

ATTACHMENT D

AUTHORIZATION OF CHANGE IN SERVICES
CITY OF SAN MARCOS, TEXAS

PROJECT: Wallace Addition Water & Wastewater Improvements (Contract #215-212)
CONSULTANT: Klotz Associates, Inc.
AUTHORIZATION NO.: 3
ORIGINAL CONTRACT DATE: February 17, 2015
AUTHORIZATION DATE:

WORK TO BE ADDED TO OR DELETED FROM SCOPE OF SERVICES

A change in service is requested to provide drainage improvements along Staples Road and within the Wallace Addition neighborhood including surveying, preliminary engineering, design, bidding and construction phase services.

Previous Change In Services

- #1; June 29, 2015; 12" waterline replacement along Staples Road
- #2; July 6, 2016; 4" waterline replacement along the north side of Staples Road

Previous contract amount:	<u>\$ 219,306.86</u>
Net increase/decrease in contract amount:	<u>\$ 333,392.67</u>
Revised contract amount:	<u>\$ 552,699.53</u>

Requested by:

By:  Date: 10/9/17

John Friedman - Deputy Operations Manager

Printed name, title

Approved by:

City of San Marcos: _____ Date: _____

By: _____
Bert Lumberras, City Manager



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T 512 328 5771 E email@klotz.com W rpsgroup.com | klotz.com

October 3, 2017

Mr. Rohit Vij, P.E.
Senior Engineer
Engineering & Capital Improvements
City of San Marcos
630 E. Hopkins
San Marcos, Texas 78666

**RE: Proposal for Additional Engineering Services – Drainage Improvements
Wallace Addition Neighborhood
RPS Klotz Associates Project No. 564.001.000**

Dear Mr. Vij,

Klotz Associates, Inc. DBA RPS Klotz Associates is pleased to submit the attached proposal for providing Professional Engineering Services for the above referenced project. The scope of work includes PER, Design, Bidding, and Construction Phase services for drainage improvements along Staples Road and within the Wallace Addition neighborhood. These services will be in addition to a previous work authorization, dated February 10, 2015, for Design, Bidding, and Construction Phase services to replace existing waterlines and a wastewater main in the Wallace Addition Neighborhood.

We will be providing these services with in-house and subconsultant resources. Attached is a detailed scope of services and design schedule. We propose to complete these services on a time and materials basis for an amount not to exceed \$ 333,392.67.

We look forward to working with you on this project. If you have any questions, please contact me or Wade Benton, P.E. at 512-328-5771.

Sincerely,

John Friedman, P.E.
Deputy Operations Manager

JF:lf

- ATTACHMENTS**
- Attachment A – Scope of Work
 - Attachment A1 – McGray McGray Land Surveyors, Inc. Scope and Fee Dated 9/7/2017
 - Attachment B – Fee Schedule
 - Attachment C – Deliverables Schedule



ATTACHMENT A

**SCOPE OF WORK
PRELIMINARY ENGINEERING REPORT, DESIGN, BIDDING AND CONSTRUCTION PHASES**

**CITY OF SAN MARCOS
WALLACE ADDITION NEIGHBORHOOD – DRAINAGE IMPROVEMENTS**

Klotz Associates, Inc. DBA RPS, (Engineer) will provide Preliminary Engineering Report (PER) Design, Bidding and Construction phase services to the City of San Marcos (City) for drainage improvements along Staples Road and within the Wallace Addition neighborhood. Currently, Bonham Prekindergarden School has been experiencing flooding. This flooding has been reported to be the result of storm water overtopping an existing culvert at Staples Road and Broadway Street. Additionally, multiple residents in the Wallace Addition Neighborhood, located directly north of Bonham Prekindergarden School, have reported flooding issues. In order to mitigate some of these issues, the Engineer will analyze the existing hydrologic and hydraulic configurations and identify issues and prospective resolutions.

The following is a Scope of Work to prepare a Preliminary Engineering Report (PER), Design, Bidding and Construction Phases for the drainage improvements associated with the Wallace Addition Neighborhood issue referenced above.

PER Phase

Engineer will provide the following services during the PER Phase of the Project.

Task 1 – Project Management

Engineer will coordinate with city staff for the development of the project designs, and public information services necessary for the design described within. We will coordinate with the city for the proper processing of monthly invoices to the city to cover work completed as of the billing period. Additionally, we will provide bi-weekly status reports which will summarize work completed, list the work scheduled to be completed for the upcoming week, and identify any outstanding issues or decisions that must be resolved by the project team.

