

**TOWN OF CASTLE ROCK
SERVICES AGREEMENT**
(East Plum Creek Reach 5 Phase II Stabilization Engineering Design)

DATE: _____, 2019.

PARTIES: **TOWN OF CASTLE ROCK**, a Colorado municipal corporation, 100 N. Wilcox Street, Castle Rock, Colorado 80104 (“Town”).

OLSSON, INC., a Nebraska corporation, 1525 Raleigh Street, Suite 400, Denver, Colorado 80204 (“Consultant”).

RECITALS:

- A. The Town issued a Request for Proposals from qualified firms with expertise in engineering design services.
- B. Consultant timely submitted its proposal.
- C. Town wishes to engage Consultant to provide the services more fully described in the following Agreement and Exhibits.

TERMS:

Section 1. Scope of Services. Consultant shall provide engineering design services related the East Plum Creek Reach 5 Phase II Stabilization Project, in accordance with the Consultant’s proposal attached as ***Exhibit 1*** (“Services”).

Section 2. Payment. Consultant shall invoice Town for the Services rendered upon the completion of each task in accordance with the rate and fee schedule identified in ***Exhibit 1***. Town shall pay such invoices within 30 days receipt of such invoice. In no event shall the cumulative payment to Consultant exceed \$261,284, unless authorized in writing by Town.

Section 3. Completion. Consultant shall commence the Services upon execution of this Agreement and complete the Services not later than December 31, 2020, or upon completion of the Project. Consultant shall devote adequate resources to assure timely completion of the Services. Consultant shall perform the Services under this Agreement using a standard of care, skill and diligence ordinarily used by reputable professionals performing under circumstances similar to those required by this Agreement.

Town shall have the right to terminate this Agreement at any time with 30 days written notice to Consultant. The Town’s only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination. Consultant shall turn over all work product produced up to the date of termination.

Section 4. Subcontractors. Consultant may utilize subcontractors to assist with specialized works as necessary to complete the Services. Consultant will submit any proposed subcontractor and the description of their services to the Town for approval.

Section 5. Assignment. This Agreement shall not be assigned by Consultant without the written consent of the Town.

Section 6. Notice. Any notice required or permitted by this Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the first page of this Agreement, or at such other address as has been previously furnished in writing to the other party or parties. Such notice shall be deemed given when deposited in the United States mail.

Section 7. Prohibition Against Employing Illegal Aliens. Consultant shall not knowingly employ or contract with an illegal alien to perform work under this contract. Consultant shall not enter into a contract with a subcontractor that fails to certify to the Consultant that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this contract.

Consultant has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under the public contract for services through participation in either the E-verify program or the Department program, as defined in C.R.S. §§ 8-17.5-101(3.3) and 8-17.5-101(3.7), respectively. Consultant is prohibited from using the E-verify program or Department program procedures to undertake pre-employment screening of job applicants while this contract is being performed.

If Consultant obtains actual knowledge that a subcontractor performing work under this Agreement for services knowingly employs or contracts with an illegal alien, Consultant shall:

A. Notify the subcontractor and the Town within three days that the Consultant has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

B. Terminate the subcontract with the subcontractor if within three days of receiving notice required pursuant to this paragraph the subcontractor does not stop employee or contracting with the illegal alien; except that the Consultant shall not terminate the contract with the subcontractor if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

Consultant shall comply with any reasonable request by the Department of Labor and Employment made in the course of an investigation that the Department is undertaking pursuant to the authority established in C.R.S. §8-17.5-102(5).

If Consultant violates a provision of this Agreement required pursuant to C.R.S. §8-17.5-102, Town may terminate the Agreement for breach of contract. If the Agreement is so terminated, the Consultant shall be liable for actual and consequential damages to the Town.

Section 8. Insurance. Consultant agrees to procure and maintain, at his own cost, the following policy or policies of insurance. Consultant shall not be relieved of any liability, claims, demands or other obligations assumed pursuant to this Agreement by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

A. Consultant shall procure and maintain, and shall cause each subcontractor of the Consultant to procure and maintain a policy with the minimum insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to the Town. All coverage shall be continuously maintained from the date of commencement of services hereunder. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

1. Workers Compensation insurance to cover obligations imposed by the Workers Compensation Act of Colorado and any other applicable laws for any employee engaged in the performance of Work under this contract, and Employer's Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-policy limit, and FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-each employee.

2. Comprehensive General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall contain a severability of interests provision.

3. Comprehensive Automobile Liability Insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate with respect to each of Consultant's owned, hired and/or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision.

4. Professional Liability insurance with minimum limits of ONE MILLION DOLLARS (\$1,000,000) per claim and ONE MILLION DOLLARS (\$1,000,000) aggregate.

B. The policies required above, except Workers' Compensation insurance, Employers' Liability insurance and Professional Liability insurance shall be endorsed to include the Town, its officers and employees, as an additional insured. Every policy required above, except Workers' Compensation and Professional Liability insurance, if applicable, shall be primary insurance, and any insurance carried by the Town, its officers, or its employees, shall be excess and not contributory insurance to that provided by Consultant. The additional insured endorsement for the Comprehensive General Liability insurance required

above shall not contain any exclusion for bodily injury or property damage arising from completed operations. The Consultant shall be solely responsible for any deductible losses under each of the policies required above.

C. Certificates of insurance shall be completed by Consultant's insurance agent as evidence that policies providing the required coverage, conditions and minimum limits are in full force and effect, and shall be subject to review and approval by the Town. Each certificate shall identify the Project and shall provide that coverage afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to the Town. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. The Town reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

D. Failure on the part of Consultant to procure or maintain policies providing the required coverage, conditions, and minimum limits shall constitute a material breach of contract upon which at the Town's discretion may procure or renew any such policy or any extended connection therewith, and all monies so paid by the Town shall be repaid by Consultant to the Town upon demand, or the Town may offset the cost of the premiums against any monies due to Consultant from the Town.

E. The parties understand and agree that the Town is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently \$387,000 per person, \$1,093,000 for two or more persons, per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, §24-10-101, *et seq.*, C.R.S., as from time to time amended, or otherwise available to Town, its officers, or its employees.

Section 9. Indemnification. Consultant expressly agrees to indemnify and hold harmless Town or any of its officers or employees from any and all claims, damages, liability, or court awards including attorney's fees that are or may be awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone, including, but not limited to, any person, firm, partnership, or corporation, to the extent caused by the negligent acts, errors or omissions of Consultant or any of their employees or agents in performing work pursuant to this Agreement. In the event that any such suit or action is brought against Town, Town will give notice within ten (10) days thereof to Consultant.

Section 10. Delays. Any delays in or failure of performance by any party of his or its obligations under this Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such party.

Section 11. Additional Documents. The parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement.

