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ADDENDUM NO. ONE

REQUEST FOR PROPOSALS

NEW UNION DITCH CONCRETE CHANNEL CONVERSION AND HEADGATE

PROJECT NOS. 26-33 AND 26-144

CITY OF THORNTON, CO

TO: Prospective Proposing Firms and all others concerned

DATE: November 3, 2026

PURPOSE: To provide additional information and clarification to the solicitation documents for the above-referenced Project.

1. The following information shall become part of the original Request for Proposal (RFP) for this Project.

   A. Proposals will be received until 4:00 p.m. local time, November 12, 2026.

   B. In Section V. PROPOSAL PREPARATION, Paragraph B.7, the first sentence shall be revised to state: “A list of at least three (3) references for which similar services have been provided.”

   C. Exhibits A.1 and A.2 shall be deleted and replaced with Exhibits A.1 and A.2 (Addendum No. One), respectively.

   D. Drawings labeled ‘Non-Potable Irrigation Improvements Conceptual Construction Plans’ are attached as an example reference of specifications and deliverable.

2. The following questions and answers are provided for additional clarification to the RFP.

   Question 1: “It appears that the existing ditch receives water from various stormwater inlets along the entire length of the ditch which is to be converted to pipe conveyance. Is it intended that these inlets also need to be attached to the new pipe?”

   Answer 1: The City is not aware of any existing stormwater inlet connections to the ditch within the project limits. No Stormwater inlet connections to the proposed buried pipeline are anticipated or required as part of the Project.

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Question 2: "Please clarify what specific tasks the consultant would be required to provide at no cost to Thornton should the lowest bid exceed the final EOPC and Thornton elect to re-design and re-bid the project (see Subsections E and F under V. Bid Phase on page 44 of the RFP)."

Answer 2: Thornton does not expect the Consultant to re-design and re-bid the project at no cost to Thornton. This language has been revised in this addendum.

Question 3: "Please confirm site restoration requirements above the proposed piped sections of ditch. Item 7 on page 35 references an irrigation plan with main lines and a sprinkler head layout. Does Thornton want the consultant to design permanent irrigation systems for revegetating these areas, or will seeding without permanent irrigation be acceptable?

Answer 3: Seeding without permanent irrigation is acceptable.

Question 4: "Can Thornton provide any additional information on available survey and utility data for the proposed project areas to assist in scoping the field survey required?

a) Does Thornton have an existing maintenance easement along the project reach of the ditch?
b) Does Thornton have a preferred surveyor, or a list of surveyors familiar with the City's survey control and standards?
c) Please confirm Thornton requires boundary and easement survey of all properties within 25' feet of the proposed project areas."

Answer 4: Survey and GIS information will be provided to the Consultant after award.

a) Yes, Thornton has an existing maintenance easement along the project reach.
b) Thornton does not have a preferred surveying vendor. Surveyors familiar with the City's survey control and standards are as follows:
    - Baseline Engineering Corporation, Aaron Demo
      970-353-7600 x303; aaron@baselinecorp.com
    - CivilArts, Frank Drexel, PLS
    - 303-682-1131; fdrexel@civilarts.us
    - Flatirons Surveying, Inc, Tom Willis
      303-443-7001 x 664; twillis@flatironsinc.com
    - JR Engineering, Jarrod Adams
      303-267-6172; jadams@jrengineering.com
    - King Surveying, Paul Groves
      970-686-5011; paulg@kingsurveyors.com
    - Landmark EPC LLC, Rodney Harr
      970-667-6286; rod.harr@landmarkepc.com
c) Thornton requires boundary and easement survey of all properties within 25' feet of the proposed project areas.

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Question 5: "Does Thornton own and operate the New Union Ditch, and does the existing concrete-lined ditch serve any users other than Thornton along the project reach? I.e., do deliveries need to be made to other users along the project reach of the ditch?

Answer 5: Thornton does own and operate the New Union Ditch. Other deliverables to Ditch Companies, etc. will not be required

Question 6: "Does the storm sewer outfall to any portion of the existing concrete-lined ditch? Where surface runoff from adjacent properties currently enters the ditch, will the new pipe need to accept those flows?

Answer 6: The storm sewer does not outfall to any portion of the existing concrete-lined ditch. The new pipe will not need to accept any storm sewer outfalls.

Question 7: "Will the proposed design packages be subject to review and approval by the Signal Ditch? If so, will Thornton coordinate with the ditch company regarding review or will this be the consultant's responsibility?

Answer 7: Signal Ditch is not involved in this project. The headgate alterations are subject to review by The Farmers High Line Ditch Company and State of Colorado authorities.

Question 8: "Documentation of input from public meetings is listed under the Closeout phase – how many public meetings are anticipated during the design process?

Answer 8: No public meetings are required for the project. This language has been revised in this addendum.

Question 9: "Will Thornton require inspection and certification of structural concrete construction? Do any other permitting agencies have jurisdiction over the project?

Answer 9: Thornton will not require the Consultant to inspect and certify of structural concrete construction. Design will be subject to review by The Farmers High Line Ditch Company and State of Colorado authorities.

Question 10: "Please confirm the consultant is responsible for developing traffic control for construction (10 on page 36).

Answer 10: Consultant will not be required for developing traffic control for construction.

Question 11: "In addition to construction stormwater and dewatering permitting (and potentially traffic control, see previous question), does Thornton anticipate needing support for any other permitting?

Answer 11: Thornton does not anticipate the need of the Consultant supporting any other permitting other than stormwater and dewatering permit.

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Question 12: "Is there any flexibility on the proposed deadlines for the various design phases given the minimum review periods? The specified 14-day windows amount to a substantial portion of the 200-day timeline for completing final design."

Answer 12: Consultants shall use proposed deadlines for development of their scope and fee. Thornton will discuss future schedule flexibility/modifications with the awarded Consultant.

Question 13: "Can Thornton provide additional information on the range of design flows for the new piped systems?"

Answer 13: Design flow shall range between 0 and 5 cfs.

Question 14: "Are there any issues diverting Thornton's pro-rata ditch flows at the existing headgate? Or flow measurement accuracy with the existing flume?"

Answer 14: Thornton does not anticipate any issues diverting the pro-rate ditch flows at the existing headgate or flow measurement accuracy with the existing flume.

Question 15: "Please confirm the duration of the warranty period referenced in the project Warranty Phase (page 47 and page 64)."

Answer 15: Warranty period will be one year after Initial Acceptance is issued to the contractor.

Question 16: "What is the anticipated construction budget for the project? (Please identify whether the budget includes engineering, permitting, easement or right-of-way acquisition, utility relocation, and contingency costs.)"

Answer 16: The total budget for design and construction of both projects is $2.2M. Easement, right of way, and utility relocation costs are not anticipated.

Question 17: "The indemnification paragraph in the contract states, "To the fullest extent permitted by law, Consultant agrees to defend, indemnify and hold harmless Thornton, its officer, agents and employees (emphasis added)…" We feel that the duty to provide legal defense for the City puts an unnecessary burden on Consultants. Will the City drop the "duty to defend" clause from the contract?"

Answer 17: This clause may not be edited in the contract.

Question 18: "Which existing bridges or crossings are to be replaced, modified, or removed as part of the project, and which are required to remain intact? Note that the business access at Pep Boys and at Café Mexico are plate bridges rather than buried pipe."

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Answer 18: No bridges or crossings are expected to be replaced or modified.

Question 19: "Please provide available structural, survey, and section of the pipe that is already in pipe (each road crossing and the longer section that is already underground)."

Answer 19: Use the same pipe size and materials as provided in the attached As-Builts of the 2025 Non-potable Irrigation Improvements at the SW Corner of 120th Avenue and Claude Street. We expect to tie into existing piped sections and sizing accordingly.

Question 20: "Please provide, or confirm the availability and accuracy of. Will record drawings or as-built information for the existing piped sections of the ditch, including pipe size, material, alignment, profile, appurtenances, and connection details be provided."

Answer 20: As-Builts for the 2025 Non-Potable Irrigation Improvements will be provided via addendum. All other available record drawings for existing piped sections will be provided to the awarded Consultant.

Question 21: "Please identify known easements, rights-of-way, property constraints, and access limitations within the anticipated project corridor."

Answer 21: This information will be provided to the awarded Consultant.

Question 22: "What operating flows (diversions at the headgate), peak flows, and delivery requirements should be used to size the buried pipeline?"

Answer 22: The design flows for are 0-5 cubic feet per second (cfs).

Question 23: "There appears to be a diversion structure at the northwest corner of 120th Avenue and Claude Ct (Circle K). Please provide guidance on how Thornton desires to operate these gates after the ditch is converted to pipeline. Will measuring structures be impacted by the ditch conversion?"

Answer 23: Thornton does not anticipate any structures impacted by the ditch conversion. Operation of gates will be coordinated with the awarded Consultant.

Question 24: "Stormwater currently enters the ditch through overland surface flow. Should the buried-pipeline design continue to accept existing stormwater inflows, or should those flows conveyed to the roadway? Please identify applicable criteria for any stormwater facilities."

Answer 24: No, the buried pipe will not accept stormwater runoff. All stormwater runoff shall be conveyed to the roadway.

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Question 25: "Do roadside drainage, culverts, storm drains, or other inflow points enter the ditch?"

Answer 25: No roadside drainage, culverts, storm drains, or other inflow points enter the ditch.

Question 26: "What final grading and surface-restoration conditions are required along the roadside and within the former ditch corridor? Please clarify where restoration should consist of native soil, topsoil and revegetation, aggregate surfacing, pavement, curb and gutter, sidewalk, or other improvements."

Answer 26: The former ditch corridor shall be backfilled, graded, and revegated.

Question 27: "Are there specific roadway, shoulder, drainage, landscaping, erosion-control, or revegetation standards that must be incorporated into the final design?"

Answer27: The Consultant shall incorporate applicable requirements outlined in the City of Thorntons Standard Details and Specifications for roadway, shoulder, drainage, landscaping, erosion control, and revegetation associated with proposed improvements. https://www.thorntonco.gov/business-development/additional-design-guides

Question 28: What level of public engagement and stakeholder coordination is expected during design? Please identify anticipated public meetings, open houses, presentations, notices, or individual property-owner and business-owner coordination."

Answer 28: No public engagement is expected.

Question 29: "Project 26-144 has no pre-design report or 100-year submittal. Should this align with 26-33 or was the intent to exclude that scope from the headgate improvements?"

Answer 29: The intent is to exclude that scope from the headgate improvements project.

Question 30: "Section V.B.7 lists at least "five (3)" references are required. Please confirm if this is five or three."

Answer 30: Three (3) references are required. This has been revised in this addendum.

Question 31: "The schedule indicates the final review meeting is "14 days after NTP". It is assumed this is a typo. Should this be 14 days after the pre-final submittal?"