Task 2 – Project Meetings

Engineer will attend one (1) public meeting, one (1) City Council Meeting and three (3) stakeholder meetings. We intend to attend one (1) stakeholder meeting for each of the following stakeholder groups: San Marcos Independent School District, Wallace Neighborhood and the property owner downstream of the storm water conveyance. All five (5) meetings will be attended by two (2) representatives from our office. We assume that the City will coordinate

the time and location for these meetings. The Engineer will provide two (2) color project layout exhibits on 22"X34" for use during the public meeting.

Task 3 – Site Visits and Survey/Lidar Data Review

Engineer will utilize existing survey collected in the area along with any available Lidar data from the City. Additionally, Engineer will conduct two (2) full day site investigations and one (1) half day site investigations with two (2) representatives from our office for each investigation. These site investigations will aid in the confirmation of survey and Lidar data and to aid in confirmation of hydrologic and hydraulic models. Engineer will utilize, as much as possible, existing survey information obtained for the Wallace Addition Water & Wastewater Improvements project and the Reclaimed Water Expansion Pipeline project. Additional field topographic survey data will be acquired in the area around the intersection of Staples Road (FM 621) at Hwy 123.

Task 4 – PER Modeling, Report and Recommendations

Engineer will prepare models and use these models to determine possible solutions to mitigate flooding issues in the Wallace Addition Neighborhood and surrounding areas, specifically around Bonham Prekindergarden School.

4A - Modeling

- 4A1 - Watershed Analysis: Engineer will use survey, Lidar and site information to determine drainage areas. HEC-HMS will be used to determine flows in the study area based on City drainage manual requirements.
- 4A2 - Preliminary Hydraulics and Modeling: Engineer will use watershed analysis in 4A1 to input design flows and model existing conditions of the study area into StormCAD and InfoWorks. This model will then be utilized to identify problem drainage areas which will have recommended improvements.
- 4A3 - Determine Alignments: Engineer will determine proposed alignments for infrastructure improvements based on StormCAD and InfoWorks models.
- 4A4 - Determine Water Quality Needs: Engineer will research the function and possible use for downstream conveyance of storm water and determine possible impacts for the existing pond downstream of the Wallace Addition Neighborhood.

4B - Draft Report

- 4B1 - Preliminary Analysis of Model Findings: Engineer will review model output in Tasks 4A1-4A4 to identify flooding problem areas and analyze possible recommended solutions or mitigations.
- 4B2 - Report Drafting: Engineer will prepare report based on model analysis and findings in 4B1. These recommendations will be designed for the 25-year storm event, per City standards. The 100-year storm event will also be analyzed to determine if runoff will be contained within the Right-of-Way.

- 4B3 - Report Exhibits and Attachments: Engineer will prepare exhibits and attachments for the PER, specifically, location and drainage area maps, as well as model output tables and figures. Exhibits will be created to show recommended improvements.
- 4B4 - Develop Opinion of Probable Cost: Engineer will prepare an opinion of probable cost of recommended improvements in the PER. Quantity units will be based on TxDOT and City of San Marcos standard specification items where applicable. Construction cost estimate will assume a contingency of 25% to aid in accounting for cost discrepancies. Local projects and Texas Department of Transportation (TxDOT) published costs will be used as a basis for estimating unit costs.
- 4B5 - Formatting and Preparation of Deliverable Package (3 Hard Copies, 1 PDF): Preparation of draft submittal printed documents and digital versions of report for delivery to the City.

4C - Final Report

- 4C1 - Revise Models: Engineer will revise HEC-HMS, StormCAD and InfoWorks models per City comments based on draft PER submittal (4B5). These revisions will not require rework of more than 40% of existing models. If rework of more than 40% is required, additional authorization will be submitted.
- 4C2 - Report Drafting: Engineer will update report identifying flooding problem areas and possible recommended solutions or mitigations based on comments from the City.
- 4C3 - Report Exhibits and Attachments: Engineer will update exhibits and attachments for the PER, specifically location and drainage area maps, as well as model output tables and figures. Exhibits will be updated to show any updates to recommendations.
- 4C4 - Update and Finalize Opinion of Probable Cost: Engineer will update quantities for the opinion of probable cost. Construction cost estimate will assume a 15% to aid in accounting for cost discrepancies. Local projects and Texas Department of Transportation (TxDOT) published costs will be used as a basis for estimating unit costs.
- 4C5 - Formatting and Preparation of Deliverable Package (3 Hard Copies, 1 PDF, 1 zip file of HEC-HMS, StormCAD and InfoWorks models): Preparation of final submittal printed documents and digital versions of report and models for delivery to the City.