Section 12. Entire Agreement. This Agreement represents the entire agreement between the parties and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect.

Section 13. Time of the Essence. Time is of the essence. If any payment or any other condition, obligation, or duty is not timely made, tendered or performed by either party, then this Agreement, at the option of the party who is not in default, may be terminated by the non-defaulting party, in which case, the non-defaulting party may recover such damages as may be proper.

Section 14. Default and Remedies. In the event either party should default in performance of its obligations under this agreement, and such default shall remain uncured for more than 10 days after notice of default is given to the defaulting party, the non-defaulting party shall be entitled to pursue any and all legal remedies and recover its reasonable attorney's fees and costs in such legal action. In addition, no Party will be entitled to lost profits, economic damages, or actual, direct, incidental, consequential, punitive or exemplary damages in the event of a default.

Section 15. Waiver. A waiver by any party to this Agreement of the breach of any term or provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.

Section 16. Governing Law. This Agreement shall be governed by the laws of the State of Colorado.

Section 17. Independent Contractor. Consultant and Town hereby represent that Consultant is an independent contractor for all purposes hereunder. As such, Consultant is not covered by any worker's compensation insurance or any other insurance maintained by Town except as would apply to members of the general public. Consultant shall not create any indebtedness on behalf of the Town.

Section 18. No Third Party Beneficiaries. It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Town and Consultant, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than Town or Consultant receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

ATTEST:

Lisa Anderson, Town Clerk

Approved as to form:

Robert J. Slentz, Town Attorney

TOWN OF CASTLE ROCK

Jason Gray, Mayor

Approved as to content:

Mark Marlowe, Director of Castle Rock Water

CONSULTANT:

OLSSON, INC.
a Nebraska corporation

By: _____

Its: _____

Work Breakdown Structure/Scope of Work

The proposed scope of work and associated fees is provided for discussion. We are confident our team can negotiate a scope of services that meets your needs.

Detailed tasks and hours are provided in Attachment A. Stream Landscape Architecture & Design will provide landscape architecture, revegetation and planting plans, and related services throughout the project. Services are detailed in Attachment B, Stream's proposal dated November 13, 2019. CORVUS Environmental Consulting, LLC will provide permitting services as detailed in Attachment C, CORVUS' proposal dated November 12, 2019. SurvWest will provide subsurface utility engineering services as detailed in Attachment D, SurvWest's proposal dated November 12, 2019. All other services will be performed by Olsson.

1. Project Management, Coordination and Meetings

- a. Project Management Plan: Prepare Project Management Plan to communicate work assignments, project scope, budget and schedule to all team members.
- b. Kick-off Meeting and Site Visit: Attend kick-off meeting and site visit with Town of Castle Rock. Prepare and distribute meeting notes. Stream will attend the kickoff meeting.
- c. Progress Meetings: Prepare and distribute meeting notes. Three (3) meetings are included in the fee proposal: one (1) each during Phases I, II, and III. Stream and CORVUS are anticipated to attend three (3) progress meetings. It is assumed that any stakeholders can attend a progress meeting.
- d. Review Meetings: Attend review meetings following the alternatives selection, 30%, and 90% submittals. Prepare and distribute meeting notes.
- e. Public Meetings: Prepare for and attend up to two (2) public meetings.
- f. Monthly Progress Reports: Prepare progress reports to advise the Town's project manager of work completed, work planned for the upcoming month and challenges that could affect budget or schedule.
- g. Stream: Services detailed in Stream's scope of services, Task 1: Project Management, Coordination and Meetings
- h. Phase I Deliverables:
 1. Project Management Plan (PDF)
 2. Meeting notes (PDF)
 3. Monthly progress reports (PDF)

2. Phase I: Surveying, Site Investigation & Alternatives Analysis

- a. Survey: Olsson's survey team will conduct a field survey and prepare a base map for the area outlined in cyan shown in Figure 1. The survey will focus on the channel corridor plus the corner of the northeast pond. The survey will show topography with a 1-foot contour interval, spot elevations at critical locations, utilities based on surface evidence, existing improvements, landscaping, and structures. The survey will be based on the NAVD 88 Vertical Datum and State Plane NAD83, Colorado Central Zone coordinate system. A boundary survey will be completed to determine legal boundaries of Parcel number 2505-022-00-023 per Douglas County Assessor's Office and for use with legal descriptions and exhibit, if needed. Geotechnical borings will be located. A total of four control points will be set for use during construction. The southern

portion of the reach might not need any grade control. It may be possible to reduce the extent of the survey in the upstream, southern to simply determine the longitudinal slope of the channel. If grade control is warranted, additional survey can be performed. The area in cyan is included in the scope. Utility investigation will be completed as part of the SUE.



Figure 1. Suggested survey limits (in cyan)

- b. Geotechnical Investigation: Olsson's geotechnical team will complete borings and laboratory testing to identify sub-surface conditions and recommendations for excavation and backfill. Prepare a geotechnical report summarizing findings. Three (3) geotechnical boring are included within the floodplain. Olsson can also perform a two-dimensional multichannel analysis of surface waves (MASW) to determine the anticipated depth to bedrock if present in the upper 10 feet of the subgrade profile. This service is not included in the proposed budget but could be performed for an additional \$1,400.
- c. Environmental Permitting Coordination (CORVUS): CORVUS' proposed scope of services is included as Attachment C. During Phase I, CORVUS proposes to complete Tasks 1-3 of their scope, including jurisdictional delineation of waters of the U.S., Preble's meadow jumping mouse (PMJM) habitat mapping, and gather existing information on historic properties (to be performed by PaleoWest Archaeology). If the Town would prefer these tasks be performed during Phase II, they will be moved.
- d. Geomorphic Assessment: Olsson will provide a geomorphic assessment of the site including:
 - i. Desktop analysis including, but not limited to, an evaluation of historic and contemporary maps, ground and aerial photos, survey data, bridge plans and inspection records, utility

plans for stream crossings, existing watershed plans and reports, and hydrologic and hydraulic data and information.

