AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES FOR HEATHERWILDE BOULEVARD NORTH - PHASE II

This Agreement for Professional Engineering Services, hereinafter called "Agreement," is entered into by the **City of Pflugerville, Texas**, a municipal corporation, duly authorized to act by the City Council of said City, hereinafter called "City," and **Halff Associates, Inc.**, a Texas corporation, acting through a duly authorized officer, herein called "Engineer," relative to Engineer providing professional engineering services to the City. City and Engineer when mentioned collectively shall be referred to as the "Parties".

W I T N E S S E T H:

For the mutual promises and benefits herein described, the City and Engineer agree as follows:

1. **Term of Agreement.** This Agreement shall become effective on the date of its execution by both Parties, and shall continue in effect thereafter until terminated as provided herein.

2. **Services to be performed by Engineer.** Engineer shall perform the services described in the attached Scope of Services **(Attachments A, B, C and D)** which incorporates these terms and conditions. Unless modified in writing by the parties hereto, the duties of Halff shall not be construed to exceed those services specifically set forth in the Scope of Services. The Scope of Services and these terms and conditions, when executed by the City, shall constitute a binding Agreement on both parties.

3. **Compensation of Engineer.** The City agrees that Engineer shall be paid for services per the fee schedule in **Attachment E**, attached hereto.

Engineer agrees to submit monthly invoices to the City for professional engineering services. These statements will be based upon Engineer's percentage of completion of the Scope of Services. Each monthly invoice submitted by Engineer to the City shall be reasonably itemized to show a brief summary of the work performed. If the City fails to pay Engineer within thirty (30) calendar days of the receipt of Engineer's invoice, Engineer may, after giving ten (10) days written notice to the City, suspend professional engineering services until payment is received. City agrees that Engineer shall be entitled to interest on accounts that are greater than 45 days and such interest shall be reimbursed to Engineer at a rate of one percent (1%) per month. The assessment of interest on accounts receivable shall not preclude Engineer from suspending services as described above.

Nothing contained in this Agreement shall require the City to pay for any work that is unsatisfactory as reasonably determined by the City or which is not submitted in compliance with the terms of this Agreement.

If the City requests additional services beyond the Scope of Work, such work at the hourly rates reflected on the fee schedule plus reasonable and necessary reimbursable expenses (Direct Costs) incurred by Engineer in the performance of the requested services. Direct costs shall include, but are not limited to, long distance telephone, postage, equipment, expendables, mileage, subcontractors or special consultants, freight, testing fees, copies and blueprints. See **Attachment F** for the current Unit Pricing Schedule for direct costs. Direct Costs shall be billed at 1.1 times actual costs. If additional services, trips or expenses are requested, Engineer will not provide such additional services until authorized by the City in writing to proceed

4. **City's Obligations.** The City agrees that it will (i) designate a specific person as the City's representative, (ii) provide Engineer with any previous studies, reports, data, budget constraints, special City requirements, or other pertinent information known to the City, when necessitated by a project, (iii) assist Engineer in obtaining access to property necessary for performance of Engineer's work for the City, (iv) make prompt payments in response to Engineer's statements and (v) respond in a timely fashion to requests from Engineer. Engineer is entitled to rely upon and use, without independent verification and without liability, all information and services provided by the City or the City's representatives.

5. **Termination.** The obligation to provide further services under this Agreement may be terminated by either party in writing upon thirty (30) calendar days notice. In the event of termination by the City, Engineer shall be entitled to payment for services rendered through receipt of the termination notice.

6. **Ownership and Reuse of Documents.** Upon completion of Engineer's services and receipt of payment in full therefore, Engineer agrees to provide the City with an irrevocable license to use the materials and documents prepared or assembled by Engineer under this Agreement. Engineer may retain in its files copies of all drawings, specifications and all other pertinent information related to the work it performs for the City. City's reuse of documents and/or materials provided by or through Engineer on a subsequent or unrelated project or projects shall result in the City automatically indemnifying, defending and holding

harmless Engineer from any and all claims, causes of action, suits, disputes or circumstances that in any way result from such reuse by City, its agents, or others possessing such information by or through City.

7. **Notices.** Any notices to be given hereunder by either party to the other may be affected either by personal delivery, in writing, or by registered or certified mail.

8. **Sole Parties and Entire Agreement.** This Agreement shall not create any rights or benefits to anyone except the City and Engineer, and contains the entire agreement between the parties (including the attached Addendum which is hereby made a part of the agreement). Oral modifications to this Agreement shall have no force or effect.

9. **Indemnification.** Engineer does hereby covenant and agree to release, indemnify and hold harmless the City and its officials, officers, agents, representatives, employees and invitees from and against liability, claims, suits, demands and/or causes of action, (including, but not limited to, reasonable attorney's fees and costs of litigation), which arise directly and proximately by reason of death or injury to property or persons but only to the extent occasioned by the negligent act, error or omission of Engineer, its officials, officers, agents, employees, invitees or other persons for whom Engineer is legally liable with regard to the performance of services under this Agreement.

In the event that the City and Engineer are alleged or found to be concurrently negligent, the Parties agree that all liability shall be calculated on a comparative basis of fault and responsibility and that neither Party shall be required to defend or indemnify the other Party for that Party's negligent or intentional acts, errors or omissions.

10. **Insurance.** Engineer shall, at its own expense, purchase, maintain and keep in force throughout the duration of this Agreement and for a period of three years thereafter, professional liability insurance. The limits of liability shall be $1,000,000.00 per claim and in the aggregate. For coverage provided on a claims-made basis, Engineer agrees to use its best efforts to maintain this policy for a period of three (3) years after the cessation of any work for the City or shall purchase the extended reporting period or "tail" coverage insurance providing equivalent coverage for the same period of time. Engineer shall submit to the City a certificate of insurance prior to commencing any work for the City.

11. **Prompt Performance by Engineer.** All services provided by Engineer hereunder shall be performed in accordance with the degree of care and skill ordinarily exercised under similar circumstances by competent members of the engineering profession in the State of Texas applicable to such engineering services contemplated by this Agreement. Engineer shall perform all duties and services and make all decisions called for hereunder promptly and without unreasonable delay as is necessary to cause Engineer's services hereunder to be timely and properly performed. Notwithstanding the foregoing, Engineer agrees to use diligent efforts to perform the services described herein and further defined in the specific task orders or project scope(s) of work, in a manner consistent with therewith. However, the City understands and agrees that Engineer is retained to perform a professional service and such services must be bound, first and foremost, by the principles of sound engineering judgment and reasonable diligence.

12. **City Objection to Personnel.** If at any time after entering into this Agreement, the City has any reasonable objection to any of Engineer's personnel, or any personnel, professionals and/or consultants retained by Engineer, Engineer shall promptly propose substitutes to whom the City has no reasonable objection, and Engineer's compensation shall be equitably adjusted to reflect any difference in Engineer's costs occasioned by such substitution.

13. **Assignment and Delegation.** Neither the City nor Engineer may assign their rights or delegate their duties without the written consent of the other party. This Agreement is binding on the City and Engineer to the fullest extent permitted by law. Nothing herein is to be construed as creating any personal liability on the part of any City officer, employee or agent.

14. **Texas Law to Apply; Successors; Construction.** This Agreement shall be construed under and in accordance with the laws of the State of Texas. It shall be binding upon, and inure to the benefit of, the parties hereto and their representatives, successors and assigns. Should any provisions in this Agreement be held invalid, illegal or unenforceable, they shall be deemed void, and this Agreement shall be construed as if such provision had never been contained herein.

15. **Conflict of Interest.** Engineer covenants that during the Agreement period that Engineer shall have no interest and shall not acquire any interest, direct or indirect, which will conflict in any manner or degree with the performance of the services to be performed under this Agreement. All activities and other efforts made by Engineer pursuant to this Agreement shall be conducted only by Engineer and professionals and/or consultants retained by Engineer. Any actual violation of this Paragraph, with knowledge, express or implied, by Engineer shall render this Agreement voidable by the City.

16. **Venue.** The parties herein agree that this Agreement shall be enforceable in the State of Texas, and if legal action is necessary to enforce it, exclusive venue shall lie in Travis County, Texas.

