

EXHIBIT 1

ATTACHMENT A CITY OF SAN MARCOS WALLACE ADDITION SUBDIVISION IMPROVEMENTS SCOPE OF SERVICES

Project Understanding

The work to be performed by Tetra Tech, Inc. (the Consultant) under this contract will consist of providing Preliminary Design, Design Phase (60%, 90%, 99%, 100% Documents), and Bid and Construction Phase Services for the Wallace Addition Subdivision Improvements. The project consists of replacing potable water main and sanitary sewer pipelines along Staples, Juarez, Monterey, Luciano Flores, Durango, Saltillo, Laredo, and Tampico streets. Approximately 13,700 linear feet (LF) potable water pipelines and 9,800 LF of sanitary sewer lines are to be replaced in the project. The proposed diameter of water and sewer lines will range from 8 to 12-inches. The preliminary design phase will also evaluate drainage, street, and sidewalk improvements needed in the subdivision. Available funds will dictate which improvements will be included in subsequent phases of the project.

Basic Scope of Services

I. General

- A. Data Collection/Review: The City has a lot of relevant information (Geotech, surveying and Subsurface Utility Engineering (SUE) which will be provided to the Consultant as part of existing data. After reviewing the data, the Consultant will prepare a Data Request from the City prior to the initial Project Coordination Meeting. The Consultant will review the pertinent documentation to inform subsequent project evaluations.
- B. Topographic and Tree Survey: During the Preliminary Engineering Phase, the Consultant will have McCray and McCray prepare any additional topographic and tree survey within the public right of way (ROW) and utility easement, as shown in the attached exhibits (Exhibits A, B, and C). The Consultant will prepare an electronic map showing the following:
 - a. Horizontal Control: The survey will be provided in Texas State Plane, South Central Zone, NAD 83, Grid coordinates with a note defining the Grid to Surface Scale factor.
 - b. Vertical Control: Elevations will be obtained using NAVD 88, Central Zone, EPOCH 2010.00, Geoid 2018 and at least three (3) benchmarks will be established onsite, and descriptions will be provided on the drawing.
 - c. Full topography with enough detail to prepare 1' contours for the project area as identified in Exhibit A, including portions of Staples Road, Tampico Street, Juarez Avenue, Laredo Street, Saltillo Street, Durango Street, Cape Road, Monterrey Street and Luciano Flores Boulevard.
 - d. Locate and identify all above ground features within the survey limits including buildings, fences, sidewalks, driveways, handicap ramps, guardrails, signs, visible utilities including manholes, water meters, top of nut of water and gas valves, telecom boxes, utility poles and mailboxes.
 - e. Invert elevations of manholes, drainage pipes and culverts shall be identified along with size/type of the pipes.
 - f. Locate and identify types of existing pavement surfaces for streets, sidewalks and driveways.
 - g. Existing conditions survey to include boundary information and ROW and easement limits within project area. Identify all visible and above grade utilities, and manholes with invert elevations and tied to existing control points/City benchmarks (if any).
 - h. Underground site utilities will be located by Dig-Tess only.
 - i. Existing trees, size and type (at minimum caliper inches required by City CIP) — 24" and above caliper for Native Oaks, Elms, Madrone, and Pecan, Celtis Occidentalis (Hackberry), Juniperus Virginiana, Juniperus Ashei (Common Cedar), Chinaberry,

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mesquite and Ligustrum trees per San Marcos City Ordinances, Section 5.5.2.2- (g)(2), will be identified and tagged with a point number.

- j. Locate required survey borings, paving material and geometry, and extra cross- sections at the request of the City. Locations of cross-sections will require pre-staking by the City or City's Engineer prior to survey.
- C. Field Investigations: The City has a lot of relevant information (geotechnical, surveying, and Subsurface Utility Engineering (SUE)), which will be provided to the Consultant as par of existing data. This information was collected for the Wallace Addition Offsite Drainage Improvements project. However, the Consultant will use HVJ Associates to perform any additional geotechnical investigations on the project. Additional SUE investigations will be performed by the Rios-Group within the project limits as well (Refer to HVJ and Rios-Group Proposals attached).
- a. Geotechnical Investigation: The Consultant will have their subconsultant, HVJ perform eight (8) geotechnical bores at selected locations in the subdivision to provide overall physical properties of soil, rock and other subsurface conditions. Each bore will be drilled to a depth of 20 feet (FT). The Geotechnical deliverables shall be provided in two separate reports, a Geotechnical Data Report (GDR) and a Geotechnical Design Recommendation Memorandum. The Consultant will incorporate the geotechnical design recommendations into the design.
 - b. Subsurface Utility Engineering: The Consultant will have their subconsultant, Rios Group, perform subsurface utility engineering (SUE). The SUE will encompass Quality Level (QL) B for all underground utilities within the limits of investigation. Up to 16 QLA SUE test holes will be performed for this project for existing utilities at critical locations to support utility conflict resolution.

II. Preliminary Engineering

Consultant will prepare a Preliminary Engineering Report (PER) for the Wallace Addition Subdivision Improvement project. This report will evaluate the feasibility, scope, and estimated costs for the design and construction of drainage systems, roadway improvements, water main replacement, and sewer replacement. The PER will assist the City in making informed decisions on whether to proceed with the entire project or prioritize water and sewer main replacements over drainage and roadway improvements. Additionally, the PER will establish the foundation for detailed planning and design, including projections for future phases to support budget planning.

- A. Project Management and Quality Assurance / Quality Control (QA/QC): This task consists of effort associated with project administration, coordination with City staff, coordination and supervision of the project team, and quality management so that project milestones and deliverables meet schedule and budget constraints during the Preliminary Engineering phase.
- B. Meetings
 - a. Kickoff Meeting - Tetra Tech will attend a kickoff meeting at the project beginning.
 - b. Project Coordination Meetings: One (1) utility coordination meeting has been budgeted for the Preliminary Engineering Phase. It is assumed that the meeting will be held prior to beginning the preliminary design. The Consultant will attend the meeting with the City to determine project constraints and needs as well as discuss design considerations. A site visit will follow the meeting.
 - c. Project Status Meetings: Three (3) project status meetings have been budgeted for the Preliminary Engineering Phase.

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C. Preliminary Engineering Tasks

- a. Sanitary Sewer (gravity main) Preliminary Engineering: The Consultant will evaluate existing conditions, identify operational issues, and analyze site conditions. The PER will include an alternative analysis to determine the optimal alignment, construction method, and pipe material to be proposed.
- b. Potable Water Preliminary Engineering: The Consultant will evaluate existing conditions, identify operational issues, and analyze site conditions. The PER will include an alternative analysis to determine the optimal alignment, and pipe material.
- c. Street Assessment and Sidewalks Preliminary Engineering: The Consultant will review roadway design standards and guidelines. During this task, preliminary geometric design, horizontal and vertical alignments and cross-sections and profiles will be developed. Cross section/profile will include evaluating the addition of sidewalks to the subdivision. In addition, a preliminary pavement design to include pavement type and structural design will be developed.
- d. Drainage Improvements Preliminary Engineering: The Consultant will perform a watershed analysis to determine storm runoff quantities and associated appurtenances to carry the resultant stormwater discharge. After this analysis, alignments will be determined along with preliminary- hydraulics/modeling for the subdivision. The consultant will employ a Low Impact Development (LID) approach to design a stormwater system that minimizes environmental impact thus managing stormwater close to its source.
- e. Permitting: The Consultants will determine a list of permits needed for the project. The City will complete all permits required for this project.
- f. Utility Coordination: The Consultant will review the project to determine which utilities are within the project limits and Identify Utility Conflicts – Prepare an overall exhibit and utility conflict matrix.
- g. Cost Estimate: The Consultant will Prepare an Opinion of Probable Construction Cost (OPCC) for all improvements recommended in the PER. The OPCC will conform to AACE Class 3 Standard.
- h. Topographic and Tree Survey: The Consultant will prepare an electronic map showing the results of topographic and tree survey obtained by McCray and McCray. The topographic and tree survey will be incorporated into the preliminary engineering analysis.
- i. Geotechnical Investigation: The Consultant will prepare an electronic map showing the results of the geotechnical investigation obtained by HVJ. The results of the investigation will be incorporated into the preliminary engineering analysis.
- j. SUE: The Consultant will prepare an electronic map showing the results of the SUE obtained by the Rios-Group. The results of the investigation will be incorporated into the preliminary engineering analysis.

D. Deliverables

- a. Three (3) Monthly Status Reports

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- b. Preliminary Engineering Report – Draft
 - c. Preliminary Engineering Report – Final
- E. Preliminary Engineering Phase Schedule
- Preliminary Engineering Phase (90 days)

III. Design Phase (60/90/99/100%)

- A. Project Management and QA/QC: The Consultant will provide professional management of the project. The Project Manager will schedule resources, assign tasks, develop schedules, set deadlines, monitor costs and prepare invoices for the project. A Project Assistant will provide administrative and accounting services to facilitate management of the project. This task also includes coordination between the design team and the City's project manager to provide updates and solicit input throughout the design phase. The Consultant will perform a quality assurance and quality control review of every deliverable.
- B. Meetings
- a. Project Coordination Meetings: Two (2) utility coordination meeting have been budgeted for the Design Phase. It is assumed that meetings will be held prior to beginning 60% and 90% design. Consultant will attend meetings with the City to determine project constraints and needs as well as discuss design considerations.
 - b. Monthly Project Status Meetings: Eight (8) project status meetings have been budgeted for the Design Phase, including one meeting following each milestone deliverable (60/90/99/100%).
 - c. Public Meetings: One (1) public meeting has been budgeted which consists of preparing exhibits and attending the meeting.
- C. Tasks
- a. Pipelines – Wastewater Main: Upon approval from the City, the Consultant will further develop the design of the sanitary sewer mains within the project area. The design will progress in a methodical method, with the City staff fully engaged, and in greater detail at each subsequent deliverable within the design phase. Emphasis will be made in avoiding existing utilities and identifying potential utility relocation where the new sanitary sewer main cannot be moved due to design constraints. This proposal assumes that wastewater main pipelines will be shown in plan and profile. It also assumes plans will be at a plan scale of 1" = 40' and a vertical scale of 1" = 10', produced on 11"x17" sheets. It is anticipated that twenty (20) sheets will be required to show all the sanitary sewer mains in the project.
 - b. Pipelines – Water Main: Upon approval from the City, the Consultant will further develop the design of the potable water mains within the project area. The design will progress in a methodical method, with the City staff fully engaged, and in greater detail at each subsequent deliverable within the design phase. Emphasis will be made in avoiding existing utilities and identifying potential utility relocation where the new potable water main cannot be moved due to design constraints. Sheets will show plan and profile of proposed pipe, restrained joint requirements, existing utility crossings, callouts for

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appurtenances, labels of existing utilities including size and material as well as fire hydrant and Valve IDs, and proposed flowline grade information. This proposal assumes that water service leads will be shown in plan view only up to the existing meter. All water lines 12-inch or larger will be shown in profile at 1" = 10' scale. Assumes plans will be at 1" = 40' scale produced on 11"x17" sheets. It is anticipated that twenty two (22) sheets will be required to show all the potable water pipelines in the project.

