EXHIBIT
"A"

STATE OF TEXAS §
§
COUNTY OF WILLIAMSON §

SUPPLEMENTAL CONTRACT NO. 1
TO CONTRACT FOR ENGINEERING SERVICES

FIRM: **HALFF ASSOCIATES, INC.** **("Engineer")**
ADDRESS: **9500 Amberglen Boulevard, Building F, Suite 125, Austin, TX 78729**
PROJECT: **Wyoming Springs Segment 1**

This Supplemental Contract No. 1 to Contract for Engineering Services is made by and between the City of Round Rock, Texas, hereinafter called the "City" and Halff Associates, Inc., hereinafter called the "Engineer".

WHEREAS, the City and Engineer executed a Contract for Engineering Services, hereinafter called the "Contract", on the 22nd day of August, 2019 for the Wyoming Springs Segment 1 Project in the amount of $546,776.54; and

WHEREAS, it has become necessary to amend the Contract to modify the provisions for the scope of services and to increase the compensation by $1,641,846.00 to a total of $2,188,622.54;

NOW THEREFORE, premises considered, the City and the Engineer agree that said Contract is amended as follows:

I.

Article 1, City Services and Exhibit A, City Services shall be amended as set forth in the attached Addendum To Exhibit A.

II.

Article 2, Engineering Services and Exhibit B, Engineering Services shall be amended as set forth in the attached Addendum to Exhibit B. Exhibit C, Work Schedule shall be amended as set forth in the attached Addendum to Exhibit C.

III.

Article 4, Compensation and Exhibit D, Fee Schedule shall be amended by increasing by $1,641,846.00 the lump sum amount payable under the Contract for a total of $2,188,622.54, as shown by the attached Addendum to Exhibit D.

IN WITNESS WHEREOF, the City and the Engineer have executed this Supplemental Contract in duplicate.

HALFF ASSOCIATES, INC.

By: _____

Vice President

12-28-20

Date

CITY OF ROUND ROCK

By: _____
Craig Morgan, Mayor

_____
Date

APPROVED AS TO FORM:

_____
Stephan L. Sheets, City Attorney

ADDENDUM TO EXHIBIT A

City Services

The City will furnish to the Engineer the following information and/or perform the following tasks:

- Provide a tax exemption form for the purchase of taxable goods and services.
- Post and pay for notices in local publications.
- Post and maintain project information on City website, as appropriate. Provide Engineer a project specific email address which citizens can use to direct inquires.
- Review Engineer 's plan and submittals, and cost estimates.
- Criteria or direction for screen fence locations
- Assist the Engineer in obtaining property rights-of-entry for ground surveys and environmental investigations.
- Support project development with external stakeholders such other agencies and property owners.
- Assist the Engineer, as needed, in obtaining data and information from the State, County, and/or other franchise utility companies.
- Coordinate and communicate project items and progress to other city departments, as appropriate.

ADDENDUM TO EXHIBIT B
Engineering Services

For the scope of services for this contract, the Engineer shall provide professional services for Final Design and Permitting. Engineer will provide services described in further detail as follows:

Task 1 - PROJECT MANAGEMENT

1.1. Project Administration
- The Project Manager shall communicate with the city project manager.
- Prepare project meeting summaries for applicable meetings during the project development process.
- Keep records of project correspondence and make such records available to the city as needed.

1.2. Monthly Progress and Invoice
- Create and submit monthly invoices in required city format.
- Prepare monthly progress reports for submission with the invoices to provide a written account of the progress made to date on the project

1.3. Sub-consultant Management
- Prepare and execute contracts with sub-consultants, monitor sub-consultants work, review and approve of sub-consultant invoices.

Task 2 – ROW PARCELS AND ENVIRONMENTAL PERMITTING

2.1. Right-of-way (ROW) Parcel Preparation –
Halff will prepare legal descriptions and accompanying parcel exhibits for ROW and easement acquisition documents, as shown on the revised schematic dated August 2020:
- Two (2) pedestrian easements on west side near Hairy Man Road (Fern Bluff MUD)
- One (1) drainage easements on west side near cross culvert (Fern Bluff MUD)
- Two (2) ROW parcels near Sam Bass Road (dedicate Round Rock property)
- One (1) ROW parcel on the east side near Hairy Man Road (Fern Bluff MUD)
- One (1) ROW parcel on the west side near Tenor Lane (Fern Bluff MUD)

The descriptions will be based on our previous boundary surveys. Corner monuments will be set for new ROW and easement lines. No monuments will be placed along existing ROW.

Individual parcel exhibits shall be in pdf format, shall be sealed, signed and dated by a Registered Professional Land Surveyor

2.2. Traditional ROW Map -

The traditional ROW map includes the performance of on the ground surveys and preparation of parcel maps, legal descriptions (metes and bounds descriptions), and ROW maps.

1. PURPOSE

The purpose of a traditional ROW map is to prepare documents suitable for the acquisition of real property interests and the probable issuance of a title policy.

2. DEFINITIONS

For purposes of this Contract, the following definitions shall apply:

a. Owner – The most current title holder of record as determined by a study of the Real Property Records.

b. Parent Tract – A unit or contiguous units of land under one ownership, comprising a single marketable tract of land consistent with the principle of highest and best use.