Task 5 – Easement and Land Acquisition Study

As part of the PER analysis, Engineer will identify the need for easements based on recommended improvements and prepare an easement map illustrating the proposed



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easement widths and locations. No survey deliverables related to easement acquisition will be included in the PER phase.

Task 6 – Project Permitting Investigation

Based on recommendations in the PER, Engineer will investigate permitting requirements with TxDOT, TCEQ, and/or Texas Historical Commission. We do not anticipate requiring permits from the US Corps of Engineers (USACE) or with FEMA for any LOMR or CLOMR studies. Permitting documents and coordination are not part of the scope of PER phase. Services are anticipated to be performed by the Engineer in the design phase (Task 15).

Task 7 – Utility Coordination

Engineer will identify and investigate utility conflicts as documented in existing survey and site investigations during Task 3. These conflicts will be determined relative to proposed storm drain systems recommended in the PER. An exhibit will be created which will indicate the location of existing utilities and potential conflicts within the project limits. The Engineer will attend one (1) meeting with utility providers to discuss potential conflicts and resolutions. Utility relocation costs will be included in the project cost estimate.

Task 8 – Quality Control

Engineer will provide internal Quality Control review of all work products. These reviews will be done for the hydraulic and hydrologic models, draft PER and cost estimate submittal, and final PER and cost estimate submittal. During this review, written comments and markups will be used to document the completeness of the information submitted. These written comments and markups will be saved to the project files as backup to the review process that was done for each submittal. Following the Quality Control review of the project, a senior officer will review the submittal package before it is delivered to the City. This final look will make sure that the submittal package includes the items described in the scope of services and that the quality of that work is consistent with company standards. Review of subconsultants' work will also be completed and review comments will be sent to subconsultants' for revisions.

Design Phase

Engineer will provide the following services during the Design Phase of the Project.

Task 9 – Project Management

Engineer will provide bi-weekly status reports and monthly invoices to cover work completed as of the billing period. The status report will summarize work completed, list the work scheduled to be completed for the upcoming week, and identify any outstanding issues or decisions that



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must be resolved by the project team. One (1) public meeting will be attended by two (2) representatives from our office. We assume that the City will coordinate the time and location for these meetings. The Engineer will provide two (2) color project layout exhibits on 22"X34" for use during the public meeting.

Task 10 – Design Survey

Engineer will obtain updated design survey based on the area surveyed in the PER phase by McGray & McGray Land Surveyors, Inc. and previous field surveys performed by Macias & Associates. The surveyor will reconcile and combine the previous survey information with the new information to be collected and prepare one consistent data set to be utilized for the overall project design. A more detailed design survey scope from McGray & McGray Land Surveyors, Inc. is included in Attachment A1.

Task 11 – Easement Documents

Based on findings in the PER phase, the Engineer shall obtain easement survey and field notes (Metes and Bounds documents) for up to six (6) properties to allow the City to modify the limits of existing drainage easements or obtain new drainage and/or temporary construction easements.

Task 12 – Geotechnical Evaluation

Engineer will use the existing Geotechnical Evaluation completed by HVJ for the purpose of the Wallace Neighborhood water and wastewater of the proposed alignment. The evaluation included four (4) subsurface borings with testing which determined the engineering properties of the material anticipated to be encountered in the utility trenches. Additional geotechnical information may be needed, based upon final PER findings and is not included in this scope of work. The estimated scope of services for any additional geotechnical investigations will be identified in the PER and will be addressed as an additional service, if required.

The Engineer will obtain and review the results of the geotechnical investigation of the subsurface conditions along the proposed improvement alignments, including the creek stabilization area, if required. The additional Geotechnical Report will include recommendations concerning trench excavation, backfill, and bedding requirements. The Engineer shall review the findings and incorporate recommendations from the report into the bid and construction contract documents as appropriate.

Task 13 – Design Drawings

The Engineer shall develop plans to remediate local flooding conditions identified in the final PER (Task 4C) to comply with the criteria in the City of San Marcos Standard Design Criteria

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manuals. Variance requests and associated reasoning will be prepared and submitted by the Engineer as necessary. The system shall be designed to capture runoff resulting from fully developed upstream conditions and, if possible, meet the following criteria:

- A. Convey Q25 peak flows within the storm drain system;
- B. Convey Q100 peak flows within defined street rights-of-way and easements;
- C. Maintain Q25 cross-intersection flows less than 3 cfs;
- D. Maintain Q25 cross-street flows less than 3 cfs; and
- E. Provide roadway clear widths during storm events in accordance with the City of San Marcos Standard Design Criteria manuals.

