

ADDENDUM TO EXHIBIT A – SCOPE OF SERVICES

SUPPLEMENTAL SCOPE OF SERVICES - PSSA No. 4

MELBER LANE

Schematic Phase 2 from Pleasanton Parkway to Ashton-Woods and Plans, Specifications, and Estimate from Cameron Road to Ashton-Woods

ADDITIONAL SERVICES TO BE PERFORMED BY THE ENGINEER

This supplemental scope includes:

- preliminary engineering (30% design) with cross-sections at 50' intervals for the ultimate four-lane divided section of Melber Lane from Pleasanton Parkway to Ashton-Woods, and
- development of plans, specifications and estimate (PS&E) for the ultimate four lanes of Melber Lane from Cameron Road to Ashton-Woods.

The proposed scope and fee shall include all engineering services necessary to develop the final design based on the results of the geotechnical, environmental, hydraulic, survey, utility, and other field investigations. This includes refinement of the bridge, retaining wall, drainage, and roadway design, as well as all permitting, agency coordination, permit applications, responses to agency comments, and approvals specifically identified in this Agreement.

Any additional services resulting from a material change in scope initiated by the City or new regulatory requirements outside the agreed scope shall require a separate Supplemental Agreement approved by the City before the work proceeds.

The Engineer shall provide the necessary engineering and technical services for the completion of environmental studies, public involvement, surveying and mapping, and traffic studies for development of the project. Design will be performed in accordance with the latest available City of Pflugerville, City of Austin, Travis County and TxDOT manuals, guidelines and standards, as applicable. This project will be developed utilizing Microstation V8i and OpenRoads.

Agency abbreviations are as follows:

City of Pflugerville (City), Travis County (County), Texas Department of Transportation (TxDOT), Texas Department of Transportation Environmental Division (TxDOT-ENV), Federal Highway Administration (FHWA), Capital Area Metropolitan Planning Organization (CAMPO), Environmental Protection Agency (EPA), Texas Historical Commission (THC), National Register of Historical Places (NRHP), Federal Emergency Management Agency (FEMA), and Texas Commission on Environmental Quality (TCEQ).

The tasks and products are more fully described in the following TASK OUTLINE.

TASK OUTLINE

I. ROUTE AND DESIGN STUDIES

- A. DATA COLLECTION *(provided by STV)*
- B. ALIGNMENT STUDY *(provided by STV)*
- C. GEOTECHNICAL INVESTIGATIONS *(provided by Corsair Consultants, Inc.)*

1. The Engineer shall determine the location of proposed soil borings for bridge design, embankment settlement analysis, retaining walls, slope stability, and pavement thickness design in accordance with the latest edition of the State's Geotechnical Manual. The City of Pflugerville will review and provide comments for a boring layout submitted by the Engineer showing the general location and depths of the proposed borings. Once the Engineer receives the City's review comments they shall perform soil borings (field work), soil testing and prepare the boring logs in accordance with the latest edition of the State's Geotechnical Manual and City's procedures and design guidelines.
2. All geotechnical work should be performed in accordance with the latest version of the State's Geotechnical Manual. All testing shall be performed in accordance with the latest version of the State's Manual of Test Procedures. American Society for Testing Materials (ASTM) test procedures can be used only in the absence of the State's procedures. All soil classification should be done in accordance with the Unified Soil Classification System.
3. Soil Borings – Geotechnical Testing
 - (a) Perform a total of twelve (12) structure borings at the planned bridge and retaining wall locations. A total of seven (7) pavement borings spaced along the Melber Ln alignment and Cameron Rd realignment were drilled previously, alternating the drilling location between the edges of right-of-way.
 - (b) If expansive soils are encountered ($PVR > 2''$) and a lime stabilized subgrade option is desired, additional borings may be needed. If applicable, drill pavement borings to a minimum depth of fifteen (15) feet to map geology and collect PI information if soils are expansive for PVR calculation.
 - (c) Bridge borings will be drilled to a depth of 80 feet and retaining wall borings to a depth of 30 feet.
4. Laboratory testing will be performed to determine the soil's plasticity and strength characteristics, including:
 - (a) NRCS Soil Classification
 - (b) Atterberg Limits Tests
 - (c) Sieve Analysis
 - (d) Soluble Sulfate Content
 - (e) Moisture Content
 - (f) Unconfined Compressive Strength
 - (g) One Dimensional Consolidation Test
 - (h) Consolidated Undrained Triaxial Test
 - (i) California Bearing Ratio Test
 - (j) Standard Proctor Test
5. The Engineer will coordinate with locator service to determine existing utility locations.
6. The Engineer will provide pavement thickness design recommendations for the development of Melber Lane extending from Cameron Rd to approximately 1600 feet north of Pleasanton Pkwy. The pavement design will follow the recommendations outlined in the CAPEC Phase 3 Final report developed by HVJ dated July 28, 2017. The pavement design will assume up to 20% truck traffic and utilize the use of vertical moisture barriers within the design.
7. The Engineer shall perform scour analysis to include Grain Size distribution curves with D50 and D95 values.
8. The Engineer shall incorporate soil boring data sheets prepared, signed, sealed, and dated by the Geotechnical Engineer.
9. The Engineer shall provide a signed, sealed and dated geotechnical report which contains, but is not limited to, soil boring locations, site geology map, boring logs, laboratory test results, generalized subsurface conditions, ground water conditions, piezometer data, analyses and recommendations for settlement and slope stability of the earthen embankments, retaining wall analyses, skin friction tables and design capacity curves including skin friction and point bearing. The skin friction tables, and design capacity curves must be present for piling and drilled shaft foundation. In addition, the Engineer will provide recommendations for the design of the roadway pavement sections and will include three (3) pavement thickness design options for the proposed roadways.

D. SCHEMATIC LAYOUT DEVELOPMENT *(provided by STV)*

1. Prepare calculated horizontal geometrics for the project roadway from Pleasanton Pkwy to Ashton-Woods.
2. Prepare calculated vertical geometrics for the project roadway from Pleasanton Pkwy to Ashton-Woods.
3. Develop existing and proposed typical sections for inclusion on project schematics.
4. Develop preliminary schematic cross sections at 50' intervals. These cross sections will be for estimation of ROW needs and cut and fill quantities, as well as determining retaining wall locations and heights.
5. Determine retaining wall limits for the project roadway from Pleasanton Pkwy to Ashton-Woods.
6. Assume standard illumination spacing (for cost estimating purposes).
7. Develop pavement edges for the selected configuration that will be shown on the schematic layout.
8. Finalize Engineer's opinion of probable cost for the selected configuration.
9. Prepare project schematic plots for the project corridor. Plots will include required elements suitable for submission to the City and Travis County. The roll plot will not exceed 10' in length with a 1"=50' horizontal scale and 1"=10' vertical scale. Depict the following on the project layout plot:
 - (a) The horizontal alignments will show bearings in the tangent sections and curve data including delta angles, PI stations, tangent lengths, length of curve, and radii. The plan views will show the centerline, edge of pavement, striping, lane widths, shoulder widths, cross slopes, superelevations with transitions, direction of traffic flow, and layouts for speed change lanes.
 - (b) The vertical alignment will show existing and proposed elevations at 100-foot intervals, vertical curve VPI stations, curve lengths, superelevation rates and transitions, design speeds, and "K" values.
 - (c) The existing apparent ROW limits and proposed ROW limits.
 - (d) Anticipated retaining wall locations (if any).
 - (e) Proposed striping and lane numbers, and proposed signal pole locations. Small signs will not be developed at the project layout phase.
 - (f) Current and projected traffic volumes as developed by the traffic data collection and analysis task and proposed design speed.
 - (g) Existing utility locations in plan emphasizing those, which are in conflict with the proposed construction. Proposed utilities will not be shown.
 - (h) Significant drainage structures (existing and proposed) as determined by Hydrologic and Hydraulic report.

E. TRAFFIC ENGINEERING VERIFICATION AND DESIGN TRAFFIC MEMO *(Added scope provided by STV)*

The CONSULTANT shall perform traffic engineering and develop a Design Technical Memorandum to support the preparation of Plans, Specifications, and Estimate (PS&E). Services shall include confirming design traffic volumes from available planning studies and documented data sources, where available; in the absence of such data, design volumes shall be developed based on the best available information and accepted engineering judgment. The CONSULTANT shall verify existing intersection geometrics and turn lane storage lengths. Traffic operational analysis shall be conducted using Synchro to evaluate intersection performance.

F. HYDROLOGY AND HYDRAULIC ANALYSIS *(provided by STV)*

- (a) Survey Coordination
The Engineer will coordinate the acquisition of survey along the route at crossings not already studied and to verify FEMA cross section geometry.
- (b) Data Collection
The Engineer will (i) acquire available H&H files and mapping shapes from LOMR 18-06-0800P-481026 from FEMA and/or best available data(ii) conduct field investigations to observe existing channel characteristics and bridge/culvert structures. The Engineer will assess channel and overbank roughness values using field notes and photographs.
- (c) Hydrology

For the crossing at Wilbarger Creek STV will verify the hydrologic analysis based on best available data and/or will perform hydrologic analysis using HEC-HMS software performing the NRCS Unit Hydrograph method, or other accepted hydrologic methods. The effective City of Pflugerville Engineering Design Manual (COP EDM) criteria at time of contract execution will be used as best available data. Existing land use condition will be assumed for drainage areas outside the proposed ROW. The loss, routing and precipitation methodologies used in the COP EDM will be used for these subdivided areas. Existing and proposed flows for the 2-year (50 % AEP), 10-year (10% AEP), 25-year (4% AEP) 100-year (1% AEP) and 500-year (0.2% AEP) frequency storms will be computed using the Atlas 14 precipitation depths for Pflugerville.

(d) Hydraulics

The design criteria for this crossing will be based on the City of Pflugerville EDM Drainage Specification Requirements. A summary of this criteria will be prepared and reviewed with the City. The hydraulic analysis will be performed using HEC-RAS. Tailwater assumptions will be based on a normal depth assumption if unknown. Additionally, Travis County floodplain development criteria will be considered for the bridge crossings.

Crossing Structure Hydrology and Hydraulic Analysis (Schematic layout Phase)

Perform preliminary hydrologic and hydraulic analysis/design to determine location and sizes of major cross drainage structures not to exceed 2 crossings.

Anticipated structures are:

- (i) 1 Crossings at upper reaches of Wilbarger Creek
- (ii) 1 outlet at Melber Lane and Cameron Rd intersection (South end).

(e) Drainage Report (Prelim)

Prepare a preliminary drainage report that includes a section summarizing the findings of the above analysis. This section of the report will include:

- (i) Determination if any proposed drainage easements are required to adequately drain the proposed facility.
- (ii) Summary of methodology used for hydrology and hydraulics.
- (iii) Tabular summary and comparison of results for Effective, Pre-project, and Proposed conditions.
- (iv) Summary of impacts and mitigation.
- (v) Recommendations for easements (if needed).

Hydrology

The Engineer will expand upon the hydrology developed with the crossing structures above in order to assess the hydrologic impact of the proposed improvements. The change in flow due to the proposed project will be at a minimum quantified at the Wilbarger Creek crossing. Hydrologic analysis of the two (2) crossings listed in section H. (d) will be provided in the report.

Hydraulics

The Engineer will analyze existing and proposed conditions hydraulics as a result of the proposed improvements using HEC-RAS for the 2 Wilbarger Creek crossings. HY-8 will be used for Cameron Rd crossing in the PS&E portion of the project. The Engineer will summarize the relative impacts to computed water surface elevations between existing and proposed conditions for the two (2) Wilbarger Crossings. Engineering effort will include a feasibility analysis of bridge types to determine the preferable bridge type to span the crossings.

(f) Drainage Report (Final)

The Engineer will prepare preliminary hydraulic reports that includes a section summarizing the methodology and results used in the hydrologic and hydraulic impact analyses. This section of the report will include:

- (i) Determination if any proposed drainage easements are required.
- (ii) Summary of methodology used for hydrology and hydraulics
- (iii) Summary of results comparing the existing (pre-project) water surface elevations compared to post-project water surface elevations with the proposed bridge crossings in place.

Based on the current effective FEMA floodplain delineation (February 11, 2019) preparation of a Conditional Letter of Map Revision (CLOMR) and/or Letter of Map Revision (LOMR) may be required, but are not included in this scope of services to determine the ROW requirements for the proposed road. A determination if this work will be needed based of a decision by the local floodplain administrator after the impacts have been assessed and the project moves toward PS&E. If required, any future CLOMR or LOMR may be provided under a separate work authorization.

