## SUPPLEMENTAL CONTRACT NO. 1 TO CONTRACT FOR ENGINEERING SERVICES

FIRM: Aguirre \& Fields, LP ("Engineer")<br>ADDRESS: 12708 Riata Vista Circle, Suite A-109, Austin, TX 78727<br>PROJECT: Old Settlers Extension

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 Aguirre \& Fields, LP, hereinafter called the "Engineer".

WHEREAS, the City and Engineer executed a Contract for Engineering Services, hereinafter called the "Contract", on the 13th day of February, 2020 for the Old Settlers Extension Project in the amount of $\$ 532,331.53$; 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 $\$ 934,919.70$ to a total of $\$ 1,467,251.23$;

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 $\$ 934,919.70$ the lump sum amount payable under the Contract for a total of $\$ 1,467,251.23$, as shown by the attached Addendum to Exhibit D.

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

## AGUIRRE \& FIELDS, LP

AGUIRRE, LLC - GENERAL PARTNER
By: $\frac{\text { Phonew M N Netel }}{\text { Christine R. Crosby. Vice-President }}$

October1.2021
Date

## CITY OF ROUND ROCK

By: Craig Morgan, Mayor

## APPROVED AS TO FORM:

Stephan L. Sheets, City Attorney

Date

## ADDENDUM TO EXHIBIT A

City Services
Attached Behind This Page

# ADDENDUM TO EXHIBIT A - SWA 01 

CITY OF ROUND ROCK

## OLD SETTLERS EXTENSION <br> FROM N RED BUD LN TO CR 110 <br> PS\&E/CONSTRUCTION SERVICES

## SERVICES TO BE PROVIDED BY THE CITY

The City of Round Rock will provide the following items/information for the Engineer under this agreement:

## 1) ROUTE \& DESIGN STUDIES (FC 110)

i) Provide available plans and/or data for adjacent projects, including the adjacent N Red Bud Ln improvements and CR 110 South schematic.
ii) Attend Design Concept Conference with The Engineer to discuss revisions to the design prior to development of the $60 \%$ plans.
iii) Provide review/approval of pavement design

## 2) RIGHT OF WAY DATA (FC 130)

i) Assist with Rights-of-Entry (ROE) for all adjacent properties if initial request is denied.
ii) Conduct all ROW appraisals and acquisitions.
iii) Coordination for any temporary construction easements.
iv) Coordination for any drainage easements.
v) Assist with coordinating utility adjustments and proposed relocation plans by utility owners.
3) ROADWAY DESIGN CONTROLS (FC 160)
i) Assist with the coordination and procurement of design files for adjacent projects, including the adjacent N Red Bud Ln improvements and CR 110 South schematic.
ii) Provide a PS\&E checklist and preferred plan set go-by (if applicable) for use by the Engineer.
iii) Provide example Estimates and hard copy documentation for the Engineer's use in preparing the Estimate, General Notes and Specifications.
iv) Provide direction for the creation of Design Cross Sections.

## 4) PROJECT MANAGEMENT \& ADMINISTRATION (FC 164)

i) Provide timeline/schedule confirmation for milestone submittals.
ii) Provide the Engineer with timely reviews/decisions to maintain the project schedule.
iii) Provide agreements with property owners for all necessary off-site improvements. Consultant to develop utility agreements with utility provider's and City oversight.
iv) Meet with the Engineer on an as-needed basis.
v) Provide payment of all associated application and review fees required for jurisdictional approval of the project.

# ADDENDUM TO EXHIBIT B - SWA 01 ENGINEERING SERVICES 

## OLD SETTLERS EXTENSION <br> FROM N RED BUD LN TO CR 110 <br> PS\&E/CONSTRUCTION SERVICES

This contract consists of providing engineering services required for the preparation of plans, specifications and estimates (PS\&E) and related supporting documents for the construction of Old Settlers Blvd in Round Rock, TX on new location. The project limits will begin at $N$ Red Bud Ln and end at CR 110, with transitions as necessary beyond those intersections to accommodate the traffic control plan or other miscellaneous work. Old Settlers Blvd will consist of an average 110 -foot right-of-way, 68 feet of pavement, twin bridge structures, retaining walls, corridor fencing, curb and gutter, and a sidewalk/shared use path on each side of the road. These services include preparing roadway design, hydrologic and hydraulic design, structural design, signal design, waterline design, geotechnical investigation, supplemental survey, utility coordination, and attendance at the city's monthly utility coordination meeting as necessary.

## FC 110-ROUTE \& DESIGN STUDIES

## 1. DATA COLLECTION \& FIELD RECONNAISSANCE

a. Aguirre \& Fields, LP ("the Engineer") shall collect, review, and evaluate the data described below. The City of Round Rock (City) will be notified in writing whenever the Engineer finds disagreement with the information or documents. The Engineer shall:
i. Review plans and/or data from the City, including the adjacent $N$ Red Bud Ln improvements and CR 110 South schematic.
ii. Review supplemental survey and topographic file.
iii. Conduct field reconnaissance and collect data including a photographic record of any changes since the $30 \%$ schematic submittal.
b. The Engineer shall collect data to support the finalization of the traffic report and signal design:
i. Obtain Weekday 12-Hour Turning Movement Counts at the following intersections CR 110 at Porano Circle.
ii. Obtain 24 -hour tube counts on one Weekday on CR 110 south of Porano Circle.
iii. Obtain Traffic Impact Analysis (TIAs) for Siena MUD Subdivision and other new approved developments in the area.
iv. Conduct field reconnaissance to observe existing traffic pattern and existing conditions for signal and illumination design.

## 2. DESIGN CRITERIA

a. The Engineer shall schedule and attend one Design Concept Conference with the City once the Public Involvement and Outreach Process (Open House \#2) has been completed, and public comments and attendance are documented. The purpose of this meeting will be to discuss any necessary revisions or updates to the design prior to developing the $60 \%$ plans. The Engineer shall create and distribute meeting notes for concurrence by the City.
b. The Engineer shall update the design summary report (DSR) and project notebook to document design decisions as necessary.
c. Deliverables:
i. Design Concept Conference Notes for approval
ii. Design Summary Report (DSR)

## 3. GEOTECHNICAL INVESTIGATION \& FIELD WORK

a. The Engineer shall determine boring locations for retaining wall structures.
b. The Engineer shall perform borings and obtain soils samples. Borings are estimated to consist of the following:
i. 2 retaining wall borings to a depth of 20 feet within the at-grade or fill areas at 200 -foot maximum intervals. The boring depths may be reduced when encountering rock and shall have a 5 -foot minimum penetration into rock.
ii. Borings shall occur within the limits of the future retaining walls.
c. The Engineer shall obtain two Scour analysis hand samples.
d. The Engineer shall perform laboratory testing to classify soil strata, evaluate plasticity and shrink/swell potential and evaluate the compressive strength. Typical Tests include moisture contents, Atterberg Limits, unconfined compressive strengths, sieve analyses, sulfate content tests, and grain size distribution curves with DSO value.
e. The Engineer shall prepare/update a signed, sealed, and dated Geotechnical Report to include the summary of field investigations, laboratory testing results and recommended retaining wall design.
f. Deliverables:
i. Signed/Sealed Geotechnical Report
ii. Boring Logs