Answer 31: Final review meeting shall be 14 days after submission of the pre-final design. This has been revised in this addendum.

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Question 32: "As-builts are due in 60 days in the closeout section but 14 days in the schedule. Please confirm."

Answer 32: As-builts are due 14 days after initial acceptance for the project. This has been revised in this addendum.

Question 33: "The scope of services Construction Phase item VI.J indicates a not-to-exceed fee for this agreement, while the sample agreement indicated a fixed fee. Is the intent of the scope of services to provide change order consultation on a time and expense basis and should an hourly rate table be provided?"

Answer 33: The overall agreement is fixed fee. The Consultant shall provide change order consultation on a time and expense basis and should include an hourly rate table in the proposal.

Question 34: "Is there a construction budget for the two projects?"

Answer 34: The combined design and construction budget for both projects is $2.2M.

Question 35: "Will permit fees be waived for SUE and Geotechnical field work?"

Answer 35: Yes, permit fees will be waived for SUE and Geotechnical field work for the awarded Consultant.

Question 36: "When does the headgate valve need to open and close? Is it based on a sensor reading? If so what sensor? Is there a need to remotely open and close the headgate valve manually? If so what SCADA network or com protocol is desired? Please provide a full description of operation for headgate valve."

Answer 36: The headgate will be manually operated and controlled by Thornton staff and will be scheduled with The Farmers High Line Ditch Company. Thornton must be able to remotely open and close the headgate valve. It is desired to have a future option to integrate into the SCADA system. Currently, HydroLogik provides read only flow data to Farmers High Line and Thornton. Thornton manually operates the headgate to a desired flow rate.

Question 37: "The RFP establishes a schedule requiring submission of the pre-final (95%) design documents within 200 calendar days of Notice to Proceed. Can the City provide additional information regarding the primary drivers behind this schedule and whether flexibility exists within the design milestones if additional coordination, easement evaluations, utility investigations, permitting considerations, or other unforeseen constraints are identified during the design process?"

Answer 37: The two hundred (200) Calendar Day schedule reflects the City's anticipated project delivery timeline and the need to maintain progress toward subsequent project phases, including bidding and construction.

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The City recognizes that unforeseen conditions, utility coordination, easement evaluations, permitting requirements, or other constraints may arise during design. Proposers should develop their schedules based on the milestones established in the RFP and identify any anticipated challenges or schedule risks in their proposals. Any adjustments to the design schedule will be evaluated by the City on a case-by-case basis during the project, subject to justification and City approval.

Question 38: The Scope of Services requires the Consultant to identify temporary and permanent easement and right-of-way needs associated with the project. Can the City clarify whether acquisition of temporary construction easements, permanent easements, and any associated property-owner negotiations will be performed by Thornton, or whether consultant support beyond identification and exhibit preparation is anticipated?"

Answer 38: The City anticipates managing property owner negotiations and the acquisition of temporary construction easements, permanent easements, and any necessary rights of way. The Consultant will be responsible for identifying easement and right-of-way requirements and preparing the associated legal descriptions, exhibits, and supporting documentation necessary to facilitate acquisition.

Question 39: "Can the City provide any existing easement exhibits, title information, or ROW mapping associated with the project corridor and confirm whether existing easement widths are anticipated to accommodate construction access, or if additional temporary construction easements are expected?"

Answer 39: Available easement exhibits, title information, and right of way documentation will be provided to the selected Consultant following contract award.

Question 40: "What type of instrument (model/manufacturer) is currently being used to measure the depth of water in the Parshall flume (i.e., radar, ultrasonic, hydrostatic level transducer, etc.)?"

Answer 40: OTT HydroMet, Sutron SDR (Stage Discharge Recorder) using stilling well and float/pully system.

Question 41: What mode of communication is currently transmitting the Parshall flume data (i.e., cellular, radio, etc.), where is that information going to, what is being transmitted (level, flow, etc.) and what is it being used for?"

Answer 41: Cellular data is going to a site operated by HydroLogik and owned be The Farmers high Line Ditch Company. Thornton would want a separate system that transmits stage, current flow, and totalized flow or volume. This information is used in reporting to the State.

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Question 42: Is there a requirement that flow and actuator feedback be remotely sent to an offsite monitoring or SCADA system?"

Answer 42: No feedback is necessary.

Question 43: Is there a requirement for remote manual control of the actuator through a monitoring or SCADA system?"

Answer 43: No requirement for remote manual control of the actuator through a monitoring or SCADA system.

3. All other terms and conditions shall remain unchanged except as provided by this Addendum. Proposing firms must acknowledge receipt of this Addendum in their Proposal.

END OF ADDENDUM NO. ONE

DocuSigned by:
Patrick Hinterberger
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11/4/2026

Patrick Hinterberger — Date
Contracts Supervisor

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EXHIBIT A.1
(Addendum No. One)

CONSULTANT'S GENERAL SCOPE OF SERVICES

NEW UNION DITCH CONCRETE CHANNEL CONVERSION

PROJECT NO. 26-33

Project Description

The Scope of this Professional Service Agreement includes the design and surveying required for bidding and construction associated with the conversion of 3,100-Linear Feet (LF) of existing concrete channel to a buried pipe conveyance system within the New Union Ditch.

The New Union Ditch is shut down in the winter months from approximately October 31 – April 1 of each year. The New Union Ditch Concrete Channel Conversion shall be completed during this shutdown window and shall be able to convey water by **April 1, 2028.**

DESCRIPTION OF SERVICES TO BE DONE

Thornton requires that the following engineering services be performed by the Consultant as it relates to the above-described Project and constitutes the basis for this Agreement.

This Project includes converting approximately 3,100-LF of existing concrete channel to a buried pipe conveyance system. The figure below shows the four (4) existing segments that will be converted to buried pipe. The images below show the beginning of each ditch (looking east).



Figure 1 – New Union Ditch Existing Concrete Channel

A hydraulic analysis should be performed on pipe conveyance system to determine the

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optimal size of the buried pipe that will replace the concrete channel.

The Consultant shall determine required inlet, outlet, and intermediate transition structures necessary to convert the existing concrete channel to a buried pipe conveyance system This includes erosion control protection and energy dissipation measures, as necessary. The Consultant shall determine whether geotechnical investigation, pavement section evaluation, or subsurface exploration is necessary to support design of the buried pipe conveyance system, junction structures, and shall include such investigation, as required.

The Consultant shall evaluate the need for standard or custom manhole/junction boxes for access to the pipeline for cleanout and/or inspection. The evaluation shall account for shallow depth conditions, constrained horizontal footprint, property line limitations, maintenance access, and non-standard pipe connection geometry where applicable.

The Consultant shall evaluate horizontal and vertical limits of the proposed improvements relative to existing property lines, easements, and adjacent private improvements, and shall identify any temporary or permanent easement, access, or right-of-way (ROW) needs required for construction or long-term maintenance.

The Consultant shall evaluate construction sequencing and phasing necessary to complete the work within the available ditch shutdown window and shall identify any temporary bypass, diversion, dewatering or operational constraints necessary to maintain ditch service and achieve the required completion date.

The Services shall be completed in phases as further described below.

I. Information Available

Thornton will provide the Consultant with available information related to the Project. Information will include Thornton's standard front-end documents for construction contracts, existing drawings (if available), survey, utility maps, GIS files, Thornton standards. Thornton will provide related electronic computer aided design and drafting (CADD) files, if they are available. The Consultant will be responsible for verifying the information supplied by Thornton. The documentation given to the Consultant is for information only, and Thornton does not guarantee its accuracy. The Consultant shall not utilize aerial photography supplied by Thornton to the Consultant for any purpose other than Thornton's Project.

II. Pre-Design Phase

A. The Consultant shall attend a Project Kickoff Meeting with Thornton staff.

B. The Consultant shall conduct data gathering meetings, as necessary, with the Thornton Water Resources and Infrastructure Departments, in order to obtain information and understand the desired outcome of the Project. The Consultant shall plan to attend one (1) meeting during this task.

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C. The Consultant shall meet at the Project site and review the existing field conditions. Subconsultants, Thornton's staff, and other designated representatives shall be present during this review.

D. The Consultant shall contact the Utility Notification Center for utility marking, shall review Xcel Energy, CenturyLink, Comcast, AT&T, Level 3, Thornton signal and fiber, Thornton water, sanitary sewer, and storm sewer, and other public and/or private utility provider maps, as required, to accurately depict existing utility locations, depths, and points. The Consultant shall determine whether the level of accuracy thus provided is adequate and in accordance with Colorado Senate Bill 18-167; if it is not, the Consultant shall be responsible for establishing such accuracy through other appropriate means such as surveying and potholing.

The Consultant shall ensure that the location of all of the subsurface utilities have been properly investigated, located and depicted on the drawings, and that all utility locations and depictions are in compliance with Colorado Senate Bill 18-167. Consultant shall further attempt to achieve ASCE 38 utility quality level B (or its successor utility quality level) on all utilities within any proposed excavation areas unless a reasonable rationale by a licensed Professional Engineer is provided in writing for not doing so.

E. The Consultant shall provide the necessary field survey, using Thornton’s control points, to identify existing features necessary to accurately complete the design of the Project. All features shall be shown within twenty five feet (25’) of the proposed work area. A licensed surveyor registered to practice surveying in the State of Colorado shall perform the survey work. The Services shall include, but not be limited to, the following:

1. Site improvements.

2. Landscape elements including fences, gates, trails, plant materials, sprinkler vaults, water features, streams, etc.

3. Surface treatments including pavements, curb and gutter, curb ramps, driveways, steps, etc.

4. All structures.

5. All utilities, including irrigation lines, poles, vaults, hydrants, cabinets, etc.

6. All easements, including easements for Thornton-owned utilities.

7. Street addresses of building structures.

8. All property lines and corners.

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F. The Consultant shall plan and provide any required traffic control for the survey, testing or design process for field activities, which interfere with vehicular, bicycle, or pedestrian traffic operations within existing roadways, sidewalks, trails, or parking areas. Traffic control operations will be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) as well as the American Traffic Safety Services Association's ATSSA Guide for Work Area Traffic Control. Consultant shall submit their traffic control plan to Thornton and obtain the necessary permit(s).

G. Based on input from Thornton, and from thorough site investigations and analyses performed independently by the Consultant, the Consultant shall prepare and submit a Pre-design Report including the following, at a minimum:

1. Determination on whether geotechnical investigation, pavement section evaluation, or subsurface exploration is necessary to support design of the buried pipe conveyance system, and junction structures.

2. Detailed information on all recommended inlet, outlet, and intermediate transition structures, including manholes/junction boxes needed for inspection of the new buried pipe. This shall account for shallow depth conditions, constrained horizontal footprint, property line limitation, and maintenance access.