A parent tract may be described by a single instrument or several instruments. A single parent tract cannot be severed by a public right-of-way, easement, or separate ownership which destroys unity of use.

c. Parent Tract Inset – A small line drawing, to an appropriate scale, of the parent tract perimeter placed upon the right-of-way map in the proximity of the respective parcel. Parent tract insets are used in cases where the parent tract cannot be shown to the same scale as the right-of-way map. Since parent tract insets are used to identify the limits and location of parent tracts, they must include public right-of-ways, utility easements and fee strips, and identifiable water courses which bound the parent tract.

d. Point of Beginning (P.O.B.) – A corner of the parcel of land to be acquired, located on the proposed right-of-way line and being the beginning terminus of the first course of the property description.

e. Point of Commencing (P.O.C.) – A monumented property corner which can be identified in the Real Property Records and is located outside the proposed right-of-way corridor. For title purposes, the point of commencing must be a monumented back corner of the parent tract. In the event a monumented back corner of the parent tract cannot be recovered, the nearest identifiable monumented property corner located outside the proposed right-of-way corridor may be used.

f. Right-of-Way Maps – A series of 22 inch by 34 inch drawings to scale depicting the results of relevant elements of records research, field work, analysis, computation, and map making required to determine title, delineate areas and boundaries, and locate and describe utilities and improvements to the extent necessary to appraise the value and negotiate the acquisition of individual parcels of private land for a proposed right-of-way project.

3. PROCEDURE

All standards, procedures and equipment used by the Surveyor shall be such that, at a minimum, the results of the survey shall be in compliance with the “Precision and Accuracy Requirements” set forth by the latest Board Rule as promulgated by the Texas Board of Professional Land Surveying (TBPLS).

a. Right-of-Way Map

The Surveyor shall field locate items such as: property corners, existing right-of-way markers, improvements, and visible utilities. The Surveyor shall verify and update the planimetric file as directed by the City.

The Surveyor shall prepare a right-of-way map for each proposed right-of-way project. A right-of-way map must include a title sheet, an index sheet, a survey control index sheet, a horizontal control data sheet, and sufficient plan sheets to cover the proposed project, and other sheets as directed by the City.

Plan sheets must include, but need not be limited to, the following items of information:

i. Proposed right-of-way lines delineated with appropriate bearings, distances, and curve data. Curve data must include the radius, delta angle, arc length, and long chord bearing and distance.

ii. Existing right-of-way lines delineated with appropriate bearings, distances, and curve data to the extent necessary to describe the individual parcels of land to be acquired. Curve data must include the radius, delta angle, arc length, and long chord bearing and distance.

iii. The proposed project baseline alignment delineated with appropriate bearings, distances, and curve data. Curve data must include the station of the curve, Point of Intersection (PI), radius, delta angle, arc length, tangent length, long chord bearing and distance, and the N and E coordinates of the curve PI. All alignment PCs, PTs, and even 500 foot stations must be labeled as to station.

iv. Proposed paving lines combined with relevant existing paving lines must be shown to the extent necessary to compile a complete picture of proposed traffic movements. Proposed paving on the final product submitted to the city must be shaded with a dot pattern or highlighted by some other means acceptable to the City.

v. Private property lines must be delineated with appropriate bearings, distances, and curve data to the extent necessary to describe the individual parcels of land to be acquired. Curve data shall include the radius, delta angle, arc length, and long chord bearing and distance.

vi. League lines and survey lines must be shown and identified by name and abstract number.

vii. County lines and city limit lines must be located and identified by name.

viii. A north arrow must be shown on each sheet, and, if possible, located in the upper right corner of the sheet.

ix. Monumentation set or found must be shown and described as to material and size.

x. A station and offset must be shown for each PC, PT, and angle point in the proposed right-of-way lines. Stations and offsets shall be shown with respect to the proposed centerline alignment.

xi. Intersecting and adjoining public right-of-ways must be shown and identified by name, right-of-way width, and recording data.

xii. Railroads must be shown and identified by name, right-of-way width, and recording data.

xiii. Utility corridors must be identified as to easement or fee.

xiv. Easements and fee strips must be shown and identified by width, owner, and recording data.

xv. Building lines or set-back lines must be shown and identified.

xvi. Visible improvements located within the proposed right-of-way corridor or within 50 feet of a proposed right-of-way line must be shown and identified.

xvii. Structures must be identified as commercial or residential, by number of stories, and as to type (brick, wood frame, etc.).

xviii. Structures which are severed by a proposed right-of-way line must be dimensioned to the extent necessary to completely delineate the severed parts.

xix. Parking areas, billboards, and other on-premise signs which are severed by a proposed right-of-way line must be dimensioned to the extent necessary to delineate that portion of the parking area, billboard, or sign which is located within the proposed right-of-way corridor.

xx. In cases where structures are located outside the proposed right-of-way corridor and within ten feet of a proposed right-of-way line, the shortest distance between the structure and the proposed right-of-way line must be shown.

xxi. If the structure is an element of the planimetric furnished to the Surveyor by the City, the Surveyor may snap to the structure to determine the shortest distance to the proposed right-of-way line. However, if the distance is less than three feet, the Surveyor shall verify the distance in the field.

xxii. Visible utilities located within the proposed right-of-way corridor or within 50 feet of a proposed right-of-way line must be shown and identified.

xxiii. Visible location of vents and filler caps of underground fuel storage tanks situated within the proposed right-of-way corridor or within 50 feet of the corridor must be determined and shown.

xxiv. Points of commencing and points of beginning must be shown and labeled. Points of beginning must be shown with their respective N and E surface coordinates. As an exception, a point of commencing will not be required in the case of a total taking without a remainder.

