

EXHIBIT A

SCOPE OF SERVICES

TASK 1 - DATA COLLECTION

1. Initial Tasks, Engineering Research and Project Management:

- 1.1. Conduct a Project Onsite Kick-off Inspection Meeting to walk the length of the Project. This inspection will be attended by members of the consultant's design team and Commerce City staff. Prepare minutes of this inspection meeting.
- 1.2. Using digital photography, conduct a field inventory and generate a Photo Log of the existing roadways with labels describing what direction and subject, including the date of the photography.
- 1.3. Formulate format for plan sheets to be reviewed by Commerce City staff.
- 1.4. At the kick off meeting, or shortly thereafter, create and provide a Project Management Plan which outlines an approach for managing the Project (i.e. involved staff, key team positions), including task orders, a schedule, document and agency reviews and other Project needs.
- 1.5. Update the Project Schedule in consultation with City Staff. Modifications will be made as necessary with appropriate justification and will be subject to review and approval by the City.
- 1.6. Coordinate work activities with other consultants or City staff

2. Design Surveys and Mapping:

- 2.1. Aerial mapping will be required for the Project (One-foot contour intervals). Complete supplemental field surveys to obtain the detail required to design approach roadways, driveways and pavement widening. Surveys shall be conducted in accordance with the CDOT Survey Manual.
- 2.2. **Right of Entry:**
 - 2.2.1. Prepare right of entry request letters to the property owners immediately adjacent to the corridor that we require access from for the purpose of surveying. Letters will be prepared and mailed to the owners of each property. Should there be no response to the letter from a particular address, Contractor will attempt to contact the residence or business to request access to the property for the purpose of surveying through other means.
 - 2.2.2. Establish horizontal and vertical control for the Project based on the High-Accuracy Reference Network (HARN) and existing NGS benchmarks resulting in a NAD83 2011 horizontal datum and a 1988 NAVD vertical datum. The section line will be the Project survey line for Rosemary Street. Establish horizontal control lines for intersecting streets. Establish ties to two or more section corners. Final CAD

drawings and spread sheets must include point numbers, state plane coordinates and elevations, bearings & distances between aliquot corners, street names, geodetic coordinates, ground based coordinates, scale factors and convergence angles, etc. Prepare and submit Dwg files for all survey and design drawings. Include a copy of all Monument records used in survey.

2.2.3. Prepare a Survey Control Diagram for the Project showing existing monuments that were utilized and newly established monumentation. The Survey Control Diagram will be prepared in accordance with CDOT criteria. Control points established for this survey will be monumented with durable monuments for use during construction, and referenced on the Ownership Map.

2.2.4. Provide a mounted, digital color aerial photograph at a scale of 1"=200' with labels for street names and other significant features.

2.3. Topographic Survey – This scope anticipates utilizing drone technology to perform a new aerial topographic survey, and supplementing this data with additional field information. Cross sections will be obtained at approximate 50' intervals delineating elevations at each edge of pavement, centerline, edge of shoulder, centerline of borrow ditch and top of borrow ditch on each side of the roadway as applicable. Additional spot elevations will be attained on all driveway access points and all other tie-in points. This data will be merged with the existing aerial map.

Include the existing visible features as follows:

- Any existing private improvements that lie within the City's existing right- of-way.
- Manhole and storm sewer inlet invert and rim elevations and sizes, inverts and direction of pipes in manhole. Note sizes of manholes. Determine pipe sizes and flow directions to the greatest extent possible from the surface. For safety, surveying personnel will not be required to enter confined spaces such as manholes and vaults. The marked utilities will subsequently be field surveyed and delineated on the design survey. All visible utility surface appurtenances will be field located and shown on the design survey. Invert elevations will be obtained from all accessible utilities, i.e. storm and sanitary sewers. Traffic control, if required to obtain utility information, will be provided by the contractor.
- Culvert sizes, materials and invert elevations.
- Irrigation ditches.
- Signs, including sizes and types.
- Earthen berms, including top and toe of slopes.
- Edges of pavement, flowline, lip of curb pan, and roadway crown.
- Curbs, gutters and sidewalks and survey topography at intersections, providing curb return elevations, radius returns, centerline profiles and signal equipment information (where applicable).
- Surface utility evidence such as utility poles, junction boxes and any signs or markers indicating location of underground utilities on the Project, not identified on

the aerial mapping. For the protection of field personnel, provide traffic control for this task, as necessary.

- Horizontal and vertical locations will be completed in accordance with the NAD83 2011.
- Survey geotechnical test hole locations (15 anticipated) and show them on the Project plans.
- Review survey data and incorporate supplemental data into computer database.
- Merge the aerial and supplemental field survey into a single, coordinated base map for design use.

2.4. Traffic Analysis

- Analyze existing and future traffic operations using micro-simulation software to evaluate the operations of the roadway and report the opening day and future levels of service, lane volumes, and turning movements at all intersections, and delay.
- Analyze all the intersections to determine if traffic signals are warranted and complete a warrant analysis and provide a recommendation.
- Review crash data (to be provided by the City) to determine safety improvements which will be incorporated into the Project.
- Provide a Traffic Study summarizing the data and recommendations.

3. Right-of-Way Research and Ownership Map - Right-of-way (ROW) acquisition, and easements or temporary construction easements acquisition will be required the entire length of the Project along 96th Avenue. Work shall also include ROW negotiation and acquisition, preparation of ROW plans and legal descriptions, and preparation of environmental documentation and reports.