## 4. TRAFFIC ENGINEERING \& OPERATIONS

a. The Engineer will update signal warrant analysis at the intersection of Old Settlers Blvd and CR 110. The Engineer shall:
i. Estimate projected turning movement volumes at the future intersection of Old Settlers Blvd Extension and CR 110 using new turning movement counts at CR 110 and Porano Circle.
ii. Conduct signal warrant analysis at the future intersection of CR 110 and proposed Old Settlers Blvd Extension following methodology found in Chapter 4 of the Texas Manual on Uniform Traffic Control Devices (TMUTCD). Warrant 3 (Peak-Hour Volume) will be analyzed using projected turning movement counts. TMUTCD Warrant 2 (Four-Hour Volume) and Warrant 8 (Daily Volume) will be analyzed using 12 -hour roadway segment counts collected in Task II and traffic volume projections.
iii. Summarize findings of the traffic study in a technical memorandum.
b. Deliverables:
i. Updated Signal Warrant Study Technical memorandum

## FC 120 - PUBLIC INVOLVEMENT

1. RIGHT OF WAY MAP
a. The Engineer's subconsultant will provide public involvement during this phase to keep stakeholders updated on design progress, answer questions, and support the team with stakeholder communications. CD\&P will schedule and facilitate meetings with affected property owners as circumstances require and document meeting outcomes. CD\&P will provide updates to project materials and content for updates to the City of Round Rock project webpage. CD\&P will update the project database with stakeholder contact information and communications.
b. Deliverables:
i. Stakeholder database
ii. Coordinate, attend, and document up to 8 stakeholder meetings
iii. Respond to stakeholder inquiries and provide project email updates
iv. Update project materials (fact sheet, maps and FAQs)
v. Provide content updates for City of Round Rock project webpage

## FC 130 - RIGHT OF WAY DATA

1. RIGHT OF WAY MAP
a. The Engineer will finalize proposed Right of Way (ROW) and easements. The Engineer shall:
i. Review Survey ROW documents.
ii. Review SUE data and utility conflicts.
iii. Refine the 3D roadway model to establish construction limits for proposed easements.
iv. Update ROW and easement linework in CADD for the PS\&E.
b. The Engineer's Surveyor shall prepare proposed ROW documents:
i. Preparation of Right of Way (ROW) Document (Meets \& Bounds).
c. The Engineer's Surveyor shall set ROW Monumentation:
i. The Engineer's Surveyor will set $1 / 2$-inch iron rods with caps at PCs, PTs, angle points and at no greater than 1,000 foot intervals along tangents on the proposed ROW line. $1 / 2$-inch iron rods with caps will be set at property line intersections with the new right-of-way line.
d. Deliverables:
i. One legal description for each parcel (signed and sealed). Up to five (6) exhibits.
ii. One individual survey plat on $81 / 2^{\prime \prime} \times 11^{\prime \prime}$ for each parcel (signed and sealed).
iii. One set of area computation sheets for legal descriptions and plats and ROW maps for all parcels.
iv. Digital files will be uploaded onto ProjectWise for the ROW base file and reference files in MicroStation (.dgn) format.
2. SUBSURFACE UTILITY ENGINEERING (SUE)
a. The Engineer will provide Subsurface Utility Engineering (SUE) as described below:
i. The Engineer shall perform Quality Level-B and Quality Level-A SUE.
ii. As necessary: in accordance with CI/ASCE 38-02 'Standard Guideline for the collection and depiction of existing subsurface data.' The Quality Level-B investigation will encompass the portion of the project area east of McNutt Creek to the eastern limit of the project at CR 110. The Quality Level-A investigation assumes up to 15 test holes to be used as necessary and invoiced to the City for each hole conducted. This standard defines the following quality levels:
3. Quality Level-B: Information obtained through the application of appropriate surface geophysical methods to determine the existence and approximate horizontal position of subsurface utilities. Quality Level-B data should be reproducible by surface geophysics at any point of their depiction. This information is surveyed to applicable tolerances defined by the project and reduced onto plan documents.
4. Quality Level-A: Precise horizontal and vertical location of utilities obtained by the actual exposure (or verification of previously exposed and surveyed utilities) and
subsequent measurement of subsurface utilities, usually at a specific point.
Minimally intrusive excavation equipment is typically used to minimize the potential for utility damage. A precise horizontal and vertical location, as well as other utility attributes, is shown on plan documents.

## 3. UTILITY COORDINATION (UC)

a. The Engineer shall provide Utility Coordination for the project as described below:
i. The Engineer shall maintain a Utility Contact List, Utility Conflict Matrix (UCM) Spreadsheet and Conflict Layout Exhibit.
ii. The Engineer shall maintain a 2D Conflict Layout Exhibit in the MicroStation/GeoPak SS10 version used by the City of Round Rock. The exhibit shall include existing utilities which are to remain in place or be abandoned, and adjusted utilities. This layout will be utilized to monitor the necessity to evaluate alternatives. Facilities in conflict with the proposed project that are to be relocated. Facilities to be abandoned in place. Facilities to remain in service and in place.
iii. The Engineer shall facilitate utility conflict identification and review of resolutions for utilities conflicts to be adjusted, relocated, or accommodated in the public right of way.
iv. The Engineer shall review the utility's proposed adjustments and coordinate compliance with local, state, and federal utility accommodation rules.
$v$. The Engineer shall prepare for and attend up to twelve (12) coordination meetings with individual utility owners including transmission line power provider and two (2) coordination meeting with the City.
vi. The Engineer shall coordinate distribution of NOPC letters (Notice of Proposed Construction) and NORA (Notice of Required Accommodation) letters.
vii. The Engineer shall coordinate Utility Certifications and/or Special Provisions for any utility adjustments not fully completed by the time of the project letting phase.
viii. Deliverables:

1. Quality Level-B 2D Utility Designation will be 11-in. x 17-in. SUE plan sheets depicting the findings of the investigation.
2. Quality Level-A Test Hole excavations will be an $8.5-\mathrm{in} . \times 11-\mathrm{in}$. Test Hole Data Form for each Test Hole performed indicating depth, size, location, and other notable characteristics of the utility. Electronic files will be provided in MicroStation format along with PDFs and photos.
3. Utility Contact List
4. Utility Conflict Matrix Spreadsheet
5. Utility Conflict Layout Exhibits
6. Meeting Minutes (delivered electronically)
7. Utility Certificates
8. Electronic CAD files