- c. Streets, Driveways, and Sidewalks: Upon approval from the City, the Consultant will further develop the design of the streets, driveways, and sidewalks within the project area. The design will progress in greater detail at each subsequent deliverable within the design phase. Sheets will show plan and profile of proposed driveway, joint requirements, existing utility crossings, callouts for appurtenances, labels of existing utilities including size and material. Assumes plans will be at 1" = 40' scale for plan view and 1" = 10' scale for profiles, produced on 11"x17" sheets. It is anticipated that fifteen (15) sheets will be required to show all the streets in the project.
- d. Drainage Improvements: Upon approval from the City, the Consultant will further develop the drainage improvements within the project area. The design will progress in greater detail at each subsequent deliverable within the design phase. Detailed calculations such as routing program computations should be documented in a drainage report. Both 25 & 100-year storm events using Atlas 14 rainfall data Per Storm Water Technical Manual (STM) 3.2.1.6.3 will be used in calculations. Both "on-site" and "overall"/"downstream" calculations will be provided. Sheets will show plan and profile of proposed pipe, joint requirements, existing utility crossings, callouts for appurtenances, labels of existing utilities including size and proposed flowline grade information. Hydrologic calculations will be shown on plan sheets (drainage area, runoff coefficient/weighted curve number calculation, impervious cover, time of concentration, rainfall intensity/flow path, and peak runoff (flow) for each sub-basin). Assumes plans will be at 1" = 40' scale on plan view and 1" = 10' on profile view, produced on 11"x17" sheets. It is anticipated that fifteen (15) sheets will be required to show all the drainage improvements in the project.
- e. Drainage Area Map(s) will be created and updated throughout the design phases. The drainage area map will consist of an "Existing" Overall Drainage Area Map with existing drainage areas and topography shown with minimum 1' contour and a "Proposed" Overall Drainage Area Map with proposed drainage areas and topography shown with minimum 1' contour. In addition, on the on-site Proposed Drainage Area Map for smaller drainage areas captured such as sub-areas to each inlet will be shown. Flow direction arrows, Time of Concentration lines and type segments, & flow paths will be shown as well. Drainage Area Maps will indicate points of analysis where flow leaves the site that include flow comparison tables, existing versus proposed. FEMA Floodway and Floodplain Boundaries (ref. FIRM panel No. and date and pending CLOMR or LOMR case numbers) will also be shown. In addition, Water Quality and Buffer Zones per CoSM Land Development Code (LDC) Section 6.2.2 will be shown. The Drainage Area Map will show ordinary high-water mark in Waters of the US. Assumes plans will be at 1" = 40' scale produced on 11"x17" sheets. It is anticipated that up to two (2) sheets will be required to show all the drainage information calculated in the design.
- f. Structural/Retaining Walls: The Consultant will design of structural appurtenances and retaining walls needed to accommodate the drainage improvements the project. Typical retaining wall details will be developed, such that the Contractor can have sufficient information and detail to adjust the retaining wall as needed in the project site.

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- g. Utility Coordination: The Consultant will develop a Utility Conflict Matrix and Layout Plans showing existing utility conflicts with proposed solutions.
- h. Tree Mitigation: The Consultant will develop Tree Preservation Plan and Details (estimated at 3 sheets total). A tree survey and tree table will be required. Existing trees to be removed and preserved will be identified on the sheets. Proposed trees, landscaping, and irrigation plans will be required.
- i. Erosion/Sedimentation Control: The Consultant will develop erosion and sedimentation control measures to be included in the plans and details.
- j. Traffic Control: The Consultant will provide standard traffic control details for construction of the improvements. A detailed traffic control plan will be developed for all major streets within the project area.
- k. Sequence of Construction: The Consultant will analyze the construction sequence with the City to identify a work plan that would minimize the construction schedule as well as minimize disruption to the public.
- l. Geographic Information System (GIS) Submittal: The Consultant will prepare and submit a GIS submittal as per the Plan Review Checklist and the GIS Review Checklist at the 60%, 90%, 99%, and 100% Phases.
- m. Permitting: The Consultant will prepare a list of all permits required for the project to include:
 - Texas Commission on Environmental Quality (TCEQ) Storm Water Permit
 - City of San Marcos Permits.
- n. Cost Estimates: The Consultant will update the OPCC with the 60%, 90%, 99%, and 100% deliverable. The OPCC will conform to AACE standards for each deliverable required during the design phase.
- o. Texas Department of Licensing & Regulation (TDLR) Review: The Consultant will perform a TDLR review for compliance with Chapter 469 of the Texas Government Code, State of Texas Architectural Barriers Act, and TDLR Administrative Rule 68.102 at the 90% design phase. The Consultant proposes to use Altura Solutions to perform the project registration with TDLR, perform the plan review, and inspection for compliance with the State of Texas Architectural Barriers Act. The Public Rights-of-Way Accessibility Guidelines (PROWAG) will be used as the standard to achieve compliance for all work located within the Public Right-of-Way. Results of TDLR review will be incorporated into the 99% design submittal.
- p. Prepare Promoting Resilient Operations for Transformative, Efficient, and Cost-Savings Transportation (PROTECT) grant for the Wallace Addition Subdivision: The Consultants will assist the City in the preparation of a PROTECT Grant application for Wallace Addition. The Consultant will prepare the following sections of the grant application:
 - i. Project Description
 - ii. Project Location
 - iii. Project Parties
 - iv. Grant Funds, Sources, and Uses of all Project Funding
 - v. Merit Criteria

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- vi. Criterion 1 - Vulnerability and Risk
- vii. Criterion 2 - Criticality to Community
- viii. Criterion 3 - Design Elements
- ix. Criterion 4 - Public Engagement, Partnership, and Collaboration
- x. Criterion 5 - Equity and Justice⁴⁰
- xi. Criterion 6 - Climate Change Sustainability
- xii. Criterion 7 Schedule and Budget
- xiii. Criterion 8 – Innovation
- xiv. Benefit-Cost Analysis
- xv. Federal Highway Administration Priority Considerations
- xvi. Equity and Justice⁴⁰
- xvii. Workforce Development, Job Quality, and Wealth Creation
- xviii. Construction Readiness
- xix. Funding Needs
- xx. Appendices

D. Deliverables:

- a. Monthly Status Report: The Consultant will provide a monthly status report, including a summary of work completed with an MS Project schedule updated to reflect milestone deliverables.
- b. 60% Design Phase: Consultant will provide two (2) hard copies of 11" x 17" plan sets and one (1) pdf electronic copy. It is estimated that the plan set will contain the following:
 - Cover Sheet: Estimated Number of Sheets – one (1).
 - General Notes Sheet: Estimated Number of Sheets – one (1)
 - Quantity Sheet: Consultant will provide a quantity table that includes individual sheet quantities and the overall project quantities. Estimated Number of Sheets – one (1)
 - Project Layout & Survey Sheet: Consultant will provide a layout of the project with plan sheet references. Estimated Number of Sheets (2).
 - Typical Cross-Section Sheets: Estimated Number of Sheets – two (2).
 - Tree Mitigation & Preservation Sheets (if required or shown on erosion and sedimentation controls sheet, to include tree table and survey, tree removal and installation plan with irrigation) – Estimated Number of Sheets – four (4).
 - Erosion & Sedimentation Controls - Estimated Number of Sheets – two (2).
 - Construction Phasing (Traffic Control Narrative) Sheets: Estimated Number of Sheets – three (3).
 - Traffic Control Plan (Detailed Version): Estimated Number of Sheets - three (3).
 - Removal Plan (if required): Estimated Number of Sheets – two (2).
 - Streets, Driveways, and Sidewalks Plan and Profile Sheets: Estimated Number of Sheets – fifteen (15).
 - Grading Plans for Intersections: Estimated Number of Sheets – ten (10).
 - Pavement Markings & Signage Plans: Estimated Number of Sheets – fifteen (15).
 - Drainage Improvements Plan and Profile Sheets: Estimated Number of Sheets – eight (8).
 - Structural Sheets (if needed): Estimated Number of Sheets two (2).
 - Retaining Walls (if needed): Estimated Number of Sheets – two (2).
 - Sanitary Sewer Main Pipeline Plan and Profile Sheets: Estimated Number of Sheet – twenty (20).
 - Sanitary Sewer Bypass Plans: Estimated Number of Sheets – ten (10).

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- Potable Water Pipeline Plan and Profile Sheets: Estimated Number of Sheets – twenty-two (22).
 - Utility Conflict Matrix and Layout Plans: Estimated number of Sheets – four (4).
 - Storm Water Pollution and Prevention Plan (SW3P): Estimated Number of Sheets - eight (8).
 - Cross Sections Sheet: Estimated number of Sheets – ten (10)
 - List of Standard Details: City of San Marcos details will be used.
 - Geographic Information System (GIS) Submittal: As per Plan Review Checklist.
 - Hydrologic Calculations and Drainage Area Map.
 - List of Standard Specifications: City of San Marcos Division 1 specifications will be used. City of Austin standard specifications will be used.
 - Engineer's Opinion of Probable Construction Costs (OPCC) – Class 2 Standard.
 - Construction Project Schedule: Consultant will develop a Construction Schedule for the project consisting of design, bid and construction phases. The schedule will be updated during subsequent design phases.
- c. 60% Comment Response Letter. After 60% deliverable review, the Consultant will document all City review comments and document how each comment was addressed and incorporated into the 90% deliverable.
- d. 90% Design Phase: Consultant will provide two (2) hard copies of 11" x 17" plan sets and one (1) pdf electronic copy. The plan set will also contain the following:
- Cover Sheet: Estimated Number of Sheets – one (1).
 - General Notes Sheet: Estimated Number of Sheets – one (1)
 - Quantity Sheet: Consultant will provide a quantity table that includes individual sheet quantities and the overall project quantities. Estimated Number of Sheets – one (1)
 - Project Layout & Survey Sheet: Consultant will provide a layout of the project with plan sheet references. Estimated Number of Sheets (2).
 - Typical Cross-Section Sheets: Estimated Number of Sheets – two (2).
 - Tree Mitigation & Preservation Sheets (if required or shown on erosion and sedimentation controls sheet, to include tree table and survey, tree removal and installation plan with irrigation) – Estimated Number of Sheets – four (4).
 - Erosion & Sedimentation Controls - Estimated Number of Sheets – two (2).
 - Construction Phasing (Traffic Control Narrative) Sheets: Estimated Number of Sheets – three (3).
 - Traffic Control Plan (Detailed Version): Estimated Number of Sheets - three (3).
 - Removal Plan (if required): Estimated Number of Sheets – two (2).
 - Streets, Driveways, and Sidewalks Plan and Profile Sheets: Estimated Number of Sheets – fifteen (15).
 - Grading Plans for Intersections: Estimated Number of Sheets – ten (10).
 - Pavement Markings & Signage Plans: Estimated Number of Sheets – fifteen (15).
 - Drainage Improvements Plan and Profile Sheets: Estimated Number of Sheets – eight (8).
 - Structural Sheets (if needed): Estimated Number of Sheets two (2).
 - Retaining Walls (if needed): Estimated Number of Sheets – two (2).
 - Sanitary Sewer Main Pipeline Plan and Profile Sheets: Estimated Number of Sheet – twenty (20).
 - Sanitary Sewer Bypass Plans: Estimated Number of Sheets – ten (10).
 - Potable Water Pipeline Plan and Profile Sheets: Estimated Number of Sheets – twenty-two (22).