- 3.1. Establish the location of the 96th Avenue right-of-way from record information, so that the need for acquisition of property can be accurately determined.
- 3.2. Prepare and submit an ownership map reflecting the right-of-way limits based on record information, without purchasing title commitments. Show current recorded names of owners, their addresses, and their Property Identification Number (PIN) per the County Assessor.
- 3.3. Prepare a right-of-way tabulation of properties detailing parcel number, owner's name, address & phone number, location, area of parcel, date of most recent legal description, and purpose of acquisition (ROW, or type of easement).
- 3.4. Complete appraisals of each property for acquisition of area necessary for construction of widened 96th Avenue, bike lanes and/or sidewalks.
- 3.5. Complete the acquisition of all right-of-way and temporary easements necessary to construct the Project. This task includes but is not limited to conducting appraisals, preparing offer letters, conducting negotiations in good faith, preparing final legal descriptions and exhibits, coordinating City Council approvals, coordinate and attending real estate closings, and coordinating with the City's legal counsel.

4. **Environmental Site Assessment** – As part of the Project Services, Contractor will perform an environmental analysis to complete a study that will identify potential environmental impacts and mitigation for those impacts, including a wetlands investigation; any recommended alternative; and any other data or information necessary to demonstrate satisfaction of the goals of the Project. Contractor will complete its final Environmental Assessment, including the decision document and all underlying analysis, within approximately 12 months from the issuance of the Notice to Proceed.
5. **Environmental Clearance Letter** – Contractor will prepare an “Environmental Clearance Letter.” The Letter will outline the results of the wetlands investigation, provide an opinion of the likelihood of the existence of rare or endangered species in the Project area, and provide the recommendations of the various federal and state agencies responsible for environmental regulation regarding current design requirements and any anticipated future requirements of the Project. The Letter will also set forth environmental performance requirements that Contractor must follow during construction in order to avoid construction delays.
6. **Geotechnical Design:** Meet with the City in the field to review the geology of the Project area with respect to geologic hazards, swelling soils, past roadway failures, areas of high maintenance, and any areas of special subgrade treatments. Discuss any special geologic conditions that would impact the pavement design or underground utility construction (very loose sand, organic matter, high water table, etc.).
 - Using available maps and utility location services, Contractor will locate utilities prior to drilling test holes. Contractor will lay out proposed locations for test holes following CDOT 2020 M-E Pavement Design Manual.
 - Contractor will drill test holes to a depth of 5 to 10 feet or more, depending on final grades. Test holes will be drilled on approximately 250-foot centers to obtain a soil profile for pavement design and excavation conditions. Drill at least 10 test holes in the existing pavement along the corridor to determine pavement and sub-grade material thickness. Drill primarily in areas where it is anticipated that existing pavement may be salvaged. At each of these test holes:
 - Measure groundwater depths.
 - Collect representative soil samples.
 - Perform laboratory tests on representative samples:
 - Maximum Density at optimum moisture content
 - R-Value
 - Natural Density and Moisture Content
 - Atterberg Limits
 - Gradation Analysis
 - Swell/Consolidation Tests (expansive properties of soils)
 - Water Soluble Sulfates

- Unconfined Compressive Strength
- Review test results and make recommendations for the pavement thickness required for flexible pavements and special subgrade treatments, if required. The pavement thickness recommendations should consider minimizing impacts to the existing underground utilities, and constructability.
- Conduct an economic analysis of various asphalt pavement sections to determine the best design. Concrete pavement design alternatives are not to be included in the analysis. Provide a cost comparison between pavement section alternatives based on the estimated total quantities for this Project so that the City can make an informed decision regarding the best pavement section for this Project.
- Prepare a Geology Map of the Project limits to illustrate the changes in geology and soil types on the Project.
- Prepare soil log sheets to illustrate the changes in geology and soil types in the Project corridor.
- Prepare and submit a bound Draft Geotechnical Report to the City for review.
- Meet with the City after the completion of the draft report to develop a consensus on pavement types, sections, and subgrade treatment alternatives to be used for the Project.
- Make revisions and submit final report to City upon concurrence of the findings of the draft report.

TASK 2 - PRELIMINARY DESIGN

1. Preliminary Roadway Plans – Field Inspection Review (F.I.R. Plans):

- 1.1. Prepare a “Memorandum of Design – Roadway” outlining the roadway design criteria recommended by the consultant for the Project.
- 1.2. Prepare preliminary plans to include the following items:
 - Title Sheet
 - Standard Plans List
 - Typical Sections
 - General Notes
 - Survey Control Diagram and Notes
 - Ownership Tabulation Sheet
 - Ownership Map
 - Plan sheets 1"=20' Horizontal (full-size scale), including line drawing of existing topography (man-made features only), survey alignment, proposed alignments, profile grades, existing ground lines, existing right-of-way, drainage structure notes, top and toe of slopes, proposed right-of-way, proposed easements, location of soil borings, existing bus stop locations, proposed bus stop benches for attached and

detached sidewalks, and existing property owners' names and addresses, Assessor Property Identification Numbers (PIN) numbers, and Project parcel numbers.

- Profile sheets 1"=10' Vertical (full-size scale), are to be on separate sheets from the plan sheets and are to be grouped together following the plan sheets, are to include soil boring profiles and underground utilities
 - Side street profiles
 - Roadway plans and profiles
 - Preliminary driveway profiles
 - Cross-sections of the existing ground and proposed roadway template (at 100-foot intervals).
 - Storm sewer plans and any special drainage plan sheets
 - Construction phasing typical sections and plans (schematic)
- 1.3. Preliminary striping will be shown on the preliminary roadway plan sheets. Signing plans will not be developed until final design.
- 1.4. Consult with Commerce City on the appropriate length of deceleration/storage/taper lengths for right-turn lanes.
- 1.5. Prepare an F.I.R.-level Opinion of Probable Construction Cost. If intergovernmental agreements (IGAs) or utility agreements cost sharing is anticipated for various Project elements, pay items and costs for these items will be broken out in the Project opinion of probable construction cost.
- 1.6. Show limits of driveway reconstruction to adjacent properties on roadway plans.
- 1.7. Design vertical profiles for each driveway.