3. Demolition and abandonment recommendation for all existing features to be removed, modified, or abandoned in place, including portions of the concrete channel, existing gate operating components, appurtenant structures, and all required surface restoration.

4. Identify any private property limitations, ROW, and easements required for construction and long-term maintenance.

5. Recommendation for project delivery, construction sequencing, and phasing necessary to complete the work within the available ditch shutdown window.

6. Engineers Estimate of Probable Construction Cost for the project. Thornton requires that a construction contingency allowance of at least ten percent (10%) of the Project construction budget be reserved and carried as a separate line item in all construction cost estimates. Should the cost estimates prepared for the Pre-design Report exceed the currently approved budget, Consultant shall prepare a list of possible design alternates to bring the design back within budget. Thornton will either approve the incorporation of some or all of the suggestions into the next design phase and/or amend the budget prior to commencing with the next phase of design.

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H. The Consultant shall submit an **electronic copy** of the draft Pre-design Report and mapping within **one-hundred (100)** Calendar Days following Notice-to-Proceed. Thornton requires a minimum of fourteen (14) Calendar Days to review the documents. The Consultant shall attend a Pre-design Review Meeting with Thornton, record comments of interested parties, and distribute minutes to all attendees. The Consultant shall revise the draft Pre-design Report and mapping to reflect the comments and submit an **electronic copy** of the final Pre-design documents within fourteen (14) Calendar Days following the Pre-design Review Meeting.

III. Preliminary Design Phase

A. The Consultant shall prepare engineering designs and produce appropriate drawings and specifications, to approximately the fifty percent (50%) complete stage, for the selected design alternative.

Drawings shall be twenty-two inches (22”) by thirty-four inches (34”) with a plan scale of one inch (1”) equals twenty feet (20’); or as otherwise appropriate and acceptable to Thornton. All drawing graphics shall fit on eleven-inch (11”) by seventeen-inch (17”) paper when reduced to half size. All graphics, including text and dimensions, shall be legible when reduced to half size. Drawing graphics or notes shall not be obscured under the binding. Refer to the Final Design Phase herein for specification format requirements.

The Consultant shall perform a thorough coordination review of all drawings and specifications, including Subconsultant drawings and specifications, and correct any discrepancies. The drawings shall show, at a minimum, all existing and proposed features both above and below the ground including but not limited to streets, highways, sidewalks, fences, gates, utilities, signs, fixtures, pavements, plantings, trails, water, sewer, and electrical services, and other proposed utilities such as storm sewer, telephone, cable, structures.

B. The Consultant shall expand on survey information provided in the Pre-design Phase to provide information necessary for the design and necessary for construction of the Project. This information shall be shown on the drawings and shall include, but not be limited to, the following:

1. General.

The Consultant shall fully describe the benchmark utilized for vertical control, including the specific datum or origin of the benchmark. The Consultant shall provide the specific datum of any USGS information (i.e., NAVD 88, NGVD 29 etc.). More than one (1) control point must be used to develop the horizontal control for the Project. The control points utilized for horizontal control must be completely described to allow the points to be found by an individual who is unfamiliar with the area.

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2. Piped facilities.

   The Consultant shall begin the stationing for any gravity pipe system at the low end, which shall be station 0+00.

3. Streets.

   The Consultant shall begin the stationing for streets with 0+00 wherever practical. Stationing shall be Project Control Line (or Center Line) stationing with adequate offsets identified. If the Consultant utilizes a separate stationing system, which is included for a line other than the Project Control Line, then the Consultant shall identify the ends of these lines by offsets from a specific set of Project Control Line stations. The Consultant shall provide adequate reference to the Project Control Line, including stationing and offsets for any grade lines that are non-parallel to the Project Control Line. Designs with a constantly varying street template are discouraged.

C. The Consultant shall provide drawing sheets, which shall include, but not be limited to, the following:

1. A Title Sheet or Sheets with Thornton's approval signature block, a location map, the Project name and number, issue block with dates and revision number, summary of applicable codes and standards, Drawing Index, sheet number block, space for professional stamp, name, street address, phone, fax, and email address of Consultant and all Subconsultants.

2. Plan views, including survey control drawings, erosion control plans, ROW plans,

3. Profiles, including Energy Grade Line (EGL) and Hydraulic Grade Line (HGL), typical sections

4. Sections, including typical sections

5. Details, including typical details

6. Schedules, including equipment, doors, hardware, finishes, etc.

7. An irrigation plan, along with proposed details and service connections. The plan shall include main lines and a sprinkler head layout; and shall include scheduling information confirming the ability of the system to operate in accordance with Thornton's Standards and Specifications for the Design and Construction of Public Improvements.

8. Phasing plan.

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9. Staging area plan, site access restriction plan.

D. The Consultant shall prepare preliminary technical specifications to describe the elements of work proposed. In general, the technical specifications will be as detailed as possible for all work to be performed. All technical specifications shall be coordinated with Thornton's General and Special Conditions and shall not repeat or conflict with any information contained in the General and Special Conditions or other standard Thornton front-end contract documents.

The technical specifications shall not make any generalized blanket references to Thornton Standards and Specifications, to Colorado Department of Transportation (CDOT) Specifications, or to other national standards. If any sections of these standards and specifications are to be included by reference, the Project technical specifications shall cite specific chapters and/or paragraphs of the reference standards.

Thornton Standards and Specifications are intended to be the minimum standards acceptable on private development projects and do not necessarily represent the technical requirements Thornton wishes to achieve on a particular Thornton project. Obtain approval in writing from Thornton prior to citing these reference standards and specifications. Performance specifications in lieu of prescriptive specifications shall only be used with the prior written approval of Thornton.

The technical specifications document must be prepared without section breaks (use page breaks at end of each section) and the page numbering shall be sequential and located in the footer at the bottom center of the page. The Consultant shall prepare a Technical Specification Index/Table of Contents. Refer to Final Design Phase, paragraph M.1. for additional format requirements for technical specifications.

For projects that utilize a unit price contract for construction, the Consultant shall include information on the method for measurement and payment for work performed under each section of the technical specifications. The measurement for payment for each item shall be coordinated with other referenced specification standards, such as CDOT specifications. The Consultant’s drawings and specifications regarding measurement for payment shall be coordinated with Thornton standards for certain measurement and payment methods contained in Thornton’s Special Conditions. The Consultant shall at a minimum coordinate the following sections:

1. Excavation,
2. Muck excavation,
3. Fill,
4. Subgrade preparation,

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5. Asphalt and/or concrete paving,
6. Temporary and permanent asphalt patching,
7. Potholing.

The Consultant shall read and be familiar with Thornton's standard construction contract language regarding the Schedule of Contract Items and Prices and Special and General Conditions regarding measurement and payment. The Consultant and Thornton shall determine which pay items shall be paid at the Plan Quantity and which pay items shall have an estimated quantity designated as possibly varying more than plus or minus twenty five percent (25%) from the stated quantity.

E. Stormwater Sediment and Erosion Control and Stormwater Quality Control Measures

1. The Colorado Department of Public Health and Environment (CDPHE), Water Quality Control Division (WQCD), through the Municipal Separate Storm Sewer System (MS4) permit issued to Thornton, requires Thornton to control and reduce the discharge of pollutants to protect stormwater quality and to satisfy the appropriate water quality requirements of the Colorado Water Quality Control Act and the Colorado Discharge Permit Regulations (Colorado Regulation 61). The MS4 permit requires the implementation of a program to reduce the discharge from public and private construction sites.

2. Pursuant to Thornton's stormwater program, the Consultant shall develop designs and prepare drawings and details for stormwater quality control measures (CM) for temporary sediment and erosion control to conform to the latest edition of Urban Drainage Criteria Manual Volume III or CDOT M-Standards and in compliance with the CDPS General Permit for Stormwater Discharges Associated with Construction Activity (Permit No. COR400000) for CDPHE. The drawings shall show a minimum of three (3) phases for temporary control measures to differentiate the phases of construction. For complex projects, additional phases may be added for proper stormwater management control.

3. If the earth disturbance is less than one (1) acre, the Consultant shall develop temporary sediment and erosion control drawings and details to control construction stormwater runoff. There is no SWMP or CDPS permit required for disturbances under one (1) acre. Sediment and erosion control measures are required for all construction in Thornton.

4. The Consultant shall design permanent water quality CMs for new development, redevelopment, and Capital Improvement Projects that disturb one (1) or more acres, as well as for projects that disturb less than one (1) acre that are part of a larger common plan of development

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or sale. The requirement does not apply to excluded projects as defined in the MS4 permit.

5. The design criteria for stormwater quality CMs shall be as described in the MS4 Permit and the latest edition of Urban Drainage and Flood Control District (UDFCD) Criteria Manual Volume III.

6. For guidance on selecting sediment and erosion control measures and permanent stormwater quality control measures, including project work sheets, checklists and general notes, visit the Thornton stormwater webpage at:

   https://www.thorntonco.gov/government/infrastructure/stormwater/Pages/stormwater-quality.aspx

7. The work sheets and checklists must be submitted with the final water quality design documents.

F. The Consultant shall attend two (2) progress meetings on-site with Thornton's staff to exchange and share information during preparation of the preliminary documents.

G. The Consultant shall prepare an updated Engineer's Estimate of Probable Construction Cost for the Project. The estimate shall be based on a work breakdown structure describing finite elements of the work and unit prices applicable to each element. The work breakdown structure shall include separate line items for mobilization and project closeout. Thornton requires that a construction contingency allowance of at least ten percent (10%) of the Project construction budget be reserved and carried as a separate line item in all cost estimates. For projects that are to use the unit price method of measurement and payment, the Consultant shall prepare measurement and payment specifications for each item proposed. Should the updated cost estimate exceed the currently approved budget, Consultant shall prepare a list of possible design alternates or revisions to bring the design back within budget. Thornton will either approve the inclusion of the alternates or revisions and/or amend the budget prior to commencing with the next phase of design.

H. The Consultant shall prepare and submit information to be incorporated with Thornton's standard construction contract documents including, at a minimum, the following:

1. A brief description (one paragraph) of the Project that adequately depicts the work to be completed, which will be used in the Invitation for Bids of Thornton's standard contract documents.

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2. An estimate of the number of consecutive Calendar Days that will be required for completion of construction of the Project, which will be included in Thornton's standard construction contract documents. The estimate shall take into account average weather conditions for the time of the year that construction is anticipated to take place, as well as any other limitations on the work by the contractor, such as planting windows, seasonal water flows, and school schedules. The estimate shall consider any intermediate milestones and construction phasing that may be necessary to complete the construction.