17. **Dispute Resolution.** In the event of any disagreement or conflict concerning the interpretation of this Agreement, and such disagreement cannot be

resolved by the signatories hereto, the signatories agree to schedule a series of no less than two meetings of senior personnel of City and Engineer in which the disagreement or conflict will be discussed. The first of such meetings will be scheduled as soon as possible following identification of such disagreement or conflict and the second meeting must occur within thirty (30) days following the initial meeting. Subsequent meetings, if any may be scheduled upon mutual agreement of the parties. The parties agree that these two meetings are conditions precedent to the institution of legal proceedings unless such meetings will adversely affect the rights of one or more of the parties as such rights relate to statutes of limitation or repose.

18. Prevailing Party. In the event a Party initiates or defends any legal action or proceeding to enforce or interpret any of the terms of this Agreement, the prevailing party in any such action or proceeding shall be entitled to recover its reasonable costs and attorney's fees (including its reasonable costs and attorney's fees on any appeal).

19. Signatories. The City and Engineer mutually warrant and represent that the representation of each who is executing this Agreement on behalf of the City or Engineer, respectively, has full authority to execute this Agreement and bind the entity so represented.

IN WITNESS WHEREOF, the parties, having read and understood this Agreement, have executed such in duplicate copies, each of which shall have full dignity and force as an original, on the 11th day of May, 2009.

HALFF ASSOCIATES, INC.

By: Michael A Mya
Signature

Michael A. Mya
Printed Name

Vice President
Title

5/6/09
Date

CITY OF PFLUGERVILLE, TEXAS

By: David Buesing
Signature

David Buesing
Printed Name

City Manager
Title

5/11/2009
Date

ADDENDUM TO AGREEMENT BETWEEN CITY OF PFLUGERVILLE AND HALFF ASSOCIATES, INC. FOR PROFESSIONAL ENGINEERING SERVICES FOR HEATHERWILDE BOULEVARD NORTH PHASE II

The following terms and conditions are incorporated into and form a part of the Agreement Between City of Pflugerville (City) and Halff Associates, Inc. (Engineer) for Professional Engineering Services for the Heatherwilde Boulevard North - Phase II (Project) to which they are attached (the "Original Agreement") for all purposes. "CITY" means The City of Pflugerville and "ENGINEER" means Halff Associates, Inc. In addition to the provisions contained in the Original Agreement, the following provisions, terms, and conditions shall govern and control the parties to the Original Agreement and constitute additional consideration as part of the Original Agreement of which this shall be a part upon approval and execution by the CITY and the ENGINEER:

Section 5 is hereby amended as follows:

Either party may terminate the agreement without cause with 30 days written notice to the non-terminating party by certified mail, return receipt requested. Both parties shall be subject to the termination conditions set forth in Section 5 of the Original Agreement.

Section 6 is hereby amended as follows:

All documents, including Drawing and Specifications prepared or furnished by ENGINEER pursuant to this Agreement or any Task Order, are instruments of service with respect to each project and CITY shall retain an ownership and property interest therein whether or not the project is completed. ENGINEER may make and retain copies for any purpose or use. Any reuse of incomplete documents without the written verification or adoption by ENGINEER for the specific purpose intended will be at CITY's sole risk and without liability or legal exposure to ENGINEER, and CITY shall defend, indemnify and hold harmless ENGINEER from all claims, damages, losses and expenses including attorney fees arising out of or resulting therefrom. CITY shall retain copies of drawings and specifications prepared in CADD. ENGINEER retains the right to remove all indication of ownership and/or involvement from the disc/magnetic tape provided to CITY.

Section 10 is hereby amended as follows:

ENGINEER shall procure and maintain the following minimum insurance applicable to the Project and ENGINEER's services hereunder:

Type of Insurance	Limits of Liability
Worker's Compensation	Statutory
Employer's Liability	$250,000
Commercial General Liability Personal Injury/Property Damage	$1,000,000. Combined single limit
Automobile Liability	
Bodily Injury/Property Damage Hired car, owned and non-owned autos	$1,000,000. Combined single limit.
Professional Liability	$1,000,000
Excess Liability (Umbrella form)	$1,000,000

Section 19 is hereby amended as follows:

Representations and Warranties by ENGINEER. If ENGINEER is a corporation, partnership or a limited liability company, ENGINEER warrants, represents, covenants, and agrees that it is duly organized, validly existing and in good standing under the laws of the state of its incorporation or organization and is duly authorized and in good standing to conduct business in the State of Texas, that it has all necessary power and has received all necessary approvals to execute and deliver the Agreement, and the individual executing the Agreement on behalf of ENGINEER has been duly authorized to act *for* and bind ENGINEER.

Section 20 is hereby added as follows

Franchise Tax Certification. A corporate or limited liability company ENGINEER certifies that it is not currently delinquent in the payment of any Franchise Taxes due under Chapter 171 of the *Texas Tax Code,* or that the corporation or limited liability company is exempt from the payment of such taxes, or that the corporation or limited liability company that is not an out-of-state corporation or limited liability company that is not subject to the Texas Franchise Tax, whichever is applicable.

Section 21 is hereby added as follows:

Payment of Debt or Delinquency to the State or Political Subdivision of the State. Pursuant to Chapter 38, *City of Plugerville Code of Ordinances,* ENGINEER agrees that any payments owing to ENGINEER under the Agreement may be applied directly toward any debt or delinquency that ENGINEER owes the City of Pflugerville, State of Texas or any political subdivision of the State of Texas regardless of when it arises, until such debt or delinquency is paid in full.

Section 22 is hereby added as follows:

Texas Family Code Child Support Certification. ENGINEER certifies that no officers of the organization are delinquent in child support obligations and therefore is not ineligible to receive the award of or payments under the Agreement and acknowledges that the Agreement may be terminated and payment may be withheld if this certification is inaccurate.

Section 23 is hereby added as follows:

Eligibility Certification. ENGINEER certifies that the individual or business entity named in the Agreement is not ineligible to receive the award of or payments under the Agreement and acknowledges that the Agreement may be terminated and payment withheld if this certification is inaccurate.

ATTACHMENT "A"

PROPOSED SCOPE OF SERVICES
for
HEATHERWILDE BLVD ROADWAY IMPROVEMENTS
CITY OF PFLUGERVILLE, TEXAS

PURPOSE

The purpose of this Proposed Scope of Services is to delineate the professional services that Halff Associates, Inc. (Engineer) and its Sub-consultants will provide to the City of Pflugerville (City) for the development of Preliminary Design documents, PS&E documents, and other related or associated services outlined in this document for the Heatherwilde Boulevard Roadway Improvements.

PROJECT DESCRIPTION

The project includes design of Heatherwilde Boulevard from Wilke Ridge Lane to Kingston Lacy in Pflugerville, Texas. The general scope of work is to convert the existing 2-lane roadway into a 4-lane divided curb and gutter roadway meeting City of Pflugerville design requirements. Other than general roadway design, the project also includes design of the following: culvert/bridge on the southern end where Heatherwilde crosses the Unnamed Tributary to Wilbarger Creek; 2,500 linear feet of City wastewater line; 3,500 linear feet of Manville water line; hike and bike trail on east side of roadway inside ROW; and civil design of median street lights from Wilke Ridge Lane to SH 45. The project will be developed under the following Tasks:

Task 1: Schematic Alignment & Preliminary Engineering Report

Task 2: Complete Preliminary Design (50% design)

Task 3: Develop Plans/Specifications and Estimates (PS&E) (90% design)

Task 4: Final Plans, Specifications and Estimates (100% design)

Task 5: Construction Administration

Task 6: Additional Special Services

TASK 1: SCHEMATIC ALIGNMENT & PRELIMINARY ENGINEERING REPORT

1.1 Data Collection

This task identifies the data gathering that will be required for the project and generally includes the following:

1. Identify property owners based on Travis County tax maps.
2. Obtain adjacent subdivision plans, preliminary plans, roadway design plans, utility plans, etc. as available. It is expected that the City will provide items as follows:
    a. Subdivision as-builts with detention ponds.
    b. Highland Park LOMR/CLOMR.
    c. Existing City wastewater line as-builts.
    d. Street light details from electric company.
3. Perform site visits to verify site conditions, utility locations, driveways, drainage structures, etc.