- ii. Detailed site reconnaissance to document and map the existing morphology of the project channels. The site reconnaissance will be conducted based on the guidance provided in HEC-20 (Lagasse et al. 2012) and the Stream Reconnaissance Handbook by (Thorne 1998). Where possible, the evolutionary stage of stream reaches will be identified based on the Channel Evolution Models of Schumm et al. (1984), Simon and Hupp (1986), and Cluer and Thorne (2015). The site reconnaissance work will include documenting the general sediment caliber and character of the channel bed and banks where visible, delineating existing bank protection, delineating any structures in the channel, exposed utility crossings, sand and gravel bars, inset berms/benches, outfalls, and documenting any other man-made feature in or along the channels that could impact the channel morphology. Field notes and georeferenced ground photos will be used to document existing conditions.
- iii. A Geomorphic Stream Evaluation Report will be developed. The evaluation report will document all findings of the geomorphic evaluation and will include recommendations for improved sediment transport, improved flood flow conveyance, channel and stream bank maintenance, and channel and streambank stabilization.
- e. Alternatives analysis: The project team will complete up to three alternatives incorporating Master Plan recommendations, stakeholder input, items for federal permitting, floodplain considerations, stream dynamics, trail and recreational considerations, and the natural environment. The alternatives will use the detailed survey shown in Figure 1 (in Item 2.a) plus LiDAR information outside of the survey.
- f. Stream: Services detailed in Stream's scope of services, Task 2: Phase I: Surveying and Site Investigation & Alternative Analysis
- g. Prepare a brief memorandum documenting the alternatives.
- h. Prepare a conceptual opinion of probable cost for each alternative.
- i. Conduct an independent QA/QC review.
- j. Phase I Deliverables
 - 1. Geomorphic Stream Evaluation Report
 - 2. Alternatives Memorandum including design discussion, recommendations, and selection matrix (PDF)
 - 3. Conceptual level plan and profile drawings as an appendix to the memorandum (PDF and AutoCAD)
 - 4. Conceptual level opinion of probable cost (OPC) for each alternative (PDF and Excel)
 - 5. Topographic and property boundary survey plan sheets (PDF and AutoCAD)
 - 6. Geotechnical Report (PDF)

3. Phase II: Preliminary Design & Environmental Permitting

- a. Site meeting to observe the locations of the preferred improvements and make adjustments to the locations, if needed. Because the grade control is anticipated to be designed close to utility crossings, staking was not included but can be done, if needed.
- b. Stream: Services detailed in Stream's scope of services, Task 3: Phase II: Preliminary Project Design

- c. Preliminary (30%) Design: The project team will provide a 30% progress submittal based on the selected alternative from Phase I
 - i. 30% Construction Drawings (22"x34" printable on 11"x17"):
 - 1. Cover (1 sheet)
 - 2. General Notes, Abbreviations, Legend (1 sheet)
 - 3. Survey Control (1 sheet)
 - 4. Overall Improvements (1 sheet)
 - 5. Plan and Profile (2 sheets)
 - 6. Pond Grading (1 sheet) (if part of design)
 - 7. Preliminary Details (2 sheets)
 - 8. Preliminary Planting/Revegetation Plan (2 sheets) (may lag other plans)
 - 9. Planting Plan Details (2 sheets) (may lag other plans)
 - 10. Preliminary Construction Access Plan (1-2 sheets)
 - ii. Preliminary Hydraulic Calculations: Olsson will prepare a Preliminary Floodplain Modification Study (FMS) that will contain preliminary hydraulic calculations and will be used as the basis for the CLOMR Report or No-Rise Certification, as applicable. The hours associated with the FMS are associated with some of the basic modeling and the information and narrative to be developed. The majority of the hours associated with the detailed modeling and other required submittals are included with the CLOMR. If the Town would prefer a different format, it can be developed.
 - iii. Environmental Permitting Coordination (CORVUS): CORVUS' proposed scope of services is included as Attachment C. During Phase II, CORVUS proposes to complete Tasks 4 through 6 of their scope, consisting of agency pre-application coordination, Douglas County Habitat Conservation Plan compliance, and survey, document and record potential historic properties (to be performed by PaleoWest Archaeology). If the Town would prefer these tasks be performed during Phase III, they will be moved.
 - iv. 30% Engineer's Opinion of Probable Cost
 - v. Subsurface Utility Engineering: SurvWest will conduct subsurface utility engineering and develop a SUE Plan and Report to meet the requirements of SB18-167. Their scope and proposal are included as Attachment D. The project design will strive to avoid utilities wherever possible. The gravity utilities are exposed in the channel and will not require Quality Level A test holes.
 - vi. Conduct an internal, independent QA/QC review.
 - vii. Phase II Deliverables
 - 1. 30% Construction Drawings (PDF and AutoCAD)
 - 2. 30% Preliminary FMS that includes hydraulic calculations (or other format) (PDF and working files)
 - 3. 30% Floodplain workmap (PDF and AutoCAD)
 - 4. 30% OPC (PDF and working file)
 - 5. Certified SUE Plan and Report (PDF and AutoCAD)

4. Phase III: Final Design & Floodplain Modification Approval

- a. Stream: Services detailed in Stream's scope of services, Task 4: Phase III: Final Project Design
- b. Final Design: The project team will provide a 90% progress submittal and 100% Bid Set submittal in accordance with Town Criteria.

- i. 90% Construction Drawings (22"x34" printable on 11"x17"):
 - 1. Cover (1 sheet)
 - 2. General Notes, Abbreviations, Legend (1 sheet)
 - 3. Survey Control (1 sheet)
 - 4. Horizontal Control (1 sheet)
 - 5. Construction Access Plan (1-2 sheets)
 - 6. Traffic and/or Pedestrian Control Plan (1 sheet)
 - 7. Overall Improvements; include river stationing, property boundaries, easements, plan improvements, floodplain and RCZ (1 sheet)
 - 8. Channel Plan and Profile (2 sheets)
 - 9. Detailed Cross Sections: through low flow realignment and bank protection as applicable (2 sheets)
 - 10. Drop Structure Details: details plus cross sections through grade control structures, (4 or 6 sheets)
 - 11. Details (2-4 sheets)
 - 12. Planting / Revegetation Plan (2 sheets)
 - 13. Planting / Revegetation Plan Details (2 sheets)
- ii. Temporary Erosion and Sediment Control (TESC) Plan and Report: Olsson will prepare a TESC plan and TESC report for the project in accordance with the Town of Castle Rock TESC Manual. Submit a 90% progress set for Town review and 100% bid set.
- iii. Floodplain Modification Study (FMS): Olsson will update the FMS (or other format) to the 90% and 100% levels. It will serve as the basis for the CLOMR Report. Additional information will be required.
- iv. CLOMR or No-Rise Certification: Olsson will prepare and submit a CLOMR application and address comments as needed to obtain approval. A discussion of the alternatives evaluation and documentation of Environmental Species Act (ESA) compliance will be included. The CLOMR will be prepared in final form for Town and Douglas County review prior to submittal to FEMA, with the 90% submittal. Acknowledgement by Douglas County will be required on the MT-2 forms. If a "no-rise" condition is achieved, a CLOMR will not be required. Each task of the CLOMR is listed in the fee estimate.