xxv. Each parcel of land to be acquired must be identified by a parcel number which shall appear in the ownership tabulation and on the right-of-way map in the proximity of the respective parcel. If the Surveyor is unfamiliar with the criteria used by the city to assign parcel numbers, the Surveyor shall seek the assistance of the city at the time the abstract map is complete.

xxvi. An ownership tabulation must be shown that includes the parcel number, existing area of the parent tract, lot(s) and block(s) constituting the parent tract when applicable, owner's name, type of conveyance, film code, county clerk's file number, taking area, and remaining area of the parent tract located left and right of the centerline alignment or both. Types of conveyance, film code and file numbers refer to conveyances to the city and will be added to the right-of-way map by the city at a later date. The Surveyor must provide several blank lines in the tabulation block to facilitate future map additions.

xxvii. A parent tract inset must be shown for each parent tract which cannot be shown to scale on the right-of-way map. The use of broken scale lines must be avoided. When parent tract insets are used, the point of commencing with the appropriate bearing and distance to the point of beginning may be shown on the parent tract inset.

xxviii. A note must be included on the title sheet and each map sheet stating the source of bearings, coordinates, and datum used. The note must also include the National Geodetic Survey (NGS) or other basis monument(s) name or identification number, city Plane Coordinate zone information, EPOCH information, Grid or Surface values and the Combined Adjustment Factor or Surface Adjustment Factor.

xxix. Appropriate notes must be included on the title sheet and each map sheet stating the following:

- Month(s) and year abstracting upon which the map is based.
- Month(s) and year field surveys were conducted upon which the map is based.

- Month and year the map was completed by the Surveyor.

4. ADHERENCE TO STANDARDS

For purposes of clarity, consistency, and ease of understanding, the City, as an acquiring agency of private property for public use, has adopted standards and formats for a right-of-way map which have proven to facilitate the processes of negotiation, appraisal, relocation assistance, and condemnation. The Surveyor shall adhere to these standards and formats to every extent possible to ensure that the needs of the city are met.

5. GENERAL SPECIFICATIONS

For purposes of this Contract, the following general specifications for a right-of-way map apply:

a. Completed right-of-way maps must be submitted to the city in both Microstation CADD files and Adobe PDF format that conform to producing a final print or plot which is 22 inches by 34 inches in size with a 21 inch by 32 inch printed border positioned ½ inch from the top, bottom, and right edge of the sheet.

b. Right-of-way maps must be drawn to a scale of 1 inch = 50 feet. An appropriate scale other than 1 inch = 50 feet may be used on some proposed right-of-way projects with prior approval by the City.

c. The smallest size lettering acceptable on a right-of-way map shall be 1/10 of one inch (Leroy #100) because right-of-way maps are reduced in size by one-half for archiving purposes. A right-of-way map which contains any lettering smaller than 1/10 of one inch will not be accepted by the City.

d. Parcel plats must be drawn to a preferred scale of 1 inch = 50 feet. An appropriate scale other than 1 inch = 50 feet may be used on some proposed right-of-way projects with prior approval by the City. In the case of a very large parcel which would be difficult to show with clarity on a single 8 ½ inch by 11 inch sheet, the Surveyor shall use multiple 8 ½ inch by 11 inch sheets with matching lines.

e. The smallest size lettering acceptable on a parcel plat shall be 0.06 of an inch (Leroy #60).

f. Property descriptions shall be submitted on 8 ½ inch by 11 inch bond paper.

g. The Surveyor shall obtain city approval prior to using a paper product not previously approved by the City.

6. GENERAL REQUIREMENTS

For purposes of this Contract, the following general requirements shall apply:

a. Copies of instruments of record submitted to the city must be indexed by parcel number.

b. Coordinates appearing on right-of-way maps, on parcel plats, and in property descriptions must be surface coordinates based on the Texas Coordinate System. The appropriate combined adjustment factors (sea level factor multiplied by the scale factor) for each zone of the coordinate system, which have been developed by the City, must be noted.

In order to obtain surface coordinates, the Surveyor shall multiply grid coordinates by the appropriate combined adjustment factor for each zone, as provided by the city (The Grid coordinates multiplied by the combined adjustment factor = surface coordinates).

c. Line and curve tables may be used when necessary.

d. The number of centerline alignment stations to be shown on a single plan sheet are restricted to the extent necessary to allow approximately four inches between match lines and sheet borders for future details and notes.

e. A minimum four inch by four inch space shall be reserved at the bottom right corner of each map sheet for future revision notes.

f. Based on the discretion and direction of the City, a 5/8 inch Iron Rod (or other appropriate monument) may be set on the proposed right-of-way line, and may be replaced at a later date with the City's right-of-way marker.

When the 5/8" iron rod with is set for PCs, PTs, PIs, and 1500 foot stations, the double asterisk symbol (**) must be shown on the map sheets and written into and shown in the property description and must be accompanied by the following note:

**The monument described and set may be replaced with the City's right-of-way marker upon the completion of the construction project,

under the supervision of a RPLS, either employed or retained by the City.

