EXHIBIT "A"

STATE OF TEXAS §
§
COUNTY OF WILLIAMSON §

SUPPLEMENTAL CONTRACT NO. 1
TO CONTRACT FOR ENGINEERING SERVICES

FIRM: **HDR ENGINEERING, INC. ("Engineer")**
ADDRESS: **710 Hesters Crossing, Suite 150, Round Rock, TX 78681**
PROJECT: **CR 112 from CR 117 to CR 110**

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 HDR Engineering, Inc., hereinafter called the "Engineer".

WHEREAS, the City and Engineer executed a Contract for Engineering Services, hereinafter called the "Contract," on the 9th day of January, 2020 for the CR 112 from CR 117 to CR 110 Project in the amount of $468,491.63; 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 $641,626.89 to a total of $1,110,118.52;

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 $641,626.89 the lump sum amount payable under the Contract for a total of $1,110,118.52, as shown by the attached Addendum to Exhibit D.

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

[signature pages follow]

HDR ENGINEERING, INC.

By: 

Mark D. Borenstein, Vice President

01/06/22

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

For Roadway Improvements on CR 112 from CR 117 to CR 110Round

Rock, Texas

Project Limits: From 300 feet east of CR 117 to CR 110.
Project Length: 6,400 feet (1.20 Miles)

In coordination with the services to be provided by the ENGINEER, as described in Exhibit B, the CITY shall provide the following, as available:

PROJECT MANAGEMENT

The CITY will designate a Project Manager to represent the CITY.

DESIGN / ENVIRONMENTAL / UTILITY ENGINEERING

Any records available which would assist in the identification of environmental constraints.

A. Reviews of recommendations offered by HDR Engineering, Inc. (ENGINEER) and approve or reject any or all work performed under this contract
B. Review of progress of work and final acceptance of deliverables
C. Processing of all periodic payment requests submitted by ENGINEER
D. Submittal of documentation to regulatory agencies for review, comment, or approval when specified.
E. All comments regarding the review of the engineering services completed
F. Assistance in the coordination and scheduling of site visits
G. Review and approval of typical roadway sections and design criteria developed by the ENGINEER
H. Pavement design to be used for all new roadways, in consultation with the ENGINEER
I. Assist as necessary in obtaining the required data and information from other local, regional, state, and federal agencies
J. Provide the ENGINEER with timely reviews and decisions necessary for the ENGINEER to maintain the project work schedule
K. Distribute plan sets to the appropriate agencies and the public
L. Schedule and coordinate, with the ENGINEER public involvement meetings
M. Furnish available horizontal control points established by the CITY
N. Furnish available plans and design information for adjoining projects
O. Furnish available right-of-way maps
P. Negotiate with all utility companies for any agreements and required relocations
Q. Pay all reviewing agency fees promptly including review, inspection and recording fees
R. Assist with obtaining right-of-entry (ROEs) for adjoining property owners necessary for field surveying outside existing public right-of-way
S. Right of Way Acquisition services and landowner negotiations
T. Title Commitments for parcels to be acquired
U. TDLR Permit and Registered Accessibility Specialist (RAS) review fees.
V. Advertisement and solicitation for bids to construct the project
W. Facilitate reviews by FEMA and payment of required review fees.
X. Publish required notifications for the CLOMR/LOMR process.

PLAN REVIEW TURN-AROUND TIMES

- 60% Submittal: 3-4 Weeks
- 90% Submittal: 3-4 Weeks
- 100% Final Submittal: 2-3 Weeks

ADDENDUM TO EXHIBIT B

Engineering Services

For Roadway Improvements on CR 112 from CR 117 to CR 110

Round Rock, Texas

Project Limits: From 300 feet east of CR 117 to CR 110.

Project Length: 6,400 feet (1.20 Miles)

Project Statement:

The roadway improvements for CR 112 from CR 117 to CR 110 are to widen this 1.20-mile section from a two-lane roadway to six-lane divided roadway and add pedestrian facilities per the approved schematic developed in the Preliminary Engineering Phase.

The work to be performed by HDR Engineering, Inc. (ENGINEER) for this work shall consist of providing engineering services for ROW survey, utility coordination, roadway, drainage, signing, pavement markings, and illumination at 60%, 90% and the Final Plans, Specifications, and Estimate (PS&E) submittals. The project limits are from 300 feet east of CR 117 to CR 110 for a length of approximately 6,400 feet. The project will follow the existing CR 112; however, the east end of the project includes a re-alignment to a new intersection with CR 110/Avery Nelson Blvd. The ENGINEER shall coordinate with adjacent projects during the design development. The project shall be designed according to applicable design criteria including TxDOT's *Roadway Design Manual* (4R criteria), City of Round Rock *Design and Construction Standards* (DACS), City of Round Rock *Drainage Criteria Manual* (DCM), TxDOT Standards and Specifications, or other design standards and specifications as agreed to with the City of Round Rock (CITY).

Project control will be based on and tied into the CITY's coordinate system and be compatible with the current Geographical Information Systems (GIS) in use by the CITY. The ENGINEER shall collect, review, and evaluate the available existing data pertaining to this project and prepare the project design in accordance with applicable requirements and policies of the CITY.

The project will be developed in English units.

The PS&E package shall be prepared in accordance with the requirements of the applicable TxDOT and CITY Specifications, Standards, and Manuals (current versions in effect on the NTP date). Whenever possible, TxDOT and the CITY's standard drawings, standard specifications, or previously approved special provisions and/or special specifications will be used. If a special provision and/or special

specification must be developed for this project, it shall be in a format acceptable to the CITY and, to the extent possible, incorporate references to approved test procedures.

All design exceptions to approved design criteria shall be requested in writing, by the ENGINEER for approval by the CITY prior to incorporating the criteria into the project design.

The ENGINEER shall make reasonable efforts to minimize or avoid where possible, utility conflicts and the relocation of existing utilities.

The ENGINEER shall prepare parcel sketches and metes and bounds descriptions for the parcels and ROW footprint previously determined at the 30% PS&E design level, subject to approval by the CITY.

Federal funding is not anticipated at this time; however, if the CITY pursues federal funding, the ENGINEER will make available all project records prepared by the ENGINEER.

Utility coordination and Subsurface Utility Engineering Quality Level 'B' and 'A' shall be completed at limited locations as necessary to evaluate potential utility conflicts.

The CITY will be the principal point of contact for public or private inquiries regarding the project. The ENGINEER will prepare technical exhibits and attend public stakeholder meetings as requested by the CITY.

The detailed scope of services for this work is further described below.

PROJECT MANAGEMENT

A. **Managing Contracted Services (Project Management)**

a. **Coordination with CITY**: The ENGINEER will coordinate with the CITY to complete the PS&E for the project. The ENGINEER will prepare for and attend monthly coordination meetings with the CITY to discuss project progress, planned activities, key issues or items requiring decision or approval by the City. The ENGINEER shall prepare meeting minutes for all meetings and will distribute to staff for approval and record keeping. Project Management services needed to complete the design phase are anticipated to span a period of 16 months.

b. **Invoicing and Schedule Updates:** The ENGINEER will provide monthly invoices for payment to the CITY including a project status report of work completed within the reporting period, work anticipated in the next work period, and any outstanding issues or concerns. The ENGINEER will also provide design schedule updates with the monthly invoices detailing work completed and any task adjustments. Status reporting, invoicing, and schedule updates are anticipated to span a period of 16 months.

c. **Subconsultant Coordination, Deliverables Review and Invoices:** Monthly coordination with the team will be conducted to ensure project milestones are met. The ENGINEER will meet with Subconsultants to discuss progress, design updates, constraints, and completion schedules for key tasks. The ENGINEER shall review deliverables from Subconsultants for

conformance with the approved scope and project design. Subconsultants will forward their monthly invoices directly to the ENGINEER. The ENGINEER will review, process, and combine all invoices into one deliverable and forward one copy for payment to the CITY.

d. **Coordinate with CITY's consultant for adjacent section of CR 112**: The ENGINEER will coordinate monthly with the designer of the adjacent design section to determine the proper tie-in, conveyance of drainage, traffic control and schedule for both projects. The CITY intends to construct both projects as one construction contract.

e. **Quality Assurance / Quality Control:** The ENGINEER will develop a project-specific quality control plan identifying key roles, responsibilities, record keeping procedures, and anticipated review dates and make a copy available to the CITY. The ENGINEER will provide quality control of identified documents prior to each defined design submittal (60% 90% and Final) following established quality assurance processes.

ROADWAY DESIGN

A. **Title Sheet and Index of Sheets**

   a. Prepare Title sheet per City of Round Rock Standard detail
   b. Prepare and update Index of Sheets including standard selections

B. **Typical Sections:** Typical sections shall be prepared for existing and proposed. Typical sections shall include width of travel lanes, shoulders, outer separations, border widths, sidewalks, curb offsets, and ROW. The typical section shall also include PGL, centerline, pavement design, longitudinal joints, side slopes, sodding/seeding limits, concrete traffic barriers and sidewalks, if required, station limits, common proposed and existing structures including retaining walls, existing pavement removal, limits of embankment and excavation, and existing and proposed utilities.

C. **Project Layout:** Layout shall consist of a planimetric file of existing features and the proposed improvements within the existing and proposed ROW. The layout shall include the following features:

   a. Existing/Proposed ROW
   b. Existing/proposed horizontal alignment
   c. Proposed drainage features
   d. Proposed retaining walls/bridges/culverts (as applicable)
   e. Begin/end project stations
   f. Street names

D. **Horizontal Alignment Data Sheets:** Sheet includes data for the Horizontal Alignment for CR 112 and cross streets. Superelevation data consisting of station, slope, and begin and end transition will be provided as needed.

E. **Roadway Plan & Profile:** The ENGINEER will develop plan and profile (1" = 50' sheets) using the survey acquired by the ENGINEER, as well as utilizing the approved roadway design criteria.

   The plan view shall contain the following design elements:

   a. Calculated roadway centerlines for roadways including cross streets as applicable. Horizontal control points shall be shown.

b. Pavement edges for all improvements (main lanes, cross streets, and driveways)
c. Right of way and easement limits (proposed and existing)
d. Linework for proposed drainage elements
e. The geometrics (pavement cross slope, lane, and shoulder widths) and typical sections of the proposed highway roadway and crossroads
f. Horizontal and vertical roadway alignments.
g. Direction of traffic flow on all roadway lanes
h. Sidewalks/Pedestrian facilities
i. Identified utilities and providers

The profile view shall contain the following design elements:

a. Calculated profile grade for CR 112 and cross streets
b. Existing and proposed profiles along the proposed centerline of CR 112. Maintain parallel grades for each direction of travel similar, if feasible
c. Drawing vertical scale to be 1" =10'
d. Existing and proposed utilities, including proposed drainage crossings

F. **Intersection Layouts - Cross Streets:** The ENGINEER shall provide an intersection layout detailing the pavement design and drainage design at the intersection of each cross street. The layout shall include the horizontal and vertical alignments, curb returns, contours, geometrics, transition length, stationing, pavement, drainage details, and American with Disabilities Act Accessibility Guidelines (ADAAG)/PROWAG compliance items. The ENGINEER shall design for full pavement width to the ROW and provide a transition to the existing roadway.

G. **Driveway Plan & Profiles:** Prepare driveway plan and profiles with details including station, pavement section, width, length, radii, proposed grades, parallel culvert details (if needed) and associated temporary construction easements.

H. **Removal Layouts:** Provide removal layouts 1" = 50' scale (double bank) detailing items to be removed for project limits.

I. **Pedestrian and Bicycle Facilities:** The ENGINEER shall coordinate with the City to incorporate pedestrian and bicycle facilities as required or shown on the project's schematic. All pedestrian/bicycle facilities must be designed in accordance with the latest Americans with Disabilities Act Accessibility Guidelines (ADAAG), the Texas Accessibility Standards (TAS), PROWAG, and the AASHTO Guide for the Development of Bicycle Facilities.

J. **Roadway Cross Sections:** The ENGINEER shall develop a 3D design model of the project corridor using Geopak or OpenRoads to determine earthwork quantities and provide final design cross sections at 50-foot intervals. Cross sections shall be delivered in standard GEOPAK format on 11"x17" sheets or roll plots and electronic files. The ENGINEER shall provide all criteria and input files used to generate the design cross sections. Cross sections and quantities shall consider existing pavement removals. Annotation shall include at a minimum existing/proposed right of way, side slopes (front & back), and profiles. Utility information will be provided where grades/elevations are available.

Cross sections shall be submitted by the ENGINEER at the 60%, 90%, and Final submittals, respectively.

K. **Miscellaneous Detail Sheets:** Provide detail sheets (estimated 3 sheets) for miscellaneous design details.

L. **Quantity Summary Sheets:** Prepare and update summary sheets showing item description, item unit, and item quantity for roadway bid items. Summary sheets shall be updated at each milestone submittal.

M. **Standards Selection:** Include standard sheets applicable to project for roadway design elements.

DRAINAGE DESIGN

Data Collection

A. **Coordination with local agencies:** Meet with local officials and City floodplain administrator to discuss proposed project following the 60% design submittal.

Complex Hydraulic Design

A. Hydraulic Modeling: The ENGINEER will update existing and proposed hydraulic analyses for four hydraulic crossings at the following locations based on the latest design information to meet the design storm frequency:

a. McNutt Creek below SCS #16 Reservoir

b. McNutt Creek Tributary 1

c. McNutt Creek Tributary 2A

d. McNutt Creek Tributary 2B

Hydraulic analyses will be based on effective HEC-RAS models included in the 30% Design submittal.