2. Preliminary Utility Coordination:

- 2.1. Send copies of preliminary plans to utility districts and companies to request verification of existing and proposed utility locations shown on the plans per Colorado Subsurface Utility Law (SB18-167) Level D.
- 2.2. Identify utility conflicts and potential relocations. Determine locations where utility potholes should be dug to confirm whether conflicts exist or not. Prepare additional services request for utility potholing services once the required number and locations of potholes are known. Utility potholing is not included in the Base Scope of Services. The goal shall be to perform the additional services for utility potholing very soon after the F.I.R. meeting.
- 2.3. Before the F.I.R. meeting, meet with the affected utility companies that will be significantly impacted by the Project, including but not limited to, South Adams County Water and Sanitation District and United Power regarding the Project's impacts to their utilities.
- 2.4. At the start of the F.I.R. meeting, a utility coordination session will be held with utility company representatives to review conflicts, determine how the conflicts should be resolved, and determine who is financially responsible for work required to resolve the conflict.
- 2.5. A "Memorandum of Design – Utilities" will be prepared to include a list of locations where conflicts exist between utilities and proposed roadway construction and where utility facilities will need to be relocated.

3. Preliminary Construction Phasing Plans:

- 3.1. Review design plans to determine a logical approach for staged construction.
- 3.2. Prepare a schematic construction phasing plan to illustrate possible construction phasing for the Contractor. The plan will include an outline of salient construction tasks to be completed in each phase.
- 3.3. Prepare typical section (schematic) showing detours and work areas within the Project right-of-way for various construction phases.
- 3.4. Prepare preliminary construction cost estimate for construction traffic control items for inclusion in the F.I.R.-level construction cost estimate for the Project.

4. Preliminary Drainage Plans:

- 4.1. Review past drainage reports and other available drainage-related information (Master Plans, Flood Plain Studies, etc.).
- 4.2. Establish drainage basin boundaries and characteristics for minor cross drainages.
- 4.3. Conduct field reconnaissance to verify drainage basin boundaries for cross drainage and storm sewer design.
- 4.4. Establish drainage basin boundaries and characteristics for minor cross drainages.
- 4.5. Determine design discharges in minor cross drainages according to the Mile High Flood District (formerly known as the Urban Drainage and Flood Control District) Urban Storm Drainage Criteria Manual and the CDOT Design Guide.
- 4.6. Inventory irrigation structures and determine necessary irrigation water structure requirements and flow rates.
- 4.7. Establish locations of required drainage structures. Check capacity of existing drainage structures. Identify drainage structures to be replaced for capacity or condition issues.
- 4.8. Establish a plan for meeting Commerce City's MS-4 requirements for permanent water quality with regard to the proposed roadway improvements.
- 4.9. Using the Mile High Flood District (formerly known as the Urban Drainage and Flood Control District) Urban Storm Drainage Criteria Manual and the CDOT Design Guide, analyze flows on pavements and determine storm sewer and inlet requirements along the Project.
- 4.10. Using the Mile High Flood District (formerly known as the Urban Drainage and Flood Control District) Urban Storm Drainage Criteria Manual and the CDOT Design Guide, analyze each cross culvert structure and determine opening sizes to accommodate design discharges.
- 4.11. Prepare a Phase II Drainage report in accordance with the requirements of the Mile High Flood District (formerly known as the Urban Drainage and Flood Control District) Urban Storm Drainage Criteria Manual.
- 4.12. Include drainage items in the preliminary construction cost estimate.

5. Signing and Striping Plans:

- 5.1. Show preliminary striping on the preliminary roadway plan sheets.
- 5.2. Include signing and striping items in the preliminary construction cost estimate.

6. Ownership Map:

- 6.1. Show the approximate limits of the proposed right-of-way and easements on the preliminary plan sheets, and the Ownership Map.
- 6.2. Prepare an exhibit for the public open house meeting that shows the existing property lines, the proposed right-of-way limits, existing topographic features, and proposed curb, gutter and sidewalks.
- 6.3. Prepare the final legal descriptions and exhibits (Right-of-Way, permanent and temporary construction easements) for properties required for the Project.

7. Project Coordination:

- 7.1. Attend regular progress meetings as appropriate. At least three (3) meetings with up to three (3) consultant staff members are included in the scope of work during the preliminary design phase.
- 7.2. Prepare and distribute written minutes of meetings required for the Project, including any meetings held with the County, utility companies, and jurisdictional entities.
- 7.3. Document time delays, scope of work variations, changes in input from entities and coordinate said documentation.
- 7.4. Arrange and attend a Field Inspection Review (F.I.R.) meeting with Commerce City staff and other affected parties, as required by Commerce City.
- 7.5. Prepare and distribute minutes of the F.I.R. meeting.
- 7.6. Make minor revisions to plans as agreed to by the consultant and Commerce City. In general, F.I.R. comments will be incorporated into the plans during final design. There will not be a post-FIR plan submittal as a part of this Scope of Services.
- 7.7. Prepare a list of design recommendations to be incorporated into the final plans and submit as an Appendix to the “Memorandum of Design – Roadway”.
- 7.8. Prepare monthly reports to Commerce City outlining work completed to date, value added services, actual completion vs. budget completion vs. scheduled completion and potential additional services requests on the horizon.

8. Public Coordination:

- 8.1. Update computerized mailing list to include names and addresses of property owners.
- 8.2. Arrange for a location for the public open house (or virtual open house) and collaborate with Commerce City on event date/time. Any fees for meeting facilities will be paid directly by the consultant.
- 8.3. Prepare a meeting announcement for the public open house and submit an original copy of the announcement to Commerce City. Reproduce and mail public open house announcements to those on the computer mailing database.
- 8.4. Prepare an advertisement for the public open house. Submit the advertisement to Commerce City for review and distribution via various digital and print media.
- 8.5. Prepare the text for a Variable Message Sign (VMS) message announcing the public meeting (unless virtual). Consultant will provide this text to Commerce City staff, who will post the message on City-owned signs and place the signs along the 96th Avenue

- corridor. City will place the VMS along the 96th Avenue, Chambers Rd and Tower Road corridors for a period of five (5) days prior to meeting.
- 8.6. Prepare exhibits for the public open house. Exhibits will be word boards (data and/or questions), aerial photographs (with and without the proposed roadway superimposed), and other relevant drawings developed during preliminary design.
 - 8.7. Prepare pdf files of all public meeting exhibits for electronic submittal to Commerce City. PDF files shall be prepared at a size suitable for posting online. City staff shall post information on the City's website. A pdf index page may be necessary to maintain file sizes that are workable for the public.
 - 8.8. Attend one (1) public open house meeting. At least three members of the consultant's staff will attend the meeting.
 - 8.9. After the public meeting, prepare a report summarizing the notification process, attendance, intent of the meeting, exhibits / handouts, and public comments.
 - 8.10. Preliminary Design Public Coordination includes up to two (2) meetings with individual property owners or other interested citizens in addition to the referenced public meeting.