- (g) Conditional Letter of Map Revision
 - (i) Prepare CLOMR submittal package for the two (2) Wilbarger Creek for the 10, 50, 100, and 500-year frequency storm events based on Best Available hydrologic data incorporating Atlas 14.
 - (ii) Prepare annotated FIRM and hydraulic work maps with effective and post-project floodplain tie-in locations upstream and downstream of the proposed project.
 - (iii) Prepare MT-2 FEMA forms for CLOMR submittal to the City, Travis County, and FEMA.
 - (iv) Prepare notices to be sent to affected property owners.
 - (v) Prepare an environmental assessment that includes a determination for threatened and endangered species complying with the Endangered Species Act.
 - (vi) Submit CLOMR to City of Pflugerville and Travis County floodplain administrators for review and approval, including obtaining signatures for the Community Acknowledgement Form. This scope assumes one (1) meeting and response to comments with each Floodplain Administrator.
 - (vii) Submit CLOMR to FEMA for review and approval. A FEMA review fee is required upon submittal to FEMA and will be submitted by STV as a pass-through expense to be paid by the City (see ix).
 - (viii) Coordinate up to two (2) iterations with FEMA reviewers. Provide response to FEMA comments within 90-day timeframe.
 - (ix) FEMA fees to process CLOMR will be applied as a pass-through expense to the City. The current fee for FEMA to process a CLOMR is \$6,500.00. If the fees change before the CLOMR is submitted, STV will include the fee changes to the pass-through expense.
- (h) Post-Construction LOMR
 - (i) Prepare LOMR submittal package for the two (2) Wilbarger Creek for the 10, 50, 100, and 500-year frequency storm events based on Best Available hydrologic data incorporating Atlas 14.
 - (ii) For the purposes of this LOMR, it is assumed that the construction of the two bridge crossings over Wilbarger Creek will occur concurrently, or close in duration so that only one LOMR will be needed. If the construction schedule changes from this assumption, two LOMRs may be needed – one for each bridge.
 - (iii) Prepare annotated FIRM and hydraulic work maps with effective and post-project floodplain tie-in locations upstream and downstream of the proposed project.
 - (iv) Prepare MT-2 FEMA forms for LOMR submittal to the City, Travis County, and FEMA.
 - (v) Prepare notices to be sent to affected property owners.
 - (vi) Prepare an environmental assessment that includes a determination for threatened and endangered species complying with the Endangered Species Act.
 - (vii) Submit LOMR to City of Pflugerville and Travis County floodplain administrators for review and approval, including obtaining signatures for the Community Acknowledgement Form. This scope assumes one (1) meeting and response to comments with each 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 by STV as a pass-through expense to be paid by the City (see ix).
 - (ix) Coordinate up to two (2) iterations with FEMA reviewers. Provide response to FEMA comments within 90-day timeframe.
 - (x) FEMA fees to process LOMR will be applied as a pass-through expense to the City. The current fee for FEMA to process a LOMR is \$8,500.00. If the fees change before the LOMR is submitted, STV will include the fee changes to the pass-through expense.
- (i) Additional Services not included in scope:
 - (i) Layouts and exhibits for crossings
 - (ii) Any crossings needed beyond those identified in this scope.

B. WATER QUALITY

This project is not contained in the Edwards Aquifer Recharge, Contributing or Transition Zone. TCEQ BMP design and coordination is not included in this scope of services.

Deliverables:

- Schematic roll plot
- Schematic cost estimate
- Geotechnical/Pavement Design Report
- Design Traffic Technical Memorandum
- Schematic Drainage Report
- CLOMR
- Post-Construction LOMR

II. SOCIAL, ECONOMIC & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT

Environmental services will consist of a due diligence review of Melber Lane from Cameron Road to 2nd entrance to 1849 Park. Depending on the availability of federal funding, TxDOT review and coordination may be required. If TxDOT review is required, then a supplemental service agreement for the NEPA Process required for TxDOT environmental review would be necessary.

A. ENVIRONMENTAL SERVICES

1. Based on the desktop effort and resulting coordination with THC, the following cultural resource task would be prepared in compliance with the Antiquities Code of Texas (and the National Historic Preservation Act if there will be a federal permit).
 - (i) Antiquities Permit Application
 - (ii) Archaeological Survey
 - (iii) An archaeological field survey of locations within the project area/APE recommended for survey will be conducted to meet THC survey standards. For the purposes of this proposal, several assumptions have been made regarding the fieldwork (see below). Subsurface explorations will be accomplished through shovel testing only. The placement and quantity of these excavations will depend on the level of disturbance within the proposed project boundary and the nature of the soils, geology, and topography.
 - (iv) If sites are encountered, a minimum of six shovel tests will be excavated per site. Shovel tests will be excavated to the depth of project impacts, to the bottom of Holocene-age sediments with the potential to contain subsurface archeological resources, or to the maximum depth practicable.
 - (v) If an archaeological site is discovered during the investigations, it will be explored as much as possible with consideration to land access constraints. All discovered sites will be assessed in regard to potential significance so that recommendations can be made for proper management (avoidance, non-avoidance, or further work). Additional subsurface investigations will be conducted per THC standards at discovered sites to define horizontal and vertical boundaries. Appropriate State of Texas Archeological Site Data Forms will be filled out for each site discovered during the investigations. A detailed plan map of each site will be produced and locations will be plotted on U.S. Geological Survey 7.5-minute topographic maps and relevant project maps.
 - (vi) Artifacts will be tabulated, analyzed, and documented in the field, but not collected (except as noted below). Temporally diagnostic artifacts will be described in detail and photographed in the field. Only especially rare artifacts or discoveries will be collected. This policy will reduce curation costs once the fieldwork is concluded; however, as per the stipulations of the Antiquities Permit, all paperwork and photographs generated during field investigations must be curated at an approved repository
- (b) Assumptions/Considerations

- (i) A maximum of two archaeological sites will be identified during the survey. If additional sites are encountered, the additional effort associated with investigating, documenting and recording these additional sites will be subject to a supplemental work authorization.
- (ii) Backhoe trenching is not included in this cost proposal. The survey will determine if the project area contains the potential for deeply buried cultural deposits that would require backhoe trenching. If the survey finds that mechanical excavations are required to assess deeply buried cultural deposits, the additional effort will be subject to a supplemental work authorization.
- (iii) Any reroutes resulting from the identification of significant cultural resources or changes in engineering design plans, which subsequently will require additional fieldwork, are not part of this cost proposal.
- (iv) This scope does not include testing or data recovery excavations of sites discovered during the investigations.

(c) Cultural Resources Report Preparation

- (i) Once reviews and fieldwork have been completed, the archeologist/Principal Investigator will prepare a draft report of the investigations. The archaeological report will conform to THC, NHPA, and Council of Texas Archeologists reporting standards. Depending on available federal funding for construction, the archeological survey report will be reviewed by TxDOT Austin and ENV and would follow the TxDOT Environmental Toolkit standards. The Engineer will address one round of comments from TxDOT.

(d) Cultural Resources Records Curation

- (i) Following acceptance of draft report by applicable regulatory agencies, project records will be prepared for permanent curation at the Texas Archeological Research Laboratory per the requirements of the Antiquities Code of Texas and TARL's Stipulations and Procedures for the Preparation of Archeological Records and Photographs, Curation Supplies, and Sources.

2. Waters of the U.S./Wetlands

The Engineer will conduct due diligence investigations and perform a field survey to confirm the presence and extent of potentially jurisdictional waters and potentially jurisdictional wetlands within the project area. Investigation findings and survey results will be documented in a Jurisdictional Determination Report. Wetland delineations will be conducted using the three-parameter approach as outlined in the U.S. Army Corp of Engineers (USACE) Wetlands Delineation Manual (1987) and Regional Supplement to the Wetland Delineation Manual for the Great Plains Region (2010). *Preparation of a Pre-Construction Notification (PCN) to the USACE, including preparation of Preliminary Jurisdiction Determination Forms, is included as supplemental services to be authorized if required.*

The draft Jurisdictional Determination Report will be submitted to the City for review. The Engineer will respond to up to one (1) rounds of review comments from the City. After addressing the City's review comments, a final report will be submitted to the City for inclusion in the project record.

3. Threatened and Endangered Species Habitat Assessment

A survey of the project area will be conducted to identify potentially-suitable habitat for state and federally-listed threatened, endangered, and candidate plant and animal species. A Habitat Assessment Technical Report summarizing the habitat survey findings will be prepared. The technical report will include an analysis of the potential for project-related impacts to threatened and endangered species and to designated critical habitat. *Presence/absence surveys, Section 7 or 10 consultation, and coordination with the USFWS are not included in this scope of work. Should Section 7 or 10 consultation be required, a supplemental work authorization with an additional scope of work and budget will be needed.*

A draft Habitat Assessment Technical Report will be submitted to the City for review. The Engineer will respond to up to one (1) round of review comments from the City. After addressing the City's review comments, a final report will be submitted to the City for inclusion in the project record.

Supplemental Services (to be used only if authorized)

1. Prepare a USACE Nationwide Permit (NWP) 14 for Transportation projects. A Pre-construction Notification (PCN) would be prepared to USACE Fort Worth District Standards and include necessary documentation for compliance and issuance of a Section 404 permit. Submission and coordination with USACE would be completed and permit obtained for project construction. This would include completion of TxRAM process for functional assessments of the water/wetlands that may be impacted.

III. PLANS, SPECIFICATIONS & ESTIMATE

The engineer will develop and submit Plans, Specifications & Estimates (PS&E) plans at levels consistent with and required for City 60%, 90%, and final 100% plans.

A. ROADWAY DESIGN CONTROLS *(provided by STV)*

1. Miscellaneous Plans

- (a) A project title sheet will be prepared as required for the construction plans.
- (b) A detailed index of sheets will be prepared that shows each sheet's location in the plan set, as well as its corresponding sheet number. This index will be updated throughout the submittal process to allow for easier reference during the review process.
- (c) Project layout sheets will be prepared at a scale of 1"=200' that clearly indicates the limits of the entire project.
- (d) Benchmark layout sheets will be completed at a scale of 1"=200' that clearly indicate the benchmark locations and associated control information. These sheets will later be sealed by a RPLS for submittal.

2. Roadway Plans & Geometry

- (a) Existing typical sections will be completed depicting the existing conditions of Pleasanton Pkwy.
- (b) Proposed typical sections will be completed depicting Melber Ln. The proposed typical sections are intended to show the general cross-sectional configuration of the roadway in logical sections, and will be prepared to the appropriate level of detail and limits to convey that general information.
- (c) A horizontal alignment data sheet will be prepared depicting the horizontal geometric information for the project roadways to be included in the construction plan set.
- (d) Melber Ln plan and profile sheets shall be completed depicting the proposed construction. The plan and profile sheets will be prepared at a scale of 1"=100' H and 1"=10' V.
- (e) Cameron Rd plan and profile sheets shall be completed depicting the proposed construction. The plan and profile sheets will be prepared at a scale of 1"=100' H and 1"=10' V.
- (f) Supplemental grading sheets will be prepared at a scale of 1"=50' for areas of the project that require additional grading information for construction or review purposes.
- (g) The Engineer shall provide plan sheets of removals at a scale of 1"=100'. Removal sheets shall clearly identify the disposition of roadway appurtenances. Description of removal items, including material, shall be included.
- (h) Miscellaneous roadway detail sheets will be developed for the project. The sheets will depict details required that are not defined in standard detail sheets.

3. Grading and Details

- (a) Design cross sections will be completed at 50-foot stations and other locations as necessary for the determination of cut and fill quantities. These sections will also be used to further refine the design vertical geometry. Cut and fill quantities determined from the design cross sections will be shown on the plan/profile sheets. Cross sections will not be developed as a deliverable for phased TCP.
- (b) The Engineer shall complete intersection layouts for one (1) intersection/location. The intersection layout will include the design of the pavement layouts, as well as other pertinent details not discernable elsewhere in the plans.
- (c) Driveway details will be prepared for each driveway along the project limits. When possible these driveways will be defined in a tabular format. Non-typical driveways may require special details.

The Engineer will develop driveway profiles as required for the project. These profiles will be developed to show driveway tie-back slopes, as well as limits for the contractor's information

4. Design Criteria Report

- (a) Prepare a Design Criteria Report documenting roadway classification, design speeds, traffic assumptions, controlling criteria, design exceptions, and design waivers.
- (b) Submit DCR for City review and approval prior to advancement to final PS&E.

B. DRAINAGE DESIGN *(provided by STV)*

(1) Hydrology Plans. Perform a hydrologic analysis to size a storm sewer system and to evaluate the need for detention ponds to attenuate peak flows in accordance with the City of Pflugerville Engineering Design Manual. It is assumed that the largest off-site contributing basin will be less than 200 acres. The storm sewer hydrology will be based on the rational method and the detention pond design will be based on the NCRS hydrograph method. The Engineer will calculate the increase in peak discharge and runoff volume associated with the proposed improvements in accordance with the City of Pflugerville Engineering Design Manual.

