AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT FOR PROFESSIONAL SERVICES ("Agreement") is made and entered into effective this ____ day of _____, 2015 ("Effective Date"), by and between the CITY OF COMMERCE CITY, a Colorado home rule municipality whose address is 7887 East 60th Avenue, Commerce City, Colorado 80022 ("City"), and FELSBURG HOLT & ULLEVIG, INC., a Colorado corporation whose principal business address is 6300 South Syracuse Way, Suite 600, Centennial, CO 80111 ("Consultant").

WHEREAS, the City desires to retain the services of Consultant, and Consultant desires to provide services to the City.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained in this Agreement, the sufficiency of which is hereby acknowledged, the parties agree as follows:

I. SERVICES.

A. Services. At the City's direction, Consultant will provide professional design and engineering services as set forth in Exhibit A, attached and incorporated by reference ("Services"). A separate Notice to Proceed will be issued for each task identified in Exhibit A. Consultant will not perform any Services for which a Notice to Proceed has not been issued and will not be entitled to compensation for any Services performed before the issuance of a Notice to Proceed. The City reserves the right to omit any of the Services identified in Exhibit A upon written notice to Consultant.

B. Controlling Terms. The terms of this Agreement will control if the terms of any exhibit, attachment, or invoice conflict with this Agreement.

C. Deliverables.

1. Electronic format. Consultant will provide all reports, surveys, maps, plans, drawings or photographs, or any other materials that lend themselves to production in electronic format ("Deliverables") to the City in both hard copy and electronic formats acceptable to the City, unless otherwise directed by the City in writing. Consultant's failure to do so will constitute a material breach of this Agreement. Consultant will consult with the City to determine acceptable electronic formats before beginning the Services. All Deliverables and other tangible materials produced by Consultant pursuant to this Agreement will at all times be considered the property of the City.

2. Spatial Data. Deliverables including spatial data (GIS/AutoCad) will include geospatial datasets (those generated from GPS, survey data, or other derived geospatial data like orthography) in Environmental Systems Research Institute, Inc.'s ("ESRI") file/personal geodatabase or shapefile format, including a coordinate system projection information or file. Point features will be generated as point shapefiles, linear features will be generated as line shapefiles, and area features will be generated as polygon shapefiles. Any geospatial dataset derived from new or existing geospatial data will be in file/personal geodatabase or shapefile format, along with an explanation of the method used to generate the derived geospatial data. Spatial Coordinate or Survey System will be documented and used, along with a coordinate system projection file for said data. Consultant will provide complete metadata (who, what, when, where, how) for all provided spatial data and related information.

3. Digital images. Consultant will provide non-copyrighted, high resolution, illustrative, digital images of project site plans, elevations, renderings, photos, and other Deliverables, as directed by the City, suitable for reproduction of and dissemination in marketing materials and at City Council hearings

and public presentations. Consultant will affirm that the images do not violate copyright laws and will indemnify and hold harmless the City from liability for any expense, cost, loss or damage resulting from any claim of copyright infringement arising from the City's use of the images. All images provided will become the property of the City.

D. Consultant Representations. Consultant warrants and represents that it has the requisite authority, capacity, experience and expertise to perform the Services in compliance with the provisions of this Agreement and all applicable laws. Consultant acknowledges that the City is relying on Consultant's expertise, skill, and knowledge, and that the Consultant's obligations and liabilities will not be diminished by reason of any approval or review by the City.

E. Prosecution of the Services. Consultant will perform all work in a professional and workmanlike manner and will furnish all labor, materials, tools, supplies, machinery, utilities, and other equipment that may be necessary for the completion of the Services. Consultant will monitor, supervise, and otherwise control and be solely responsible for all persons or entities performing work on its behalf.

F. Correction of Errors. Consultant will correct any errors or omissions in its work and any work deemed unsatisfactory or unacceptable by the City promptly and for no additional compensation.

G. Subcontractors. Consultant will not engage any subcontractors other than those identified in their original proposal to perform any part of the Services, other than for the provision of goods, materials or supplies, without the City's express written consent. Subcontractors and/or consultants identified in the original proposal may be engaged without any further City consent.

H. Licenses & Permits. Consultant and each subcontractor will be responsible to obtain all required licenses and permits, including a City Contractor's license, if required. Consultant will pay any and all license and permit fees.

I. Rate of Progress. Consultant's rate of progress is a material term of this Agreement. As part of the project scope, Consultant will provide a progress schedule for the performance of all Services subject to the City's approval. Consultant's failure to complete any of the Services as may be more specifically set forth in an exhibit, notice(s) to proceed, change order, or any approved progress schedule, may be deemed a breach of this Agreement.

J. Monitoring and Evaluation. The City reserves the right to monitor and evaluate the progress and performance of Consultant to ensure that the terms of this Agreement are being satisfactorily met in accordance with the City's and other applicable monitoring and evaluating criteria and standards. Consultant will cooperate with the City relating to such monitoring and evaluation.

K. Drugs, Alcohol and Workplace Violence; Compliance with Applicable Law. Consultant and its employees and agents, while performing the Services or while on City property for any reason during the Term, will adhere to the City's policies applicable to City employees regarding drugs, alcohol and workplace violence. Policies will be made available to Consultant upon request. Consultant will comply with all applicable federal, state and local laws, ordinances and regulations.

L. Non-Exclusivity. The City may engage the services of other persons for the provision of Services that could be performed under this Agreement. Consultant acknowledges that it is not entitled to perform any work except as assigned under this Agreement and is not guaranteed any amount of work.

II. COMPENSATION.

A. Amount. As compensation for performance of the Services and any other obligations under this Agreement, the City will pay Consultant for work actually performed, in accordance with the hourly rates and expenses set forth in Exhibit A, Price Proposal, a sum not to exceed **$1,599,305.00**. The compensation established by this Agreement includes all of Consultant's costs and expenses to fully perform the Services and other obligations of this Agreement. The City will not consider or be obligated to pay or reimburse Consultant any other charges or fees and Consultant will not be entitled to any additional compensation or reimbursement.

B. Changed Conditions. Consultant specifically waives any claim for additional compensation for any changed condition arising out of any one or more of the following, unless such changed condition is caused in whole or in part by acts or omissions within the City's control: (1) a physical condition of the site of an unusual nature; (2) any condition differing materially from those ordinarily encountered and generally recognized as inherent in work or services of the character and at the location provided for in this Agreement; or (3) any force majeure. As used in this paragraph, force majeure does not include impacts due to typical historical weather issues (rain, cold, snow, etc.)

C. Invoices. Consultant will submit invoices on a monthly basis, in a format approved by the City, and provide verification documentation as requested by the City. Invoices will be submitted to the City not more frequently than monthly. Invoices will identify the specific Services performed for which payment is requested, including a description of the Services, the applicable rates, any costs for which Consultant seeks reimbursement, and the total amount that Consultant claims is due.

D. Payment. The City will make payment to Consultant within thirty (30) days after receipt and approval of invoices submitted by Consultant. The City's obligation to make payment is contingent upon the Consultant's: (a) submission of a complete and accurate invoice; and (b) satisfactory performance of the Services and conditions of this Agreement. The City may withhold payment of any disputed amounts, and no interest will accrue on any amount withheld pending the resolution of the dispute.

E. IRS Form W-9. If not on file with the City, Consultant will provide to the City a current, completed Internal Revenue Service Form W-9 with or before Consultant's first invoice. Failure to submit a W-9 may result in delay or cancellation of payment under this Agreement.

F. Appropriation. This Agreement will neither constitute nor be deemed a multiple fiscal-year debt or financial obligation of the City based on the City's ability to terminate this Agreement. Consultant acknowledges that the City has made no promise to continue to budget funds beyond the current fiscal year and that the City has and will pledge adequate cash reserves on a fiscal-year by fiscal-year basis.

III. TERM AND TERMINATION.

A. Term. The term of this Agreement will be from the Effective Date until December 29, 2017 ("Term"), unless the Term is extended in by validly executed written amendment.

B. Termination.

1. Generally. The City may terminate this Agreement without cause if the City determines that such termination is in the City's best interest. The City will effect such termination by giving written notice of termination to Consultant, specifying the effective date of termination, at least fourteen (14) calendar days prior to the effective date of termination.

2. For Cause. If, through any cause, Consultant fails to fulfill its obligations under this Agreement in a timely and proper manner, violates any provision of this Agreement or violates any applicable law

("Breach"), the City may terminate this Agreement for cause immediately upon written notice of termination to Consultant. Consultant will not be relieved of liability to the City for any damages sustained by the City by virtue of any Breach, and the City may withhold payment to Consultant for the purposes of setoff until such time as the exact amount of damages due to the City from Consultant is determined. If Consultant challenges a termination for cause by the City and prevails, the termination for cause will be deemed to be a termination for convenience and will be effective fourteen (14) days from the date that the original written notice of termination for cause was given to Consultant and no further notice will be required.

3. Effect of Termination. The City will be liable to pay Consultant for Services performed as of the effective date of termination, but will not be liable to Consultant for anticipated profits. Unless otherwise instructed in writing, Consultant will immediately discontinue performance of the Services upon receipt of a notice of termination.

C. Consultant's Remedies for Breach.

1. Consultant may terminate this Agreement for non-payment of sums due under this Agreement except where non-payment is pursuant to the City's rights under this Agreement. Consultant will first provide the City written notice of Consultant's intent to terminate and allow the City ten (10) days within which to make payment.

2. Pending resolution of any material breach by the City, Consultant may, in addition to any other remedies provided by law, discontinue performance of the Services without being in breach of this Agreement.

IV. INDEMNITY.

Consultant will be liable and responsible for any and all damages to persons or property caused by or arising out of the negligent or willful actions or omissions in the performance of the Services by Consultant, its employees, agents, or other persons acting under Consultant's direction or control. Consultant will indemnify and hold harmless the City, its elected and appointed officials and its employees, agents and representatives (the "Indemnified Parties"), from any and all liability, claims, demands, actions, damages, losses, judgments, costs or expenses, including, but not limited to, attorney fees, which may be made or brought or which may result against any of the Indemnified Parties as a result or on account of the negligent, grossly negligent, willful and wanton, or intentional actions or omissions of Consultant and/or its employees, agents or representatives or other persons acting under Consultant's direction or control. Consultant will include the provisions of this Section in any such subcontracts engaged to perform any part of the Services. The provisions set forth in this Section will survive the completion of the Services and the satisfaction, expiration or termination of this Agreement.

V. INSURANCE.

A. Required Policies. Consultant will procure and keep in force the following insurance subject to the conditions below, for the duration of this Agreement:

1. Commercial General Liability Insurance. Comprehensive general liability insurance insuring against any liability for personal injury, bodily injury or death arising out of the performance of the Services with at least **One Million Dollars ($1,000,000)** each occurrence.

2. Products and Completed Operations Insurance. Products and completed operations insurance insuring against any liability for bodily injury or property damage caused by the completed Services, with a combined single limit of at least **One Million Dollars ($1,000,000)**

3. Comprehensive Automobile Liability Insurance. Comprehensive automobile liability insurance insuring against any liability for personal injury, bodily injury or death arising out of the use of motor vehicles and covering operations on or off the site of all motor vehicles controlled by Consultant that are used in connection with performance of the Services, whether the motor vehicles are owned, non-owned or hired, with a combined single limit of at least **One Million Dollars ($1,000,000)**.

4. Professional Liability Insurance. If Consultant is an architect, engineer, surveyor, appraiser, physician, attorney, accountant or other licensed professional, or if it is customary in the trade or business in which Consultant is engaged, or if the City otherwise deems it necessary, errors and omissions professional liability insurance insuring Consultant against any professional liability with a limit of at least **One Million Dollars ($1,000,000.00)** per claim and annual aggregate.

5. Other Insurance. Workers' compensation insurance (unless Consultant provides a completed Declaration of Independent Contractor Status Form) and other insurance required by applicable law.

The limits of any insurance required by this Agreement will not limit Consultant's liability.

B. Terms of Insurance.

1. Additional Insured. Except for the professional liability policy, if applicable, and workers' compensation policy, **all required insurance policies shall name the City as an additional insured** and will provide that the City, although named as an additional insured, will nevertheless be entitled to recovery under said policies for any loss occasioned to the City or its officers, employees or agents by reason of the negligence of Consultant or its officers, employees, agents, subcontractors or business invitees. The insurance policies will be for the mutual and joint benefit and protection of Consultant and the City. **Such policies will be written as primary policies not contributing to and not in excess of coverages the City may carry**.

2. Qualification; Deductible. Insurance required by this Section will be with companies qualified to do business in the State of Colorado and may provide for deductible amounts as Consultant deems reasonable for the Services, but in no event greater than **Ten Thousand Dollars ($10,000.00)**, and Consultant will be responsible for the payment of any such deductible.

3. Cancellation. No such policies will be cancelable or subject to reduction in coverage limits or other modification unless previously approved by the City in writing.