Storm Drain Analysis and Design

A. Storm Drains: The ENGINEER will perform the following storm drain design services:

a. Update the storm drain analysis and design using Geopak Drainage and incorporating updated Rational Method peak flows for the specified frequencies.

b. Update the storm drain design (inlets, laterals, trunk lines and outfalls) that minimize the interference with the passage of traffic or incur damage to the highway and local property in accordance with the City of Round Rock *Drainage Criteria Manual* (DCM) and ATLAS 14.

c. Determine hydraulic grade line starting at the outfall channel for each storm drain design. Use the design water surface elevation of the outfall as the starting basis (tailwater) for the design of the proposed storm sewer system.

d. Calculate manhole head losses. Compute manhole head losses as per FHWA's HEC-22.

e. Limit discharge into existing storm drains and existing outfalls to the capacity of the existing system, which will be determined by the ENGINEER. Evaluate alternate flow routes if necessary, to relieve system

overload.

f. Identify areas requiring trench protection, excavation, shoring, and de-watering.
g. Design non-standard drainage details (junction boxes, pipe connections, etc.).
h. Determine pipe strength requirements.

B. **Storm Sewer Hydraulic Tables:** The ENGINEER will prepare hydraulic data using Geopak Drainage software for the proposed storm sewer system. The storm system will be designed for the 25-year event per the approved design criteria. Update Cross Drainage Structures:

a. Determine drainage areas and flows for cross culvert drainage systems.
b. Determine the sizing of the drainage crossings. Develop designs that minimize the interference with the passage of traffic or cause damage to the highway and local property in accordance with the City of Round Rock Drainage Criteria Manual (DCM). Cross drainage design shall be performed using HY-8 or HEC RAS.
    - Determine Traffic Control Phasing for the construction of the cross culverts
    - Design inlet and outfall erosion protection at each crossing

Storm Water Detention Analysis: Detention pond designs developed during the schematic phase will be removed from the project, and the ENGINEER will revise the drainage design and PS&E package accordingly.

Conditional Letter of Map Revision (CLOMR):

The previous drainage design was re-evaluated by removing the detention basins and determining the calculated increase in downstream water surface elevations. The ENGINEER will revise the drainage design accordingly and prepare two CLOMRs to be submitted to the CITY and FEMA for review and comment at the following locations:

a. McNutt Creek

b. McNutt Creek Tributary 2B

A second CLOMR submittal will be prepared to address comments received. FEMA review fees will be paid directly by the CITY. Submittal packages include 60% PS&E level for CITY review and 90% level for FEMA review. A second FEMA submittal will be prepared to address CITY or FEMA comments. The ENGINEER will prepare the following submittals:

a. Report summarizing methodologies, assumptions, results, and exhibits

b. FEMA MT-2 Forms

c. Example newspaper notification. The CITY will publish required notifications.

d. CLOMR package for CITY review and Floodplain Administrator approval.

e. CLOMR package for FEMA submittal. Fees to be paid by the CITY.

Letter of Map Revision (LOMR):
After construction is complete the ENGINEER shall prepare and submit the LOMR to the CITY and FEMA for review and approval. The scope and fee for this submittal assumes that the project is constructed according to the plans, and therefore no additional field survey will be required to document as-built conditions. Also, Williamson County is currently re-evaluating floodplain mapping throughout the County. The scope and fee is based on current effective models. The ENGINNER will prepare the following submittals:

a. Final effective HEC-HMS Hydrology Model
b. Final drainage report
c. Prepare FEMA MT-2 Forms
d. Final newspaper publication. The CITY will publish required notifications.
e. LOMR package for CITY review and Floodplain Administrator approval.
f. LOMR package for FEMA submittal. Fees to be paid by the CITY.

Update Plans Sheets for Drainage Design:

A. Prepare the PS&E package in accordance with the applicable requirements of the City's specifications, standards, and manuals. Include the following sheets and documents, as appropriate:
   a. Drainage Area Maps
   b. Hydrologic Data Sheets
   c. Hydraulic Data Sheets
   d. Scour Data Sheets (for bridges)
   e. Culvert Layout Sheets
   f. Storm Drain Plan/Profile Sheets
   g. Detention Pond Grading Plan and Typical Sections
   h. Detention Pond Maintenance Ramp Details
   i. Trench Protection and Special Shoring Details (if applicable)

B. Prepare culvert cross sections and identify each cross-section's station location.
C. Identify areas requiring trench protection, excavation, shoring and de-watering.
D. Prepare drainage area maps.
E. Prepare plan and profile sheets for storm drain systems and outfall ditches.
F. Select any necessary standard details from City or TxDOT list of standards for items such as inlets, manholes, junction boxes and end treatments.
G. Prepare details for non-standard inlets, manholes and junction boxes.
H. Prepare drainage details for outlet protection, outlet structures and utility accommodation structures.
I. Identify pipe strength requirements.
J. Prepare drainage facility quantity summaries.
K. Identify potential utility conflicts and, if feasible, design to mitigate or avoid those identified conflicts.
L. Consider pedestrian facilities, utility impacts, driveway grades, retaining wall and concrete traffic barrier drainage impacts.

M. Identify existing ground elevation profiles at the ROW lines on storm sewer plan and profile sheets.

N. Prepare Hydraulic Data Sheets for cross drainage structures at the outfall channel and indicate site location (e.g., station and name of creek).

Hydrologic and Hydraulic Report:

Prepare a Pre-Final and Final report summarizing the assumptions, methods for calculations, existing and proposed conditions, and results of analyses. The report will include discussion hydrologic and hydraulic analysis procedures and summaries of calculation results and input parameters along with ROW needs to accommodate roadside ditches and dentition.

The ENGINEER will submit the Pre-Final report to the CITY for review and comment at the 60% Design submittal. The ENGINEER will address comments and submit a Final report to the CITY at the 100% Design submittal.

BRIDGE DESIGN

The ENGINEER will complete detailed design for the following bridges as shown on the interim design schematic:

(a) Eastbound CR 112 at McNutt Creek Tributary 1

(b) Westbound CR 112 at McNutt Creek Tributary 1

The design approach will be to use the current edition of the AASHTO LRFD Bridge Design Specifications, including HL93 live load, TxDOT LRFD Design Manual, and standard bridge design practice. A prestressed concrete I-girder superstructure will be used in conjunction with a cast in place substructure and drilled shaft foundations for all structures.

The ENGINEER will design the superstructure utilizing PGSuper software for prestressed concrete I-girder spans.

The ENGINEER will design the substructure utilizing AASHTO LRFD Bridge Design Specifications and TxDOT design methodology.

The ENGINEER will design the bridge foundations utilizing the TxDOT WINCORE program utilizing Texas Cone Penetrometer data provided by the geotechnical subconsultant.

The ENGINEER will prepare the bridge details listed below in accordance with the TxDOT Bridge Detailing Manual. The level of effort assumed during the preparation of this fee proposal for each bridge is as follows:

A. **Eastbound and Westbound CR 112 at McNutt Creek Tributary 1**

a. Conventionally cast concrete decks supported carried by girder type superstructures, supported on conventionally reinforced concrete caps and single or multi column bents and drilled shafts
b. All girders will be prestressed concrete
c. Prepare plan sheets for abutment design
d. Prepare plan sheets for additional abutment details
e. Prepare plan sheets for bent layout, elevation, and details
f. Prepare framing plan and slab plan sheets
g. Compute and prepare tables for slab and bearing seat elevations, dead load deflections, etc.
h. Design beams and prepare beam design tables
i. Perform calculations to determine elevations of bridge substructure and super structure elements
j. Perform calculations for design of bridge abutments
k. Perform calculations for design of bridge bents
l. Perform calculations for bridge superstructure design
m. Prepare appropriate TxDOT Standards

DELIVERABLES

- 30% Bridge Design (Bridge Layouts) previously submitted and approved prior to starting detailed bridge design
- 60%, 90%, and 100% Final Bridge Detail Plans
- Calculation notebook for each bridge provided with 100% Bridge Detail Plans

SIGNING AND PAVEMENT MARKING

A. **Signing:** The ENGINEER shall prepare drawings, specifications, and details for necessary small signing. The ENGINEER shall coordinate with the City (and other Engineers as required) for overall temporary, interim, and final signing strategies and placement of signs outside contract limits.

a. Prepare sign detail sheets for non-standard signs showing dimensions, lettering, shields, borders, corner radii, etc., and shall provide a summary of small signs.
b. Designate the shields to be attached to guide signs.
c. Illustrate and number the proposed signs on plan sheets.
d. Select each sign foundation from City or TxDOT Standards.

B. **Pavement Marking:** The ENGINEER shall detail permanent and temporary pavement markings and channelization devices on plan sheets. The ENGINEER shall coordinate with the City (and other Engineers as required) for overall temporary, interim, and final pavement marking strategies.

The ENGINEER shall select Pavement markings from the latest City or TxDOT standards.

The ENGINEER shall provide the following information on signing and pavement marking layouts:

a. Roadway layout
b. Center line with station numbering
c. Designation of arrow used on exit direction signs
d. Culverts and other structures that present a hazard to traffic
e. Location of utilities
f. Existing signs to remain, to be removed, or to be relocated
g. Proposed signs (illustrated, numbered and size)
h. Proposed markings (illustrated and quantified) which include pavement markings, object markings and delineation
i. Quantities of existing pavement markings to be removed
j. Proposed delineators and object markers
k. Right-of-way limits
l. Direction of traffic flow on all roadways

C. **Quantity Summary Sheets:** Prepare and update summary sheets showing item description, item unit, and item quantity for temporary and permanent signing and pavement marking bid items.

TRAFFIC CONTROL PLAN, DETOURS, AND SEQUENCE OF CONSTRUCTION

The ENGINEER shall prepare Traffic Control Plans (TCP) for the project. A detailed TCP shall be developed in accordance with the latest edition of the TMUTCD. The ENGINEER is to implement the current Barricade and Construction (BC) standards as applicable. The ENGINEER shall interface and coordinate phases of work, including the TCP, with adjacent Engineers. The ENGINEER shall:

A. **Overall Phasing Plan:** Develop an overall phasing plan for the project showing the phasing layout for construction of the proposed improvements.

B. **Traffic Control Narrative:** Provide a written narrative of the construction sequencing and work activities per phase and determine the existing and proposed traffic control devices (regulatory signs, warning signs, work zone pavement markings, barricades, flaggers, temporary traffic signals, etc.) to be used to handle traffic during each construction sequence.

C. **Traffic Control Phasing Layouts:** Prepare Traffic Control Phasing Layouts (3 Phases assumed) for each phase of the project including typical sections that identify the travel lanes and work zones. The ENGINEER shall show proposed traffic control devices for at-grade intersections during each construction phase (stop signs, flaggers, signals, etc.). The ENGINEER shall show temporary roadways, structures and detours required to maintain traffic throughout the construction phasing.

The Phasing Layouts will include the following:

a. Prepare each TCP in coordination with the City. The TCP shall include interim signing for every phase of construction. Interim signing shall include regulatory,

warning, construction, route, and guide signs. The ENGINEER shall interface and coordinate phases of work, including the TCP, with adjacent Engineers, which are responsible for the preparation of the PS&E for adjacent projects.

b. Maintain continuous access to abutting properties during all phases of the TCP. The ENGINEER shall develop a list of each abutting property along its alignment. The ENGINEER shall prepare exhibits for and attend meetings with the public, as requested by the City.
c. Make every effort to prevent detours and utility relocations from extending beyond the proposed Right-of-way lines. If it is necessary to obtain additional permanent or temporary easements and Right-of- Entry, the ENGINEER shall notify the City in writing of the need and justification for such action. The ENGINEER shall identify and coordinate with all utility companies for relocations required.
d. Describe the type of work to be performed for each phase of sequence of construction and any special instructions (e.g., storm drain, culverts, bridges, railing, illumination, signals, retaining walls, signing, paving surface sequencing or concrete placement, ROW restrictions, utilities, etc.) that the contractor should be made aware to include limits of construction, obliteration, and shifting or detouring of traffic prior to the proceeding phase.
e. Include the work limits, the location of channelizing devices, positive barrier, location and direction of traffic, work area, stations, pavement markings, and other information deemed necessary for each phase of construction.
f. Delineate areas of wetlands on traffic control plans (if any).
g. Design temporary drainage to replace existing drainage disturbed by construction activities or to drain detour pavement. The ENGINEER shall show horizontal and vertical location of culverts and required cross sectional area of culverts. If temporary shoring is required, prepare layouts and show the limits on the applicable TCP.
h. Quantity Summary Sheets: Provide summary sheets showing item description, item unit, and item quantity for temporary and permanent traffic control bid items.
i. Standards Selection**:** Include standard sheets applicable to project for traffic control design elements.

ILLUMINATION

The illumination design will include the following:

A. Conduct a google earth survey of the existing illumination (continuous and safety), associated electrical services, utility electric service drops, utility electric primary routing, and illumination aboveground/underground infrastructure.

B. Removal of all existing illumination (continuous and safety), associated electrical services, and illumination aboveground/underground infrastructure in conflict with the CR112 reconstruction.

C. Provide new continuous illumination, associated electrical services, and underground illumination

infrastructure services for all continuous illumination.