## FC 131 - UTILITIES

1. UTILITIES
a. Halff shall design approximately 4,030 linear feet of new waterline to be constructed within the ROW of the Old Settlers extension. The proposed waterline will connect to the CORR's existing system at two points, at the intersection of Old Settlers Blvd and Red Bud Ln and at an existing stub out from Pauling Loop, and terminate at CR 110. The connection to the water system off of Pauling

Loop will require a dedicated utility easement on CORR property.
b. Diameter of proposed main will be selected by CORR based on digital water modeling.
c. Horizontal alignment will account for extension to the parcels south of Old Settlers ROW. If required, a minimum of two roadway crossings will be included in the design to allow for connection to the water system by the south parcels.
d. Design shall conform to the CORR's utility criteria and standards.
e. Plan Preparation
i. Project Layout will show limits of waterline installation (one sheet at $1^{\prime \prime}=\mathbf{2 0 0}$ )
ii. Utility Notes applicable to this project provided by the City of Round Rock.
iii. Project Specific Notes
iv. Utility Plan \& Profile ( $1^{\prime \prime}=40^{\prime}$ horiz)
v. City of Round Rock Standard Utility Details
vi. Special details, as necessary
f. Easement Documentation
i. Halff shall prepare an easement document containing a metes and bounds description for a waterline easement that will encompass the proposed waterline from the edge of the Sienna development (Pauling Loop) to the new Old Settlers ROW.

## FC 150-SURVEY

1. SURVEY
a. The Engineer's Surveyor shall provide Supplemental Design Surveys as described below
i. The Surveyor shall collect supplemental data for a typical design and topographic survey. Process data for DTM \& Triangle Irregular Network (TIN) (2D \& 3D), including but not limited to chains and points; planimetric maps (2D) \& topographic maps, cross sections and/or drainage analysis and other needs as detailed below.
ii. Typical DTM \& topographic data includes but is not limited to: natural ground (NG), roadway surfaces, edge of pavement (EP), centerline, grade breaks, striping, driveways and side streets (determine driveway/side street radii), curb, ditches, culverts, headwalls, drainage structures, channel(s), riprap, power poles, signs, delineators, luminaries, fences, manholes, sewer lines, telephone boxes, junctions, etc., water valves, fire hydrants, pipeline crossings, gas meters, gas valves, etc., and any other visible utility.
2. Driveway and street/county road data collect type of surface (asphalt, concrete, seal coat, gravel, dirt, etc.), with or without culvert, type of culvert pipe, size, length, with or without Safety End Treatment (SET) for a distance of 200' beyond the existing Old Settlers Blvd. ROW.
3. Cross road structures data (includes culverts and bridge class structures), collect type, size, end treatment, etc., and profile for crossroad structure.
4. Bore Hole locations
5. Identify and photograph features (signs, mail boxes, etc.).
6. Trees- all trees of $8^{\prime \prime}$ diameter or greater shall be located and tied in. Information needed is trunk size, tree type and limits of canopy (size).
7. Develop pavement centerline alignment of existing pavement(s).
8. Run existing cross sections as a back check for errors in data or processing
9. Utility locations- Behind curbs, tie visible utility locations, including ties to aboveground features, such as power poles, valves, and other utility features to the right-of-way line either found by our surveyors or located for us by utility companies
and/or other agencies. One-call will be notified prior to acquisition of survey. The Engineer shall not be liable for utilities not identified as part of the one-call at the time of survey. Note: does NOT include tying irrigation heads; irrigation heads are often below the grass and not readily visible/locatable.
10. The Texas Excavation Safety \$ystem, DIGTESS one call system (phone number 1-800-DIG-TESS) shall be notified for utility locations and prior to drilling, setting or driving anything including property corners or control monuments below $16^{\prime \prime}$ depth, as detailed by DIGTESS (http://www.digtess.org), which may impact or be impacted by the existence of any underground utility, whether visible or not. Note that some local or city utilities may not be a part of the DIGTESS system and may require separate notification.
11. Perform a bathymetric survey of McNutt Creek from face of dam to $\pm 200$ feet north and merge data with DTM. Note: this information is necessary for bridge scour analysis.
12. As built survey of McNutt Creek bridge crossing to include: Top of road, top of rail, bottom chord, abutments, and bent locations for using in LOMR application package.
b. Specifications \& Standards for the Work:
i. The Engineer's Surveyor shall perform all work in accordance with the contract and the provisions, standards, specifications, manuals (City of Round Rock Transportation Criteria Manual, ROW-Vol. I, Procedures Preliminary to Release, et al), methods, procedures, deliverables, deliverable format and any other information contained within or referenced to in the contract as previously agreed to by both parties.
c. Field Surveying Deliverables:
i. Data
13. Raw field data
14. Processed field data
15. Project digital pictures (delivered in .jpg format)
16. 3D \& 2D Topo (.dgn) processed files in MicroStation/GeoPak SS10, with all chains and points included on the $30 \%$ existing survey.
ii. Signed Right of Entry forms if ROE is acquired.
iii. ROW Products
17. .dgn of Proposed and Existing ROW
18. Reference Deeds, support documents, scanned and in .pdf format.
iv. Survey Control - Survey Control shall be furnished in two (2) forms-
19. The City's Control Sheet(s) format, which consists of:
a. A Control Layout index map, which contains an overall view of the project area with the locations of primary and secondary control identified and labeled.
b. A Horizontal and Vertical Control Sheet(s), which contains monument sketches of primary and secondary control points. Monument sketches shall tie monuments to a minimum of three existing features.
c. Survey Control Sheet(s) information shall include the NGS or other basis monument(s) name or identification number, Texas Coordinate System (TCS) zone information, Grid and Surface values in $X, Y, \& Z$ coordinates, the Combined Adjustment Factor or Surface Adjustment Factor, and project
station and offset.
d. Survey Control Sheet(s) shall be delivered as an $11^{\prime \prime} \times 17^{\prime \prime}$ sized sheet as a MicroStation dgn and as a PDF.
20. An individual $81 / 2^{\prime \prime} \times 11^{\prime \prime}$ Control Point Data Sheet for each primary control monument (delivered as original, interactive PDF file).
v. All delivered control documentation shall be signed with a date of signature and sealed by a Texas RPLS.
vi. Provide information on cross-sections used as a back check for errors in data or processing.
vii. Raw GPS files.
viii. For static GPS sessions, in RINEX format.
ix. For RTK GPS, furnish reports of network information.
$x$. ASClI file(s) of final position information.
xi. MicroStation/GeoPak SS10 file (.dgn) of all drawings.
21. Shall include within the drawing file: Company name, address, telephone number, Surveyor's name, date(s) of survey and survey datum information.
22. Shall follow the naming convention "MDF "_Logical Name.dgn
23. E.g. "MDF212104065_Topo.dgn"
xii. .gpk, .prj, .tin and .dat files that are compatible with MicroStation/GeoPak SS10 format.
xiii. Upload all files to ProjectWise in appropriate folder.
xiv. Preliminary Deliverables shall be delivered as scheduled, in full, to include all items as listed above.
xv. Final Deliverables shall be delivered as scheduled, in full, to include all items as listed above no later than 15 days after the return of corrected Preliminary deliverables from the City to the consultant.