In developing the plans for improvements, The Engineer shall include consideration of:

- A. improvements to gutters and crowns;
- B. improvements to driveways;
- C. improvements to street intersection geometry;
- D. addition of storm drain inlets to existing storm drainage systems;
- E. addition of storm drain inlets, piping and outlets;
- F. alignments;
- G. existing utilities;
- H. traffic impacts;
- I. traffic controls during construction;
- J. neighborhood concerns and input;
- K. easement requirements;
- L. construction materials; and
- M. construction cost estimate.

Storm drain alignments and ditch improvements shall be selected with consideration of minimizing disruptions to the neighborhood, avoiding acquisitions of easements, minimizing traffic impacts, and avoiding infrastructure and utility relocations when practical. The use of temporary workspace easements shall be considered to aid construction.

The drawings will be prepared using Microstation. The Engineer shall prepare Preliminary Design Submittals at the 60% and 90% stages of completion. Submittals will be submitted to the City through the Project Manager. Drawings shall be 11" X 17" with a horizontal scale of 1" = 40' and a vertical scale of 1" = 10', or 22" X 34" with a horizontal scale of 1" = 20' and a vertical scale of 1" = 5'. The drawings shall be suitable for enlargement to full scale. The drawings shall conform to the City of San Marcos standards and shall define the limits of construction, required construction sequencing, traffic control requirements, environmental protection requirements, water and wastewater relocations, contractor staging areas, and re-vegetation

requirements. The plans shall include sufficient dimensions and distance references to provide for field construction staking without the need to scale the drawings for distance or elevation data. For each submittal, the City shall be provided an electronic (PDF) copy of preliminary construction drawings for review.

The Engineer will utilize the 90% Design Phase “Wallace Addition Water and Wastewater Improvements” project plan set (designed by Engineer) and incorporate new plan sheets for proposed drainage improvements as one merged plan document. In addition to adding the drainage improvements into the plan set, some waterline sections previously designed will need to be adjusted as they have been included in other project plans, currently under construction.

13A - 60% Submittal

The 60% design plans shall include, at a minimum, the following:

- a. Cover Sheet;
- b. Sheet Index;
- c. Existing conditions, including roadway, structures, vegetation and utilities, as determined by field survey;
- d. Drainage area maps;
- e. Existing right-of-way lines, existing property lines, existing permanent easements (as described on subdivision plats). For each property, identify on the drawings the property identification number, the deed volume and page number, and street address as well as the names of all property owners;
- f. Preliminary layout (plan view) of all proposed storm drainage features (channels, pipes, manholes, inlets, etc.);
- g. General notes and construction sequencing;
- h. Updated Engineer’s Opinion of Probable Construction Cost, with a 15% contingency;
- i. Preliminary Traffic Control Notes and Standard Details
- j. Complete and final hydrologic and hydraulic analyses, catch basin analyses, and all other calculations (on hard copy and in digital format) conducted for design of the proposed drainage system. The analyses shall use the design survey data and final system profiles;
- k. Proposed right-of-way lines, proposed property lines, proposed permanent and temporary easement lines. Right-of-way and/or easements shall be sufficient to encompass all improvements, including landscaping;

- l. Preliminary location (plan and profile) of all proposed storm drainage features (channels, pipes, manholes, inlets, etc.). Show all crossing utilities in the plan and profile;
- m. Location (plan and profile) of all known existing utilities based on record information and field survey. Show in profile view all parallel utilities that are within six feet of the proposed work, regardless of whether they are to be reconstructed or relocated. Prepare utility conflict matrix for coordination between the City, Engineer, and utility companies;
- n. Preliminary location of construction work areas showing which existing features may be impacted by construction (fences, trees, sheds, etc.) and identifying the party responsible for removal and/or re-establishment;
- o. Erosion/Sedimentation and Tree protection plan, notes, and details: The Engineer shall design and specify erosion control measures which minimize erosion and off-site sedimentation during construction of the Project. The plan and specifications shall be prepared in accordance with the requirements of the City of San Marcos Standard Design Criteria manuals and must be approved by the City of San Marcos;
- p. Typical cross-sections of open channels showing armoring techniques, if applicable;
- q. Recommendation of construction materials to be used;
- r. Project Manual Cover Sheet, Table of Contents (including anticipated special provision and special specifications);
- s. Copy of Final Geotechnical Data Report;
- t. List of applicable permits;

13B - 90% Submittal

In addition to the information provided in the 60% plans submittal, the 90% submittal shall provide, at a minimum, the following:

- a. Comments addressed from the 60% submittal;
- b. Details sufficient for the construction of all proposed facilities;
- c. Final Traffic control plans: Traffic control is expected to utilize Texas Department of Transportation standards. All traffic control devices and specifications proposed to be used within a City right-of-way must comply with both the Texas Manual on Uniform Traffic Control Devices. The final traffic control plans and specifications shall include a phasing sequence identifying work to be done in each phase, the traffic controls of each phase, and any special considerations such as time limitations, hour of day limitations, or required completion times. If full traffic control plans are required, additional authorization will be required;

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- d. Standard specifications, special provisions to the specifications, and remaining bid documents: The Engineer shall prepare detailed construction specifications using the City of San Marcos Standard Specifications, and all remaining documents needed for the bid process using the City's Standard Construction Contract Bid Documents. The Engineer shall prepare thorough and complete special provisions to the specifications to cover those items of material, work and other conditions special to the project. Any revisions or special provisions to the specifications shall be submitted to the City for approval. The contract documents, technical specifications, geotechnical data report, and any permits (e.g., SWPPP) will be submitted as the Project Manual for review. The Engineer shall also submit the bid form with quantities and estimate unit costs to the City's Project Manager for use in determining project trade requirements. The Engineer shall submit one (1) hard copy and a PDF electronic file of draft bidding documents to the City for review; and
- e. Opinion of Probable Construction Cost: The Engineer shall develop and seal an opinion of probable construction cost for the authorized project, and submit the Opinion of Probable Cost to the City's Project Manager. The Opinion of Probable Construction Cost shall be a Class A Estimate (with a margin of error of 5%).

13C - Final Design

One (1) hard copy of the plans addressing the 90% comments will be submitted to the City of San Marcos. Upon acceptance of the final design, the Engineer will provide two (2) hard copies, and one digital copy of the final construction drawings, one reproducible copy and one digital copy of the Project Manual.

Task 14 – Technical Specifications and Bid Form

Engineer will prepare the technical specifications and bid form for the Contract Manual and will incorporate final review comments from the 90% submittal. The City will prepare the complete Contract Manual and Engineer will review the completed manual.

Task 15 – Project Permitting Investigation and Permitting

Based on final design parameters, Engineer will investigate permitting requirements with TxDOT, TCEQ, and/or Texas Historical Commission. We will provide Permitting documents and coordination for use in approval from any identified agencies. We do not anticipate the need for permits from the Corps of Engineers or with FEMA for LOMR or CLOMR studies.



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Bid Phase

Engineer will provide the following services during the Bid Phase of the Project.

Task 16 – Project Management

Engineer will provide bi-weekly status reports and monthly invoices to cover work completed as of the billing period. The status report will summarize work completed, list the work scheduled to be completed for the upcoming week, and identify any outstanding issues or decisions that must be resolved by the project team. Engineer will provide the City with two (2) half-size sets of construction drawings as well as an electronic copy (PDF) of the construction drawings and bid manual.

Task 17 – Attend Pre-Bid Conference

Engineer will attend the Pre-Bid Conference planned and hosted by the City.

Task 18 – Respond to Contractor Questions/Issue Addenda

Engineer will respond to questions from prospective contractors and shall issue up to two (2) addenda as necessary to further explain or clarify the intent of the construction documents. Additional addenda will be provided in the event of a design issue or error.

Task 19 – Review Bids and Make an Award Recommendation

Engineer will review the three apparent low bids. Engineer will check references and make a recommendation to the City concerning the award of the construction contract based on this review.

Construction Phase

Engineer will provide the following services during the Construction Phase of the Project.

Task 20 – Project Management

Engineer will provide bi-weekly status reports and monthly invoices to cover work completed as of the billing period. The status report will summarize work completed, list the work scheduled to be completed for the upcoming weeks, and identify any outstanding issues or decisions that must be resolved by the project team.

Task 21 – Construction Documents

Engineer will provide the Contractor with two (2) full-size set and two (2) half-size sets of construction drawings as well as an electronic copy (PDF format and Microstation format to be compatible with Geographic Information Systems programs). The construction drawings will



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reflect any addenda or changes made to the plans after the bid set was issued. Engineer does not expect to provide copies of the final completed bid manual to the City, but does assume an electronic version will be provided, which includes all final versions of manual contracts and bid information.

Task 22 – Attend Pre-Construction Meeting

Engineer will attend the Pre-Construction Meeting planned and hosted by the City's inspector for the project.

Task 23 – Review Shop Drawings

Engineer will review Shop Drawings and other submittals provided by the Contractor in accordance with the Construction Contract Documents.

Task 24 – Respond to Requests for Information

Engineer will provide responses to up to ten (10) Requests for Information (RFI) submitted by the Contractor as necessary to clarify the intent of the construction documents. Additional responses will be provided in the event of a design issue or error.