1.2 Utility Coordination & Subsurface Utility Engineering (SUE)

This task identifies the utility coordination required and the SUE needed in order to get existing utilities relocated that are in conflict, and generally includes the following:

1. Identify and locate horizontally all existing utilities (SUE). Utilities will be located to Quality Level "B" as defined by ASCE 38-02: Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data. Halff will also provide up to eight (8) Quality Level "A" test holes for various utility locations.

2. Engineer will identify conflicts between existing utilities in the project area and new facilities associated with the proposed project. The utility companies will be responsible for preparing design solutions for their affected utilities. This task will include the following activities:
    a. Each utility company will be contacted for plans showing the location of their existing and planned facilities.
    b. Provide developed utility plans (hard copy and electronic) to utility companies at 50, and 90% percent complete stage, and at the final plan stage (100%) showing proposed improvements with all conflicts clearly identified.
    c. Formerly request solutions to mitigate the impacts to their facilities.
    d. Coordinate with utility companies and obtain utility relocation designs and proposed relocation dates.

1.3 Surveying Services

Surveying services on the Heatherwilde Boulevard project shall consist of various services related to the design of approximately 3,500 linear feet of roadway construction and is described as follows:

1. Project Survey

    a. Primary Control:

        i. Utilizing GPS, Surveyor will set control points (station and Azimuth mark) along the project route, Control pairs will be set at each end of the route.

        ii. Control points will be brass caps with iron rod set in concrete stamped with unique alphanumeric identifier. Item includes providing three (3) permanent survey monuments (brass discs in concrete) along the project to expand the City's benchmark system.

        iii. Primary control will be based on existing HARN stations, TxDOT RRP data, LCRA sub-HARN control points and NGS, USGS and LCRA vertical control data.(Grid or surface)

        iv. A data sheet will be published for each control pair providing geographic coordinates, recover directions and state plane coordinates in NAD 83 (93), Texas Central Zone.

    b. Land Surveying Services: Based on final centerline alignment, surveyor will perform design survey of features within 50 feet of proposed ROW and will include the following:

        i. Survey elevations at approximately 50-foot intervals and major grade breaks to provide a topographic map of the area. A DTM with contours of one-foot intervals will be generated from this data. Elevations will be based on the GPS observations.

        ii. Surveyor existing utility markings in the project area as identified by SUE. These markings will be located in the design survey for use by the project designer. A record of contacts with the utility owners will be kept and passed on to the project designer. All visible and observable utilities will be located within the ROW.

        iii. Locate soil borings and core holes if they are present at the time of the survey.

        iv. Size, type, and condition of driveways or roadway crossings.

        v. Signs, fences, guardrails, and other visible improvements including buildings within 50' of proposed ROW. Also to include trees 6" or greater and visible utilities (including rim and flowline elevations).

        vi. Size and type of culverts with top and flowline elevations

1.4 Geotechnical Services

See Attachment "C" for detailed scope of services from Raba-Kistner Consultants, Inc. In addition, Halff Associates will provide coordination needed with the Geotechnical Engineer for design and preparation of the construction documents. This will include a sulfate analysis and a lime recommendation.

1.5 Signal Warrant & Pole Foundation Layout

See Attachment "D" for detailed scope of services from Alliance Transportation Group, Inc. In addition, Halff Associates will provide coordination needed with the Traffic Engineer for preparation of the documents.

1.6 Environmental Analysis

Halff Associates, Inc. will conduct environment constraints analysis for the proposed alignment and identify permitting requirements for the proposed activity.

1. Initial Site Assessment for identification and evaluation of hazardous material issues that could impact the project.

2. Jurisdictional waters determination and analysis of Section 404 permit requirements and includes any delineation requirements.

3. Survey of historic resources in or eligible for inclusion in the National Register of Historic Places, and project impact analysis.

4. Texas Historical Commission's Archeological Sites Atlas search for known archeological sites, and agency coordination letter to determine if a survey would be required.

5. Threatened or endangered species records search and habitat impact evaluation.

1.7 H&H Analysis – Crossing of Unnamed Tributary to Wilbarger Creek

This item covers a detailed Hydraulic and Hydrology (H&H) analysis of the Heatherwilde Blvd. existing and proposed creek crossing. The creek is currently described as a Zone-A floodplain upstream (two locations) and a Zone-AE floodplain downstream as a result of a previous Letter of Map Revision (LOMR). The proposed Heatherwilde crossing location will be sized and analyzed for both a culvert and bridge structure and this effort is generally described as follows:

1. Hydrology
    a. Watershed delineation of the approximate 890 acre drainage area.
    b. HEC-HMS v3.2 hydrologic model to determine pre and post project flows of 2yr, 25yr and 100yr frequency events for both current and future conditions using the following:

i. Existing and future land use data provided by City,

ii. NRCS SSURGO Soil Data,

iii. 2007 CAPCOG LiDAR topography with 2-ft contours,

iv. NRCS Unit Hydrograph Methodology,

v. City of Pflugerville Drainage Criteria

2. Hydraulics

   a. HEC-RAS v3.1.3 to determine proposed culvert and bridge sizes based on passing the 100 year flood event.

      i. Per City standards, if 100 year is higher than 1,200 cfs, the structure will be sized for a water surface elevation 1 ft below the low chord

   b. It is assumed that detailed channel survey will be obtained along the Heatherwilde Blvd. ROW. It will be necessary to collect up to 6 channel cross-sections just upstream and downstream of this crossing (outside the limits of the project ROW) to better define the hydraulics in this area. Some invert spot shots may also be needed in this area.

   c. Velocity analysis needed to recommend appropriate channel armoring upstream and downstream of the proposed crossing. This effort will also include a preliminary bridge scour analysis in the event a bridge design is the final recommendation for this project.

3. H&H Summary Report: including calculations, details of findings, and recommendation of proposed structure will be included as an attachment of the Preliminary Engineering Report described under Task 1.11.

It is anticipated that some level of channelization upstream of Heatherwilde Blvd. will be needed to convert the existing two crossing situation to a single crossing. Every effort will be made not to adversely impact the existing floodplain in this area. In the event an increase in the floodplain is necessary, a Letter of Map Revision (LOMR) will need to be submitted to FEMA at the conclusion of this project's construction (not included).

It is anticipated that this project will not adversely impact the existing floodplain downstream of this proposed Heatherwilde Blvd. crossing. It should be noted that the existing downstream channel is a detailed Zone AE floodplain with a potential floodway. In the event that some adverse impacts are unavoidable, it will be necessary to maintain those impacts to no more than a one (1) foot rise in the 100-yr floodplain, and a zero (0) rise in the floodway (if in existence). In the event an increase in the floodplain is unavoidable, a FEMA Letter of Map Revision (LOMR) will be needed for the existing floodplain in the area associated with the proposed culvert improvements. In the event a floodway is in existence, a no-rise certificate will be required regardless of the improvements that occur. Some comparison to the existing Zone AE floodplain will be needed for the LOMR submittal, which will require that Halff acquire, utilize, and possibly modify the existing current effective Zone AE model of this area. Any changes to the existing floodplains will require notification to impacted property owners. FEMA's standard notification form will be utilized for this purpose.

1.8 H&H Analysis – Downstream Channel Improvements (Concept Design).

This item covers a Hydraulic and Hydrology (H&H) analysis of the downstream channel as well as a preliminary/conceptual assessment of potential channel improvements downstream of the proposed Heatherwilde crossing. The creek is currently described as a detailed Zone-AE floodplain downstream. It is anticipated that the proposed improvements will not have an adverse impact to the floodplain just downstream of the limits of proposed improvement. In the event there are some adverse impacts, they will be limited to a maximum of a one (1) foot rise in the 100-yr floodplain, in which case a Letter of Map Revision (LOMR) will be needed at the conclusion of the construction. Every effort will also be made to limit the proposed channel improvements to within the threshold of the existing Nationwide Permit limits and/or avoid existing "waters of the US". In the event these limits must be exceeded, then some level of environmental mitigation will be necessary. This mitigation effort and any other coordination with the Corps will be considered additional services. It should be noted that this is a conceptual design, and in the event the City wants to proceed to a detailed design, it will be considered additional services as well. These additional services would likely include easement acquisition, detailed existing and post project survey, potential utility relocation, possible environmental mitigation, possible LOMR, and detailed construction plans. The services provided under this conceptual design include the following:

1. Hydrology and Hydraulics
    a. The hydrologic and hydraulic models developed under 1.7A of this scope will be used to determine adverse impacts to downstream property and aid with the recommended channel improvements to improve the existing flooding problems. The proposed channelization will likely include channel widening with the goal of avoiding the ordinary high water mark of the existing creek.
    b. The models will also be used to determine the impacts of this channelization to downstream properties. In the event an increase in the 100-yr floodplain downstream of the proposed channel improvement occurs, some level of hydrologic mitigation may be needed. This might include a combination of regional detention and/or modifications to existing detention facilities nearby.
    c. This conceptual design will utilize existing LiDAR data with some minor field data collection only (no detailed survey data is anticipated). In the event some detailed survey data is needed, this will be considered additional services.
2. H&H Summary Report: including calculations, details of findings, preliminary estimate of probable construction costs, rough benefit/cost assessment to the downstream property owners, and recommendation of proposed channel improvements will be included as an attachment to the Preliminary Engineering Report described under Task 1.11.