1. Hydrologic Calculation Sheets (up to 2 sheets). This will contain drainage area and time of concentration calculations.

2. External Drainage Area Maps (up to 5 sheets). It is assumed that external drainage areas will be estimated using publicly available GIS elevation data. Exterior drainage area maps will be finalized at a scale reasonable to fit drainage areas on an 11x17 plan sheet. These maps will depict drainage area boundaries and flow direction arrows. Each area will be identified with a unique number to be used to find run-off information from the calculation sheets.

3. Internal Existing Drainage Area Maps (up to 16 sheets). Interior drainage area maps will be finalized at a scale of 1"=50'. These maps will depict drainage area boundaries and flow direction arrows. Each area will be identified and cross-referenced to the calculation sheets.

4. Internal Proposed Drainage Area Maps (up to 16 sheets). Interior drainage area maps will be finalized at a scale of 1"=50'. These maps will depict drainage area boundaries and flow direction arrows. Each area will be identified and cross-referenced to the calculation sheets.

(2) Storm Sewer Drainage Plans. Design and prepare plans for a storm sewer system to service local runoff for Melber Lane improvements in accordance with the City of Pflugerville Engineering Design Manual. It is intended for the storm sewer model to be prepared and analyzed using OpenRoads Designer Drainage & Utilities or StormCAD/SewerGems. Drainage plan and profile sheets will be completed depicting locations of inlets, manholes, storm sewers, culverts, utilities, channel improvements and ditch locations and flowlines as required. Storm sewer profiles will show pipe size and type, slope, existing and proposed ground lines above the pipe, pertinent hydraulic information and locations and sizes of inlets and junctions. The Engineer will identify areas within the construction of the storm sewer and culvert construction that will require trench protection or special shoring.

1. Storm Sewer Calculation Sheets (up to 3 sheets). This will contain inlet, pipe/box, and manhole calculations.

2. Storm Sewer Plan & Profile Sheets, 1"=50' H and 1"=5' V (up to 15 sheets)

3. Storm Sewer Profile Sheets 1"=50' H and 1"=5' V (up to 5 sheets)

4. Miscellaneous Storm Sewer Details (up to 3 sheets). The Engineer shall provide drainage design details for "non-standard" drainage structures in instances where they are not covered by City standard details cannot be utilized. The Engineer shall use City standard details where practical.

(3) Detention Design and Details. The Engineer will determine the need for detention ponds to regulate the storm water runoff so the proposed runoff does not exceed the existing runoff peak discharges in accordance with the City of Pflugerville Engineering Design Manual. It is assumed that up to 2 detention ponds will be necessary and that they will be designed using earthen berms and concrete outfall structures.

1. Detention Pond Layouts for up to 2 ponds (2 sheets). The engineer will develop a Pond Layout at a scale suitable to show the entire facility on one (1) sheet. The pond layout shall show the overall dimensions of the pond, grading details, location of hydraulic structures, and access locations.

2. Detention Pond Section View Sheets (1 sheet each pond for a total of up to 2 sheets). These sheets will show section cut lines for their respective ponds.

3. Detention Pond Calculation Sheets (1 sheet each pond for a total of up to 2 sheets). These sheets will show hydrologic and hydraulic computations for their respective ponds.

4. Outflow Structure Details (1 sheet each pond for a total of up to 2 sheets). The engineer shall develop structural details for the single outlet structure for the assumed ponds.

5. Miscellaneous Pond Details (1 sheet each pond for a total of up to 2 sheets). These sheets will show additional details for the ponds beyond the layout, section views, computations, or outlet structures

D. RETAINING WALL DESIGN

- (a) Perform structural design of retaining walls identified during schematic development.
- (b) Develop retaining wall plans, profiles, details, and quantities.
- (c) Prepare retaining wall calculations and design summary.
- (d) Incorporate retaining wall specifications into the PS&E package.

E. BRIDGE DESIGN *(provided by STV)*

1. Preliminary Engineering

- (a) Prior to preparation of the bridge layout, the Engineer shall prepare a comparative cost analysis of bridge structures to determine the optimum bridge type and structure length.

2. Bridge Layout and Typical Sections

Two bridges over Wilbarger Creek are anticipated as part of this project. Bridge lengths are approximately 1200 ft and 850 ft with constant width on curved and tangent alignment. Substructure may be skewed to match direction of stream flow. It is also assumed that the bridge design will be completed in single phase construction and will utilize prestressed concrete beam elements on conventional reinforced concrete substructure elements.

The Engineer will prepare a preliminary and final bridge layout for each bridge. The Engineer will perform preliminary and final bridge geometry calculations as part of the work for generating the bridge layouts.

The Engineer will prepare a 3D bridge model for each bridge.

3. Bridge Design and Details

The Engineer will perform the following tasks for each bridge:

- (a) Assembly of bridge quantities and bearing seat elevations and originating necessary plan sheets showing this information.
- (b) Design and detailing of abutments.
- (c) Design and detailing of interior bents.
- (d) Assembly of girder layouts with summary of girder framing information.
- (e) Design and detailing of slabs and superstructure typical sections including girder design, camber and dead load deflection calculations.
- (f) Foundation design, including updating of the bridge layouts for foundation information and developing foundation layouts. Includes review of geotechnical reports and coordination with the geotechnical engineer.

4. Bridge Standards and Specifications

- (a) Select appropriate TxDOT statewide bridge standards for use in the plan set.
- (b) Complete IGND sheet with girder design information for all bridges.
- (c) Modify, as needed, TxDOT statewide bridge standards for use in the plan set.
- (d) Origination of necessary special or modified specifications applicable to bridge construction.

5. Estimate

- (a) An opinion of probable construction cost will be prepared for the bridges at the 30%, 60%, 90% and prior to final PS&E submittal in Microsoft Excel format.

F. SIGNING AND PAVEMENT MARKINGS *(provided by STV)*

1. Small Signing and Pavement Markings

- (a) Signing and Pavement marking layouts will be prepared at a scale of 1"=100'. Road signs and markings will be shown all on the same plan sheet. These layouts will depict striping and delineator type and location, as well as MBGF location, lengths, and end treatments. Each sign will have a corresponding number for cross-reference to the sign summaries.
- (b) Pavement marking details will be prepared for non-standard conditions.
- (c) Detail sheets for small signs will be prepared for non-standard signs. This sheet is intended to show the overall dimensions of the signs by determining letter size and spacing. Details will not be to scale.

G. ILLUMINATION *(provided by STV)*

- 1. The Engineer will design continuous and safety lighting along the project corridor. The lighting will be shown on illumination layouts. Illumination layout sheets will be prepared at a scale of 1"=100'.
- 2. The Engineer will provide electrical circuit plans and details for the roadway lighting systems within the project limits.
- 3. The Engineer will provide current illumination standards, electrical services summary and illumination quantity summary.
- 4. The Engineer will coordinate with the City in identifying power sources, conduit runs and will show them on the project plans. The Engineer shall identify potential overhead utility conflicts and coordinate with the utility company to help resolve the conflicts.
- 5. Small Signing and Pavement Markings

H. MISCELLANEOUS ROADWAY *(provided by STV)*

1. Traffic Control Plan

- (a) Traffic control typical sections will be prepared for each stage of the construction sequence to clearly delineate the position of the existing traffic with respect to the proposed construction. Temporary traffic barriers and pavement markings will also be shown and dimensioned.
- (b) The Engineer will develop overview plans for each stage of traffic control. These plans will act as key maps for each phase of TCP and shall be developed at a 1"=400' scale.
- (c) The Engineer will prepare 1"=400' plan layouts of all advance warning signs for Cameron Rd.
- (d) A detailed narrative for the sequence of construction and traffic control general notes will be prepared and submitted to the City for review and incorporation into the plans. The narrative will include a phase-by-phase, step-by-step written account of the proposed activities throughout the construction process. This is intended to be a narrative account of the activities shown in the traffic control plan layouts.
- (e) Detailed traffic control plans will be prepared at a scale of 1"=100'. This plan will describe the maintenance of traffic and sequence of work for each phase of the proposed construction. Detour alignments, location of work areas, temporary paving, temporary shoring, signing, barricades and other details will be required to describe the traffic control plan. The Engineer will be required to ensure that proper drainage can be maintained during each phase of construction.
- (f) Traffic control details will be developed for items not covered by City of Pflugerville or TxDOT standard details.
- (g) An Engineer's opinion of construction schedule will be computed in order to determine an approximate duration for each of the phases of construction. The schedule will be prepared using Microsoft Project.

I. QUANTITIES AND SUMMARY SHEETS *(provided by STV)*

1. Quantities

Quantities will be tabulated for each of the following and as necessary to bid this project:

- (a) Traffic Control (per each phase)
- (b) Earthwork

- (c) Roadway
- (d) Removal
- (e) Drainage
- (f) Bridges
- (g) Retaining Walls
- (h) Culverts (not included)
- (i) Small Signs
- (j) Pavement Markings
- (k) Illumination
- (l) Utilities
- (m) Erosion Control and SW3P

2. Summary Sheets

Quantities that are calculated will be tabulated on individual summary sheets for inclusion in the construction plan set:

- (a) Traffic Control (per each phase)
- (b) Earthwork
- (c) Roadway
- (d) Removal
- (e) Drainage
- (f) Bridges
- (g) Retaining Walls
- (h) Small Signs
- (i) Pavement Markings
- (j) Illumination
- (k) Utilities
- (l) Erosion Control
- (m) SW3P Development
 - (i) Prepare Storm Water Pollution Prevention Plan (SW3P).
 - (ii) Develop temporary erosion and sediment control plans.
 - (iii) Prepare BMP details and sequencing requirements.
 - (iv) Support preparation of required construction stormwater permit documentation

J. STANDARDS, SPECIFICATIONS, ESTIMATES AND BID DOCS *(provided by STV)*

1. Standards, Specifications and Estimate

- (a) The Engineer will download the appropriate standards for the project from the City of Pflugerville and TxDOT's web site. Standards that require modification will be corrected and sealed by the Engineer. All other standards will have their title blocks filled out with the applicable project data and printed for inclusion in the final plan set.
- (b) A tabulation of applicable specifications, special specifications and special provisions will be prepared for submission with the final PS&E package.
- (c) The Engineer will review general notes provided by the City for applicability to the project. The Engineer will mark-up a set and return it to the City for their inclusion in the final plan set. The Engineer will work with the City to complete the basis of estimate prior to beginning quantity calculations.
- (d) An opinion of probable construction cost will be prepared at the 30%, 90% and prior to final PS&E submittal, and supplied to the City in Microsoft Excel format. Opinion of probable cost will also be broken out for each bridge class structure.

2. Bid Documents

- (a) The Engineer will prepare contract bid documents and proposals and make them available in electronic format (PDF) as well as hard copy for the City's use.

IV. SURVEYING SERVICES

A. PROJECT CONTROL SERVICES *(provided by STV)*

The Surveyor will attempt to recover and utilize City of City of Pflugerville NAD-83/93 (HARN) NAVD 88 datum, Texas State Plane Coordinate System, Texas Central Zone primary control monuments for this project unless requested to use another source of datum. In the case that the control has been destroyed the Client will be notified immediately. This scope and fee do not include effort to re-establish destroyed control. A Global Positioning System (GPS) and conventional land surveying methods will be used to establish additional project control if needed. These methods will also be used to perform the various tasks of this project.

B. DATA COLLECTION AND PROPERTY RESEARCH *(provided by STV)*

The Engineer will do the necessary research in order to obtain all of the deeds and plats along the proposed project to help us establish the applicable boundaries or right-of-way.