Task 25 – Assist with Change Orders

Engineer will assist with preparing up to three (3) change orders to address changed conditions.

Task 26 – Attend Construction Meetings

Engineer will attend bi-weekly construction meetings to provide input to the project. It is anticipated that a total of eighteen (18) meetings will be required. Meetings beyond this number will be considered as an additional service.

Task 27 – Periodic Site Visits

In addition to the construction meetings, Engineer will conduct up to nine (9) periodic site visits (an average of one per month) to observe the general progress and character of the construction. This total shall include visits to the construction site in response to requests by the City inspector or the contractor to observe some aspect of the construction.

Task 28 – Substantial Completion Walk-Through and Punch List

Upon receipt of notice from the City inspector that construction is complete, Engineer shall attend a final walk-through of the project. Engineer will prepare a punch list of items to be addressed by the contractor, and provide a letter to the City that Substantial Completion has been reached prior to acceptance of the project by the City.

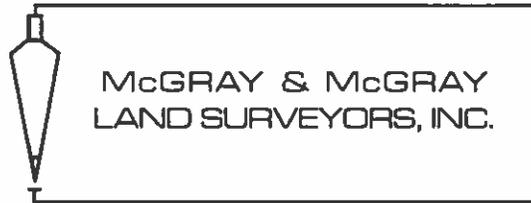
ATTACHMENT A**Task 29 – Record Drawings**

Engineer will prepare an electronic copy (PDF format) of the record drawings. The record drawings will be prepared from information provided by the Contractor and the City Inspector concerning changes made in the field. In addition, Engineer will provide an electronic copy (Microstation format) of the final alignment with all appurtenances so that the City can incorporate the improvements into its GIS system.

Assumptions:

The following assumptions have been used to create the above scope. If any of the assumptions change, additional authorization may be required.

- Right-of-Entries will not be required for field surveys and/or investigations.
- PER Phase will last 6 months from NTP to submittal of final PER Report.
- PER review from the City will be returned to Engineer within 4 weeks after submittal. Additional review time may add additional authorization.
- RPS will not rely solely upon historical drainage analysis performed in the areas that may include the Wallace Subdivision in order to develop proposed drainage solutions.
- The City of San Marcos will acquire any right-of-way.
- Lidar data will be provided by the City.
- Fees for subconsultants not specifically identified in this proposal are not included.
- Preparation of survey field notes and/or easement exhibits not described above or specified in the subconsultants' proposals are not included.
- Additional survey areas or points not described above or specified in the subconsultants' proposals are not included.
- Draft submittal will include 3 hard copies and 1 PDF.
- Final submittal will include 3 hard copies, 1 PDF and 1 DGN.
- No cultural constraints analysis or coordination is included.



October 3, 2017

Laura Friello, P.E.
RPS
4801 Southwest Parkway 2, Suite 150
Austin, TX 78735
(512) 326-5659

VIA EMAIL
Laura.Friello@rpsgroup.com

RE: Second Revised Proposal for a Drainage Study and Designed Improvements Project, San Marcos, Texas

Dear Ms Friello:

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

Area to Survey:

- See Exhibit "A" attached.
 - **Area 1 (Red)** – represents new area of topography needed.
 - **Area 2 (Blue)**– represents area previously surveyed by Macias. No new survey work by us in this area is required.
 - **Area 3 (Green)** – represents area previously surveyed by McGray.

Scope of Services:

A. Design Survey:

- Cross sections shall be taken at 50-foot intervals along with break lines as required, to provide a digital topographic design file at 1-foot interval contours.
- Locate and identify all above ground features within the survey limits including buildings, fences, visible utilities, sidewalks, driveways, handicap ramps, guardrails, signs, manholes, water valves, telecom boxes, utility poles, mailboxes, irrigation heads, water meters, sanitary sewer clean outs, etc.
- Locate and identify types of existing pavement surfaces for streets, alleys, sidewalks, driveways, etc. Locate and identify existing lane markings and signage in detail [color, width, words, symbols, etc.]. Locate and identify existing traffic signals including base, mast arms, and control boxes. Locate and identify any planters, mailboxes (with type) and other improvements.
- Invert elevations and size/type of utility and drainage pipes and culverts shall be identified for all manholes and culverts within the project limits. For all gravity flow utilities (i.e. storm water and sanitary sewer) tie in the manhole upstream and

downstream of the last manhole within the project limits. This may result in having to tie in manholes that are outside of the project limits as defined by you. Note any relevant information (damaged, silted in, etc.).

B. Underground Utilities:

- McGray & McGray will contact One Call (811) to designate underground utilities which we will locate upon completion.