9. Preliminary Landscape and Irrigation Plans

- 9.1. Landscape and irrigation design plans are to be prepared to be separate from the roadway plan set so that they can be bid as a separate project. Construction of the landscape project is scheduled to be done in the spring of 2024 or 2025, which would be after the construction of the roadway improvements is completed.
- 9.2. Prepare landscape planting designs for right-of-way, median and multi-use trail areas.
- 9.3. Prepare landscape plan base sheets at 1"=20'.
- 9.4. Prepare preliminary planting plans at 1"=20' scale and typical sections. Plans will show planting beds and types of plants to be used. No wetland area planting will be included in the project for this segment.
- 9.5. Prepare 30% complete irrigation plans to show water tap locations and mains, of sufficient detail to prepare cost estimates.
- 9.6. Determine available water pressures through contacts with the water utility and fire hydrant tests in the Project area.
- 9.7. Prepare illustrations of proposed roadway with preliminary landscape concepts for use at the public workshop.
- 9.8. Prepare preliminary cost estimates for landscape and irrigation features.
- 9.9. Attend landscaping review meeting with Commerce City.
- 9.10. Preliminary landscaping and irrigation plans will be prepared and included in the Roadway FIR set for review purposes

10. Preliminary Bridge Design to complete bridge over 2nd Creek.

- 10.1. When the west-bound bridge was completed with the original construction, the full abutments were built to include the future east-bound portion. The design of the east-bound portion will include verification of all existing structural and complete design and structural analysis for the eastbound bridge.

11. Preliminary traffic signal design at 96th and Chambers Road, Landmark Drive and Telluride Streets. Revised signal design at 96th and Tower Road.

- 11.1. Updated or new traffic signals are required at Chambers Road and Tower Road. In addition, new signals are anticipated at Landmark Road and Telluride Streets. Preliminary designs for each of these signals will be part of this task.

TASK 3 - FINAL DESIGN

Following Commerce City review of the preliminary plans and, at the direction of Commerce City County, the following final design work tasks will be completed:

1. Final Roadway Plans - Final Office Review (F.O.R. Plans):

- 1.1. Revise preliminary roadway plans based on F.I.R. comments.
- 1.2. Prepare Summary of Approximate Quantities.
- 1.3. Prepare quantity tabulations for individual items. Anticipated tabulations include construction surveying, removals/resets/adjust items, earthwork, guardrail, concrete items, surfacing, fencing, storm sewers and others listed in subsequent sections of the Scope.
- 1.4. Prepare detail sheets for various miscellaneous Project components.
- 1.5. Prepare Project Special Provisions and Standard Special Provisions (e.g. technical specifications) to augment the most recent adopted Colorado Department of Transportation's Standard Specifications for Road and Bridge Construction.
- 1.6. Provide Commerce City Engineering Division via electronic link, a list of F.O.R. deliverables. The list will be a table indicating plan sheet number, plan sheet description, and the AutoCAD file name for each sheet.
- 1.7. Prepare F.O.R.-level Opinion of Probable Construction Cost based on the Summary of Approximate Quantities. If the use of IGAs or utility cost sharing agreements is anticipated for various Project elements, costs for these items, including each party's tentative payment obligations, will be broken out in the Project opinion of probable construction cost.

2. Final Utility Coordination:

- 2.1. Once the additional services for utility potholing are performed (soon after the F.I.R.) and the conflict locations are verified per Colorado Subsurface Utility Law (SB18-167) Level B, Contractor will conduct a Utility Coordination Meeting. All affected utility companies shall be invited to the meeting. The purposes of the meeting will be to:
 - Review conflicts
 - Confirm how the conflicts should be resolved
 - Confirm who is financially responsible for work required to resolve the conflict
 - Confirm which portions of the work will be performed by Utility Company versus City Contractor forces
 - Confirm the duration or expected completion date of the utility work and the advance notification time requirements.
- 2.2. Conduct field reviews with utility owners as required.
- 2.3. Revise plans to reflect input from utility owners at the Utility Coordination Meeting and field reviews.