4. Coverage Type. Consultant will identify whether the type of coverage is "occurrence" or "claims made." If the type of coverage is "claims made," which at renewal Consultant changes to "occurrence," Consultant will carry a twelve (12) month tail. Consultant will not do or permit to be done anything that will invalidate the policies.

5. Evidence of Coverage. Before commencing work under this Agreement, Consultant will provide certificates of insurance policies and all necessary endorsements evidencing insurance coverage required by this Agreement. The City will not be obligated under this Agreement until Consultant provides acceptable such certificates of insurance and endorsements. If the Term extends beyond the period of coverage for any required insurance, Consultant will, at least ten (10) days before

the expiration of any such insurance coverage, provide the City with new certificates of insurance and endorsements evidencing either new or continuing coverage.

C. Subcontracts. Consultant will include the insurance requirements of this Agreement in all subcontracts. Consultant will be responsible if any subcontractor fails to procure and maintain insurance meeting the requirements of this Agreement.

VI. SALES AND USE TAX.

Unless specifically exempt, all materials provided and equipment used in the performance of Services within the City are subject to City Sales & Use Tax, including services performed on behalf of the City.

A. Consultant Responsible for Tax. Consultant is subject to the tax on all purchases, fabrication, manufacture or other production of tangible personal property used, stored, or consumed in performance of the Services.

B. Specific Industry Standard. The Specific Industry Standard for Construction and Contractors (Regulation 20-S.I.15) can be provided upon request by contacting the City's Finance Department, Sales Tax Division, at 303-289-3628, and is available on the City's website at http://www.c3gov.com/DocumentView.aspx?DID=115.

C. Equipment. Prior to or on the date Consultant locates equipment within the City to fulfill this Agreement, Consultant will file a declaration describing each anticipated piece of equipment the purchase price of which was two thousand five hundred dollars ($2,500) or greater, stating the dates on which Consultant anticipates the equipment to be located within and removed from the boundaries of the City and stating the actual or anticipated purchase price of each such anticipated piece of equipment along with any other information deemed necessary by the City. When such declared equipment is located within the City for a period of thirty (30) days or less, Consultant may include sales and use tax calculated on one-twelfth (1/12) of the purchase price of such equipment in the contract amount, in compliance with Section 20-5-T of the Commerce City Sales & Use Tax Code. If Consultant fails to declare the equipment to the City prior to or on the date Consultant locates the equipment within the City, none of the sales and use tax due on the equipment will be allowed as a contract expense.

VII. COMPLIANCE WITH C.R.S. § 8-17.5-102; VERIFICATION OF LAWFUL PRESENCE.

A. Certification. Consultant hereby certifies that, as of the date of this Agreement, it does not knowingly employ or contract with an illegal alien who will perform work under this Agreement and that Consultant will participate in the E-verify Program or Department Program as defined in C.R.S. § 8-17.5-101 in order to confirm the eligibility of all employees who are newly hired to perform work under this Agreement.

B. Pre-Employment Screening. Consultant is prohibited from using either the E-verify Program or Department Program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

C. Consultant Obligations. Consultant will not knowingly employ or contract with an illegal alien to perform work under this Agreement or contract with a subcontractor that fails to certify to Consultant that the subcontractor will not knowingly employ or contract with an illegal alien to perform work under this Agreement. If Consultant obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, Consultant will:

1. Notify the subcontractor and the City within three (3) days that Consultant has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

2. Terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to this subparagraph d the subcontractor does not stop employing or contracting with the illegal alien; provided, however, that Consultant will not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

D. Compliance with Investigation. Consultant will comply with any reasonable request by the Colorado Department of Labor and Employment (the "Department") made in the course of an investigation undertaken by the Department pursuant to Article 17.5 of Title 8, C.R.S.

E. Violation. If Consultant violates this Section, the City may terminate this Agreement for breach of contract and Consultant will be liable for actual and consequential damages to the City.

VIII. NOTICES.

Except for routine communications, written notices required under this Agreement and all other correspondence between the parties will be directed to the following and will be deemed received when hand-delivered or three (3) days after being sent by certified mail, return receipt requested:

If to the City:

2K Team, c/o Courtney Smith
City Manager's Office
City of Commerce City
7887 E. 60th Avenue
Commerce City, CO 80022

If to Consultant:

Alex Pulley, Environmental Design Practice Lead
Felsburg Holt & Ullevig, Inc.
6300 South Syracuse Way, Suite 600
Centennial, CO 80111

IX. GENERAL PROVISIONS.

A. Independent Contractor. The relationship between Consultant and the City will be as independent contractors, and neither the City nor Consultant will be deemed or constitute an employee, servant, agent, partner or joint venturer of the other. **Consultant is obligated to pay federal and state income tax on any money earned pursuant to this Agreement, and neither Consultant nor Consultant's employees, agents or representatives are entitled to workers' compensation benefits, unemployment compensation benefits, sick and annual leave benefits, medical insurance, life insurance, or pension or retirement benefits from the City.**

B. No Assignment. Consultant will not assign or transfer any rights, interests, or obligations under this Agreement without the City's prior written consent.

C. Governing Law; Jurisdiction and Venue; Recovery of Costs. This Agreement will be governed by the laws of the State of Colorado without regard to its conflicts of laws provisions. For all claims arising out of or related to this Agreement, Consultant consents to the exclusive jurisdiction of and venue in the state courts in the County of Adams, State of Colorado. Consultant waives any exception to jurisdiction because of residence, including any right of removal based on diversity of citizenship. The prevailing party in any litigation to resolve a dispute between the parties arising from this Agreement will be entitled to recover court costs and reasonable attorney fees from the non-prevailing party.

D. Governmental Immunity. No term or condition of this Agreement will be construed or interpreted as an express or implied waiver of any of the immunities, rights, benefits, protections, or other provisions of the Colorado Governmental Immunity Act, C.R.S. §§ 24-10-101, *et seq*.

E. No Third-Party Beneficiaries. Enforcement of the terms and conditions of this Agreement and all rights of action relating to such enforcement will be strictly reserved to the parties. Any person other than the City and Consultant will be deemed to be only an incidental beneficiary under this Agreement.

F. No Waiver. The waiver of any breach of a term of this Agreement, including the failure to insist on strict compliance or to enforce any right or remedy, will not be construed or deemed as a waiver of any subsequent breach of such term; any right to insist on strict compliance with any term; or any right to enforce any right or remedy with respect to that breach or any other prior, contemporaneous, or subsequent breach.

G. Rules of Construction. Neither party will be deemed to have drafted this Agreement. This Agreement has been reviewed by all parties and will be construed and interpreted according to the ordinary meaning of the words used so as to fairly accomplish the purposes and intentions of all parties. No term of this Agreement will be construed or resolved in favor of or against the City or Consultant on the basis of which party drafted the uncertain or ambiguous language. Where appropriate, the singular includes the plural and neutral words and words of any gender will include the neutral and other gender. Paragraph headings used in this Agreement are for convenience of reference and will in no way control or affect the meaning or interpretation of any provision of this Agreement.

H. Severability. A holding by a court of competent jurisdiction that any term of this Agreement is invalid or unenforceable will not invalidate or render unenforceable any other term of this Agreement.

I. Acknowledgement of Open Records Act. Consultant acknowledges that the City is a public entity subject to the Colorado Open Records Act, C.R.S. § 24-72-201, *et seq*., and this Agreement and any related documents are subject to public disclosure.

J. Authority. The parties represent and warrant that they have taken all actions necessary to legally authorize the undersigned signatories to execute this Agreement for the parties and to bind the parties to its terms. The signatories represent and warrant that each has legal authority to execute this Agreement for the party he or she represents and to bind that party to its terms.

K. Counterparts. This Agreement may be executed in any number of counterparts, each deemed to be an original, and, taken together will constitute one and the same instrument.

L. Entire Agreement; Modification; Binding Effect. This Agreement contains the entire agreement of the parties relating to the subject matter of this Agreement and, except as expressly provided, may not be modified or amended except by validly executed written agreement of the parties. All prior and contemporaneous agreements and understandings, whether oral or written, are superseded by this Agreement and are without effect to vary or alter any terms or conditions of this Agreement. This Agreement will be binding upon, and will inure to the benefit of, the parties and their respective heirs, personal representatives, successors and assigns.

[Remainder of this page intentionally left blank – signature page(s) follow(s).]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date.

CITY OF COMMERCE CITY

_____
Brian K. McBroom, City Manager

ATTEST:

_____
Laura J. Bauer, MMC, City Clerk

APPROVED AS TO FORM:

_____
Robert Sheesley, Senior Assistant City Attorney

Recommended for approval:

_____
Maria D'Andrea, Director of Public Works

FELSBURG HOLT & ULLEVIG, INC.

_____
Kurt Kellog, Principal
[**must be notarized**]

STATE OF COLORADO)
) ss.
COUNTY OF _____)

The foregoing Agreement was acknowledged before more this _____, 2015, by Kurt Kellogg, Principal of Felsburg Holt & Ullevig, Inc.

Witness my hand and official seal.

My commission expires:_____.

_____
Notary Public

EXHIBIT A

Scope of Services

The Consultant shall provide personnel and resources to complete the following Services in a proactive, professional, thorough and precise manner.

a. **Task 1 - Visioning Alternatives**

1. General Requirements

Develop up to three Second Creek Visioning Alternatives that identify the general overall area plan, recreation opportunities and connectivity, within the Second Creek area (parcels A, B, C, D, E and O). The preferred alternative must illustrate four main components:

1. **Drainage**

   Upstream drainage infrastructure under the O'Brian Canal and an improved 112th Avenue will be the key consideration in the alternatives analysis. Alternatives should consider a new elevation for 112th Avenue in relation to both the O'Brian Canal and the 100 year floodplain. Suitable drainage crossing structures should consider desired improvements to the Second Creek Detention pond (parcel D) and future realignment of the Second Creek Canal (parcels A, B &C), while considering local connectivity to and from the Recreation Center (parcel O) and neighborhoods, amenities to the east along 112th, and regional trail connectivity from the south along Second Creek. Urban Drainage criteria shall be the met with all alternatives.

2. **Roadway Alignments**

   Roadway alternatives shall consider improvements for improved 112th Avenue intersections at Highway 2, Potomac Avenue and Chambers Road, construction of a multi-modal roadway providing primary access to the proposed new Recreation Center on parcel O, and potential connections to the Second Creek Drainage Area (parcels A, B, C, D, & E).

   The intersection of 112th Avenue with Highway 2 is of particular concern. Development of this intersection shall include the following:

   - Conceptual design for a preliminary list of alternatives. Assume four (4) 112th Avenue alignment alternatives and three (3) 112th Avenue and Highway 2 Intersection alternatives.
   - Level of effort will include the following:
   - Basic typical section diagrams based on the Commerce City multi-modal cross section
   - Single line configuration exhibits for 112th Avenue alignment alternatives. Single line exhibits shall include proposed entrance road accesses to the new Recreation Center Site.
   - Plan view roll plots of 112th Avenue horizontal alignment alternatives (with Highway 2 and 112th Avenue full widths shown to scale)
   - 11 X 17 detailed layouts of the 112th Avenue and Highway 2 Intersection alternatives, including full width plan view and curb & gutter.
   - Existing ROW included on all exhibits
   - Screen initial alternatives and provided alterative screening memorandum which includes screening matrix and screening criteria.

3. **Multimodal Connectivity**

   The Second Creek Area provides the opportunity to define a new recreation focused gateway into north Commerce City. The Consultant shall consider maximizing multimodal connections to the

various existing and future recreation options, Connections should be identified and help integrate the drainage infrastructure, roadway alignments and Recreation Center development. The Consultant shall consider a range of potential connections to and from parcels A, B, C, D, E and O in an environmentally sustainable manner given the desired channel restoration improvements and wetland preservation along Second Creek.

4. Community Park

Parcels A, B & C provide the City with an area to develop a future Community Park. The Consultant shall determine activities consistent with the goals outlined in the Prairie Ways Master Plan and develop a schematic concept plan that both optimizes the usable land within parcels A, B &C, and incorporates a Second Creek channel restoration and corresponding wetland preservation/mitigation. The Conceptual Plan shall illustrate park activities, roadway alignment, drainage improvements and connectivity to the Recreation Center, regional trail network and surrounding neighborhoods.

Review of Alternatives

The City will require up to 10 business days to review the alternatives presented and determine its acceptance of the preferred alternative. If the City determines that additional alternative(s) must be examined, additional services will be negotiated and a contract modification, including schedule revision, will be prepared.