Build upon the design modeling and FMS to prepare a CLOMR submittal. The majority of the hours for floodplain modeling and development of required maps and forms is included with the CLOMR task. The following items will be included:

- a. Duplicate effective model
- b. Existing/corrected effective model
- c. Existing floodplain delineation, 100-yr & 500-yr
- d. Post-project floodplain model
- e. Post-project floodway model
- f. Post-project floodplain delineation, 100-yr & 500-yr
- g. Post-project floodway delineation
- h. Base flood elevations
- i. Workmap
- j. Annotated FIRM
- k. Annotated profile
- l. Annotated floodway table
- m. Agreement table
- n. Floodplain and floodway table
- o. CLOMR narrative
- p. MT-2 forms
- q. Owner notification letters and exhibit

- r. QA/QC
- s. Address sponsor comments
- t. Address FEMA comments
- u. FEMA review fee of \$6,500 is included.

Note that the costing spreadsheet shows the CLOMR after the remaining 90% and 100% tasks, rather than in this position in the order as it is helpful to track it separately.

- v. Environmental Permitting Coordination (CORVUS): CORVUS' proposed scope of services is included as Attachment C. During Phase III, CORVUS proposes to complete Tasks 7 and 8 of their scope, consisting of preparing an individual permit application, although it is possible that the final design will meet criteria for authorization under Section 404 Nationwide Permit 27, and agency and team coordination. The fee estimate includes \$1,122 for the 401 water quality certification request fee.
- vi. Utility Relocation Coordination.
- vii. 90% Technical Specifications: The project team will prepare technical specifications, which are anticipated to be a combination of Town of Castle Rock, UDFCD, and CDOT specifications.
- viii. Technical Criteria Variance related to Water Quality Exclusion(s)
- ix. 90% OPC
- x. Conduct an internal, independent QA/QC review.
- xi. 100% Bid Set
 - a. Address 90% review comments and prepare and submit 100% documents and a bid schedule.
 - b. Conduct an internal, independent QA/QC review.
- xii. Easement Legal Descriptions and Exhibits, if needed. Two descriptions were included.
 - c. Phase III Deliverables
 - i. 90% and 100% Construction Drawings (PDF and AutoCAD)
 - ii. TESC Plan and Report (PDF, AutoCAD, and Word)
 - iii. Drainage calculation memorandum of FMS (PDF and working files)
 - iv. CLOMR or No-Rise Certification Report and Application (PDF and working files)
 - v. 404 Permit Application (PDF)
 - vi. Memo and Exhibit(s) for USFWS Concurrence Request (PDF and working files)
 - vii. Utility Relocation Agreements, as applicable (PDF)
 - viii. Technical Specifications (PDF and Word Document)
 - ix. Technical Criteria Variance (PDF and Word Document)
 - x. Engineer's Opinion of Probable Cost (PDF and working files)
 - xi. Bid Schedule (Excel or Word Document)
 - xii. Easement Legal Descriptions and Exhibits, if needed (PDF and AutoCAD)

5. Assumptions and Clarifications

The following services are not included. If they are requested, a proposal will be prepared for your approval:

1. Bid phase and construction phase services.
2. As-built survey and record drawings.
3. Letter of Map Revision.
4. Environmental testing related to the old WWTP northeast pond

OLSSON
PROFESSIONAL SERVICES FEE ESTIMATE

ATTACHMENT A

Project Name: East Plum Creek Reach 5 Phase II Stabilization

Project Number: P19-0616

Project Manager: Deb Ohlinger

TASK	Estimated Hours										Total Labor Cost	Sub-consult	Reimb Expenses	Sub Total Task Cost	Total Phase Cost
	Team Leader	Project Manager	Project Engineer	Assistant Engineer	Geomorphologist	Team Leader Survey	Associate Surveyor	Senior Survey Tech	2-person Survey Crew						
HOURLY RATES Personnel	\$211.00 DK	\$185.00 DO	\$146.00 AG/CU	\$106.00 HP	\$207.00 WS	\$180.00 NS	\$88.00	\$115.00	\$191.00						
Project Management, Coordination and Meetings															
Project management plan		2								370	-	\$0	\$370		
Kick-off meeting and site visit, distribute meeting notes		3	3	4	5					2,452	-	\$160	\$2,612		
Progress meetings, distribute meeting notes (3)		9		12	10					5,007	-	\$365	\$5,372		
Review meetings (alts, 30%, 90%), meeting notes		9		12	5					3,972	-	\$250	\$4,222		
Public meetings (2)		10		14						3,334	-	\$145	\$3,479		
Monthly progress reports and general coordination		10								1,850	-	\$0	\$1,850		
Project Management, Coordination and Meetings (Stream)										-	8,536	\$0	\$8,536		
	-	43	3	42	20	-	-	-	-	16,985	8,536	\$920	\$26,441	\$26,441	
Phase I: Surveying, Site Investigation & Alternatives Analysis															
Survey						24	48	32	96	30,560	-	\$400	\$30,960		
Geotechnical investigation (Olsson)										-	5,300	\$0	\$5,300		
Environmental Permitting (CORVUS Tasks 1-3)										-	4,900	\$0	\$4,900		
Geomorphic Assessment				5	38					8,396	-	\$160	\$8,556		
Alternatives Anlysis										-					
<i>Evaluate Existing Hydraulics</i>		2	2	14						2,146	-	\$0	\$2,146		
<i>Develop Alternatives (up to 3)</i>		6	12	60	6					10,464	-	\$0	\$10,464		
<i>Evaluate Proposed Hydraulics</i>		2	2	8						1,510	-	\$0	\$1,510		
<i>Conceptual Plan and Profiles</i>		2	12	42						6,574	-	\$0	\$6,574		
Landscape architecture (Stream)										-	1,731	\$0	\$1,731		
Alternatives Memorandum		2	2	24						3,206	-	\$0	\$3,206		
Conceptual OPC		1	4	12						2,041	-	\$0	\$2,041		
Independent QA/QC	4									844	-	\$200	\$1,044		
	4	15	34	165	44	24	48	32	96	65,741	11,931	\$760	\$78,432	\$78,432	
Phase II: Preliminary Design & Environmental Permitting															
Site meeting to discuss improvements			4	4	4					1,836	-	\$160	\$1,996		
Landscape architecture (Stream)										-	6,907	\$0	\$6,907		
30% Construction Drawings															
<i>Cover sheet (1 sheet)</i>			1	1						252	-	\$0	\$252		
<i>General notes, abbreviations, legend (1 sheet)</i>			1	2						358	-	\$0	\$358		
<i>Survey control sheet (1 sheet)</i>				1						106	-	\$0	\$106		
<i>Overall site improvements (1 sheet)</i>		1	2	6						1,113	-	\$0	\$1,113		
<i>Plan and profile (1"=50', 2 sheets)</i>		4	4	48	4					7,240	-	\$0	\$7,240		
<i>Pond grading (1 sheet)</i>		1	4	18						2,677	-	\$0	\$2,677		
<i>Preliminary details (2 sheets)</i>		2	4	24						3,498	-	\$0	\$3,498		
<i>Planting plan (1"=50', 2 sheets)</i>			1	4						570	-	\$0	\$570		
<i>Planting plan details (2 sheets)</i>			1	2						358	-	\$0	\$358		
<i>Preliminary construction access plan (1-2 sheets)</i>		1	2	8						1,325	-	\$0	\$1,325		
30% Floodplain Modification Study (FMS) w/calcs		4	3	20						3,298	-	\$0	\$3,298		
Environmental Permitting (CORVUS Tasks 4-6)										-	5,000	\$0	\$5,000		
30% OPC		1	4	12						2,041	-	\$0	\$2,041		
SUE (SurvWest)										-	15,200	\$0	\$15,200		
Independent QA/QC	4									844	-	\$0	\$844		
	4	14	31	150	8	-	-	-	-	25,516	27,107	\$160	\$52,783	\$52,783	