- 2.4. Prepare Utility Clearance Letters listing specific utility work elements that the Contractor shall perform, specific utility work elements that the utility owner shall perform, the duration or expected completion date of the utility work, and advance notification time requirements.
 - 2.5. Submit the letters to the utility companies requesting their signature and return of the letters.
 - 2.6. Prepare a utility specification listing all utility owners adjacent to the Project and the provisions of the "Utility Clearance Letters".
3. **Construction Traffic Control Plans and Quantities:**
 - 3.1. Prepare detailed recommended construction traffic control plans showing suggested construction phasing, work zone locations, temporary striping, construction signing and other construction traffic control devices following guidance from the most recent adopted version of the Manual on Uniform Traffic Control Devices (MUTCD).
 - 3.2. Prepare recommended traffic control and phasing notes sheet. Include an outline of salient construction tasks to be completed in each phase.
 - 3.3. Prepare Tabulation of Suggested Traffic Control Devices, and Tabulation of Contractor Traffic Control Pay Items.
4. **Final Drainage Plans:**
 - 4.1. Revise grading details, and other drainage details based on F.I.R. comments.
 - 4.2. Prepare storm sewer profiles.
 - 4.3. Design permanent Best Management Practices to meet Commerce City's MS-4 requirements for water quality for the proposed roadway improvements.
 - 4.4. Prepare Erosion Control Plans for construction of the Project. The plans will depict schematically the measures to be used to minimize erosion and sedimentation during construction. The plans will be at a scale of 1"=100'. The Erosion Control Plans shall accommodate and address the differing requirements for each proposed phase of construction.
 - 4.5. Prepare a Phase III Drainage report in accordance with the requirements of the Mile High Flood District (formerly known as the Urban Drainage and Flood Control District) Urban Storm Drainage Criteria Manual.
5. **Final Signing and Striping Plans:**
 - 5.1. Prepare signing and striping plans for the Project at 1"=50' scale (1"=100' on 11" x 17" sheets). Plans will show striping layout for permanent roadway striping, existing and proposed sign locations, and proposed sign sizes and codes.
 - 5.2. Prepare tabulation of signs.
 - 5.3. Prepare tabulation of pavement markings.
6. **Right-of-Way Plans, Legal Descriptions and Exhibits**
 - 6.1. The right-of-way descriptions and exhibits prepared under this section will be final documents to be used to acquire the right-of-way and easements necessary to complete the construction of the Project. ROW and easement acquisition will be based on the F.I.R. plans by agents of the City, as modified with comments made at the meeting and will be prepared in compliance with the applicable requirements.

- 6.2. Calculate areas of parcels and easements to be acquired, and the area of prescriptive right-of-way to be deducted from the acquisition transaction.
- 6.3. Write legal descriptions and prepare exhibit maps of parcels that are to be acquired. The areas described and exhibited will include the combination of the new right-of-way take, and any existing prescriptive right-of-way. Separate legal descriptions need to be made for any existing prescriptive right-of-way and used in quit claim deeds. The existing prescriptive right-of-way will be highlighted on the exhibit and its area will be listed so the consultant can deduct this area when negotiating the purchase price. Descriptions will be prepared from record information, as provided in the title commitments. A record copy of the descriptions shall include date, seal, signature, name and number of the Professional Land Surveyor responsible for their preparation.
- 6.4. Review ROW descriptions and exhibits.
- 6.5. Prepare a right-of-way Tabulation of Properties (11"x17") detailing parcel number, owner's name, address and phone number, location, area of parcel, date of most recent legal description, and purpose of acquisition (ROW or type of easement). Submit this tabulation to Commerce City in both paper and electronic (MS-Excel) format. This tabulation will be used to ensure that the most current legal description is being used, and it will define what parcels need to be acquired to accommodate the construction.
- 6.6. Update the previously prepared Ownership Map with the following information superimposed: existing right-of-way, prescriptive right-of-way, proposed right-of-way, permanent/slope easements, construction easements, and drainage easements (if any). Typical right-of-way dimensions will be provided if/where right-of-way is a constant width. Parcel numbers will be assigned and a legend will be provided correlating the parcel number to the landowner's name, address, and Assessor Property Identification Numbers (PIN) numbers.
- 6.7. Prepare a right-of-way "Clearance Letter" that summarizes the acquisitions and easements information determined by the consultant to be necessary to construct the Project.

7. Final Design Coordination:

- 7.1. Attend regular progress meetings as appropriate. At least three (3) meetings with up to three (3) consultant staff members are included in the scope of work during the final design phase.
- 7.2. Prepare and distribute written minutes of meetings required for the Project, including any meetings held with Commerce City, utility companies, and jurisdictional entities.
- 7.3. Document time delays, Scope of Services variations, changes in input from entities and coordinate said documentation.
- 7.4. Arrange and attend Final Office Review (F.O.R.) meeting with Commerce City staff and other affected parties, as required by Commerce City.
- 7.5. Prepare monthly reports to Commerce City outlining work completed to date, value added services, actual completion vs. budget completion vs. scheduled completion and potential additional services requests on the horizon.
- 7.6. Prepare and distribute minutes of the F.O.R. meeting.
- 7.7. Make minor plan revisions after the F.O.R. as requested by Commerce City. Submit two sets of plans (22" x 34"), five set of plans (11" x 17") and seven sets of technical specifications (8.5" x 11") with F.O.R. comments incorporated ("Post-FOR Plans and Specs") to Commerce City for approval. Revisions to plans will be made for a period of 4

weeks after the Final Office Review Meeting based on Commerce City staff input and minor modifications required due to right-of-way negotiations.

- 7.8. Submit one Record Set of Approved Post-F.O.R. Plans (8-1/2" x 14") and Specifications with a P.E. Seal to Commerce City.

8. Construction Stormwater Discharge and Dewatering Permits:

- 8.1. Prior to the development of any Erosion Control Plans, the consultant will meet with the Commerce City stormwater staff to outline the approach to developing the plans. The consultant will develop the Erosion Control Plans based on direction received at the meeting.
- Consultant will prepare a Stormwater Management Plan (SWMP). The prepared SWMP will identify temporary sediment and erosion controls that are to be used during construction for different contaminants. Following preparation of the SWMP, Commerce City will review the Construction Phasing Plans and traffic control plans which are also prepared by the consultant.
 - The consultant will provide Commerce City with "Area of Disturbance" calculations in acres for: 1.) Total Area of Construction; 2.) Total Area of Disturbance; and 3.) Area of Native Grass Seeding. This information will be used, in cooperation with Commerce City, to complete the SWMP.
 - The consultant is to include CDOT's latest Standard Special Provision regarding "Water Quality Control" (i.e. Revision of Sections 101, 107, and 208) in the specifications.
- 8.2. Consultant will prepare a Tabulation of "Temporary Erosion & Sediment Controls" (temporary BMP's) based on the approved "Erosion & Sediment Control Plan" sheets and include the quantities in the Bid Schedule.
- 8.3. Include the Commerce City prepared SWMP, and the approved "Erosion & Sediment Control Plan" sheets in the "For Bid" set of plans.
- 8.4. If it is determined that a Dewatering Permit is needed for this Project, Contractor will complete the application form and prepare the supporting documentation for a Dewatering Permit as required by the Colorado Department of Public Health Construction Dewatering Discharge Application. Contractor will pay for the filing fee for this permit, if it is determined that it is needed before construction begins. The Contractor will pay the fee permit if the Contractor determines that it is needed during construction, and Commerce City has not already obtained the Dewatering Permit.
- The Project Special Provisions prepared by the consultant will include a requirement that the Contractor transfer the Dewatering Permit to the Contractor's company before construction begins, and that the Contractor amend the permit during construction if the Contractor's operations are inconsistent with these statements or any other portion of the permit.