## FC 160 - ROADWAY DESIGN CONTROLS

1. ROADWAY DESIGN
a. Horizontal Design - The Engineer shall refine the horizontal design for the Old Settlers Extension Project as described below:
i. Refine and extend alignments for Old Settlers Blvd and Porano Circle (after supplemental survey is obtained).
ii. Design ultimate configuration for the intersection at Old Settlers Blvd and CR 110.
iii. Create horizontal alignment for reconstruction of Porano Circle at CR 110 (after supplemental survey is obtained).
iv. Add driveway access to the City-owned parcel on the west side of McNutt Creek.
v. Update OpenRoads design files, gpk, and Microstation base/sheet files as necessary.
b. Vertical Design - The Engineer shall refine the vertical design for the Old Settlers Extension Project as described below:
i. Refine Old Settlers profile at creek and Siena MUD to minimize the need for proposed retaining walls.
ii. Create profile for Porano Circle at CR 110.
iii. Create profile for proposed driveway west of McNutt Creek.
iv. Create profile for proposed sidewalk that ties to existing sidewalk at the Siena Park.
v. Profile adjustments as necessary for storm sewer design.
vi. Update OpenRoads design files, gpk, and Microstation base/sheet files as necessary.

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c. Review/Incorporate design for adjacent projects - The Engineer shali review and incorporate the design files for adjacent projects (including N Red Bud Ln and CR 110 South improvements) as described below:
i. Organize and import design files into ProjectWise.
ii. Update horizontal/vertical/cross sectional design of Old Settlers Blvd as necessary.
iii. Update OpenRoads design files, gpk, and Microstation base/sheet files as necessary.
d. 3D OpenRoads Model - The Engineer shall refine the 3D OpenRoads Model as the project design progresses and will perform the following tasks:
i. Update 30 OpenRoads model to reflect roadway design changes (horizontal/vertical/cross sectional) as necessary. This also includes (but is not limited to) model revisions for the shared use path/sidewalk, retaining walls, site grading, cross culverts.
ii. Create 3D OpenRoads model using latest design files for the adjacent N Red Bud Ln project. This model will be used as future existing ground for the N Red Bud Ln intersection, where Old Settlers Blvd will tie into.
iii. Create 3D OpenRoads model for Porano Circle at CR 110 (after supplemental survey is obtained).
iv. Create proposed surface and .tin file.
e. Proposed Cross Sections - The Engineer shall produce proposed cross sections at 50-foot intervals to submit with the $60 \%$ Plans. The Engineer shall:
i. Obtain/calculate cut and fill quantities - existing and proposed cross sections at 50 foot intervals will be created to determine cut and fill quantities. OpenRoads will be used to calculate quantities.
ii. Cut cross sections using OpenRoads.
iii. Create cross section plan sheets (11×17). This includes creation of a project specific sheet border, cross section annotation, and sheet clean up.
iv. Design cross sections will be plotted on sheets and submitted separately.
f. Cross Section Updates - The Engineer shall produce updated cross sections to submit with the $95 \%$ and Final Plans.

## 2. PLAN SET DRAFTING

a. The Engineer shall produce $60 \%, 95 \%$ and Final plans for the Old Settlers Extension Project:
i. Title Sheet - will include project name and number; site location; project limits, design speed, signature blocks, and logos as directed by the City.
ii. Index of Sheets
iii. Project Layout ( $1^{\prime \prime}=200^{\prime}$ )
iv. Typical Sections

1. Proposed typical section and existing typical section at tie in point.
2. Sections will include proposed pavement width, travel lanes, pavement structure, sidewalk location and typical cross slope requirements.
3. Typical section will depict typical right of way width.
v. General Notes (provided by the City of Round Rock)
vi. Removal Layout ( $1^{\prime \prime}=50$ )
vii. Horizontal Alignment Data
viii. Roadway Plan \& Profile $\left(1^{\prime \prime}=50^{\prime}\right)$
ix. Intersection Layout ( $1^{\prime \prime}=20^{\prime}$ )
x. Proposed Grading $\left(1^{\prime \prime}=50\right)$
xi. Roadway, Sidewalk, \& Driveway Details
xii. Roadway Standards
b. The Engineer shall prepare/assemble $60 \%, 95 \%$ and Final plans, to be submitted in electronic and hard copy ( $11^{\prime \prime} \times 17^{\prime \prime}$ ) formats. This includes general CADD tasks related to the development of the Plans, Specifications, and Estimate, including supporting documentation.
i. File management for CADD, plan set, and supporting documents
ii. Create and maintain PSET, pen tbl, resource files
iii. Create base files (sheet border, clip shapes)
iv. Set up motif/master container files for plan sheets
v. Incorporate subconsultant sheets into plan set
vi. Compile and PDF plan set, supporting documentation, design calculations
vii. Print hard copies for submittal
viii. Sign/seal final plan set
c. Deliverables:
i. 60\% PS\&E Package
4. $60 \%$ Plan Set, Specifications, and Construction Cost Estimate
ii. 95\% PS\&E Package
5. $95 \%$ Plan Set, Specifications, and Construction Cost Estimate
iii. Final PS\&E Package
6. Final Signed/Sealed Plan Set, Specifications, and Construction Cost Estimate
7. All OpenRoads, GEOPAK, and Microstation project files (.dgn, .gpk, .tin)
iv. Deliverables will be submitted in both electronic and hard copy formats
8. $Q A / Q C$
a. The Engineer shall submit QA/QC documentation of $60 \%, 95 \%$ and Final plans for the Old Settlers Extension Project.