DELIVERABLES

The Surveyors shall prepare and submit the following:

- A Right-of-Way map for the project limits under cover of Title Sheet, Index Sheet, Control Data Sheet, and Exhibits of the property descriptions and parcel plats.
- Documentation stating that the appropriate monuments were set on the proposed right-of-way lines at intersecting property lines, and at all PCs, PTs, angle points, intersecting right-of-way lines of side streets, and at 1,500 foot stations.
- Documentation stating that the appropriate monuments were set on the existing right-of-way lines in areas of no acquisition at all PCs, PTs, angle points, and 1,500 foot stations, and as directed by the City.
- The Surveyor's report, outlining the approach, reasons or basis for the existing right-of-way determination, and conclusions made.
- A copy of the City's right-of-way map check list, signed by the Surveyor.

2.3. USACE Pre-Construction Notification (PCN) and coordination–

A pre-application meeting with the United States Army Corps of Engineers (USACE) confirmed that Pre-Construction Notification (PCN) under *NWP 14 – Linear Transportation* would be necessary. The PCN is required to evaluate impacts pursuant to *General Condition 18 – Endangered Species* and *General Condition 20 – Historic Resources* of the NWP program. Consultant proposes to prepare the NWP PCN documentation which includes the following:

- Name, address and telephone numbers of the prospective permittee;
- Location of the proposed project;
- A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure;
- Preparation of exhibits demonstrating work in Waters of the United States (WOTUS)
- A description and/or exhibits demonstrating avoidance/minimization measures and construction Best Management Practices (BMPs)
- Delineation of waters of the US (*prepared under original Agreement*);
- Compensatory mitigation plan, if needed (*not anticipated per impacts from preliminary design and pre-application discussion with the USACE)*;
- Threatened and endangered species Biological Assessment (*See 2.3*);
- Cultural resources assessment (*prepared under original Agreement*).

In addition to the PCN application documentation identified above, Consultant will facilitate interagency review pursuant to General Conditions 18 and 20 of the NWP Program including:

- Informal Section 7 Consultation with the United States Fish and Wildlife Service (USFWS); and
- USACE Regulatory Archeological review pursuant to Section 106 of the National Historic Preservation Act (NHPA).
- It is anticipated that the interagency review process will include a pre-submittal conference call with the USACE and USFWS to review the PCN package for completeness prior to submitting, and up to three comment resolution conference calls.

2.4. Biological Assessment (BA) –

- Engineer shall prepare and coordinate the submittal of the BA in accordance with USACE guidance and described in more detail in the following (services to be provided by subconsultant SWCA):
- Endangered Species Act (ESA) compliance in support of a pre-construction notification (PCN) to the U.S. Army Corps of Engineers (USACE) Fort Worth District. There are two proposed waters of the U.S. (WOTUS) crossings within the project right-of-way: Brushy Creek (a perennial stream) and Dry Fork Creek (an open water impoundment on an intermittent stream). There are two roadway alternatives proposed for the crossing at Dry Fork Creek: a three-span bridge with drilled pier foundations (Option 1), and a floorless arch culvert with spread footings (Option 2). At Brushy Creek, a bridge span is proposed for the road crossing. No permanent impacts are anticipated from construction of the bridge span. For the two WOTUS crossings, authorization under Nationwide Permit 14 (Linear Transportation Projects) is proposed. The Project crosses designated subsurface critical habitat for the Jollyville Plateau Salamander (Eurycea tonkawae) at Dry Fork Creek. Therefore, SWCA is to prepare a Biological Assessment (BA) to assess the effects of the Project on the Jollyville Plateau Salamander, as well as protected species known to occur in the Project action area. The BA would be drafted to support informal Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) via the USACE Fort Worth District as the lead federal agency.

BIOLOGICAL ASSESSMENT

- Recently, the USACE Fort Worth District Regulatory Division provided SWCA with draft BA guidance, which included required elements for a BA. SWCA will use the guidance to develop an outline and draft the components of the BA before submitting to the USACE. The USACE also suggests that the applicant incorporate additional resources provided by the appropriate USFWS office for guidance on the development of BAs. In addition, SWCA senior wildlife biologists that holds a USFWS Section 10(A)(1)(A) Permit will be conducting a one-day site visit to assess and map potential Jollyville Plateau salamander and golden-cheeked warbler habitat within the Action Area for the BA. The following components are a comprehensive list of information required by the USACE for the development of the BA as quoted by the draft BA guidance provided by the USACE:

    1. Introduction
        a. State the purpose of document (e.g., to assess the effects of the proposed action on federally protected resources).
        b. Briefly specify the proposed action. If applicable, include both the Federal action (e.g., issuance of Nationwide Permit 14) and the applicant's action (e.g., roadway construction).
    2. Project Description
        a. Subdivide proposed action into project elements (e.g., construction, operation, and maintenance), if applicable.
        b. Describe the where, when, and how for each Project element.
        c. Include a map delineating the location of each Project element.
        d. Identify any conservation measures that will be incorporated into the Project design.
    3. Action Area
        a. Delineate the geographic area that will be affected(i.e., the area where the physical, chemical, and biotic effects will occur).
        b. Delineate the specific areas that will affected by each of the Project elements.
        c. Identify any ongoing activities that may be affecting the species or habitat.
    4. Species/Critical Habitat Considered
        a. Identify the species or critical habitat that "may be present."
        b. Document how you identify these listed resources.
        c. Describe the current population and habitat conditions (status and trend, if known) in the action area for each protected resource that "may be present."