1.9 Conceptual Landscape Planning

This item includes preparation of conceptual landscape plans and will generally include the following:

1. Attend project kick-off meeting with City staff to establish scope of project and identify the general program and parameters for conceptual design efforts.
2. Prepare conceptual landscape and irrigation plans with supporting illustrative graphics for client review and comment (maximum of two).
3. Provide preliminary development and construction costs for each conceptual landscape and irrigation plan alternative.
4. Review the conceptual landscape and irrigation plans with City and incorporate City comments prior to preparation of design plans.
5. Prepare a final conceptual landscape plan for City use based on previously prepared concepts. Preparation of full color renderings of conceptual landscape and irrigation plans for City use during public presentations is not included under this task but can be provided as an additional service.

1.10 Plan & Profile Schematic

This item includes preparation of a schematic plan and profile of the roadway improvements and will generally include the following:

1. Roadway plan and profile provided on roll plot at 1"=100' and featuring roadway horizontal and vertical alignments including 'K' values and travel lane lines.
2. Sequence of construction and basic traffic control plan (diagrammatic)
3. Existing and proposed ROW lines.
4. Water and wastewater lines (plan view only).
5. Typical sections showing cross-slopes, lane widths, pavement section, ROW widths, hike and bike trail location, cut/fill rates, etc.
6. Location of median openings and turn-lanes.
7. Analysis of hike and bike locations as they relate to the City's trail plans along Wilbarger Creek. This will include up to three (3) options (with exhibit) related to crossing Heatherwilde to accommodate a future trail along Wilbarger Creek.

1.11 Preliminary Engineering Report

This item includes preparation of a preliminary engineering report and will generally include the following:

1. Description of existing site conditions & utilities along with contact information.
2. Description of proposed roadway and drainage facilities.

3. Design calculations and models associated with the hydraulic analysis of the unnamed tributary of Wilbarger Creek crossing.
4. Environmental summary description related to site conditions and permitting.
5. Estimate of Probable Construction Cost.

TASK 1 Deliverables:

a. Geotechnical Report
b. Signal Warrant Analysis
c. Conceptual Landscape Plans & Estimates
d. Schematic Plan & Profile (Roll Plot)
e. Preliminary Engineering Report

TASK 2: COMPLETE PRELIMINARY DESIGN (50% Design)

2.1 Preliminary Plans Design (50%)

This work product will require the development of preliminary design including preliminary roadway plan and profile, utilities and drainage. The design of the roadway will be in compliance with City design criteria. Plans will be produced using MicroStation v8 and will include the following:

1. Title, general notes, typical sections and horizontal alignment sheets.
2. Preliminary roadway plan and profile sheets with basic call-out information.
3. Preliminary drainage plans and profile sheets with culvert layout.
4. Preliminary traffic control and construction phasing plan.
5. Preliminary signing and striping sheets.
6. Preliminary estimate of probable construction cost.
7. Determine necessary easement and ROW requirements

2.2 Boundary Surveying Services

1. This fee proposal includes the cost of preparing the parcel plats and field notes, to acquire right-of-way from a total of twenty (20) parcels, and twenty (20) permanent construction easements and temporary easements on adjacent properties. These will be signed and sealed by a Texas Registered Professional Land Surveyor. Surveyor will also locate sufficient boundary information in order to meet minimum requirements per the Texas Board of Professional Land Surveying for easements.

2. An Abstract of Title research is required and will research the chain of title and any easements recorded during the last 25 years (included as part of survey cost).

TASK 2 Deliverables:

a. Updated estimate of probable construction costs.

b. 50% complete plans (11"x17").

c. Parcel Metes and Bounds with field notes

TASK 3: DEVELOP PLANS/SPECS AND ESTIMATES (PS&E) (90 % Design)

3.1 Document Development

1. Roadway Plans & Profiles

   a. Plan and profile sheets will be further developed including features such as: roadway horizontal and vertical alignment with calculations shown, pavement widths and limits, typical sections, curb and gutter, normal cross-slope and super elevation locations, side slopes, right-of-way and easement limits, grading and intersection details, retaining walls (if needed) and railing.

   b. Hike and Bike Trail: included on roadway plans showing width (10ft anticipated), location, grading, ramps and details all meeting ADA requirements. Trail expected to be inside ROW on east side of roadway.

   c. Street Light Electrical: included on roadway plans showing conduit location (sized by electrical company), foundation location and foundation details (provided by electrical company). Design to extend from Wilke Ridge Lane to SH 45 (section from Kingston Lacy to SH 45 was designed by others).

2. Drainage Plan & Profiles

   a. Plan and profile sheets will be further developed including features such as: pipe sizes, pipe pay lengths, hydraulic grade lines, flowline information, and manhole/inlet spacing. Plans will also include grading of drainage channels necessary to convey offsite flows.

   b. Box Culverts: includes plan and profiles, hydraulic grade lines, grading and details (see 3.1.9 for structural items).

   c. Calculation Sheets: includes on-site and off-site runoff assumptions and calculations, storm system calculations for 25 year event, and culvert calculations.

3. Waterline Plan & Profiles (Relocation of Manville facilities)

   a. Plan and profiles to include horizontal and vertical designation, pipe size and material (determined by Manville), service connections, pipe appurtenances (valves, bends, etc.) and details. This task assumes Manville will provide standards, details and drawings (hard copy and digital) for use in the plan set.

4. Wastewater Plan & Profiles

    a. Plan and profiles to include horizontal and vertical designation, pipe size (determined by City), flowline information, manholes, service connections, and design calculations (where applicable). It is anticipated that the new wastewater line will be located on the west side of the roadway (inside ROW) and will tie into an existing City line just south of the creek and will end north at the Nicholson property (approximately 2,500 linear feet).

5. Signing And Pavement Marking Plan

    a. Existing signing will be moved to temporary locations during construction and reset to new locations as part of the construction. New signs will be placed as required. Speed limit signs and their locations are to be determined by others. Signing quantities will be prepared at the 90% submittal.

    b. Pavement markings will be designed in accordance with the Texas Manual on Uniform Traffic Control Devices and the Texas Department of Transportation Standard Details. Pavement markings will be shown for the entire length of the project on layout sheets. Pavement marking quantity list will be prepared for the 90% submittal.

6. Traffic Control and Construction Phasing Plan

    a. Traffic control plans will be prepared showing construction phasing to maintain traffic through the project. Typical cross sections showing staging methods will be shown on the drawings. Traffic control details showing special barrier locations, signing, and stage surfacing will be prepared. Construction staging plans delineating areas under traffic, under construction, and roadway obliteration will be prepared.

7. Erosion Control Plans

    a. Prepare erosion control plans that show both temporary and permanent controls to be used during construction. Controls to include silt fence, rock berms, construction entrance locations and details, tree protection, and soil retention blankets as necessary. Streambank stabilization for creek crossing is provided under this task. The erosion controls are also provided as an inclusion into the Stormwater Pollution Prevention Plan (SWPPP) that will be prepared and maintained by the contractor.

8. Cross Sections

    a. Prepare cross sections at 50 foot intervals along roadway improvements. Sections will include design surface and existing surface data and will be conducted using MicroStation Geopak.