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- Utility Conflict Matrix and Layout Plans: Estimated number of Sheets – four (4).
 - Storm Water Pollution and Prevention Plan (SW3P): Estimated Number of Sheets - eight (8).
 - Cross Sections Sheet: Estimated number of Sheets – ten (10)
 - List of Standard Details: City of San Marcos details will be used.
 - Geographic Information System (GIS) Submittal: As per Plan Review Checklist.
 - Hydrologic Calculations and Drainage Area Map.
 - List of Standard Specifications: City of San Marcos Division 1 specifications will be used. City of Austin standard specifications will be used.
 - Engineer's Opinion of Probable Construction Costs (OPCC) – Class 2 Standard.
 - Construction Project Schedule: Consultant will develop a Construction Schedule for the project consisting of design, bid and construction phases. The schedule will be updated during subsequent design phases. Prepare 90% project manual, including contracting documents, list of standard specifications, general provisions, special specifications and any other necessary documents. Technical specifications will reference City of San Marcos Construction Specifications and Standards. For items not covered by the standards, a special project specification will be prepared for inclusion in the project manual.
 - Engineer's OPCC Class 1 Standard.
 - Construction Project Schedule: Consultant will develop a Construction Schedule for the project consisting of design, bid and construction phases. The schedule will be updated in subsequent design submittals.
- e. 90% Comment Response Letter. After 90% deliverable review, the Consultant will document all City review comments and document how each comment was addressed and incorporated into the 99% deliverable.
- f. 99% Design Phase: Consultant will provide two (2) unsealed hard copies of 11" x 17" plan sets and one (1) pdf electronic copy. The plan set will also contain the following:
- Cover Sheet: Estimated Number of Sheets – one (1).
 - General Notes Sheet: Estimated Number of Sheets – one (1)
 - Quantity Sheet: Consultant will provide a quantity table that includes individual sheet quantities and the overall project quantities. Estimated Number of Sheets – one (1)
 - Project Layout & Survey Sheet: Consultant will provide a layout of the project with plan sheet references. Estimated Number of Sheets (2).
 - Typical Cross-Section Sheets: Estimated Number of Sheets – two (2).
 - Tree Mitigation & Preservation Sheets (if required or shown on erosion and sedimentation controls sheet, to include tree table and survey, tree removal and installation plan with irrigation) – Estimated Number of Sheets – four (4).
 - Erosion & Sedimentation Controls - Estimated Number of Sheets – two (2).
 - Construction Phasing (Traffic Control Narrative) Sheets: Estimated Number of Sheets – three (3).
 - Traffic Control Plan (Detailed Version): Estimated Number of Sheets - three (3).
 - Removal Plan (if required): Estimated Number of Sheets – two (2).
 - Streets, Driveways, and Sidewalks Plan and Profile Sheets: Estimated Number of Sheets – fifteen (15).
 - Grading Plans for Intersections: Estimated Number of Sheets – ten (10).
 - Pavement Markings & Signage Plans: Estimated Number of Sheets – fifteen (15).
 - Drainage Improvements Plan and Profile Sheets: Estimated Number of Sheets – eight (8).

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- Structural Sheets (if needed): Estimated Number of Sheets two (2).
 - Retaining Walls (if needed): Estimated Number of Sheets – two (2).
 - Sanitary Sewer Main Pipeline Plan and Profile Sheets: Estimated Number of Sheet – twenty (20).
 - Sanitary Sewer Bypass Plans: Estimated Number of Sheets – ten (10).
 - Potable Water Pipeline Plan and Profile Sheets: Estimated Number of Sheets – twenty-two (22).
 - Utility Conflict Matrix and Layout Plans: Estimated number of Sheets – four (4).
 - Storm Water Pollution and Prevention Plan (SW3P): Estimated Number of Sheets - eight (8).
 - Cross Sections Sheet: Estimated number of Sheets – ten (10)
 - List of Standard Details: City of San Marcos details will be used.
 - Geographic Information System (GIS) Submittal: As per Plan Review Checklist.
 - Hydrologic Calculations and Drainage Area Map.
 - List of Standard Specifications: City of San Marcos Division 1 specifications will be used. City of Austin standard specifications will be used.
 - Engineer's Opinion of Probable Construction Costs (OPCC) – Class 2 Standard.
 - Construction Project Schedule: Consultant will develop a Construction Schedule for the project consisting of design, bid and construction phases. The schedule will be updated during subsequent design phases. Prepare 99% project manual, including contracting documents, list of standard specifications, general provisions, special specifications and any other necessary documents. Technical specifications will reference City of San Marcos Construction Specifications and Standards. For items not covered by the standards, a special project specification will be prepared for inclusion in the project manual.
 - Engineer's OPCC Class 1 Standard.
 - Construction Project Schedule: Consultant will develop a Construction Schedule for the project consisting of design, bid and construction phases. The schedule will be updated in subsequent design submittals.
- g. 99% Comment Response Letter. After 99% deliverable review, the Consultant will document all City review comments and document how each comment was addressed and incorporated into the 100% deliverable.
- h. Final 100%: Consultant will provide two (2) hard copies of 11" x 17" plan sets and one (1) pdf electronic copy. Upon approval by the City, two (2) hard copies of 22" x 34" plan sets, one (1) pdf copy, and one (1) CAD copy (DWG format) of the sealed plans will be provided.
- i. (PROTECT) grant for the Wallace Addition Subdivision.
- E. Design Phase Schedule:
- 60% Design Documents Submittal (120 days)
 - 90% Design Documents Submittal (90 days)
 - 99% Design Documents Submittal (60 days)
 - 100% Design Documents Submittal (30 days)

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IV. Bid Phase

- A. Project Management: This task consists of routine communication with the City and other activities associated with managing the project. It is assumed that this phase will have a duration of 60 days.
- B. Attend Pre-Bid Meeting: The Consultant will assist the City in conducting pre-bid meeting and developing the agenda.
- C. Answer Questions: Consultant will coordinate with the City for issuing responses for technical questions and requests for additional information from potential bidders. It is estimated that the Consultant will respond to ten (10) requests for additional information.
- D. Addenda: Consultant will prepare addenda required to clarify, correct or change the bid documents. Addenda will be provided in Adobe .pdf (searchable) format and sealed by responsible engineer(s). Addenda will be issued to bidders through the City's Purchasing Department.
- E. Bid Tabulation and Recommendation of Award: Consultant will assist the City in opening of bids, review all bids and evaluate them for responsiveness and bid amount. Consultant will also check references, by telephone, of the low bidder and second low bidder. Consultant will prepare a letter summarizing the review and evaluation and include recommendations for award of the contract for construction, or other action as may be appropriate. The City will make the final decision on the award of the contract for construction and the acceptance or rejection of all bids.
- F. Deliverables: Consultant will incorporate addenda items in the Construction Plans; include addenda in the bound Project Manual; and issue a "Conformed" set of plans for construction.
 - a. Bid Form: Consultant will provide the Bid Form in Word Document format.
 - b. Technical Specifications: Consultant will provide one (1) pdf electronic copy of the Technical Specifications.
 - c. Conformed Plans: Consultant will provide one (1) electronic copy of Construction Plans in pdf, one (1) CAD copy, and two (2) 22" x 34" plan set, three (3) 11" x 17" plan sets.
- G. Bid Phase Schedule:
 - Bid Phase (60 days)

V. Construction Phase

- A. Project Management: This task consists of routine communication with the City; managing, manpower, budgets, and schedules; invoicing; and other activities associated with managing the project. Estimated construction phase duration is 730 days (2 years).
- B. Attend Pre-Construction Conference: Consultant will attend a Pre-Construction Conference prior to commencement of work.

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- C. Submittal Review: Consultant will review and approve or take other appropriate action in respect to Shop Drawings and Samples and other data which the Contractor is required to submit, but only for conformance with the information given in the Contract Documents. Such review and approvals or other action will not extend to means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction or to related safety precautions and programs. One hundred (100) submittals have been assumed.
- D. Response to Requests for Information/Modifications: Consultant will respond to reasonable and appropriate Contractor requests for information (RFI's) and issue necessary clarifications and interpretations of the Contract Documents to the City as appropriate to the orderly completion of Contractor's work. One hundred (100) RFI's have been assumed.
- E. Pay Application Review: Based on its observations and on review of applications for payment and accompanying supporting documentation, Consultant will determine the amounts that Consultant recommends Contractor be paid. Such recommendations of payment will be in writing and will constitute Consultant's representation to The City, based on such observations and review, that, to the best of Consultant's knowledge, information and belief, Contractor's work has progressed to the point indicated and that such work-in-progress is generally in accordance with the Contract Documents subject to any qualifications stated in the recommendation. In the case of unit price work, Consultant's recommendations of payment will include determinations of quantities and classifications of Contractor's work, based on observations and measurements of quantities provided with pay requests. Review twenty-four (24) Pay Applications has been assumed.
- F. Construction Observation: The Consultant will provide on-site construction observation services during the construction phase. The Consultant will make visits on an as needed basis and at intervals as directed by The City to observe the progress of the Work. Such visits and observations by the Consultant are not intended to be exhaustive or to extend to every aspect of Contractor's work in progress. Observations are to be limited to spot checking, selective measurement, and similar methods of general observation of the Work based on the Consultant's exercise of professional judgment. Based on information obtained during such visits and such observations, the Consultant will evaluate whether the Contractor's work is generally proceeding in accordance with the Contract Documents, and the Consultant will keep The City informed of the general progress of the Work.

The purpose of the Consultant's site visits will be to enable the Consultant to better carry out the duties and responsibilities specifically assigned in this Agreement, and to provide the City a greater degree of confidence that the completed Work will conform in general to the Contract Documents. The Consultant will not, during such visits or as a result of such observations of Contractor's work in progress, supervise, direct, or have control over the Contractor's work, nor will the Consultant have authority over or responsibility for the means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction selected by Contractor, for safety precautions and programs incident to Contractor's work, nor for any failure of the Contractor to comply with laws and regulations applicable to the Contractor's furnishing and performing the Work. Accordingly, the Consultant neither guarantees the performance of any the Contractor nor assumes responsibility for any the Contractor's failure to furnish and perform its work in accordance with the Contract Documents. It is assumed that two (2) site visits per month for a duration of twelve (12) months followed by one (1) site visit per month for a duration of twelve (12) months will be accomplished.

- G. Review of Change Orders: The Consultant may recommend Change Orders to the City and will review and make recommendations related to Change Orders submitted or proposed by the

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Contractor. It is estimated that twenty-five (25) Change Orders will need to be reviewed by the Consultant.

- H. Substantial Completion: The Consultant will, promptly after notice from Contractor that it considers the entire Work ready for its intended use, in company with the City and the Contractor, conduct a site visit to determine if the Work is substantially complete. Work will be considered substantially complete following satisfactory completion of all items except for those identified on a final punch list. If after considering any objections of the City, Consultant considers the Work substantially complete, Consultant will notify the City and the Contractor.
- I. Final Notice of Acceptability of the Work: The Consultant will conduct a final site visit to determine if the completed Work of Contractor is generally in accordance with the Contract Documents and the final punch list so that the Consultant may recommend, in writing, final payment to Contractor. Accompanying the recommendation for final payment, the Consultant will also provide a notice that the Work is generally in accordance with the Contract Documents to the best of Consultant's knowledge, information, and belief based on the extent of its services and based upon information provided to Consultant upon which it is entitled to rely.
- J. Deliverables:
 - a. Site Visit Reports: The Consultant will submit a site visit report to the City following each visit to the site during construction (Substantial & Final Completion).
 - b. Submittal Log: Consultant will prepare a spreadsheet for identifying required submittals that the Contractor must provide as well as tracking to-date submittals and RFI's provided by the Contractor. An updated Submittal Log will be submitted to the City monthly.
- K. Construction Phase Schedule:
 - Construction Phase (730 days)

VI. Record Drawings

- A. Record Drawings: The Consultant will review the Contractor's redline as-built drawings and incorporate deviations from the construction drawings as appropriate. Record drawing information will be based solely on the provided marked-up drawings and appropriate field documentation received from the City. The Consultant will deliver one (1) set of full-size bond drawings and one (1) set of half size plan set for review.
- B. Deliverables: After review, Consultant will deliver two (2) sets of full-size bond drawings, one (1) pdf electronic copy and one (1) CAD copy.
- C. Record Drawing Schedule:
 - Record Drawings (30 days)

Project Schedule Summary

The following project milestones are estimated and may require modification pending preliminary engineering results, design phase, and construction timeframe constraints:

- Preliminary Engineering (90 days)
- 60% Design Documents Submittal (120 days)
- 90% Design Documents Submittal (90 days)

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- 99% Design Documents Submittal (60 days)
- 100% Design Documents Submittal (30 days)
- Bid Phase (60 days)
- Construction Phase (730 days)
- Record Drawings (30 days)

The estimated timeframes identified above do not include time for City review of deliverables.

City Responsibilities

1. The City will provide to Consultant all data in the City's possession relating to Consultant's services on the Project. Consultant will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by the City.
2. The City will give prompt notice to Consultant whenever the City observes or becomes aware of any development that affects the scope or timing of Consultant's services.
3. The City will examine information submitted by Consultant and render in writing or otherwise provide comments and decisions in a timely manner.
4. The City will obtain all necessary right-of-entries from required landowners. However, Right-of-Way entries required will be identified by the consultant.
5. The City will prepare all permits required for the project.
6. The City will provide Title Reports for properties with proposed easements.
7. The City will obtain all permanent sanitary sewer line, access, and temporary construction easements, including services such as appraisal of properties, negotiations with the property owners, and actual purchase of the easements. The consultant shall identify all permanent and temporary easements required for this project. The City will do metes and bounds and property acquisition.