5. Effects Analysis
    a. For each species or critical habitat parcel, explain how it will or will not be exposed to the Project elements; be sure to consider effects to all life stages.
    b. Describe the anticipated response (e.g., none, abandoned the area, decrease foraging success, reduced fecundity, injury, death, etc.) from any likely exposure.
    c. Cumulative Effects Analysis (for actions that are likely to adversely affect listed resources). Identify any future state or private activities, not involving Federal activities that are reasonably certain to occur within the action area. Describe how such activities will affect listed resources within the action area.
6. Conclusion and Determination of Effects for each protected resource
    a. For each protected resource, make a Section 7 determination and include your rationale.

ASSUMPTIONS

- The USACE, as the lead federal agency, will coordinate with the USFWS. Other than initial contact with the USFWS regarding agency-specific recommendations (e.g., Action Area) for the BA, SWCA will not have contact with the USFWS regarding the Project.
- The cost below is based on the required components provided in the USACE draft BA guidance. If the USFWS requires or recommends items for the BA that differ greatly than the USACE guidance, a change order may be required.
- SWCA will provide draft and final copies of the BA (in electronic format) to Halff Associates, Inc. for one round of review prior to agency submission.
- SWCA will respond to up to three rounds of comments from the USACE with the assumption these comments will be include any comments from the USFWS.
- SWCA will work with Halff Associates, Inc., USACE and USFWS to identify appropriate and practicable conservation measures to minimize incidental take of federally listed species.
- SWCA will use a recent USACE-provided BA outline and guidelines to develop the BA and will incorporate any suggested additions that may be provided by the USFWS regarding the development of the BA

Task 3 – Plans, Specifications, and Estimates (PS&E)

3.1. Alignment Refinement – Engineer shall prepare an update the schematic alignment to minimize impacts to large trees and parallel water utilities.

3.2. 60% PS&E – Engineer shall prepare and submit 60% PS&E including:

- Title and Index Sheet
- Quantity Summary Sheets
- Typical Sections
- Survey Control Sheet
- Removal Sheets
- Paving Plan and Profiles Sheets
- Retaining Wall Layouts per item 3.7 below
- Bridge Drawings per item 3.8 below
- Runoff Calculation Sheets
- Storm Sewer Plan and Profile Sheets
- Storm Sewer and Inlet Calculation Sheets
- SW3P Cover Sheet and Erosion and Sedimentation Control Sheets
- Tree Protection Plan Sheets
- Landscape Planning and Irrigation Layout Sheets
- Water and Wastewater adjustment (provide utility sheets showing manholes and valves proposed to be raised/adjusted to grade)
- Roadway Illumination and Conduit Sheets
- Signing and Striping Sheets
- Signal Layout and Elevation Sheets
- Traffic Control Plans
- Project Specific Detail Sheets
- Roadway Cross Section Sheets (50 ft spacing)
- Preparation of updated OPCC

3.3. 90% PS&E – Engineer shall prepare and submit 90% PS&E including

- Updated 90% with comments addressed from 60% review
- Bid Form and Specifications for inclusion in Project Manual (front-end contract documents to be provided by the city)
- Preparation of updated OPCC

3.4. 100% PS&E – Engineer shall prepare and submit 100% PS&E signed and sealed by Professional Engineers licensed in the State of Texas including

- Final plans with comments addressed from 90% review
- Final Bid Form and Specifications in Project Manual
- Final updated OPCC

3.5. CLOMR– Engineer will provide hydraulic analysis and report required for a Conditional Letter of Map Revision (CLOMR) and submittal to FEMA,

- Conditional Letter of Map Revision (CLOMR) Submittal
  - Prepare CLOMR submittal package for Brushy Creek and Dry Fork Tributary for the 10-year, 50-year, 100-year, 500-year, and Ultimate 100-year frequency storm events based on the Upper Brushy Creek FEMA models provided by the City. These models are the best available data at this time.

- Prepare effective, corrected effective, pre-project, and post project hydrology and hydraulic models, and run cHECk-RAS for all HEC-RAS models.
- Prepare exhibits and tables showing floodplain tie-in points upstream and downstream of the proposed project.
- Update hydrology, flood profiles, and floodway data tables in the FIS as needed.
- Prepare MT-2 FEMA forms for CLOMR submittal to City and FEMA.
- Environmental Assessment to be provided by Halff Public Works for inclusion with the CLOMR submittal.
- Final proposed plans to be provided by Halff Public Works for inclusion with the CLOMR submittal.
- Submit CLOMR to City Floodplain Administrator for review and approval. This scope assumes one (1) meeting with the City Floodplain Administrator.
- Submit CLOMR to FEMA for review and approval. A FEMA review fee is required upon submittal to FEMA and will be submitted on Halff's invoice as a pass-through expense to be paid by the City.
- Coordinate up to two (2) iterations with FEMA reviewers.

3.6. Bridge Scour Analysis and Final Drainage Report Update – Engineer will perform a scour analysis of both bridge crossings and show scour envelopes in the plans

- Perform a scour evaluation for each proposed bridge structure over Brushy Creek and Dry Fork.
- Prepare scour evaluation for 60% and 90% bridge plans.
- Provide bridge engineer the potential scour depths, envelope and recommended countermeasures, if needed.
- The schematic level drainage report will be updated with the final bridge configuration via simple revision/addendum.