3. A summary of recommended modifications to the Special Conditions section of Thornton's standard construction contract documents. The Special Conditions are used to modify the standard General Conditions to fit the specifics of each project. The General Conditions will not be edited. The summary shall include, at a minimum:

    a. Consultant’s recommendations regarding the type of schedule to be provided by the contractor (critical path method (CPM) for example versus simple bar chart),

    b. A list of other outside contractors and/or agencies the contractor will be required to coordinate with,

    c. Any special insurance requirements,

    d. Language for unique conditions such as assignment of pre-purchased materials or equipment to the general contractor,

    e. A calculation for recommended liquidated damages to be imposed if the general contractor should fail to substantially complete the Project within the specified contract time,

    f. Bid item descriptions including measurement and payment information,

    g. An estimate of the time required for the review of shop drawings and submittals.

4. A "Schedule of Contract Items and Prices" using Thornton’s standard format. This schedule shall contain blank areas where the bidder will fill in the amount of its bid for each recommended item. A separate mobilization and close out item is mandatory for all bid schedules. Do not include the project contingency line from the estimate in the Schedule of Contract Items and Prices.

5. A technical specification section on Submittal requirements, which coordinates with and is consistent with Thornton’s Special and General Conditions sections on Submittals, and which includes a thorough and complete Project Submittal Log.

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The Submittal Log shall list all submittals for this Project, including but not limited to all Shop Drawing, Samples, Materials Certificates, and Equipment that are required by the technical specifications to be submitted for review and approval by either Thornton and/or the Consultant. The Submittal Log shall indicate the time frame required for Thornton's and/or the Consultant's review of each individual Submittal. The Submittal Log shall include blank columns for the contractor's future use to indicate the submittal processing dates, review and approval status, and comments.

I. The Consultant shall complete the Preliminary Design Phase of services and submit an **electronic copy** of preliminary drawings, specifications, and Engineer's Estimate of Probable Construction Cost within **one hundred and fifty (150)** following issue of Notice to Proceed (NTP). Thornton will require a minimum of fourteen (14) Calendar Days to review the submitted information. The Consultant shall attend a Field Inspection Review (FIR) Meeting and record comments of all interested parties. The Consultant shall be responsible for documenting all decisions reached during the meeting and preparing and submitting the meeting minutes to all attendees.

IV. Final Design Phase

A. Based on comments received at the FIR Meeting, the Consultant shall prepare pre-final and final drawings and specifications in Thornton's required format.

B. The Consultant shall attend one (1) Progress Meeting on-site during the Final Design Phase to discuss previously undiscovered conditions or concerns arising during final design.

C. The Consultant shall identify and utilize an individual or individuals to perform an independent quality control check of the drawings and specifications to assure the documents are clear and complete and to assure functional coordination of the varied systems and components of the construction documents. This individual shall not have had a role in the development of the construction documents. The quality control check shall include checking dimensions, sizes, detail, section, and elevation references, coordination between the Consultant and Subconsultant's drawings, compatibility of materials, references within technical specifications to other sections and to drawings, and constructability. Consultant shall submit the comments from the independent quality control check to Thornton. Thornton may engage independent consultants to perform a separate peer review. Consultant shall supply all necessary calculations, analyses, and other documents and cooperate fully with any such independent peer review.

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D. Consultant shall prepare an updated Engineer's Estimate of Probable Construction Cost based on the Pre-Final Documents (approximately ninety-five percent (95%) complete design). The estimate shall include a work breakdown structure describing finite elements of the work and estimated unit prices applicable to each element. The work breakdown structure shall include items for mobilization and Project close-out. Thornton requires that a construction contingency allowance of at least ten percent (10%) of the Project construction budget be reserved and carried as a separate line item in all cost estimates.

It is Thornton's desire for the Project construction to remain within the allocated Project budget and Thornton expects to be notified of significant budgetary issues with the submission of Engineer's Estimates of Probable Construction Costs during for each phase of the design, including the Pre-design and Preliminary Design Phases. Should the Consultant fail to notify Thornton that construction costs are likely to exceed the allocated budget, and the Engineer's Estimate of Probable Costs submitted during the Final Design Phase exceeds Thornton's currently approved budget by more than ten percent (10%), Consultant shall be required to work with Thornton to find appropriate changes to the bid and/or design documents that will resolve the budgetary concerns. Under these circumstances, any necessary revisions to the design to come within Thornton's budget shall be completed at no cost to Thornton. Note that Thornton may engage the services of an independent third party to provide assistance in cost estimating and to verify Consultant's estimate. Thornton may request that the independent third party estimator assist with development of design alternatives if required to bring the Project back within budget. Should Thornton engage the services of a third party cost estimator, Consultant shall cooperate with and participate in the independent third party cost estimating and design alternatives evaluation. Consultant shall make changes to the design documents at no cost to Thornton resulting from this effort.

E. The Consultant shall complete the pre-final design documents (approximately ninety-five percent (95%) design completion) an electronic copy of pre-final drawings, specifications, and revised pre-final Engineer's Estimate of Probable Construction Cost within **two hundred (200) Calendar Days** following issuance of Notice to Proceed (NTP). Thornton will require a minimum of fourteen (14) Calendar Days to review the documents. The Consultant shall attend a Final Office Review (FOR) Meeting to receive comments on the pre-final documents from all interested parties. The Consultant shall be responsible for documenting all comments and decisions reached during the meeting and preparing and submitting the minutes of the meeting.

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F. The Consultant's pre-final and final contract documents shall provide drawing sheets that shall include, but not be limited to, the following:

1. Title sheet or sheets with Thornton's approval signature block, a location map, the Project name and number, issue block with dates and revision numbers, summary of applicable codes and standards, Drawing Index, sheet number block, space for professional stamp, name, street address, phone, fax and email address of Consultant and all Subconsultants.

2. Table of "Estimated Quantities", with notation of items that will be paid at Plan Quantity and items that may vary by more than plus or minus twenty five percent (25%) of estimate.

3. Dimensioned construction drawings for all required disciplines, which may include, but not necessarily be limited to, ROW plans, demolition plans, staging plans, traffic control, erosion control, drainage, roads, trails, utilities, grading, paving, landscape, irrigation, site furnishings, site lighting, site signage, profiles, sections, elevations, schedules, and details as required to detail the work sufficiently to allow for the complete construction of the Project.

G. The Consultant shall make document revisions noted and agreed upon at the FOR Meeting within fourteen (14) Calendar Days following the FOR Meeting. Revisions may include denoting work elements as bid alternatives and revising the bidding form and alternates specification section if, in Thornton's sole opinion, the cost estimates are not consistent with the budgeted level of funding and the design alternatives accepted have not sufficiently reduced the cost estimate to align with the budget. If, in Thornton's sole opinion, the final documents submitted by the Consultant do not adequately respond to the FOR comments, the Consultant shall revise and reissue the final documents at no additional cost to Thornton until all comments are resolved to Thornton's satisfaction.

H. When Thornton determines that the final contract documents are acceptable and are ready for bidding, the Consultant shall submit the following to Thornton:

1. Technical Specifications: Submit technical specifications in Microsoft Word, either emailed to Contract Administrator or on a CD, prepared using the following format:

   a. 8 ½" x 11", 11.5 pt. Arial font, single line spacing;
   b. Margins: left 1.0", right 1.0", top 1.0", bottom 1.0"; footer 0.5", no headers;
   c. Index/Table of Content of Technical Specs with no page numbers indicated;

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d. No section breaks, use page breaks between specification sections;
e. Section titles in all caps, bold, 14 pt. Arial font, centered on page at top of each new specification section;
f. Entire set of specification pages numbered sequentially beginning with Page 1 of X;
g. Footer with file path name left justified and page number centered, 8 pt. Arial font.

2. Bid documents:

Thornton will prepare the Project Manual for bidding. The Project Manual for bidding will not be stamped by the Consultant. The cover page on the Project Manual shall read “Issued for Bidding” with date.

Consultant shall submit electronic files of drawings on CD. Submit one disk with drawing file(s) in AutoCAD format compatible with Thornton’s system. Submit another disk with drawings combined into a single file using .pdf format. Alternatively, the .pdf version may be emailed to the Contract Administrator provided the file size is small enough to email successfully.

3. Consultant shall submit a final Engineer's Estimate of Probable Construction Cost. Thornton requires that ten percent (10%) of the engineer's estimate be available in the overall budget for a construction contingency at the time of bidding to cover unforeseen changes during the construction of the Project.

V. Bid Phase

A. The Consultant shall attend the “Pre-Bid Conference” and shall provide assistance to Thornton in responding to inquiries by the prospective bidders during the bidding period.

B. The Consultant shall prepare all necessary corrections and additional information based on prospective bidder inquiries. All answers to questions shall be coordinated with Thornton and issued by Thornton. Consultant shall not respond directly to any prospective bidder or subcontractor during the bid phase. Consultant shall assist Thornton with preparation of addenda. Thornton will issue all addenda.

C. The Consultant shall assist Thornton in the review of bids received and the qualification of bidders as deemed appropriate by Thornton.

D. If more than **one hundred eighty (180) Calendar days** have elapsed between the date of the Consultant’s most recent Estimate of Probable Construction Cost and the date of the bid submission, the Estimate of Probable Construction

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Cost total shall be adjusted for inflation based on the Engineering News Record Construction Cost Index for Denver. The adjusted estimate shall be used as the basis for evaluating the bids and the Project budget.

E. Should the bid of the lowest responsive and responsible bidder exceed the Consultant's Estimate of Probable Construction Cost, Thornton and the Consultant shall explore options, including but not limited to awarding the project as designed if sufficient budget contingency is available, evaluating design alternatives and estimates of related cost savings to bring the Project back within budget, and re-designing and re-bidding. Thornton, at its sole option, will determine the course of action to take.

F. If the bid exceeded the Consultant's estimate of probable construction cost, as adjusted for inflation if applicable, and should Thornton choose to re-design and re-bid the Project, the Consultant shall prepare revised contract documents as required, and shall assist in the re-bidding phase. Should Thornton choose to award the Project without rebidding, the Consultant shall cooperate with the selected contractor and assist in preparation of "Proposal Requests" as directed by Thornton to reduce the Project cost to within budget, all at no additional cost to Thornton.

G. At the end of the Bid Phase, the Consultant shall make final revisions to the contract documents based on addenda issued during the Bid Phase. Drawing revisions shall be indicated by encircling addenda changes with "clouds" and including a delta indicating the addendum number. All addenda dates and delta numbers shall also be indicated in the revision block on each sheet. Project Manual addenda revisions shall be denoted by striking through deleted text and italicizing added text with the addendum number noted in parentheses immediately following each text revision. The Project Manual index shall indicate those sections that contain addenda revisions by placing an asterisk next to the section number in the Index/Table of Contents. The Consultant shall provide revised reproducible and electronic documents to Thornton within ten (10) Calendar Days following the opening of the bids. Issue block shall read "For Construction" and shall be dated as of the general contractor's date of Notice of Award. Thornton will issue the "For Construction" documents to the successful general contractor for use during the construction phase. Consultant shall be responsible for the cost of printing and distributing hard copies of the "For Construction" documents to themselves and their Subconsultants.