OLSSON
PROFESSIONAL SERVICES FEE ESTIMATE

Project Name: East Plum Creek Reach 5 Phase II Stabilization
 Project Number: P19-0616
 Project Manager: Deb Ohlinger

TASK	Estimated Hours										Total Labor Cost	Sub-consult	Reimb Expenses	Sub Total Task Cost	Total Phase Cost
	Team Leader	Project Manager	Project Engineer	Assistant Engineer	Geomorphologist	Team Leader Survey	Associate Surveyor	Senior Survey Tech	2-person Survey Crew						
HOURLY RATES Personnel	\$211.00 DK	\$185.00 DO	\$146.00 AG/CU	\$106.00 HP	\$207.00 WS	\$180.00 NS	\$88.00	\$115.00	\$191.00						
Phase III: Final Design & Floodplain Modification Approval															
Landscape architecture (Stream)											-	7,790	\$0	\$7,790	
90% Construction Drawings															
Cover sheet (1 sheet)				1						106	-	\$0	\$106		
General notes, abbreviations, legend (1 sheet)			1	2						358	-	\$0	\$358		
Survey control (1 sheet)				1						106	-	\$0	\$106		
Horizontal control plan (1 sheet)			1	1						252	-	\$0	\$252		
Construction access plan (1-2 sheets)			2	6						928	-	\$0	\$928		
Traffic and/or pedestrian control plan (1 sheet)		1	2	8						1,325	-	\$0	\$1,325		
Overall site improvements (1 sheet)				1	4					570	-	\$0	\$570		
Channel plan and profile (1"=50', 2 sheets)		2	8	36	4					6,182	-	\$0	\$6,182		
Drop structure details (4 or 6 sheets)		2	6	48						6,334	-	\$0	\$6,334		
Detailed cross Sections (2 sheets)		1	6	18						2,969	-	\$0	\$2,969		
Details (2-4 sheets)	1	2	8	24						4,293	-	\$0	\$4,293		
Planting/revegetation plan (1"=50', 2 sheets)			1	2						358	-	\$0	\$358		
Planting plan details (2 sheets)			1	2						358	-	\$0	\$358		
90% TESC Plan		1	6	40						5,301	-	\$0	\$5,301		
90% TESC Report		1	6	18						2,969	-	\$0	\$2,969		
90% FMS		2	4	16						2,650	-	\$0	\$2,650		
Environmental Permitting (CORVUS Tasks 7-8)										-	5,522	\$0	\$5,522		
Utility Relocation Coordination	1	2	8	8						2,597	-	\$0	\$2,597		
90% Technical Specifications	1	4	8	24						4,663	-	\$0	\$4,663		
Technical Criteria Variance Regarding Water Quality		1	2	4						901	-	\$0	\$901		
90% OPC		1	8	16						3,049	-	\$0	\$3,049		
Independent QA/QC	6									1,266	-	\$0	\$1,266		
100% Documents															
Address 90% comments; prepare 100% bid set		4	16	42						7,528	-	\$0	\$7,528		
100% FMS		1	2	4						901	-	\$0	\$901		
100% GESC Plan		1	2	6						1,113	-	\$0	\$1,113		
100% GESC Report		1	2	6						1,113	-	\$0	\$1,113		
100% OPC		1	1	4						755	-	\$0	\$755		
100% Technical Specifications		2	4	8						1,802	-	\$0	\$1,802		
Bid Schedule		1	1	1						437	-	\$0	\$437		
Independent QA/QC	4									844	-	\$0	\$844		
Legal descriptions (2)		13	31	107	350	4	-	-	-	62,028	13,312	\$1,500	\$1,500	\$76,840	\$76,840

OLSSON
PROFESSIONAL SERVICES FEE ESTIMATE

Project Name: East Plum Creek Reach 5 Phase II Stabilization
 Project Number: P19-0616
 Project Manager: Deb Ohlinger

TASK	Estimated Hours										Total Labor Cost	Sub-consult	Reimb Expenses	Sub Total Task Cost	Total Phase Cost
	Team Leader	Project Manager	Project Engineer	Assistant Engineer	Geomorphologist	Team Leader Survey	Associate Surveyor	Senior Survey Tech	2-person Survey Crew						
HOURLY RATES Personnel	\$211.00 DK	\$185.00 DO	\$146.00 AG/CU	\$106.00 HP	\$207.00 WS	\$180.00 NS	\$88.00	\$115.00	\$191.00						
CLOMR															
Duplicate effective model				1	2					358	-	\$0	\$358		
Existing/corrected effective model			1	1	10					1,391	-	\$0	\$1,391		
Existing floodplain delineation, 100-yr & 500-yr				1	8					994	-	\$0	\$994		
Post-project floodplain model				1	8					994	-	\$0	\$994		
Post-project floodway model		1	1	6						967	-	\$0	\$967		
Post-project floodplain delineation, 100-yr & 500-yr				1	8					994	-	\$0	\$994		
Post-project floodway delineation				1	4					570	-	\$0	\$570		
Base flood elevations					4					424	-	\$0	\$424		
Workmap		1	1	8						1,179	-	\$0	\$1,179		
Annotated FIRM				1	6					782	-	\$0	\$782		
Annotated profile				1	4					570	-	\$0	\$570		
Annotated floodway table				1	2					358	-	\$0	\$358		
Agreement table				1	6					782	-	\$0	\$782		
Floodplain and floodway table		1	1	6						967	-	\$0	\$967		
CLOMR narrative				2	12					1,564	-	\$0	\$1,564		
MT-2 forms				1	4					570	-	\$0	\$570		
Owner notification letters and exhibit				1	4					570	-	\$0	\$570		
QA/QC		2	6							1,246	-	\$0	\$1,246		
Address sponsor comments		2	4	16						2,650	-	\$0	\$2,650		
Address FEMA comments		2	2	16						2,358	-	\$0	\$2,358		
FEMA review fee										-	-	\$6,500	\$6,500		
	-	10	29	134	-	-	-	-	-	20,288	-	\$6,500	\$26,788	\$26,788	
Total Hours	21	113	204	841	76	24	48	32	96	\$190,558	\$60,886	\$9,840	\$261,284		
Total Cost	\$4,431	\$20,905	\$29,784	\$89,146	\$15,732	\$4,320	\$4,224	\$3,680	\$18,336	\$190,558	\$60,886	\$9,840	\$261,284	\$261,284	
															TOTAL PROJECT
															\$261,284