## FC 161 - DRAINAGE

1. DRAINAGE
a. Bridge Scour Analysis - The Engineer shall perform a scour analysis of the proposed bridge crossing and provide the scour envelopes for use in the plans. The Engineer will also update the drainage report.
i. Perform a scour evaluation for the proposed bridge structure over McNutt Creek for $60 \%$, $95 \%$ and final bridge plans.
ii. Scope assumes the Engineer will provide two channel bed sieve analysis
iii. Provide the potential scour depths, envelope, and recommended countermeasures, if needed.
iv. The scour analysis report will be prepared as a separate document and may be included in the Final Drainage Report as an appendix.
b. Final Drainage Report - The Engineer shall update the drainage analysis prepared during the schematic design phase.
i. Update Drainage Report to reflect final design plans
ii. Submit draft Drainage Report to City for review and approval
iii. Scope assumes one (1) Drainage Report meeting with the City Floodplain Administrator.
c. Conditional Letter of Map Revision (CLOMR) Submittal
i. Prepare CLOMR submittal package for McNutt Creek for the 10-year, 50-year, 100-year,

CONTRACT:

500-year, and Ultimate 100-year frequency storm events based on the Upper Brushy Creek preliminary FEMA models provided by the City. These models are considered to be the best available data at this time.
ii. Prepare effective, corrected effective, pre-project, and post project hydrology (if needed) and hydraulic models, and run cHECk-RAS for all HEC-RAS models.
iii. Prepare exhibits and tables showing floodplain tie-in points upstream and downstream of the proposed project.
iv. Update flood profiles, hydrology (if needed) and floodway data tables in the FIS as needed.
v. Prepare MT-2 FEMA forms for CLOMR submittal to City and FEMA.
vi. Environmental Assessment to be included with the CLOMR submittal.
vii. Final proposed plans to be included with the CLOMR submittal.
viii. Submit CLOMR to City Floodplain Administrator for review and approval. This scope assumes one (1) CLOMR meeting with the City Floodplain Administrator.
ix. Submit CLOMR to FEMA for review and approval. A FEMA review fee is required upon submittal to FEMA and will be submitted on the Engineer's invoice as a pass-through expense to be paid by the City.
x. Coordinate up to two (2) iterations with FEMA reviewers.
d. Letter of Map Revision (LOMR) Submittal
i. Prepare LOMR submittal package for McNutt Creek for the 10-year, 50-year, 100-year, 500year, and ultimate 100-year frequency storm events based on the Upper Brushy Creek preliminary FEMA models provided by the City. These models are considered to be the best available data at this time.
ii. Prepare effective, corrected effective, pre-project, and post project hydrology (if needed) and hydraulic models and run cHECk-RAS for all HEC-RAS models.
iii. Prepare exhibits and tables showing floodplain tie-in points upstream and downstream of the proposed project.
iv. Update flood profiles, hydrology (if needed) and floodway data tables in the FIS as needed.
v. Prepare MT-2 FEMA forms for LOMR submittal to City and FEMA.
vi. Final as-built plans signed and sealed by a licensed engineer to be included with the LOMR submittal.
vii. Submit LOMR to City Floodplain Administrator for review and approval. This scope assumes one (1) LOMR meeting with the City Floodplain Administrator.
viii. Submit LOMR to FEMA for review and approval. A FEMA review fee is required upon submittal to FEMA and will be submitted on the Engineer's invoice as a pass-through expense to be paid by the City.
ix. Coordinate up to two (2) iterations with FEMA reviewers.
e. Storm Drain Facilities
i. Any proposed public drainage system will be designed to the twenty-five (25) year frequency storm based on fully developed conditions as appropriate. The one hundred (100) year frequency storm event will be designed to be contained within public rights of way or drainage easements as outlined in the latest City Drainage Criteria Manual.
ii. The Engineer shall prepare existing and proposed drainage area maps, hydraulic link calculations, inlet calculations and quantity and cost estimates for all proposed storm drain facilities, not including the proposed bridge crossing.
iii. Storm Sewer plan and profile sheets along with standards will be included in plan set. City standards will be used. TxDOT standards will be used for all design features which do not have
an applicable City standard.
iv. Culvert plan and profile sheets along with standards will be included in plan set. TxDOT standards will be used for all design features which do not have an applicable City standard. Scope assumes one culvert extension at Porano Circle and CR 110.
v. This scope assumes storm drain design of the realignment of $N$ Red Bud Ln and Old Settlers Blvd improvements west of Red Bud are to be performed by others.
vi. Proposed detention facilities design or analysis of the City Regional Stormwater Management Program (RSMP) are not included in this scope. It is assumed detention facilities will not be required based on time frequencies of the proposed improvements relative to the overall basin timing for the creek. If the City requires install detention facilities or conduct a timing analysis for the RSMP, a Supplemental agreement may be required.
vii. Deliverables:

1. $11 \times 17$ construction plans sheets for proposed storm drain infrastructure, storm and inlet calculations, culvert calculations and construction details.
a. Existing and proposed drainage area maps including hydrology calculations (25 and 100-YR events)
b. Storm drain plan and profile to include 25 and 100-YR HGL \& Q,V,D calcs per conduit link
c. Lateral profiles to include 25 and 100-YR HGL \& Q,V,D calcs per conduit link
d. Hydraulic calculation sheets ( 25 and 100-YR storm events)
e. Inlet calculation sheet(s) (25 and 100-YR events)
f. Standard detail sheets
g. Custom detail sheet(s), as necessary
h. Proposed culvert extension plan and profile, calculations, and construction details.
i. Quantity Summary Sheet
j. Cost Estimate ( $60 \%, 95 \%$, Final)

## FC 162 - SIGNING, PAVEMENT MARKINGS, \& SIGNALS

1. SIGNING \& PAVEMENT MARKINGS
a. The Engineer will develop a design for signing and pavement markings along the Old Settlers Blvd Extension.
b. The Engineer will prepare plans for signing and pavement markings at a scale of $1^{\prime \prime}=50^{\prime}$ and will include the following:
2. Signing \& Pavement Marking Layouts
3. Small Sign Details
4. Summary of Small Signs Sheet
5. Standard Sheets using City of Round Rock and/or TxDOT Standards
6. SIGNAL DESIGN
a. Signal Design Plans: The Engineer will develop plans to install new traffic signal at the future intersection of CR 110 and Old Settlers Blvd. The Engineer will also develop sheets for signal modifications at CR 110 and N Red Bud Lane. For this scope, the Engineer has assumed that the modifications will be limited to pedestrian equipment (ped-pole, push buttons and associated wiring) relocation only and does not include any plans to install new traffic signal poles and signal
cabinet.
b. The signal plans will be prepared at a scale of $1^{\prime \prime}=40^{\prime}$ and will include the following sheets.
i. Signal Layout sheet will show the locations of proposed signal poles, pedestrian poles, signal heads, communication equipment, electrical conduits, ground boxes, signal cabinet, new electrical service, existing utilities, right of way, and proposed roadway improvements. Locations of pedestrian poles and pedestrian access ramps will be designed in conformance with ADA requirements. Due to lateral and vertical clearance required from an overhead electric line (per the State law), the Engineer will coordinate with the City before finalizing locations of signal poles, where applicable.
ii. Signal Elevation sheet will show placement of signal heads on a mast-arm and vertical clearance required for the mast-arm.
iii. Conduit Chart and Electrical Wiring sheet will show the type and number of electrical wires in each conduit run. A new electrical service will be designed to support total electrical load due to the new traffic signal and safety lighting at the intersection. The electrical service will include two separate circuits for traffic signal and illumination. At the 60\% field review meeting, the Engineer will coordinate with the City and local electric service provider to determine location of new electrical service.
iv. Phasing \& Detection sheet will show the proposed phasing at each intersection. Phasing and signal-heads for left-turn movements will be designed in conformance with 2011 Texas MUTCD. Video detection details for each movement will also be shown.
v. APS load switch assignment sheet
vi. Quantities sheet will be provided for the intersection.
c. The Engineer will use latest general notes issued by the City and update appropriately as required for traffic signals.
d. Deliverables:
i. 60\% Plans Submittal
7. Existing Conditions
8. Proposed Signal Layout
9. Signal Elevation
10. Opinion of Probably Construction Cost Estimate
ii. 95\% Plans Submittal
11. General Notes
12. Proposed Signal Layout
13. Signal Elevation
14. Electrical Wiring
15. Phasing and Detection
16. Estimated Quantities
17. City/TxDOT Standards (including Traffic Control Plans standards)
18. Opinion of Probably Construction Cost Estimate
iii. Final Plans Submittal
19. Address any comments to plan sheets from $90 \%$ submittal
20. Issue signed and sealed plan sheets
21. Final cost estimate