C. DESIGN SERVICES *(provided by STV)*

1. 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.
2. The Surveyor shall establish or densify additional secondary control as needed for the project to collect data along the length of the project.
3. 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. The surveyor shall set two (2) brass discs for GPS points at both ends of the project.
4. The Surveyor shall perform differential leveling through the project control (primary and secondary) to establish or extend vertical control for the project.
5. The project limits for surveying shall be the proposed alignment of Melber Ln to from Cameron Road to Pleasanton Parkway (approx. 5000-LF) and the realignment of Cameron Road (approx. 4000-LF).
6. The Surveyor shall perform a topographic/design survey within the project limits. The topographic/design survey includes, but is not necessarily limited to: roadway, ditches, major grade breaks, culverts, culvert types and sizes, metal beam guard fence, fences, driveways, mailboxes, traffic and other signs, striping, and visible above ground utilities.
7. The Surveyor shall survey side streets within the project limits to a distance of 100' from the intersection road or far enough to establish drainage.
8. The Surveyor shall survey driveways within the project limits to a distance of 20' from the proposed alignment or far enough to establish drainage.
9. The Surveyor shall provide digital photograph of each end of each cross road drainage structures located within the project limits.
10. The Surveyor shall process the collected information into a 1 foot contour DTM file utilizing Geopak V8i.
11. The Surveyor shall locate right-of-way monumentation and other evidence to reestablish the existing right-of-way lines for Melber Ln and Cameron Road and intersecting roads and adjacent parcels within the limits of survey. This is not to be construed as boundary surveying at this time nor is it considered taxable for the purposes intended at this time.
12. The Surveyor shall set project control (N, E, Elev.) in such manner to reasonably assure the control will survive construction.
13. The Surveyor shall locate trees that 8 inches in diameter and larger, and note the size, species and canopy area if different than a standard canopy area.

D. UTILITIES

1. Subsurface Utility Engineering (SUE) *(provided by STV)*

- (a) The project consists of providing Quality Level (QL)-B on the existing utilities. QL-C and QL-D services are inclusive with the QL-B product.

- (b) Provide QL-B services for the various utilities noted on the site visit for preparing this scope of services with associated fees. The various utilities noted are: water, natural gas pipelines, telephone communications (cable and fiber optic) and electrical. This scope of services is based upon the effort to provide SUE services for these utility systems: approximately 12,700 LF of underground utilities and 5,000 of overhead electric (distribution and transmission).
 - (c) Utility services from the main utility to the right-of-way to service a lot or structure are not included within this scope of service nor the estimated utility linear footage previously shown.
 - (d) Identify and map the existing utility facilities located on existing utility poles within the project limits.
 - (e) Definitions:
 - (i) Quality Service Level D (QL-D) – This level of service consists of collecting existing utility record information (as-built) from utility purveyors, municipalities, counties and other agency suppliers within the area of investigation. Contact the TxDOT Permit Office to obtain available records of any utility crossing IH 35 within the project limits.
 - (ii) Quality Service Level C (QL-C) –This level of service consists of surveying and obtaining accurate horizontal position of visible utility surface features associated with the project area to be designated by the Engineer.
 - (iii) Quality Service Level B (QL-B Designating Services) – Designate is to indicate, by marking with paint, the presence and approximate horizontal location of subsurface utilities using geophysical prospecting techniques, including, without limitations, electromagnetic, sonic, and acoustical techniques.
 - (iv) Quality Service Level A (QL-A Locating (Test Hole) Services) – Locating services is to locate the accurate horizontal and vertical position of subsurface utilities by excavating a test hole using vacuum excavation techniques and equipment that is non-destructive to utilities.
 - (f) The Engineer will develop a contact list of the affected utility owners in the project corridor.
 - (g) The Engineer will contact each utility company and meet individually with them to review their assumed utility locations developed from the SUE process. The Engineer shall attend the City monthly coordination meetings, as necessary for coordination. It is assumed up to three (3) meetings.
 - (h) The Engineer will prepare scroll plots indicating researched utility locations to provide to utility companies / owners for their review and comment.
2. Utility Coordination (*provided by Cobb, Fendley & Associates*)
- 3.
- (a) 30% Design Phase
 - (i) Develop Utility Contact List. Utility Coordinator will establish contact with existing utility companies within and adjacent to the project area and create a utility contact list. This list will be maintained throughout the project.
 - (ii) As-builts/Records Research. Utility Coordinator shall contact all known utility providers in and adjacent to the project area and request maps and/or as-builts of their existing facilities. Utility Coordinator will make a site visit for additional field verification.
 - (iii) Project Team Meeting. Utility Coordinator shall attend a project team meeting to identify utilities and assist in minimizing utility impacts. This meeting will include meeting preparation, travel time, and meeting minutes.
 - (iv) Existing Utility Layout. Utility Coordinator shall create an existing utility layout in the latest version of MicroStation V8 or AUTOCAD using base topo and proposed roadway files provided by STV and Subsurface Utility Engineering (SUE) provided by *The Wallace Group*. This layout shall be in a strip map format (1"=100') and include all existing utilities in relation to proposed roadway alignment to assist in conflict assessment, monitor necessity of relocation and evaluate alternatives.
 - (v) 30% Conflict Assessment. Utility Coordinator shall update the preliminary conflict assessment and determine which utilities will conflict with roadway construction and City or County guidelines based on the 30% design plans and make the utility company aware of these conflicts. Utility Coordinator will be reviewing direct conflicts with proposed roadway improvements, constructability conflicts, and conflicts with current rules/guidelines.
 - (vi) Initial Project Notification Letters. Utility Coordinator will prepare and mail written notification letters to all known Utility Owners within and adjacent to the project site.

- (vii) Evaluate Relocation Alternatives. Utility Coordinator will evaluate alternatives in the adjustment of utilities balancing the needs of both the City and the Utility. Evaluation will include preparing high-level estimate of reimbursable utility adjustments anticipated on the project
 - (viii) Utility Coordination Meetings (up to 8 Individual Utility Meetings). Utility Coordinator shall establish contact with up to four (8) utility owners within the project corridor and set up individual utility coordination meetings to discuss proposed roadway alignment. This meeting will include meeting preparation, travel time, meeting and follow-up meeting minutes. Utility Coordinate will set agenda for all coordination meeting as directed by the *City* and *STV*.
 - (ix) Utility Agreements: Will coordinate with reimbursable utility owners to prepare utility agreements. City to provide standard utility agreement forms.
 - (x) Coordinate Reimbursable and Non-Reimbursable Adjustment Forms. If a utility is located within an easement, the utility company may have a compensable interest. The utility company must furnish a copy of their easement document. Utility Coordinator will coordinate with the City to determine appropriate agreement forms and permits to be used on this project for both reimbursable and non-reimbursable utility adjustments. The City to provide appropriate agreement forms and permits to be used on the project. The relevant project information will be filled in by the Utility Coordinator on the agreed upon forms and forwarded on to each respective utility impacted on the project to review/use.
- (b) 60% Design Phase
- (i) Project Team Meeting. Utility Coordinator shall attend project team meeting to assist in minimizing utility impacts and discuss alternatives. This meeting will include meeting preparation, travel time, and meeting minutes.
 - (ii) Updates to Existing Utility Layouts. Utility Coordinator shall update the existing utility layout in the latest version of Microstation V8 using the base topo files and 60% design files provided by STV. This layout will be utilized to assist in conflict assessment, monitor necessity of relocations and evaluate alternatives.
 - (iii) 60% Conflict Assessment. Utility Coordinator shall update the 30% conflict assessment and determine which utilities will conflict with roadway construction and City or County guidelines based on the 60% design plans and make the utility company aware of these conflicts. Utility Coordinator will be reviewing direct conflicts with proposed roadway improvements, constructability conflicts, and conflicts with current rules/guidelines.
 - (iv) Provide Proposed Utility Assignments. Utility Coordinator will provide proposed utility assignments to relocating utilities.
 - (v) Utility Agreements (2 Agreements): Will coordinate with reimbursable utility owners to prepare and execute utility agreements. City to provide standard utility agreement forms.
 - (vi) 60% Utility Coordination Meeting (1 group meeting). Utility Coordinator shall establish contact with existing utility companies within and adjacent to the Project and set up a 60% Utility Coordination Meeting to discuss proposed roadway alignment, potential utility conflicts, and proposed mitigation measures. This meeting will include meeting preparation, travel time, meeting and follow-up meeting minutes. Utility Coordinate will set agenda for all coordination meeting as directed by the City and STV.
 - (vii) Coordinate Reimbursable and Non-Reimbursable Adjustment Forms (up to 2). Utility Coordinator will continue coordination with Utility Owners on required agreement forms and permits for both reimbursable and non-reimbursable utility adjustments. Utility Coordinator will assist Utility Owner with preparing agreement forms.
- (c) 90% Design Phase
- (i) Project Team Meeting. Utility Coordinator shall attend project team meetings to discuss utility relocation design and schedules to assist in project scheduling and sequencing. This meeting will include meeting preparation, travel time, and meeting minutes.
 - (ii) Updates to Existing Utility Layouts. Utility Coordinator shall update the existing utility layout in the latest version of Microstation V8 using the base topo files and 90% design files provided by STV. This layout will be utilized to assist in conflict assessment, monitor necessity of relocations and evaluate alternatives.
 - (iii) 90% Conflict Assessment. Utility Coordinator shall update the 60% conflict assessment and confirm which utilities will conflict with roadway construction and City or County guidelines based on the 90% design plans and make the utility company aware of these conflicts. Utility Coordinator will be reviewing direct conflicts with proposed roadway improvements, constructability conflicts, and conflicts with current rules/guidelines.

- (iv) Relocation Plan Review (Up to 16 reviews). Utility Coordinator will review and approve relocation plans provided by the utilities. Review utility relocation plans for consistency with roadway design and construction phasing.
- (v) Utility Agreements (2 Agreements): Will coordinate with reimbursable utility owners to prepare and execute utility agreements. City to provide standard utility agreement forms.
- (vi) Utility Coordination Meetings (up to 8 Individual Utility Meetings). Utility Coordinator shall establish contact with four (8) utility owners with most significant relocations on the project corridor and set up individual utility coordination meetings to discuss relocation design, construction and clearance dates. This meeting will include meeting preparation, travel time, meeting and follow-up meeting minutes. Utility Coordinate will set agenda for all coordination meeting as directed by the *City* and *STV*.
- (vii) Coordinate Reimbursable and Non-Reimbursable Adjustment Forms (up to 2). Utility Coordinator will continue coordination with Utility Owners on required agreement forms and permits for both reimbursable and non-reimbursable utility adjustments. Utility Coordinator will assist Utility Owner with preparing and submitting agreements and permits.
- (d) 100% Design Phase
 - (i) Project Team Meeting. Utility Coordinator shall attend project team meetings to discuss utility relocation status and clearance date to assist in project bidding. This meeting will include meeting preparation, travel time, and meeting minutes.
 - (ii) Updates to Existing Utility Layouts. Utility Coordinator shall update the existing utility layout in the latest version of Microstation V8 using the base topo files and 100% design files provided by *STV*. This layout will be utilized to assist in conflict assessment, monitor necessity of relocations and evaluate alternatives.
 - (iii) 100% Conflict Assessment. Utility Coordinator shall update the 90% conflict assessment and confirm no new conflicts with roadway construction and City or County guidelines based on the 100% design plans and make the utility company aware of any new conflicts. Utility Coordinator will be reviewing direct conflicts with proposed roadway improvements, constructability conflicts, and conflicts with current rules/guidelines.
 - (iv) Relocation Plan Review (Up to 8 reviews). Utility Coordinator will review and approve relocation plans provided by the utilities. Review utility relocation plans for consistency with roadway design and construction phasing.
 - (v) Utility Agreements (2 Agreements): Will coordinate with reimbursable utility owners to prepare and execute utility agreements. City to provide standard utility agreement forms.
 - (vi) 100% Utility Coordination Meeting (1 group meeting). Utility Coordinator shall establish contact with existing utility companies within and adjacent to the Project and set up a 100% Utility Coordination Meeting to discuss proposed roadway alignment, potential utility conflicts, and proposed mitigation measures. This meeting will include meeting preparation, travel time, meeting and follow-up meeting minutes. Utility Coordinate will set agenda for all coordination meeting as directed by the *City* and *STV*.
 - (vii) Coordinate Reimbursable and Non-Reimbursable Adjustment Forms (up to 2). Utility Coordinator will continue coordination with Utility Owners to review and secure required agreement forms and permits for both reimbursable and non-reimbursable utility adjustments.
 - (viii) Obtain utility relocation schedules from all affected utility owners.
 - (ix) Track utility relocation progress and identify critical path impacts.
 - (x) Prepare Utility Clearance Certification documenting utility readiness for project advertisement.
 - (xi) Verify all utility conflicts have been resolved prior to final PS&E submittal.
- (e) Construction Phase
 - (i) Utility Coordinator shall assist the *City* & *STV* with addressing utility questions during construction
 - (ii) Biweekly meetings with City's ROW permit staff to coordinate utility construction (up to 20 meetings)
- (f) Project Management
 - (i) Utility Coordinator shall prepare and submit bi-weekly progress summary reports itemizing Utility Coordination activities completed during that period and upcoming tasks (up to 20 email updates)
 - (ii) Utility Coordinator shall prepare monthly summary report and invoice (up to 10 months)

Excluded Services: The following services are not included with this proposal. If requested, they can be performed as an additional service.