ATTACHMENT B



landscape architecture + planning

Olsson - Castle Rock - East Plum Creek Reach 5--Phase II

Prepared by Paul Thomas

11/13/2019

Design Services Fees: Subtotal		\$ 24,595.00
Direct Costs estimated at 1.5% of fees		\$ 369.00
Design Services Fees: TOTAL		\$ 24,964.00

Note - direct costs were prorated per task

General Scope Description: Provide landscape, revegetation, and aesthetic design services for channel stabilization project.. Assit with graphics for public meetings.

Scope Items	Tasks/Phases:	SLA-PR1	SLA-PM1	SLA-PM2	SLA-LA1	Admin	TOTAL
1	Project Management, Coordination and Meetings	\$ 160.00	\$ 115.00	\$ 95.00	\$ 85.00	\$ 45.00	
1a	Kick-off meeting and site visit	6	6		0		\$ 1,650.00
1b	Progress meetings (assume 3)	12	8		0		\$ 2,840.00
1c	Assist with preparation of graphics for 2 public meetings	4	6		10		\$ 2,180.00
1d	General coordination	6			6	6	\$ 1,740.00
2	Phase I: Surveying and Site Investigation & Alternative Anal.						
2a	Follow up site visit	5	0	0	5	0	\$ 1,225.00
2b	Asist with / review of alternatives	3		0	0	0	\$ 480.00
3	Phase II: Preliminary Project Design (30%)						
3a	Preliminary planting design/PJM mitigation; general assistance with structure design if necessary	10		4	28	0	\$ 4,360.00
3b	Assit with trail detour / and/or permanent trail realignment	3		2	10	0	\$ 1,520.00
3c	Preliminary cost estimate	1		2	3	0	\$ 605.00
3d	Internal Quality Review	2				0	\$ 320.00
4	Phase III: Final Project Design						
4a	Final planting design-plan preparation	10		8	38	0	\$ 5,590.00
4b	Specifications	6		3	0	0	\$ 1,245.00
4c	Final cost estimate	1		2	2	0	\$ 520.00
4d	Internal Quality Review	2				0	\$ 320.00
	Subtotal	49	0	21	92	6	\$ 24,595.00
	Design Services Fees: Subtotal						\$ 24,595.00
	Direct Costs estimated at 1.5% of fees						\$ 369.00
	Design Services Fees: TOTAL						\$ 24,964.00

**SERVICES NOT INCLUDED IN THIS PROPOSAL INCLUDE
THE FOLLOWING (IF REQUESTED, THESE SERVICES WILL
BE PROVIDED AS AN ADDITIONAL SERVICE ON AN**

**SURVEY AND/OR AS-BUILT INFORMATION
DESIGN**

**ENVIRONMENTAL REPORTING, ANALYSIS, OR DESIGN
ELECTRICAL AND/OR LIGHTING DESIGN**

TRAFFIC STUDIES OR DESIGN

EROSION CONTROL DESIGN

IRRIGATION DESIGN

ATTENDANCE AT PUBLIC MEETINGS

***ANY OTHER ASSUMPTIONS STATED IN LINE ITEMS APPLY**

ATTACHMENT C

Statement of Work for East Plum Creek Reach 5 Phase II Stabilization Project

November 12, 2019

Presented to:

Olsson
1525 Raleigh Street, Suite 400
Denver, CO 80204

Prepared by:



CORVUS
Environmental Consulting LLC

Project Information Summary

CORVUS Client Name	Olsson
Client Project Manager	Deb Ohlinger
Project Name	East Plum Creek Reach 5 Phase II Stabilization (project)
Project Purpose	Stabilize the East Plum Creek Reach 5 (Phase II) to create a sustainable channel system that protects existing infrastructure, minimizes impacts to existing woody vegetation and enhances riparian habitat
Location	The project area is east of I-25 between the Plum Creek Water Purification Facility (PCWPF) and the Town's Central Service Center, from approximately 800' downstream of the existing pedestrian crossing to the Town limits approximately 700' upstream of the crossing
CORVUS Project Role	CORVUS' role will be to implement a Clean Water Act Section 404 permitting approach for the improvements. The role includes acting as the primary point of contact for communication between the project team and the U.S. Army Corps of Engineers (USACE). CORVUS will work with the design team to optimize the compatibility of project design elements with the permitting approach. CORVUS will also coordinate consultation with U.S. Fish and Wildlife Service (USFWS) and the State Office of Historic Preservation (SHPO) regarding potential effects to threatened and endangered species and historic properties.

Description of Study Area

The study area includes the footprint of proposed improvements, including project elements that affect East Plum Creek and/or its adjacent wetlands. Revisions to the extent of the study area may require additional effort and associated changes in labor costs. CORVUS will coordinate with the Client Project Manager to determine if cost modifications are necessary prior to performing work in a revised study area.

Tasks

The following tasks address compliance with Clean Water Act Section 404 (Section 404) and the Endangered Species Act (ESA). To be conservative, the tasks assume that the project will require a Section 404 Individual Permit, although it is possible that the final design will meet criteria for authorization under Section 404 Nationwide Permit 27. The tasks also assume that the proposed project will result in a net benefit to Preble's meadow jumping mouse (PMJM). The tasks have been divided into three phases: Phase I – Site Investigations and Alternatives Analysis; Phase II – Preliminary Design and Permitting Coordination; and Phase III – Final Project Design.

Phase I – Site Investigations and Alternatives Analysis

CORVUS' approach to work in Phase I is to do detailed surveys and mapping for regulated biological resources, including waters of the U.S. (WOTUS), which includes adjacent wetlands; PMJM and other threatened and endangered species habitat; and raptor nests that may affect construction of the project. Additionally, PaleoWest, as a subconsultant to CORVUS, will gather information from previous surveys of historic resources done in or near Reach 5 (Phase II). This mapping will be used as one of the screening metrics used for the alternatives analysis.

Task 1. Jurisdictional Delineation of WOTUS – CORVUS will complete a full jurisdictional delineation of WOTUS in the project footprint. The delineation will follow current USACE methods and guidance on performing delineation of wetlands and the ordinary high water mark. CORVUS will provide the Client with an AutoCAD file of the WOTUS boundaries.