Additional Services

Additional Services to be performed, if authorized in writing by the City, but which are not included in the above-described Basic and Supplemental Scope of Services, and once a mutually agreed upon fee is negotiated are as follows:

1. Right of Entry/Easement/Land Acquisition services.
2. Texas Historic Commission (THC): An Archeological Full Review with Shovel Test and detailed report to THC.
3. Performing Environmental Investigation or Environmental permit preparation and submittal.
4. Performing title searches for easement or joint-use agreement preparation.
5. Preparation of additional easement/ boundary exhibits beyond the number identified in the Scope of Services.
6. Acting as an agent of the City in the acquisition of permanent or temporary easements.
7. Preparation of platting documents and/or real property survey for site acquisition.
8. Accompanying the City when meeting with the Texas Commission on Environmental Quality (TCEQ), U.S. Environmental Protection Agency, or other regulatory agencies during the Project, beyond those meetings identified above.
9. Preparing applications and supporting documents for government grants, loans, or planning advances, beyond those meetings identified above.
10. Appearing before regulatory agencies or courts as an expert witness in any litigation with third parties or condemnation proceedings arising from the development or construction of the Project, including the preparation of engineering data and reports for assistance to the City.
11. Providing professional services associated with the discovery of any hazardous waste or materials in the project site.

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12. Additional services to be determined at the time of request (fee to be determined at the time of request).

COMPENSATION FOR PROFESSIONAL SERVICES:

The fees for the above services shall be allocated on a time and materials basis according to the following phases:

<u>Phase</u>	<u>Amount</u>
Preliminary Engineering	\$ 280,230
Design Phase (60%)	\$ 440,450
Design Phase (90%)	\$ 216,860
Design Phase (99%)	\$ 93,325
Design Phase (100%)	\$ 54,520
Bid Phase	\$ 42,700
Construction Phase	\$ 248,783
Record Drawings	\$ 22,720
Additional Supplemental Services (Fee to be determined at time of request)	\$ 317,045
Subconsultants	
HVJ (Geotechnical)	\$ 46,013
McGray and McGray (Surveying)	\$ 149,854
Rios-Group (SUE)	\$ 82,742
Altura (TDLR)	\$ 4,758
TOTAL FEE	\$2,000,000

Price Proposal

Wallace Subdivision Improvements

Improvements to upgrade the street and drainage work in the Wallace Subdivision of San Marcos including upgrades to the water and sanitary sewer system.

Submitted to: City of San Marcos (Attn: Rohit Vij)

Contract Type: T&M

Project Phases / Tasks

Project Phases / Tasks	Schedule		Total Labor Hrs	Labor Plan													Price Summary / Totals						
	From	Thru		Program Manager	QA/QC (Roadways & Drainage)	QA/QC (Potable Water & Sanitary Sewer)	Project Manager	Project Controls	Sr Project Engineer (Technical Review)	Project Engineer (Roadway)	Project Engineer (Drainage)	Engineer II (Water & Wastewater)	Engineer I (Water & Wastewater)	Sr CADD Designer	CADD Designer	Project Administrator	Labor Rate Esc.	Labor	Subs	Travel	Mat'l's & Equip	ODCs	Task Pricing Totals
			8,416	24	114	114	476	344	77	949	1,107	1,038	1,242	38	2,595	298	0.00%	1,706,241	282,817	6,543	-	4,400	2,000,000
5.2 Meetings	10/27/25	11/26/25	16	8			8												550			5,870	
5.3 Pipelines - Wastewater Main	10/27/25	11/26/25	40								8	8			24							5,280	
5.4 Pipelines - Water Main	10/27/25	11/26/25	40								8	8			24							5,280	
5.5 Streets, Driveways, and Sidewalks	10/27/25	11/26/25	16							8	8											2,960	
5.6 Drainage Improvements	10/27/25	11/26/25	16							8	8											2,960	
5.7 Drainage Area Map(s)	10/27/25	11/26/25	22								4			2	16							2,960	
5.8 Structural/Retaining Walls	10/27/25	11/26/25	16							8	8											2,960	
5.9 Utility Coordination	10/27/25	11/26/25	5							1	1	1	1		1							790	
5.10 Tree Preservation	10/27/25	11/26/25	5							1	1	1	1		1							790	
5.11 Erosion/Sedimentation Control	10/27/25	11/26/25	5							1	1	1	1		1							790	
5.12 Traffic Control	10/27/25	11/26/25	2							1	1											370	
5.13 Sequence of Construction	10/27/25	11/26/25	4							1	1	1	1									670	
5.14 Geographic Information System (GIS) Submittal	10/27/25	11/26/25	40													40						4,800	
5.15 Permitting	10/27/25	11/26/25	4							1	1	1	1									670	
5.16 Cost Estimating	10/27/25	11/26/25	4							1	1	1	1									670	
5.17 Contract Document & Project Manual	10/27/25	11/26/25	24							1	1	1	1								20	2,670	
5.18 Project Schedule	10/27/25	11/26/25	4							1	1	1	1									670	
6.0 Bid Phase	11/26/25	01/25/26	202	-	-	-	40	32	-	24	24	24	24	-	20	14			550	-	2,750	42,700	
6.1 Project Management	01/25/26	04/25/26	64					32	32													17,120	
6.2 Attend Pre-Bid Meeting (includes developing agenda)	11/26/25	02/24/26	40				8			8	8	8	8						550			8,310	
6.3 Answering Questions	11/26/25	02/24/26	16							4	4	4	4									2,680	
6.4 Prepare addenda	11/26/25	02/24/26	32							4	4	4	4		16							4,600	
6.5 Bid Tabulation and Recommendation for Award	11/26/25	02/24/26	24							4	4	4	4								8	3,480	
6.6 Confirm Technical Specifications	11/26/25	02/24/26	18							4	4	4	4								2	2,880	
6.7 Conformed Plans (1 electronic, CAD, and 5 plan sets)	11/26/25	02/24/26	8												4	4						880	
7.0 Construction Phase	02/24/26	02/24/28	1,368	-	-	-	140	104	-	152	356	152	356	-	8	100			3,243	-	-	248,783	
7.1 Project Management	02/24/26	02/24/28	208				104	104								8	100					55,640	
7.2 Attend Pre-Construction Conference	02/24/26	02/24/28	40				8			8	8	8	8						550			8,310	
7.3 Submittal Review (100 submittals)	02/24/26	02/24/28	400							100	100	100	100									67,000	
7.4 Response to Requests for Information/Modifications (100 RFIs)	02/24/26	02/24/28	40							10	10	10	10									6,700	
7.5 Construction Observation (1 visits per month for 24 months)	02/24/26	02/24/28	384								192		192								2,693	65,093	
7.6 Pay Application Review (24 Pay Applications)	02/24/26	02/24/28	60				12			24		24										11,880	
7.7 Review of Change Orders (10 Cos)	02/24/26	02/24/28	48							10	10	10	10								8	7,660	
7.8 Substantial Completion	02/24/26	02/24/28	8				8															2,400	
7.9 Final Notice of Acceptability of Work	02/24/26	02/24/28	8				8															2,400	
7.10 Site Visit Reports	02/24/26	02/24/28	72								36		36									11,700	
7.11 Submittal Log	02/24/26	02/24/28	100													100						10,000	
8.0 Record Drawings	02/24/28	03/25/28	154	-	-	-	-	-	-	20	20	8	8	2	96	-			21,620	-	-	1,100	
8.1 Record Drawings (1 full-sized set and 1 half-sized REVIEW set)	02/24/28	03/25/28	138							20	20	8	8	2	80							550	
8.2 Deliverables: Record Drawings (1 full-sized set and 1 half-sized FINAL set)	02/24/28	03/25/28	16												16							1,920	
9.0 Additional Supplemental Services				-	-	-	-	-	-	-	-	-	-	-	-	-			317,046	-	-	317,046	
10.0 Subconsultants	11/01/24	01/30/25		-	-	-	-	-	-	-	-	-	-	-	-	-			282,817	-	-	550	
10.1 Geotechnical Investigation - HVJ	11/01/24	01/30/25																				46,013	
10.2 Surveying - McGray & McGray	11/01/24	01/30/25																				149,854	
10.3 Subsurface Utility Exploration - Rios Group	11/01/24	01/30/25																				82,742	
10.4 Texas Department of Licensing & Regulation Review - Altura	01/30/25	05/30/25																				4,758	
Totals	11/01/24	03/25/28	8,416	24	114	114	476	344	77	949	1,107	1,038	1,242	38	2,595	298	0.00%	1,706,241	282,817	6,543	-	4,400	2,000,000



206 W Rhapsody

San Antonio, Texas 78216

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www.hvj.com

August 13, 2024

Mr. Jaime R. Kypuros, Jr., PE
Tetra Tech, Inc.
711 Navarro St, Suite 560
San Antonio, Texas 78205

Re: City of San Marcos Wallace Subdivision
Geotechnical Site Investigation
Owner: City of San Marcos
HVJSCTx Proposal No. SGT 24 1041

Dear Mr. Kypuros,

HVJ South Central Texas, M&J Inc. (HVJSCTx) is pleased to submit this proposal to provide geotechnical investigation and pavement design services for the above referenced project.

Our scope work, as outlined in this proposal, provides the necessary and appropriate level of geotechnical engineering support during the design phase of the project.

Project Description

We understand that Tetra Tech, Inc. (Tetra Tech) is assisting the City of San Marcos with the Wallace Subdivision street, water and sewer improvements. As a part of the project, water/sewer line installation and pavement reconstruction/rehabilitation will be performed along Staples, Juarez, Monterey, Luciano Flores, Durango, Saltilo, Laredo, and Tampico streets. Approximate lengths of water and sewer lines are 13,700 LF water and 9,860 LF, respective.

The proposed diameter of water and sewer lines will range from 8 to 12-inches. A minimum cover depth of 5 to 10 feet is anticipated. We assumed open cut method for water and sewer line installations.

Geotechnical Scope of Work

For this project, HVJSCTx will conduct the following:

- **Subsurface Exploration:** To investigate subsurface conditions and characterize soil at the project area, geotechnical borings will be drilled. A total of eight (8) borings are proposed. Each boring will be drilled to a depth of 20 feet each; totaling 160 lineal feet.

Based on the project location and its expected geology, fill over clay/granular soil deposits are anticipated at this site. However, if different soil conditions are encountered during drilling activities, the boring depths may be adjusted.

The borings will be completed with a truck-mounted rig, equipped with flight augers and sampling tools. Soil samples will be collected using Shelby tubes and/or split-spoon samplers. Soil sampling will be performed continuously to a depth of 10 feet and at 5-ft. interval thereafter. Field-testing of soil samples will include pocket penetrometer readings in

Mr. Jaime R. Kypuros, Jr., PE
City of San Marcos Wallace Subdivision
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the cohesive soils and Standard Penetration Tests (SPT) in cohesionless soils. Continuous rock coring is not included in our scope of work.

Groundwater data will be obtained during and immediately after drilling, if encountered. Upon completion of drilling and groundwater readings, boreholes will be backfilled using soil cuttings and bentonite pellets to match existing grade, and patch with asphalt.

Dynamic Cone Penetration (DCP) tests will be performed on subgrade at four (4) select boring locations.

- Laboratory Tests: Laboratory index tests will be performed on select soil samples recovered from the test borings. The index tests will include Atterberg limits, percent passing no. 200 sieve, moisture content, unconfined compressive strength and corrosivity (pH, Sulfate, Chloride, Resistivity) tests.

The collected field and laboratory data will be interpreted and used to develop geotechnical investigation report for the project. The report will include the following specific items:

- Site vicinity map,
- Geology map,
- Plan of borings,
- Boring logs,
- Field and Laboratory test results summary,
- Recommendations for open-cut installation of the utility lines,
- Trench safety recommendations,
- Pipe bedding and backfill recommendations, and
- General discussion of construction and excavation recommendations.