## FC 163 - MISCELLANEOUS (ROADWAY)

1. TRAFFIC CONTROL
a. Traffic Control Plans - The Engineer will develop Traffic Control Plans (TCP) for the Old Settlers Blvd Extension at $N$ Red Bud Ln, Porano Circle, and CR 110 with accordance with the latest edition of the TMUTCD. The Engineer will:
i. 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, guide signs, route markers, construction pavement markings, barricades, flag personnel, temporary traffic signals, etc.) to be used to handle traffic during each construction sequence.
ii. Develop each TCP to provide continuous, safe access to each adjacent property during all phases of construction and to preserve existing access. The Engineer shall notify the City in the event existing access must be eliminated and must receive approval from the City prior to any elimination of existing access.
iii. Prepare each TCP in coordination with the City. The TCP must include interim signing for every phase of construction. Interim signing must 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.
iv. 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.
v. 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.
b. Deliverables:
i. Traffic Control Plans ( $1^{\prime \prime}=50^{\prime}$ )
ii. Traffic Control Narrative
iii. Standard Sheets using City of Round Rock and/or TxDOT Standards

## 2. ILLUMINATION DESIGN

a. Illumination Design Plans - The Engineer will develop illumination plans for continuous lighting along Old Settlers Blvd from $N$ Red Bud Lane to CR 110. The Engineer will:
i. Coordinate with the City to confirm preference on height and aesthetics for the light poles.
ii. Develop a photometric model using lighting software AGi 32 to determine pole spacing such that minimum "Illuminance" requirements are satisfied per AASHTO guidelines.
iii. Conduct electrical and voltage drop calculations to determine wire and conduit sizes, and number and details of electrical services required along the project corridor.
iv. Coordinate with ONCOR and City staff to determine locations to draw power and set electrical services.
v. Prepare layout sheets at appropriate scale to show location of poles, conduits, and wiring. The plans will also include conduit and wire charts, details on electrical services, and quantity summaries.
vi. Develop opinion of probable construction cost (OPCC) at the $95 \%$ and prior to final PS\&E submittal.
b. Deliverables:
i. $60 \%$ Submittal - Photometric Layout
ii. $95 \%$ Plans Submittal

1. Proposed Illumination Layout
2. Electrical Wiring \& Conduit Charts
3. City/TxDOT Standards (including Traffic Control Plans standards)
4. Quantity Summary Sheets
5. Opinion of Probable Construction Cost Estimate
6. EROSION CONTROL
a. The Engineer shall develop Storm Water Pollution Prevention (SW3P), on separate sheets from (but in conformance with) the TCP, to minimize potential impact to receiving waterways. The SW3P shall include text describing the plan, quantities, type, phase, and locations of erosion control devices and any required permanent erosion control.
b. The Engineer shall develop SW3P plans for Old Settlers Blvd, N Red Bud Ln, Porano Circle, and CR 110. This includes:
i. Proposed erosion control design
ii. Storm Water Pollution Prevention Plan (SW3P) sheets at $1^{\prime \prime}=50^{\prime}$
7. Standard Sheets using City of Round Rock and/or TxDOT Standards
c. Deliverables:
i. SW3P Layout Sheets
ii. SW3P Standards
8. COMPUTE \& TABULATE QUANTITIES
a. The Engineer shall compute and tabulate quantities for all applicable pay items.
b. The Engineer shall document assumptions and calculations for each pay item.
c. Deliverables:
i. Quantity Summary Sheets
ii. Quantity Calculations and Assumptions
9. CONSTRUCTION COST ESTIMATE
a. The Engineer shall provide a construction cost estimate with unit prices and bid schedule with each submittal ( $60 \%, 95 \%$, and Final Plans).
b. The Engineer shall provide a basis of estimate to detail assumptions made for bid item prices and formulas used (if applicable) for each bid item.
c. Deliverables:
i. Construction Cost Estimate
ii. Basis of Estimate

## 6. SPECIFICATIONS \& GENERAL NOTES

a. The Engineer shall compile General Notes, Specifications and Special Provisions as needed.
b. The Engineer shall prepare the Project Manual (Bid Documents), including a signed \& sealed Cover Page, Bid Addenda, Bid Form, Technical Specifications, Plan Drawings, and Geotechnical Report.
b. Deliverables:
i. General Notes Sheets
ii. List of applicable project Specifications and Special Provisions

## FC 164 - PROJECT MANAGEMENT \& ADMINISTRATION

## 1. PROJECT MANAGEMENT \& ADMINISTRATION

a. Meetings
i. The Engineer has provided for four design meetings and six stakeholder meetings at two hours each.
b. General Contract Administration
i. Prepare invoices and monthly written progress reports for the project.
ii. Project coordination with the City to include documenting correspondence and meeting minutes.
iii. Project Coordination with Sub-Consultants to include documenting correspondence and meeting minutes.
iv. Prepare, distribute and file both written and electronic project correspondence.
v. Update project schedule as necessary.
vi. Direct Expenses for travel and copies is included in the fee.