9. Project Construction Manual

    a. A project construction manual with the City's boilerplate will be prepared and will include the bid schedule, list of specifications, special specifications and other pertinent documents as necessary for the use of project bidding.

10. Quantities and Estimates

    a. A detailed quantity takeoff will be performed for a unit bid price. An engineer's estimate of probable construction cost will be provided based on the quantity takeoff.

11. Structural Design

    a. Structural design plans will be prepared for box culverts, retaining walls and/or splitter boxes should they be required. It is anticipated that box culverts, retaining walls and splitter boxes will utilize standard TxDOT detail sheets. This item does not include design of a bridge or a floodwall.

12. Environmental Permits

    a. Nationwide Permit 14: The proposed project qualifies for the US Army Corps of Engineers (USACE) Nationwide Permit (NWP) 14 for linear transportation projects. NWP 14 requires preconstruction notification (PCN) which includes a mitigation plan which will be provided by Halff Associates. This task does not include preparation of an Individual 404 permit but can be provided as an additional service for fees to be determined.

TASK 3 Deliverables:

a. 90% Complete Plans (11"x17").
b. 90% Complete Project Construction Manual.
c. 90% Estimate of Probable Construction Cost.
d. Environmental Permits (as required).

TASK 4: FINAL PLANS, SPECIFICATIONS, AND ESTIMATES (100% Design)

Verify that all comments from Task 3 have been resolved and incorporate into the plan documents as appropriate.

4.1 Finalize Plans and Estimates

After incorporating City's comments, finalize Plans, Specifications & Estimates for construction as detailed under Task 3.

TASK 4 Deliverables:

a. 100% Complete Design Plans (sealed) (22"x34")
b. 100% Complete Project Manual (sealed)
c. Final Estimate of Probable Construction Cost
d. Electronic copy of Microstation DGN's, Geopak and GIS files.

TASK 5: CONSTRUCTION ADMINISTRATION

5.1 Bid Phase

1. Engineer will provide assistance to the City in responding to questions from contractors and prepare contract addenda as necessary.
2. Engineer will provide a bid tabulation and evaluation of bids received from contractors along with a written recommendation for 'lowest responsive bidder'.

5.2 Construction Support Services

1. Attend the pre-construction meeting with the City and Contractor as well as site meetings for construction. (One consultant representative will attend up to 6 meetings at 4 hours per meeting. Preparation and follow up for each site visit is included for 2 hours per meeting).
2. Review and approve all shop drawing submittals.
3. Review and respond to all design clarifications as necessary.
4. Provide 'record drawings' based on red-line mark-ups provided by the contractor (does not include as-built survey). This includes four (4) hard copies and electronic files.

TASK 5 Deliverables:

a. Provide correspondence with City and contractors.

b. Provide addenda support data.

c. Provide written recommendation of "lowest responsive bidder"

d. Provide site visit reports.

e. Perform Final Walk-through and Punch List

f. Provide 'record drawings' (hard and digital copies)

TASK 6: ADDITIONAL SPECIAL SERVICES

Items provided under this task will not be conducted unless specifically requested by City in writing.

6.1 Landscape & Irrigation Plans

Prepare landscape and irrigation construction plans based on approval of a specific conceptual design provided under Task 1.9.

1. Provide details indicating specific information and data necessary for construction of landscape and irrigation improvements.
2. Submit plans for City staff review and comment at the 50% and 90% levels of completion (consistent with Tasks 2 & 3).
    a. Attend meeting with City staff at each submittal stage (two total) to discuss comments and plan changes and to document staff comments for use during preparation of subsequent submittal.
    b. Prepare estimate of probable construction cost at each submittal stage.
    c. Provide specifications and bidder instructions in City standard format at the 90% complete stage.
3. Prepare and submit final plans at the 100% stage along with a final estimate of probable construction cost (consistent with Task 4).

6.2 Signal Design

See Attachment "D" for detailed scope of services from Alliance Transportation Group, Inc. In addition, Halff Associates will provide coordination needed with the Traffic Engineer for design and preparation of the construction documents.