The above-described report will be prepared by an engineer specializing in soil mechanics after reviewing available boring and laboratory data.

Pavement Design Scope

HVJSCTx will prepare pavement designs for this project in accordance with the City of San Marcos guidelines using geotechnical data. Falling Weight Deflectometer (FWD) tests will be performed along the residential streets to evaluate full depth reconstruction and rehabilitation requirements.

We understand the City of San Marcos will provide available traffic data for the pavement design. Because the current conditions and unknown historical pavement materials along the existing roads, HVJSCTx proposes to utilize nondestructive deflection testing (NDT) with the Falling Weight Deflectometer (FWD) to calculate subgrade design parameters. The data may also be used to finalize boring locations to be able to collect representative geotechnical data concerning existing pavement layer thicknesses, base layers, and in-situ subgrade conditions identified in deflection profile plots using the NDT data.

We will submit a signed and sealed pavement design report Tetra Tech. The pavement design report must be reviewed and approved by the City of San Marcos prior to its implementation. The

Mr. Jaime R. Kypuros, Jr., PE
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pavement design report will document assumptions and design considerations. The pavement design report will include the following:

- Cover sheet with roadway name, geographical limits, and signatures of persons involved in the preparation and approval.
- Existing and proposed typical sections.
- Soils map of the project area with a brief description of each type of soil located within the project areas.
- Design input values and output.
- Conclusion consisting of recommended pavement design or designs based on the data, analyses, and procedures included in the report.
- Pavement design details specified for each location that includes structural layer materials, general specifications, and layer thicknesses.
- Relevant pavement evaluation data (structural and functional) and condition information on adjacent roads.
- Site conditions that might influence the design and performance of pavements.
- Relevant geotechnical data including boring logs, laboratory soil test results, dynamic cone penetrometer (DCP) data, pavement coring and soil classifications with Atterberg limits.
- Falling weight deflectometer (FWD) data, plots and analysis results of the field explorations and testing of pavement sections using the MODULUS software.
- Recommended pavement rehabilitation and designs for new pavements.
- Design criteria used in determining pavement designs, including traffic loads, pavement material characterization, environmental conditions, and pavement design life.
- Design summary from the program used to design (e.g., FPS 21, DARWin, and MODULUS 7.0)
- Pavement material specifications based on City of San Marcos and/or TxDOT standard construction specifications.
- Other considerations used in developing the pavement designs, including subgrade preparations and stabilization procedures will be as provided.

Assumptions

The following assumptions were made in developing the scope and fee estimate for this project:

- Boring locations are not finalized yet. Boring locations will be mutually agreed upon by Tetra Tech and HVJSCTx. The proposed boring locations may need to be adjusted to avoid utility conflicts, and/or limit traffic control requirements.
- Traffic control will be required for drilling.
- City permit will be required. We understand city permit fee (if there is any) will be waived.
- Tetra Tech shall provide HVJSCTx with an electronic site map.
- Surveying of the boring locations will be done by others, if required.
- HVJSCTx will be responsible for avoiding conflicts with utility facilities by contacting the One Texas calling facility.

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- Preparation of Geotechnical Baseline Report for trenchless installation, and trenchless installation recommendations are not included in our scope of work.
- City will provide any available historical traffic data or input concerning major traffic generators for pavement designs will be provided.
- HVJSCTx will submit a proposal for additional services should any additional pavement design alternatives, and construction phase services are requested.

Fee

HVJSCTx will perform the outlined scope of work for the **Lump Sum** amount of **\$41,830.00**. If anomalous soil conditions are encountered, or if the project configuration changes significantly, additional work may be required. HVJSCTx will recommend such additional work when and if it is deemed necessary.

Schedule

We propose to initiate project scheduling and coordination, immediately upon receiving notice-to-proceed. We subsequently expect to complete the test borings approximately 2 to 3 weeks after receiving notice to proceed and permits. Laboratory testing, evaluation of test results, engineering analyses and report preparation will take approximately 3 to 4 weeks after completion of the fieldwork.

The estimated schedule for the pavement design work is as follows:

Task	Estimated Schedule, weeks
Field coordination and permits	1 - 2 after receipt of Notice to Proceed (NTP)
Field FWD - NDT testing	1 - 2 depending on permit receipt and/or weather
Draft pavement design report	2 - 3 depending on receipt HVJ SCTx draft geotechnical report
Final pavement design report	2 - 3 after receipt of HVJ SCTx, RPS-Tetra Tech , and City of San Marcos combined comments

Insurance

Insurance certificates verifying HVJSCTx general liability, auto, workers' compensation, and errors and omissions insurance coverage, listing Tetra Tech and City of San Marcos as a certificate holder, will be provided upon request.

Sample Retainage

Soil samples will be retained in our laboratory for 30 days after the draft geotechnical investigation report has been submitted.

Mr. Jaime R. Kypuros, Jr., PE
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Invoices

Invoices will be submitted at the end of each month based on the time spent on the work and items completed, or based on an invoice schedule provided by Tetra Tech. HVJSCTx credit terms are 30 days net.

If this proposal meets with your approval, please sign and complete the indicated spaces below and forward a copy of the proposal to us. Thank you for this opportunity. We appreciate your business.

Sincerely,

HVJ SOUTH CENTRAL TEXAS – M&J INC.

Golam Kibria

Golam Kibria, PhD, PE
Vice President of Operations

Agreed to this _____ day of _____, 20_____

By: _____

Title: _____

Firm: _____

Date to Start Work: _____

Mr. Jaime R. Kypuros, Jr., PE
City of San Marcos Wallace Subdivision
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City of San Marcos Wallace Subdivision					
HVJ South Central Texas M&J, Inc.					
HVJ SCTx Proposal No. SGT 24 1041					
Geotechnical Field Investigation - Drilling and Soil Sampling					
Mobilization/Demobilization	1	@	\$650.00	per mobilization	\$650.00
Drilling & Sampling - Soil Drilling	120	@	\$30.00	per foot	\$3,600.00
Shelby Tube (Thin Wall)	24	@	\$20.00	each	\$480.00
Backfilling Soils/Bentonite	120	@	\$6.00	per foot	\$720.00
Asphalt Patching	8	@	\$50.00	each	\$400.00
Driller Standby time	4	@	\$150.00	per hour	\$600.00
Logging	20	@	\$85.00	per hour	\$1,700.00
Staking, Utility Clearance, permit Coordination	8	@	\$85.00	per hour	\$680.00
Traffic Control	2	@	\$2,500.00	each	\$5,000.00
Support Truck	2	@	\$150.00	each	\$300.00
				Sub Total	\$14,130.00
Laboratory Testing					
Moisture Content (ASTM D 2216)	30	@	\$25.00	each	\$750.00
Atterberg Limits (ASTM D 4318; Tex-104-E; Tex-105-E and Tex-106-E)	16	@	\$85.00	each	\$1,360.00
No. 200 sieve (ASTM D 422)	16	@	\$55.00	each	\$880.00
Unconfined Compressive Strength Test - Soil (ASTM D 2166)	8	@	\$70.00	each	\$560.00
Corrosion (pH, Resistivity, Sulfate and Chloride)	1	@	\$500.00	each	\$500.00
				Sub Total	\$4,050.00
Non Destructive Testing (FWD)					
FWD Mobilization/Demobilization	50	@	\$3.00	miles	\$150.00
FWD Equipment	1	@	\$3,300.00	day	\$3,300.00
Traffic Control Mobil Operation	1	@	\$1,800.00	day	\$1,800.00
				Sub Total	\$5,250.00
Geotechnical Engineering & Reporting					
Project Management, QA/QC report	4	@	\$200.00	/hr	\$800.00
Senior Engineer	16	@	\$185.00	/hr	\$2,960.00
Engineer in Training	40	@	\$100.00	/hr	\$4,000.00
Administrative Assistant	4	@	\$75.00	/hr	\$300.00
				Sub-Total	\$8,060.00
Pavement Design & Reporting					
Project Management, QA/QC report	8	@	\$200.00	/hr	\$1,600.00
Senior Engineer	24	@	\$185.00	/hr	\$4,440.00
Engineer in Training	40	@	\$100.00	/hr	\$4,000.00
Administrative Assistant	4	@	\$75.00	/hr	\$300.00
				Sub-Total	\$10,340.00
				Grand Total	\$41,830.00

McGRAY & McGRAY LAND SURVEYORS, INC.

3301 HANCOCK DRIVE, SUITE 6
AUSTIN, TEXAS 78731
[512] 451-8591 FAX [512] 451-8791

TRANSMITTAL

TO: RPS | North America
Attn: Kyle Hogue
5810 Tennyson Parkway
Suite 280
Plano, TX 75024
PHONE: (469) 677-3005
EMAIL: kyle.hogue@tetrattech.com

DATE: May 29, 2024
FROM: Patsy Trevino for Chris Conrad
RE: Proposal for Surveying Services
for the Wallace Addition, San
Marcos, Texas

WE ARE SENDING YOU X **Attached** _____ **Under separate cover the following items:**

COPIES

DESCRIPTION

1 Proposal

For Your Approval

For Your Information

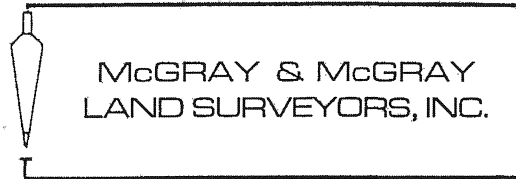
As Requested

For Review and Comment

REMARKS: Thank you,
Chris
TBPELS Survey Firm #10095500

SENT VIA: Delivery Service FedEx Mail Fax Email Other:

If you received this message incomplete or illegible, or if enclosures are not as noted, please notify us at once



May 29, 2024

Kyle Hogue
RPS | North America
5810 Tennyson Parkway, Suite 280
Plano, TX 75024
(469) 677-3005

VIA EMAIL
kyle.hogue@tetrattech.com

RE: Proposal for Surveying Services for the Wallace Addition, San Marcos, Texas

Dear Mr. Hogue:

We appreciate the opportunity to present you with this proposal for the above-referenced project. The following represents our understanding of the area to survey and scope of services. Our fee proposal follows.

Area to Survey:

- The Wallace Addition, as defined on attached Exhibits "A, B & C".

Survey Control:

- Horizontal Control: The survey will be provided in Texas State Plane, South Central Zone, NAD 83, Grid coordinates with a note defining the Grid to Surface Scale factor.
- Vertical Control: Elevations will be obtained using NAVD 88, Central Zone, EPOCH 2010.00, Geoid 2018 and at least three (3) benchmarks will be established onsite, and descriptions will be provided on the drawing.

Scope of Services:

Design Survey:

1. Full topography with enough detail to prepare 1' contours for the project area as identified in Exhibit A, including portions of Staples Road, Tampico Street, Juarez Avenue, Laredo Street, Saltillo Street, Durango Street, Cape Road, Monterrey Street and Luciano Flores Boulevard.
2. Locate and identify all above ground features within the survey limits including buildings, fences, sidewalks, driveways, handicap ramps, guardrails, signs, visible utilities including: manholes, water meters, top of nut of water and gas valves, telecom boxes, utility poles and mailboxes.

3. Invert elevations of manholes, drainage pipes and culverts shall be identified along with size/type of the pipes.
4. Locate and identify types of existing pavement surfaces for streets, sidewalks and driveways.
5. Existing conditions survey to include boundary information and ROW and easement limits within project area. Identify all visible and above grade utilities, and manholes with invert elevations and tied to existing control points/City benchmarks (if any).
6. Underground site utilities will be located by Dig-Tess only.
7. Existing trees, size and type (at minimum caliper inches required by City CIP) – 24” and above caliper for Native Oaks, Elms, Madrone, and Pecan, Celtis Occidentalis (Hackberry), Juniperus Virginiana, Juniperus Ashei (Common Cedar), Chinaberry, mesquite and Ligustrum trees per San Marcos City Ordinances, Section 5.5.2.2-(g)(2), will be identified and tagged with a point number.
8. Locate required survey borings, paving material and geometry, and extra cross-sections at the request of the City. Locations of cross-sections will require pre-staking by the City or City’s Engineer prior to survey.