9. Final Landscape and Irrigation Plans

Landscape and irrigation design plans are to be prepared to be separate from the roadway plan set so that they can be bid as a separate project. Construction of the landscape project is scheduled to be done in the spring of 2024 or 2025, which would be after the construction of the roadway improvements is completed. The bid set, however, will be developed at the same time as the roadway bid package. Revisions and changes to the landscaping plans that may occur

after the roadway construction package is advertised are not included in the basic services, and will be completed as an additional service under Section 4.5.

- Selection of specific plant materials and seed mixtures.
- Preparation of irrigation details and specifications (specifications based on CDOT Standard Specifications for Road and Bridge Construction, latest version anticipated to be released in 2019).
- Preparation of final layout plans showing the proposed landscape elements.
- Preparation of plant list, plant counts and landscape cost estimates.
- Preparation of planting details.
- Preparation of irrigation construction plans.
- Preparation of tabulation of planting quantities and irrigation quantities.

10. Final Geotechnical Report:

Submit Final Geotechnical Report to be used by Contractor for pavement types, sections, and subgrade treatment alternatives to be used for the Project.

11. Final Bridge Design to complete bridge over 2nd Creek

The design will build on the existing abutments and west-bound bridge so as to complement the existing structure. Complete bridge construction plans.

12. Final traffic signal designs at Chambers Road, Tower Road, Landmark Drive and Telluride Streets

12.1. The signal designs for the intersections of 96th & Chambers Road, 96th & Landmark Drive, 96th & Telluride Street will be completed. The existing 96th & Tower Road signals will be analyzed to determine what modifications will be required for the new intersection configuration. Final signal design plans will be completed.

PROJECT DELIVERABLES (TASKS 1-3)

The Engineer shall deliver to the City the designated number of copies of the following documents at appropriate times during the Project, as outlined in this Scope of Services. The Engineer shall provide electronic versions of all deliverables upon request.

TASK 1 - DATA COLLECTION:

- Two (2) copies each:
 - Draft and Final Geotechnical Reports (Task 1.2.3)
 - Environmental Site Assessment Report (1.4)
 - Environmental Clearance Letter (Task 1.5)
 - Minutes of Onsite Kick-off Meeting (Task 1.1.1)
 - Project Schedule (Task 1.1.4)
 - Ownership Map (Task 1.2.2.3)

- One (1) copy of each:
 - Bound Photo Log of existing roadways (Task 1.1.2)
 - Mounted digital color aerial photograph of Project (Task 1.2.1)
 - Survey Notes for HARN Network Coordinate Tie Loop (Task 1.2.2.2) following Colorado Subsurface Utility Law (SB18-167).
 - Field Survey Notes (Task 1.2.3)

TASK 2 - PRELIMINARY DESIGN:

- Two (2) copies each:
 - F.I.R. Preliminary Roadway Plans (11"x17") (Task 2.1)
 - F.I.R. Preliminary Landscaping Plans (11"x17") (Task 2.9)
- Two (2) copies each:
 - Phase II Drainage Report (Task 2.4.11)
 - Memorandum of Design – Roadway (including design criteria) (Task 2.1.1)
 - F.I.R.-level Opinion of Probable Construction Cost (Task 2.1.5)
 - Memorandum of Design – Utilities (Task 2.2.5)
 - Appendix to Memorandum of Design – Roadway (Task 2.7.7)
- One (1) copy of each:
 - Minutes of Meetings and Phone Conversations (Task 2.1.1)
 - Public Meeting Announcement (Task 2.8.4)
 - Newspaper Announcement for Public Meeting (Task 2.8.4)
 - Pdf files of Public Meeting Exhibits (Task 2.8.7)
 - Public Meeting Report (Task 2.2.9)

TASK 3 - FINAL DESIGN:

- Two (2) copies each:
 - F.O.R. Roadway Plans (11" x 17" plans) and Technical Specifications (Task 3.1)
- To include:
 - Title Sheet and Notes
 - Typical Sections
 - Horizontal Control Plans
 - Roadway Plan & Profiles
 - Intersection Details
 - Signing and Striping Plans
 - Traffic Signal Plans
 - Roadway Lighting Plans
 - Roadway Details
 - Bridge Construction Plans
 - Storm Drainage Plans & Profiles
- Storm Drainage Details
 -
- F.O.R. Landscaping Plans (11" x 17" plans) and Technical Specifications (Task 3.9)
- Two (2) copies each:
 - Phase III Drainage report (Task 3.4.5)

- Right-of-Way Descriptions and Exhibits (Task 3.6.1)
- Right-of-Way Tabulation of Properties (Task 3.6.5)
- Right-of-Way "Clearance Letter" (Task 3.6.7)
- F.O.R.-level Opinion of Probable Construction Cost (Task 3.1.7)
- Stormwater Construction Dewatering Discharge Permit Application (Task 3.8.4)
- One (1) copy each:
 - Utility Clearance Letters (Task 3.2.4)
 - F.O.R. Plans (11" x 17" plans) and Technical Specifications (Task 3.1.5)
 - F.I.R. Preliminary Roadway Plans (11" x 17") (Task 3.1.1)
 - Electronic version (Excel) of Right-of-Way Tabulation of Properties (Task 3.6.5)
 - Minutes of Meetings and Phone Conversations (Task 3.7.6)
 - Original 11" x 17" Final Plans and Technical Specifications (with Post-FOR revisions) (Task 3.7.7)
 - Plans and Technical Specifications with P.E. Stamp (Record Set) (Task 3.7.8)
 - Title Commitments (Task 3.6.3)
 - Right-of-Way Information Binders (Task 3.6.1)

INFORMATION TO BE FURNISHED BY COMMERCE CITY

Commerce City will furnish the following items at no charge to the consultant:

- Mailing list of citizens to receive public meeting notices.
- Available accident data.