ATTACHMENT 'E'
CITY OF PFLUGERVILLE
HEATHERWILDE BLVD - FEE SCHEDULE

HALFF ASSOCIATES, INC.
4030 W Braker Lane, Ste 450
Austin, TX 78759

AVO: 1008-08-6178

DATE: 4-28-09

Project Task Description	Principal	Project Manager	Project Engineer (PE)	Project Engineer (EIT)	Sr. Env Scientist	Env Scientist	Sr. Land Architect	Land Architect	RPLS	Survey Tech	Survey/ SUE Crew	SUE Field Manager	CADD Tech	Admin	Direct Costs	TOTAL
BASIC FEE - HEATHERWILDE BLVD ROAD IMPROVEMENTS	**$180**	**$150**	**$125**	**$90**	**$135**	**$90**	**$110**	**$85**	**$125**	**$90**	**$125**	**$95**	**$60**	**$50**		
TASK 1: Schematic Alignment & Preliminary Engineering Report																
1.1 Data Collection		**4**	**8**	**16**					**8**	**4**				**4**	**$100**	**$4,700.00**
1.2 Utility Coordination & SUE	**0**	**0**	**40**	**40**	**0**	**0**	**0**	**0**	**0**	**0**	**88**	**24**	**24**	**0**	**$3,200**	**$26,520.00**
1.2.1 SUE (Level 'B' and 8 Level 'A' Test Holes)			24								88	24	24		$3,200	$20,920.00
1.2.2 Utility Coordination			16	40											$0	$5,600.00
1.3 Surveying Services	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**36**	**104**	**184**	**0**	**0**	**0**	**$100**	**$36,960.00**
1.3.1a Primary Control									12	24	40				$50	$8,710.00
1.3.1b Surveying									24	80	144				$50	$28,250.00
1.4 Geotechnical Services		**4**	**8**												**$9,875**	**$11,475.00**
1.5 Signal Warrant & Pole Foundation Layout		**4**	**8**												**$15,536**	**$17,136.00**
1.6 Environmental Analysis	**0**	**0**	**0**	**0**	**10**	**86**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$0**	**$9,090.00**
1.6.1 Hazardous Materials Initial Assessment						24									$0	$2,160.00
1.6.2 Jurisdictional Waters Analysis & Delineation					4	24									$0	$2,700.00
1.6.3 Historic Resources Survey					2	32									$0	$3,150.00
1.6.4 Archeological Record Research & Agency Coordination					4	2									$0	$720.00
1.6.5 Threatened and Endangered Species Habitat Evaluation						4									$0	$360.00
1.7 H&H Analysis - Crossing of Unnamed Tributary of Wilbarger Creek	**2**	**2**	**48**	**140**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**$25**	**$19,385.00**
1.7.1 Hydrology			16	40											$0	$5,600.00
1.7.2 Hydraulics			16	60											$0	$7,400.00
1.7.3 Summary Report	2	2	16	40										2	$25	$6,385.00
1.8 H&H Analysis - Downstream Channel Improvements (Concept Design)	**2**	**2**	**32**	**112**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**$25**	**$14,865.00**
1.8.1 Hydrology & Hydraulics			16	64											$0	$7,760.00
1.8.2 Summary Report	2	2	16	48										2	$25	$7,105.00
1.9 Conceptual Landscape Planning	**0**	**0**	**0**	**0**	**0**	**0**	**32**	**52**	**0**	**0**	**0**	**0**	**0**	**0**	**$50**	**$7,990.00**
1.9.1 Project Kick-off							4	4							$0	$780.00
1.9.2 Conceptual Landscape Alternatives (2 max)							12	24							$50	$3,410.00
1.9.3 Cost Estimates							4	8							$0	$1,120.00
1.9.4 Review & Incorporate City Comments							12	16							$0	$2,680.00
1.10 Plan & Profile Schematic	**8**	**36**	**88**	**152**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**184**	**12**	**$250**	**$43,410.00**
1.10.1 Roadway Plan & Profile	4	16	40	80									80	4	$200	$20,520.00
1.10.2 Diagrammatic Traffic Control	2	8	16	16									32	4	$50	$7,170.00
1.10.3 Right-of-Way Graphics		2	4	8									8		$0	$2,000.00
1.10.4 Water & Wastewater Schematic Design	2	4	16	16									32	4	$0	$6,520.00
1.10.5 Typical Sections		2	4	8									8		$0	$2,000.00
1.10.6 Median Cuts & Turn Lanes		2	4	8									8		$0	$2,000.00
1.10.7 Wilbarger Hike & Bike Analysis		2	4	16									16		$0	$3,200.00
1.11 Preliminary Engineering Report	**0**	**10**	**56**	**16**	**16**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**$200**	**$12,960.00**
1.11.1 Existing Site Conditions		2	16	4										2	$50	$2,810.00
1.11.2 Proposed Facilities		2	16	4										2	$50	$2,810.00
1.11.3 Engineering Calculations		4	16											2	$50	$2,750.00
1.11.4 Environmental Summary					16	4									$50	$2,570.00
1.11.5 Estimate of Probable Cost		2	8	8											$0	$2,020.00
TASK 1 SUBTOTAL	**12**	**62**	**288**	**476**	**26**	**90**	**32**	**52**	**44**	**108**	**272**	**24**	**208**	**26**	**29361**	**$204,491.00**
TASK 2: Complete Preliminary Design (50% Plans)																
2.1 Preliminary Plans Design (50%)	**8**	**78**	**208**	**348**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**384**	**12**	**$150**	**$94,250.00**
2.1.1 Title, General Notes, Typical Sections, Horiz. Alignment		4	16	16									24	4	$25	$5,705.00
2.1.2 Roadway Plan & Profiles	2	16	40	80									80	4	$25	$19,985.00
2.1.3 Drainage Plan & Profiles	2	16	40	80									80	4	$25	$19,985.00
2.1.4 Traffic Control	2	16	40	64									64		$25	$17,385.00
2.1.5 Signing & Striping		4	16	24									40		$25	$7,185.00
2.1.6 Estimate of Probable Construction Cost		2	8	8											$25	$2,045.00
2.1.7 ROW & Easement Determinations		4	8	16									16		$0	$4,000.00
2.1.8 Water/Wastewater Plan & Profiles	2	16	40	60									80		$0	$17,960.00
2.2 Boundary Surveying Services	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**204**	**320**	**120**	**0**	**0**	**0**	**$30,100**	**$99,400.00**
2.2.1 Metes and Bounds (20 ROW Parcels, 20 Easement Parcels)									180	320	120				$100	$66,400.00
2.2.2 Abstract of Title									24						**$30,000**	$33,000.00
TASK 2 SUBTOTAL	**8**	**78**	**208**	**348**	**0**	**0**	**0**	**0**	**204**	**320**	**120**	**0**	**384**	**12**	**$30,250**	**$193,650.00**
TASK 3: Develop Plans, Specifications and Estimates (PS&E) (90% Plans)																
3.1.1 Roadway Plan & Profiles	**2**	**22**	**56**	**112**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**104**	**4**	**$50**	**$27,230.00**
3.1.1a Roadway Plan & Profiles	2	16	40	80									80	4	$50	$20,010.00
3.1.1b Hike & Bike Trail Design		2	8	16									16		$0	$3,700.00
3.1.1c Street Light Foundations/Conduits		4	8	16									8		$0	$3,520.00
3.1.2 Drainage Plan & Profiles	**6**	**32**	**80**	**104**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**64**	**4**	**$50**	**$29,330.00**
3.1.2a Drainage Plan & Profiles	2	16	40	80									40	4	$50	$17,610.00
3.1.2b Box Culvert Design	2	8	16	16									16		$0	$5,960.00
3.1.2c Drainage Calculations	2	8	24	8									8		$0	$5,760.00
3.1.3 Waterline Plan & Profiles	**2**	**8**	**40**	**64**									**64**		**$0**	**$16,160.00**
3.1.4 Wastewater Plan & Profiles	**2**	**8**	**32**	**40**									**40**		**$0**	**$11,560.00**
3.1.5 Signing & Striping Plans		**4**	**16**	**24**									**24**		**$0**	**$6,200.00**
3.1.6 Traffic Control & Construction Phasing Plans	**2**	**16**	**24**	**40**									**40**		**$0**	**$11,760.00**
3.1.7 Erosion Control Plans		**4**	**16**	**40**									**40**		**$0**	**$8,600.00**
3.1.8 Cross Sections		**8**	**40**	**64**									**64**	**4**	**$50**	**$16,050.00**
3.1.9 Project Construction Manual		**4**	**24**	**24**										**4**	**$50**	**$6,010.00**
3.1.10 Quantities and Estimates		**4**	**8**	**8**											**$0**	**$2,320.00**
3.1.11 Structural Design	**2**	**4**	**16**	**16**									**24**		**$0**	**$5,840.00**
3.1.12 Environmental Permits	**2**	**4**	**8**	**0**	**32**	**32**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**4**	**$50**	**$10,370.00**
3.1.12a USACE Nationwide Permit 14	2	4	8		32	32							16	4	$50	$10,370.00
TASK 3 SUBTOTAL	**18**	**118**	**360**	**536**	**32**	**32**	**0**	**0**	**0**	**0**	**0**	**0**	**480**	**20**	**$250**	**$151,430.00**
TASK 4: Final Plans, Specifications and Estimates (100% Plans)																
4.1 Final Plans & Estimates	**2**	**16**	**40**	**64**									**40**	**4**	**$100**	**$16,220.00**
TASK 4 SUBTOTAL	**2**	**16**	**40**	**64**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**40**	**4**	**$100**	**$16,220.00**
TASK 5: Construction Administration																
5.1 Bid Phase	**0**	**8**	**24**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**$0**	**$5,640.00**
5.1.1 Contractor Response & Addenda		4	24	8											$0	$4,320.00
5.1.2 Bid Tabulation		4		8											$0	$1,320.00
5.2 Construction Support Services	**2**	**48**	**88**	**48**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**32**	**0**	**$550**	**$25,350.00**
5.2.1 On-Site Construction Meetings (12 max)	2	24	24												$0	$6,960.00
5.2.2 RFI Review		8	32												$50	$5,250.00
5.2.3 Provide Design Clarifications		8	16	16											$0	$4,640.00
5.2.4 Provide Record Drawings		8	16	32									32		$500	$8,500.00
TASK 5 SUBTOTAL	**2**	**56**	**112**	**64**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**32**	**0**	**$550**	**$30,990.00**
TASK 6: Additional Special Services																
6.1 Landscape & Irrigation Plans	**0**	**0**	**0**	**0**	**0**	**0**	**62**	**60**	**0**	**0**	**0**	**0**	**0**	**0**	**$100**	**$12,020.00**
6.1.1 Details							2	4							$0	$560.00
6.1.2 Landscape & Irrigation Plans, Specs & Estimates (50% & 90%)							44	44							$50	$8,630.00
6.1.3 Final Plans							16	12							$50	$2,830.00
6.2 Signal Design		**4**	**8**												**$14,922**	**$16,522.00**
TASK 6 SUBTOTAL	**0**	**4**	**8**	**0**	**0**	**0**	**62**	**60**	**0**	**0**	**0**	**0**	**0**	**0**	**$15,022**	**$28,542.00**
HOURLY RATES	$180	$150	$125	$90	$135	$90	$110	$85	$125	$90	$125	$95	$60	$50		
																TOTAL FEE
TOTAL (ALL TASKS)	**42**	**334**	**1016**	**1488**	**58**	**122**	**94**	**112**	**248**	**428**	**392**	**24**	**1144**	**62**	**$75,533**	**$625,323.00**

ATTACHMENT "B"

ITEMS EXCLUDED FROM SCOPE OF SERVICES

1. Performing forensic pavement analyses (beyond tasks identified above)
2. Design of pavement sub-grade drainage systems
3. Design of bridge or floodwalls
4. Design of water quality or detention ponds
5. Design of roadway illumination and electrical (beyond tasks identified above)
6. Design of hardscape (enhanced flatwork) facilities
7. Design of noise abatement facilities
8. Analyzing or simulating water supply networks
9. Design of public and franchised utility adjustments (beyond tasks identified above)
10. USACE Individual 404 Permit
11. Letter of Map Revision (LOMR)
12. Stormwater Pollution Prevention Plan (SWPPP)
13. Public Involvement
14. Property acquisition or negotiations
15. Filing fees, permit fees
16. Construction staking
17. Quality control and material testing services during construction
18. Reviewing and evaluating alternate designs proposed by contractor
19. TxDOT Coordination & Permits
20. Review of Engineers certificates. The Design Professional shall not be required to execute any documents subsequent to the signing of this Agreement that in any way might, in the sole judgment of the Design Professional, increase the Design Professional's risk or the availability or cost of his or her professional or general liability insurance

Any additional services required beyond those specifically identified in this proposal are beyond the scope of services to be provided under this proposal. Any required additional services will be separately identified and negotiated and such additional scope and commensurate fee will be executed/authorized under a supplemental agreement to this proposal/contract.