- Coordination during schematic phase

- Individual utility meetings at 60% and 100%
- Survey and Subsurface Utility Engineering services
- Utility relocation design services
- Review and processing Utility Payment Requests
- Utility adjustment monitoring and verification

V. PROJECT MANAGEMENT

A. PROJECT MANAGEMENT *(provided by STV)*

1. Create and submit monthly invoices suitable for payment by the City. (22 months)
2. Prepare monthly progress reports for submission with the monthly invoices to provide a written account of the progress made to date on the project. (22 months)
3. Meet formally biweekly with the City to review project progress. (22 months)
4. Prepare project meeting summaries for applicable meetings during the project development process. (22 months)
5. The Engineer will have internal meetings with the consultant design team every two weeks for the length of the project. It is assumed that these meetings will include key personnel from each discipline and will be required to discuss and resolve project issues.
6. The Engineer shall prepare and execute contracts with sub-consultants, monitor sub-consultants activities (staff and schedule), complete monthly reports and review and recommend approval of sub-consultant invoices.
7. Coordinate and review subconsultant work activities and submittals. The Engineer will review and coordinate work of sub-consultants to ensure quality products are delivered to the City. The Engineer will also be responsible for the consistency and coordination between plans developed by each sub-consultant on the design team.
8. The Engineer shall formally close out the project and perform a documented archive process.

Deliverables:

- Monthly invoices and progress reports (22)
- Meeting minutes/summaries (22 months)
- Project schedule updates

VI. BID AND CONSTRUCTION PHASE SERVICES

A. BID PHASE SERVICES

1. The Engineer will coordinate with the City in all aspects of the Bid Package including but not limited to answering prospective bidder questions and preparing addenda as necessary.
2. The Engineer will attend one pre-bid meeting.
3. The Engineer will assist the City at contract bid opening.
4. The Engineer will tabulate the bids, research low bidder and make a recommendation of award to the City.

B. CONSTRUCTION PHASE SERVICES

1. Create and submit monthly invoices suitable for payment by the City. (30 months)
2. The Engineer shall attend the pre-construction meeting.
3. The Engineer shall attend up to thirty (30) construction meetings as requested by the City.

4. The Engineer shall provide Construction Support Services at the written request of the City project manager. The written request shall include a description of the work requested, a mutually agreed upon time limit, a mutually agreed upon level of effort, a defined deliverable and any special instructions for coordination and submittal. These services shall include, but are not limited to the following:
 - Responding to requests for information (RFIs)
 - Providing redesign as directed by the City for Change orders and documentation
 - Other project related tasks in support of the City during construction

The Engineer shall provide minor redesign as requested by the City project manager. In the event that revisions are requested, and the work is considered to be additional to that set forth on the original contract or scopes of work, the Engineer shall prepare a budget and a schedule for the additional work requested. The Engineer shall not commence work on a task prior to receiving written approval by the City.

5. Review the Application for Payment and supporting documentation submitted by the Contractor, recommended to the Owner the amount that the Contractor is to be paid on monthly estimates as required by the Construction Contract. A fifteen (30) month construction schedule is assumed.

Such recommendation for payment to the Contractor shall not be a representation that the Engineer:

- (a) has made exhaustive or continuous on-site observations to check the quality or quantity of the Contractor's work,
 - (b) has reviewed construction means, methods, techniques, sequences, or procedures,
 - (c) has reviewed copies of invoices received from subcontractors, material suppliers or other data requested by the Owner to substantiate the Contractor's right to payment,
 - (d) has ascertained how or for what purpose the Contractor has used monies previously paid by the Owner, or
 - (e) has determined that title to any of the Contractor's work has passed to the Owner free and clear of any liens, claims, security interests or encumbrances.
6. Upon notice from the Contractor that the Contractor's work is ready for its intended use, conduct, in company with the Owner's representative and the Contractor, an inspection to determine if the work is substantially complete. If the Owner and the Engineer consider the work substantially complete, issue a certificate of substantial completion containing a list of required tasks for the Contractor to complete prior to issuance of certificate of final completion. Conduct a final inspection together with the Owner and the Contractor to determine if the work has reached final completion so that the Engineer may recommend final payment to the Contractor. If appropriate, make recommendations to the Owner for final payment to the Contractor.
 7. Provide shop drawing review. The shop drawing submittals will be limited to those specifically called for in the construction contract documents (plans, standard specifications, special provisions to the standard specifications and special specifications). Such reviews will not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions and programs incident thereto.
 8. An engineer's concurrence letter and 11"x17" record drawings (one hard copy and a digital copy on CD) will be submitted to the Public Works Department. The Engineer and Contractor shall verify that all final revisions and changes have been made to the Mylar and digital copy prior to City submittal. Record construction drawings shall be provided to the City in digital format as AutoCAD ".dwg" files, MicroStation ".dgn" files or ESRI ".shp" files as well as PDF ".pdf" on CD. The set of Record Drawings, which are stamped by the Engineer, shall be the sole documents relied upon by the Owner as a reflection of the condition of the project location after completion of the construction activities.

EXHIBIT 1 - FEE SUMMARY FOR PROFESSIONAL SERVICES

Lump Sum Basis

Melber Lane
Cameron Road to Pleasanton Parkway
City of Pflugerville

Task Description	Total Cost
TOTAL LABOR COSTS	
I. ROUTE AND DESIGN STUDIES	
Data Collection; Alignment Study; Schematic Project Layout STV	\$ 25,793.20
Geotechnical Services; Pavement Design Corsair	\$ 160,222.38
Traffic Engineering Verification and Design Traffic Memo STV	\$ 24,595.20
Hydrology & Hydraulics; Water Quality STV	\$ 198,096.40
I. ROUTE AND DESIGN STUDIES Subtotal	\$ 408,707.18
II. SOCIAL, ECONOMIC & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT*	
Environmental Studies & Public Involvement STV	\$ 35,416.00
Cultural Resources; Intensive Arch Survey and Assessment Horizontal Environmental Services	\$ 19,750.00
II. SOCIAL, ECONOMIC & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT* Subtotal	\$ 55,166.00
III. PS&E	
Roadway Design Controls STV	\$ 179,915.60
Drainage STV	\$ 234,645.60
Bridge STV	\$ 254,248.40
Signing and Pavement Markings STV	\$ 30,358.40
Illumination STV	\$ 84,268.80
Miscellaneous Roadway STV	\$ 75,934.40
Quantities and Summary Sheets STV	\$ 100,256.80
Standards, Specifications, Estimates and Bid Docs STV	\$ 47,667.20
III. PS&E Subtotal	\$ 1,007,295.20
IV. SURVEYING	
Ground Survey; Project Controls STV	\$ 38,855.00
SUE STV	\$ 38,776.00
Utility Coordination Cobb Fendley	\$ 171,642.00
IV. SURVEYING Subtotal	\$ 249,273.00
V. PROJECT MANAGEMENT	
STV	\$ 94,304.00
V. PROJECT MANAGEMENT Subtotal	\$ 94,304.00
VI. BID AND CONSTRUCTION PHASE	
STV	\$ 120,548.80
VI. BID AND CONSTRUCTION PHASE Subtotal	\$ 120,548.80
SUBTOTAL LABOR EXPENSES	\$ 1,935,294.18
TOTAL EXPENSES	
STV	\$ 658.00
Cobb Fendley	\$ 646.90
Corsair	\$ 3,880.00
	0.00
SUBTOTAL EXPENSES	\$ 5,184.90
SUMMARY	
STV	\$ 1,584,337.80
Cobb Fendley	\$ 172,288.90
Corsair	\$ 164,102.38
Kimley-Horn	\$ 24,595.20
Horizon Environmental Services	\$ 19,750.00
GRAND TOTAL - Lump Sum Services	\$ 1,940,479.08

EXHIBIT 1 - FEE SUMMARY FOR PROFESSIONAL SERVICES

Lump Sum Basis

Melber Lane Cameron Road to Pleasanton Parkway City of Pflugerville													
Fee Schedule/Budget for STV, Inc.													
Task Description	Project Manager	Sr. Structural Engineer	Senior Engineer	Structural Engineer	Design Engineer	E.I.T.	Chief Hydrologist	Senior CADD Operator	CADD Operator	GIS Specialist	Environ Manager	Total Labor Hours	Total Direct Labor Costs
	\$336.00	\$280.00	\$274.40	\$210.00	\$170.80	\$128.80	\$205.00	\$185.00	\$152.00	\$105.00	\$195.00		
I. ROUTE AND DESIGN STUDIES													
A Data Collection													\$ -
B Alignment Study													\$ -
C Geotechnical Investigations													\$ -
Services to be provided by Corsair													\$ -
D Schematic Layout Development													\$ -
D0 Develop roadway design criteria and compile spreadsheet													\$ -
D1 Calculate horizontal geometrics for project roadways	1		2		8	12		8				30	\$ 4,780.80
D2 Calculate vertical geometrics for project roadways	1		1		6	12		8				27	\$ 4,164.80
D3 Develop existing and proposed typical sections													\$ -
D4 Develop schematic cross sections at 100' intervals	1		4		10	20						34	\$ 5,381.60
D5 Determine retaining wall limits	1		1		2	4						7	\$ 1,131.20
D7 Develop conceptual traffic control plan													\$ -
D8 Develop proposed pavement edges	1		2		4	10		6				22	\$ 3,510.00
D9 Develop engineer's opinion of probable cost	1		2		2	10						14	\$ 2,178.40
D10 Prepare Schematic Layout plots of corridor	2		4		4	12		8				28	\$ 4,648.40
												162	\$ 25,793.20
E Traffic Engineering Verification and Design Traffic Memo													\$ -
Confirm design traffic volumes from data available	-	-	4	-	8	12	-	-	-	-	-	24	\$ 4,009.60
Develop Traffic Maps with volumes	2	-	2	-	8	16	-	-	-	-	-	28	\$ 4,648.00
Verify intersection geometrics and turn lane storage (Synchro)	2	-	6	-	12	24	-	-	-	-	-	44	\$ 7,459.20
Technical Memo Draft	2	-	12	-	8	8	-	-	-	-	-	30	\$ 6,361.60
Technical Memo Final	1	-	4	-	4	-	-	-	-	-	-	9	\$ 2,116.80
												135	\$ 24,595.20
F Hydrology and Hydraulic Analysis													\$ -
a Survey coordination	1		2		8	16						27	\$ 4,312.00
bi Data collection - LOMR acquisition from FEMA	2		6			8						16	\$ 3,348.80
bit Site Visits / Field Observations (3)	1		2			12						15	\$ 2,430.40
Hydrology - flow-path analyses													\$ -
c Hydrology - Proposed runoff analysis			1		2	2						5	\$ 873.60
d Hydraulics													\$ -
di Wilbarger Crossings (1 crossing) (2 iterations each)	2		8		20	20						50	\$ 8,859.20
Gale Rd at Melber Lane crossing (1 crossing) (3 iterations each)													\$ -
Cale Rd at Melber Lane crossing (1 crossing) (3 iterations each)													\$ -
di Outlet at Melber and Cameron Rd (1 crossing) (2 iterations each)	1		8		20	20						49	\$ 8,523.20
Additional minor crossings not to exceed 3 crossings (3 iterations each)													\$ -
e Prelim Report													\$ -
Technical Write up	1		6		9	20						36	\$ 6,095.60
Drainage Area exhibits													\$ -
Prelim Sizing of Structure													\$ -
Determine Easements	1		8		10	20						39	\$ 6,815.20
Cost Estimate													\$ -
Prelim Layouts (5 crossings)													\$ -
Prelim Layouts minor culverts (3 crossings)													\$ -
Mitigation													\$ -
Assess grading for Wilbarger segments (1 crossing)	1		4		12	20						37	\$ 6,059.20
f Final Report													\$ -
Technical Write up	1		8		8	30						47	\$ 7,761.60
g CLOMR	40		80		80	80				40		280	\$ 63,560.00
gi FEMA LOMR Review Fee													\$ 6,500.00
gii Environmental Endangered Species Act Compliance										8	8		\$ 2,400.00
giii LOMR	20		40		60	60				40			\$ 39,872.00
giv FEMA LOMR Review Fee			2			8							\$ 8,000.00
h Scour			2									10	\$ 1,579.20
hi Scour Analysis			2		8	40						50	\$ 7,067.20
hii Scour Sheet					2	12						14	\$ 1,887.20
hiv Scour Countermeasure Design/Recommendations			6		4	24						34	\$ 5,420.80
hiv Scour Report			2			12						14	\$ 2,094.40
hv Reviews	4		12									16	\$ 4,636.80
												739	\$ 198,096.40
I. - SUBTOTALS													
HOURS SUB-TOTALS		90	0	241	0	319	544	0	30	0	90	1,435	
SUBTOTAL	\$ -	\$ 25,200.00	\$ -	\$ 50,610.00	\$ -	\$ 41,087.20	\$ 111,520.00	\$ -	\$ 4,560.00	\$ -	\$ 17,550.00		\$ 250,527.20