3.7. Retaining Wall – Engineer will provide structural design and wall layouts:

- MSE Retaining Walls (4 ~ Abutment Locations, 1 ~ Sta 125+00 to 130+00)
    i. Wall Layout
        a. Develop Wall Layout Sheets (1" = 40' Scale) (60%, 90%, 100%)
        b. Develop Wall Typical Section Sheets (60%, 90%, 100%)
        c. Develop Wall Boring Log Sheets (60%, 90%, 100%)
    ii. Wall Detail Summary
        a. Develop Wall Quantities, Estimates, and Summary Sheets (60%, 90%, 100%)
    iii. Wall Details
        a. Develop RW(MSE)(DD) Design Data (90%, 100%)
        b. Develop Aesthetic Details Sheets (Precast Panels) (90%, 100%)

c. Develop sheet list & identify wall standards

3.8. Bridge Design – Engineer will provide structural design utilizing standard TxDOT beam types and will include attachments for precast aesthetic panels with stone façades with pattern and color to be selected by the city from options provided by the design team.

- Hairy Man Road/Brush Creek Bridges (2 Bridges)
  - i. Bridge Layout
    - a. Develop NB & SB Bridge Layout Sheets (30%, 60%, 90%, 100%)
    - b. Develop NB & SB Typical Section Sheets (30%, 60%, 90%, 100%)
    - c. Develop NB & SB Boring Log Sheets (60%, 90%, 100%)
  - ii. Bridge Detail Summary
    - a. Develop NB & SB Bridge Quantities, Estimates, and Summary Sheets (60%, 90%, 100%)
  - iii. Bridge Structural Details
    - a. Develop NB & SB Abutment Details Sheets (60%, 90%, 100%)
    - b. Develop NB & SB Bent Details Sheets (60%, 90%, 100%)
    - c. Develop NB & SB Framing Plan Sheets (60%, 90%, 100%)
    - d. Develop NB & SB Slab Plan & Sections Sheets (60%, 90%, 100%)
    - e. Develop NB & SB Beam Design Data Sheets (60%, 90%, 100%)
    - f. Develop Aesthetic Details Sheets (Precast Panels) (60%, 90%, 100%)
    - g. Perform structural design of bridge elements
    - h. Develop sheet list & identify bridge standards

- Dry Fork Creek Bridges (2 Bridges)
  - i. Bridge Layout
    - a. Develop NB & SB Bridge Layout Sheets (30%, 60%, 90%, 100%)
    - b. Develop NB & SB Typical Section Sheets (30%, 60%, 90%, 100%)
    - c. Develop NB & SB Boring Log Sheets (60%, 90%, 100%)
  - ii. Bridge Detail Summary
    - a. Develop NB & SB Bridge Quantities, Estimates, and Summary Sheets (60%, 90%, 100%)
  - iii. Bridge Structural Details
    - a. Develop NB & SB Abutment Details Sheets (60%, 90%, 100%)
    - b. Develop NB & SB Bent Details Sheets (60%, 90%, 100%)
    - c. Develop NB & SB Framing Plan Sheets (60%, 90%, 100%)

d. Develop NB & SB Slab Plan & Sections Sheets (60%, 90%, 100%)
e. Develop NB & SB Beam Design Data Sheets (60%, 90%, 100%)
f. Develop Aesthetic Details Sheets (Precast Panels) (60%, 90%, 100%)
g. Perform structural design of bridge elements
h. Develop sheet list & identify bridge standards

3.9. Future Water Corridor Planning – Engineer will identify a potential feasible alignment within the corridor to accommodate a future 42" City water main and provide sleeves in the plans below the proposed roadway paving, as deemed appropriate by city utility staff.

3.10. Signal Modifications Design – Engineer to provide design of signal modifications at Creek Bend and Sam Bass Road intersections in accordance with the attached proposal from BGE

- The Engineer shall design plans for the demolition and removal or retrofitting of existing traffic signal hardware. Traffic signal design elements shall include elements identified as necessary including signal poles, mast arms, signal heads, signage, vehicle detection systems, wiring details, conduits, ground boxes, integrated communication, illumination, illuminated signage, and pedestrian crossing elements. Pedestrian design elements shall be in accordance with the Texas Accessibility Standards (TAS) and Public Right-Of-Way Access Guidelines (PROWAG), and shall be activated push buttons, countdowns signal heads, and auditory warnings.

- Design of elements shall be in conformance with the City of Round Rock design guidelines, Texas Manual on Uniform Traffic Control Device (TMUTCD), and TxDOT design guidelines, in that order of preference. Engineer shall identify standards and specifications for all design elements, when applicable. Itemized calculations of quantity of materials and services shall be performed to assist in bidding and letting. From these quantities, the sub-consultant shall calculate an Opinion of Probable Cost.

The Plan Set shall include the following:
- Existing traffic signals (plan), survey to be provided by the Prime
- Existing traffic signals (elevations)
- Demolition of existing elements
- Proposed traffic signals (plan), including:
    - Poles, mast arms, luminaires
    - Illuminated street name signs and regulatory signage
    - Vehicle detection, communication
    - Conduits, wiring, and ground boxes

    - Pedestrian pushbuttons, signal heads, and associated accessibility items
- Proposed traffic signals (elevations)
- Summary of signal wiring
- Traffic Control Plans (traffic signals only)
- Standard details
- Quantity construction cost estimates

Traffic Control Plan, Temporary Signal Design

- Preparation of Traffic Control Plans (TCP) to the extent of installation or alteration of temporary traffic signals. The complexity and design of these temporary signals to meet the complexity as desired by the Client, e.g. temporary illumination, vehicle actuation, etc. Such temporary signal design shall be made in accordance with considerations of constructability and shall naturally flow from the existing conditions, to construction, and to the final permanent condition. A maximum of there (3) sets of temporary traffic signal design phases is anticipated for each intersection