ATTACHMENT 'C'

Raba Kistner

Raba-Kistner-Brytest Consultants
8200 Cameron Rd., Suite C-154
Austin, Texas 78754
(512) 339-1745 • FAX (512) 339-6174
www.rkci.com

[Delivery by US Mail and Email: eratzman@halff.com]

Proposal No.: PAA09-018-00
February 19, 2009

Halff Associates, Inc.
4030 West Braker Lane, Suite 450
Austin, Texas 78759

c/o Eric J. Ratzman, P.E.

Re: **Proposal for a Geotechnical Engineering Study**
Improvements to Heatherwilde Blvd from
Wilke Ridge to Kingston Lacy
Pflugerville, Texas

Raba-Kistner Consultants, Inc. (R-K) is pleased to submit this proposal for Geotechnical Engineering Services as requested by Halff Associates, Inc. for the above-referenced project. The broad objectives of our study will be to determine soil conditions for use in determining design and construction methods for the improvements to Heatherwilde Blvd from Wilke Ridge to Kingston Lacy Blvd in Pflugerville, Texas. Described in this letter are:

- our understanding of pertinent project characteristics;
- our proposed scope for field and laboratory study;
- our proposed scope for engineering evaluation and reporting;
- our tentative project schedule; and
- our lump sum study cost.

PROJECT DESCRIPTION

We understand that Halff Associates, Inc. has been contracted by the City of Pflugerville to improve Heatherwilde Blvd from Wilke Ridge Lane to Kingston Lacy Blvd. We understand that the approximate 3,500 lineal foot two-lane roadway portion will be converted to a four lane roadway. The improvements will also consists of the addition of traffic lights at the intersection of Kingston Lacy Blvd and Heatherwilde Blvd and the construction of a bridge/culvert at the tributary Wilbarger Creek crossing near Heatherwilde's intersection with Great Basin Avenue.

FIELD STUDY

Based on our understanding of the project, we recommend the following drilling schedule:

Number of Borings	Depth (ft)	Location
6	8	Street Borings
2	30	Bridge/Culvert
1	25	Traffic Signal

Samples will be taken using conventional split-spoon, Shelby-tube, and/or rock coring sampling techniques. Representative portions of all samples will be sealed and packaged for transportation to our laboratory.

LABORATORY STUDY

Upon completion of the subsurface exploration, a testing program will be designed to define the strength and classification characteristics of the subsurface soil conditions. The testing program may include moisture content tests, (10) Atterberg Limits (plasticity tests), (5) unconfined compression of the soil/rock samples, (3) percent passing minus 200 sieve, (3) sulfate tests, (1) lime series curve, and (1) California Bearing Ration tests.

ENGINEERING REPORT

The results of the field and laboratory phases of the study will be reviewed by our staff of engineers. The results of our review, together with the supporting field and laboratory data will be presented in a written engineering report. Included in the report will be geotechnical recommendations concerning the design and construction of the propose 4-lane roadway, to include a culvert/bridge structure and a traffic signal foundation. In addition, the following will be addressed.

- A summary of the field and laboratory sampling and testing program;
- Boring logs and laboratory testing results;
- A review of general site conditions including descriptions of the site, the subsurface stratigraphy, groundwater conditions, and the presence and condition of fill materials, if encountered.

- Foundation design considerations and recommendations, including:
  - expansive, soil-related movements using an empirical method for predicting Potential Vertical Rise (PVR) developed by the Texas Department of Transportation;
  - methods for reducing expansive, soil-related movements;
  - types of shallow and deep foundations;
  - available bearing pressures;
  - settlement estimations, where applicable;
  - uplift and allowable uplift resistance, if applicable;
  - groundwater considerations.

- Foundation construction considerations, including:
  - site drainage;
  - site preparation;
  - select fill materials;
  - shallow and deep foundation excavations;
  - potential reuse of on site materials as select fill materials;
  - excavation considerations; and
  - fill placement compaction.

- Pavement design in accordance with City of Pflugerville street design requirements.

The report will be reproduced in 3, spirally-bound copies and one electronic copy (pdf).

TENTATIVE PROJECT SCHEDULE

Based on our present workload, we anticipate that we could begin the field coordination phase of this study within 3 working days of receiving your written authorization. We anticipate an additional 4 days to coordinate boring locations and coordinate with utility line locators prior to mobilizing our drill rigs onto the site to complete the drilling phase of our services. We anticipate 1 to 2 days to complete our drilling and an additional 5 working days to complete the laboratory testing. Engineering analyses and preparation of the engineering report is expected to take an additional 10 working days to complete. We will be pleased to provide the design team with verbal design information as the data becomes available.

PROJECT COST

The total lump sum cost for the study scope outlined herein will be $9,875. Should unusual soil conditions be encountered in the field that indicates the desirability of significantly broadening the scope of the study, we will contact you to receive authorization before proceeding with any additional work. Additional services will be billed on a unit basis in accordance with our standard fees as indicated on the attached Schedule of Fees for Professional Services.

This estimate does not include costs incurred to:

- Provide surveyed locations of the proposed borings; and

R-K will comply with contacting "Texas One-Call" prior to performing drilling. We request that Half Associates will provide R-K with SUE plans documenting existing utility locations.

Historically the cost of our field services is about 45 percent of our total fee. These services are predominantly provided by subcontractors. In order to promptly pay our subcontractors and continue to be able to respond to your needs, we will send you an interim invoice for 45 percent as soon as the field exploration phase of our study is complete.

It should be noted that our study scope and project cost does not include professional time or travel expenses for participation in design team meetings. If these services are required, they will be billed at our standard billing rates for professional time plus expenses.

ACCEPTANCE

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

Attachment	Description
I	Standard Terms and Conditions
II	Schedule of Fees

Please return one signed copy of this letter proposal to provide written authorization for our firm to complete work on the services outlined herein. Our invoices are due and payable upon receipt at P.O. Box 971037, Dallas, Texas 75397-1037. We will be able to schedule the drilling services only after we receive your authorization to proceed.

Proposal No. PAA09-018-00
February 19, 2009

ATTACHMENT II

RABA-KISTNER CONSULTANTS, INC.

SCHEDULE OF FEES FOR PROFESSIONAL SERVICES

PERSONNEL:

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

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

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

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

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

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

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

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

ATTACHMENT 'D'

ALLIANCE
Transportation Group, Inc.

Heatherwilde Boulevard
Traffic Services
Proposed Scope - Draft

TASK 1.0 TRAFFIC ANALYSIS

1.1 Collect 12-hour traffic data at the following intersections:

- Heatherwilde Blvd. at Kingston Lacy Blvd.

1.2 Collect AM (7:00 to 9:00) and PM (5:00 – 7:00) turning movement counts at the following intersections:

- Heatherwilde Blvd. at Kingston Lacy Blvd.
- Heatherwilde Blvd at Meister Lane.
- Heatherwilde Blvd. at Great Basin Ave.
- Heatherwilde Blvd. at Wilke Ridge Lane.

1.3 Collect 24-hour ADT and classification data via tube count on Heatherwilde Blvd. within the project limits.

1.4 Evaluate Heatherwilde Blvd. at Kingston Lacy Blvd. against traffic signal warrant criteria contained in the Texas MUTCD. Provide recommendation for signalization of intersection.

1.5 Evaluate all noted intersections for turning movement requirements. Provide recommendations for turn bay placement and queue lengths, as well as recommendation for spacing of median breaks on Heatherwilde Blvd.

1.6 Prepare summary report detailing the results of the analysis.

TASK 2.0 TRAFFIC SIGNAL PRELIMINARY DESIGN

2.1 Provide preliminary signal layout (30%) at Heatherwilde and Kingston Lacy sufficient to define future signal foundation locations.