Deliverables:

- A. Survey shall be provided in AutoCAD (.dwg) format.
- B. The units of the drawing file shall be U.S. survey feet.

Fees:

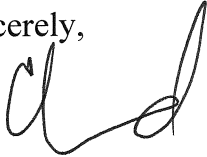
Design Surveying Services (Non-Taxable):

2 Man Crew:	350 hrs @	\$190.00 /hr.= \$	66,500.00
Field Coordinator:	30 hrs @	\$91.35 /hr.= \$	2,740.50
Sr. Survey Technician:	175 hrs @	\$115.53 /hr.= \$	20,217.75
Survey Technician:	350 hrs @	\$95.38 /hr.= \$	33,383.00
Administrative/Clerical:	12 hrs @	\$85.97 /hr.= \$	1,031.64
RPLS:	40 hrs @	\$188.06 /hr.= \$	7,522.40
Project Manager:	24 hrs @	\$201.50 /hr.= \$	4,836.00
		TOTAL = \$	136,231.29

Once we receive notice to proceed, we will visit with you to establish a schedule for this project.

Thank you for including us on this project. We look forward to the opportunity to work with you. If you think we have omitted any service you require or misinterpreted your request, please let me or Joe Webber know.

Sincerely,



Chris I. Conrad, RPLS
Vice President
TBPELS Survey Firm #10095500

Authorized to Proceed by:

Signature

Date

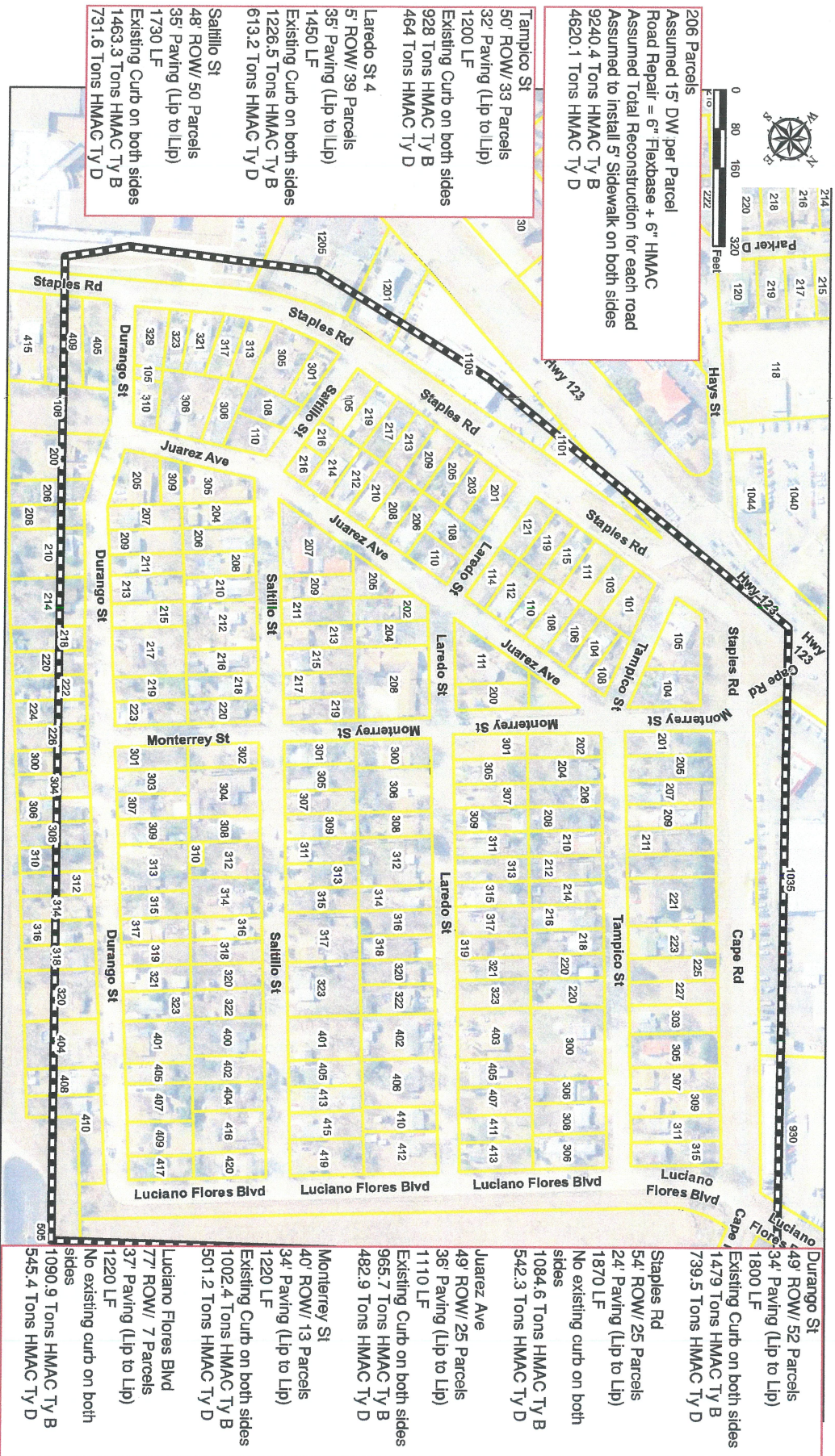
Print Name

Title

CIC:JDW:klr
Encl.

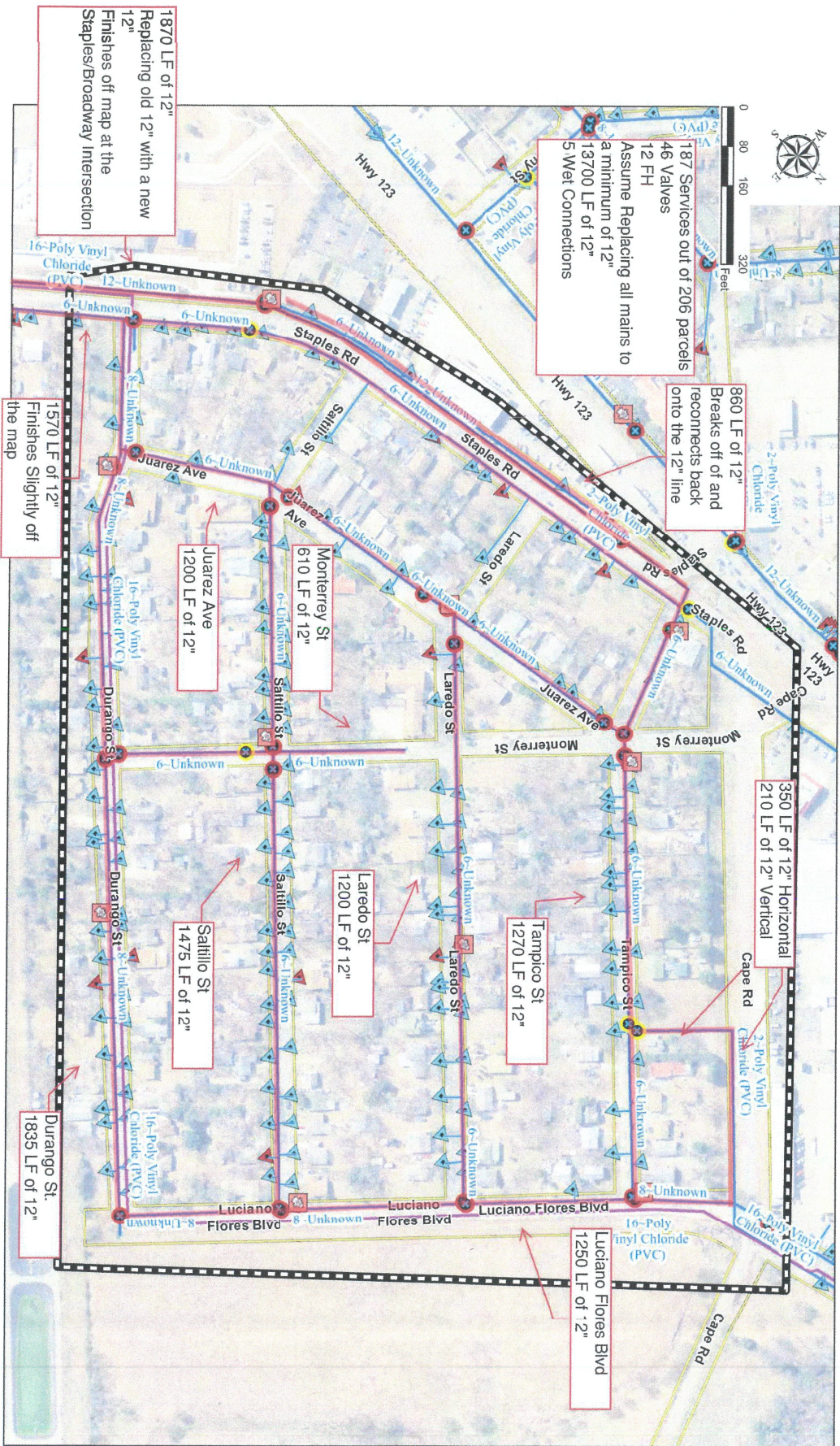
Wallace Addition Subdivision Aerials

EXHIBIT "A"



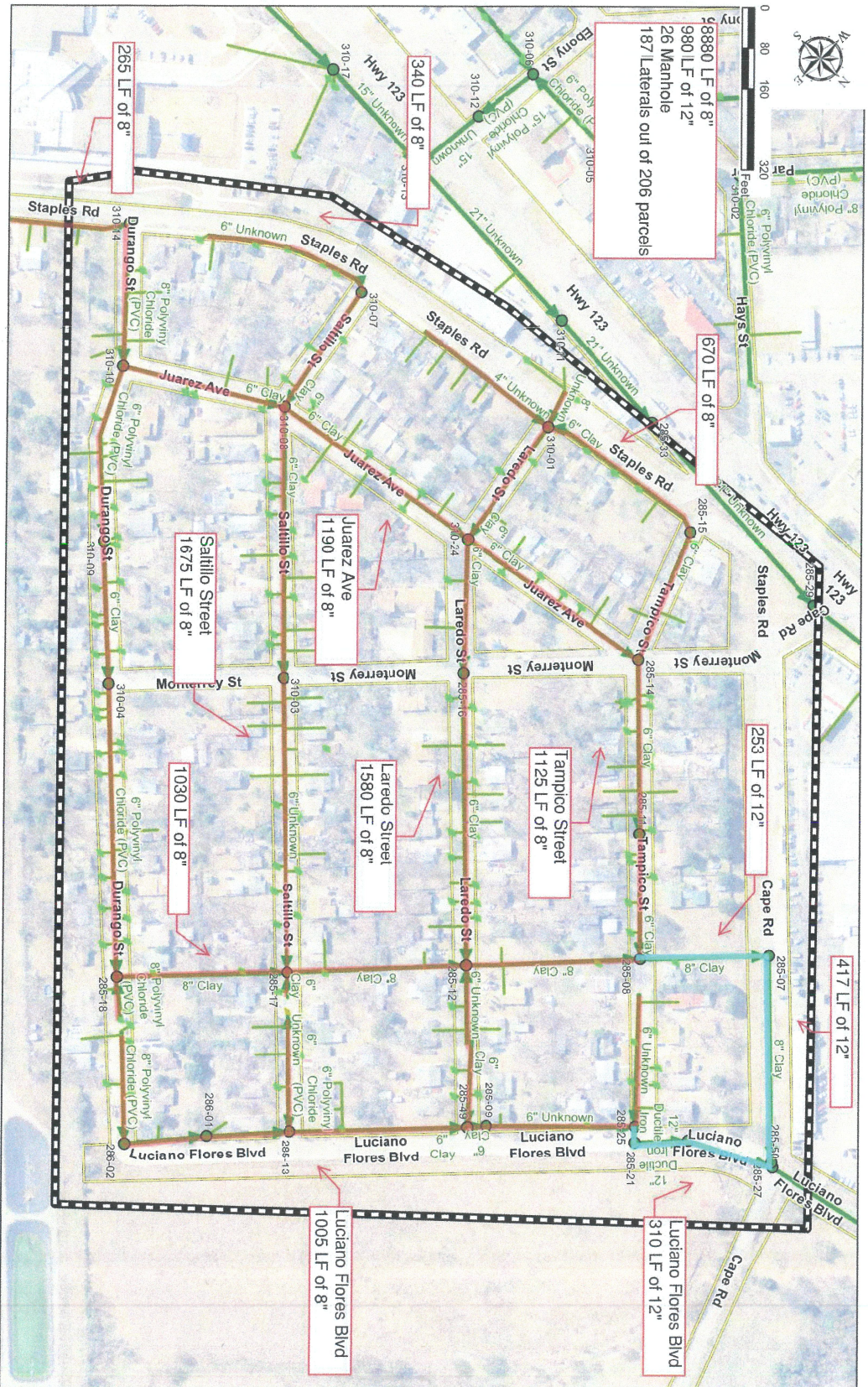
Wallace Addition Subdivision Water

EXHIBIT "B"



Wallace Addition Subdivision Wastewater

EXHIBIT "C"



August 27, 2024

Ramón Enrique Ortiz, PE
Tetra Tech
711 Navarro Street, Suite 560
San Antonio, Texas 78205
210-299-7926
ramon.ortiz1@tetrattech.com

**RE: Subsurface Utility Engineering
Wallace Addition Subdivision
San Marcos, Texas**

Dear Ramón:

The Rios Group, Inc. (TRG) is pleased to submit a cost proposal for Subsurface Utility Engineering (SUE) for the above referenced project. This proposal is based on information provided via email on August 21, 2024.