D. Utilize the minimal number of electrical services locations for the continuous illumination.

E. Project Task List

a. Data Collection

i. Utility power company(s) contact(s)

ii. Existing utility(s) overhead and underground routing information

iii. Existing illumination electrical services information (voltage, service size, connected loads, spares, etc.)

iv. Available voltage for new illumination electrical services

v. As-Builts of existing continuous, safety, and intersection Illumination along CR112

b. Survey

i. HDR will perform a google earth survey of the existing illumination (continuous and safety), associated electrical services, utility electric service drops, utility electric primary routing, and illumination aboveground/underground infrastructure.

c. Illumination Design

i. Utility power company coordination

ii. Photometric analysis (Project Limits)

iii. Overcurrent protection of electric services and branch circuits

iv. Voltage drop analysis for electrical services and branch circuits

v. Electrical service load analysis and schematics

vi. NEC and TxDOT compliance

vii. Illumination Removal Plans

viii. Illumination Summary & Plans

ix. Illumination mounting details (if applicable)

d. Electrical for Illumination System

i. Utility Power Coordination

- Contact the utility power company(s) for existing available voltage, service size, connected loads, and locations of existing illumination electrical services.
- Coordinate the voltage, service size, connected loads, and locations of the new illumination electrical services.

ii. Photometric Analysis

- Conduct photometric analysis (project limits) for continuous illumination foot-candle compliance.
- Photometric analysis will be utilized to determine the illumination assembly selection type, distribution, mounting height, and spacing for continuous illumination.

iii. Overcurrent Protection

- Conduct overcurrent protection analysis for determining electrical service and branch circuit breaker sizes.

iv. Voltage Drop

- Conduct voltage drop analysis for determining electrical service feeders, branch circuit conductors, and conduit sizes.

v. Electrical Service Load Analysis and Schematics

- Conduct load analysis for all illumination electrical services to determine the electrical service sizes.
- Develop schematics for all illumination electrical services.

vi. NEC and TxDOT Compliance

- Design illumination utilizing the most current TxDOT Highway Illumination Manual, City of Round Rock Standards, and applicable National Electric Code (NEC).

vii. Illumination Removal Plans

- Develop illumination plans for removal of all existing illumination (continuous and safety), associated electrical services, and illumination aboveground/underground infrastructure in conflict with the CR112 reconstruction.

viii. Illumination Summary & Plans

- Develop illumination plans for continuous illumination.
- Develop Illumination Summary for all illumination quantities

ix. Illumination Details

- Develop illumination details for any custom mounting not covered by the TxDOT Standards or City of Round Rock Standards.

STORM WATER POLLUTION PREVENTION PLANS (SW3P)

A. **SW3P Plan Sheets:** The ENGINEER shall develop the SW3P plan sheets to minimize potential impacts to receiving waterways. The SW3P shall include text describing the plan, quantities, type, phase, and locations of erosion control devices (BMPs) and any required permanent erosion control.

B. **Quantity Summary Sheets:** Provide summary sheets showing item description, item unit, and

estimated item quantities.

C. **Standards Selection:** Include standard sheets applicable to the project for temporary and permanent SW3P elements.

PS&E PREPARATION

A. **Specifications and General Notes.** The ENGINEER shall identify necessary standard specifications, special specifications, special provisions, and the appropriate reference items. The ENGINEER shall prepare General Notes from the City or TxDOT master list, Special Specifications and Special Provisions for inclusion in the plans and bidding documents. The ENGINEER shall provide General Notes, Special Specifications and Special Provisions in the required format as specified by the City.

B. **Plans and Estimate.** The ENGINEER shall independently develop the submittal package for each defined deliverable milestone. Numbering of Plan Sheets will be updated with the continued development of the project documents for each submittal. Electronic and hard copy sets of the project documents will be provided at each milestone. The construction plans will include the necessary bid and construction documentation to construct the project in standard City bid format at the specified milestones (30%, 60% & 90%) and Final PS&E submittals. The ENGINEER shall prepare a construction cost estimate at each defined milestone using the latest available bid data from City or TxDOT sources.

C. **Contract time determination.** The ENGINEER shall prepare a detailed contract time estimate to determine the approximate time required for construction of the project in calendar and working days at the 90% and Final PS&E milestone using Primavera P6 software or Microsoft Project. The schedule shall include tasks, subtasks, critical dates, milestones, deliverables, and review requirements in a format which depicts the interdependence of the various items and adjacent construction packages. The ENGINEER shall aid the City in interpreting the schedule.

D. **QA/QC Reviews:** ENGINEER will provide QA/QC reviews for 60%, 90%, and 100% Final submittals including a construability review at the 60% submittal and review of joint-bid utility plans (if any) at each submittal.

UTILITY COORDINATION

Utility Engineering including the identification of utility conflicts, coordination, compliance with the City of Round Rock utility criteria, and resolution of utility conflicts. Coordinate all activities with the CITY to facilitate the orderly progress and timely completion of the utility coordination phase.

The ENGINEER shall advance the utility layout developed in the previous phase using SUE QL ‘B’ information at selected locations in MicroStation format. This layout shall include all known existing utilities which are to remain in place or be abandoned, and all proposed adjusted/relocated utilities. These layouts are required to establish the location of the utility in plan view, the limits of the project & profile view at locations mutually agreed upon by the City. This layout shall be utilized to identify,

mitigate, or clear utility conflicts during the PS&E design. The ENGINEER shall review and incorporate these locations into the utility layout file. The ENGINEER shall review all existing utility location data previously collected and reevaluate as revisions are made to the final design.

A. **Coordination of engineering activities include:**

a. Utility Layout: Maintain a utility layout in the latest version of Microstation. This layout shall include all existing utilities which are to remain in place or be abandoned, and all adjusted utilities. This layout shall be utilized to monitor the necessity and evaluate alternatives. The ENGINEER's licensed Professional Engineer (P.E.) shall utilize the layout of existing utilities as prepared, if available, and make a determination of the following:

(i) Facilities in conflict with the proposed project that are to be relocated.
(ii) Facilities to be abandoned in place.
(iii) Facilities to remain in service and in place as a result roadway design adjustment and meeting the current City of Round Rock Utilities Criteria
(iv) The ENGINEER shall be responsible for determining if there are additional facilities, not shown in the Subsurface Utility Engineering (SUE) documents, which require relocation.
(v) Coordinate this information with the City immediately upon discovery.
(vi) Utility Conflict List: The ENGINEER shall update the Utility Conflict Tracking Report Spreadsheet, generated in Phase I with SUE QL 'A' and QL 'B' information.

B. **City Monthly and Individual Meetings with Utility Companies, as required, to facilitate utility conflict identification and resolution.**

a. Establish contact with all existing utilities within and adjacent to the project limits and set up utility coordination meetings to discuss concepts and options for construction.
b. Schedule all utility coordination meetings and assess compatibility with the schedule of the City.
(i) Set agenda for all coordination meetings as directed by the City.
(ii) Progress Meetings: Meet with the City periodically to coordinate the work effort and resolve problems and prepare a written report of such meetings. The meetings shall review:

- Activities completed since the last meeting
- Problems encountered.
- Late activities.
- Activities required by the next progress meeting.
- Solutions for unresolved and/or anticipated problems.
- Information or items required from other agencies/consultants.

C. **Review of Utility's Proposed Adjustments**

a. Evaluate Alternatives: Evaluate alternatives in the adjustment of utilities balancing the needs of both the City and the Utility.
b. Review Estimates and Schedules: Review the utility adjustment estimates for reasonableness of cost and the timely scheduling of the adjustment.
c. Review Plans for compliance with City of Round Rock Utility Criteria and proposed location data. The responsibility for quality and accuracy of Utility adjustment plans shall remain with the Utility Company.
d. Inspect Traffic control setup. Review for compliance with the regulations of the most recent edition of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD). Obtain approval from the City concerning the proposed method of handling traffic prior to allowing commencement of work.

D. **Utility Layouts:** Prepare utility layout sheets that display proposed improvements and known utilities to be used to determine the following:

a. Known facilities conflicts have been resolved.
b. All stakeholders have concurred with the various alignments.
c. Establish the sequence of construction for all utility relocation work whether it is included as a part of the highway construction or not.
d. Determine which utilities may be built as part of the contract (joint-bid) if any.
e. Determine which facilities shall be relocated prior to construction.

SUBSURFACE UTILITY ENGINEERING (SUE)

Subsurface utility engineering services will be performed by Sub-Consultant. (See attached proposal B-1)

RIGHT OF WAY SURVEYING

Right of way surveying services for parcels to be acquired will be performed by Sub-Consultant (See attached proposal B-2)

GEOTECHNICAL ENGINEERING AND PAVEMENT DESIGN

Provide field exploration and foundation design for the twin bridges at McNutt Creek Tributary No. 1. Provide a rigid pavement design option for both segments of CR 112. This work will be performed by Sub-Consultant (See attached proposal B-3).

DELIVERABLES

The ENGINEER shall provide the following deliverables at each submittal:

1. **30% Plans Submittal (Submitted previously):**

a. One printed set and one electronic set of 11" x 17" plan sheets (.PDF format) for City Review.
b. Estimate of construction cost.
c. ENGINEER's internal QA and QC markup set.
d. Utility Conflict Matrix

2. **60% Plans Submittal:**
   a. One printed set and one electronic set of 11" x 17" plan sheets (.PDF format) for the City review.
   b. Estimate of construction cost.
   c. ENGINEER's internal QA and QC marked up set.
   d. Utility Conflict Matrix

3. **90% Plans Submittal:**
   a. One printed set and one electronic set of 11" x 17" plan sheets (.PDF format) for the City review
   b. List of governing Specifications
   c. General notes
   d. Plans estimate
   e. Contract time determination summary (Construction Schedule)
   f. ENGINEER's internal QA and QC marked-up set.
   g. Other supporting documents.

4. **Final submittal (100%).**
   a. Two printed sets and one electronic set of 11" x 17" plan sheets (.PDF format)
   b. Revised supporting documents from 90% review comments.
   c. Master design reference files in Microstation format

BID PHASE SERVICES

A. Prepare Bid Manual – The ENGINEER shall prepare the project bid manual including latest City front end documents, bid tabulation form (electronic and pdf), contract documents and specifications.

B. Attend Pre-bid Meeting and Furnish Documents – The ENGINEER shall be present at the pre-bid meeting and describe the project improvements and bid documents to prospective bidders. The ENGINEER shall document contractor questions and provide responses along with the meeting sign-in sheet to all attendees.

C. Respond to Bidder's Questions - During the bid period all questions submitted to the ENGINEER shall be logged and responded to in the form of a comment matrix log.

D. Prepare and Distribute Addendum – The ENGINEER shall produce no more than two (2) addendums, as needed, for question response or correction to the bid documents, and distribution to bidders.

E. Attend Bid Opening – The ENGINEER shall be present at the bid opening to announce and record prospective bids received.

F. Prepare Bid Tab and Letter of Recommendation – The ENGINEER shall analyze contractor bids, prepare bid tabulation, check references, and make recommendation to the CITY for award to the apparent low bidder.

CONSTRUCTION PHASE SERVICES

A. Pre-Construction Meeting – The ENGINEER will attend one pre-construction meeting with the Contractor, the City's project manager, and related City staff; at an agreed upon date and time.

It would be appropriate at this time to include public and private utility companies, City Planning & Engineering and Public Works representatives, and other parties responsible for oversight and/or approvals that may be directly involved in this project.

This meeting will be to discuss any project related items, including but not limited to questions related to the construction documents, the construction schedule, scheduled construction status meetings, pay requests, and communication methods (e-mail, phone, fax, etc.) available to both the Contractor, the ENGINEER, and the CITY. The ENGINEER will document meeting notes and submit to the City for inclusion into the meeting minutes.

B. Review of Contractor Submittals – The ENGINEER will review construction submittals and shop drawings relative to the project specifications and details provided by the Contractor. The Contractor is responsible for providing shop drawings that have complete project information, are clearly depicted, and are ready for the ENGINEER'S review.

The Contractor may submit Shop Drawings and/or Construction Submittals noting minor changes to the Construction Drawings, Specifications, or other information provided by the ENGINEER; and within the area of expertise of the ENGINEER; then modifications and/or approvals may be provided by the ENGINEER. A maximum of twenty (20) Construction Submittal reviews are anticipated.

C. Monthly Construction Meetings – The ENGINEER will attend monthly construction meetings at a location determined by the City. The CONTRACTOR will provide an updated construction schedule, submit any pay requests, and forward any discussions related to potential construction issues. A maximum of twelve (12) meetings are anticipated.

D. Construction Site Visits – The ENGINEER will perform periodic site visits and observations during project construction. Based on the construction schedule timeline developed by the ENGINEER, no more than six (6) visits beyond the monthly construction meetings are anticipated.

It is at the ENGINEER'S discretion whether to notify the Contractor of a planned or anticipated visit. The ENGINEER may notify the Contractor prior to a site visit to meet the Contractor in the field and discuss ongoing construction operations.

The ENGINEER may request photographs and/or video be taken of specific items in the field by the Contractor. The ENGINEER may also take photographs and/or video to document construction progression, site conditions, or safety issues.

E. Requests for Information – The ENGINEER will respond to written Requests for Information (RFI's) during construction. The ENGINEER will accept written Requests for

Information provided by the Contractor. The Contractor is responsible for providing complete and clearly written documents, ready for the ENGINEER'S review.

The Contractor may submit RFI's to ask for clarification of the Construction Drawings, Specifications, or other information provided by the ENGINEER for:

Bidding Purposes: and within the area of expertise of the ENGINEER. A maximum of fifteen (15) RFI reviews are anticipated.
If the Contractor requests RFI's for items outside of the ENGINEER'S area of expertise; they may not be approved by the ENGINEER. The Contractor may then choose to have a Registered Engineer in the State of Texas, with that specific expertise, provide Sealed Shop Drawings for review, rather than an RFI,

F. Change Orders - The ENGINEER will provide cost adjustment information and revised construction documents for change orders provided by the Contractor. Prior to completion of any change order, the revisions to any bid documents requiring a change in price will be discussed and approved with the City prior to submitting to the contractor. Additional time for design modifications relative to new scoping items that aren't considered omissions or errors of the ENGINEER will be vetted and approved by the City before modification of the construction documents. All change orders will be prepared in accordance with City requirements and will be logged for recordkeeping purposes. Assume three (3) change orders.

G. Final Walk-Through / Punch List – The ENGINEER will accompany the City Representative and the Contractor on a final walk-through when the Contractor notifies the CITY that the project is substantially complete and ready for final inspection.

The ENGINEER may photograph and/or video the completed work, make verbal comments to the City Representative and to the Contractor during final walk-through; develop a written punch list of items yet to be completed, to be adjusted, removed and
/ or replaced; document incomplete or missing items; and note those items that are complete and accepted.

The ENGINEER, Contractor, and City will meet at a designated place and time to discuss the Final Walk-Through findings and Punch List. It shall be the Contractor's responsibility to complete the Punch List to the satisfaction of the City prior to acceptance of the project as being constructed in accordance with the construction documents.

Following project acceptance, the Final Acceptance Letter will be completed, and the contractor field notes will be included in as-built drawings as a part of the As-Built Plan deliverables.