VI. Construction Phase

A. It is anticipated that the 26-144 Headgate Improvements Project and the 26-33 Concrete Channel Conversion Project will be separate bid packages which will require independent construction phase services from the Consultant.

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B. Construction is anticipated to commence approximately two (2) months following the delivery of the bid-ready set of documents. The Consultant shall attend the "Pre-Construction Meeting" and assist Thornton in responding to inquiries by the contractor during the Pre-Construction Meeting.

C. The Consultant and their Subconsultants shall provide periodic field observation to assure themselves and Thornton that the work is proceeding in accordance with the intent of the contract documents. Notwithstanding the foregoing, if required by any permitting agency or Thornton, the Consultant's Engineer shall be required to inspect structural work, including but not limited to any foundations and steel structures, and provide a letter to the permitting agency and Thornton certifying that the work was constructed substantially in accordance with the design intent.

D. The Consultant shall attend Weekly Meetings on site or virtually with the contractor and Thornton.

E. The Consultant shall review the contractor's proposed submittal schedule and comment on submittal review times proposed. The Consultant and contractor shall negotiate until mutually acceptable review times are established for each submittal. The Consultant shall complete submittal review within the agreed upon allotted time so as to not delay the construction.

F. The Consultant shall promptly respond to requests for information issued by Thornton, the contractor, subcontractors, testing agencies, commissioning agent, building department, or other entities so as not to delay construction.

G. The Consultant shall issue "Supplemental Instructions" to Thornton or their designated representative when an ambiguous condition requiring clarification is discovered in the contract documents. The Consultant shall prepare documents providing clarification and/or correcting errors or omissions in the contract documents at no charge to Thornton. Consultant shall prepare a Proposal Request for issuance to the contractor when such items may have a cost or schedule impact.

H. The Consultant shall review progress payments and make recommendations as to the validity of percentages complete claimed by the contractor.

I. The Consultant shall periodically update the electronic documents to reflect As-Built information throughout the construction phase, as a minimum at the completion of each trades work, to keep the electronic documents current. The As-Built information shall be confirmed with the contractor and Thornton's Construction Coordinator before the revisions are finalized.

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J. The Consultant shall provide change order consultation as it relates to change order requests submitted by the contractor, including but not limited to review of change order requests for impacts on schedule, quality, constructability, aesthetics, functionality, and proposed change order pricing. Change order consultation may also be necessary for discretionary changes requested by Thornton; however, such consultation is not included in the fixed ffee for this Agreement. Compensation for discretionary change order consultation shall be made on a time and expense basis at the rates specified in the Schedule of Charges included in the Professional Service Agreement.

VII. Closeout Phase

A. When the contractor applies for "Substantial Completion," the Consultant, in consultation with Thornton's representative(s), shall perform a walk-through of the Project to review and add to the contractor's punch list. The Consultant shall monitor the contractor's progress on the punch list and recommend to Thornton when all items are satisfactorily completed and "Initial Acceptance" may be granted.

B. Within fourteen (14) Calendar Days after Initial Acceptance of the Project, the Consultant will be required to submit the following:

1. Pre-design Report and review comments in Microsoft Word on a non-rewritable compact disc (CD).

2. FIR review comments in Microsoft Word on a non-rewritable compact disc (CD).

3. FOR review comments in Microsoft Word on a non-rewritable compact disc (CD).

4. The Consultant shall prepare and submit As-Built documents. The issue block on the drawings shall read "As-Built" and indicate the date, which shall be the date of Initial Acceptance. The As-Built Project Manual shall indicate "As-Built" and the Initial Acceptance date on the cover page.

   a. As-Built electronic drawing files shall be in a vector format compatible with the AutoCAD version currently in use by Thornton. Provide both .dwg and .pdf formats on CD.

   b. The Project Manual shall be submitted both in hard copy and as electronic files on CD. Submit electronic files in a Microsoft Word file compatible with the version currently in use by Thornton and as a .pdf file.

VIII. Warranty Phase

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A. The Consultant shall assist Thornton in resolving warranty repairs during the warranty period.

B. The Consultant shall participate in a walk-through of the Project near the end of the Warranty Phase and prepare a final punch list of items needing correction. The Consultant shall review progress made by the contractor on the Warranty Phase punch list and recommend when the work is completed satisfactorily and the Project is ready for Final Acceptance.

Project Schedule

Project deliverable, meetings, and review times are listed below as an example. Consultant shall provide a proposed project schedule as part of their proposal.

- Notice to Proceed – Date to be determined. Target date is **November 1, 2026.**

Pre-Design Phase

- Attend Project Kick Off Meeting – date to be determined.
- Attend Data Gathering Meetings – dates to be determined.
- Attend field conditions walk-through – date to be determined.
- Submit pre-design documents within **one hundred (100) Calendar Days** after Notice to Proceed.
- Attend Pre-Design Review Meeting within fourteen (14) Calendar Days after Pre-Design Documents Submittal.

Preliminary Design Phase

- Attend Progress Meetings – dates to be determined.
- Submit Preliminary Design documents within **one hundred and fifty (150) Calendar Days** after Notice to Proceed.
- Attend Field Inspection Review (FIR) Meeting within fourteen (14) Calendar Days after Preliminary Design Submittal.

Final Design Phase

- Attend Progress Meetings on-site – dates to be determined.
- Submit pre-final design documents within **two hundred (200) Calendar Days** after Notice to Proceed.
- Attend Final Office Review (FOR) Meeting within (14) Calendar Days after submission of pre-final design.
- Submit Final Design bid documents within fourteen (14) Calendar Days after Final Office Review (FOR) Meeting.

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Bid Phase

- Attend Pre-Bid Conference – date to be determined.
- Revise documents as required to meet budget – submission date to be determined.
- Prepare addenda for Thornton's review – dates to be determined.
- Prepare "For Construction" contract documents incorporating all addenda items – deadline to be determined and to correspond to date of Notice of Award for the construction contractor.

Construction Phase

- Attend Pre-Construction Meeting – date to be determined and to correspond to date of Notice to Proceed for the construction contractor.
- Perform periodic field observations weekly – dates to be determined.
- Attend weekly Construction meetings on-site – dates to be determined.

Closeout Phase

- Attend punch list walk-through – date to be determined.
- Monitor punch list progress – dates to be determined.
- Review contractor submitted closeout documents – date to be determined.
- Recommend issuance of Initial Acceptance – date to be determined.
- Submit As-Built documents – within fourteen (14) Calendar Days following issuance of Initial Acceptance to construction contractor.

Warranty Phase

- Assist Thornton with obtaining warranty repairs as needed – dates to be determined.
- Attend warranty punch list walk-through – date to be determined.

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EXHIBIT A.2
(Addendum No. One)

CONSULTANT'S GENERAL SCOPE OF SERVICES

NEW UNION DITCH HEADGATE IMPROVEMENTS

PROJECT NO. 26-144

Project Description

The Scope of this Professional Service Agreement includes the design and surveying required for bidding and construction of a new automated headgate for the New Union Ditch located near 120th Avenue and Grant Street.

Services include design of the New Union Ditch headgate improvements which will replace the existing headgate and add a solar powered actuator. The New Union Ditch is shut down in the winter months from approximately October 31 – April 1 of each year. Construction for the New Union Ditch Headgate Improvements Project shall be completed during this shut down window and be operational by **April 1, 2028.**

DESCRIPTION OF SERVICES TO BE DONE

Thornton requires that the following engineering services be performed by the Consultant as it relates to the above-described Project and constitutes the basis for this Agreement.

This Project includes replacing the existing headgate and providing automated flow control using a solar-powered actuator which will be tied to the existing downstream Parshall flume flow meter. The Consultant should evaluate the existing ditch structure and channel conditions to determine the most appropriate configuration for the new gate system, including how it is installed, supported, and integrated with the existing structure.

The Consultant shall evaluate and design the electrical and instrumentation and control components required for automated gate operation, including solar power supply, wiring, conduit, actuator sizing, control logic, communication requirements, fail-safe operation, manual override capacity, and integration with the existing downstream Parshall flume flow meter and any existing monitoring infrastructure.

The Consultant shall design all required supports, anchorage, fastening, mounting, and structural modifications necessary to safely and reliably install the proposed headgate system and actuator. This includes evaluating load transfer, corrosion resistance, durability, constructability, and compatibility with the existing ditch structure.

The Consultant shall prepare design documents for a complete, functional system, including civil, structural, mechanical, electrical, instrumentation, and controls components as required. (See Figure 1, next page).

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Figure 1 – New Union Ditch Headgate

The Services shall be completed in phases as further described below.

I. Information Available

Thornton will provide the Consultant with available information related to the Project. Information will include Thornton's standard front-end documents for construction contracts, existing drawings (if available), survey, utility maps, GIS files, Thornton standards. Thornton will provide related electronic computer aided design and drafting (CADD) files, if they are available. The Consultant will be responsible for verifying the information supplied by Thornton. The documentation given to the Consultant is for information only, and Thornton does not guarantee its accuracy. The Consultant shall not utilize aerial photography supplied by Thornton to the Consultant for any purpose other than Thornton's Project.

II. Pre-Design Phase

A. The Consultant shall attend a Project Kickoff Meeting with Thornton staff.

B. The Consultant shall conduct data gathering meetings, as necessary, with the Thornton Water Resources and Infrastructure Departments, in order to obtain information and understand the desired outcome of the Project. The Consultant shall plan to attend one (1) meeting during this task.

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C. The Consultant shall meet at the Project site and review the existing field conditions. Subconsultants, Thornton's staff, and other designated representatives shall be present during this review.

D. The Consultant shall contact the Utility Notification Center for utility marking, shall review Xcel Energy, CenturyLink, Comcast, AT&T, Level 3, Thornton signal and fiber, Thornton water, sanitary sewer, and storm sewer, and other public and/or private utility provider maps, as required, to accurately depict existing utility locations, depths, and points. The Consultant shall determine whether the level of accuracy thus provided is adequate and in accordance with Colorado Senate Bill 18-167; if it is not, the Consultant shall be responsible for establishing such accuracy through other appropriate means such as surveying and potholing.

The Consultant shall ensure that the location of all of the subsurface utilities have been properly investigated, located and depicted on the drawings, and that all utility locations and depictions are in compliance with Colorado Senate Bill 18-167. Consultant shall further attempt to achieve ASCE 38 utility quality level B (or its successor utility quality level) on all utilities within any proposed excavation areas unless a reasonable rationale by a licensed Professional Engineer is provided in writing for not doing so.