## FC 170-STRUCTURAL

1. BRIDGE LAYOUT
a. Bridge Layout - The Engineer shall comply with all relevant sections of the latest edition of the State's LRFD Bridge Design Manual, Bridge Project Development Manual, Bridge Detailing Guide and AASHTO LRFD Bridge Design Specifications and respective checklists to prepare Bridge Layout ( $1^{\prime \prime}=40^{\prime}$ scale) and Typical Sections for approval before proceeding to detail design. Additional Bridge Layout requirements for waterway structures include:
i. Design and 100-year peak discharges
ii. Design and 100-year high water (HW) and any recorded HW data available
iii. Natural and through bridge velocities for design and 100-year floods
iv. Calculated backwater for design and 100-year floods
v. Direction of flow for waterway crossings
vi. Contours for water crossing
b. Deliverables:
i. Bridge Layout Sheets

## 2. BRIDGE DETAILS \& DESIGN

a. Bridge Details \& Design - The Engineer shall prepare final details and design calculations in accordance with standard requirements of the State as listed above. Specific bridge items relevant to this project include:
i. Soil boring data will be utilized for foundation design and details.
ii. Scour data will be incorporated in bent and foundation design.
iii. Deck drains, as necessary.
iv. Bridge lighting, as necessary.
v. Sidewalks or shared-use path shall be included along each side of the bridge. TxDOT combination bridge railing with a minimum height of $42^{\prime \prime}$ shall be selected for use.
vi. Non-standard bridge aesthetics are anticipated in lieu of standard TxDOT rectangular cap bents with circular columns. The level of effort in the detailing process is expected to be above that associated with a standard TxDOT bridge project. The Consultant will work with the City to develop the project aesthetic details.
vii. Applicable TxDOT Standards will be printed by the Consultant for inclusion in the plan set. (Any TxDOT Standards modified by the Consultant will be signed and sealed for the modification.)
b. Deliverables:
ii. Bridge Detail Sheets
iii. Bridge Standards
3. RETAINING WALLS
a. Retaining Walls - The Engineer shall prepare plans, details and standards for up to eight (8) retaining wall locations. Fill embankment MSE walls are anticipated along each side of each approach to the bridge. Other retaining wall types such as spread footing, soil nail, or drilled shaft will be considered as appropriate although not anticipated at this time. Typical retaining wall layout ( $1^{\prime \prime}=50^{\prime}$ scale) requirements include:
i. Plan View

1. Designation of reference line
2. Beginning and ending retaining wall stations
3. Offset from reference line
4. Horizontal curve data
5. Total length of wall
6. Face of wall
7. All wall dimensions and alignment relations (alignment data as necessary)
8. Soil boring locations
9. Drainage, signing, lighting, etc. that is mounted on or passing through the wall.
10. Subsurface drainage structures or utilities which could be impacted by wall construction.
ii. Elevation View
11. Top of wall elevations
12. Existing and finished ground line elevations
13. Vertical limits of measurement for payment
14. Type, limits and anchorage details of railing (only if Traffic Railing foundation standard is not being used on this project)
15. Top and bottom of wall profiles plotted at correct station \& elevation.
16. Retaining Wall Details: As required for non-standard elements such as drilled shaft wall details or transitions from one wall type to another.
17. Retaining Wall Aesthetic details: The Engineer shall provide details for, but not limited to, coping, fascia, rip rap and railings.
18. Limits of temporary shoring.
19. Underdrains
20. Soil improvement, if applicable.
21. Drainage, signing, lighting, etc. as noted above
22. Drainage structures and utilities as noted above
iii. Typical Section
23. Reinforced Volume
24. Underdrain location
25. Soil improvements, if applicable.
b. Deliverables:
i. Retaining Wall Layouts

## ii. Retaining Wall Standards

## FC 309 - CONSTRUCTION PHASE SERVICES

1. CONSTRUCTION PHASE SERVICES
a. The Engineer shall provide Construction Phase Services at the written request of the City's Project Manager. The written request shall include a description of the work requested, a mutually agreed upon time limit, and any special instructions for coordination and submittal. These services shall include, but are not limited to the following:
i. Review and approval of Contractor Submittals, shop drawings, and forming details.
ii. Attend pre-construction and pre-bid meetings.
iii. Attend up to three (3) field meetings to discuss pole locations.
iv. Respond to requests for information (RFIs).
v. Provide clarification as requested.
vi. Provide corrected plans for any Change Orders.
vii. Provide as-built plans upon completion of the project.
viii. Review signal timing plans during construction.

## SUMMARY OF DELIVERABLES

1. FC 110-ROUTE DESIGN \& STUDIES
a. Design Concept Conference Notes for approval
b. Design Summary Report (DSR)
c. Signed/Sealed Geotechnical Report
d. Boring Logs
e. Updated Signal Warrant Technical Memo
2. FC 130 - RIGHT OF WAY DATA
a. Legal description for each parcel (signed and sealed). Up to six (5) exhibits.
b. Survey plat on $81 / 2^{\prime \prime} \times 11^{\prime \prime}$ for each parcel (signed and sealed).
c. Area computation sheets for legal descriptions and plats and ROW maps for all parcels.
d. SUE plan sheets
e. Test Hole Data
f. Utility Contact List
g. Utility Conflict Matrix Spreadsheet
h. Utility Conflict Layout Exhibits
i. Utility Meeting Minutes
j. Utility Certificates
k. Electronic CAD Files
3. FC 131 - UTILITIES
a. Project Layout
b. Utility/Project Specific Notes
c. Utility Plan \& Profile Sheets
d. Standard Detail Sheets
e. Special Detail Sheets (as necessary)

AGUIRRE \& FIELDS, LP
CITY OF ROUND ROCK
CONTRACT:
old settlers extension
SWA 01 TO WA 01
4. FC 150 - SURVEY
a. Signed Right of Entry forms if ROE is acquired
b. Reference Deeds, support documents, scanned and in .pdf format.
c. Control Layout index map
d. Horizontal and Vertical Control Sheet
e. Survey Control Sheet
f. Control Point Data Sheet
g. 3D \& 2D Topo (.dgn) processed files in MicroStation/GeoPak SS10, with all chains and points included on the $30 \%$ existing survey.
5. FC 160 - ROADWAY DESIGN CONTROLS
a. Title Sheet
b. Index of Sheets
c. Project Layout Sheets
d. Typical Section Sheets
e. General Notes Sheet
f. Removal Layout Sheets
g. Horizontal Alignment Data Sheets
h. Roadway Plan \& Profile Sheets
f. Intersection Layout Sheets
j. Proposed Grading Sheets
k. Roadway, Sidewalk, \& Driveway Detail Sheets
I. Roadway Standards
6. FC 161 - DRAINAGE
a. Existing and proposed drainage area maps including hydrology calculations (25 and 100-YR events)
b. Storm drain plan and profile to include 25 and $100-$ YR HGL \& QV,D cales per conduit link
c. Lateral profiles to include 25 and $100-\mathrm{YR}$ HGL \& $Q, V, D$ calcs per conduit link
d. Hydraulic calculation sheets ( 25 and 100 -YR storm events)
e. Inlet calculation sheet(s) ( 25 and $100-\mathrm{YR}$ events)
f. Standard detail sheets
g. Custom detail sheet(s), as necessary
h. Proposed culvert extension plan and profile, calculations, and construction details.
i. Quantity Summary Sheet
j. Cost Estimate
7. FC 162 - SIGNING, PAVEMENT MARKINGS, \& SIGNALS
a. Signing \& Pavement Marking Layout Sheets
b. Small Sign Details
c. Summary of Small Signs Sheet
d. Signing \& Pavement Marking Standards
e. Existing \& Proposed Signal Layout Sheets
8. FC 163 - MISCELLANEOUS (ROADWAY)
a. Traffic Control Narrative
b. Traffic Control Plan Sheets
c. Traffic Control Standards
d. Illumination Layout Sheets
e. Illumination Standards
f. Electrical Wiring \& Conduit Charts
g. Erosion Control Sheets
h. Erosion Control Standards
i. Quantity Summary Sheets
j. Construction Cost Estimate
k. Basis of Estimate
I. List of applicable Project Specifications
m. Project Manual
9. FC 164 - PROJECT MANAGEMENT \& ADMINISTRATION
a. Monthly Progress Report and Invoices
b. Project Documentation and Meeting Minutes
10. FC 170-STRUCTURAL
a. Bridge Layout Sheets
b. Bridge Detail Sheets
c. Bridge Standards
d. Retaining Wall Layouts
e. Retaining Wall Standards
11. FC 309 - CONSTRUCTION SERVICES
a. Bridge Layout Sheets
b. Bridge Detail Sheets
c. Bridge Standards