TASK 4 - ADDITIONAL SERVICES

Additional Services are tasks that may be required to be completed as a part of the design work, or during construction, but the need and extent of the additional work is unknown at the time the Scope of Services is being prepared (prior to initiating the work). The following Scope of Services are "best estimates" or are "in anticipation" of the work that may be required.

None of the Additional Services work tasks will be completed without the written authorization of the City Engineer. At the time the need for the Additional Service is determined, the anticipated Scope of Services written herein will be reviewed for appropriateness. At that time, the consultant will advise Commerce City of the adequacy of the anticipated Scope of Services and whether more or less effort is needed. The adequacy of the established budget will also be reviewed. Every effort will be made to complete authorized Additional Services, including revised work scopes, within the established budgets. Should additional work to that is not anticipated herein be requested or determined necessary, Commerce City may authorize additional budget amounts. Should Commerce City choose not to authorize the additional work and budget amounts, the consultant is not obligated to complete additional work beyond the amount previously authorized and approved. All Additional Services work will be performed on a time and expense basis with costs not to

exceed the budget amounts authorized by Commerce City. Hourly billing rates current for the period when the work is performed will be the basis for establishing the consultant's cost.

1. Additional Right-Of-Way Services:

- 1.1. Prepare additional title commitments and update ownership map as outlined in Task 3.7 of this Scope of Services.
- 1.2. Prepare additional descriptions and exhibits or revise descriptions and exhibits per landowner input, as outlined in Task 3.7 of this Scope of Services. Update right-of-way Tabulation of Properties and right-of-way / easement plan sheets to include these additional descriptions and exhibits.
- 1.3. Complete the acquisition of all additional right-of-way and temporary easements necessary to construct the Project. This task includes but is not limited to conducting appraisals, preparing offer letters, conducting negotiations in good faith, preparing final legal descriptions and exhibits, coordinating City Council approvals, coordinate and attending real estate closings, and coordinating with the City's legal counsel.

2. Utility Potholing:

- 2.1. Upon mutual agreement between the consultant and Commerce City that location of underground utilities is necessary to determine or resolve conflicts, the consultant shall perform the following services upon written notice from Commerce City.
- 2.2. Using non-destructive techniques, locate underground utilities on the Project site.
- 2.3. Survey the pothole locations.
- 2.4. Document the field locations and include the information in an updated Memorandum of Design - Utilities.
- 2.5. Modify design plans where field locations show discrepancies with the utility key maps. Detail on the plans the horizontal and vertical location of each utility potholed.
- 2.6. The number of potholes excavated will be dependent on locations, timing and budget amount.

3. Property Owner / Citizen Coordination:

- 3.1. From right-of-way research, determine names and addresses of ownerships that will be impacted by the Project construction. Contact the property owners and arrange meetings with them individually to discuss right-of-way and/or access impacts to their property. Document property owner meetings. At the request of Commerce City, develop written responses to letters or other specific comments received from citizens. Send written responses to Commerce City staff for review and forwarding to citizens.

4. Plan Changes After Final Office Review (F.O.R.) Comments:

- 4.1. After a period of eight weeks past the date of the Final Office Review (F.O.R.) meeting, make changes to the plans bases on comments from Commerce City staff or due to right-of-way negotiations. The amount in the estimate is a 'place holder' to set aside a budget for this activity should the need arise.
- 4.2. This item also includes additional work required to make any revisions to the landscape and irrigation plan package prior to advertising the separate package in 2022.

5. Plan Reproduction Services:

5.1. After completion of the final Project **roadway** construction plans reproduce plans in the following quantities for the City to distribute to stakeholders or bidders:

- One (1) set of plans, 11"x17".
- Five (5) sets of plans, full-size blue lines.
- Five (5) sets of roadway cross sections, full-size blue lines.
- Ten (10) sets of plans, 11" x 17" photocopies.
- Ten (10) sets of roadway cross sections, 11" x 17" photocopies.
- Ten (10) sets of Bid Documents and Technical Specifications.

5.2. After completion of the final Project landscape construction plans reproduce plans in the following quantities for the City to distribute to stakeholders or bidders:

- One (1) set of plans, 11"x17".
- Five (5) sets of plans, full-size blue lines.
- Five (5) sets of roadway cross sections, full-size blue lines.
- Ten (10) sets of plans, 11" x 17" photocopies.
- Ten (10) sets of roadway cross sections, 11" x 17" photocopies.
- Ten (10) sets of Bid Documents and Technical Specifications.

6. Water and Sanitary Sewer Line Relocations:

6.1. If, during the course of the design work, it is determined that water and/or sanitary lines must be relocated to accommodate the street improvements, water system and/or sanitary sewer relocation plans will be developed by the consultant upon written authorization from Commerce City. The work items to be completed for design of relocated water and/or sanitary sewer lines are as follows:

6.2. Prepare a set of plans for review by the South Adams County Water and Sanitation District including the following sheets:

- Title sheet separate from the roadway plans.
- Water and/or sanitary sewer system details and notes.
- Water line and/or sanitary sewer line plan and profile sheets.
- Sequencing of water line and/or sanitary sewer relocation construction.

6.3. Prepare Project special provisions for the water line and/or sanitary sewer relocations and include the standard specifications of the South Adams County Water and Sanitation District.