2. Deliverables

1. Hold up to three information gathering and/or design workshop meetings with key City staff.
2. Schedule and conduct up to three public meetings to gather input for alternatives. Prepare necessary exhibits for the meetings. After each public meeting, prepare a report summarizing the notification process, attendance, intent of the meeting, exhibits / handouts, and public comments.
3. Develop up to three Infrastructure Alternatives that address the key components outlined above
4. Deliver a preferred alternative including a plan graphic and summary suitable for presentation to City Management, City Council and the public.
5. Preliminary cost estimates for the preferred plan.

b. **Task 2 - Second Creek Drainage Improvements**

1. General Requirements

- This work requires providing the necessary personnel and resources to perform professional and technical project administrative, design and management duties to design the Second Creek Drainage Improvements project for the City. The team identified for this work shall remain the same for the duration of the Project unless approved by the City.
- At a minimum, the Consultant's team shall include a Professional Engineer who will be responsible for signing and sealing the construction plans and specifications as the Engineer of Record. The Professional Engineer on the team shall be a Professional Engineer registered in the State of Colorado and have a minimum of 7 years of previous experience in major drainage improvement projects, including projects requiring coordination with the U.S. Army Corps of Engineers (USACE) and their permitting processes. Other team members may be needed for various tasks.
- Coordination with FRICO, as well as other stakeholders, will also be required for any design elements that cross (over or under) the O'Brian Canal.

- Certain tasks must be completed by a Professional Land Surveyor (PLS) who is registered with the state of Colorado.
- All tasks assigned to the Consultant must be conducted by a qualified person on the team. This qualified person is a professional with the necessary education, certifications (including registrations and licenses), skills, experience, qualities, or attributes to complete a particular task.
- UDFCD's involvement in this project is important to the City of Commerce City. The City plans to continue a partnership with UDFCD to plan, design, and construct these important regional drainage improvements. Once constructed, the City will be seeking UDFCD funding support for drainageway maintenance, which will require the project to be approved by UDFCD.
- All team members shall establish and maintain effective working relationships with the City staff and other stakeholder groups including USACE, SACWSD, FRICO, UDFCD, and CDOT.

2. Project Management

- At the kick off meeting, or within two weeks of the kick off meeting, 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.
- Develop a detailed project schedule for review and approval by the City. Modifications will be made as necessary in collaboration with City staff and appropriate justification.
- Prepare agendas and lead monthly progress meetings with the City and other agencies/stakeholders as appropriate. These meetings will include a review of activities to be completed since the last meeting, problems encountered/anticipated and potential solutions, project schedule update, action items, and coordination required with other agencies.
- Complete progress meeting minutes and coordinate distribution.
- Coordinate work activities with other consultants or City staff
- Complete project closeout including delivery of all project documentation to the City
- Coordinate with the City's Communications Division and the City's communications consultant to deliver timely, correct information to the public.

3. Data Collection and Research

3.0 General

- The overall intent of this project is to restore the flows of Second Creek within City-owned property past the O'Brian and Burlington Canals and toward the South Platte River to accommodate future regional development. This includes the final design for the regional detention pond identified for parcel D.
- The City has secured grant funding for this project. Significant conditions of the grant approval include the following:
    - To be used to restore the flows of Second Creek past the O'Brian and Burlington Canals and to create a water quality pond that will provide wetland habitat, recharge groundwater and improve water quality.
    - The funds will enhance the urban drainage/infrastructure improvements consistent with the goals of the State Natural Resource Damages (NRD) program and are not dedicated to the construction of drainage features themselves.
- Detailed financial accounting will be required to document compliance with the enhancement requirement for these funds.

3.1 Engineering Research

- Schedule and facilitate an initial project kick-off meeting. All appropriate disciplines should be included in the scoping meeting. Create an invitation list, send notices, with a draft agenda

prior to the meeting, and provide meeting minutes to all those invited. As a part of the meeting, conduct an on-site inspection to familiarize the project team with the character and condition of the site.

- Using digital photography, conduct a field inventory and generate a Photo Log of the existing conditions with labels describing subject and photo orientation, including the date of the photography.

3.2 Design Surveys and Mapping

- Review prior survey information available.
- An aerial survey of nearly the entire project area has already been completed.
- The Consultant shall determine if additional survey is needed and complete a topographic field survey to obtain the detail required to design the project. Cross sections will be obtained at approximate 50' intervals delineating elevations at each edge of ditches/canals, the existing retention pond in parcel D, and other areas, as may be determined. Additional spot elevations will be obtained as necessary.
- Establish vertical control, including setting temporary and permanent benchmarks throughout the project.
- Prepare a Survey Control Diagram for the project showing existing monuments 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.
- Include any existing improvements (such as fences, structures, pads, etc.) that lie within the City's property (parcels A, B, C, D and O).

3.4 Environmental Site Assessment

- Conduct additional Phase I Environmental Site Assessment (ESA) to complete the entire site (parcels A, B, C, D and O). A Phase I ESA has already been completed for Parcel O. Include a compilation of publicly available information from a variety of sources about past and current environmental conditions. Provide a written report, including a detailed presentation of findings.
- Conduct a visual site inspection of the project site (include all of parcels A, B, C, D, and O). The purpose of the inspection is to document recognized environmental conditions. Take photographs as appropriate (already completed for Parcel O).
- Document the general site setting, such as current use(s) of the subject property and adjoining properties, and general hydro-geologic and topographic features. Provide a general description of structures and other improvements.
- Identify the following site conditions, if they are visually or physically observed, during the site inspection:
  - The quantity, type, and storage system for hazardous substances and petroleum products in connection with identified uses;
  - Tanks, containers, drums, barrels, and other systems used for storing hazardous substance and petroleum products not connected to identified uses;
  - Aboveground and underground storage tanks;
  - Pits, ponds, lagoons, and other features potentially used for storage and/or disposal of hazardous substances and petroleum product;
  - Odors, pools of liquids, stained soils and pavement, and stressed vegetation; and
  - Presence of electrical equipment potentially containing PCBs.
- Conduct a search of records and files from a variety of sources and compile information pertaining to current and past environmental conditions. This search may include the following information:
  - Topographic, land use, and environmental resource maps
  - Aerial photographs

- County and city records
- State and federal databases

- Based on the information gathered during the above tasks, compile the information and findings in a written report that contains a detailed presentation of findings, including the site description, records review, site reconnaissance, and conclusions.

3.5 Wetland Delineation

- Coordinate actions under this task with 112th Avenue and Potomac Avenue Improvements
- Review prior wetland survey information available.
- Based on the preferred alternative selected from Task 1, prepare wetland mitigation concepts.
  - Identify proposed changes to the delineated wetlands and other waters of the U.S. subject to USACE jurisdiction under Section 404 of the Clean Water Act within the subject property.
  - Conduct a pre-application meeting with USACE to (1) review the project and (2) gain some initial consensus that the proposed plan for mitigation is supportable**.**
- Conduct a field survey including completion of Routine Wetland Determination forms as specified in the 1987 USACE Wetland Delineation Manual. Map the wetland boundaries for incorporation into project base mapping.
- Submit a wetland delineation report to the City and USACE. Include a description of the wetlands and other waters of the U.S. on the project site, the methodology and rationale for determining their boundaries, and photographs of representative wetlands.
- Upon final completion and incorporation of the wetland delineation survey into the site plans, refine and document proposed impacts (both temporary and permanent), then assess and determine Clean Water Act, Section 404 permit and mitigation requirements.
- Prepare the application for an Individual or Nationwide 404 Permit and associated attachments/drawings.
- Complete wetland mitigation plans. Develop one consolidated wetland mitigation plan for stream and wetland impacts. The mitigation plan will satisfy the requirements of the 404 Permit application process and construction bid process.

3.6 Conditional Letter of Map Revision (CLOMR)

- Fill out MT-2 forms and attachments (may combine with Task 3)
- Create annotated FIRM showing new floodplain boundaries and structures
- Update FEMA FIS tables and charts
- Obtain signed notification letters from City
- Create modeling output data
- Compile CLOMR document
- Submit CLOMR document to City for approval
- Address City comments
- Obtain signatures
- Submit CLOMR document for initial FEMA review
- Updates and resubmittals

3.7 Habitat Review for Threatened and Endangered Species

- Assess the project site for the presence of habitat that may support threatened and endangered (T&E) species.
- During the fieldwork, take note of any other potential environmental impacts or conflicts. Examples of other issues are disturbance of nesting eagles, raptors and/or songbirds (protected by the Migratory Bird Act) and the presence of prairie dog towns and/or burrowing owls.

- Submit a habitat assessment report to the City for review.

3.8 Environmental Clearance Letter

- Prepare an Environmental Clearance Letter which outlines the results of the wetlands investigation, provides an opinion of the likelihood of the existence of rare or endangered species in the project area and provides the results and recommendations of the various federal and state agencies responsible for environmental regulation regarding current design requirements and any anticipated future requirements, as well as the environmental performance requirements during construction to avoid construction delays.

3.9 Cultural Resources Survey

- Perform a Cultural Resources Survey of the entire area to identify evidence of the past activities and accomplishments of people such as buildings, objects, features, locations, and/or structures with scientific, historic, and cultural value. The survey results should be used to ensure all design actions are consistent with, and comply with, applicable laws and regulations such as the National Historic Preservation Act (NHPA), the Native American Graves and Repatriation Act (NAGPRA), the American Indian Religious Freedom Act (AIRFA) American Indian Religious Freedom Act (AIRFA), the Archaeological Resources Protection Act (ARPA), the Archeological Data Preservation Act (ADPA), the Federal Records Act (FRA), and Executive Order 12898.

4. Preliminary Design

4.1 Preliminary Drainage Improvement Plans (PRELIMINARY PLAN)

- Prepare preliminary plans (to an approximate 30% complete level) to include the following items:
  - Title Sheet
  - Standard Plans List
  - Typical Sections
  - General Notes
  - Survey Control Diagram and Notes
  - Plan sheets, including (at a minimum) line drawing of existing topography, survey alignment, proposed Second Creek channel alignment, profile grades, existing ground lines, and drainage structure notes.
  - Profile sheets of the proposed Second Creek channel are to be on separate sheets from the plan sheets and are to be grouped together following the plan sheets.
  - Cross-sections of the existing ground and proposed channel (at 100-foot intervals)
  - Construction phasing typical sections and plans (schematic)
- Prepare a 30% level PRELIMINARY PLAN-level Opinion of Probable Construction Cost.
- Plans shall be designed in accordance with UDFCD criteria.

4.2 Project Coordination

- Attend regular progress meetings as needed. Monthly meetings are anticipated during the preliminary design phase.
- Prepare and distribute written minutes of meetings required for the project, including any meetings held with the City, USACE or others.
- Document time delays, scope of work variations, changes in input from entities and coordinate said documentation.
- Arrange and attend a PRELIMINARY PLAN review meeting with City Staff and other affected parties.
- Prepare and distribute minutes of the PRELIMINARY PLAN review meeting.

- Make minor revisions to plans as agreed to by the Project Manager and the City. In general, PRELIMINARY PLAN review comments will be incorporated into the plans during final design.
- Prepare a list of design recommendations to be incorporated into the final plans and submit for City review and approval.

4.3 Public Coordination

- The Consultant will be required to provide programmatic and project-level communications for release by the City.
- Create a computerized mailing list to include names and addresses provided by participants at the various public meetings and any others identified through the project.
- Prepare technical material for the public open house.
- Attend one (1) public open house meeting.
- After the public meeting, prepare a report summarizing the notification process, attendance, intent of the meeting, exhibits / handouts, and public comments.
- Preliminary Design Public Coordination includes up to four (4) meetings with individual property owners, homeowner's associations, or other interested citizens in addition to the referenced public meeting.

5. Final Design

5.1 Final Drainage Improvement Plans (FINAL DRAFT PLAN)

- Revise preliminary plans based on PRELIMINARY PLAN review comments.
- Prepare Summary of Approximate Quantities.
- Prepare quantity tabulations for individual items.
- Prepare detail sheets for various miscellaneous project components.
- Prepare Project Special Provisions and Standard Special Provisions.
- Provide the City with electronic copies of all project drawings in AutoCAD. A hard copy of the itemized list of contents will be provided. The list will be a table indicating plan sheet number, plan sheet description, and the AutoCAD file name for each sheet.
- Prepare final draft-level Opinion of Probable Construction Cost based on the Summary of Approximate Quantities. Since NRD Recovery Fund Money is to be used for various project enhancement elements, pay items and costs for these items will be broken out in the project opinion of probable construction cost.

5.2 Final Drainage Plans

- Revise grading details, and other drainage details based on PRELIMINARY PLAN review comments.
- Design permanent BMP's to meet the City's MS-4 requirements for water quality
- 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 Erosion Control Plans shall accommodate and address the differing requirements for each proposed phase of construction.
- Prepare a Phase III Drainage report in accordance with the requirements of the Urban Drainage Design and Technical Criteria Manual.

5.3 Final Design Coordination

- Attend regular progress meetings as appropriate. Bi-weekly meetings are anticipated during the final design phase.
- Prepare and distribute written minutes of meetings required for the project, including any meetings held with the City, USACE, and jurisdictional entities.

- Arrange and attend FINAL DRAFT PLAN meeting with City staff and other affected parties.
- Prepare and distribute minutes of the FINAL DRAFT PLAN meeting.
- Make minor plan revisions after the FINAL DRAFT PLAN meeting. Submit one set of plans and technical specifications with comments incorporated, to the City for approval.
- Submit one record set of approved Plans and Specifications signed and stamped with the Professional Engineer's seal.