EXHIBIT D
FEE SCHEDULE
METHOD OF PAYMENT: LUMP SUM

SUBPROVIDER NAME: Corsair Consulting LLC

PROJECT NAME: Melber Lane

PROJECT CSJ:

TASK DESCRIPTION	SENIOR ENGINEER	DESIGN ENGINEER	ENGINEER IN TRAINING	ADMIN CLERICAL	TOTAL LABOR HRS.	TOTAL LABOR COST
FUNCTION CODE 102(110) – FEASIBILITY STUDIES						
ROUTE AND DESIGN STUDIES						
GEOTECHNICAL BORINGS AND INVESTIGATIONS						
Coordinate Soil Bore Locations/Utility Call-ins		4	8		12	\$1,631.32
Field Personnel During Drilling	5		100		105	\$13,514.40
Sample Classification, Laboratory Coordination and Boring Log Generation	15	30	55		100	\$15,369.85
Analysis and Design of Pavements	4		8		12	\$1,980.72
Analysis and Recommendations for Bridges and Walls	20	30	60		110	\$17,232.50
Preliminary Report Generation	15	25	50		90	\$13,943.95
Final Report Generation	10	15	25		50	\$8,003.00
Prepare Boring Log Sheets for Plan Set and Stamp	2		4		6	\$990.36
Invoicing/Admin	2			4	6	\$883.28
HOURS SUB-TOTALS	73	104	310	4	491	
CONTRACT RATE PER HOUR	\$249.88	\$162.53	\$122.65	\$95.88		
TOTAL LABOR COSTS	\$18,241.24	\$16,903.12	\$38,021.50	\$383.52		\$73,549.38
SUBTOTAL (FC 102(110))						\$73,549.38

for finalizing pr

UNIT COSTS	QUANTITY	RATE	UNIT			
Soil Boring/Rock Coring without TCP (<60 ft.)	660	\$57.00	LF			\$37,620.00
Soil Boring/Rock Coring without TCP (>60 ft.)	200	\$66.00	LF			\$13,200.00
Borehole Grouting - Bentonite Chips	860	\$16.50	LF			\$14,190.00
Mobilization of Drilling Rig	1	\$600.00	EACH			\$600.00
Soluble Sulfate Content	6	\$145.00	EACH			\$870.00
Atterberg Limits Tests	36	\$120.00	EACH			\$4,320.00
California Bearing Ratio	1	\$450.00	EACH			\$450.00
Standard Proctor Test	1	\$385.00	EACH			\$385.00
Moisture Content of Soil	170	\$35.00	EACH			\$5,950.00
Unconfined Compressive Strength (Soil)	12	\$90.00	EACH			\$1,080.00
Determining the Amount of Material in Soils Finer than the 78 micrometer (No. 200) sieve	36	\$72.00	EACH			\$2,592.00
Consolidated Undrained (CU) Triaxial Compression Test for Undisturbed Soils- Multiple Change	2	\$2,000.00	EACH			\$4,000.00
One Dimensional Consolidation Properties of Soil	2	\$708.00	EACH			\$1,416.00
SUBTOTAL UNIT COSTS						\$86,673.00
OTHER DIRECT EXPENSES	QUANTITY	RATE	UNIT			
Mileage	400	\$0.700	Mile			\$280.00
Backhoe Rental	3	\$1,200.00	day			\$3,600.00
Traffic Control Services, Arrow Boards and Attenuator trucks - Medium Project	0	\$3,000.00	day			\$0.00
SUBTOTAL DIRECT EXPENSES						\$3,880.00

10B Borings@€

mileage for logs
tree clearing m:

Exhibit D

Lump Sum Basis

Melber Lane From Cameron Road to Pleasonton Parkway City of Pflugerville											
Fee Schedule/Budget for CP&Y, Inc.											
Task Description	Project Manager	Senior Engineer	Environ Manager	Senior Environ Specialist	Environ Specialist	Senior Biologist	Biologist	GIS Specialist	Admin / Clerical	Total Labor Hours	Total Direct Labor Costs
	\$336.00	\$274.40	\$297.00	\$138.00	\$110.00	\$128.00	\$115.00	\$105.00	\$100.00		
<u>II. SOCIAL, ECONOMIC & ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT</u>											
A A. ENVIRONMENTAL SERVICES											
A1 Archeology	1		8							9	\$ 2,712.00
A2 Waters of the US/Wetlands	1		8	16		60	36	8		129	\$ 17,580.00
A3 Threatened and Endangered Species Habitat Assessment	1		8	16		48	28	8		109	\$ 15,124.00
II. - SUBTOTALS											
HOURS SUB-TOTALS	3	0	24	32	0	108	64	16	0	247	\$ 35,416.00
SUBTOTAL	\$ 1,008.00	\$ -	\$ 7,128.00	\$ 4,416.00	\$ -	\$ 13,824.00	\$ 7,360.00	\$ 1,680.00	\$ -		\$ 35,416.00

EXHIBIT 1 - FEE SUMMARY FOR PROFESSIONAL SERVICES													
Moiber Lane From Cameron Road to Pleasanton Parkway City of Pluggerville													
Fee Schedule/Budget for STV, Inc.													
Task Description	Project Manager	Sr Structural Engr	Senior Engineer	Structural Eng	Design Engineer	E.I.T.	Sr Eng Tech	Chief Hydrologist	Senior CADD Operator	CADD Operator	GIS Specialist	Total Labor Hours	Total Direct Labor Costs
	\$300.00	\$360.00	\$774.40	\$210.00	\$170.00	\$128.80	\$154.00	\$205.00	\$168.00	\$152.00	\$105.00		
II. PLANS, SPECIFICATIONS AND ESTIMATE													
A Roadway Design Controls													
A1 Miscellaneous Plans	-	-	-	-	-	-	-	-	-	-	-	5	-
a Title Sheet	1	-	-	-	-	1	2	-	-	-	-	4	1,172.40
b Index of Sheets	-	-	-	-	-	3	3	-	-	-	-	12	3,360.00
c Project Layout 1"=200'	1	-	-	-	-	9	18	-	-	-	-	24	7,662.00
d Benchmark Layout 1"=200'	2	-	-	-	-	4	12	-	-	-	-	20	5,900.00
A2 Roadway Plans & Geometry	2	-	-	-	-	-	-	-	-	-	-	2	550.00
a Existing Typical Sections	-	-	-	-	-	17	40	-	-	-	-	140	6,550.00
b Proposed Typical Sections	1	-	10	-	-	24	40	-	-	-	-	72	24,211.20
c Horizontal Curve Sheet	-	-	2	-	-	4	12	-	-	-	-	8	2,160.00
d Moiber Ln Plan & Profile Sheets 1"=100' H and 1"=10' V	4	-	16	-	24	80	-	-	80	40	-	244	39,477.60
e Cemetery Rd Plan & Profile Sheets 1"=100' H and 1"=10' V	1	-	2	-	4	20	-	-	8	16	-	50	8,411.20
f Supplemental Grading Sheets 1"=40'	1	-	8	-	8	16	-	-	16	-	-	48	9,568.40
g Removal Sheets 1"=100'	-	-	2	-	4	8	-	-	-	-	-	12	2,928.00
A3 Grading and Details	2	-	8	-	24	100	-	-	-	-	-	134	19,544.40
a 10' x 4' cross sections	-	-	-	-	24	100	-	-	-	-	-	134	19,544.40
b Intersection layout (3 locations) 1"=40'	1	-	1	-	8	64	-	-	40	24	-	138	20,468.00
c Curbways (length 1/2 driveway)	-	-	-	-	2	16	-	-	8	-	-	22	3,852.00
d Curbways (length 1/2 driveway)	-	-	-	-	2	16	-	-	8	-	-	22	3,852.00
e Miscellaneous roadway details	1	-	2	-	10	80	-	-	24	40	-	111	20,362.00
												1,163	179,115.60
B Drainage													
B1 Hydrology, Plans	-	-	-	-	-	-	-	-	-	-	-	-	-
a Hydrology Calculation Sheets (2 sheet)	-	-	2	-	16	72	-	-	-	-	-	16	561
b External Drainage Area Maps (3 sheets)	-	-	2	-	10	48	-	-	-	-	-	60	8,439.20
c Internal Existing Drainage Area Maps 1"=50' H (16 sheets)	-	-	-	-	20	160	-	-	-	-	-	201	28,144.40
d Internal Proposed Drainage Area Maps 1"=50' H (16 sheets)	-	-	1	-	20	160	-	-	-	-	-	201	28,144.40
B2 Storm Sewer Drainage Plans	-	-	-	-	-	-	-	-	-	-	-	-	-
a Storm Sewer Calculations Sheets (3 sheets)	-	-	-	-	12	24	-	-	-	-	-	36	5,140.80
b Storm Sewer Plan & Profile Sheets 1"=50' H and 1"=5' V (15 sheets)	-	-	4	-	40	320	-	-	-	-	-	48	82,833.60
c Storm Sewer Profile Sheets 1"=50' H and 1"=5' V (5 sheets)	-	-	-	-	20	160	-	-	-	-	-	140	18,672.00
d Miscellaneous Storm Sewer Details (3 sheets)	-	-	-	-	12	96	-	-	-	-	-	72	9,717.60
B3 Detention Design and Details	-	-	2	-	8	64	-	-	-	-	-	72	9,543.20
a Detention Pond Layouts (2 sheets)	-	-	-	-	8	48	-	-	-	-	-	56	7,548.80
b Detention Pond Section View Sheets (2 sheets)	-	-	-	-	8	48	-	-	-	-	-	72	9,543.20
c Detention Pond Calculations (2 sheets)	-	-	-	-	8	48	-	-	-	-	-	56	7,548.80
d Outflow Structure Details (2 sheets)	-	-	-	-	8	48	-	-	-	-	-	60	8,064.00
e Miscellaneous pond details (2 sheets)	-	-	-	-	8	60	-	-	-	-	-	60	8,064.00
												1,744	234,445.60
C Bridges													
C1 Preliminary Engineering	4	8	-	16	-	24	16	-	-	-	-	68	11,939.20
a Evaluation of Options (2 bridges)	-	-	-	-	-	80	160	-	-	-	-	272	46,116.00
b Bridge Layout and Typical Sections	12	24	-	40	-	16	16	-	-	-	-	60	11,939.20
c Bridge Layout Sections	4	8	-	12	-	16	16	-	-	-	-	40	7,480.00
d Bridge 1/4 Details	-	-	-	-	-	16	16	-	-	-	-	32	5,984.00
C2 Bridge Design and Details	2	4	-	8	-	12	16	-	-	-	-	40	7,480.00
a Estimated Quantities and Retaining Wall Elevations	4	12	-	32	-	48	96	-	-	-	-	192	32,360.40
b Abutment Design and Details (6 sheets)	4	8	-	32	-	48	96	-	-	-	-	176	30,712.00
c Interior Bent Design and Details (14 sheets)	12	24	-	40	-	20	48	-	-	-	-	64	10,912.00
d Girder Layouts (7 sheets)	12	24	-	40	-	112	112	-	-	-	-	184	31,904.00
e Span Design and Details (14 sheets)	12	24	-	40	-	112	112	-	-	-	-	184	31,904.00
f Miscellaneous Details (4 sheets)	4	8	-	16	-	24	48	-	-	-	-	100	17,487.20
g Foundation Design and Layouts (2 bridges) (4 sheets)	8	16	-	32	-	48	96	-	-	-	-	160	27,456.00
C3 Bridge Standards and Specifications	8	16	-	32	-	48	96	-	-	-	-	192	32,360.40
a Standards	-	-	-	-	2	16	16	-	-	-	-	32	5,984.00
b USGS	-	-	-	-	1	8	8	-	-	-	-	16	2,992.00
c Miscellaneous Standards	-	-	-	-	1	8	8	-	-	-	-	16	2,992.00
C4 Estimate	1	2	-	4	-	12	16	-	-	-	-	24	4,352.00
a Estimate at 30%, 60%, 90%, 100%	-	-	8	-	8	-	12	-	-	-	-	24	4,352.00
												1,468	264,248.40
D Signs, Markings and Signalization													
D1 Site signs at project and surrounding areas	-	-	-	-	-	-	-	-	-	-	-	-	-
a Small Signage & Pavement marking layouts 1"=100'	1	-	4	-	12	80	-	-	16	40	-	153	22,507.20
b Pavement Marking Details	-	-	4	-	6	48	-	-	-	-	-	22	3,608.00
c Detail sheets for small signs	-	-	-	-	6	16	-	-	-	-	-	28	4,183.20
												201	30,348.40
E Illumination													
E1 Design of continuous lighting and safety lighting (8 sheets)	8	-	24	-	64	224	-	-	-	-	-	320	48,056.00
a Circuit wiring diagrams (1 sheet)	2	-	4	-	24	64	-	-	-	-	-	34	5,147.20
b Electrical Services Summary (1 sheet)	-	-	-	-	8	64	-	-	-	-	-	36	5,344.00
c Illumination Standards	2	-	2	-	2	12	-	-	-	-	-	18	2,436.00
d Illumination Summary (1 sheet)	-	-	-	-	10	40	-	-	-	-	-	50	7,370.00
e Coordination with the City	4	-	8	-	8	48	-	-	-	-	-	18	2,664.00
												460	68,978.00
F Miscellaneous Roadway													
F1 Traffic Control Plan	-	-	-	-	-	-	-	-	-	-	-	-	-
a T-CP Typical	2	-	2	-	-	10	-	-	16	-	-	30	5,148.80
b T-CP Overview	-	-	1	-	-	8	-	-	8	-	-	19	2,852.40
c T-CP Advanced Warning Layouts 1"=400'	-	-	2	-	-	8	-	-	-	4	-	12	1,659.60
d T-CP Narrative for Sequence of Construction	2	-	6	-	-	16	-	-	-	-	-	24	3,536.40
e T-CP Plans Sheets 1"=100'	2	-	8	-	16	28	-	-	12	8	-	74	12,462.40
f T-CP Details-Non Standard	-	-	-	-	-	-	-	-	-	-	-	-	-
g Detail sheets for small signs	2	-	1	-	4	8	-	-	-	-	-	15	2,660.00
F2 Retaining Walls	-	-	-	-	-	-	-	-	-	-	-	-	-
a Investigate wall locations and determine wall type	-	-	2	-	8	4	-	-	-	-	-	14	2,464.00
b Retaining Wall Location Map	-	-	-	-	-	-	-	-	-	12	-	12	2,064.00
c Retaining Wall Plan and Profile 1"=50' H 1"=10' V	2	-	2	-	50	160	-	-	20	80	-	204	42,788.80
												244	38,344.40
G Quantities and Summary Sheets													
G1 Quantities	-	-	-	-	-	-	-	-	-	-	-	-	-
a Traffic Control	2	-	2	-	6	8	-	-	-	-	-	14	2,056.00
b Earthwork	-	-	2	-	6	8	-	-	-	-	-	42	6,272.00
c Roadways	1	-	2	-	10	80	-	-	-	-	-	111	16,511.20
d Retaining Walls	-	-	-	-	10	80	-	-	-	-	-	40	5,944.00
e Benchmark	-	-	-	-	10	12	-	-	-	-	-	22	3,253.60
f Curbways	1	-	4	-	10	12	-	-	-	-	-	14	2,444.00
g Bridge	1	1	-	2	8	16	-	-	-	-	-	28	4,464.00
h Culverts	-	-	-	-	8	16	-	-	-	-	-	24	3,536.00
i Signs	1	-	2	-	10	24	-	-	-	-	-	36	5,348.00
j Pavement Markings	2	-	-	-	12	32	-	-	-	-	-	46	6,863.20
k Utilities	-	-	-	-	10	32	-	-	-	-	-	52	7,586.00
l Erosion Control and SWP	2	-	-	-	10	24	-	-	-	-	-	36	5,471.20
G2 Summary Sheets	-	-	-	-	-	-	-	-	-	-	-	-	-
a Traffic Control	1	-	1	-	4	4	-	-	-	-	-	8	1,056.00
b Earthwork	-	-	-	-	2	8	-	-	-	-	-	4	512.00
c Roadways	1	-	1	-	3	4	-	-	-	-	-	9	1,639.00
d Retaining Walls	-	-	-	-	3	2	-	-	-	-	-	2	256.00
e Benchmark	-	-	-	-	2	2	-	-	-	-	-	2	257.60
f Curbways	1	-	1	-	3	4	-	-	-	-	-	11	2,063.60
g Bridge	1	1	-	2	3	4	-	-	-	-	-	12	1,812.00
h Culverts	-	-	-	-	3	4	-	-	-	-	-	8	1,184.00
i Signs	1	-	1	-	4	4	-	-	-	-	-	8	1,184.00
j Pavement Markings	2	-	-	-	3	4	-	-	-	-	-	10	1,574.00
k Utilities	-	-	-	-	3	4	-	-	-	-	-	10	1,574.00
l Erosion Control and SWP	2	-	-	-	4	4	-	-	-	-	-	12	1,787.20
												670	99,346.80
H Standards, Specifications, Estimates and Bid Docs													
H1 Standards, Specifications and Estimate	-	-	-	-	-	-	-	-	-	-	-	-	-
a International Prepare and Modify Standards	1	-	-	-	6	30	-	-	-	-	-	39	5,712.00
b Specifications	-	-	10	-	20	120	-	-	-	-	-	60	10,448.40
c Internal Notes	4	-	8	-	20	120	-	-	-	-	-	48	7,140.80
d Preliminary Cost Estimate and Item price identification	-	-	-	-	10	120	-	-	-	-	-	40	5,712.00
H2 Prepare contract for drawings and proposals	-	-	-	-	-	-	-	-	-	-	-	-	-
a Preliminary Cost Estimate and Item price identification	-	-	-	-	10	120	-	-	-	-	-	40	5,712.00
b Prepare contract for drawings and proposals	-	-	-	-	-	-	-	-	-	-	-	-	-
												257	47,467.20
HOURS SUB-TOTALS													
	48	116	390	91	245	797	379	648	0	312	304	0	8,527
	\$ 48,344.00	\$ 33,600.00	\$ 77,440.00	\$ 21,000.00	\$ 15,140.00	\$ 136,120.00	\$ 48,044.00	\$ 99,192.00	\$ 0	\$ 148,464.00	\$ 40,240.00	\$ 0	\$ 1,007,280.00