E. The Consultant shall provide the necessary field survey, using Thornton’s control points, to identify existing features necessary to accurately complete the design of the Project. All features shall be shown within twenty five feet (25’) of the proposed work area. A licensed surveyor registered to practice surveying in the State of Colorado shall perform the survey work. The Services shall include, but not be limited to, the following:

1. Site improvements.

2. Landscape elements including fences, gates, trails, plant materials, sprinkler vaults, water features, streams, etc.

3. Surface treatments including pavements, curb and gutter, curb ramps, driveways, steps, etc.

4. All structures.

5. All utilities, including irrigation lines, poles, vaults, hydrants, cabinets, etc.

6. All easements, including easements for Thornton-owned utilities.

7. Street addresses of building structures.

8. All property lines and corners.

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F. The Consultant shall plan and provide any required traffic control for the survey, testing or design process for field activities, which interfere with vehicular, bicycle, or pedestrian traffic operations within existing roadways, sidewalks, trails, or parking areas. Traffic control operations will be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) as well as the American Traffic Safety Services Association's ATSSA Guide for Work Area Traffic Control. Consultant shall submit their traffic control plan to Thornton and obtain the necessary permit(s).

III. Preliminary Design Phase

A. The Consultant shall prepare engineering designs and produce appropriate drawings and specifications, to approximately the fifty percent (50%) complete stage, for the selected design alternative.

Drawings shall be twenty-two inches (22") by thirty-four inches (34") with a plan scale of one inch (1") equals twenty feet (20'); or as otherwise appropriate and acceptable to Thornton. All drawing graphics shall fit on eleven-inch (11") by seventeen-inch (17") paper when reduced to half size. All graphics, including text and dimensions, shall be legible when reduced to half size. Drawing graphics or notes shall not be obscured under the binding. Refer to the Final Design Phase herein for specification format requirements.

The Consultant shall perform a thorough coordination review of all drawings and specifications, including Subconsultant drawings and specifications, and correct any discrepancies. The drawings shall show, at a minimum, all existing and proposed features both above and below the ground including but not limited to streets, highways, sidewalks, fences, gates, utilities, signs, fixtures, pavements, plantings, trails, water, sewer, and electrical services, and other proposed utilities such as storm sewer, telephone, cable, structures.

B. The Consultant shall expand on survey information provided in the Pre-design Phase to provide information necessary for the design and necessary for construction of the Project. This information shall be shown on the drawings and shall include, but not be limited to, the following:

1. General.

The Consultant shall fully describe the benchmark utilized for vertical control, including the specific datum or origin of the benchmark. The Consultant shall provide the specific datum of any USGS information (i.e., NAVD 88, NGVD 29 etc.). More than one (1) control point must be used to develop the horizontal control for the Project. The control points utilized for horizontal control must be completely described to allow the points to be found by an individual who is unfamiliar with the area.

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2. Piped facilities.

   The Consultant shall begin the stationing for any gravity pipe system at the low end, which shall be station 0+00.

3. Streets.

   The Consultant shall begin the stationing for streets with 0+00 wherever practical. Stationing shall be Project Control Line (or Center Line) stationing with adequate offsets identified. If the Consultant utilizes a separate stationing system, which is included for a line other than the Project Control Line, then the Consultant shall identify the ends of these lines by offsets from a specific set of Project Control Line stations. The Consultant shall provide adequate reference to the Project Control Line, including stationing and offsets for any grade lines that are non-parallel to the Project Control Line. Designs with a constantly varying street template are discouraged.

C. The Consultant shall provide drawing sheets, which shall include, but not be limited to, the following:

1. A Title Sheet or Sheets with Thornton's approval signature block, a location map, the Project name and number, issue block with dates and revision number, summary of applicable codes and standards, Drawing Index, sheet number block, space for professional stamp, name, street address, phone, fax, and email address of Consultant and all Subconsultants.

2. Plan views, including survey control drawings, erosion control plans, right-of-way (ROW) plans,

3. Profiles, including typical sections.

4. Sections, including typical sections.

5. Details, including typical details.

6. Schedules, including equipment, doors, hardware, finishes, etc.

7. An irrigation plan, along with proposed details and service connections. The plan shall include main lines and a sprinkler head layout; and shall include scheduling information confirming the ability of the system to operate in accordance with Thornton's Standards and Specifications for the Design and Construction of Public Improvements.

8. Phasing plan.

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9. Staging area plan, site access restriction plan.

D. The Consultant shall prepare preliminary technical specifications to describe the elements of work proposed. In general, the technical specifications will be as detailed as possible for all work to be performed. All technical specifications shall be coordinated with Thornton's General and Special Conditions and shall not repeat or conflict with any information contained in the General and Special Conditions or other standard Thornton front-end contract documents.

The technical specifications shall not make any generalized blanket references to Thornton Standards and Specifications, to Colorado Department of Transportation (CDOT) Specifications, or to other national standards. If any sections of these standards and specifications are to be included by reference, the Project technical specifications shall cite specific chapters and/or paragraphs of the reference standards.

Thornton Standards and Specifications are intended to be the minimum standards acceptable on private development projects and do not necessarily represent the technical requirements Thornton wishes to achieve on a particular Thornton project. Obtain approval in writing from Thornton prior to citing these reference standards and specifications. Performance specifications in lieu of prescriptive specifications shall only be used with the prior written approval of Thornton.

The technical specifications document must be prepared without section breaks (use page breaks at end of each section) and the page numbering shall be sequential and located in the footer at the bottom center of the page. The Consultant shall prepare a Technical Specification Index/Table of Contents. Refer to Final Design Phase, paragraph M.1. for additional format requirements for technical specifications.

For projects that utilize a unit price contract for construction, the Consultant shall include information on the method for measurement and payment for work performed under each section of the technical specifications. The measurement for payment for each item shall be coordinated with other referenced specification standards, such as CDOT specifications. The Consultant’s drawings and specifications regarding measurement for payment shall be coordinated with Thornton standards for certain measurement and payment methods contained in Thornton’s Special Conditions. The Consultant shall at a minimum coordinate the following sections:

1. Excavation,
2. Muck excavation,
3. Fill,
4. Subgrade preparation,
5. Asphalt and/or concrete paving,

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6. Temporary and permanent asphalt patching, and
7. Potholing.

The Consultant shall read and be familiar with Thornton's standard construction contract language regarding the Schedule of Contract Items and Prices and Special and General Conditions regarding measurement and payment. The Consultant and Thornton shall determine which pay items shall be paid at the Plan Quantity and which pay items shall have an estimated quantity designated as possibly varying more than plus or minus twenty five percent (25%) from the stated quantity.

E. Stormwater Sediment and Erosion Control and Stormwater Quality Control Measures

1. The Colorado Department of Public Health and Environment (CDPHE), Water Quality Control Division (WQCD), through the Municipal Separate Storm Sewer System (MS4) permit issued to Thornton, requires Thornton to control and reduce the discharge of pollutants to protect stormwater quality and to satisfy the appropriate water quality requirements of the Colorado Water Quality Control Act and the Colorado Discharge Permit Regulations (Colorado Regulation 61). The MS4 permit requires the implementation of a program to reduce the discharge from public and private construction sites.

2. Pursuant to Thornton's stormwater program, the Consultant shall develop designs and prepare drawings and details for stormwater quality control measures (CM) for temporary sediment and erosion control to conform to the latest edition of Urban Drainage Criteria Manual Volume III or CDOT M-Standards and in compliance with the CDPS General Permit for Stormwater Discharges Associated with Construction Activity (Permit No. COR400000) for CDPHE. The drawings shall show a minimum of three (3) phases for temporary control measures to differentiate the phases of construction. For complex projects, additional phases may be added for proper stormwater management control.

3. If the earth disturbance is less than one (1) acre, the Consultant shall develop temporary sediment and erosion control drawings and details to control construction stormwater runoff. There is no SWMP or CDPS permit required for disturbances under one (1) acre. Sediment and erosion control measures are required for all construction in Thornton.

4. The Consultant shall design permanent water quality CMs for new development, redevelopment, and Capital Improvement Projects that disturb one (1) or more acres, as well as for projects that disturb less than one (1) acre that are part of a larger common plan of development

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or sale. The requirement does not apply to excluded projects as defined in the MS4 permit.

5. The design criteria for stormwater quality CMs shall be as described in the MS4 Permit and the latest edition of Urban Drainage and Flood Control District (UDFCD) Criteria Manual Volume III.

6. For guidance on selecting sediment and erosion control measures and permanent stormwater quality control measures, including project work sheets, checklists and general notes, visit the Thornton stormwater webpage at:

   https://www.thorntonco.gov/government/infrastructure/stormwater/Pages/stormwater-quality.aspx

7. The work sheets and checklists must be submitted with the final water quality design documents.

F. The Consultant shall attend two (2) Progress Meetings on-site with Thornton's staff to exchange and share information during preparation of the preliminary documents.

G. The Consultant shall prepare an updated Engineer's Estimate of Probable Construction Cost for the Project. The estimate shall be based on a work breakdown structure describing finite elements of the work and unit prices applicable to each element. The work breakdown structure shall include separate line items for mobilization and project closeout. Thornton requires that a construction contingency allowance of at least ten percent (10%) of the Project construction budget be reserved and carried as a separate line item in all cost estimates. For projects that are to use the unit price method of measurement and payment, the Consultant shall prepare measurement and payment specifications for each item proposed. Should the updated cost estimate exceed the currently approved budget, Consultant shall prepare a list of possible design alternates or revisions to bring the design back within budget. Thornton will either approve the inclusion of the alternates or revisions and/or amend the budget prior to commencing with the next phase of design.

H. The Consultant shall prepare and submit information to be incorporated with Thornton's standard construction contract documents including, at a minimum, the following:

1. A brief description (one paragraph) of the Project that adequately depicts the work to be completed, which will be used in the Invitation for Bids of Thornton's standard contract documents.

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2. An estimate of the number of consecutive Calendar Days that will be required for completion of construction of the Project, which will be included in Thornton's standard construction contract documents. The estimate shall take into account average weather conditions for the time of the year that construction is anticipated to take place, as well as any other limitations on the work by the contractor, such as planting windows, seasonal water flows, and school schedules. The estimate shall consider any intermediate milestones and construction phasing that may be necessary to complete the construction.

3. A summary of recommended modifications to the Special Conditions section of Thornton's standard construction contract documents. The Special Conditions are used to modify the standard General Conditions to fit the specifics of each project. The General Conditions will not be edited. The summary shall include, at a minimum:

    a. Consultant’s recommendations regarding the type of schedule to be provided by the contractor (critical path method (CPM) for example versus simple bar chart),

    b. A list of other outside contractors and/or agencies the contractor will be required to coordinate with,

    c. Any special insurance requirements,

    d. Language for unique conditions such as assignment of pre-purchased materials or equipment to the general contractor,

    e. A calculation for recommended liquidated damages to be imposed if the general contractor should fail to substantially complete the Project within the specified contract time,

    f. Bid item descriptions including measurement and payment information,

    g. An estimate of the time required for the review of shop drawings and submittals.