5.8 Construction Storm Water Discharge and Dewatering Permits

- Complete the application form for the Storm Water Discharge Permit for Construction as required by the Colorado Department of Health and Environment (CDPHE) General Permit Application, Storm Water Discharges Associated with Construction Activity.
- Prepare a Storm Water Management Plan (SWMP) to accompany the CDPHE Storm Water Discharge Permit application. The SWMP will identify temporary sediment and erosion controls that are to be used during construction for different contaminants.
- 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. The Project Special Provisions prepared by the Consultant will include a requirement that the Contractor transfer the Storm Water Discharge Permit to its company before construction begins, and that it amends the Permit during construction if the Contractor's operations are inconsistent with any portion of the Permit.
- The City will submit the application, pay the required fees, and obtain the Permit. Once the Permit is obtained, the City will provide a copy to the Consultant for inclusion in the Bid Package.
- Prepare a Tabulation of "Temporary Erosion & Sediment Controls) (i.e. temporary BMP's) based on the final "Erosion & Sediment Control Plan" sheets and include the quantities in the Bid Schedule.
- If it is determined that a Dewatering Permit is needed for this project, complete the application form and prepare the supporting documentation as required by the CDPHE Construction Dewatering – Industrial Wastewater Discharge Application. The City will pay for the filing fee for this permit.
- The Project Special Provisions will include a requirement that the Contractor transfer the Dewatering Permit to its company before construction begins, and that it amend the permit during construction if the Contractor's operations are inconsistent with any portion of the permit.

6. Bid Services

- Prepare the Bid Package, including bid forms, Project Special Provisions, Standard Special Provisions, which will comprise the Contract Documents. Standard City and CDOT forms and formats will be used for the Contract Documents.
- Attend the Pre-Bid meeting and prepare the meeting minutes.
- Prepare addenda to the bid plans and specifications during the advertisement period.
- Attend the Bid Opening and prepare a bid tabulation for the project.

7. Additional Project Requirements

- Provide transportation to and from the Project as needed using a field vehicle fitted with appropriate flashing traffic warning devices
- Provide equipment necessary for completing work functions of field inspection, measurements, documentation, record keeping, communications and personal safety.

c. **Task 3 - 112th Avenue Improvements**

1. General Requirements

- This work requires providing the necessary personnel and resources to perform professional and technical project administrative, design and management duties to design a roadway and utility project for the City. The team identified for this work shall remain the same for the duration of the Project unless approved by the City.
- At a minimum, the Consultant's team shall include a Professional Engineer who will be responsible for signing and sealing the construction plans and specifications as the Engineer of Record. The Professional Engineer on the team shall be a Professional Engineer registered in the State of Colorado and have a minimum of 7 years of previous experience in road and bridge design. Other team members may be needed for various tasks.
- Certain tasks must be completed by a Professional Land Surveyor (PLS) who is registered with the state of Colorado.
- All tasks assigned to the Consultant must be conducted by a qualified person on the team. This qualified person is a professional with the necessary education, certifications (including registrations and licenses), skills, experience, qualities, or attributes to complete a particular task.
- All team members shall establish and maintain effective working relationships with the City staff and other stakeholder groups including USACE, SACWSD, FRICO, and CDOT.

2. Project Management

- At the kick off meeting, or within two weeks of the kick off meeting, 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.
- Develop a detailed project schedule for review and approval by the City. Modifications will be made as necessary in collaboration with City staff and appropriate justification.
- Prepare agendas and lead monthly progress meetings with the City and other agencies/stakeholders as appropriate. These meetings will include a review of activities to be completed since the last meeting, problems encountered/anticipated and potential solutions, project schedule update, action items, and coordination required with other agencies.
- Complete progress meeting minutes and coordinate distribution.
- Coordinate work activities with other consultants or City staff
- Complete project closeout including delivery of all project documentation to the City
- Coordinate with the City's Communications Division and the City's communications consultant to deliver timely, correct information to the public.

3. Data Collection and Research

3.0 General

- 112th Avenue will be constructed as a Multimodal Arterial from Colorado Highway 2 to Chambers Road. The entire project length is approximately 1.27 miles. The road design must allow for the crossing of Second Creek flows to accommodate the Second Creek Drainage Improvements. Wet and dry utilities will be installed in the 112th Avenue ROW to accommodate the new recreation center and the planned developments in the immediate vicinity.
- New LED street lights, matching those along Tower Road, will be installed along the length of the project.

3.1 Engineering Research

- Schedule and facilitate an initial project kick-off meeting. All appropriate disciplines should be included in the scoping meeting. Create an invitation list, send notices, with a draft agenda prior to the meeting, and provide meeting minutes to all those invited. As a part of the meeting, conduct an on-site inspection to familiarize the project team with the character and condition of the site.
- Using digital photography, conduct a field inventory and generate a Photo Log of the existing roadways with labels describing subject and photo orientation, including the date of the photography.

3.2 Design Surveys and Mapping

- Review prior survey information available.
- Surveys shall be conducted in accordance with the CDOT Survey Manual.
- Complete a topographic field survey to obtain the detail required to design the project. 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.
- Right of Entry. Prepare right of entry request letters to the property owners immediately adjacent to the corridor where access is required for the purpose of surveying. Letters will be mailed to the owners of each property. Should there be no response to the letter, attempt to contact the individual at the residence or business to request access to the property for the purpose of surveying.
- Establish horizontal and vertical control for the project. Establish horizontal control lines for intersecting streets.
- Establish vertical control, including setting temporary and permanent benchmarks throughout the project.
- Prepare a Survey Control Diagram for the project showing existing monuments 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.
- 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 form the surface. Utilities within the ROW must be marked and the marked utilities must be subsequently 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.
  - Culvert sizes, materials and invert elevations.
  - 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.
- Survey geotechnical test hole locations and show them on the project plans.

3.3 Right of Way Research and Ownership Map

- Establish the location of the 112th Avenue ROW from record information, so that the need for acquisition of property can be accurately determined.
- Prepare and submit an Ownership Map reflecting the ROW limits based on record information, without purchasing title commitments. Number ownerships alternately as they occur along the centerline from south to north or west to east, in the same direction as the stationing. Show current recorded names of owners, their addresses, and their Property Identification Number (PIN) per the County Assessor.
- Potentially affected owners where additional ROW or permanent easements may be required are as follows:
  - Catellus, Turnberry Filing No. 1, Parcel ID: 172112101050 (land south of parcel P)
  - Catellus, Turnberry Filing No. 1, Parcel ID: 172307201001 (land south of parcel O)
  - Owner: 111489 Corporation, Inc., Parcel ID: 172101000016 (Pioneer Sand Company)
- Prepare up to three (3) ROW information packets on properties where additional ROW and/or permanent easements are anticipated to be required for the project. Information packets will include:
  - Description of parcel.
  - Easements within the parcel.
  - Summary of Liens and Encumbrances.
  - Exceptions to the Title Commitment.

3.4 Environmental Site Assessment

- Review prior Environmental Site Assessment (ESA) information available.
- Conduct a Phase I ESA for the corridor. Include interviews with the property owners, realtor/developer, key site manager, and occupants, if applicable, and a compilation of publicly available information from a variety of sources about past and current environmental conditions. Provide a written report, including a detailed presentation of findings.
- Conduct a visual site inspection of the corridor. The purpose of the inspection is to document recognized environmental conditions. Take photographs as appropriate.
- Document the general site setting, such as current use(s) of the subject property and adjoining properties, and general hydro-geologic and topographic features. Provide a general description of structures and other improvements.
- Identify the following site conditions, if they are visually or physically observed, during the site inspection:
  - The quantity, type, and storage system for hazardous substances and petroleum products in connection with identified uses;
  - Tanks, containers, drums, barrels, and other systems used for storing hazardous substance and petroleum products not connected to identified uses;
  - Aboveground and underground storage tanks;
  - Pits, ponds, lagoons, and other features potentially used for storage and/or disposal of hazardous substances and petroleum product;
  - Odors, pools of liquids, stained soils and pavement, and stressed vegetation; and
  - Presence of electrical equipment potentially containing PCBs.
- Conduct a search of records and files from a variety of sources and compile information pertaining to current and past environmental conditions. This search may include the following information:
  - Topographic, land use, and environmental resource maps
  - Aerial photographs
  - County and city records
  - State and federal databases
- Based on the information gathered during the above tasks, compile the information and

findings in a written report that contains a detailed presentation of findings, including the site description, records review, site reconnaissance, and conclusions.

3.5 Wetland Delineation

- Coordinate actions under this task with Second Creek Drainage and Potomac Avenue Improvements.
- Review prior wetland survey information available.
- Based on the preferred alternative selected from Task 1, prepare wetland mitigation concepts.
- Identify proposed changes to the delineated wetlands and other waters of the U.S. subject to USACE jurisdiction under Section 404 of the Clean Water Act within the subject property.
- Conduct a pre-application meeting with USACE to (1) review the project and (2) gain some initial consensus that the proposed plan for mitigation is supportable.
- Conduct a field survey including completion of Routine Wetland Determination forms as specified in the 1987 USACE Wetland Delineation Manual. Map the wetland boundaries for incorporation into project base mapping.
- Submit a wetland delineation report to the City and USACE. Include a description of the wetlands and other waters of the U.S. on the project site, the methodology and rationale for determining their boundaries, and photographs of representative wetlands.
- Upon final completion and incorporation of the wetland delineation survey into the site plans, refine and document proposed impacts (both temporary and permanent), then assess and determine Clean Water Act, Section 404 permit and mitigation requirements.
- Prepare the application for an Individual or Nationwide 404 Permit and associated attachments/drawings.
- Complete wetland mitigation plans. Develop one consolidated wetland mitigation plan for stream and wetland impacts. The mitigation plan will satisfy the requirements of the 404 Permit application process and construction bid process.

3.6 Conditional Letter of Map Revision (CLOMR)

- Fill out MT-2 forms and attachments (may combine with Task 2)
- Create annotated FIRM showing new floodplain boundaries and structures
- Update FEMA FIS tables and charts
- Obtain signed notification letters from City
- Create modeling output data
- Compile CLOMR document
- Submit CLOMR document to City for approval
- Address City comments
- Obtain signatures
- Submit CLOMR document for initial FEMA review
- Updates and resubmittals

3.7 Habitat Review for Threatened and Endangered Species

- Assess the project site for the presence of habitat that may support T&E species.
- During the fieldwork, take note of any other potential environmental impacts or conflicts. Examples of other issues are disturbance of nesting eagles, raptors and/or songbirds (protected by the Migratory Bird Act) and the presence of prairie dog towns and/or burrowing owls.
- Submit a habitat assessment report to the City for review.

3.8 Environmental Clearance Letter

- Prepare an Environmental Clearance Letter which outlines the results of the wetlands investigation, provides an opinion of the likelihood of the existence of rare or endangered species in the project area and provides the results and recommendations of the various federal

and state agencies responsible for environmental regulation regarding current design requirements and any anticipated future requirements, as well as the environmental performance requirements during construction to avoid construction delays.

3.9 Utility Potholing

- Using non-destructive techniques, locate underground utilities on the project site.
- Survey the pothole locations.
- 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.
- The number of potholes excavated will be dependent on locations, timing and budget amount.

3.10 Geotechnical Design

- Using available maps and utility location services, locate utilities prior to drilling test holes. The Design Engineer, with assistance from the Geotechnical Engineer, will lay out proposed locations for test holes.
- Drill test holes to a depth of 5 to 10 feet or more, depending on final grades. Test holes will be drilled on approximately 500-foot centers to obtain a soil profile for pavement design and excavation conditions. At each of these test holes, measure groundwater depths and 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
- Prepare soil log sheets to illustrate the changes in geology and soil types in the project corridor.
- Prepare a Geology Map of the project limits to illustrate the changes in geology and soil types on the project.
- Conduct a life cycle cost analysis of asphalt pavement versus concrete pavement. Perform analysis with unit and maintenance costs from the industry. Determine present worth and annual costs in accordance with the procedures in the CDOT Pavement Design Guide. Recommend the pavement structure and provide a basis for the recommendation.
- Review test results and make recommendations for the pavement thickness required for either asphalt or concrete pavement and special subgrade treatments, if required, using the MGPEC criteria & process.
- Prepare and submit a 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 Geotechnical Report.

3.11 Traffic Analysis

- Analyze existing and future traffic operations using a micro-simulation software to evaluate the operations of the roadway and report the opening day and future levels of service, lane volumes, turning movements at all intersections, and delay.
- Analyze the proposed project design with the traffic projection data. Recommend the appropriate geometry (i.e. number of lanes, auxiliary lanes, storage lengths, weaving distance, etc.)
- Develop the total ESAL for the design life and utilize this information for the pavement

design.

- Review crash data (to be provided by the City) to determine safety improvements which should be incorporated into the project.