TASK 3.0 TRAFFIC SIGNAL DETAILED DESIGN

3.1 Develop construction plan sheets for mast arm signals with pedestrian accommodations. Plans will show traffic signal poles,

detection zones, conduit runs, wiring diagram, and signal face locations.

3.2 Develop sheets showing elevations of traffic signal indications, poles, and any traffic control signs to be mounted on the traffic signal.

3.3 Develop wiring diagram sheet showing the number and type of electrical wire runs between the signal controller and indications.

3.4 Develop Quantity estimate sheet and general notes for signals.

3.5 Insert appropriate specification sheets from the Texas Department of Transportation (TxDOT).

3.6 Prepare packet of construction plans and bid documents.

3.7 Submit 60% and 90% signal plans and bid documents for review.

3.8 Incorporate one (1) time, any revisions to the 60% and 90% plans based on comments.

3.9 Submit one (1) set of reproducible mylar final drawings and bid documents, sealed by a Professional Engineer

ASSUMPTIONS

- **Survey and subsurface information provided to ATG.**
- **Electronic files for proposed improvements provided to ATG.**

Project: Heatherwilde
Client: Halff (Pflugerville)

TRAFFIC ENGINEERING STUDIES	Labor Classifications						TOTAL HOURS	COST	LABOR COST/TASK	DIRECTS/TASK	TOTAL COST
	Project Manager	Senior Engineer	Engineer	EIT	Engineer Tech	Admin/ Clerical					
1. Traffic Analysis											
1.1 12-hour traffic data (1)									9215	2400	11615
1.2 TMC data collection (4)	1	2		1			4	565			
1..3 24-hour data collection (2)				1			1	75			
1.4 Warrant analysis, 1 intersection				1			1	75			
1.5 Operational Analysis (4 intersections, median breaks, turn lane recs)	1	4		12	4		21	2040			
1.6 Letter Report	1	4		30	12		47	4070			
1.7 Meetings	1	2		6	2	4	15	1270			
1.8 Admin	2					4	6	520			
	2					6	8	600			
2. Preliminary Signal Design											
2.1 Signal Layout (1 sheet)									3800	121	3921
2.2 Meetings	1	4		16	8		29	2680			
2.3 Admin	2					4	6	520			
	2					6	8	600			
3. Detailed Signal Design											
3.1 Plan Sheet									14560	362	14922
3.2 Elevation Sheet	2	8		16	16		42	4160			
3.3 Wiring Diagram	2	4		12	8		26	2560			
3.4 Quantities and General Notes		2			10		12	1160			
3.5 Standards/Specs		4		16			20	1820			
3.6 Bid Documents		2		8			10	910			
3.7 - 3.9 Prepare 60, 90, Final bid sets							0	0			
Meetings		6			12		18	1950			
Admin	4					4	8	880			
	4					10	14	1120			
TOTAL HOURS	25	42	0	119	72	38	296				
Loaded Labor Rate	$ 180.00	$ 155.00	$ 125.00	$ 75.00	$ 85.00	$ 40.00					
TOTAL LABOR COST	$ 4,500.00	$ 6,510.00	$ -	$ 8,925.00	$ 6,120.00	$ 1,520.00	$ 27,575.00				$ 30,457.25

DIRECT EXPENSES	UNIT	UNIT COST	QTY	Cost		
Tube counts (regular)	EA	$ 300.00	2	$ 600.00		
Tube Counts (12-hour)	EA	$ 900.00	1	$ 900.00		
Intersection Counts	EA	$ 300.00	3	$ 900.00		
MILEAGE	MILE	$ 0.485	600	$ 291.00		2400
MEALS	DAY	$ 36.00	0	$ -		
B/W PHOTOCOPIES (8.5X11)	SA	$ 0.10	100	$ 10.00		
COLOR PHOTOCOPIES (8.5x11)	EA	$ 1.00	20	$ 20.00		
B/W PHOTOCOPIES (11X17)	EA	$ 0.25	225	$ 56.25		
COLOR PHOTOCOPIES (11X17)	EA	$ 1.50	0	$ -		
CADD Plotting	SF	$ 1.00	0	$ -		
Digital Ortho Plotting	LF	$ 1.50	0	$ -		
WHITE MYLAR PLOTS (11X17)	EA	$ 3.00	15	$ 45.00		
Courier Deliveries	EA	$ 10.00	6	$ 60.00		
OVERNIGHT MAIL- OVERSIZED BOX	EA	$ 20.00		$ -		
TOTAL EXPENSES	TOTAL EXPENSES			$ 2,882.25	$ 2,882.25	$ 482.25
TOTAL PROJECT ESTIMATE					$ 30,457.25	

Attachment F

Unit Pricing Schedule
July 1, 2008

Unit Code	Unit Description	Unit of Measure	$ per Unit
ATV	ATV	per day	$35.00
AUGER	Hand Auger	per day	$15.00
BINDBK	Binding Booklets	per set	$5.00
BINDPL	Binding Plans	per set	$5.00
BLUEPR	Blueprint (KIP)	per each	$1.00
BOAT	Boat Rental	per day	$50.00
CLWSMP	Colliwasa Samplers	per each	$10.00
CD	Burn CD/DVD	per each	$25.00
COPY1	Copies and Scans – Legal and Letter / Black & White	per sheet	$0.10
COPY2	Copies and Scans – Oversize (11x17) / Black & White	per sheet	$0.20
COPY3	Copies and Scans – Legal and Letter / Color	per sheet	$1.00
COPY4	Copies and Scans – Oversize (11x17) / Color	per sheet	$2.00
DB	Disposable Bailers (.75" and 2")	per each	$8.00
DELIV1	Delivery / Courier in Area	per delivery	$15.00
DELIV2	Delivery / Out of Area	per delivery	$40.00
DIP	Dual Interphase Probe (for free product measuring)	per day	$25.00
DPB	Disposable Pressure Bailers (2")	per each	$15.00
EMILES	Unit based miles for eExpense	per mile	*$.585
ENVSVY	Environmental Survey Equipment (for Gradient/Elevation)	per day	$100.00
FCMNT	Foam Core Mount	per sq ft	$4.00
GATOR	John Deere Gator – Laser Scanner	per day	$100.00
GISPEN	GIS Digital Map Pen	per day	$30.00
GLOVES	Disposable Gloves	per pair	$10.00
GPS	GPS Survey Equipment	per hour	$36.00
GPSHH	GPS Survey Equipment Hand Held	per day	$20.00
M*DV	Mileage rate for Mobilization / Demobilization of the Designating Vehicle	per mile	$2.68
MI*SVY	Mileage rate for Mobilization / Demobilization of a Survey Truck	per mile	$2.68
MI*TCV	Mileage rate for Mobilization / Demobilization of a Traffic Control Vehicle	per mile	$2.68
MI*VE	Mileage rate for Mobilization / Demobilization of the Vacuum Excavating Vehicle	per mile	$5.68
MICRON	10 Micron Filters (for Low Flow Sampling – Metal)	per each	$20.00
MON1	Small Brass Markers; Type I Survey Monuments	per each	$55.00
MON2	Survey Monumentation; Type II R-O-W Markers	per each	$220.00
MON3	Survey Monumentation; Type III GPS Markers	per each	$220.00
MYLARS	Mylars	per mylar	$5.00
OVM	Organic Vapor Meter (OVM)	per day	$75.00
PLOT1	Plots – Full Size / Black & White	per plot	$5.00
PLOT2	Plots – Full Size / Color	per plot	$15.00
PLTCSF	Plots – Color – Sq Ft	per sq ft	$2.50
PLTBSF	Plots – Black & White – Sq Ft	per sq ft	$.85
PROXRS	PROXRS Receiver	per hour	$20.00
SECCHI	Secchi Disk	per day	$10.00
SED	Sediment / Sludge Sampler	per day	$45.00
SILICN	Silicon Tubing (for Low Flow Sampling)	per foot	$2.00
POSTGE	Postage	per ounce	$0.42
TEFLON	Teflon Tubing (for Low Flow Sampling)	per foot	$1.00
VAC*HD	Heavy Duty Vacuum Excavation Truck	per hour	$100.00
VACTRK	Vacuum Truck Charge	per hour	$75.00
WLI	Water Level Indicator	per day	$15.00

* or current IRS rate