H. As-Built Plans – The ENGINEER will prepare and submit final as-built plans that reflect field changes for RFI's and change order design modifications and Contractor field mark-ups for the project. One 11" x 17" as-built set along with an electronic copy of the drawings shall be submitted to the City for their records. Additionally, GIS data files will be developed from the project CADD files and submitted to the CITY for review.

I. **Project Management –** The ENGINEER will attend bi-weekly meetings by phone and coordinate with the CITY to comply with terms set forth in their agreement for construction related activities including contractor's responsibilities and updates to City Council. The ENGINEER will assist the CITY in updating traffic control information for public use as needed through the construction phasing. The ENGINEER will prepare monthly invoices and progress reports and implement a QA/QC program throughout the project for all construction record deliverables.

DELIVERABLES

Final Design & Bidding

1. Conformed Construction Plans, Cost Estimate meeting City of Round Rock and TxDOT Standards and Specifications
2. Project Bid Manual
3. Addendums
4. Bid Tabulation and Letter of Recommendation

Pre-Construction and During Construction:

1. Pre-Construction Meeting related documents such as:
    a. Agenda
    b. Meeting Minutes
2. Construction Submittals and Log
3. Construction RFI's and Log
4. Construction Site Visit Minutes
5. Change Order Requests
6. Construction Punch List
7. Construction Final Acceptance Letter
8. As-Built Plans & GIS files

Exclusions

- Construction Inspection and Materials Testing services are excluded from this contract. These services will be performed by the CITY through other contracting measures
- Design services beyond those specifically stated in this scope and any previously approved scopes
- Additional construction surveying
- Daily or repeated Construction Inspection Services beyond field meetings established in the scope

- TDLR Submittal Permit and Inspection Fees and Report
- Renderings or animated models
- Retaining Wall Design
- Traffic Signal Warrant Studies or Signal Design
- Utility Relocation Design
- ROW acquisition services, landowner negotiations, and title commitments for parcels and easements to be acquired by the City
- Bid advertisement for the construction project

THE RIOS GROUP B-1

September 14, 2021

Philip A. Fulton, PE
Sr. Transportation Project Manager
HDR, Inc.
710 Hesters Crossing, Suite 150
Round Rock, Texas 78681
512-685-2911
philip.fulton@hdrinc.com

RE: Subsurface Utility Engineering
City of Round Rock - CR 112 East Segment, CR 117 to CR 110

Dear Mr. Fulton:

The Rios Group, Inc. (TRG) is pleased to submit a cost proposal for Subsurface Utility Engineering (SUE) for the above referenced project. This proposal is based on information provided via email and telephone on September 10, 2021.

Introduction

TRG will perform SUE services for this project in general accordance with the recommended practices and procedures described in ASCE publication CI/ASCE 38-02 "Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data." As described in the publication, four levels have been established to describe and depict the quality of subsurface utility information. The four quality levels are as follows:

- Quality Level D (QL"D") – Information obtained from existing utility records.
- Quality Level C (QL"C") – Surveyed data depicting visible above-ground features supplemented with QL"D" information.
- Quality Level B (QL"B") – Two-dimensional horizontal information obtained through the application and interpretation of non-destructive surface geophysical methods. Also known as "designating," this level incorporates QL"C" information and provides horizontal positioning of subsurface utilities to within approximately 1.0 foot.
- Quality Level A (QL"A") – Three-dimensional horizontal and vertical information obtained through non-destructive vacuum excavation equipment to expose utilities at critical points. Also known as "locating," this level incorporates QL"B" information and provides horizontal and vertical positioning of subsurface utilities to within approximately 0.05 feet.

Scope of Work

Based on information provided by HDR, Inc. (Client), TRG has developed a proposed scope for SUE services on this project. This scope may be modified, with Client and TRG concurrence, during the performance of work if warranted by changing or unexpected field conditions.

The scope of this proposal includes twenty (20) QL"A" SUE Test Holes at locations to be identified by the client along CR 112 from CR 117 to CR 110 in Round Rock, Texas. The project limits are shown in red on Exhibit B. To layout the test holes, TRG will attempt to designate the target utility 10-feet either side of the test hole.

Additionally, this proposal includes targeted QL"B" SUE, equivalent to approximately 3,000 linear feet, on specific utilities identified by the Client prior to the mobilization of TRG field personnel.

The survey of SUE field markings is not included in this scope of work. It is assumed that the Client's Surveyor, Inland Geodetics, will provide SUE survey data for use in preparing the final deliverables.

Any necessary Right-Of-Entry (ROE) permits will be provided by the Client prior to the start of field work.

TRG Procedures

QL"D" and "C" – Records Research and Surface Feature Survey

It is the responsibility of the SUE provider to perform due-diligence with regard to records research and the acquisition of available utility records. The due-diligence provided for this project will consist of contacting the applicable One Call agency and associated utility owners/municipalities, visually inspecting the work area for evidence of utilities, and reviewing available utility record information. Additional utilities not identified through these efforts will be referred to as Unknown utilities.

QL"B" – Designating

Following a review of the project scope and available utility records with the project manager, TRG field personnel will begin designating the approximate horizontal position of known subsurface utilities within the project area. A suite of geophysical equipment that includes magnetic and electromagnetic induction will be used to designate conductive utilities. Where access is available, a sonde will be inserted into non-conductive utilities to provide a medium for transmission which can then be designated using geophysical equipment. Non-conductive utilities can also be designated using other proven methods, such as rodding and probing. TRG will make a reasonable attempt to designate Unknown utilities identified during field work; however, no guarantee is made that all Unknown utilities will be designated. Utilities will be marked and labeled to distinguish type and ownership. Field data depicting the designated utilities, as well as relevant surface features, will be produced to ensure accuracy and completeness of subsequent survey data. The TRG project manager will review the collected survey data, field data, and utility records for accuracy and completeness.

QL"A" – Locating

TRG will utilize non-destructive vacuum excavation equipment to excavate test holes at the requested locations. To layout the test holes, TRG will follow the QL"B" – Designating procedures described above. Once each utility is located, TRG will record the size, type, material, and depth.

Test holes will be uniquely marked. Excavations will be backfilled by mechanical means with the appropriate material, and the original surface will be restored. If necessary, TRG can core pavement up to a depth of 12 inches. Asphalt surfaces will be repaired with an asphalt cold patch, and concrete cores will be epoxied in place, flush with the surrounding surface. TRG assumes that flowable fill will not be required when backfilling test holes and that full-section pavement repair (including sidewalks) will not be required to restore the original pavement surface. If requested, these services can be provided at an additional cost.

TRG will establish any necessary routine traffic control measures at no additional cost. However, if non-routine traffic control measures (lane closures, traffic detours, flagpersons, etc.) are required, this service will be invoiced as a direct expense. Due to the risk of damage, TRG will not attempt to probe or excavate test holes on AC water lines unless approval is obtained from the owner in advance. Additionally, excavation in rock, or to a depth greater than 18 feet, is considered beyond the scope of this proposal.

TRG has made the following assumptions with regard to the test holes on this project:

- All test holes will be accessible to truck-mounted vacuum excavation equipment.
- Right-Of-Way (ROW) permits from the City of Round Rock (CORR) will be required. TRG will obtain all required City permits and ensure that coordination and compliance with the City is provided.
- Designed traffic control plans will not be required. It is assumed that City of Austin or TxDOT standard TCPs will be utilized for any required lane closures.
- Non-routine traffic control measures will be required. TRG will acquire the services of a qualified Maintenance-Of-Traffic (MOT) Subcontractor, and ensure that adequate traffic control is provided.
- The coring of pavement will not be required.

Deliverables

TRG will provide the following as a final deliverable to the Client:

- A utility file in CAD format depicting all designated and located utilities. The Client will provide TRG with any necessary background files for use in completing the final deliverables.
- A summary sheet of all test hole coordinate data and depth information.
- 8.5” x 11” Test Hole Data Forms for all test hole locations completed. These plans will be signed and sealed by a Professional Engineer and delivered to the Client in electronic PDF form.

Schedule

TRG can mobilize within three (3) weeks of receiving Notice-To-Proceed (NTP). TRG estimates that the SUE work can be completed in nine (9) working days, broken down as follows:

- QL"B" field work – 2 days
- QL"B" deliverable preparation – 7 days (following receipt of survey data from Client)

TRG estimates that the QL"A" SUE work can be completed in seventeen (17) working days, broken down as follows:

- Layout test holes – 2 days (concurrent with QL"A" field work)
- Field work – 10 days
- Deliverable preparation – 7 days (following receipt of survey data from Client)

Estimated Fee

The total estimated cost to complete the work described herein is **Forty-Two Thousand Three Hundred Seventy-Two Dollars and 44/100 ($42,372.44)**. An itemized breakdown of cost is provided in Exhibit A. Please note that these pricings are based on an assumption of quantities, and that only actual quantities will be invoiced – up to the total Contract amount.

We look forward to working with you on this project. If there are any questions, please do not hesitate to call at 512.580.5440.

Respectfully,

The Rios Group, Inc.

Robby Hub
Project Manager

THE RIOS GROUP

Estimate for Subsurface Utility Engineering

City of Round Rock

CR 112 East Segment, CR 117 to CR 110

EXHIBIT A

Hourly Office Labor	*Rate*	*Assumed Quantity*	*Unit of Measure*	*Sub-Total*
Supervisory Engineer	$ 166.06	4	HR	$ 664.24
SUE Project Manager	$ 151.93	6	HR	$ 911.58
Professional Engineer	$ 143.73		HR	$ -
Assistant Project Manager	$ 105.89		HR	$ -
Engineer in Training	$ 96.48	10	HR	$ 964.80
CADD Technician	$ 79.76	12	HR	$ 957.12
Engineering Technician	$ 66.85	6	HR	$ 401.10
Field Manager	$ 104.72	5	HR	$ 523.60
Administrative Specialist	$ 70.80		HR	$ -
Sub-Total				**$ 4,422.44**

Direct Expenses	*Rate*	*Assumed Quantity*	*Unit of Measure*	*Sub-Total*
ROW Permit	$ 500.00	1	EA	$ 500.00
Traffic Control (Flagging)	$ 1,200.00	2	DAY	$ 2,400.00
Sub-Total				**$ 2,900.00**

Quality Level "B" SUE and Test Hole Layout	*Rate*	*Assumed Quantity*	*Unit of Measure*	*Sub-Total*
One Designating Person	$ 150.00	20	HR	$ 3,000.00
One Designating Person - Test Hole Layout	$ 150.00	20	HR	$ 3,000.00
Sub-Total				**$ 6,000.00**

QL"A" SUE Test Holes

Unit Rate - Depth	*Outside Pavement Rate*	*Assumed Quantity*	*Unit Of Measure*	*Sub-Total*
0 - 5 feet	$ 1,250.00	8	EA	$ 10,000.00
5 - 8 feet	$ 1,525.00	10	EA	$ 15,250.00
8 - 13 feet	$ 1,900.00	2	EA	$ 3,800.00
13 - 20 feet	$ 2,450.00	0	EA	$ -
Over 20 feet	$ 3,025.00	0	EA	$ -
Pavement Coring	$ 350.00	0	EA	$ -
Test Hole Total		20		
Sub-Total				**$ 29,050.00**
Total Estimated Cost				**$ 42,372.44**

Exhibit B-1

CITY OF ROUND ROCK

CR 112 EAST SEGMENT FROM CR 117 TO CR 110

LOCATION MAP

B-2

INLAND GEODETICS
PROFESSIONAL LAND SURVEYORS

1504 Chisholm Trail Road
Suite 103
Round Rock, TX 78681
512-238-1200
512-238-1251 fax
TBPELS Firm Reg. No. 10059100

Sept. 20, 2021

Philip Fulton, PE
Senior Transportation Project Manager
HDR
710 Hesters Crossing, Suite 150
Round Rock, TX 78681-7839

RE: CR 112 East Segment, CR 117 to CR 110,

Mr. Fulton:

Scope of Services

The Surveyor shall provide Right of Way Acquisition surveying services for the CR 112 Improvement Project between CR 117 and CR 110. It is understood that this proposal is for up to 11 acquisition parcels within the stated limits. **NOTE**: this proposal assumes that title abstracts will be provided prior to delivering parcel acquisition packages.

Field Surveying

1. **Right-Of-Entry**

   A. The Surveyor understands that Right of Entry will be provided from the affected landowners along the project route. This will include landowners subject to boundary line verification or data gathering on tracts adjoining the project tracts. This number of ROEs may exceed the 11 parcels being acquired from. Copies of the signed ROE letters will be supplied to the surveyor prior to work commencing. Limitations for access will be addressed as they become known and adjustments to scope of work, fee estimates, time schedules, and other tasks will be made by supplemental proposal.

ROW Acquisition Surveys

A. The Surveyor shall generate, recover, and/or verify existing horizontal and vertical project primary control at the site, if any, and reconcile the control to known existing intersecting projects.
B. The Surveyor shall establish or densify additional secondary control as needed for the project to collect data along the length of the project.
C. The Surveyor shall, at their discretion, use 5/8" iron rods with distinguishing caps, cotton spindles (paved areas) or other durable entities for the project control as applicable.
D. Inland will perform sufficient research of property records from various sources to analyze and develop an exhibit of the record ROW and property configurations for the affected area. Inland will perform sufficient field work to recover property corners and other boundary related evidence to aid in the analysis and reconstruction of the affected properties. Final deliverables will be a signed and sealed survey plat and accompanying metes and bounds description for each parcel.
E. Title Abstracts shall be provided by the City in a timely fashion for the use of the surveyor in preparing the ROW acquisition documents.
F. Inland will monument the corners of the acquired tract of land.