4. Preliminary Design

4.1 Preliminary Roadway Plans (PRELIMINARY PLAN)

- Prepare a "Memorandum of Roadway Design" outlining the roadway design criteria recommended by the Engineer for the project.
- 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, including line drawing of existing topography, survey alignment, proposed alignments, profile grades, existing ground lines, existing ROW, drainage structure notes, top and toe of slopes, proposed ROW, proposed easements, location of soil borings, and existing property owners' names and addresses, Assessor Property Identification Numbers (PIN) numbers, and project parcel numbers.
  - Profile sheets 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
  - Cross-sections of the existing ground and proposed roadway template (at 100-foot intervals)
  - Water and Sanitary sewer plans
  - Storm sewer plans and any special drainage plan sheets
  - Underground electric plans
  - Construction phasing typical sections and plans (schematic)
- Preliminary striping will be shown on the preliminary roadway plan sheets. Signing plans will not be developed until final design.
- Design all proposed raised medians with catch curb and gutter, e.g. Type 2–Section I-B (catch).
- Prepare a PRELIMINARY PLAN-level Opinion of Probable Construction Cost. If intergovernmental agreements (IGA's) 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.

4.2 Preliminary Utility Coordination

- Send copies of preliminary plans to utility companies to request verification of existing and proposed utility locations shown on the plans.
- 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.
- Before the PRELIMINARY PLAN meeting, meet with the affected utility companies regarding the project's impacts to their utilities.
- At the start of the PRELIMINARY PLAN 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.

- A "Memorandum of Utilities Design" 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.

4.3 Preliminary Construction Phasing Plans

- Review design plans to determine a logical approach for staged construction.
- 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.
- Prepare typical section (schematic) showing detours and work areas within the project ROW for various construction phases.
- Prepare preliminary construction cost estimate for construction traffic control items for inclusion in the PRELIMINARY PLAN -level construction cost estimate for the project.

4.4 Preliminary Drainage Plans

- Review past drainage reports and other available drainage-related information, (Master Plans, Flood Plain Studies, etc.).
- Establish drainage basin boundaries and characteristics for minor cross drainages.
- Conduct field reconnaissance to verify drainage basin boundaries for cross drainage and storm sewer design.
- Establish drainage basin boundaries and characteristics for minor cross drainages.
- Establish locations of required drainage structures. Check capacity of existing drainage structures. Identify drainage structures to be replaced for capacity or condition issues.
- Establish a plan for meeting the City's MS-4 requirements for permanent water quality with regard to the proposed roadway improvements.
- Using the Urban Drainage Design and Technical Criteria Manual and the CDOT Design Guide, analyze flows on pavements and determine storm sewer and inlet requirements along the project.
- Using the Urban Drainage Design and Technical Criteria Manual and the CDOT Design Guide, analyze each cross culvert structure and determine opening sizes to accommodate design discharges.
- Prepare a Phase II Drainage report in accordance with the requirements of the Urban Drainage Design and Technical Criteria Manual.
- Include drainage items in the preliminary construction cost estimate.

4.5 Signing and Striping Plans

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

4.6 Ownership Map

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

4.7 Project Coordination

- Attend regular progress meetings as needed. Monthly meetings are anticipated during the preliminary design phase.
- Prepare and distribute written minutes of meetings required for the project, including any meetings held with the City, utility companies, and jurisdictional entities.

- Document time delays, scope of work variations, changes in input from entities and coordinate said documentation.
- Arrange and attend a PRELIMINARY PLAN meeting with City Staff and other affected parties.
- Prepare and distribute minutes of the PRELIMINARY PLAN meeting.
- Make minor revisions to plans as agreed to by the Project Manager and the City. In general, PRELIMINARY PLAN review comments will be incorporated into the plans during final design.
- Prepare a list of design recommendations to be incorporated into the final plans, and submit as an Appendix to the "Memorandum of Roadway Design".

4.8 Public Coordination

- The Consultant will be required to provide programmatic and project-level communications for release by the City.
- Create a computerized mailing list to include names and addresses provided by participants at the various public meetings and any others identified through the project.
- Prepare technical material for the public open house.
- Attend one (1) public open house meeting.
- After the public meeting, prepare a report summarizing the notification process, attendance, intent of the meeting, exhibits / handouts, and public comments.
- Preliminary Design Public Coordination includes up to four (4) meetings with individual property owners, homeowner's associations, or other interested citizens in addition to the referenced public meeting.

4.9 Street Lighting Plans

- Analyze street lighting options which use LED fixtures.
- Prepare preliminary lighting plan sheets.
- Include lighting items in the preliminary construction cost estimate.

4.10 Preliminary Landscape and Irrigation Plans

- Prepare landscape planting designs for raised median areas using xeriscaping materials that require very limited water. Only drip irrigation lines should be used.
- Prepare preliminary planting plans and typical sections. Plans will show planting beds and types of plants to be used.
- Prepare 30% complete irrigation plans to show water tap locations and mains, of sufficient detail to prepare cost estimates.
- Prepare illustrations of proposed roadway with preliminary landscape concepts for use at the public meeting.
- Prepare preliminary cost estimates for landscape and irrigation features.

4.11 Preliminary Structure Plans

- Conduct a field investigation of any existing structures.
- Obtain data on the existing structure. Collect information such as existing plans, inspection reports, structure ratings, and shop drawings.
- Determine the structure length, width, and span configurations that satisfy all horizontal and vertical clearance criteria.
- Determine the structure layout alternatives such as precast and cast-in-place concrete and steel superstructures and determine the spans and depths for each.
- Determine the foundation alternatives. Consider piles, drilled caissons, spread footings and mechanically stabilized earth foundations based on geologic information.
- Develop a staged construction phasing plan, as necessary for traffic control and detours.
- Compute preliminary quantities and preliminary cost estimates as necessary to evaluate the structure alternatives that, in addition to costs, encompass all aspects of the project's objectives.

Based on the established criteria, select the optimum structure layout and type, as applicable, for recommendation to the City.

- Complete a Structure Selection Report to document and obtain approval for the structure preliminary design.
- Prepare PRELIMINARY PLAN.
- Prepare preliminary cost estimates for all structure elements.

5. Final Design

5.1 Final Roadway Plans (FINAL DRAFT PLAN)

- Revise preliminary roadway plans based on PRELIMINARY PLAN review comments. **The total roadway design shall be divided into two separate sets of drawings:**
    - One set of drawings shall contain that portion of the roadway that lies outside the floodplain, in order that the City may proceed with this portion of the construction prior to the completion of any USACE permit actions.
    - A second set of drawings shall contain that portion of the roadway that lies within the floodplain.
    - Appropriate matchline information shall be provided in each set of drawings.
    - Consultant may recommend alternate packaging for City consideration and approval.
- Prepare Summary of Approximate Quantities.
- Prepare quantity tabulations for individual items.
- Prepare detail sheets for various miscellaneous project components.
- Prepare Project Special Provisions and Standard Special Provisions (e.g. technical specifications) to augment the Colorado Department of Transportation's Standard Specifications for Road and Bridge Construction.
- Provide the City with electronic copies of all project drawings in AutoCAD. A hard copy of the itemized list of contents will be provided. The list will be a table indicating plan sheet number, plan sheet description, and the AutoCAD file name for each sheet.
- Prepare FINAL DRAFT PLAN-level Opinion of Probable Construction Cost based on the Summary of Approximate Quantities. If intergovernmental agreements (IGA's) 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.

5.2 Final Utility Coordination

- Once the additional services for utility potholing are performed and any conflict locations are verified, 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 the City's Contractor
    - Confirm the duration or expected completion date of the utility work and the advance notification time requirements.
- Conduct field reviews with utility owners as required.
- Revise plans to reflect input from utility owners at the Utility Coordination Meeting and field reviews.
- 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.

- Submit the letters to the utility companies requesting their signature and return of the letters.
- Prepare a utility specification listing all utility owners adjacent to the project and the provisions of the Utility Clearance Letters.

5.3 Construction Traffic Control Plans and Quantities

- Prepare detailed "suggested" construction traffic control plans showing suggested construction phasing, work zone locations, temporary striping, construction signing and other construction traffic control devices.
- Prepare "suggested" traffic control and phasing notes sheet. Include an outline of salient construction tasks to be completed in each phase.
- Prepare a tabulation of Suggested Traffic Control Devices, and a tabulation of Contractor Traffic Control Pay Items.

5.4 Final Drainage Plans

- Revise grading details, and other drainage details based on PRELIMINARY PLAN review comments.
- Prepare storm sewer profiles.
- Design permanent BMP's to meet the City's MS-4 requirements for water quality for the proposed roadway improvements.
- 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 Erosion Control Plans shall accommodate and address the differing requirements for each proposed phase of construction.
- Prepare a Phase III Drainage report in accordance with the requirements of the Urban Drainage Design and Technical Criteria Manual.

5.5 Final Traffic Signal, Signing and Striping Plans

- Prepare signing and striping plans. Plans will show striping layout for permanent roadway striping, existing and proposed sign locations, and proposed sign sizes and codes.
- Prepare tabulation of signs.
- Prepare tabulation of pavement markings.
- Prepare plan sheets with intersection condition diagrams and required signal design. Prepare intersection plan sheet for each intersection which will have a traffic signal designed/modified for it.

5.6 Right-of-Way Plans, Legal Descriptions and Exhibits

The ROW descriptions and exhibits prepared under this section will be final documents to be used by the City to acquire the ROW and easements necessary to complete the construction of the project.

The following legal descriptions and exhibits are anticipated for the listed properties along 112th Avenue:

- Catellus, Turnberry Filing No. 1, Parcel ID: 172112101050 (land south of parcel P)
  1 - ROW acquisition/Permanent Easement
  1 - Temporary Construction Easement

- Catellus, Turnberry Filing No. 1, Parcel ID: 172307201001 (land south of parcel O)
  1 - ROW acquisition/Permanent Easement
  1 - Temporary Construction Easement

- Owner: 111489 Corporation, Inc., Parcel ID: 172101000016 (Pioneer Sand Company)
  1 - ROW acquisition/Permanent Easement

1 - Temporary Construction Easement

- Other (to be determined)
  4 - Temporary Construction Easements

- Calculate areas of parcels and easements to be acquired.
- Write legal descriptions and prepare exhibit maps of parcels that are to be acquired. 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.
- Prepare a ROW 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).
- Update the previously prepared Ownership Map with the following information superimposed: existing ROW, prescriptive ROW, proposed ROW, permanent/slope easements, construction easements, and drainage easements (if any). Typical ROW dimensions will be provided if/where ROW 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.
- Prepare a ROW "Clearance Letter" that summarizes the acquisitions and easements information determined by the Engineer to be necessary to construct the project.

5.7 Final Design Coordination

- Attend regular progress meetings as appropriate. Bi-weekly meetings are anticipated during the final design phase.
- Prepare and distribute written minutes of meetings required for the project, including any meetings held with the City, utility companies, and jurisdictional entities.
- Arrange and attend a FINAL DRAFT PLAN meeting with City staff and other affected parties.
- Prepare and distribute minutes of the FINAL DRAFT PLAN meeting.
- Make minor plan revisions after the FINAL DRAFT PLAN. Submit one set of plans and technical specifications with comments incorporated to the City for approval.
- Submit one record set of approved Plans and Specifications signed and stamped with the Professional Engineer's seal.

5.8 Construction Storm Water Discharge and Dewatering Permits

- Complete the application form for the Storm Water Discharge Permit for Construction as required by the Colorado Department of Health and Environment (CDPHE) General Permit Application, Storm Water Discharges Associated with Construction Activity.
- Prepare a Storm Water Management Plan (SWMP) to accompany the CDPHE Storm Water Discharge Permit application. The SWMP will identify temporary sediment and erosion controls that are to be used during construction for different contaminants.
- 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. The Project Special Provisions prepared by the Consultant will include a requirement that the Contractor transfer the Storm Water Discharge Permit to its company before construction begins, and that it amends the Permit during construction if the Contractor's operations are inconsistent with any portion of the Permit.
- The City will submit the application, pay the required fees, and obtain the Permit. Once the Permit is obtained, the City will provide a copy to the Consultant for inclusion in the Bid Package.
- Prepare a Tabulation of "Temporary Erosion & Sediment Controls) (i.e. temporary BMP's) based on the final "Erosion & Sediment Control Plan" sheets and include the quantities in the Bid

Schedule.

- If it is determined that a Dewatering Permit is needed for this project, complete the application form and prepare the supporting documentation as required by the CDPHE Construction Dewatering – Industrial Wastewater Discharge Application. The City will pay for the filing fee for this permit.
- The Project Special Provisions will include a requirement that the Contractor transfer the Dewatering Permit to its company before construction begins, and that it amend the permit during construction if the Contractor's operations are inconsistent with any portion of the permit.

5.9 Street Lighting Plans

- Prepare final street lighting plan sheets.
- Prepare tabulation of street lights.

5.10 Final Landscape and Irrigation Plans

- Finalize selection of specific plant materials and seed mixtures.
- Prepare irrigation details and specifications.
- Prepare final layout plans showing the proposed landscape elements.
- Prepare plant list, plant counts and landscape cost estimates and planting details.
- Preparation of irrigation construction plans.
- Preparation of tabulation of planting quantities and irrigation quantities.