Introduction

TRG will perform SUE services for this project in general accordance with the recommended practices and procedures described in ASCE publication ASCE/UESI/CI 38-22 “Standard Guideline for Investigating and Documenting Existing Utilities”. SUE Quality Level definitions and data limitations are included in Exhibit C, attached to this proposal.

Scope of Work

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

The scope of this proposal includes QLD, QLC, QLB and QLA SUE services.

To Include:

In general, QLC/D SUE services are requested within the limits of the entire subdivision limits of the Wallace Addition Subdivision in San Marcos, Texas as shown clouded in blue in Exhibit B. QLB SUE is requested within areas that are depicted within red clouds on Exhibit B and include 16 intersections. The QL A test holes will also be located within these intersections. TRG has made the following assumptions for the QLB SUE Services on this project:

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

- TRG will perform records research and acquire available existing utility records within the project limits. This will include contacting the applicable One Call agency and associated utility owners/municipalities to request records and reviewing available utility record information obtained.
- TRG will attempt to designate the following utilities within this area: potable water, reclaimed water, chilled water, natural gas/crude oil/refined product pipelines, communication duct banks, fiber optic, cable television, telephone, and electric.
- Wastewater and storm drain facilities will be inverted at manholes, and will be depicted as QLC information.
- TRG will attempt to designate utility service lines, however, because these lines are often non-conductive and not shown on records TRG cannot guarantee all service lines will be included in the final deliverables.
- The following facilities/items are specifically **excluded** from the scope of work of this proposal: irrigation lines, overhead utilities, and detailed vault investigations.
- TRG will attempt to provide Electronic Depth readings calculated by TRG's geophysical equipment. If Electronic Depth readings can be obtained, they will be provided every 50 feet. However, due to the inconsistency with Electronic Depth readings, TRG cannot guarantee the accuracy of the information. Data will be provided for informational purposes only.

This proposal also includes up to **sixteen (16) QLA SUE** test holes at locations that will be provided by the Client following a review of the QLB SUE information. TRG has made the following assumptions related to test hole excavations on this project:

- Test holes will be excavated using vacuum excavation equipment.
- All test holes will be accessible to truck/trailer-mounted vacuum excavation equipment. Any special requirements needed to access test hole locations (clearing, grading, mat installation, etc.) will be provided by others at no cost to TRG.
- Right-Of-Way (ROW) permits from the City of San Marcos will be required. TRG will obtain all required City permits and ensure that coordination and compliance with the City is provided.
- Designed traffic control plans will **not** be required.
- Traffic control measures will be required. TRG will acquire the services of a qualified Maintenance-Of-Traffic (MOT) Subcontractor, and ensure that adequate traffic control is provided.
- Pavement coring/repair will be required. TRG can core pavement up to a depth of 12 inches. Asphalt surfaces will be repaired with an asphalt cold patch, and concrete cores will be epoxied in place, flush with the surrounding surface.
- The following item is excluded from this scope of work: full-section pavement repair (including sidewalks)
- Excavation in rock, or to a depth greater than 18 feet, is considered beyond the scope of this proposal.

The survey of SUE field markings and test hole locations is also included in this scope of work. Client will provide the necessary survey control information in close proximity to the work area. Client will also provide a full topo survey file including utility appurtenances.

Deliverables

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

- A utility file in CAD format depicting all SUE data documented on the project. The Client will provide TRG with any necessary background files for use in completing the final deliverables.
- A summary sheet of all test hole coordinate data and depth information.
- 8.5" x 11" Test Hole Data Forms for all test hole locations completed. These forms will be signed and sealed by a Professional Engineer and delivered to the Client in electronic PDF form.
- 11" x 17" SUE Plan Sheets depicting all SUE data documented on the project. These plans will be signed and sealed by a Professional Engineer and delivered to the Client in electronic PDF form.
- A Utility Report containing metadata (e.g. scope of work, work limits, dates of performance, survey control, etc.), information about the Utility Investigation not otherwise conveyed in other project deliverables, and recommendations to address data deficiencies.

Schedule

TRG can mobilize within three (3) weeks of receiving Notice-To-Proceed (NTP). TRG will apply for the required ROW permits immediately following receipt of NTP. TRG estimates that the QLB SUE work (including QL C&D for subdivision) can be completed in thirty-five (35) working days broken down as follows:

- QLB field work – 5 days
- QLB survey and preparation of data – 10 days
- QLB deliverable preparation – 20 days (after receipt of topo file from client)

TRG estimates that the QLA SUE work can be completed in twenty-seven (27) working days following approval of the City ROW permit, broken down as follows:

- Layout test holes – 2 days
- QLA field work – 8 days
- QLA survey and preparation of data – 7 days
- QLA deliverable preparation – 10 days

Estimated Fee

The total estimated cost to complete the work described herein for **Seventy-Five Thousand Two Hundred and Twenty Dollars and 00/100 (\$ 75,220.00)**. An itemized breakdown of cost is

Wallace Addition Subdivision
August 27, 2024
Page 4 of 4

provided in Exhibit A. Please note that these pricings are based on estimated quantities, and that only actual quantities will be invoiced – up to the total Contract amount.

We look forward to working with you on this project. If there are any questions, please do not hesitate to call at 210.981.3050.

Respectfully,
The Rios Group, Inc.

A handwritten signature in blue ink that reads "Paul D. Brannan". The signature is written in a cursive, flowing style.

Paul D. Brannan, P.E.
Project Manager



THE RIOS GROUP

Estimate for Subsurface Utility Engineering
Wallace Addition Subdivision
San Marcos, Texas

EXHIBIT A

Direct Expenses	<i>Rate</i>	<i>Assumed Quantity</i>	<i>Unit of Measure</i>	<i>Sub-Total</i>
Traffic Control (Standard)	\$ 350.00	8	DAY	\$ 2,800.00
ROW Permits	\$ 270.00	4	EA	\$ 1,080.00
Flowable Backfill	\$ 275.00	16	EA	\$ 4,400.00
Survey (RPLS)	\$ 2,500.00	5	DAY	\$ 12,500.00
Sub-Total				\$ 20,780.00
Hourly Office Labor				
	<i>Rate</i>	<i>Assumed Quantity</i>	<i>Unit of Measure</i>	<i>Sub-Total</i>
Senior Project Manager	\$ 190.00	6	HR	\$ 1,140.00
Senior Professional Engineer	\$ 175.00	8	HR	\$ 1,400.00
Project Manager	\$ 150.00	32	HR	\$ 4,800.00
SUE Field Manager	\$ 105.00	16	HR	\$ 1,680.00
Assistant Project Manager	\$ 95.00	12	HR	\$ 1,140.00
CADD Tech I	\$ 90.00	32	HR	\$ 2,880.00
Project Coordinator	\$ 80.00	6	HR	\$ 480.00
Sub-Total				\$ 13,520.00
QL"B" SUE Designating				
	<i>Rate</i>	<i>Assumed Quantity</i>	<i>Unit of Measure</i>	<i>Sub-Total</i>
1-Man Crew - QL B & TH Layout	\$ 132.00	50	HR	\$ 6,600.00
2-Man Crew	\$ 255.00	24	HR	\$ 6,120.00
Sub-Total				\$ 12,720.00
QL"A" SUE Test Holes				
Unit Rate - Depth	<i>Rate</i>	<i>Assumed Quantity</i>	<i>Unit of Measure</i>	<i>Sub-Total</i>
0 - 6 feet	\$ 1,300.00	12	EA	\$ 15,600.00
6.01 - 10 feet	\$ 1,750.00	4	EA	\$ 7,000.00
10+ feet	\$ 2,800.00		EA	\$ -
Every 1' deeper than 20'	\$ 300.00		EA	\$ -
Pavement Coring	\$ 350.00	16	EA	\$ 5,600.00
Test Hole Total		16		
Sub-Total				\$ 28,200.00
Total Estimated Cost				\$ 75,220.00

Wallace Addition Subdivision, San Marcos, TX

SUE Investigation Limits

EXHIBIT B

Legend



16 - QL B & QL A
Intersections Shown in Red

QL C & D SUE Limits
Shown in Blue

WALLACE ADDITION
Wallace Addition

1000 ft



EXHIBIT C DEFINITIONS & DATA LIMITATIONS

Subsurface Utility Engineering (SUE) Quality Level Definitions

The Rios Group (TRG) performs SUE services in general accordance with the recommended practices and procedures described in ASCE publication ASCE/UESI/CI 38-22 “Standard Guideline for Investigating and Documenting Existing Utilities”. The core aspect of this standard is affixing a professionally judged value (a Utility Quality Level) to buried and hidden Utility Segments and Utility Features that identify the reliability and nonquantifiable locational uncertainty of documented Utility infrastructure data. The four quality levels, as defined in the standard, are:

- **Utility Quality Level D (QLD)** – A value assigned to a Utility Segment or Utility Feature not visible at the ground surface whose estimated position is judged through Utility records, information from others, or from visual clues such as pavement cuts, obvious trenches, or existence of service.

A QLD data attribute is assigned to a Utility Segment or Utility Feature after review and compilation of existing records, oral recollections, One-Call or “private-locate” markings, managed data repositories, context with other achieved Utility Quality Levels, and/or other evidence of existence. QLD data is more uncertain than QLC, QLB, and QLA. QLD data is less uncertain than utilities documented without any Utility Quality Level barring a Professional’s statement of fact to the contrary.

- **Utility Quality Level C (QLC)** – A value assigned to a Utility Segment not visible at the ground surface whose estimated position is judged through correlating Utility records or similar evidence to Utility Features, visible aboveground and/or underground. The Utility Anchor Point on the Utility Features shall be tied to the Project Survey Datum with an accuracy of 0.2 ft (60 mm) horizontal.

A QLC value judgement is assigned to a Utility Segment by using visible Utility Features to approximate the position of a Utility Segment between or in proximity to the visible Utility Features and in context with other achieved Utility Quality Levels. QLC only pertains to the underground Utility Segment(s), not the Utility Feature(s). QLC data is more certain than QLD and is more uncertain than QLB and QLA

- **Utility Quality Level B (QLB)** – A value assigned to a Utility Segment or Subsurface Utility Feature whose existence and horizontal position is based on Geophysical Methods combined with professional judgement and whose location is tied to the Project Survey Datum.