Topographic Surveys

A. The Surveyor shall establish or densify additional secondary control as needed for the project

B. The Surveyor will collect spot elevations along the intersection of CR 112 and Avery Nelson Parkway including edges of back of curbs, driveways, visible utilities, drainage structures, centerline of roads, significant trees (8" and up), any other hard surfaced improvements within the defined area, grade breaks, flowlines of watercourses, and other significant features relevant to the project (MH inverts, if any). The collected data will include spot elevations and breaklines sufficient to generate and/or merge to a 1 foot contour interval DTM for the project.
C. Deliverables will include a spot point data in ASCII format, Microstation 2D and 3D, and TIN files. A list of benchmarks and project control coordinates will be included.
D. The Surveyor will locate and process up to 20 SUE test holes within the project limits.
E. The Surveyor will tie 2,600 linear feet of QL B utility markings.

Deliverables

The Surveyor shall provide:

A. ASCII point file, DGN files, and/or DWG files as appropriate.
B. Preliminary set and final survey plats with metes and bounds descriptions for 11 parcels.
C. PDF file of each Surveyor's project fieldbook if requested.

Compensation

ROW and Additional Topo Surveying LUMP SUM FEE: **$77,633.84**

ASSUMPTIONS

The Surveyor shall notify the client prior to performing the work if:

A. Sufficient boundary monumentation cannot be recovered to re-construct the existing alignments and associated right-of-way lines along the project corridor or that sufficient evidence for adjoining boundary lines of affected properties cannot be recovered and utilized for preliminary boundary line reconstruction. NOTE: It may become necessary for extending the survey limits beyond the properties in question to satisfy the Texas Board of Professional Engineers and Land Surveyors regulations pertaining to sufficient research and investigation with regards to the reconstruction of the affected boundary lines. This may be due to ambiguous seniority evidence or conflicting adjoining calls or descriptions that may not be located on the ground.
B. Traffic Control can be managed by the Surveyor's personnel. If abnormal conditions or additional TC apparatus is required, the Surveyor will notify the appropriate personnel prior to proceeding. There may be additional costs contingent to this task.
C. The work is delayed due to weather, Right of Entry/access, or other circumstances beyond the Surveyor's direct control.

Submitted:

Brenda Sies
Principal
Inland Geodetics, LLC

CORR
CR 112 ROW ACQUISITION
INLAND GEODETICS, LLC

SERVICE	2 CREW	3 CREW	4 CREW	1GPS	PM	RPLS	SEN TECH	TECH	LSLS	ADMIN	DIRECT	GPS REC ($15/Unit/Hour)		VEHICLES($60/Unit/Day)		ATV's ($55/Unit/Day)		INDIRECT	TOTAL
RATE / HOUR	$150	$170	$190	$120	$170	$166	$119	$98	$162	$68		# of Units	# of Hours	# of Units	# of Days	# of Units	# of Days		
											$ -							$ -	$ -
ADMIN MOBILIZATION					6 HRS	2 HRS	4 HRS			2 HRS	$ 1,963.36							$ -	$ 1,963.36
											$ -							$ -	$ -
PROPERTY RESEARCH					4 HRS	8 HRS	8 HRS				$ 2,958.44							$ -	$ 2,958.44
SURVEY CONTROLS	16 HRS			16 HRS		2 HRS	4 HRS				$ 5,128.28							$ -	$ 5,128.28
ROE COORDINATION					8 HRS					4 HRS	$ 1,631.32							$ -	$ 1,631.32
INITIAL FIELD SURVEY	40 HRS			16 HRS		5 HRS	6 HRS			4 HRS	$ 9,737.58							$ -	$ 9,737.58
BOUNDARY ANALYSIS						8 HRS	24 HRS				$ 4,186.64							$ -	$ 4,186.64
											$ -							$ -	$ -
PARCEL PREPARATION (11 P)					5 HRS	24 HRS	224 HRS			6 HRS	$ 31,935.81							$ -	$ 31,935.81
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TITLE REVIEW						5 HRS	12 HRS				$ 2,259.08							$ -	$ 2,259.08
PARCEL MONUMENTATION	32 HRS			16 HRS		4 HRS	4 HRS			2 HRS	$ 7,996.62							$ -	$ 7,996.62
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ROW ACQUSITION	88 HRS	0 HRS	0 HRS	48 HRS	23 HRS	58 HRS	286 HRS	0 HRS	0 HRS	18 HRS	$ 67,797.13		0 HRS		0 DAYS		0 DAYS	$ -	$ 67,797.13
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SECONDARY CONTROL	4 HRS					1 HRS	1 HRS				$ 884.95							$ -	$ 884.95
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INTERSECTION TOPO	16 HRS			8 HRS		2 HRS	8 HRS			1 HRS	$ 4,713.45							$ -	$ 4,713.45
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SUE TEST HOLES	8 HRS					1 HRS	1 HRS			1 HRS	$ 1,553.36							$ -	$ 1,553.36
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TIE QL B UTIL MARKS	16 HRS					1 HRS	1 HRS				$ 2,684.95							$ -	$ 2,684.95
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TOPO & SUE	44 HRS	0 HRS	0 HRS	8 HRS	0 HRS	5 HRS	11 HRS	0 HRS	0 HRS	2 HRS	$ 9,836.71		0 HRS		0 DAYS		0 DAYS	$ -	$ 9,836.71
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OTHER SURVEYING TASKS	0 HRS	0 HRS	0 HRS	0 HRS	0 HRS	0 HRS	0 HRS	0 HRS	0 HRS	0 HRS	$ -		0 HRS		0 DAYS		0 DAYS	$ -	$ -
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SUB-TOTAL	132 HRS	0 HRS	0 HRS	56 HRS	23 HRS	63 HRS	297 HRS	0 HRS	0 HRS	20 HRS	$ 77,633.84	TOTAL	0 HRS	TOTAL	0 DAYS	TOTAL	0 DAYS	$ -	$ 77,633.84
REIMBURSEABLE ITEMS																			$ -
REIMBURSEABLE SERVICES																			$ -
ESTIMATED FEE	$19,800	$0	$0	$6,720	$3,903	$10,443	$35,399	$0	$0	$1,368			$0		$0		$0		$ 77,633.84
																			$77,634

Cost Variables:	
GPS Receivers	$15
Vehicle	$60
ATV	$55

Reimburseable Services Include:	
	$0.00
	$0.00
	$0.00
Total:	$0.00

Reimburseable Fees Include:	
	$0.00
	$0.00
	$0.00
Total:	$0.00

RABA KISTNER

8100 Cameron Road, Suite B-150
Austin, TX 78754

P 512.339.1745
F 512.339.6174
TBPE Firm F-3257

WWW.RKCI.COM

[Delivery by Email: Philip.Fulton@hdrinc.com]

Proposal No. PAA21-185-00
October 4, 2021 (Revision No. 1)

Mr. Philip A. Fulton, P.E.
Senior Transportation Project Manager
HDR
710 Hesters Crossing Road, Suite 150
Round Rock, Texas 78681

RE: Proposal for Geotechnical Engineering Study
CR 112 Bridge at McNutt Creek Tributary No. 1
Round Rock, Texas

Dear Mr. Fulton:

RABA KISTNER Consultants, Inc. (RKCI) is pleased to submit this proposal for Geotechnical Engineering Services for the above referenced project. The broad objectives of our study will be to determine soil conditions at the site and to develop foundation design recommendations and construction guidelines for a pair of bridges at County Road 112 crossing McNutt Creek Tributary No. 1 in Round Rock, Texas. Additionally, rigid (concrete) pavements are being considered as an option for the roadway in general. Described in this proposal are:

- our understanding of pertinent project characteristics;
- our proposed scope for field and laboratory study;
- our proposed scope for engineering evaluation and reporting;
- our tentative project schedule; and
- our estimated not-to-exceed study cost.

Project Description

Under consideration in this study is a pair of bridges located at County Road 112, at its crossing with McNutt Creek Tributary No. 1 in Round Rock, Texas. The existing area consists of asphalt paved roads with open grass-covered tracts of land on either side. The bridges have total spans on the order of 180 ft, and maximum pier loads on the order of 200 tons are anticipated.

Additionally, rigid (concrete) pavements are being considered for County Road 112 in general.

Field Study

To explore subsurface soil conditions at this site, RKCI recommends drilling 3 bridge borings as presented on the attached preliminary Boring Location Map. The borings will be advanced to approximate depths of 50 ft below the existing ground surface utilizing a truck mounted drilling rig.

Samples will be taken using conventional Shelby-tube, split-spoon, and auger cutting (grab sample) sampling techniques. Additional field testing will include Texas Cone Penetrometer (TCP) testing at 5 ft intervals. The borings will be located in the field utilizing a recreation grade hand-held GPS device. Our scope of service does not include surveying in the boring location. The boreholes will be backfilled with auger cuttings and bentonite and then patched with asphalt.

Water level readings will be recorded for the open boreholes during drilling and at drilling completion. If free water is encountered during drilling, the RKCI geologist will temporarily suspend drilling operations and obtain water level measurements in the open borehole at 5-minute intervals over a 15-minute time period. Water level measurements will also be recorded at completion of drilling prior to backfilling the boreholes with the auger cuttings and spoils generated during the drilling operations.

Samples collected will be retained in our laboratory for 30 days after submittal of the final geotechnical report.

Laboratory Testing

Upon completion of the subsurface exploration, a testing program will be designed to define the strength and classification characteristics of the subgrade soils. The laboratory testing program is anticipated to include moisture content tests, Atterberg Limits (plasticity) tests, and grain size analyses. However, the actual type and number of laboratory tests will be based on the subsurface conditions encountered in the borings. The laboratory testing will be performed in general accordance with applicable ASTM standards.

Engineering Report

The results of the field and laboratory phases of the study will be reviewed by our staff of engineers and geologists. The results of our review, together with the supporting field and laboratory data, will be presented in a written, engineering report. The Geotechnical Engineering Report will include the following information and recommendations, if applicable:

- A boring location map and boring logs;
- A summary of the field and laboratory sampling and testing program,
- A summary of the laboratory test results;
- A review of general site conditions including descriptions of the site, the subsurface stratigraphy, groundwater conditions, and the presence and condition of fill materials, if encountered.
- Foundation design recommendations, including:
    - seismic site class parameters;
    - expansive, soil-related movements using an empirical method for predicting Potential Vertical Rise (PVR) developed by the Texas Department of Transportation;
    - allowable side shear and end bearing resistance for deep foundations;
    - allowable uplift resistance for deep foundations; and
    - lateral LPile design parameters;
- Foundation construction considerations, including:
    - site drainage;
    - site preparation;
    - embankment fill material specifications;
    - deep foundation excavations;
    - excavation considerations; and
    - fill placement compaction.

- Rigid pavement component thickness recommendations for the roadway, in accordance with the City of Round Rock Transportation Criteria Manual.

Our scope of work does not include a geologic fault study nor does it include conducting test pits at the site. Neither does it include global slope stability for embankments or walls. Site grading plans can result in changes in the subgrade conditions and alter foundation design recommendations. Final site grading plans will be helpful information in the preparation of our foundation engineering recommendations.

The final report will be produced in a digital PDF and delivered via email.

Tentative Project Schedule

Based on our present workload and weather permitting, we anticipate that we could begin the field exploration phase of this study within 4 to 6 working days of receiving your written authorization (assuming right of way permissions are given for a boring drilled in the roadway), provided the site is accessible to our truck-mounted drill rig and the Client has supplied us with available information regarding existing utilities and below grade structures on site (if any). The field exploration and laboratory testing phase of the study is expected to take approximately 5 to 7 working days to complete. Engineering analyses and preparation of the engineering report is expected to take an additional two to three weeks to complete, for an approximate project deliverable of approximately four to five weeks from authorization. We will be pleased to provide the design team with verbal design information as the data becomes available, once drilling has been completed.

Project Cost

The total cost for the study scope outlined herein is *not to exceed* **$15,888.61.**

Should unusual soil conditions be encountered in the field that indicates the desirability of significantly broadening the scope of the study, we will contact you to receive authorization before proceeding with any additional work. Additional services will be billed on a unit basis in accordance with our standard fees as indicated on the attached Schedule of Fees for Professional Services.

If available, we request that the Client provide RKCI with a recent plat of the project site, a drawing illustrating existing and proposed construction locations, and preliminary site grading plans prior to the start of our field exploration services. Also, it is our understanding that the Client will provide access to all boring locations for a conventional, truck-mounted drilling rig and that the Client will provide underground utility clearance. RKCI will assist in locating underground utilities, provided the Client submits documentation of existing utility locations. RKCI will take all precautions to prevent damage to property; however, RKCI cannot be responsible for tire rutting, or damage of landscaping.

It should be noted that our study scope and project cost does not include professional time and travel expenses for participation in design team meetings. Furthermore, our estimate does not include professional time for plan review to determine whether the drawings comply with the intent of the geotechnical recommendations.

Proposal No. PAA21-185-00
October 4, 2021 (Revision No. 1)

Acceptance

We appreciate the opportunity of submitting this contract and look forward to working with you in the development of this project, which will be carried out in accordance with this letter and the following attachments:

Attachment	Description
I	Standard Terms and Conditions
II	Schedule of Fees

Please return one signed copy of this letter proposal to provide written authorization for our firm to complete work on the services outlined herein. Our invoices are due and payable upon receipt at P.O. Box 971037, Dallas, Texas 75397-1037.

RKCI considers the data and information contained in this proposal to be proprietary. This statement of qualifications and any information contained herein shall not be disclosed and shall not be duplicated or used in whole or in part of any purpose other than to evaluate this proposal.

Very truly yours,

RABA KISTNER CONSULTANTS, INC.

Yvonne Garcia Thomas, P.E.
Vice President

Richard T. Shimono, P.E.
Project Engineer

RTS/YGT: jg
Attachments I & II
Copies Submitted: Above (1)

Accepted By:

Signature

Typed or Printed Name

Title

Date

RABA KISTNER

STANDARD TERMS AND CONDITIONS

1. **DEFINITIONS.**

1.1 **RK.** Raba Kistner, Inc., and / or one of its subsidiaries (Project Control of Texas, Inc. or PC Sports, Inc.) that is being engaged to provide the services to CLIENT in connection with the delivery of the proposal to which these Standard Terms and Conditions relate.