3.11. Landscaping – Engineer shall provide tree planting and irrigation plans to provide street trees (approximately 200 trees based on the schematic) and landscaping of the medians (similar to Creek Bend Blvd, east of Wyoming Springs)

3.12. Water Pollution Abatement Plan (WPAP) – Engineer shall provide calculations and design of water quality treatment devices for a WPAP and submit to TCEQ along with application fee

3.13. RAS Review - Accessibility Review by a RAS at 60% and RAS review / TDLR project registration (final inspection is excluded, will be added during construction phase)

3.14. Field Survey – Selective supplemental survey of Hairyman subdivision culvert flowlines and adjacent channel grading downstream of the proposed Wyoming Springs culvert crossing and supplemental survey of the Brushy Creek Regional trail where the proposed trail connection will tie in.

3.15. Screen Fence – coordinate location of screen fence and specifications with city staff for a pre-engineered product such as Ecostrong system. Design of structural supports or foundations are excluded (to be provided by supplier as part of bid price for construction).

3.16. Open House – Conduct and provide project graphics in support of one (1) open house near the project location (or virtually / on-line). Outreach will be to the HOAs affected and mailouts or emails to those citizens who provided contact information at the first public meeting. Consultant will handle the mailouts as well as responses to comments. Consultant will provide four (4)

presentation boards:

- Project purpose, timeline, and cost estimate
- Updated schematic layout with tree preservation/removals shown
- A computer-generated rendering of the cross section of the Brushy Creek Bridge with three (3) aesthetic options (different form liner patterns and/or colors) for comment from citizens and city staff.
- Environmental summary board

3.17. Noise study – Conduct a traffic noise analysis along the proposed, new location, Wyoming Springs Drive roadway project corridor as follows:

i. Identify noise sensitive adjacent land use development and representative receivers that might be impacted by roadway traffic noise.
ii. Establish existing conditions noise levels for representative receivers by capturing in the field ambient noise levels at no more than 25 individual sites along the project corridor.
iii. Determine predicted conditions (20 years after project completion) noise levels for representative receivers by performing computer modeling. The modeling will be accomplished with FHWA-approved Traffic Noise Model (TNM) software program.
iv. Evaluate abatement benefits for potential concrete traffic noise barriers (6 and 8 feet in height) along the ROW adjacent to representative receivers.
v. Calculate 66 dB(A) (impact threshold for residential sites) and 71 dB(A) (impact threshold for other types of noise sensitive sites) noise impact contours to inform the Client where future potential noise impacts may occur along the proposed Wyoming Springs Drive.

ASSUMPTIONS

- Client will provide any available traffic data for other segments of Wyoming Springs.
- Client will secure access to the project corridor to capture field noise readings.
- Public involvement or traffic noise workshops are excluded from this scope of work.

Task 4 - Utility Coordination

4.1 Utility conflict analysis – Engineer to review the design elements against the SUE information collected in the schematic phase and provide a utility conflict matrix to track and resolve conflicts either through design revisions or relocation of the conflicting utility

4.2 Utility coordination – Engineer shall participate in city utility coordination meetings and perform the following:

- Develop a contact list of the affected utility owners in the corridor
- Provide a written project notification letter and corresponding schematic layout to all utility owners in the project corridor
- Request and obtain as-built utility plans
- Prepare roll plots indicating researched utility locations (based on existing utility information provided) overlaid on design layouts
- Contact each utility company to review and confirm their existing facilities are depicted correctly in the schematic
- Identify existing utility easements and utilities that could be affected by the proposed construction

4.3 Franchise utility plan review – Engineer will coordinate with all utilities in the corridor and review relocation plans provided by utilities to ensure conflicts have been resolved and assignments followed.

4.4 Reimbursement Agreements – Engineer shall review agreements and reimbursement calculations (four agreements are anticipated and budgeted)

Task 5 – Bid Phase Services

4.1 Bid Phase – Engineer to provide bid phase services to the city for advertisement in an electronic format, such as Civcast. Services include:
- Prepare Bid notice for advertisement and publish twice in local paper
- Attend and present at pre-bid meeting at the city
- Provide answers to bidder questions and prepare addendums
- Prepare bid tabulation and recommend award to lowest responsive bidder

EXHIBIT B OVERALL SUMMARY OF DELIVERABLES:

- PCN submittal to USACE and obtain authorization/concurrence
- Schematic update and 60, 90, and 100% PS&E submittals
- CLOMR and submit with fee and obtain FEMA concurrence
- Draft and Final Scour Evaluation (60% and 90% milestone delivery, respectively)
- ROW parcels legal descriptions, sketches, and ROW strip map
- WPAP application submittal with fee and obtain approval from TCEQ
- Utility Conflict Matrix and clearance of all utility conflicts
- TDLR Registration, fee, and compliance with Texas Accessibility Standards

Services Excluded from this Scope of Services:

- Construction Phase Services
- City development permitting
- Design of Franchise utilities
- Preparation/submittal of a Stormwater Pollution Prevention Plan (SWPPP)