Task 2. PMJM Habitat Mapping – PMJM is known to occur on East Plum Creek and is assumed to be present in the project area. The Town of Castle Rock is a participant in the Douglas County Habitat Conservation Plan (DCHCP) and intends for the project to be consistent with DCHCP criteria for projects that benefit PMJM. CORVUS will map the different PMJM habitat types within the study area to aid in minimizing impact to existing woody vegetation.

Task 3. Gather Existing Information on Historic Properties (performed by PaleoWest Archaeology) – As part of the CWA Section 404 compliance process, the USACE must comply with Section 106 of the NHPA. To do this, the USACE typically requires prospective permittees to submit the results of a survey for potential historic properties in the USACE permit area (also known as the area of potential effect (APE)). Potential historic properties include archaeological sites, farmsteads, irrigation ditches, transmission lines, and railroads.

As with wetlands, historic resources work in Phase I will be preliminary and used to avoid known sites. PaleoWest will gather information from previous surveys done in or near Reach 5 (Phase II).

Specifically, the following activities will be completed as part of this task:

- Request a file search of Office of Archaeology and Historic Preservation (OAH) records for a 1-mile radius around the survey areas (permit area)
- Conduct archival research, as needed, to determine if additional cultural resources are present within the project area

The findings from this task will be used to avoid known historic properties during alternatives analysis.

Phase II – Preliminary Design and Permitting

Once a preferred alternative has been selected and a more precise footprint of disturbance is identified, CORVUS will coordinate with USACE to determine the appropriate level of permitting and submittal application requirements necessary to obtain approval. CORVUS will also coordinate with USFWS and prepare the necessary letter and exhibits to obtain USFWS concurrence for activities in the DCHCP. Lastly, PaleoWest will conduct a detailed survey to determine whether potential historic properties are eligible for listing on the National Register of Historic Places, and determine effects on eligible historic properties.

Task 4. Agency Pre-Application Coordination – CORVUS will coordinate with the USACE to discuss project purpose and need, schedule, preliminary design concepts, potential impacts to WOTUS, and mitigation strategies. The purpose of the coordination is to give the USACE an opportunity to express any concerns with the project or proposed permitting approach.

Task 5. Douglas County Habitat Conservation Plan Compliance – CORVUS will facilitate consultation between USACE, USFWS, and the Town of Castle Rock to ensure that the ESA compliance needs of all parties are addressed. This includes calculating impacts to PMJM habitat and providing the necessary letter and exhibits to obtain USFWS concurrence under applicable covered activities as authorized in the DCHCP for PMJM that supports the Town's belief that the project will be beneficial to PMJM.

Task 6. Survey, Document, and Record Potential Historic Properties (PaleoWest Archaeology) – The project footprint of the preferred alternative will be surveyed in detail for potential historic properties. The following activities are part of this task:

- Conduct an intensive pedestrian inventory of the project area
- Record the locations of any cultural resources encountered that are 50 years old or older
- Prepare eligibility and effects determination for up to one historic property
- Prepare cultural resources report

A mitigation plan for adverse effects on historic properties is not included in this statement of work.

Phase III – Final Project Design

During Phase III, CORVUS prepare and submit the individual permit application. If the application is submitted prior to the final design, CORVUS will ensure that the final design is consistent with information in the individual permit application packet.

Task 7. Individual Permit Application – With input from the USACE and design team, CORVUS will prepare an Individual Permit application submittal to USACE. The submittal will include figures of project plans, impacts to WOTUS, and a compensatory mitigation plan. Mitigation design plans and specifications will be prepared by the Client with input and review by CORVUS. This task includes one round of revisions to the submittal based on Client and design team comments. CORVUS will also respond to USACE requests for additional information and to public comments.

This task also includes coordinating with the project engineer and landscape architect to develop a mitigation plan and to incorporate bioengineered stabilization and enhancements as much as possible.

Because the date of implementation is unknown, application of the Colorado Stream Quantification Tool to the project is not included in this task. If USACE implements the tool during the course of the project or specifically requires it for this project, CORVUS will coordinate with the Client to develop a revised scope of services.

Task 8. Agency and Team Coordination – During final design, CORVUS will frequently communicate with the USACE project manager to keep the project manager apprised of progress on project design and to respond to any public comments or agency questions. This task includes attending four progress meetings at 3 hours each.

Deliverables

CORVUS will provide the following deliverables to the Client:

- AutoCAD file of WOTUS, including the ordinary high water mark and wetlands and PMJM habitat within the study area
- Locations of previously-identified historic properties (if any)
- DCHCP letter with exhibits for USFWS documenting net benefit to PMJM
- Cultural resources report and effects determination
- IP Application Packet

Assumptions

Tasks and estimated costs are based on the following assumptions:

- The Client will be responsible for preparing project plans and CORVUS will create submittal figures from the provided plans.
- PMJM is assumed to be present and a presence/absence surveys will be not be required.
- Consultation with USFWS will be done via the DCHCP process for beneficial projects and a biological assessment will not be required.
- The work will be authorized under an IP.
- One eligible historic property will be in the project area and require an effects determination.
- A mitigation plan for adverse effects on historic properties is not included.
- Unless otherwise requested by the Client, all CORVUS deliverables will be provided in digital format such as Portable Document Format (PDF), Microsoft Word, or other suitable format.

Change Management Process

In the event revisions to the study area and/or the Statement of Work tasks are determined necessary or desirable, either by CORVUS or the Client, CORVUS will coordinate with the Client Project Manager to determine if a formal request for contract modification is necessary. CORVUS will not perform work not

described in this Statement of Work or a revised Statement of Work without written authorization from the Client.

Estimated Cost

CORVUS will perform the tasks described in the statement of work on an hourly basis for the estimated cost itemized below. Expenses will be billed directly, with estimated cost itemized below. Subconsultants and other direct expenses are billed at cost.

Task	Total
Task 1. Jurisdictional Delineation of WOTUS	\$2,900.00
Task 2. PMJM Habitat Mapping	\$500.00
Task 3. Historic – Existing Info and recon. survey (PaleoWest)	\$1,000.00
Task 4. Agency Pre-application Coordination	\$500.00
Task 5. Douglas County HCP Compliance	\$1,000.00
Task 6. Fully Document Historic Properties (PaleoWest)	\$3,500.00
Task 7. Individual Permit Application	\$2,900.00
Task 8. Agency and Team Coordination	\$1,500.00
Sub-Total	\$13,800.00
<hr/>	
Expenses	
1. Mileage	\$250.00
2. GPS Rental	\$250.00
3. 401 Water Quality Certification Request Fee	\$1,122.00
Sub-Total	\$1,622.00
<hr/>	
Total Estimated Cost	\$15,422.00

11/12/2019

ATTACHMENT D

Rev. 1

Deb Ohlinger, PE, CFM
Senior Engineer / Water
Olsson
1525 Raleigh Street, Suite 400
Denver, CO 80204
dohlinger@olsson.com

RE: Subsurface Utility Engineering for Town of Castle Rock East Plum Creek Reach 5 Phase II Project, Douglas County, Colorado

Dear Ms. Ohlinger:

SurvWest, LLC (SURVWEST) is pleased to submit a cost proposal for Subsurface Utility Engineering (SUE) required for the above referenced project.