5.11 Final Structure Plans

- Perform the structural analysis. Provide superstructure design, substructure design and document the design with notes, detail notes, and computer outputs.
- Perform final design check from design and detail notes.
- Independent design, detail and quantity check.
- Prepare and provide the Structural Plans and Specifications, including any revisions identified during the independent check.
- Prepare and provide the bridge rating and field packages.

6. Bid Services

- Prepare the Bid Packages, including bid forms, Project Special Provisions, Standard Special Provisions, which will comprise the Contract Documents. Standard City and CDOT forms and formats will be used for the Contract Documents.
- Attend the Pre-Bid meeting and prepare the meeting minutes.
- Prepare addenda to the bid plans and specifications during the advertisement period.
- Attend the Bid Opening and prepare a bid tabulation for the project.

7. Additional Project Requirements

- Provide transportation to and from the Project as needed using a field vehicle fitted with appropriate flashing traffic warning devices
- Provide equipment necessary for completing work functions of field inspection, measurements, documentation, record keeping, communications and personal safety.

d. **Task 4 - Potomac Avenue Improvements**

1. General Requirements

- This work requires providing the necessary personnel and resources to perform professional and technical project administrative, design and management duties to design a roadway and utility project for the City. The team identified for this work shall remain the same for the duration of the Project unless approved by the City.
- At a minimum, the Consultant's team shall include a Professional Engineer who will be responsible for signing and sealing the construction plans and specifications as the Engineer of Record. The Professional Engineer on the team shall be a Professional Engineer registered in the State of Colorado and have a minimum of 7 years of previous experience in road and bridge design. Other team members may be needed for various tasks.
- Certain tasks must be completed by a Professional Land Surveyor (PLS) who is registered with the state of Colorado.
- All tasks assigned to the Consultant must be conducted by a qualified person on the team. This qualified person is a professional with the necessary education, certifications (including registrations and licenses), skills, experience, qualities, or attributes to complete a particular task.
- All team members shall establish and maintain effective working relationships with the City staff and other stakeholder groups including USACE, SACWSD, Denver, and CDOT.

2. Project Management

- At the kick off meeting, or within two weeks of the kick off meeting, 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.
- Develop a detailed project schedule for review and approval by the City. Modifications will be made as necessary in collaboration with City staff and appropriate justification.
- Prepare agendas and lead monthly progress meetings with the City and other agencies/stakeholders as appropriate. These meetings will include a review of activities to be completed since the last meeting, problems encountered/anticipated and potential solutions, project schedule update, action items, and coordination required with other agencies.
- Complete progress meeting minutes and coordinate distribution.
- Coordinate work activities with other consultants or City staff
- Complete project closeout including delivery of all project documentation to the City
- Coordinate with the City's Communications Division and the City's communications consultant to deliver timely, correct information to the public.

3. Data Collection and Research

3.0 General

- Potomac Avenue will be constructed as a Multimodal Arterial from 108th Avenue (end of paved section) to 112th Avenue. Design and construction of Potomac Avenue north of 112th Avenue to Colorado Highway 2 will depend on the alternative selected under Task 1. Wet and dry utilities will be installed in the Potomac Avenue ROW to accommodate the new recreation center and the planned developments in the immediate vicinity.
- New street lights will be installed along the length of the project.
- A new waterline will be installed in Potomac Avenue from 108th Avenue to 112th Avenue by others. The design of remaining utilities under this contract shall be coordinated with the waterline design.

3.1 Engineering Research

- Schedule and facilitate an initial project kick-off meeting. All appropriate disciplines should

be included in the scoping meeting. Create an invitation list, send notices, with a draft agenda prior to the meeting, and provide meeting minutes to all those invited. As a part of the meeting, conduct an on-site inspection to familiarize the project team with the character and condition of the site.

- Using digital photography, conduct a field inventory and generate a Photo Log of the existing roadways with labels describing subject and photo orientation, including the date of the photography.

3.2 Design Surveys and Mapping

- Surveys shall be conducted in accordance with the CDOT Survey Manual.
- Complete a topographic field survey to obtain the detail required to design the project. 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.
- Right of Entry. Prepare right of entry request letters to the property owners immediately adjacent to the corridor where access is required for the purpose of surveying. Letters will be mailed to the owners of each property. Should there be no response to the letter, attempt to contact the individual at the residence or business to request access to the property for the purpose of surveying.
- Establish horizontal and vertical control for the project. Establish horizontal control lines for intersecting streets.
- Establish vertical control, including setting temporary and permanent benchmarks throughout the project.
- Prepare a Survey Control Diagram for the project showing existing monuments 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.
- 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 form the surface. Utilities within the ROW must be marked and the marked utilities must be subsequently 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.
  - Culvert sizes, materials and invert elevations.
  - 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.
- Survey geotechnical test hole locations and show them on the project plans.

3.3 Right of Way Research and Ownership Map

- Establish the location of the Potomac Avenue ROW from record information, so that the need for acquisition of property can be accurately determined.

- Prepare and submit an Ownership Map reflecting the ROW limits based on record information, without purchasing title commitments. Number ownerships alternately as they occur along the centerline from south to north or west to east, in the same direction as the stationing. Show current recorded names of owners, their addresses, and their Property Identification Number (PIN) per the County Assessor.
- Potentially affected owners where additional ROW or permanent easements may be required are as follows:

    - Catellus, Turnberry Filing No. 1, Parcel ID: 172112101050 (land south of parcel P)
    - Catellus, Turnberry Filing No. 1, Parcel ID: 172307201001 (land south of parcel O)
    - Owner: 111489 Corporation, Inc., Parcel ID: 172101000016 (Pioneer Sand Company)

- Prepare up to three (3) ROW information packets on properties where additional ROW and/or permanent easements are anticipated to be required for the project. Information packets will include:
    - Description of parcel.
    - Easements within the parcel.
    - Summary of Liens and Encumbrances.
    - Exceptions to the Title Commitment.

3.4 Environmental Site Assessment

- Review prior Environmental Site Assessment (ESA) information available.
- Conduct a Phase I ESA for the corridor. Include interviews with the property owners, realtor/developer, key site manager, and occupants, if applicable, and a compilation of publicly available information from a variety of sources about past and current environmental conditions. Provide a written report, including a detailed presentation of findings.
- Conduct a visual site inspection of the corridor. The purpose of the inspection is to document recognized environmental conditions. Take photographs as appropriate.
- Document the general site setting, such as current use(s) of the subject property and adjoining properties, and general hydro-geologic and topographic features. Provide a general description of structures and other improvements.
- Identify the following site conditions, if they are visually or physically observed, during the site inspection:
    - The quantity, type, and storage system for hazardous substances and petroleum products in connection with identified uses;
    - Tanks, containers, drums, barrels, and other systems used for storing hazardous substance and petroleum products not connected to identified uses;
    - Aboveground and underground storage tanks;
    - Pits, ponds, lagoons, and other features potentially used for storage and/or disposal of hazardous substances and petroleum product;
    - Odors, pools of liquids, stained soils and pavement, and stressed vegetation; and
    - Presence of electrical equipment potentially containing PCBs.
- Conduct a search of records and files from a variety of sources and compile information pertaining to current and past environmental conditions. This search may include the following information:
    - Topographic, land use, and environmental resource maps
    - Aerial photographs
    - County and city records
    - State and federal databases

- Based on the information gathered during the above tasks, compile the information and findings in a written report that contains a detailed presentation of findings, including the site description, records review, site reconnaissance, and conclusions.

3.5 Wetland Delineation

- Coordinate actions under this task with Second Creek Drainage and 112th Avenue Improvements.
- Review prior wetland survey information available.
- Based on the preferred alternative selected from Task 1, prepare wetland mitigation concepts.
- Identify proposed changes to the delineated wetlands and other waters of the U.S. subject to USACE jurisdiction under Section 404 of the Clean Water Act within the subject property.
    - Conduct a pre-application meeting with USACE to (1) review the project and (2) gain some initial consensus that the proposed plan for mitigation is supportable**.**
- Conduct a field survey including completion of Routine Wetland Determination forms as specified in the 1987 USACE Wetland Delineation Manual. Map the wetland boundaries for incorporation into project base mapping.
- Submit a wetland delineation report to the City and USACE. Include a description of the wetlands and other waters of the U.S. on the project site, the methodology and rationale for determining their boundaries, and photographs of representative wetlands.
- Upon final completion and incorporation of the wetland delineation survey into the site plans, refine and document proposed impacts (both temporary and permanent), then assess and determine Clean Water Act, Section 404 permit and mitigation requirements.
- Prepare the application for an Individual or Nationwide 404 Permit and associated attachments/drawings.
- Complete wetland mitigation plans. Develop one consolidated wetland mitigation plan for stream and wetland impacts. The mitigation plan will satisfy the requirements of the 404 Permit application process and construction bid process.

3.6 Habitat Review for Threatened and Endangered Species

- Assess the project site for the presence of habitat that may support T&E species.
- During the fieldwork, take note of any other potential environmental impacts or conflicts. Examples of other issues are disturbance of nesting eagles, raptors and/or songbirds (protected by the Migratory Bird Act) and the presence of prairie dog towns and/or burrowing owls.
- Submit a habitat assessment report to the City for review.

3.7 Environmental Clearance Letter

- Prepare an Environmental Clearance Letter which outlines the results of the wetlands investigation, provides an opinion of the likelihood of the existence of rare or endangered species in the project area and provides the results and recommendations of the various federal and state agencies responsible for environmental regulation regarding current design requirements and any anticipated future requirements, as well as the environmental performance requirements during construction to avoid construction delays.

3.8 Utility Potholing

- Using non-destructive techniques, locate underground utilities on the project site.
- Survey the pothole locations.
- 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.
- The number of potholes excavated will be dependent on locations, timing and budget amount.

3.9 Geotechnical Design

- Using available maps and utility location services, locate utilities prior to drilling test holes. The Design Engineer, with assistance from the Geotechnical Engineer, will lay out proposed locations for test holes.
- Drill test holes to a depth of 5 to 10 feet or more, depending on final grades. Test holes will be drilled on approximately 500-foot centers to obtain a soil profile for pavement design and excavation conditions. At each of these test holes, measure groundwater depths and 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
- Prepare soil log sheets to illustrate the changes in geology and soil types in the project corridor.
- Prepare a Geology Map of the project limits to illustrate the changes in geology and soil types on the project.
- Conduct a life cycle cost analysis of asphalt pavement versus concrete pavement. Perform analysis with unit and maintenance costs from the industry. Determine present worth and annual costs in accordance with the procedures in the CDOT Pavement Design Guide. Recommend the pavement structure and provide a basis for the recommendation.
- Review test results and make recommendations for the pavement thickness required for either asphalt or concrete pavement and special subgrade treatments, if required, using the MGPEC criteria & process.
- Prepare and submit a 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 Geotechnical Report.

3.10 Traffic Analysis

- Analyze existing and future traffic operations using a micro-simulation software to evaluate the operations of the roadway and report the opening day and future levels of service, lane volumes, turning movements at all intersections, and delay.
- Analyze the proposed project design with the traffic projection data. Recommend the appropriate geometry (i.e. number of lanes, auxiliary lanes, storage lengths, weaving distance, etc.)
- Develop the total ESAL for the design life and utilize this information for the pavement design.
- Review crash data (to be provided by the City) to determine safety improvements which will be incorporated into the project.

4. Preliminary Design

4.1 Preliminary Roadway Plans (PRELIMINARY PLAN)

- Prepare a "Memorandum of Roadway Design" outlining the roadway design criteria recommended by the Engineer for the project.
- 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, including line drawing of existing topography, survey alignment, proposed alignments, profile grades, existing ground lines, existing ROW, drainage structure notes, top and toe of slopes, proposed ROW, proposed easements, location of soil borings, and existing property owners' names and addresses, Assessor Property Identification Numbers (PIN) numbers, and project parcel numbers.
- Profile sheets 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
- Cross-sections of the existing ground and proposed roadway template (at 100-foot intervals)
- Storm sewer plans and any special drainage plan sheets
- Underground electric plans
- Construction phasing typical sections and plans (schematic)

- Preliminary striping will be shown on the preliminary roadway plan sheets. Signing plans will not be developed until final design.
- Design all proposed raised medians with catch curb and gutter, e.g. Type 2–Section I-B (catch).
- Prepare a PRELIMINARY PLAN-level Opinion of Probable Construction Cost. If intergovernmental agreements (IGA's) 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.

4.2 Preliminary Utility Coordination

- Send copies of preliminary plans to utility companies to request verification of existing and proposed utility locations shown on the plans.
- 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.
- Before the PRELIMINARY PLAN meeting, meet with the affected utility companies regarding the project's impacts to their utilities.
- At the start of the PRELIMINARY PLAN 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.
- A "Memorandum of Utilities Design" 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.