A QLB value is assigned to a Utility Segment when the following conditions are met: (1) the Utility Segment was detected through the application of appropriate Geophysical Methods; (2) the geophysical signal was judged to be reliable. (3) the interpreted position was judged based on knowledge and use of geophysical science, Utility design and installation practices, available records, visual features, and influence of site conditions; and (4) the source Designation has been tied to the Project Survey Datum with an accuracy of 0.2 ft (60mm) horizontally. QLB is more uncertain than QLA and more certain than QLC or QLD.

- **Utility Quality Level A (QLA)** – A value assigned to that portion (x-, y-, and z-geometry) of a Utility Segment or subsurface Utility Feature that is directly exposed and measured and whose location and dimensions are tied to the Project Survey Datum. The Utility Segment or subsurface Utility Feature shall be tied to Project Survey Datum with an accuracy of 0.1 ft (30 mm) vertical and to 0.2 ft (60 mm) horizontal for measurements of the outside limits of the Utility Feature or Utility Segment that is exposed.

Other measurable, observable, and judged Utility Attributes are also recorded. If obtained by means of a Test Hole observation, a verification effort is made, and professional judgement is used to assert that the exposed infrastructure is indeed the sought target. The assignment of QLA conveys the lowest level of relative (nonquantifiable) uncertainty of measurable and judged Attributes and locations. QLA is more certain than QLB, QLC, or QLD.

Acronyms and Special Definitions

3D	three-dimensional
CAD	Computer-Aided Design
EOI	End of Information
GIS	geographic information system
GPR	ground penetrating radar
ROE	Right of Entry
ROW	Right of Way
SAF	Surface Adjustment Factor

Anchor Point: A defined point on a Utility Feature or a Utility Segment. (ASCE 38-22)

Attribute: A defined characteristic of a Utility Feature, Utility Segment, or of a singular point on a Utility Feature or Utility Segment. (ASCE 38-22)

Deliverable: The sealed results from a Subsurface Utility Engineering investigation that typically includes a Utility Report, Utility Drawings, and other relevant Utility data for inclusion in digital or paper formats, and/or within databases and/or three-dimensional models. (ASCE 38-22)

Designating: The application and interpretation of shallow earth Geophysical Methods to infer (with or without surface markings) the existence and the approximate horizontal position and,

when possible and part of the Scope of Work, Depth of a subsurface Utility Segment and/or Utility Feature. (ASCE 38-22)

Electronic Depth (ED): Depth obtained by electromagnetic receiver that has a varying level of accuracy based on many factors including soil conditions, connection type, overhead interference, etc. ED reports to the center of the induced magnetic field.

Encasement: A structure that encloses and protects utility facilities and surrounding infrastructure, environment, and the public. E.G. Concrete cap, casing pipe, tile, ducts, tunnel.

Geophysical Method: Application of an established shallow-earth Geophysical Method (such as seismic, acoustic, gravitational, magnetic, electrical, and electromagnetic) to observe the physical response of the subsurface Utility infrastructure and cultural features, as well as anomalies within those responses. (ASCE 38-22)

Locating: The process of exposing and verifying a Utility for purposes of determining its function, type, position, outside dimensions, and other observable Attributes at its exposed points. (ASCE 38-22)

Low Wire Sag: Lowest elevation on the lowest wire at a crossing overhead utility.

Overhead attachment point: Elevation where overhead line is attached to above ground structure such as a pole.

Subsurface Utility Engineering (SUE): The specialty practice of civil engineering's Utility Engineering branch that includes the investigation, analysis, judgment, and documentation of existing Utility networks. (ASCE 38-22)

Test Hole: A small, limited excavation, made to determine, measure, and record data about a buried Utility Segment or Utility Feature. (ASCE 38-22)

Utility: A privately, publicly, or cooperatively owned pipeline, cable(s), and/or conduits, facility, or system for producing, transmitting, or distributing communications, traffic control cables and structures, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, stormwater, or any other similar commodity, including any fire or police signal system or street lighting system. The term Utility shall also mean the Utility owner/operator inclusive of any wholly owned or controlled subsidiary. (ASCE 38-22)

Utility Feature: A physical component of a Utility. Examples include valves, hydrants, reducers, switches, thrust blocks, vaults, and transformers. (ASCE 38-22)

Utility Investigation: Any or all of a variety of office and field activities undertaken to understand and document the existence of, location, and Attributes of existing Utility facilities within the project limits. (ASCE 38-22)

Utility Quality Level: The value, assigned by the Professional, of a Utility Segment or subsurface Utility Feature that identifies the relative (nonquantifiable) uncertainty of a Utility Segment's or subsurface Utility Feature's existence and actual location to that of its documented location. (ASCE 38-22)

Utility Report: A report or sufficient notes contained within a Utility Drawing, sealed by a Professional, that (1) contains information about the Utility Investigation that might otherwise not be conveyed, (2) assists the end user in understanding the subsurface Utility landscape and risks, (3) provides recommendations to address data deficiencies, and (4) complements the Utility Drawing Deliverables. (ASCE 38-22)

Utility Segment: A continuous portion of a Utility for which the Utility Quality Level is constant, and the Attributes, other than Depth, are substantially identical. (ASCE 38-22)

Vault: A concrete box underground that is used for utility purpose.

General Data Limitations

SUE services are performed in accordance with ASCE/UESI/CI 38-22 guideline, generally accepted engineering principles and practices at the time of service. However, a possibility exists that abandoned, forgotten, non-detectable, undocumented, or newly installed utilities may not get mapped using standard records research and surface geophysical survey procedures. While the ASCE 38-22 standard guidelines mitigate these issues, utilities possessing characteristics mentioned below can be missed while following standard Utility Designating and Locating procedures:

1. Utilities lacking apparent available records and without apparent surface features.
2. Utilities with record information which is illegible, misleading, or incomplete.
3. Utilities which are inaccurately reported or inaccurately represented by the utility owner as being a significant distance from the true position.
4. Abandoned utilities without apparent surface features.
5. Utilities buried excessively deep, beyond detection limits of standard utility designating equipment.
6. Non-conductive utilities buried in clay soil without apparent surface features.
7. Non-conductive lines buried away from the tracer wire (e.g., HDPE Gas)
8. Facilities installed after the SUE effort has been completed.

A common problem occurs when the project involves facility owners and operators with insufficient records and non-conductive buried facilities (a situation often encountered with public works installations), infrastructure for oil and natural gas wells installed prior to 1960, and irrigation systems that utilize non-conductive water mains. Facilities mapped under these circumstances are often depicted as QLD during the utility designating field effort to keep operations and budgets at a practical level. As the design project progresses, some depicted facilities may have to be upgraded to a higher quality level through more advanced geophysical prospecting and utility locating methods to properly identify and assess utility conflicts for design and construction.

Designers, utility coordinators, and contractors must realize the CI/ASCE 38-22 utility mapping effort is an iterative acquisition and interpretation process. Unless subsequent endeavors are made to upgrade designated quality levels, facilities depicted at lower quality levels, such as QLD, may be completely in error. In addition, depicted facilities and corresponding data are pertinent at the time in which field investigation operations are completed and are subject to change.

Final utility plans and data are for design purposes only and reflect utility conditions at the time surveyed. The SUE consultant cannot be held responsible for utility scenario changing after completion of field operations.

Users of this data set must understand and adhere to the limitations associated with the designated quality levels assigned to the depicted facilities. QLC and QLD depictions are based on interpolations, extrapolations, and available record data; this data can be erroneous and should not be used alone for design development and bidding purposes. Additional utility designating and locating field efforts to upgrade data to QLB and QLA are strongly recommended for areas where accurate final design and construction planning and bidding is required.

It is strongly recommended that users of this data, especially project engineers-of-record, become familiar with the ASCE 38-22 standard guidelines and the corresponding data limitations inferred by the designated quality levels prior to employing the data set for design purposes. In addition, a utility report should always accompany the existing utility CADD file to ensure proper interpretation and usage of the data set. Any questions regarding the SUE data or utility report should be directed to the SUE professional engineer-of-record.



August 23, 2024

Ramon Ortiz
Tetra Tech
8911 N Capital of Texas Hwy #2310
Austin, TX 78759

RE: PROWAG Proposal for the Wallace Addition Subdivision Project

Dear Ramon Ortiz,

This is a proposal for the project registration, plan review, and inspection of the Wallace Addition Subdivision Project in San Marcos, Texas for compliance with Chapter 469 of the Texas Government Code, State of Texas Architectural Barriers Act, and TDLR Administrative Rule 68.102.

Altura Solutions proposes to perform the project registration with TDLR, perform the plan review, and inspection for compliance with the State of Texas Architectural Barriers Act. The Public Rights-of-Way Accessibility Guidelines (PROWAG) will be used as the standard to achieve compliance for all work located within the Public Right-of-Way.

Feel free to contact me at (512) 410-7059 or at access@alturalp.com to answer any questions or discuss details of the proposal. Thank you for considering Altura Solutions, LLC to meet your accessibility consulting needs. We look forward to working with you on the project.

Sincerely,

A handwritten signature in black ink that reads "Jesús Lardizábal". The signature is written in a cursive style and is contained within a light gray rectangular box.

Jesús Lardizábal,
RAS #1051
Manager

PROJECT SCOPE AND DESCRIPTION

Sitework and sidewalks in subdivision in San Marcos.

SCOPE OF WORK

Altura Solutions proposes to perform the following services in compliance with Chapter 469 of the Texas Government Code, State of Texas Architectural Barriers Act. PROWAG will be used as the standard to determine compliance with TDLR Administrative Rule 68.102. The following elements will be performed by Altura:

- Register the project with TDLR
- Perform plan review of the project construction documents (as provided by client)
- Perform the final inspection of the project upon completion

EXCLUSIONS

The proposal excludes services to determine compliance with other federal, state or local accessibility requirements and accessibility requirements of building and housing codes such as the International Building Code (IBC).

SCHEDULE

Altura Solutions will perform the project registration within three working days of receiving the required documents and registration fee.

Altura Solutions will perform the plan review and provide a report of findings within fifteen working days after receiving all required documents.

Altura Solutions will perform the final inspection and deliver the Inspection Report within fifteen working days of receiving access to the facility.

DELIVERABLES

The following items will be produced and delivered by Altura Solutions as part of this project:

- Altura Solutions will provide proof of project registration via the TDLR Proof of Registration Sheet.
- Altura Solutions will provide the Plan Review Report detailing the non-compliant findings of the project in the construction documents.
- Altura Solutions will provide the Inspection Report detailing the findings of the final inspection of the built project.

CONSULTING FEE AND INVOICING

The following fees are proposed for the services outlined in this proposal:

- Project Registration (includes TDLR’s required registration fee).....\$300.00
- Plan Review Report\$1,675.00
- Inspection Report.....\$1,850.00

The total proposed consulting fee under this agreement is three thousand eight hundred and twenty-five dollars (\$3,825.00).

To initiate services, the following items must be provided:

- Signed agreement
- Completed Project Registration and Proof of Submission forms
- A set of construction documents
- A check for \$1,975.00 for the Project Registration and Plan Review fees should be made out to Altura Solutions, LLC.

The fees listed above are limited to one plan review and one hour of technical assistance/consulting, and one final inspection. Preliminary reviews, plan review revisions, meetings, site visits, re-inspections, and additional consulting will be considered additional services and will be billed in addition to the contract amount above. This consulting rate is \$195 per hour and \$250 for site visits. Plan Review fees are valid for six months from date of proposal and inspection fees are valid for twelve months from original estimated completion date, after which Altura Solutions reserves the right to propose an increased fee.

Invoices for services are due within 30 days of receipt by client.

LIMIT OF LIABILITY

Client agrees that Altura Solutions, LLC’s limit of liability for any claim against it for services performed under this contract shall be limited to the total of fees paid to Altura Solutions, LLC pursuant to this agreement, but excluding the Texas Department of Licensing and Regulation (TDLR) required project filing fees.

Altura Solutions, LLC

Client:

By: _____

By: _____

Print Name: Jesús Lardizábal

Print Name: _____

Title: Manager

Title: _____

Date: _____

Date: _____