Introduction

This proposal is based on information received via email on November 4, 2019 for a proposed project that involves channel stabilization along East Plum Creek.

With the intent of achieving Quality Level B depiction of subsurface utilities, SURVWEST will perform the work required for this project in general accordance with the recommended practices and procedures described in ASCE Publication CI/ASCE 38-02 (Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data).

Based on typical tasks leading to utility depiction, ASCE 38-02 defines QL-B as “information obtained through the application of appropriate surface geophysical methods to determine the existence and approximate horizontal position of subsurface utilities.”

Scope of Work

Using information provided by Olsson (CLIENT), SURVWEST developed a preliminary scope for the work required for this project. The scope of work may be modified with the CLIENT, Owner, or their representative's concurrence during the performance of the work if warranted by actual field findings.

For this project, SURVWEST will provide the following services within the approximately 3.5 acres project limits shown in the attached Exhibit. SURVWEST will utilize its Standard Operating Procedures and Safety Plan in the performance of the field work.

Utility Information Research

SURVWEST will conduct a utility research of the project limits. In addition to records received from CLIENT, SURVWEST will gather and review information collected from one or more of the following sources. The data acquired through this effort will be taken into consideration when analyzing field data and preparing the project deliverables.

- One Call Notification Center
- Internet-Based Databases
- Aerial Imagery
- Utility Owners – Record Drawings, Previous Construction Plans, Database Information/Maps, Oral Histories

Permits

At the time of this proposal, there are no known permit requirements for the project. Should permit requirements arise in the future, SURVWEST will work with CLIENT and applicable jurisdictional entities to obtain the necessary permits to complete the field tasks. An additional scope and fee may be required for this effort.

Utility Designation

SURVWEST will utilize a suite of geophysical equipment to designate the following types of buried utilities which are then tied down by survey.

- Natural Gas Pipelines (up to any installed meters)
- Water Pipelines (up to any installed meters)
- Electric Lines
- Communication Lines
- Cable Service Lines
- Sanitary Sewer Lines
- Storm Sewer Lines

In the event that additional effort is needed to designate utilities or complete any portion of field work (e.g. utilities that are non-toneable or very deep), an added scope and fee may be required. SURVWEST will notify the CLIENT of such situation and approval will be needed to continue work.

Despite SURVWEST's due diligence to identify buried utilities within the project limits, the possibility still exists, that some utilities are not identified. Utilities that are not identified through the Utility Information Research and Utility Designation efforts will be referred to as "unknown" utilities. SURVWEST will perform an inductive search for "unknown" utilities within the project limits. However, SurvWest is not responsible for designating unknown utilities.

Utility Survey

SURVWEST will perform all surveying that is required for designated utilities. Visible utility appurtenances such as manholes, telephone pedestals, and water valves will be surveyed as well.

Assumptions and Considerations

- The scope of work described in this proposal excludes the following services:
 - Collection of data from open channels/irrigation ditches, utility poles, and underground irrigation systems
 - Utility Coordination Services, including the preparation of the list of utility providers, conflict matrix, participation in coordination meetings, evaluation or coordination of relocations, or the preparation of clearance or removal/relocation documents.
 - Project Design Survey
 - Project Design and Engineering
 - Project Construction Services
- Elevations of all visible wet utility (storm and sanitary sewer lines) features will be collected, including ground-level and invert elevations
- Utility poles will be surveyed.

Client Responsibilities

- CLIENT will provide SURVWEST with survey control for use in preparing the deliverables. This data can be provided in a .txt or CAD format and will include the information listed below. The CAD file will be in Microstation or AutoCAD format. If AutoCAD, file will be in 2D, saved as a 2013 or earlier version.
 - Coordinate System and Zone
 - Basis of Vertical Datum
 - Project Benchmarks (if applicable)
 - Project Scale Factor (if applicable)
- If applicable, CLIENT will provide SURVWEST with the utility line styles and symbology to utilize in preparing the deliverable(s).
- All permitting fees required for SURVWEST to perform the proposed services will be waived or paid by the CLIENT.
- CLIENT will arrange for Right of Entry (ROE), where required, to access work areas. SURVWEST can perform ROE services at an additional fee.

Deliverables

Upon receipt of survey control and a base map/topographic file from CLIENT, SURVWEST will prepare a CAD file depicting the type and horizontal location of the surveyed utilities and utility features. SURVWEST will utilize the line style and symbology provided by CLIENT. If the CLIENT does not provide this information, SURVWEST will utilize its standard line styles and symbology. The size and material



4925 Sun Valley Drive, Fort Worth, Texas 76119
10200 E Girard Avenue, Suite B450, Denver, Colorado 80231

type of all utilities will be provided if the information is indicated on available record drawings. SURVWEST will also deliver a plan set, signed and sealed by a state licensed professional engineer.

Anticipated Schedule

SURVWEST can generally commence work within two (2) weeks of receiving the notice to proceed (NTP) and other applicable permits and permissions, including ROE.

The estimated time to complete the work is shown in the table below. After the SUE survey has been completed, the deliverables as previously described can be submitted within fifteen (15) workdays.

Estimated Fees

Tasks	Unit Price	Approximate Duration	Task Fee
Utility Information Research (QL D)		Lump Sum	\$1,500
Utility Designation (QL B)	\$2,300	4 Days	\$9,200
QL-B SUE Survey	\$1,500	3 Days	\$4,500
TOTAL			\$15,200

The total estimated cost to complete the work described herein is **Fifteen Thousand, Two Hundred and 00/100 Dollars (\$15,200.00)**.

Notes:

- SURVWEST will invoice for number of days shown in the estimate plus any additional days worked in the field on a Time and Materials basis.
- Should non-routine traffic control measures be required (barricades, flag person, changeable message board, etc.), these services will be considered extra and invoiced at cost. CLIENT will be notified if such circumstances arise, and CLIENT'S approval will be necessary before commencement.

Closing

We look forward to working with you on this project. Should you have any questions or require additional information, please contact me at (832) 418-0720.

Sincerely,

Ronke Osibajo, PE
Director of Engineering
SURVWEST, LLC

Town of Castle Rock East Plum Creek Reach 5 Phase II SUE

SUE for ~6.7 acres

87

Legend

 EPC 5-II Survey