1.2 **CLIENT.** Person, entity or organization for which RK is rendering services regarding the Project.

1.3 **PROJECT.** The activity, venture, plan, building, site or investigation for which CLIENT has engaged RK to provide professional services.

1.4 **CONTRACTOR.** Person, entity or organization providing construction services, including labor and material for the Project.

1.5 **SERVICES.** The professional services to be performed by RK as set forth in the proposal or Agreement to which the Standard Terms and Conditions are attached.

1.6 **AGREEMENT.** RK's proposal accepted by CLIENT and these Standard Terms and Conditions which are incorporated into and made a part of the Agreement.

2. **SERVICES.** RK is being engaged by the CLIENT to render professional services ("Services") involving only RK's advice, judgment and opinion. RK may subcontract all or a portion of the Services performed hereunder. RK shall apply professional judgment in determining the extent to which RK complies with any given standard identified in RK's instruments of professional services. CLIENT expressly acknowledges that RK makes no warranties or guarantees, expressed or implied, regarding the Services.

3. **INFORMATION PROVIDED BY CLIENT.** CLIENT may provide or direct RK to utilize or rely upon certain information ("CLIENT Information") in the performance of RK's services. RK shall be entitled to rely upon such CLIENT Information. RK will not conduct an independent evaluation of the accuracy or completeness of such CLIENT Information and shall not be responsible for any errors or omissions in such information. RK's report, as well as any recommendations, findings, and conclusions made by RK, are dependent on information received from CLIENT. Changes or modifications to the information provided by CLIENT can affect RK's evaluation, recommendations, findings and conclusions, and CLIENT agrees—as a material term of this Agreement—to notify RK immediately, in writing, if CLIENT becomes aware of any such changes or modifications, including changes to the size, scope, location, or other material characteristics of CLIENT's project. The CLIENT shall be responsible for providing the location of all underground utilities and other structures in the vicinity of RK borings or excavations. RK will not accept responsibility and will not be liable for affecting or damaging any underground utility, underground storage tank, or other subsurface condition not previously identified and located, or improperly located, by the CLIENT, a utility, or a utility locating agency.

4. **SITE ACCESS AND SITE SAFETY.** CLIENT shall provide right-of-entry to the buildings and sites which are the subjects of RK's services. CLIENT represents that it possesses authority for such right-of-entry and that the building/site operator(s) possess the necessary permits and licenses for current activities at the site. RK shall be responsible for supervision and site safety measures of its own employees and subconsultants, but shall not be responsible for the supervision or health and safety precautions of any other parties, including CLIENT, CLIENT's contractors, subcontractors, or other parties present at the site.

5. **SUBSURFACE EXPLORATIONS.** Subsurface conditions throughout the site may vary from those depicted on logs of discrete borings, test pits, or other exploratory services. CLIENT understands RK's layout of boring and test locations is approximate and that RK may deviate a reasonable distance from those locations. RK will take reasonable precautions to reduce damage to the site when performing services; however, CLIENT accepts that invasive services such as drilling, or sampling may damage or alter the site. Site restoration is not provided unless specifically included in the scope of services.

6. **CHANGED CONDITIONS.** If, during the term of this Agreement, circumstances or conditions that were not originally contemplated by or known to RK are uncovered or revealed, to the extent that they affect the scope of services, compensation, schedule, allocation of risks or other material terms of this Agreement, RK may require renegotiation of appropriate portions of this Agreement. RK shall notify the CLIENT of the changed conditions necessitating renegotiation, and RK and the CLIENT shall promptly and in good faith attempt to renegotiate the terms of the agreement affected by the changed conditions. If changes cannot be agreed to with respect to the changed conditions, the parties shall utilize the Dispute Resolution/Litigation procedures in this Agreement.

7. **TESTING AND OBSERVATIONS.** CLIENT understands that testing and observation are discrete sampling procedures, and that such procedures indicate conditions only at the depths, locations, and times the procedures were performed. RK will provide test results and opinions based on tests and field observations only for the work tested. CLIENT understands that testing and observation are not continuous or exhaustive and are conducted to reduce – not eliminate – project risk. CLIENT agrees to the level or amount of testing performed and the associated risk. CLIENT is responsible (even if CLIENT delegates such responsibility to Contractor) for notifying and scheduling RK to perform these services. RK shall not be responsible for the quality and completeness of contractor's work or Contractor's adherence to the project plans, specifications and other related documents. RK's performance of testing and observation services shall not relieve Contractor in any way from responsibility for defects discovered in Contractor's work or create a

warranty or guarantee on the part of RK. CLIENT acknowledges that RK will not supervise or direct the work performed by Contractor or its subcontractors and is not responsible for their means and methods.

8. **ESTIMATE OF FEES FOR SERVICES.** If included as part of RK's proposal, RK will, to the best of its ability, perform the scope of services within the proposed fee estimate provided by RK. RK's proposal fees are based upon an estimate of the services required to meet the specifications for the project and following generally accepted engineering practices. The CLIENT recognizes that unforeseen circumstances along with changes in scope and project/contractor's schedules can influence the successful completion of the scope of services within the estimated proposed fees. Because Contractor has sole control over the project and determines the means and methods used to build/construct the project, RK's service fees are estimates and not lump sum or guaranteed maximum fees. The CLIENT is fully responsible for payment for all services provided, including retests of areas or samples that failed to meet Project specifications. The Estimate of Fees is valid for a period of 60 days after RK's proposal is submitted to CLIENT. If RK's proposal is not accepted by CLIENT within 60 days after it is submitted to CLIENT, RK may modify the Estimate of Fees.

9. **REPORTS**. RK may provide CLIENT with written reports in connection with the Services performed. Such reports will present such findings and conclusions as RK may reasonably make with the information gathered while performing its services and provided by CLIENT. The reports may be copied for inclusion in other documents related to the project provided they are reproduced in their entirety. Reports and other instruments of service are prepared for, and made available for, the sole use of the CLIENT, and the contents thereof may not be used or relied upon by others without the express written authorization of RK. Any unauthorized use or distribution of RK's reports shall be at the CLIENT's sole risk and without liability to RK.

10. **TOXIC AND HAZARDOUS MATERIALS.** CLIENT shall provide RK with all information within CLIENT's possession or knowledge related to the potential or presence of toxic or hazardous materials or pollutants at the Project site. CLIENT agrees that RK neither created nor contributed to the creation or existence of any toxic or hazardous materials or pollutants. In no event shall RK be required to sign a hazardous waste manifest or take ownership of any toxic or hazardous materials or pollutants. If unanticipated toxic or hazardous materials or pollutants are encountered while RK is performing its services, RK reserves the right to stop field operations and notify CLIENT and CLIENT assumes responsibility to notify appropriate regulatory agencies. RK and CLIENT must mutually agree to remobilize.

11. **NO THIRD-PARTY BENEFICIARIES**. The services and any report(s) prepared under this Agreement are for the sole benefit and sole use of CLIENT and are not for the use of any other party or person. Only CLIENT may rely upon the services and any report or work product. Nothing in this Agreement, or any subsequent amendments or modifications, or in any report issued under this Agreement, shall create a contractual relationship with or a cause of action in the favor of any third party against either RK or CLIENT. If CLIENT provides a copy of any report prepared by RK to others, it shall advise the recipient that the information contained in the report is provided for information only and is not to be relied upon by third parties.

12. **LEED PROJECTS.** Unless specifically addressed elsewhere in this agreement, RK has no responsibility or liability, including duty to defend or duty to indemnify, any party (including but not limited to CLIENT, owner, owner's agents, architects, engineers, contractors, construction managers, subcontractors) for the LEED certification process including: developing, producing, or retaining any documentation relating to the calculation of LEED points; and attainment of LEED certification points or LEED ratings.

13. **STANDARD OF CARE.** RK shall perform its professional services in accordance with the standard of care and diligence normally practiced by professional firms in performing services of a similar nature, in the same locality, under similar circumstances. CLIENT expressly acknowledges that RK makes no other warranties or guarantees, expressed or implied, regarding its professional services or its work product.

14. **RISK ALLOCATION.** RK will be responsible only for its own work, and that of its sub-consultants, and not for defects in the work designed or built by others.

15. **LIMITATION OF LIABILITY. CLIENT AND RK HAVE EVALUATED THE RISKS AND REWARDS ASSOCIATED WITH THIS PROJECT, INCLUDING RK'S FEE RELATIVE TO THE RISKS ASSUMED, AND AGREE TO ALLOCATE CERTAIN OF THE RISKS SO, TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL AGGREGATE LIABILITY OF RK (AND ITS RELATED ENTITIES, EMPLOYEES, OWNERS, AGENTS, AND REPRESENTATIVES) TO CLIENT (AND THIRD PARTIES GRANTED RELIANCE ON RK'S WORK PRODUCT, OR OTHERWISE SEEKING RECOVERY UNDER THIS AGREEMENT) IS LIMITED TO THE GREATER OF $100,000 OR THE FEE PAID RK UNDER THIS AGREEMENT, FOR ANY AND ALL INJURIES, DAMAGES, CLAIMS, LOSSES, OR EXPENSES (INCLUDING ATTORNEY AND EXPERT FEES) ARISING OUT OF RK'S SERVICES OR THIS AGREEMENT REGARDLESS OF CAUSE(S) OR THE THEORY OF LIABILITY.**

16. **CONSEQUENTIAL DAMAGES.** Neither CLIENT nor RK will be liable to the other for any special, consequential, indirect, incidental or penal losses or damages of any kind, nor will CLIENT or RK be liable to the other for losses, damages, or claims, regardless of how defined, related to: lost profits; unavailability of property or facilities; shutdowns or service interruptions; loss of use, revenue, opportunity, or inventory; use charges, carrying costs, cost of substitute facilities, goods, or services; cost of capital, or claims of any other party and/or its customers.

17. **SUSPENSION OF SERVICES.** If CLIENT fails to make payments when due or otherwise is in breach of this Agreement, RK may suspend performance of services upon seven (7) calendar days' notice to CLIENT. RK shall have no liability whatsoever to CLIENT for any costs or damages as a result of such suspension. Upon payment in full by CLIENT, RK may resume services under this Agreement, and the time schedule and compensation shall be equitably adjusted to compensate for the period of suspension plus any other reasonable time and expense necessary for RK to resume performance. Payment of invoices shall not be subject to any discounts or set-offs by CLIENT unless agreed to in writing by RK. Payment to RK for services rendered and expenses incurred will be due and payable regardless of any subsequent suspension or termination of this Agreement by either party. CLIENT shall not make any changes to RK's banking and deposit information or payment instructions unless CLIENT

communicates the requested changes to RK orally and in writing and obtains written confirmation from an RK officer that the requested changes are legitimate and authorized by RK. If CLIENT makes a payment to a third party instead of to RK based on an unauthorized request to CLIENT for a change to RK's banking and deposit information or payment instructions and without obtaining written confirmation of the change from RK, CLIENT will remain liable to RK for payment of the amount of the unauthorized payment.

18. **WAIVER OF SUBROGATION.** To the extent damages are covered by property insurance, or any other available insurance coverage, CLIENT and RK waive all rights against each other and against the contractors, consultants, agents and employees of the other for damages. CLIENT agrees that CLIENT shall procure or cause to be procured builder's risk insurance or other property insurance for its project. RK and CLIENT waive all rights against each other and any of their consultants, contractors, subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, flood, or other causes of loss to the extent covered by CLIENT's or CLIENT's Contractor's builder's risk insurance, or other available insurance coverage. The policies shall provide waivers of subrogation by endorsement or otherwise. CLIENT shall require of its contractors, consultants, agents and employees similar waivers in favor of RK and its subconsultants. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

19. **OWNERSHIP OF DOCUMENTS.** RK's reports, drawings, plans, specifications, and other documents and deliverables are instruments of professional service ("Instruments of Service") developed by RK in contemplation of a wide array of project-specific variables, including how the documents will be used and by whom. RK shall be the author, owner and custodian of the Instruments of Service, and shall retain all common law, statutory, and other reserved rights, including copyright. By execution of this Agreement, RK grants to CLIENT a limited, nonexclusive license to use the Instruments of Service for purposes of constructing, using, and maintaining the project for which the services are performed, provided CLIENT substantially performs its obligations, including prompt payment of all sums when due, under this agreement.

Upon completion of the services, and payment in full of all monies due RK, CLIENT may retain copies of all such documents. **THE INSTRUMENTS OF SERVICE ARE NOT INTENDED NOR REPRESENTED TO BE SUITABLE FOR REUSE ON EXTENSIONS, MODIFICATIONS, OR ADAPTATIONS OF THE PROJECT, OR ANY OTHER PROJECT. ANY REUSE OF SUCH DOCUMENTS, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY RK FOR THE SPECIFIC PURPOSE INTENDED, WILL BE AT CLIENT'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO RK. CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY, DEFEND, AND HOLD HARMLESS RK, ITS OFFICERS, DIRECTORS, EMPLOYEES, AND CONSULTANTS AGAINST ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES (INCLUDING REASONABLE ATTORNEYS' FEES, DEFENSE COSTS, AND COURT COSTS) ARISING FROM, OR ALLEGEDLY ARISING FROM, OR IN ANY WAY CONNECTED WITH, THE UNAUTHORIZED REUSE OR MODIFICATION OF THE DOCUMENTS BY CLIENT OR ANY PERSON OR ENTITY THAT ACQUIRES OR OBTAINS THE DOCUMENTS FROM OR THROUGH CLIENT WITHOUT THE WRITTEN AUTHORIZATION OF RK REGARDLESS OF WHETHER SUCH CLAIMS, DEMANDS, OR ACTIONS ARE FOUNDED IN WHOLE OR IN PART UPON ALLEGED NEGLIGENCE OF RK, ITS OFFICERS, DIRECTORS, EMPLOYEES, OR CONSULTANTS.**

Parties other than CLIENT and RK may apply to use an instrument, using a form prepared by RK for that purpose. Others' use of an instrument shall be permitted only when CLIENT and RK both so agree; either shall have the right to forbid use by others. In addition, RK shall make its permission contingent upon the satisfaction of certain conditions when, in RK's professional judgment, such a contingency is necessary.