4. A "Schedule of Contract Items and Prices" using Thornton’s standard format. This schedule shall contain blank areas where the bidder will fill in the amount of its bid for each recommended item. A separate mobilization and close out item is mandatory for all bid schedules. Do not include the project contingency line from the estimate in the Schedule of Contract Items and Prices.

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5. A technical specification section on Submittal requirements, which coordinates with and is consistent with Thornton's Special and General Conditions sections on Submittals, and which includes a thorough and complete Project Submittal Log.

   The Submittal Log shall list all submittals for this Project, including but not limited to all Shop Drawing, Samples, Materials Certificates, and Equipment that are required by the technical specifications to be submitted for review and approval by either Thornton and/or the Consultant. The Submittal Log shall indicate the time frame required for Thornton's and/or the Consultant's review of each individual Submittal. The Submittal Log shall include blank columns for the contractor's future use to indicate the submittal processing dates, review and approval status, and comments.

I. The Consultant shall complete the Preliminary Design Phase of services and submit an **electronic copy** of preliminary drawings, specifications, and Engineer's Estimate of Probable Construction Cost within **one hundred and fifty (150) Calendar Days** following issue of Notice to Proceed (NTP). Thornton will require a minimum of fourteen (14) Calendar Days to review the submitted information. The Consultant shall attend a Field Inspection Review (FIR) Meeting and record comments of all interested parties. The Consultant shall be responsible for documenting all decisions reached during the meeting and preparing and submitting the meeting minutes to all attendees.

IV. Final Design Phase

A. Based on comments received at the FIR Meeting, the Consultant shall prepare pre-final and final drawings and specifications in Thornton's required format.

B. The Consultant shall attend one (1) Progress Meeting on-site during the Final Design Phase to discuss previously undiscovered conditions or concerns arising during final design.

C. The Consultant shall identify and utilize an individual or individuals to perform an independent quality control check of the drawings and specifications to assure the documents are clear and complete and to assure functional coordination of the varied systems and components of the construction documents. This individual shall not have had a role in the development of the construction documents. The quality control check shall include checking dimensions, sizes, detail, section, and elevation references, coordination between the Consultant and Subconsultant's drawings, compatibility of materials, references within technical specifications to other sections and to drawings, and constructability. Consultant shall submit the comments from the independent quality control check to Thornton. Thornton may engage independent consultants to perform a separate peer review. Consultant shall supply all necessary calculations, analyses, and other documents and cooperate fully with any such independent peer review.

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D. Consultant shall prepare an updated Engineer's Estimate of Probable Construction Cost based on the Pre-Final Documents (approximately ninety-five percent [95%] complete design). The estimate shall include a work breakdown structure describing finite elements of the work and estimated unit prices applicable to each element. The work breakdown structure shall include items for mobilization and Project close-out. Thornton requires that a construction contingency allowance of at least ten percent (10%) of the Project construction budget be reserved and carried as a separate line item in all cost estimates.

It is Thornton's desire for the Project construction to remain within the allocated Project budget and Thornton expects to be notified of significant budgetary issues with the submission of Engineer's Estimates of Probable Construction Costs during for each phase of the design, including the Pre-design and Preliminary Design Phases. Should the Consultant fail to notify Thornton that construction costs are likely to exceed the allocated budget, and the Engineer's Estimate of Probable Costs submitted during the Final Design Phase exceeds Thornton's currently approved budget by more than ten percent (10%), Consultant shall be required to work with Thornton to find appropriate changes to the bid and/or design documents that will resolve the budgetary concerns. Under these circumstances, any necessary revisions to the design to come within Thornton's budget shall be completed at no cost to Thornton. Note that Thornton may engage the services of an independent third party to provide assistance in cost estimating and to verify Consultant's estimate. Thornton may request that the independent third party estimator assist with development of design alternatives if required to bring the Project back within budget. Should Thornton engage the services of a third party cost estimator, Consultant shall cooperate with and participate in the independent third party cost estimating and design alternatives evaluation. Consultant shall make changes to the design documents at no cost to Thornton resulting from this effort.

E. The Consultant shall complete the pre-final design documents (approximately ninety-five percent (95%) design completion) an electronic copy of pre-final drawings, specifications, and revised pre-final Engineer's Estimate of Probable Construction Cost within **two hundred (200) Calendar Days** following issuance of Notice to Proceed (NTP). Thornton will require a minimum of fourteen (14) Calendar Days to review the documents. The Consultant shall attend a Final Office Review (FOR) Meeting to receive comments on the pre-final documents from all interested parties. The Consultant shall be responsible for documenting all comments and decisions reached during the meeting and preparing and submitting the minutes of the meeting.

F. The Consultant's pre-final and final contract documents shall provide drawing sheets that shall include, but not be limited to, the following:

1. Title sheet or sheets with Thornton's approval signature block, a location

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map, the Project name and number, issue block with dates and revision numbers, summary of applicable codes and standards, Drawing Index, sheet number block, space for professional stamp, name, street address, phone, fax and email address of Consultant and all Subconsultants.

2. Table of “Estimated Quantities”, with notation of items that will be paid at Plan Quantity and items that may vary by more than plus or minus twenty-five percent (25%) of estimate.

3. Dimensioned construction drawings for all required disciplines, which may include, but not necessarily be limited to, ROW plans, demolition plans, staging plans, traffic control, erosion control, drainage, roads, trails, utilities, grading, paving, landscape, irrigation, site furnishings, site lighting, site signage, profiles, sections, elevations, schedules, and details as required to detail the work sufficiently to allow for the complete construction of the Project.

G. The Consultant shall make document revisions noted and agreed upon at the FOR Meeting within fourteen (14) Calendar Days following the FOR Meeting. Revisions may include denoting work elements as bid alternatives and revising the bidding form and alternates specification section if, in Thornton's sole opinion, the cost estimates are not consistent with the budgeted level of funding and the design alternatives accepted have not sufficiently reduced the cost estimate to align with the budget. If, in Thornton’s sole opinion, the final documents submitted by the Consultant do not adequately respond to the FOR comments, the Consultant shall revise and reissue the final documents at no additional cost to Thornton until all comments are resolved to Thornton’s satisfaction.

H. When Thornton determines that the final contract documents are acceptable and are ready for bidding, the Consultant shall submit the following to Thornton:

1. Technical Specifications: Submit technical specifications in Microsoft Word, either emailed to Contract Administrator or on a CD, prepared using the following format:

    a. 8 ½” x 11”, 11.5 pt. Arial font, single line spacing;
    b. Margins: left 1.0”, right 1.0”, top 1.0”, bottom 1.0”; footer 0.5”, no headers;
    c. Index/Table of Content of Technical Specs with no page numbers indicated;
    d. No section breaks, use page breaks between specification sections;
    e. Section titles in all caps, bold, 14 pt. Arial font, centered on page at top of each new specification section;
    f. Entire set of specification pages numbered sequentially beginning with Page 1 of X;
    g. Footer with file path name left justified and page number

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centered, 8 pt. Arial font.

2. Bid Documents:

   Thornton will prepare the Project Manual for bidding. The Project Manual for bidding will not be stamped by the Consultant. The cover page on the Project Manual shall read “Issued for Bidding” with date.

   Consultant shall submit electronic files of drawings on CD. Submit one disk with drawing file(s) in AutoCAD format compatible with Thornton’s system. Submit another disk with drawings combined into a single file using .pdf format. Alternatively, the .pdf version may be emailed to the Contract Administrator provided the file size is small enough to email successfully.

3. Consultant shall submit a final Engineer's Estimate of Probable Construction Cost. Thornton requires that ten percent (10%) of the engineer's estimate be available in the overall budget for a construction contingency at the time of bidding to cover unforeseen changes during the construction of the Project.

V. Bid Phase

A. The Consultant shall attend the “Pre-Bid Conference” and shall provide assistance to Thornton in responding to inquiries by the prospective bidders during the bidding period.

B. The Consultant shall prepare all necessary corrections and additional information based on prospective bidder inquiries. All answers to questions shall be coordinated with Thornton and issued by Thornton. Consultant shall not respond directly to any prospective bidder or subcontractor during the bid phase. Consultant shall assist Thornton with preparation of addenda. Thornton will issue all addenda.

C. The Consultant shall assist Thornton in the review of bids received and the qualification of bidders as deemed appropriate by Thornton.

D. If more than **one hundred eighty (180) Calendar days** have elapsed between the date of the Consultant’s most recent Estimate of Probable Construction Cost and the date of the bid submission, the Estimate of Probable Construction Cost total shall be adjusted for inflation based on the Engineering News Record Construction Cost Index for Denver. The adjusted estimate shall be used as the basis for evaluating the bids and the Project budget.

E. Should the bid of the lowest responsive and responsible bidder exceed the Consultant’s Estimate of Probable Construction Cost, Thornton and the Consultant shall explore options, including but not limited to awarding the

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Project as designed if sufficient budget contingency is available, evaluating design alternatives and estimates of related cost savings to bring the Project back within budget, and re-designing and re-bidding. Thornton, at its sole option, will determine the course of action to take.

F. If the bid exceeded the Consultant's estimate of probable construction cost, as adjusted for inflation if applicable, and should Thornton choose to re-design and re-bid the Project, the Consultant shall prepare revised contract documents as required, and shall assist in the re-bidding phase. Should Thornton choose to award the Project without rebidding, the Consultant shall cooperate with the selected contractor and assist in preparation of "Proposal Requests" as directed by Thornton to reduce the Project cost to within budget, all at no additional cost to Thornton.

G. At the end of the Bid Phase, the Consultant shall make final revisions to the contract documents based on addenda issued during the Bid Phase. Drawing revisions shall be indicated by encircling addenda changes with "clouds" and including a delta indicating the addendum number. All addenda dates and delta numbers shall also be indicated in the revision block on each sheet. Project Manual addenda revisions shall be denoted by striking through deleted text and italicizing added text with the addendum number noted in parentheses immediately following each text revision. The Project Manual index shall indicate those sections that contain addenda revisions by placing an asterisk next to the section number in the Index/Table of Contents. The Consultant shall provide revised reproducible and electronic documents to Thornton within ten (10) Calendar Days following the opening of the bids. Issue block shall read "For Construction" and shall be dated as of the general contractor's date of Notice of Award. Thornton will issue the "For Construction" documents to the successful general contractor for use during the construction phase. Consultant shall be responsible for the cost of printing and distributing hard copies of the "For Construction" documents to themselves and their Subconsultants.