## ADDENDUM TO EXHIBIT C

Work Schedule

Attached Behind This Page


AGUIRRE \& FIELDS, LP
CONTRACT:
PROJECT NAME: OLD SETTLERS EXTENSION

|  | TASK | TOTAL LABOR HOURS | TOTAL PRIME LOADED LABOR COST | OTHER DIRECT COSTS | SUBCONSULTANTS | TOTALS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FC 110 | ROUTE \& DESIGN STUDIES | 194 | \$3,900.00 |  | \$21,964.40 | \$25,864.40 |
| FC 120 | PUBLIC INVOLVEMENT | 92 |  |  | \$9,470.00 | \$9,470.00 |
| FC 130 | RIGHT OF WAY DATA | 787 | \$3,780.00 |  | \$113,437.00 | \$117,217.00 |
| FC 131 | UTILITIES | 275 |  |  | \$40,501.00 | \$40,501.00 |
| FC 150 | SURVEY | 171 |  |  | \$24,260.00 | \$24,260.00 |
| FC 160 | ROADWAY DESIGN CONTROLS | 975 | \$107,880.00 |  |  | \$107,880.00 |
| FC 161 | Drainage | 1204 |  |  | \$164,270.00 | \$164,270.00 |
| FC 162 | SIGNING, PAVEMENT MARKINGS, \& SIGNALS | 353 | \$19,820.00 |  | \$26,490.00 | \$46,310.00 |
| FC 163 | MISCELLANEOUS (ROADWAY) | 693 | \$62,380.00 |  | \$26,545.00 | \$88,925.00 |
| FC 164 | PROJECT MANAGEMENT \& ADMINISTRATION | 311 | \$37,520.00 |  | \$20,836.60 | \$58,356.60 |
| FC 170 | STRUCTURAL | 1236 | \$175,845.00 |  |  | \$175,845.00 |
| FC 309 | CONSTRUCTION PHASE SERVICES | 198 | \$14,660.00 |  | \$14,980.00 | \$29,640.00 |
| ODES | OTHER DIRECT EXPENSES |  |  | \$46,380.70 |  | \$46,380.70 |
| GRAND TOTAL: |  | 6489 | \$425,785.00 | \$46,380.70 | \$462,754.00 | \$934,919.70 |

PRIME PROVIDER: AGUIRRE \& FIELDS, LP

| COMPANY | FEE | \% OF TOTAL FEE |
| :--- | ---: | ---: |
| AGUIRRE \& FIELDS, LP | $\$ 426,470.80$ | $46 \%$ |
| HALFF ASSOCIATES | $\$ 399,744.00$ | $43 \%$ |
| FORESIGHT, PES | $\$ 20,747.60$ | $2 \%$ |
| KIMELY HORN | $\$ 74,788.10$ | $8 \%$ |
| CD\&P | $\$ 13,169.20$ | $1 \%$ |
| TOTAL | $\$ 934,919.70$ | $100.00 \%$ |


| FUNCTION CODE | TASK NAME | AFLP | HALFF | FORESIGHT | KIMLEY HORN | CD\&P | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FC 110 | ROUTE \& DESIGN STUDIES | \$3,900.00 |  | \$13,804.40 | \$8,160.00 |  | \$25,864.40 |
| FC. 120 | PUBLIC INVOLVEMENT |  |  |  |  | \$9,470.00 | \$9,470.00 |
| FC 130 | RIGHT OF WAY DATA | \$3,780.00 | \$113,437.00 |  |  |  | \$117,217.00 |
| FC 131 | UTILITIES |  | \$40,501.00 |  |  |  | \$40,501.00 |
| FC 150 | SURVEY |  | \$24,260.00 |  |  |  | \$24,260.00 |
| FC 160 | ROADWAY DESIGN CONTROLS | \$107,880.00 |  |  |  |  | \$107,880.00 |
| FC 161 | DRAINAGE |  | \$164,270.00 |  |  |  | \$164,270.00 |
| FC. 162 | SIGNING, PAVEMENT MARKINGS, \& SIGNALS | \$19,820.00 |  |  | \$26,490.00 |  | \$46,310.00 |
| FC 163 | MISCELLANEOUS (ROADWAY) | \$62,380.00 |  |  | \$26,545.00 |  | \$88,925.00 |
| FC 164 | PROJECT MANAGEMENT \& ADMINISTRATION | \$37,520.00 | \$9,396.00 | \$2,690.60 | \$5,600.00 | \$3,150.00 | \$58,356.60 |
| FC 170 | STRUCTURAL | \$175,845.00 |  |  |  |  | \$175,845.00 |
| FC 309 | CONSTRUCTION PHASE SERVICES | \$14,660.00 | \$8,130.00 |  | \$6,850.00 |  | \$29,640.00 |
| ODEs | OTHER DIRECT EXPENSES | \$685.80 | \$39,750.00 | \$4,252.60 | \$1,143.10 | \$549.20 | \$46,380.70 |
|  | TOTAL | \$426,470.80 | \$399,744.00 | \$20,747.60 | \$74,788.10 | \$13,169.20 | \$934,919.70 |

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ADDENOUM TO EXHREIT D- SWA 01
AGURRE\& \&IELDS, LP


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addendum to exhibit o-swa 01
FEE Schedule AGUIRRE \& FIELDS, LP


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ADDENDUM TO EXHIBIT D. SWA OI
FEE SCHEDULE


addendum to exhibit d-swa 01


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addendum to exhibit d－swa oi
AGURRE $\&$ FIELDS，LP

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