4.3 Preliminary Construction Phasing Plans

- Review design plans to determine a logical approach for staged construction.
- 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.
- Prepare typical section (schematic) showing detours and work areas within the project ROW for various construction phases.

- Prepare preliminary construction cost estimate for construction traffic control items for inclusion in the PRELIMINARY PLAN-level construction cost estimate for the project.

4.4 Preliminary Drainage Plans

- Review past drainage reports and other available drainage-related information, (Master Plans, Flood Plain Studies, etc.).
- Establish drainage basin boundaries and characteristics for minor cross drainages.
- Conduct field reconnaissance to verify drainage basin boundaries for cross drainage and storm sewer design.
- Establish drainage basin boundaries and characteristics for minor cross drainages.
- Establish locations of required drainage structures. Check capacity of existing drainage structures. Identify drainage structures to be replaced for capacity or condition issues.
- Establish a plan for meeting the City's MS-4 requirements for permanent water quality with regard to the proposed roadway improvements.
- Using the Urban Drainage Design and Technical Criteria Manual and the CDOT Design Guide, analyze flows on pavements and determine storm sewer and inlet requirements along the project.
- Using the Urban Drainage Design and Technical Criteria Manual and the CDOT Design Guide, analyze each cross culvert structure and determine opening sizes to accommodate design discharges.
- Prepare a Phase II Drainage report in accordance with the requirements of the Urban Drainage Design and Technical Criteria Manual.
- Include drainage items in the preliminary construction cost estimate.

4.5 Signing and Striping Plans

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

4.6 Ownership Map

- Show the approximate limits of the proposed ROW and easements on the PRELIMINARY PLAN sheets, and the Ownership Map.
- Prepare an exhibit for the public open house meeting that shows the existing property lines, the proposed ROW limits, existing topographic features, and proposed curb, gutter and sidewalks.
- Prepare the final legal descriptions and exhibits (ROW, permanent and temporary construction easements) for properties required for the project.

4.7 Project Coordination

- Attend regular progress meetings as needed. Monthly meetings are anticipated during the preliminary design phase.
- Prepare and distribute written minutes of meetings required for the project, including any meetings held with the City, utility companies, and jurisdictional entities.
- Document time delays, scope of work variations, changes in input from entities and coordinate said documentation.
- Arrange and attend a PRELIMINARY PLAN meeting with City Staff and other affected parties.
- Prepare and distribute minutes of the PRELIMINARY PLAN meeting.
- Make minor revisions to plans as agreed to by the Project Manager and the City. In general, PRELIMINARY PLAN review comments will be incorporated into the plans during final design.
- Prepare a list of design recommendations to be incorporated into the final plans, and submit as an Appendix to the "Memorandum of Roadway Design".

4.8 Public Coordination

- The Consultant will be required to provide programmatic and project-level communications for

release by the City.

- Create a computerized mailing list to include names and addresses provided by participants at the various public meetings and any others identified through the project.
- Prepare technical material for the public open house.
- Attend one (1) public open house meeting.
- After the public meeting, prepare a report summarizing the notification process, attendance, intent of the meeting, exhibits / handouts, and public comments.
- Preliminary Design Public Coordination includes up to four (4) meetings with individual property owners, homeowner's associations, or other interested citizens in addition to the referenced public meeting.

4.9 Street Lighting Plans

- Analyze street lighting options which use standard luminaires (Xcel or United Power).
- Prepare preliminary lighting plan sheets.
- Include lighting items in the preliminary construction cost estimate.

4.10 Preliminary Landscape and Irrigation Plans

- Prepare landscape planting designs for raised median areas using xeriscaping materials that require very limited water. Only drip irrigation lines should be used.
- Prepare preliminary planting plans and typical sections. Plans will show planting beds and types of plants to be used.
- Prepare 30% complete irrigation plans to show water tap locations and mains, of sufficient detail to prepare cost estimates.
- Prepare illustrations of proposed roadway with preliminary landscape concepts for use at the public meeting.
- Prepare preliminary cost estimates for landscape and irrigation features.

4.11 Preliminary Structure Plans

- Conduct a field investigation of any existing structures.
- Obtain data on the existing structure. Collect information such as existing plans, inspection reports, structure ratings, and shop drawings.
- Determine the structure length, width, and span configurations that satisfy all horizontal and vertical clearance criteria.
- Determine the structure layout alternatives such as precast and cast-in-place concrete and steel superstructures and determine the spans and depths for each.
- Determine the foundation alternatives. Consider piles, drilled caissons, spread footings and mechanically stabilized earth foundations based on geologic information.
- Develop a staged construction phasing plan, as necessary for traffic control and detours.
- Compute preliminary quantities and preliminary cost estimates as necessary to evaluate the structure alternatives that, in addition to costs, encompass all aspects of the project's objectives. Based on the established criteria, select the optimum structure layout and type, as applicable, for recommendation to the City.
- Complete a Structure Selection Report to document and obtain approval for the structure preliminary design.
- Prepare PRELIMINARY PLAN.
- Prepare preliminary cost estimates for all structure elements.

5. Final Design

5.1 Final Roadway Plans (FINAL DRAFT PLAN)

- Revise preliminary roadway plans based on PRELIMINARY PLAN review comments.
- Prepare Summary of Approximate Quantities.
- Prepare quantity tabulations for individual items.
- Prepare detail sheets for various miscellaneous project components.
- Prepare Project Special Provisions and Standard Special Provisions (e.g. technical specifications) to augment the Colorado Department of Transportation's Standard Specifications for Road and Bridge Construction.
- Provide the City with electronic copies of all project drawings in AutoCAD. A hard copy of the itemized list of contents will be provided. The list will be a table indicating plan sheet number, plan sheet description, and the AutoCAD file name for each sheet.
- Prepare FINAL DRAFT PLAN-level Opinion of Probable Construction Cost based on the Summary of Approximate Quantities. If intergovernmental agreements (IGA's) 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.

5.2 Final Utility Coordination

- Once the additional services for utility potholing are performed and any conflict locations are verified, 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 the City's Contractor
  - Confirm the duration or expected completion date of the utility work and the advance notification time requirements.
- Conduct field reviews with utility owners as required.
- Revise plans to reflect input from utility owners at the Utility Coordination Meeting and field reviews.
- 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.
- Submit the letters to the utility companies requesting their signature and return of the letters.
- Prepare a utility specification listing all utility owners adjacent to the project and the provisions of the Utility Clearance Letters.

5.3 Construction Traffic Control Plans and Quantities

- Prepare detailed "suggested" construction traffic control plans showing suggested construction phasing, work zone locations, temporary striping, construction signing and other construction traffic control devices.
- Prepare "suggested" traffic control and phasing notes sheet. Include an outline of salient construction tasks to be completed in each phase.
- Prepare a tabulation of Suggested Traffic Control Devices, and a tabulation of Contractor Traffic Control Pay Items.

5.4 Final Drainage Plans

- Revise grading details, and other drainage details based on PRELIMINARY PLAN review comments.
- Prepare storm sewer profiles.
- Design permanent BMP's to meet the City's MS-4 requirements for water quality for the proposed roadway improvements.

- 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 Erosion Control Plans shall accommodate and address the differing requirements for each proposed phase of construction.
- Prepare a Phase III Drainage report in accordance with the requirements of the Urban Drainage Design and Technical Criteria Manual.

5.5 Final Traffic Signal, Signing and Striping Plans

- Prepare signing and striping plans. Plans will show striping layout for permanent roadway striping, existing and proposed sign locations, and proposed sign sizes and codes.
- Prepare tabulation of signs.
- Prepare tabulation of pavement markings.
- Prepare plan sheets with intersection condition diagrams and required signal design. Prepare intersection plan sheet for each intersection which will have a traffic signal designed/modified for it.

5.6 Right-of-Way Plans, Legal Descriptions and Exhibits

The ROW descriptions and exhibits prepared under this section will be final documents to be used by the City to acquire the ROW and easements necessary to complete the construction of the project.

The following legal descriptions and exhibits are anticipated for the listed properties along Potomac Avenue:

- Catellus, Turnberry Filing No. 1, Parcel ID: 172112101050 (land south of parcel P)
  1 - ROW acquisition/Permanent Easement
  1 - Temporary Construction Easement

- Catellus, Turnberry Filing No. 1, Parcel ID: 172307201001 (land south of parcel O)
  1 - ROW acquisition/Permanent Easement
  1 - Temporary Construction Easement

- Owner: 111489 Corporation, Inc., Parcel ID: 172101000016 (Pioneer Sand Company)
  1 - ROW acquisition/Permanent Easement
  1 - Temporary Construction Easement

- Other (to be determined)
  4 - Temporary Construction Easements

- Calculate areas of parcels and easements to be acquired.
- Write legal descriptions and prepare exhibit maps of parcels that are to be acquired. 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.
- Prepare a ROW 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).
- Update the previously prepared Ownership Map with the following information superimposed: existing ROW, prescriptive ROW, proposed ROW, permanent/slope easements, construction easements, and drainage easements (if any). Typical ROW dimensions will be provided if/where ROW 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.

- Prepare a ROW "Clearance Letter" that summarizes the acquisitions and easements information determined by the Engineer to be necessary to construct the project.

5.7 Final Design Coordination

- Attend regular progress meetings as appropriate. Bi-weekly meetings are anticipated during the final design phase.
- Prepare and distribute written minutes of meetings required for the project, including any meetings held with the City, utility companies, and jurisdictional entities.
- Arrange and attend a FINAL DRAFT PLAN meeting with City staff and other affected parties.
- Prepare and distribute minutes of the FINAL DRAFT PLAN meeting.
- Make minor plan revisions after the FINAL DRAFT PLAN. Submit one set of plans and technical specifications with comments incorporated to the City for approval.
- Submit one record set of approved Plans and Specifications signed and stamped with the Professional Engineer's seal.

5.8 Construction Storm Water Discharge and Dewatering Permits

- Complete the application form for the Storm Water Discharge Permit for Construction as required by the Colorado Department of Health and Environment (CDPHE) General Permit Application, Storm Water Discharges Associated with Construction Activity.
- Prepare a Storm Water Management Plan (SWMP) to accompany the CDPHE Storm Water Discharge Permit application. The SWMP will identify temporary sediment and erosion controls that are to be used during construction for different contaminants.
- 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. The Project Special Provisions prepared by the Consultant will include a requirement that the Contractor transfer the Storm Water Discharge Permit to its company before construction begins, and that it amends the Permit during construction if the Contractor's operations are inconsistent with any portion of the Permit.
- The City will submit the application, pay the required fees, and obtain the Permit. Once the Permit is obtained, the City will provide a copy to the Consultant for inclusion in the Bid Package.
- Prepare a Tabulation of "Temporary Erosion & Sediment Controls) (i.e. temporary BMP's) based on the final "Erosion & Sediment Control Plan" sheets and include the quantities in the Bid Schedule.
- If it is determined that a Dewatering Permit is needed for this project, complete the application form and prepare the supporting documentation as required by the CDPHE Construction Dewatering – Industrial Wastewater Discharge Application. The City will pay for the filing fee for this permit.
- The Project Special Provisions will include a requirement that the Contractor transfer the Dewatering Permit to its company before construction begins, and that it amend the permit during construction if the Contractor's operations are inconsistent with any portion of the permit.

5.9 Street Lighting Plans

- Prepare final street lighting plan sheets.
- Prepare tabulation of street lights.

5.10 Final Landscape and Irrigation Plans

- Finalize selection of specific plant materials and seed mixtures.
- Prepare irrigation details and specifications.
- Prepare final layout plans showing the proposed landscape elements.
- Prepare plant list, plant counts and landscape cost estimates and planting details.

- Preparation of irrigation construction plans.
- Preparation of tabulation of planting quantities and irrigation quantities.

5.11 Final Structure Plans

- Perform the structural analysis. Provide superstructure design, substructure design and document the design with notes, detail notes, and computer outputs.
- Perform final design check from design and detail notes.
- Independent design, detail and quantity check.
- Prepare and provide the Structural Plans and Specifications, including any revisions identified during the independent check.
- Prepare and provide the bridge rating and field packages.

6. Bid Services

- Prepare the Bid Package, including bid forms, Project Special Provisions, Standard Special Provisions, which will comprise the Contract Documents. Standard City and CDOT forms and formats will be used for the Contract Documents.
- Attend the Pre-Bid meeting and prepare the meeting minutes.
- Prepare addenda to the bid plans and specifications during the advertisement period.
- Attend the Bid Opening and prepare a bid tabulation for the project.

7. Additional Project Requirements

- Provide transportation to and from the Project as needed using a field vehicle fitted with appropriate flashing traffic warning devices
- Provide equipment necessary for completing work functions of field inspection, measurements, documentation, record keeping, communications and personal safety.