VI. Construction Phase

A. Anticipated that the 26-144 Headgate Improvements project and the 26-33 Concrete Channel Conversion project will be separate bid packages which will require independent construction phase services from the consultant.

B. Construction is anticipated to commence approximately two months following the delivery of the bid-ready set of documents. The Consultant shall attend the "Pre-Construction Meeting" and assist Thornton in responding to inquiries by the contractor during the Pre-Construction Meeting.

C. The Consultant and their Subconsultants shall provide periodic field observation to assure themselves and Thornton that the work is proceeding in accordance with the intent of the contract documents. Notwithstanding the foregoing, if required by any permitting agency or Thornton, the Consultant's Engineer shall

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be required to inspect structural work, including but not limited to any foundations and steel structures, and provide a letter to the permitting agency and Thornton certifying that the work was constructed substantially in accordance with the design intent.

D. The Consultant shall attend Weekly Meetings on site or virtually with the contractor and Thornton.

E. The Consultant shall review the contractor's proposed submittal schedule and comment on submittal review times proposed. The Consultant and contractor shall negotiate until mutually acceptable review times are established for each submittal. The Consultant shall complete submittal review within the agreed upon allotted time so as to not delay the construction.

F. The Consultant shall promptly respond to requests for information issued by Thornton, the contractor, subcontractors, testing agencies, commissioning agent, building department, or other entities so as not to delay construction.

G. The Consultant shall issue "Supplemental Instructions" to Thornton or their designated representative when an ambiguous condition requiring clarification is discovered in the contract documents. The Consultant shall prepare documents providing clarification and/or correcting errors or omissions in the contract documents at no charge to Thornton. Consultant shall prepare a Proposal Request for issuance to the contractor when such items may have a cost or schedule impact.

H. The Consultant shall review progress payments and make recommendations as to the validity of percentages complete claimed by the contractor.

I. The Consultant shall periodically update the electronic documents to reflect As-Built information throughout the construction phase, as a minimum at the completion of each trades work, to keep the electronic documents current. The As-Built information shall be confirmed with the contractor and Thornton's Construction Coordinator before the revisions are finalized.

J. The Consultant shall provide change order consultation as it relates to change order requests submitted by the contractor, including but not limited to review of change order requests for impacts on schedule, quality, constructability, aesthetics, functionality, and proposed change order pricing. Change order consultation may also be necessary for discretionary changes requested by Thornton; however, such consultation is not included in the fixed fee for this Agreement. Compensation for discretionary change order consultation shall be made on a time and expense basis at the rates specified in the Schedule of Charges included in the Professional Service Agreement.

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VII. Closeout Phase

A. When the contractor applies for “Substantial Completion,” the Consultant, in consultation with Thornton’s representative(s), shall perform a walk-through of the Project to review and add to the contractor’s punch list. The Consultant shall monitor the contractor’s progress on the punch list and recommend to Thornton when all items are satisfactorily completed and “Initial Acceptance” may be granted.

B. Within fourteen (14) Calendar Days after Initial Acceptance of the Project, the Consultant will be required to submit the following:

1. Pre-design Report and review comments in Microsoft Word on a non-rewritable compact disc (CD).

2. FIR review comments in Microsoft Word on a non-rewritable compact disc (CD).

3. FOR review comments in Microsoft Word on a non-rewritable compact disc (CD).

4. The Consultant shall prepare and submit As-Built documents. The issue block on the drawings shall read “As-Built” and indicate the date, which shall be the date of Initial Acceptance. The As-Built Project Manual shall indicate “As-Built” and the Initial Acceptance date on the cover page.

a. As-Built electronic drawing files shall be in a vector format compatible with the AutoCAD version currently in use by Thornton. Provide both .dwg and .pdf formats on CD.

b. The Project Manual shall be submitted both in hard copy and as electronic files on CD. Submit electronic files in a Microsoft Word file compatible with the version currently in use by Thornton and as a .pdf file.

VIII. Warranty Phase

A. The Consultant shall assist Thornton in resolving warranty repairs during the warranty period.

B. The Consultant shall participate in a walk-through of the Project near the end of the Warranty Phase and prepare a final punch list of items needing correction. The Consultant shall review progress made by the contractor on the Warranty Phase punch list and recommend when the work is completed satisfactorily and the Project is ready for Final Acceptance.

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Project Schedule

Project deliverable, meetings, and review times are listed below as an example. Consultant shall provide a proposed project schedule as part of their proposal.

- Notice to Proceed – Date to be determined. Target date is **November 1, 2026.**

Pre-Design Phase

- Attend Project Kick Off Meeting – date to be determined.
- Attend Data Gathering Meetings – dates to be determined.
- Attend field conditions walk-through – date to be determined.

Preliminary Design Phase

- Attend Progress Meetings – dates to be determined.
- Submit Preliminary Design documents within **one hundred and fifty (150) Calendar Days** after Notice to Proceed.
- Attend Field Inspection Review (FIR) Meeting within fourteen (14) Calendar Days after Preliminary Design Submittal.

Final Design Phase

- Attend Progress Meetings on-site – dates to be determined.
- Submit pre-final design documents within **two hundred (200) Calendar Days** after Notice to Proceed.
- Attend Final Office Review (FOR) Meeting within fourteen (14) Calendar Days after submission of pre-final design.
- Submit Final Design bid documents within fourteen (14) Calendar Days after Final Office Review (FOR) Meeting.

Bid Phase

- Attend Pre-Bid Conference – date to be determined.
- Revise documents as required to meet budget – submission date to be determined.
- Prepare addenda for Thornton's review – dates to be determined.
- Prepare "For Construction" contract documents incorporating all addenda items – deadline to be determined and to correspond to date of Notice of Award for the construction contractor.

Construction Phase

- Attend Pre-Construction Meeting – date to be determined and to correspond to date of Notice to Proceed for the construction contractor.
- Perform periodic field observations weekly – dates to be determined.
- Attend weekly Construction Meetings on-site – dates to be determined.

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Closeout Phase

- Attend punch list walk-through – date to be determined.
- Monitor punch list progress – dates to be determined.
- Review contractor submitted closeout documents – date to be determined.
- Recommend issuance of Initial Acceptance – date to be determined.
- Submit As-Built documents – within fourteen (14) Calendar Days following issuance of Initial Acceptance to construction contractor.

Warranty Phase

- Assist Thornton with obtaining warranty repairs as needed – dates to be determined.
- Attend warranty punch list walk-through – date to be determined.

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Certificate Of Completion

Envelope Id: 57398815-C9DF-8F98-8234-D2BFC279B8E1
Status: Completed
Subject: Addendum No1: New Union Ditch Concrete Channel Conversion and Headgate, Project Nos. 26-33 & 26-144
Source Envelope:
Document Pages: 48
Signatures: 1
Certificate Pages: 5
Initials: 0
AutoNav: Enabled
EnvelopeId Stamping: Enabled
Time Zone: (UTC-07:00) Mountain Time (US & Canada)

Envelope Originator:
Adam Reiner
9500 Civic Center Drive
Thornton, CO 80229
Adam.Reiner@thorntonco.gov
IP Address: 199.117.212.4

Record Tracking

Status: Original
11/4/2026 2:02:13 PM
Holder: Adam Reiner
Adam.Reiner@thorntonco.gov
Location: DocuSign

Signer Events	Signature	Timestamp
Patrick Hinterberger patrick.hinterberger@thorntonco.gov Sr. Contract Administrator SHI OBO City of Thornton Security Level: Email, Account Authentication (None)	DocuSigned by: Patrick Hinterberger 6DA8F281E4154C8... Signature Adoption: Pre-selected Style Using IP Address: 199.117.212.4	Sent: 11/4/2026 2:03:58 PM Viewed: 11/4/2026 3:39:12 PM Signed: 11/4/2026 3:39:17 PM

Electronic Record and Signature Disclosure:
Not Offered via Docusign

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp
Contracts Administration SSContractsandPurchasing@thorntonco.gov Security Level: Email, Account Authentication (None)	COPIED	Sent: 11/4/2026 3:39:19 PM Viewed: 11/4/2026 4:12:20 PM

Electronic Record and Signature Disclosure:
Accepted: 11/4/2026 4:04:31 PM
ID: 707fcfce-8109-47b4-9733-54646ad9215f

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	11/4/2026 2:03:58 PM
Certified Delivered	Security Checked	11/4/2026 3:39:12 PM
Signing Complete	Security Checked	11/4/2026 3:39:17 PM
Completed	Security Checked	11/4/2026 3:39:19 PM

Payment Events	Status	Timestamps

Electronic Record and Signature Disclosure

ELECTRONIC RECORD AND SIGNATURE DISCLOSURE

From time to time, SHI OBO City of Thornton (we, us or Company) may be required by law to provide to you certain written notices or disclosures. Described below are the terms and conditions for providing to you such notices and disclosures electronically through the DocuSign system. Please read the information below carefully and thoroughly, and if you can access this information electronically to your satisfaction and agree to this Electronic Record and Signature Disclosure (ERSD), please confirm your agreement by selecting the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

Getting paper copies

At any time, you may request from us a paper copy of any record provided or made available electronically to you by us. You will have the ability to download and print documents we send to you through the DocuSign system during and immediately after the signing session and, if you elect to create a DocuSign account, you may access the documents for a limited period of time (usually 30 days) after such documents are first sent to you. After such time, if you wish for us to send you paper copies of any such documents from our office to you, you will be charged a $0.00 per-page fee. You may request delivery of such paper copies from us by following the procedure described below.

Withdrawing your consent

If you decide to receive notices and disclosures from us electronically, you may at any time change your mind and tell us that thereafter you want to receive required notices and disclosures only in paper format. How you must inform us of your decision to receive future notices and disclosure in paper format and withdraw your consent to receive notices and disclosures electronically is described below.

Consequences of changing your mind

If you elect to receive required notices and disclosures only in paper format, it will slow the speed at which we can complete certain steps in transactions with you and delivering services to you because we will need first to send the required notices or disclosures to you in paper format, and then wait until we receive back from you your acknowledgment of your receipt of such paper notices or disclosures. Further, you will no longer be able to use the DocuSign system to receive required notices and consents electronically from us or to sign electronically documents from us.

All notices and disclosures will be sent to you electronically

Unless you tell us otherwise in accordance with the procedures described herein, we will provide electronically to you through the DocuSign system all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any notice or disclosure, we prefer to provide all of the required notices and disclosures to you by the same method and to the same address that you have given us. Thus, you can receive all the disclosures and notices electronically or in paper format through the paper mail delivery system. If you do not agree with this process, please let us know as described below. Please also see the paragraph immediately above that describes the consequences of your electing not to receive delivery of the notices and disclosures electronically from us.

How to contact SHI OBO City of Thornton:

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