20. **DISPUTE RESOLUTION/LITIGATION.** All claims, disputes, and other controversies between RK and CLIENT arising out of, or in any way related to, the services provided by RK shall be submitted to mediation, before and as a condition precedent to, other remedies provided by law. Any litigation related to the Agreement or RK's performance of its professional services shall be commenced in a court in Bexar County, Texas. CLIENT consents to personal jurisdiction in the State of Texas and agrees that venue of any litigation shall be in Bexar County, the county where RK's principal place of business is located. CLIENT waives any objection to personal jurisdiction in Texas or to venue in Bexar County. The prevailing party in such litigation will be entitled to recover all court costs, attorneys' fees, and other legally recoverable claim-related expenses. As a condition precedent to mediation and / or litigation related to any claim arising out of the services provided under this Agreement, CLIENT shall obtain a written affidavit from a registered, independent, and reputable professional engineer describing any error, omission or other act by RK that allegedly failed to comply with the professional standard of care applicable to RK's performance of services and provide such affidavit to RK. The affidavit shall comply with the requirements of Texas Civil Practice & Remedies Code Chapter 150.

21. **TERMINATION OF CONTRACT.** CLIENT and RK may terminate RK's services at any time upon ten (10) calendar days' written notice. In the event of termination, CLIENT agrees to fully compensate RK for services performed including reimbursable expenses through the termination date, as well as reasonable demobilization expenses. RK will terminate its services without waiving any claims against or incurring any liability to CLIENT.

22. **STATUTE OF LIMITATIONS.** Any applicable statute of limitations will commence to run and any cause of action shall be deemed to have accrued not later than the earlier of the following: (1) the date of the report issued by RK giving rise to the cause of action; (2) the date on which RK issues its last report under this Agreement; or (3) if RK is retained to perform construction observation, the date of substantial completion of the project.

23. **FORCE MAJEURE.** Neither party shall be liable in damages or have the right to terminate this Agreement for any delay or default in performing hereunder if such delay or default is caused by conditions beyond its control ("Force Majeure") including, but not limited to Acts of God, Government restrictions (including the denial or cancellation of any export or other necessary license), wars, insurrections and/or any other cause beyond the reasonable control of the party whose performance is affected. Force Majeure may not be claimed as a cause for delay in payment of money due and payable hereunder.

24. **NO ASSIGNMENT**. Neither RK nor CLIENT shall assign or transfer its interest in this Agreement without the express written consent of the other.

25. **SEVERABILITY.** Each provision of this Agreement is intended to be severable. If any terms or provisions of this agreement shall be held to be invalid, illegal, or unenforceable for any reason whatsoever, the validity, legality, and enforceability of the remaining provisions hereof shall remain in full force and effect and shall not in any way be affected or impaired thereby. Moreover, to the maximum extent allowed by law, the Parties hereto stipulate that any offending provisions will be modified or altered, as necessary, so as to give such provisions the maximum permissible effect and application intended.

26. **ENTIRE AGREEMENT**. This Agreement, and all of its attachments, constitutes the entire, integrated Agreement between the Parties to it, and this Agreement supersedes all other Agreements, oral or written between the Parties, concerning the subject set forth in this Agreement. This Agreement may not be amended except in writing, with that amendment being signed by both Parties.

SCHEDULE OF FEES FOR PROFESSIONAL SERVICES

PERSONNEL:

Principal	$135 to $250/hour
Professional	$70 to $200/hour
Auto Cad Operator	$65 to $110/hour
Technical/Clerical/Administrative	$40 to $80/hour

The specific hourly rate within each classification listed above depends on the experience, special training, and qualifications of the personnel needed for the project. For projects requiring work at any hazardous waste site, there will be a $10 per hour surcharge added to the normal billing rate for all personnel. Consultants to Raba Kistner (RK) will be charged according to their professional classification.

EXPENSES: Use of company automobiles will be charged at $1.00 per mile. Automobiles and light trucks assigned to field sites will be charged at $70.00 per day, plus $1.00 per mile over 50 miles per day. Copies will be charged at $0.25 per page.

Other project specific charges for use of RK equipment or for RK testing will be in accordance with established fee schedules. All other project specific, third-party costs will be charged at cost plus 15 percent.

Invoices will be submitted monthly for work in progress in our standard format. They are due and payable upon receipt and become past due 30 days after the billing date. Past due invoices may be subject to late charges at the rate of 1-1/2 percent per month (18 percent per annum). In the event that the State of Texas legislates a sales tax on Professional Services, the amount of the tax will be PAYMENT added to the appropriate service rate charged. Our invoices are due and payable upon receipt at P.O. Box 971037, Dallas, Texas 75397-1037.

Preparation of non-standard invoice will be charged on a time and materials basis in accordance with the rates in this fee schedule.

CONDITIONS: Services will be performed in accordance with our Standard Terms and Conditions.

The proposal to which this schedule is an attachment is valid for 90 days from the date of the proposal.

ADDENDUM TO EXHIBIT C
Work Schedule

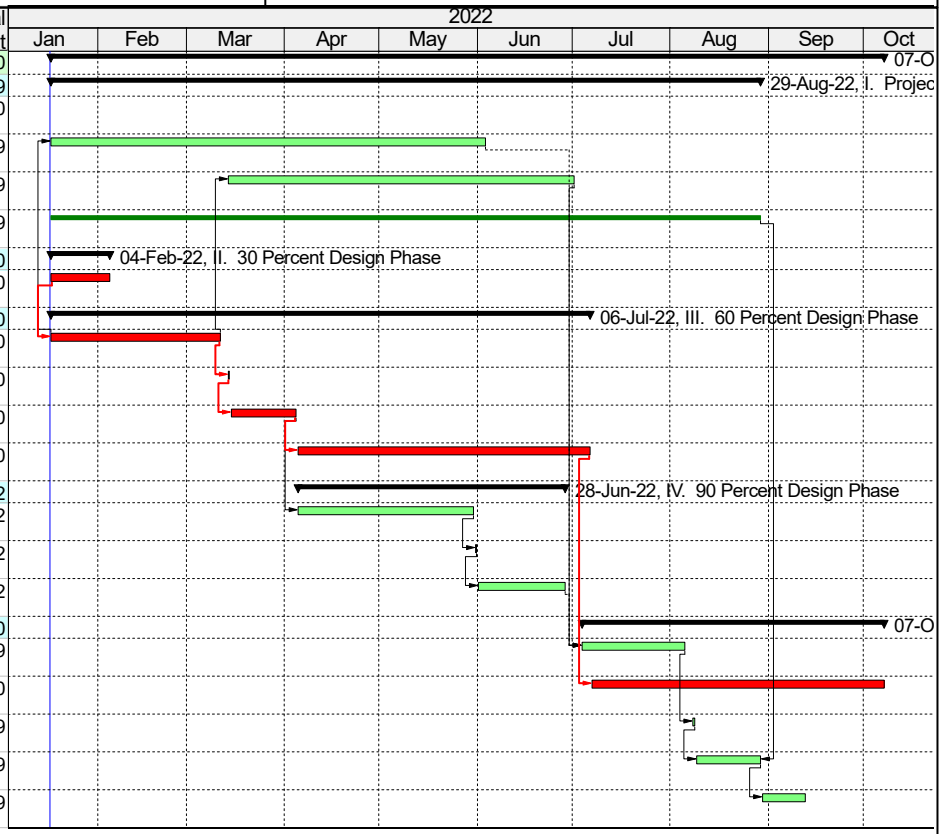
Attached Behind This Page

CoRR CR 112
From: 300' EAST OF CR 117 to CR 110

Exhibit C - Work Schedule

HDR Engineering, Inc.
22-Dec-21 16:05

Activity ID	Activity Name	Duration	Start	Finish	Total Float
CR 112 EAST Exhibit C - PS&E Design Schedule		190	17-Jan-22	07-Oct-22	0
I. Project management		161	17-Jan-22	29-Aug-22	19
PM1000	CR 112 Notice to Proceed PS&E	0	17-Jan-22		0
PM1010	Utility Coordination	100	17-Jan-22	03-Jun-22	39
PM1020	Right of Way Acquisition	80	14-Mar-22	01-Jul-22	19
PM1030	Project Management, Submittal Prep, QC, Coordination	161	17-Jan-22	29-Aug-22	19
II. 30 Percent Design Phase		15	17-Jan-22	04-Feb-22	0
DES1010	Review 30% Design with CoRR & Address Comments	15	17-Jan-22	04-Feb-22	0
III. 60 Percent Design Phase		123	17-Jan-22	06-Jul-22	0
DES1020	60% Plans	40	17-Jan-22	11-Mar-22	0
DES1030	60% Submittal	1	14-Mar-22	14-Mar-22	0
DES1040	60% City of RR Review	15	15-Mar-22	04-Apr-22	0
DES1045	FEMA Review - 90% H&H (Allow 90 Days)	67	05-Apr-22	06-Jul-22	0
IV. 90 Percent Design Phase		61	05-Apr-22	28-Jun-22	22
DES1050	90% Plans	40	05-Apr-22	30-May-22	22
DES1060	90% Submittal	1	31-May-22	31-May-22	22
DES1070	90% City of RR Review	20	01-Jun-22	28-Jun-22	22
V. 100 Percent Design Phase		70	04-Jul-22	07-Oct-22	0
DES1080	100% PS&E Package	25	04-Jul-22	05-Aug-22	19
DES1085	FEMA Address Comments-Final Review (90 Days)	67	07-Jul-22	07-Oct-22	0
DES1090	100% Submittal	1	08-Aug-22	08-Aug-22	19
DES1100	100% City of RR Review	15	09-Aug-22	29-Aug-22	19
DES1110	Final Comments, Sign & Seal Plans and Bid Docs	10	30-Aug-22	12-Sep-22	19



Remaining Level of Effort
Summary
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work

TASK filter: All Activities
CR 112 EAST Exhibit C - PSE Design Schedule
Classic WBS Layout-CR112-pfulton

ADDENDUM TO EXHIBIT D
Fee Schedule

Attached Behind This Page

EXHIBIT D
Project: CR 112 from CR 117 to CR 110 **SUPPLEMENTAL NO. 1**
Fee Schedule - Lump Sum
Firm Provider: HDR Engineering, Inc.

	Work Task	Hours for the Classifications										TOTAL HOURS	Total Amount
		Sr. Project Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer in Training	Sr. Design Technician	CADD Technician	Admin / Clerical	Sr Structural Engineer	Structural Engineer		
TASK I	**Project Management**												
	Coordination with City	60	12									72	$18,120.00
	Invoicing, Progress Reporting, and Schedule Updates	12							18			30	$4,224.00
	Subconsultant Coordination, Deliverables Review	24	24									48	$11,376.00
	Coordination with RPS (tie-in at CR 117)	12	8									20	$4,828.00
	QA/QC	12							10			22	$3,728.00
	SUBTOTAL PROJECT MANAGEMENT	**120**	**44**	**0**	**0**	**0**	**0**	**0**	**28**	**0**	**0**	**192**	**$42,276.00**
TASK II	**Roadway Design**												
	Title Sheet							2				2	$194.00
	Index of Sheets					4		2				6	$634.00
	Typical Sections		2			8		8				18	$2,086.00
	Project Layout					8		8				16	$1,656.00
	Horizontal Alignment Data Sheets					4		4				8	$828.00
	Roadway Plan & Profile Sheets		5	16		16	40	36				113	$13,767.00
	Intersection Layouts - Cross Streets		5	16		16	40	36				113	$13,767.00
	Driveway Layouts		2			16		16				34	$3,742.00
	Removal Layouts			4		16		16				36	$3,972.00
	Pedestrian and Bicycle Facilities			4		16		16				36	$3,972.00
	Roadway Cross Sections		4	4	80							88	$12,640.00
	Miscellaneous Roadway Detail Sheets			4		16		16				36	$3,972.00
	Quantity Summary Sheets			4		16		16				36	$3,972.00
	Standards Selection							4				4	$388.00
	SUBTOTAL ROADWAY DESIGN	**0**	**18**	**52**	**80**	**136**	**80**	**180**	**0**	**0**	**0**	**546**	**$65,590.00**
TASK III	**Update Drainage Design**												
	Hydrology												
	Modify Runoff calculations for Design Storms		1		4							5	$771.00
	Develop Internal Areas for Ditches		1		4							5	$771.00
	Storm Drains												
	Coordinate Design with Utilities, Traffic, and Stm Swr		1		4		4					9	$1,251.00
	Analyze Outfall Impacts		1		4		4					9	$1,251.00
	Determine trench protection and special shoring		1		4		4					9	$1,251.00
	Cross-Drainage Structures												
	Design and analyze Culverts (4 Structures)		4		4		4					12	$1,896.00
	Determine Culvert TCP Phasing		4		4		4					12	$1,896.00
	Design Inlet and Outlet Erosion Protection		4		4		4					12	$1,896.00

EXHIBIT D
Project: CR 112 from CR 117 to CR 110 **SUPPLEMENTAL NO. 1**
Fee Schedule - Lump Sum
Firm Provider: HDR Engineering, Inc.