STV Project Estimate (Supplemental)

Melber Lane Pflugerville, Texas					
Tasks	Classification	Hours	Rate	Cost	Totals
Project management (Office Mngr)	Project Manager	6	\$225.00	\$1,350	\$1,350
Project management	RPLS	15	\$185.00	\$2,775	\$2,775
Review	RPLS	4	\$185.00	\$740	\$740
Right-of-way/Boundary Analysis	RPLS	15	\$185.00	\$2,775	\$2,775
Right-of-entry 20 Parcels	RPLS	0	\$185.00	\$0	\$0
Review and sign 1 parcels	RPLS	0	\$500.00	\$0	\$0
Process control/Field data	Sr. CAD Technician	10	\$145.00	\$1,450	\$1,450
Deed Research	Sr. CAD Technician	6	\$145.00	\$870	\$870
Process topo CADD work	Sr. CAD Technician	40	\$145.00	\$5,800	\$5,800
Manholes	Sr. CAD Technician		\$145.00	\$0	\$0
Field Check	Sr. CAD Technician	6	\$145.00	\$870	\$870
Right-of-entries 20 parcels	Sr. CAD Technician	0	\$145.00	\$0	\$0
Texas811	Sr. CAD Technician	0	\$145.00	\$0	\$0
Prepare 1 ROW Parcels w/ TC if provided	Sr. CAD Technician	3	\$3,500.00	\$10,500	\$10,500
Prepare 11 TCE	Sr. CAD Technician	0	\$1,600.00	\$0	\$0
Right-of-entries 20 parcels	Administrative Assist	0	\$110.00	\$0	\$0
	Administrative Assist	4	\$110.00	\$440	\$440
Professional Office Staff Subtotal		109			\$27,570
Set Cntrl w/elev 1 BM	2-man Survey Party	6	\$185.00	\$1,110	\$1,110
Look for monuments	2-man Survey Party	20	\$185.00	\$3,700	\$3,700
Topo 50' X Sect (850')	2-man Survey Party	10	\$185.00	\$1,850	\$1,850
Topo 100' X Sect	2-man Survey Party	0	\$185.00	\$0	\$0
Manholes	2-man Survey Party	0	\$185.00	\$0	\$0
Locate 7 bores	2-man Survey Party	0	\$185.00	\$0	\$0
Set monuments	2-man Survey Party	0	\$185.00	\$0	\$0
Topo thickly wooded 50' X Sect (650')	2-man Survey Party	10	\$185.00	\$1,850	\$1,850
Topo thickly wooded area 100' X Sect	3-man Survey Party	0	\$185.00	\$0	\$0
Trees (3 ac thickly wooded)	2-man Survey Party	15	\$185.00	\$2,775	\$2,775
Cross-sections - 6	2-man Survey Party	0	\$185.00	\$0	\$0
Field Work Subtotal		61			\$11,285
Professional Services Total				\$38,855	\$38,855
Direct or Reimbursable Costs	Note	Rate			
Deeds		0	\$1.00	\$0.00	
Postage & Delivery		0	\$0.85	\$0.00	
Mileage		168	\$0.70	\$117.60	
Per Diem		0	\$50.00	\$0.00	
Lodging		0	\$150.00	\$0.00	
Monument materials		0	\$3.50	\$0.00	
Survey stakes/supplies					
Toll Road		0	\$10.00	\$0.00	
					\$118
					\$118

Signature

5/28/2026

Date

TASK DESCRIPTION	ENGINEER/	RPLS	SR. PROJECT MANAGER	SUE PM	UTILITY TECH	CADD TECH	ADMIN/COORD	2-MAN CREW		TOTAL LABOR HRS.	LABOR REVENUE	Notes	COST
	hrs		hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs			
QUALITY LEVEL C/D										0	\$0.00		\$0.00
QUALITY LEVEL B	14.8		7.4	29.6	29.6	44.4	7.4	74		281.2	\$38,776.00		\$11,297.58
QUALITY LEVEL A	0		0	0	0	0	0	0		0	\$0.00		\$0.00
Total Labor Hours Per Personnel Category	14.8		7.4	29.6	29.6	44.4	7.4	74		282	\$38,776.00		
Billable Hourly Contract Rate	\$260.00		\$240.00	\$180.00	\$140.00	\$140.00	\$110.00	\$225.00					
Labor Rate	\$260.00		\$240.00	\$180.00	\$140.00	\$140.00	\$110.00	\$212.70					
ODC Rate								\$8.00					
Mileage Rate								\$4.30					
Total Revenue Per Personnel Category	\$3,848.00		\$1,776.00	\$5,328.00	\$4,144.00	\$6,216.00	\$814.00	\$16,650.00	\$0.00	\$38,776.00	✓		

Cost =	\$	84.00	\$	92.00	\$	45.20	\$	38.60	\$	32.00	\$	36.00	\$	70.35
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Exhibit D