- Property appraisals, negotiations or acquisitions
- Letter of Map Revision (LOMR) preparation and submittal to FEMA, which will be scoped with the construction phase services
- Design of noise abatement (screen walls are included per item 3.15)
- Staking of the proposed rights of way or proposed improvements
- Design of storm water detention to reduce the *quantity*/volume runoff (storm water *quality* treatment is included)
- TxDOT permits, review, or approvals (based on FM 3406 being removed from the State system)

The Engineer will perform the services to be provided under this agreement out of Engineer's office(s) as listed below:

Office Location
Halff Associates, Inc.
9500 Amberglen Blvd
Building F, Suite 125
Austin, TX 78729

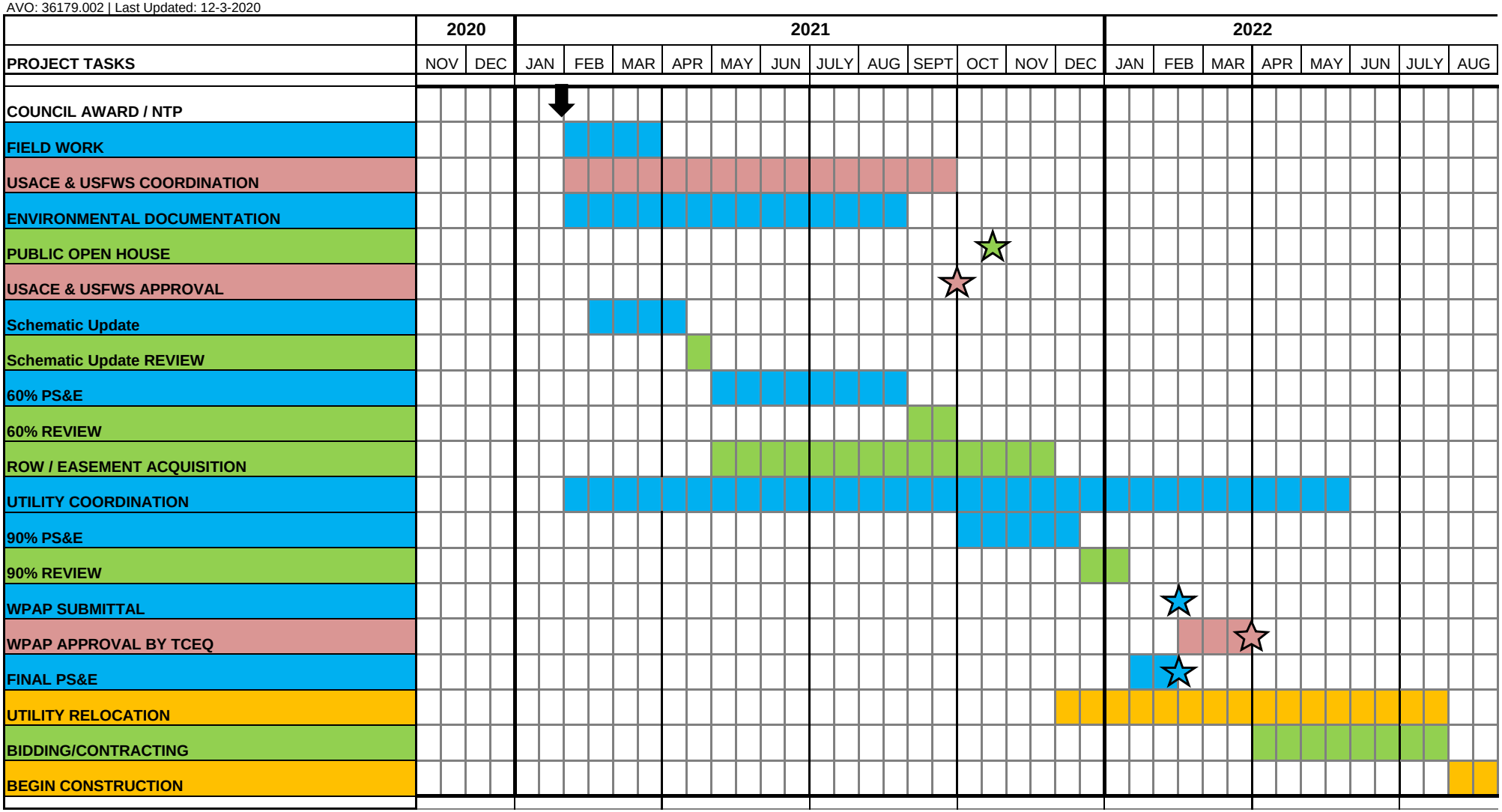
Sub-Consultants:
Aguirre & Fields, LP
BGE, Inc.
SWCA

ADDENDUM TO EXHIBIT C
Work Schedule

Attached Behind This Page

WYOMING SPRINGS PROJECT DEVELOPMENT

CITY OF ROUND ROCK
PROJECT: WYOMING SPRINGS EXTENSION
AVO: 36179.002 | Last Updated: 12-3-2020



ADDENDUM TO EXHIBIT D
Fee Schedule

Fees to be billed on a lump sum basis monthly as a percentage of work completed to date.

TASK 1 – Project Administration	$ 86,140.00
TASK 2 – ROW Parcels Preparation and Environmental Services	$ 107,960.00
TASK 3 – PS&E	$1,330,384.00
Task 3.9 – Water Corridor Planning	$ 19,956.00
Task 3.15 – Screen Fence	$ 15,942.00
TASK 4 – Utility Coordination	$ 66,356.00
TASK 5 – Bid Phase Services	$ 15,108.00
TOTAL FEE	$ 1,641,846.00