(Note: One Call will only locate those utilities which are paying for their services and, therefore, it is possible that some utilities may not be included or marked)

- McGray & McGray will also contact the City of San Marcos to obtain drawings or for the City of San Marcos to otherwise designate underground Water, Storm & Wastewater utilities. Once they have been marked we will locate the marks.

C. Merging of Data:

- We will merge the data of Area 1, 2 & 3 into a single file.

(Note: However, unless we have the data from all four (3) areas at the time of this process, the contours results will differ each time more data is added).

D. Temporary Easements:

- We will create up to six (6) metes and bounds descriptions, with exhibits, for temporary easements.

Fees:

Area 1 (Red): Includes A, B & C

2 Man Crew:	36 hrs @	\$150.00 /hr.=	\$ 5,400.00
Field Coordinator:	2 hrs @	\$98.00 /hr.=	\$ 196.00
Sr. Tech:	20 hrs @	\$96.00 /hr.=	\$ 1,920.00
Tech:	60 hrs @	\$82.00 /hr.=	\$ 4,920.00
RPLS:	5 hrs @	\$145.00 /hr.=	\$ 725.00
Project Manager:	2 hrs @	\$165.00 /hr.=	\$ 330.00
AREA 1 TOTAL =			\$ 13,491.00

Area 2 (Blue): Includes B

2 Man Crew:	20 hrs @	\$150.00 /hr.=	\$ 3,000.00
Field Coordinator:	1 hrs @	\$98.00 /hr.=	\$ 98.00
Sr. Tech:	2 hrs @	\$96.00 /hr.=	\$ 192.00
Tech:	16 hrs @	\$82.00 /hr.=	\$ 1,312.00
RPLS:	6 hrs @	\$145.00 /hr.=	\$ 870.00
Project Manager:	1 hrs @	\$165.00 /hr.=	\$ 165.00
AREA 2 TOTAL =			\$ 5,637.00

Area 3 (Green): Includes B

2 Man Crew:	30 hrs @	\$150.00 /hr.=	\$	4,500.00
Field Coordinator:	1 hrs @	\$98.00 /hr.=	\$	98.00
Sr. Tech:	2 hrs @	\$96.00 /hr.=	\$	192.00
Tech:	16 hrs @	\$82.00 /hr.=	\$	1,312.00
RPLS:	6 hrs @	\$145.00 /hr.=	\$	870.00
Project Manager:	1 hrs @	\$165.00 /hr.=	\$	165.00
AREA 3 TOTAL =				\$ 7,137.00

Easements:

Lump sum fee of \$2,500.00 each for a total of **\$15,000.00**.

Summary

Area 1 (Red)	\$	13,491.00
Area 2 (Blue)	\$	5,637.00
Area 3 (Green)	\$	7,137.00
Easements (6)	\$	15,000.00
TOTAL	\$	41,265.00

Deliverables:

- Survey shall be provided in AutoCAD (.dwg) format.
- The units of the drawing file shall be U.S. survey feet.
- ASCII File of all data points collected.

We will proceed as soon as we receive notice to proceed. We will schedule this work upon notice to proceed.

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 Chris Conrad or Joe Webber know.

Sincerely,



Judith J. McGray, RPLS
President
TBPLS Firm #10095500

Authorized to Proceed by:

 Signature

Date

 Print Name

Title

EXHIBIT "A"



1000 ft



**ATTACHMENT B
FEE SCHEDULE
PRELIMINARY ENGINEERING REPORT, DESIGN, BIDDING AND CONSTRUCTION PHASES
METHOD OF PAYMENT: TIME AND MATERIALS - AMOUNT NOT TO EXCEED**



PRIME PROVIDER NAME: RPS Klotz Associates, Inc.
PROJECT NAME: City of San Marcos - Wallace Addition Neighborhood Drainage Improvements