Lump Sum Basis

MELBER LANE 0 City of Pflugerville								
Fee Schedule/Budget for STV, Inc.								
Task Description	Project Manager II	Project Engineer 1	Utility Specialist	Senior Technician III	Technician III	Admin / Clerical	Total Labor Hours	Total Direct Labor Costs
	\$258.00	\$152.00	\$170.00	\$210.00	\$145.00	\$128.00		
III. SURVEYING SERVICES								
5 UTILITIES - CobbFendley								
30% Design Phase								
5(a)(i) As-Built/Record Research			8				8	\$ 1,360.00
5(a)(ii) Develop Utility Contact List			2			2	4	\$ 596.00
5(a)(iii) Project Team Meetings (Up to 1)	2	2	2				6	\$ 1,160.00
5(a)(iv) Existing Utility Layouts, using STV roadway design and SUE files (provided by STV)		2	2	8	32		44	\$ 6,964.00
5(a)(v) 30% Conflict Assessment & Strip Map	4	30	2	8	20		64	\$ 10,512.00
5(a)(vi) Initial Project Notification Letters			4			4	8	\$ 1,192.00
5(a)(vii) Evaluate Relocation Alternatives/High Level Cost Estimate	2	8	6			2	18	\$ 3,008.00
5(a)(viii) Coordinate and Prepare Base Agreement Forms	1	4	3			3	11	\$ 1,760.00
5(a)(ix) Utility Coordination Meetings (Up to 8 individual meetings)	8	24	24			8	64	\$ 10,816.00
5(a)(x) Coordination - Reimbursable and Non-Reimbursable Adjustments		4	4				8	\$ 1,288.00
60% Design Phase								
5(b)(i) Project Team Meetings (Up to 1)	2	2	2				6	\$ 1,160.00
5(b)(ii) Update Existing Utility Layouts		2		6	16		24	\$ 3,884.00
5(b)(iii) 60% Conflict Assessment & Strip Map	4	20	2	6	16		48	\$ 7,992.00
5(b)(iv) Provide Proposed Utility Assignments	6	16		10	10		42	\$ 7,530.00
5(b)(v) Prepare Agreement Forms (Up to 2) - (City to Provide Standard Forms)	2	8	20			3	33	\$ 5,516.00
5(b)(vi) 60% Utility Coordination meeting (1 group meeting)	2	4	4			2	12	\$ 2,060.00
5(b)(vii) Coordination - Reimbursable and Non-Reimbursable Adjustments	1	12	12				25	\$ 4,122.00
90% Design Phase								
5(c)(i) Project Team Meetings (Up to 1)	2	2	2				6	\$ 1,160.00
5(c)(ii) Update Existing Utility Layouts		2		6	10		18	\$ 3,014.00
5(c)(iii) 90% Conflict Assessment & Strip Map	4	20	2	2	12		40	\$ 6,572.00
5(c)(iv) Relocation Plan Review (Upto 16)	12	48	24				84	\$ 14,472.00
5(c)(v) Prepare Agreement Forms (Up to 2) - (City to Provide Standard Forms)	2	8	20			3	33	\$ 5,516.00
5(c)(vi) Utility Coordination Meetings (Up to 8 individual meetings)	8	24	24			8	64	\$ 10,816.00
5(c)(vii) Coordination - Reimbursable and Non-Reimbursable Adjustments		6	6				12	\$ 1,932.00
100% Design Phase								
5(d)(i) Project Team Meetings (Up to 1)	2	2	2				6	\$ 1,160.00
5(d)(ii) Update Existing Utility Layouts		2		4	10		16	\$ 2,594.00
5(d)(iii) 100% Conflict Assessment & Strip Map	4	16	2	2	12		36	\$ 5,964.00
5(d)(iv) Relocation Plan Review (Upto 8)	6	24	12				42	\$ 7,236.00
5(d)(v) Finalize Agreements (up to 2) - (City to Provide Standard Forms)	2	8	20			3	33	\$ 5,516.00
5(d)(vi) 100% Utility Coordination meeting (1 group meeting)	2	4	4			2	12	\$ 2,060.00
5(d)(vii) Coordination - Reimbursable and Non-Reimbursable Adjustments	1		4				5	\$ 938.00
5(d)(viii) Relocation schedules	2		10				12	\$ 2,216.00
5(d)(ix) Track Utility Relocation Progress	2		20				22	\$ 3,916.00
5(d)(x) Utility Clearance Certification	1	2	8				11	\$ 1,922.00
5(d)(xi) Verification of Utility Conflicts		16	2	2	12		32	\$ 4,932.00
Construction Phase								
5(e)(i) Address utility questions during construction	2	8	8				18	\$ 3,092.00
5(e)(ii) Biweekly meetings with City's ROW permit coordinators (Upto 20 Meetings)	10		10				20	\$ 4,280.00
Project Management								
5(f)(i) Prepare Bi-Weekly Progress Updates (20 email updates)			10				10	\$ 1,700.00
5(f)(ii) Prepare Monthly Summary Reports & Invoicing (10 months)	10						5	\$ 2,580.00
III. - SUBTOTALS								
HOURS SUB-TOTALS	106	330	287	54	150	40	962	\$ 164,508.00
DIRECT LABOR COSTS	\$ 27,348.00	\$ 50,160.00	\$ 48,790.00	\$ 11,340.00	\$ 21,750.00	\$ 5,120.00		
OVERHEAD AT PROVISIONAL RATE (0.00%)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
TOTAL LABOR COSTS	\$ 27,348.00	\$ 50,160.00	\$ 48,790.00	\$ 11,340.00	\$ 21,750.00	\$ 5,120.00		
FIXED FEE (0.00%)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
SUBTOTAL	\$ 27,348.00	\$ 50,160.00	\$ 48,790.00	\$ 11,340.00	\$ 21,750.00	\$ 5,120.00		\$ 164,508.00

EXHIBIT 1 - FEE SUMMARY FOR PROFESSIONAL SERVICES

Lump Sum Basis

Melber Lane Cameron Road to Pleasanton Parkway City of Pflugerville									
Fee Schedule/Budget for STV, Inc.									
	Task Description	Project Manager	Senior Engineer	Design Engineer	E.I.T.	Admin / Clerical	Environ Manager	Total Labor Hours	Total Direct Labor Costs
		\$336.00	\$274.40	\$170.80	\$128.80	\$100.00	\$297.00		
	<u>V. PROJECT MANAGEMENT</u>								
A	Project Management								
A1	Create and submit monthly invoices (August 2026 - November 2027)	18	6			12		36	\$ 8,894.40
A2	Prepare monthly progress reports (August 2026 - November 2027)	9	9					18	\$ 5,493.60
	Prepare and update schedule (August 2026 - November 2027)	12	6	-				18	\$ 5,678.40
A3	Meet with City Bi-Weekly (August 2026 - November 2027)	36	12	24			4	76	\$ 20,676.00
A4	Prepare project meeting summaries (August 2026 - November 2027)	18	6	12			12	48	\$ 13,308.00
A5	Meet with property owners, stakeholders, and City Internal Design Team Meetings (August 2026 - November 2027)	6	2	4			6	18	\$ 5,030.00
A6	Monitor and Review Sub-consultant invoices (August 2026 - November 2027)	16	24	24	24			88	\$ 19,152.00
A7	Coordinate and Review Sub-consultant work products (August 2026 - November 2027)	12	-			4	2	18	\$ 5,026.00
A8	Project Closeout	8	8	12				28	\$ 6,932.80
A9		8	-	6		4		18	\$ 4,112.80
								366	\$ 94,304.00
	V.- SUBTOTALS								
	HOURS SUB-TOTALS	143	73	82	24	20	24	366	\$ 94,304.00
	SUBTOTAL	\$ 48,048.00	\$ 20,031.20	\$ 14,005.60	\$ 3,091.20	\$ 2,000.00	\$ 7,128.00		\$ 94,304.00

EXHIBIT 1 - FEE SUMMARY FOR PROFESSIONAL SERVICES

Melber Lane From Cameron Road to Pleasanton Parkway City of Pflugerville												
Fee Schedule/Budget for CP&Y, Inc.												
	Task Description	Project Manager	Sr Structural Engr	Senior Engineer	Structural Engr	Design Engineer	E.I.T.	Sr Engr Tech	Admin / Clerical	Environ Manager	Total Labor Hours	Total Direct Labor Costs
		\$336.00	\$280.00	\$274.40	\$210.00	\$170.80	\$128.80	\$154.00	\$100.00	\$297.00	\$152.00	\$105.00
VI. Bid and Construction Phase Services												
A	Bid Phase											
	A1 Coordinate with City during Bid Package	8	-	-	-	24	14	-	-	-	46	\$ 8,590.40
	A2 Attend pre-bid meeting	3	-	3	-	-	-	-	-	-	6	\$ 1,831.20
	Respond to Bidders' questions	4	-	2	-	12	8	-	-	-	26	\$ 4,972.80
	A3 Assist City at contract bid opening	2	-	2	-	2	1	-	-	-	7	\$ 1,691.20
	A4 Tabulate bids, research low bidder, make recommendation	1	-	2	-	-	8	-	-	-	11	\$ 1,915.20
											96	\$ 19,000.80
B	Construction Phase											
	B1 Create and submit monthly invoices (30 months)	15	-	-	-	-	-	-	10	-	25	\$ 6,040.00
	B2 Prepare for and attend pre-construction meeting	2	-	4	-	2	2	-	-	-	10	\$ 2,368.80
	B3 Attend up to 30 construction meetings	15	-	30	-	-	-	-	-	-	45	\$ 13,272.00
	B4 Respond to RFI's, make updates as agreed	8	8	36	8	40	60	-	-	-	160	\$ 31,046.40
	B5 Review Contractor Pay Applications (30 months)	4	-	8	-	20	-	-	-	-	32	\$ 6,955.20
	B6 Conduct final site visit for substantial completion	4	-	4	-	-	-	-	-	-	8	\$ 2,441.60
	B7 Provide shop drawing review	2	8	8	16	40	80	-	-	-	154	\$ 25,603.20
	B8 Develop as-builts	2	-	12	-	20	50	-	-	-	84	\$ 13,820.80
											493	\$ 95,508.00
VI. Bid and Construction Phase Services- SUBTOTAL												
	HOURS SUB-TOTALS	70	16	111	24	160	223	0	10	0	614	\$ 120,548.80
	SUBTOTAL	\$ 23,520.00	\$ 4,480.00	\$ 30,458.40	\$ 5,040.00	\$ 27,328.00	\$ 28,722.40	\$ -	\$ 1,000.00	\$ -		\$ 120,548.80

EXHIBIT 1 - FEE SUMMARY FOR PROFESSIONAL SERVICES

Lump Sum Basis

Melber Lane Cameron Road to Pleasanton Parkway City of Pflugerville				
Expenses for STV, Inc.				
Expense Item	Unit	Unit Cost	Amount	Total Cost
CADD Plotting	sf	\$1.50	50	\$ 75.00
Mylar Plots	lf	\$6.00		\$ -
Digital Ortho Plotting	lf	\$2.00		\$ -
11" X 17" Mylar	sheet	\$1.00		\$ -
8 1/2" X 11" B/W Paper Copies	sheet	\$0.10	100	\$ 10.00
11" X 17" B/W Paper Copies	sheet	\$0.15	50	\$ 7.50
8 1/2" X 11" Color Paper Copies	sheet	\$1.00	50	\$ 50.00
11" X 17" Color Paper Copies	sheet	\$1.80	50	\$ 90.00
Fax Copies	sheet	\$0.10		\$ -
Film and Development	roll	\$8.00		\$ -
4 X 6 Digital Color Prints	picture	\$0.50		\$ -
Oversized Digital Color Prints	picture	\$50.00		\$ -
Standard Postage	letter	\$0.44		\$ -
Express Mail (Standard)	each	\$15.00		\$ -
Express Mail (Oversized)	each	\$30.00		\$ -
Deliveries	each	\$25.00		\$ -
Airfare	each	\$200.00		\$ -
Rental Car	day	\$80.00		\$ -
Lodging	day	\$85.00		\$ -
Meals	day	\$36.00		\$ -
Mileage	mile	\$0.58	100	\$ 57.50
GPS Rental	day	\$80.00		\$ -
HazMat Database Search	each	\$250.00	1	\$ 250.00
Deeds	each	\$1.00		\$ -
Postage and Delivery	each	\$0.85		\$ -
SUBTOTAL DIRECT EXPENSES				\$ 540.00

EXHIBIT 1 - FEE SUMMARY FOR PROFESSIONAL SERVICES

MELBER LANE From Cameron Road to Pleasanton Parkway City of Pflugerville				
Expense Item - Cobb-Fendley	Unit	Unit Cost	Amount	Total Cost
CADD Plotting	sf	\$ 1.50	150	\$ 225.00
Mylar Plots	lf	\$ 6.00	0	\$ -
Digital Ortho Plotting	lf	\$ 2.00	0	\$ -
11" X 17" Mylar	sheet	\$ 1.00	0	\$ -
8 1/2" X 11" B/W Paper Copies	sheet	\$ 0.10	50	\$ 5.00
11" X 17" B/W Paper Copies	sheet	\$ 0.15	100	\$ 15.00
8 1/2" X 11" Color Paper Copies	sheet	\$ 1.00	0	\$ -
11" X 17" Color Paper Copies	sheet	\$ 1.80	100	\$ 180.00
Fax Copies	sheet	\$ 0.10	0	\$ -
Film and Development	roll	\$ 8.00	0	\$ -
4 X 6 Digital Color Prints	picture	\$ 0.50	0	\$ -
Oversized Digital Color Prints	picture	\$ 50.00	0	\$ -
Standard Postage	letter	\$ 0.44	10	\$ 4.40
Express Mail (Standard)	each	\$ 15.00	0	\$ -
Express Mail (Oversized)	each	\$ 30.00	0	\$ -
Deliveries	each	\$ 25.00	1	\$ 25.00
Airfare	each	\$ 200.00	0	\$ -
Rental Car	day	\$ 80.00	0	\$ -
Lodging	day	\$ 85.00	0	\$ -
Meals	day	\$ 36.00	0	\$ -
Mileage	mile	\$ 0.550	350	\$ 192.50
GPS Rental	day	\$ 80.000	0	\$ -
HazMat Database Search	each	\$ 250.000	0	\$ -
				\$ -
Miscellaneous Project Related Expenses	NA	at cost	NA	\$ -
SUBTOTAL DIRECT EXPENSES				\$ 646.90