	Work Task	Hours for the Classifications										TOTAL HOURS	Total Amount
		Sr. Project Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer in Training	Sr. Design Technician	CADD Technician	Admin / Clerical	Sr Structural Engineer	Structural Engineer		
	Plan Sheets for Drainage Design												
	Hydrologic Data Sheets		1	4	10		10	4				29	$3,853.00
	Hydraulic Data Sheets		1	4	10		10	4				29	$3,853.00
	Two CLOMRs: (Fees Paid by CORR)												
	Perpare FEMA Submittal at 90% Level for First Review		20		60		30					110	$16,240.00
	Address Comments & Prepare FEMA Submittal at 100%		20		60		30					110	$16,240.00
	Storm Drain Plan & Profile		1	10	20		20	20				71	$8,985.00
	Misc Drainage Detail Sheets		1	4	4		4	4				17	$2,299.00
	Scour Calculations and Sheets			10			10					20	$2,850.00
	Standards Selection				2			2				4	$472.00
	Trench Protection and Special Shoring Details		1	4	4		4	4				17	$2,299.00
	Update Drainage Report at 90% and 100%		4	20								24	$4,160.00
	SUBTOTAL DRAINAGE	**0**	**66**	**56**	**202**	**0**	**142**	**38**	**0**	**0**	**0**	**504**	**$72,234.00**
TASK IV	**Signing, Pavement Markings, D & OM (Permanent)**												
	Small Signing												
	Small Signing Layouts		1	1		16		16				34	$3,692.00
	Small Sign Details (Street Name Signs)		1	1		10	10	10				32	$3,650.00
	Quantity Summary Sheets		1	1		5		5				12	$1,415.00
	Select Standards							2				2	$194.00
	Pavement Markings												
	Pavement Marking Layouts		1	1		16		16				34	$3,692.00
	Quantity Summary Sheets		1	1		10		8				20	$2,256.00
	Select Standards							2				2	$194.00
	SUBTOTAL SIGNING, PAV'T MRK, D&OM	**0**	**5**	**5**	**0**	**57**	**10**	**59**	**0**	**0**	**0**	**136**	**$15,093.00**
TASK V	**Traffic Control Plan**												
	TCP Overall Phasing Plan (3 Phases)			4		8		12				24	$2,704.00
	TCP Narrative & Notes			5		8		16				29	$3,257.00
	TCP Typical Sections			8		16		16				40	$4,632.00
	TCP Phasing Layouts			10		40	50	40				140	$15,930.00
	TCP Culvert Phasing Layouts			4		4	8	4				20	$2,448.00
	Quantity Summary Sheets					2	2	2				6	$654.00
	Standards Selection							2				2	$194.00
	SUBTOTAL TRAFFIC CONTROL PLAN	**0**	**0**	**31**	**0**	**78**	**60**	**92**	**0**	**0**	**0**	**261**	**$29,819.00**
TASK VI	**Illumination**												
	Illumination Layouts		2				40					42	$5,230.00
	Photometric Analysis		6				60					66	$8,490.00
	Circuit Diagrams		4				40					44	$5,660.00
	Electrical Details		4				24					28	$3,740.00
	Electric Service Coordination		4				4					8	$1,340.00
	Quantity Summary Sheets		4				8					12	$1,820.00
	Standards Selection						2					2	$240.00
	SUBTOTAL ILLUMINATION	**0**	**24**	**0**	**0**	**0**	**178**	**0**	**0**	**0**	**0**	**202**	**$26,520.00**

EXHIBIT D
Project: CR 112 from CR 117 to CR 110 **SUPPLEMENTAL NO. 1**
Fee Schedule - Lump Sum
Firm Provider: HDR Engineering, Inc.

	Work Task	Hours for the Classifications										TOTAL HOURS	Total Amount
		Sr. Project Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer in Training	Sr. Design Technician	CADD Technician	Admin / Clerical	Sr Structural Engineer	Structural Engineer		
TASK VII	**Stormwater Pollution Prevention Plans (SW3P)**												
	SW3P Narrative Sheet					4						4	$440.00
	Prepare SW3P Plans, Erosion Control					40		60				100	$10,220.00
	Standards Selection							2				2	$194.00
	SUBTOTAL SW3P	**0**	**0**	**0**	**0**	**44**	**0**	**62**	**0**	**0**	**0**	**106**	**$10,854.00**
TASK VIII	**Bridge Design EB and WB CR 112 at McNutt Creek Trib 1 2 Bridges at 3 Spans Each**												
	Bridge Layouts, Bearing Seats, Quantities Development	8					30			20	40	98	$18,232.00
	Design/Detail Abutments						50			10	40	100	$15,840.00
	Design/Detail Bents						30			10	30	70	$11,660.00
	Bore Log Sheets/Drill Shaft Calculations						20			10	20	50	$8,680.00
	Framing Plan Details						20			10	20	50	$8,680.00
	Prestressed Girder Unit Calculations/Details						40			10	30	80	$12,860.00
	IGND						8			10	20	38	$7,240.00
	Standards Modifications						8			4	8	20	$3,472.00
	QC Structural Deliverables-60%, 90%, Final	8								40		48	$12,952.00
	SUBTOTAL BRIDGE DESIGN	**16**	**0**	**0**	**0**	**0**	**206**	**0**	**0**	**124**	**208**	**554**	**$99,616.00**
TASK IX	**PS&E Preparation**												
	General Notes (60%, 90%, 100% Submittals)	8										8	$2,072.00
	Specifications (60%, 90%, 100% Submittals)	8										8	$2,072.00
	Plans and Estimates (60%, 90%, 100% Submittals)	8	8	10	20	40	40					126	$17,422.00
	Contract Time Determination (Construction Schedule)	8										8	$2,072.00
	Constructability Review at 90%	4										4	$1,036.00
	QA/QC Reviews (All Submittals)	12	32									44	$9,988.00
	SUBTOTAL PS&E PREPARATION	**48**	**40**	**10**	**20**	**40**	**40**	**0**	**0**	**0**	**0**	**198**	**$34,662.00**
TASK X	**Utility Coordination**												
	Update Existing Utility Exhibits		2	4		4		4				14	$1,918.00
	Update Utility Conflict (Tracking) List		4	8		8		8				28	$3,836.00
	Utility Conflict Identification and Resolution		4	8		8		8				28	$3,836.00
	Site Visit and Attend Utility Workshop		2	4		4		4				14	$1,918.00
	Prepare and Attend Utility Meetings with Utility Owners		4	8		8		8				28	$3,836.00
	Prepare and Attend Utility Coordination Meetings		4	8		8		8				28	$3,836.00
	Review Utility's Proposed Adjustment, Estimates, Schedules and Evaluate Alternatives		4	8		8		8				28	$3,836.00
	Prepare Proposed Utility Layouts		4	8		8		8				28	$3,836.00
	SUBTOTAL UTILITY COORDINATION	**0**	**28**	**56**	**0**	**56**	**0**	**56**	**0**	**0**	**0**	**196**	**$26,852.00**
TASK XI	**Bid Phase Services**												
	Prepare Project Manual (Bid Documents)	4		8								12	$2,356.00
	Prepare for and Attend Pre-Bid Meeting (1)	4		8								12	$2,356.00
	Address Contractor Questions	4		8								12	$2,356.00
	Prepare Addendum (up to 2)	4		8								12	$2,356.00
	Attend Bid Opening (1)	2										2	$518.00
	Prepare Bid Tabulation and Award Recommendation	1		4								5	$919.00
	SUBTOTAL BID PHASE SVCS	**19**	**0**	**36**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**55**	**$10,861.00**

EXHIBIT D
Project: CR 112 from CR 117 to CR 110 **SUPPLEMENTAL NO. 1**
Fee Schedule - Lump Sum
Firm Provider: HDR Engineering, Inc.

	Work Task	Hours for the Classifications										TOTAL HOURS	Total Amount
		Sr. Project Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer in Training	Sr. Design Technician	CADD Technician	Admin / Clerical	Sr Structural Engineer	Structural Engineer		
TASK XII	**Construction Phase Services**												
	Pre-Construction Meeting (1)	2		4								6	$1,178.00
	Review Construction Submittals (Up to 20)	5		20								25	$4,595.00
	Monthly Construction Meetings (Up to 12)	12		24								36	$7,068.00
	Site Visits (Up to 6)	6		12								18	$3,534.00
	Requests for Information (RFIs) (Up to 15)	8		15		20						43	$6,747.00
	Change Orders (Up to 3)	6		12		10						28	$4,634.00
	Final Walk-Through / Punch List	2		8								10	$1,838.00
	As-Built Plans and GIS Data Files	2		8		10	10	20				50	$6,078.00
	FEMA LOMR Submittal (Fees Paid by CORR)	2	10	20	60							92	$14,308.00
	Project Management During Construction Phase	80										80	$20,720.00
	SUBTOTAL CONSTRUCTION PHASE SVCS	**125**	**10**	**123**	**60**	**40**	**10**	**20**	**0**	**0**	**0**	**388**	**$70,700.00**
	HOURS - TOTALS FOR SUPPLEMENTAL	**328**	**235**	**369**	**362**	**451**	**726**	**507**	**28**	**124**	**208**	**3338**	
	RATE	**$259.00**	**$215.00**	**$165.00**	**$139.00**	**$110.00**	**$120.00**	**$97.00**	**$62.00**	**$272.00**	**$178.00**		
	TOTAL HDR LABOR	**$ 84,952.00**	**$ 50,525.00**	**$ 60,885.00**	**$ 50,318.00**	**$ 49,610.00**	**$ 87,120.00**	**$ 49,179.00**	**$ 1,736.00**	**$ 33,728.00**	**$ 37,024.00**		**$ 505,077.00**

	SUMMARY		
TASK I	**Project Management**	**192**	**$ 42,276.00**
TASK II	**Roadway Design**	**546**	**$ 65,590.00**
TASK III	**Update Drainage Design**	**504**	**$ 72,234.00**
TASK IV	**Signing, Pavement Markings, D & OM (Permanent)**	**136**	**$ 15,093.00**
TASK V	**Traffic Control Plan**	**261**	**$ 29,819.00**
TASK VI	**Illumination**	**202**	**$ 26,520.00**
TASK VII	**Stormwater Pollution Prevention Plans (SW3P)**	**106**	**$ 10,854.00**
TASK VIII	**Bridge Design** **EB and WB CR 112 at McNutt Creek Trib 1** **2 Bridges at 3 Spans Each**	**554**	**$ 99,616.00**
TASK IX	**PS&E Preparation**	**198**	**$ 34,662.00**
TASK X	**Utility Coordination**	**196**	**$ 26,852.00**
TASK XI	**Bid Phase Services**	**55**	**$ 10,861.00**
TASK XII	**Construction Phase Services**	**388**	**$ 70,700.00**

EXHIBIT D
Project: CR 112 from CR 117 to CR 110 **SUPPLEMENTAL NO. 1**
Fee Schedule - Lump Sum
Firm Provider: HDR Engineering, Inc.

	Work Task	Hours for the Classifications										TOTAL HOURS	Total Amount
		Sr. Project Manager	Senior Engineer	Project Engineer	Design Engineer	Engineer in Training	Sr. Design Technician	CADD Technician	Admin / Clerical	Sr Structural Engineer	Structural Engineer		
SUBCONSULTANTS													
	SUE (See Attached Proposal - The Rios Group)												**$ 42,372.44**
	Right-of-Way Acquisition Survey (See Attached Proposal - Inland Geodetics												**$ 77,633.84**
	Geotechnical (Bridge Borings) (See Attached Proposal - RKCI)												**$ 15,888.61**

SUBTOTAL LABOR AND SUBCONSULTANTS	**$ 640,971.89**

OTHER DIRECT EXPENSES	**# OF UNITS**	**COST/UNIT**		
Mileage (@ Current IRS Rate/mile)	1,000	$ 0.58		**$ 580.00**
Courier Services (Deliveries)	3	$ 25.00		**$ 75.00**
FEMA Review Fees (To Be Paid By City of Round Rock)	-	$ -		**$ -**
SUBTOTAL OTHER DIRECT EXPENSES				**$ 655.00**

SUMMARY	
TOTAL HDR LABOR AND SUBCONSULTANTS	**$ 640,971.89**
TOTAL OTHER DIRECT EXPENSES	**$ 655.00**
GRAND TOTAL SUPPLEMENTAL NO. 1	**$ 641,626.89**

EXHIBIT D
HDR ENGINEERING, INC.
PROJECT NAME: CR 112 FROM CR 117 TO CR 110
SUPPLEMENTAL NO. 1

Cost Component, Hours	Total Hours
Sr. Project Manager	328
Senior Engineer	235
Project Engineer	369
Design Engineer	362
Engineer-In-Training	451
Sr. Design Technician	726
CADD Technician	507
Admin/Clerical	28
Sr. Structural Engineer	124
Structural Engineer	208
TOTAL HOURS	**3,338**

Cost Component, Dollars	Labor Rate	Billing Rate	Totals
Sr. Project Manager	$ 85.06	$ 259.00	$84,952.00
Senior Engineer	$ 67.21	$ 215.00	$50,525.00
Project Engineer	$ 53.57	$ 165.00	$60,885.00
Design Engineer	$ 43.83	$ 139.00	$50,318.00
Engineer-In-Training	$ 35.71	$ 110.00	$49,610.00
Sr. Design Technician	$ 38.31	$ 120.00	$87,120.00
CADD Technician	$ 30.84	$ 97.00	$49,179.00
Admin/Clerical	$ 20.13	$ 62.00	$1,736.00
Sr. Structural Engineer	$ 86.35	$ 272.00	$33,728.00
Structural Engineer	$ 56.51	$ 178.00	$37,024.00
LABOR DOLLARS			**$ 505,077.00**

Cost Component, Direct Expenses	Units	Cost/Unit	Totals
Mileage (Current IRS Rate/mile)	1,000	$ 0.58	$580.00
Courier Services (Deliveries)	3	$ 25.00	$75.00
SUBTOTAL OTHER DIRECT EXPENSES			**$655.00**

PROJECT FEE SUMMARY-SUPPLEMENTAL NO. 1		
HDR Direct Labor Costs		$ 163,986.04
HDR Indirect Costs	175%	$ 286,975.57
HDR Direct Expenses		$ 655.00
HDR Profit @12%	12%	$ 54,115.39
Subconsultants		
The Rios Group	*SUE*	$ 42,372.44
Inland Geodetics	*Survey*	$ 77,633.84
RKCI	*Geotech*	$ 15,888.61
TOTAL FEE-SUPPLEMENTAL NO. 1		**$ 641,626.89**

CITY OF ROUND ROCK

CR 112 EAST SEGMENT FROM CR 117 TO CR 110

LOCATION MAP