EXHIBIT B

Task 1--Visioning

Labor Category	Hours	Billing Rate	Fee
Alex Pulley Senior Enviornmental Scientist Project Manager	**56**	**$170.00**	**$9,520.00**
Kurt Kellogg Principal Principal-in-charge	**20**	**$190.00**	**$3,800.00**
Bruce Curtis Associate Water Resources Lead	**44**	**$180.00**	**$7,920.00**
Jeanne Sharps Associate Roadway Design Lead	**40**	**$180.00**	**$7,200.00**
Keith Hidalgo Environmental Scientist III Permitting Lead	**28**	**$115.00**	**$3,220.00**
Chris Fasching Principal Traffic Lead	**20**	**$210.00**	**$4,200.00**
Kelly Leadbetter Planner II Public Involvement Lead	**80**	**$100.00**	**$8,000.00**
Andrew Myerkord Engineer IV	**84**	**$135.00**	**$11,340.00**
Ashley Ornella Engineer II	**260**	**$90.00**	**$23,400.00**
Dave Lampe Engineer V	**40**	**$150.00**	**$6,000.00**
Chad Twiss Engineer IV	**44**	**$135.00**	**$5,940.00**
Kendra Gabbert Engineer III	**164**	**$115.00**	**$18,860.00**
Jake Lloyd Environmental Scientist II	**8**	**$100.00**	**$800.00**
Tyler Spurlock Engineer II	**72**	**$90.00**	**$6,480.00**
Administrative	**32**	**$80.00**	**$2,560.00**

Scott Reed--CoreCivil, Inc. Sr. Project Manager	**0**	**$185.00**	**$0.00**
David Bacci, PE--Core Civil Engineer	**0**	**$130.00**	**$0.00**
Jake Fischer--Core Engineer Intern	**0**	**$90.00**	**$0.00**
David Neill--Core Sr. Designer	**0**	**$120.00**	**$0.00**
Tom Girard, PLS--Core Project Surveyor	**0**	**$120.00**	**$0.00**
Jeff Anton--Core Survey Technician	**0**	**$90.00**	**$0.00**
Field Surveyor--Core 2-Man Crew	**0**	**$150.00**	**$0.00**
Field Surveyor--Core 1-Man Crew	**0**	**$110.00**	**$0.00**
Nicole Horst--Wenk Associates Principal	**120**	**$125.00**	**$15,000.00**
Tyrel Sturgeon--Wenk Associates Associate	**300**	**$95.00**	**$28,500.00**
Principal Clanton Associates	**0**	**$150.00**	**$0.00**
Jim Noll, PE--Kumar & Associates Sr. Geotech Engineer	**0**	**$170.00**	**$0.00**
Carey L. Jones--Kumar & Associates Construction Services Supervisor	**0**	**$100.00**	**$0.00**
Subtotal			$162,740.00

Task 2--Second Creek Drainage

Labor Category	Hours	Billing Rate	Fee
Alex Pulley Senior Enviornmental Scientist Project Manager	**216**	**$170.00**	**$36,720.00**
Kurt Kellogg Principal Principal-in-charge	**8**	**$190.00**	**$1,520.00**
Bruce Curtis Associate Water Resources Lead	**192**	**$180.00**	**$34,560.00**

Jeanne Sharps Associate Roadway Design Lead	**0**	**$180.00**	**$0.00**
Keith Hidalgo Environmental Scientist III Permitting Lead	**116**	**$115.00**	**$13,340.00**
Chris Fasching Principal Traffic Lead	**0**	**$210.00**	**$0.00**
Kelly Leadbetter Planner II Public Involvement Lead	**72**	**$100.00**	**$7,200.00**
Andrew Myerkord Engineer IV	**0**	**$135.00**	**$0.00**
Ashley Ornella Engineer II	**980**	**$90.00**	**$88,200.00**
Dave Lampe Engineer V	**304**	**$150.00**	**$45,600.00**
Chad Twiss Engineer IV	**252**	**$135.00**	**$34,020.00**
Kendra Gabbert Engineer III	**184**	**$115.00**	**$21,160.00**
Jake Lloyd Environmental Scientist II	**140**	**$100.00**	**$14,000.00**
Tyler Spurlock Engineer II	**48**	**$90.00**	**$4,320.00**
Administrative	**44**	**$80.00**	**$3,520.00**
Scott Reed--CoreCivil, Inc. Sr. Project Manager	**10**	**$185.00**	**$1,850.00**
David Bacci, PE--Core Civil Engineer	**0**	**$130.00**	**$0.00**
Jake Fischer--Core Engineer Intern	**0**	**$90.00**	**$0.00**
David Neill--Core Sr. Designer	**0**	**$120.00**	**$0.00**
Tom Girard, PLS--Core Project Surveyor	**36**	**$120.00**	**$4,320.00**
Jeff Anton--Core Survey Technician	**70**	**$90.00**	**$6,300.00**
Field Surveyor--Core 2-Man Crew	**90**	**$150.00**	**$13,500.00**

Field Surveyor--Core 1-Man Crew	**0**	**$110.00**	**$0.00**
Nicole Horst--Wenk Associates Principal	**84**	**$125.00**	**$10,500.00**
Tyrel Sturgeon--Wenk Associates Associate	**202**	**$95.00**	**$19,190.00**
Principal Clanton Associates	**0**	**$150.00**	**$0.00**
Jim Noll, PE--Kumar & Associates Sr. Geotech Engineer	**24**	**$170.00**	**$4,080.00**
Carey L. Jones--Kumar & Associates Construction Services Supervisor	**48**	**$100.00**	**$4,800.00**
Subtotal			$368,700.00

Task 3--112th Avenue Design

Labor Category	Hours	Billing Rate	Fee
Alex Pulley Senior Enviornmental Scientist Project Manager	**296**	**$170.00**	**$50,320.00**
Kurt Kellogg I Principal Principal-in-charge	**32**	**$190.00**	**$6,080.00**
Bruce Curtis Associate Water Resources Lead	**64**	**$180.00**	**$11,520.00**
Jeanne Sharps Associate Roadway Design Lead	**284**	**$180.00**	**$51,120.00**
Keith Hidalgo Environmental Scientist III Permitting Lead	**124**	**$115.00**	**$14,260.00**
Chris Fasching Principal II Traffic Lead	**8**	**$210.00**	**$1,680.00**
Kelly Leadbetter Transportation Planner II Public Involvement Lead	**72**	**$100.00**	**$7,200.00**
Andrew Myerkord Engineer IV	**368**	**$135.00**	**$49,680.00**

Ashley Ornella Engineer I	**1326**	**$90.00**	**$119,340.00**
Dave Lampe Engineer V	**399**	**$150.00**	**$59,850.00**
Chad Twiss Engineer IV	**348**	**$135.00**	**$46,980.00**
Kendra Gabbert Engineer III	**560**	**$115.00**	**$64,400.00**
Jake Lloyd Environmental Scientist II	**88**	**$100.00**	**$8,800.00**
Tyler Spurlock Engineer I	**140**	**$90.00**	**$12,600.00**
Administrative	**24**	**$80.00**	**$1,920.00**
Scott Reed--CoreCivil, Inc. Sr. Project Manager	**125**	**$185.00**	**$23,125.00**
David Bacci, PE--Core Civil Engineer	**106**	**$130.00**	**$13,780.00**
Jake Fischer--Core Engineer Intern	**76**	**$90.00**	**$6,840.00**
David Neill--Core Sr. Designer	**96**	**$120.00**	**$11,520.00**
Tom Girard, PLS--Core Project Surveyor	**119**	**$120.00**	**$14,280.00**
Jeff Anton--Core Survey Technician	**238**	**$90.00**	**$21,420.00**
Field Surveyor--Core 2-Man Crew	**100**	**$150.00**	**$15,000.00**
Field Surveyor--Core 1-Man Crew	**0**	**$110.00**	**$0.00**
Nicole Horst--Wenk Associates Principal	**64**	**$125.00**	**$8,000.00**
Tyrel Sturgeon--Wenk Associates Associate	**247**	**$95.00**	**$23,465.00**
Principal Clanton Associates	**168**	**$150.00**	**$25,200.00**
Jim Noll, PE--Kumar & Associates Sr. Geotech Engineer	**16**	**$170.00**	**$2,720.00**
Carey L. Jones--Kumar & Associates Construction Services Supervisor	**24**	**$100.00**	**$2,400.00**
Subtotal			$673,500.00

Task 4--Potomac Street Design

Labor Category	Hours	Billing Rate	Fee
Alex Pulley Senior Enviornmental Scientist Project Manager	**284**	**$170.00**	**$48,280.00**
Kurt Kellogg Principal Principal-in-charge	**48**	**$190.00**	**$9,120.00**
Bruce Curtis Associate Water Resources Lead	**72**	**$180.00**	**$12,960.00**
Jeanne Sharps Associate Roadway Design Lead	**156**	**$180.00**	**$28,080.00**
Keith Hidalgo Environmental Scientist III Permitting Lead	**104**	**$115.00**	**$11,960.00**
Chris Fasching Principal Traffic Lead	**8**	**$210.00**	**$1,680.00**
Kelly Leadbetter Planner II Public Involvement Lead	**72**	**$100.00**	**$7,200.00**
Andrew Myerkord Engineer IV	**130**	**$135.00**	**$17,550.00**
Ashley Ornella Engineer II	**639**	**$90.00**	**$57,510.00**
Dave Lampe Engineer V	**49**	**$150.00**	**$7,350.00**
Chad Twiss Engineer IV	**180**	**$135.00**	**$24,300.00**
Kendra Gabbert Engineer III	**184**	**$115.00**	**$21,160.00**
Jake Lloyd Environmental Scientist II	**136**	**$100.00**	**$13,600.00**
Tyler Spurlock Engineer II	**80**	**$90.00**	**$7,200.00**
Administrative	**34**	**$80.00**	**$2,720.00**
Scott Reed--CoreCivil, Inc. Sr. Project Manager	**71**	**$185.00**	**$13,135.00**

David Bacci, PE--Core Civil Engineer	**31**	**$130.00**	**$4,030.00**
Jake Fischer--Core Engineer Intern	**4**	**$90.00**	**$360.00**
David Neill--Core Sr. Designer	**0**	**$120.00**	**$0.00**
Tom Girard, PLS--Core Project Surveyor	**78**	**$120.00**	**$9,360.00**
Jeff Anton--Core Survey Technician	**174**	**$90.00**	**$15,660.00**
Field Surveyor--Core 2-Man Crew	**40**	**$150.00**	**$6,000.00**
Field Surveyor--Core 1-Man Crew	**0**	**$110.00**	**$0.00**
Nicole Horst--Wenk Associates Principal	**64**	**$125.00**	**$8,000.00**
Tyrel Sturgeon--Wenk Associates Associate	**196**	**$95.00**	**$18,620.00**
Principal Clanton Associates	**168**	**$150.00**	**$25,200.00**
Jim Noll, PE--Kumar & Associates Sr. Geotech Engineer	**16**	**$170.00**	**$2,720.00**
Carey L. Jones--Kumar & Associates Construction Services Supervisor	**24**	**$100.00**	**$2,400.00**
Subtotal			$376,155.00

Total labor	$1,581,095.00

Expenses

Itemized Expenses			**Amount**
Travel	2000	$0.575 / mile	$1,150.00
Printing	10000	$0.19 / print	$1,900.00
Geotechnical Drill Rig/Sample Analysis			$12,160.00
SATISFI Database--HazMat			$1,000.00
Other Direct Costs (mailings, etc.)			$2,000.00
Total Expenses			$18,210.00

Total Proposal Price	$1,599,305.00

Commerce CITY

7887 East 60th Avenue
Commerce City, Colorado 80022
Phone (303) 289-3627
Fax (303) 289-3661
www.c3gov.com

EQUIPMENT DECLARATION

Company:_____ Date: _____

Address: _____

State and Zip: _____

Note: Construction equipment that was not otherwise subjected to the Commerce City sales or use tax, and which is located within the boundaries of the City of Commerce City for a period of thirty (30) consecutive days or less, will be subjected to the use tax of Commerce City on a prorated basis if the equipment is declared in advance. **If the equipment is not declared in advance or is located within the City for <u>over</u> thirty (30) consecutive days, the amount of tax due will be calculated on 100% of the original purchase price.**

The tax on Declared Equipment will be calculated using the following method: **The original purchase price of the equipment will be multiplied by a fraction, the numerator of which is one (1) and the denominator which is twelve (12); and the result will be multiplied by four and one-half percent (4.5%) to determine the amount of Use Tax payable to the City**. Example: thirty (30) days or less = $^{1}/_{12}$ x purchase price of the equipment x 4.5%.

In order for a taxpayer to qualify for this exemption, the taxpayer must comply with the procedures described in Section 29-2-109(4) of the Colorado Revised Statutes by completing this form and remitting the tax due to the Finance Department of the City of Commerce City. **If the taxpayer does not file this form the exemption herein provided for will be deemed waived by the taxpayer.**

A separate declaration form must be used for each individual piece of equipment.

<u>Construction Equipment Declared:</u>

Description of Equipment and/or VIN number: _____

Purchase price of above equipment and date purchased: _____

Date equipment will enter the City: _____

Date equipment will be removed from the City: _____