6.4. Prepare construction cost estimates for the preliminary and final design tasks of the water and/or sanitary sewer line design.

6.5. All permit and plan review fees will be paid directly Commerce City and are not included in the Scope of Services.

7. Retaining Wall Design:

8.1 Upon determination that a retaining wall is required to minimize right-of-way acquisition and accommodate the Project grades, the consultant will provide the following services upon written notice from Commerce City:

8.2 Conduct a geotechnical investigation to determine the soil characteristics in the retaining wall location.

- Drill additional exploratory test holes at the location where the retaining wall is to be located and obtain appropriate soil samples.

- Conduct soils testing on the soil samples to determine the active and passive earth pressures and bearing capacity of the soils in the retaining wall areas.
- 8.3 Prepare preliminary and final design plans for retaining walls, should it be determined that a retaining wall is required to avoid excessive right-of-way acquisition. It is assumed that the walls will not exceed 6 feet in height or 1000 feet in total length.
- 8.4 Prepare a plan, profile and structural details of the retaining wall.
- 8.5 Prepare Project special provisions for the retaining wall elements.

8. Miscellaneous Additional Surveys:

- 8.1. Perform additional design surveys in areas that may require further definition after preliminary design is completed. The surveys should include any existing manmade improvements and landscaping (such as fences, trees and shrubs) that lie within any proposed additional right-of-way and easement parcels so that the appraiser can ascertain what the impacts are to the affected properties. These surveys might also include additional information for driveway relocations, approach relocations or drainage information required for final design.

9. Additional Project and Public Coordination:

- 9.1. Attend additional Project progress meetings as requested by Commerce City. Prepare meeting minutes for additional progress meetings.
- 9.2. Update computerized mailing list to include names and addresses provided by participants in the last public meeting who were not on the mailing list previously.
- 9.3. Arrange for a location for the public open house. Any fees for meeting facilities will be paid directly by the Engineer, as an Additional Service.
- 9.4. Prepare a meeting announcement for the public open house and submit an original copy of the announcement to Commerce City. Reproduce and mail public open house announcements to those on the computer mailing database.
- 9.5. Prepare an advertisement for the public open house. Submit the advertisement to Commerce City for review and distribution via various digital and print media.
- 9.6. Prepare the text for a Variable Message Sign (VMS) message announcing the public meeting. Consultant will provide this text to Commerce City staff, who will post the message on City-owned signs and place the signs along the Rosemary Street Corridor. No fixed-message signs announcing the public open house will be prepared or posted for this Project.
- 9.7. Prepare exhibits for the public open house. Exhibits will be word boards (data and/or questions), aerial photographs (with and without proposed roadway superimposed), and other relevant drawings developed during design. Landscape plans will be included.
- 9.8. Prepare pdf files of all the public meeting exhibits. pdf files shall be prepared at a size suitable for posting online. Submit to Commerce City for posting on the Commerce City website.
- 9.9. Attend one (1) public open house meeting. Three members of the consultant's staff plus a greeter will attend the meeting.
- 9.10. After the public meeting, prepare a report summarizing the notification process, attendance, intent of the meeting, exhibits / handouts, and public comments.
- 9.11. Final Design Public Coordination includes up to two (2) meetings with individual property owners, homeowner's associations, or other interested citizens in addition to the

referenced public meeting. It is assumed that all property owners or their representatives can be met with in the metropolitan Denver area. No travel outside metropolitan Denver area is included in this scope. If Commerce City prefers, the consultant will respond on behalf of Commerce City to up to two (2) letters from such entities in lieu of the meetings. If more such meetings or responses become necessary, they will be performed as Additional Services.

9.12. Provide the following deliverables (1 copy of each):

- Public Meeting Announcement
- Newspaper Announcement for Public Meeting
- Pdf files of Public Meeting Exhibits
- Public Meeting Report

10. Bid Services:

- 10.1. The bidding services included in the base services are for both the roadway package to be advertised in 2023 and for the landscaping package to be advertised in 2024.
- 10.2. Prepare the Bid Package, including bid forms, Project Special Provisions, Standard Special Provisions, which will comprise the Contract Documents. Standard Commerce City and CDOT forms and formats will be used for the Contract Documents.
- 10.3. Attend the Pre-Bid meeting and prepare the meeting minutes.
- 10.4. Prepare addenda to the bid plans and specifications during the advertisement period, as requested by Commerce City.
- 10.5. Attend the Bid Opening and prepare bid tabulation for the Project.
- 10.6. Reproduction of plans for distribution to prospective bidders is not included in the Base Scope of Services, but is included in Additional Services Task 4.1.
- 10.7. Provide the following deliverables (2 copies each):
 - Bid Tabulation
 - Addenda

TASK 5 - CONSTRUCTION DESIGN SUPPORT SERVICES **(ROADWAY)**

The consultant on an “on-call” and “regular visit” basis will perform part-time construction observation services, during the Project construction period. The consultant’s Project Manager and/or Project Engineer will be designated to serve as the consultant’s representative. The Engineer's personnel will assist Commerce City’s designated full-time Project Manager with the interpretation of the plans and specifications, with the preparation of Commerce City requested changes to the plans and specifications, and will review the construction progress and observe whether construction is in general compliance with the plans and specifications. Written minutes of site observation visits, telephone conversations and meetings regarding the Project will be prepared and distributed to the Owner.

Construction services do not include the provision or direction of construction surveyors; do not include materials testing; do not include the preparation of "as-built drawings"; do not include

the certification of the Contractor's work to be in compliance with the intent of the plans and specifications. The Engineer will not, at any time, control, direct, or otherwise directly or indirectly supervise the construction operators, the Contractor, subcontractors, Commerce City, or agents or employees of the entities listed above.

It is assumed that the roadway construction phase of this Project will be completed in 2025. Services will be provided at the standard hourly rates for the consultant, current for the period the work is completed. The consultant is not obligated to provide services beyond the budget amount established and approved by Commerce City for these construction observation/design services.