TASK DESCRIPTION	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	ASSOCIATE ENGINEER (EIT)	CADD OPERATOR	ADMIN/CLERICAL	TOTAL LABOR HRS. & COSTS
DRAINAGE PER PHASE							
TASK 1: PROJECT MANAGEMENT							
GENERAL PROJECT MANAGEMENT AND MONTHLY STATUS REPORTS (4 months)	8	20	12	4		4	48
TASK 2: PROJECT MEETINGS							
MONTHLY PROJECT MEETINGS	8	16					24
PUBLIC MEETING EXHIBITS		2	4	8	8		22
PUBLIC MEETINGS	20	20					40
TASK 3: SITE VISITS AND SURVEY/LIDAR DATA REVIEW							
SITE VISITS AND FIELD INVESTIGATIONS		2	20	20		4	46
REVIEW/CONFIRM STAPLES ROAD (FM 621) AT HWY 123 DESIGN SURVEY		2	4	4			10
REVIEW/CONFIRM PREVIOUS DESIGN SURVEY		2	8	4			14
TASK 4: PER MODELING, REPORT AND RECOMMENDATIONS							
Modeling							
WATERSHED ANALYSIS		8	16	20			44
PRELIMINARY HYDRAULICS AND MODELING (STORMCAD & 2D ICM)		16	40	60			116
DETERMINE ALIGNMENTS		6	16	8	8		38
DETERMINE WATER QUALITY NEEDS		4	8	8			20
Draft Report							
PRELIMINARY ANALYSIS OF MODEL FINDINGS		8	8				16
REPORT DRAFTING			16	20			36
REPORT EXHIBITS AND ATTACHMENTS			6	20	32		58
DEVELOP OPINION OF PROBABLE COST			4	10			14
FORMATTING AND PREPARATION OF DELIVERABLE PACKAGE (3 hard copies, 1 PDF)			2	4		4	10
Final Report							
REVISE MODELS		8	8				16
REPORT DRAFTING			16	24			40
REPORT EXHIBITS AND ATTACHMENTS			8	20	20		48
UPDATE AND FINALIZE OPINION OF PROBABLE COST			4	12			16
FORMATTING AND PREPARATION OF DELIVERABLE PACKAGE (3 hard copies, 1 PDF, 1 DGN)			2	4		4	10
TASK 5: EASEMENT AND LAND ACQUISITION STUDY							
CONFIRM NEED FOR EASEMENTS	1	2	8	16			27
PREPARE EXHIBITS		1	12	24	18	12	67
TASK 6: PROJECT PERMITTING INVESTIGATION							
DETERMINE PROJECT PERMITTING AND DESIGN REQUIREMENTS	1	4	8	8			21
TASK 7: UTILITY COORDINATION							
UTILITY COORDINATION MEETINGS		4					6
IDENTIFY UTILITY PROVIDERS	2		2	4			6
IDENTIFY UTILITY CONFLICTS			4	12			16
PREPARE EXHIBITS				8	4		12
TASK 8: QUALITY CONTROL							
MODELING QA/QC REVIEW AND FINAL LOOK	1	6					7
DRAFT REPORT QA/QC REVIEW AND FINAL LOOK	2	4					6
FINAL REPORT QA/QC REVIEW AND FINAL LOOK	1	4					5

**ATTACHMENT B
FEE SCHEDULE
PRELIMINARY ENGINEERING REPORT, DESIGN, BIDDING AND CONSTRUCTION PHASES
METHOD OF PAYMENT: TIME AND MATERIALS - AMOUNT NOT TO EXCEED**



PRIME PROVIDER NAME: RPS Klotz Associates, Inc.
PROJECT NAME: City of San Marcos - Wallace Addition Neighborhood Drainage Improvements

TASK DESCRIPTION	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	ASSOCIATE ENGINEER (EIT)	CADD OPERATOR	ADMIN/CLERICAL	TOTAL LABOR HRS. & COSTS
HOURS SUB-TOTALS	44	139	236	322	90	28	859
CONTRACT RATE PER HOUR	\$278.67	\$213.68	\$139.76	\$106.99	\$102.40	\$86.95	
SUBTOTAL LABOR COSTS	\$12,261.36	\$29,702.19	\$32,984.49	\$34,451.94	\$9,216.14	\$2,434.48	\$121,050.60
PER LABOR COST							\$121,050.60
PER PHASE DIRECT EXPENSES	# OF UNITS	COST/UNIT					
Mileage (number x current state rate)	560	\$0.535					\$299.60
Courier Services (Deliveries)	2	\$50.00					\$100.00
Printing (8 1/2" X 11")	600	\$0.05					\$30.00
Printing (11" X 17")	300	\$0.15					\$45.00
Printing (22" X 34")	10	\$1.30					\$13.00
SUBTOTAL PER PHASE DIRECT EXPENSES							\$487.60
DRAINAGE PER PHASE SUBCONSULTANT EXPENSES	BASE COST	MARKUP					
STAPLES ROAD (FM 621) AT HWY 123 SURVEY - McGray & McGray (Area 1)	\$13,491.00	0.1					\$14,840.10
PER PHASE SUBTOTAL SUBCONSULTANT EXPENSES							\$14,840.10
TOTAL EXPENSES							\$15,327.70
PER PHASE SUMMARY							
TOTAL LABOR COSTS	\$121,050.60						
TOTAL EXPENSES	\$15,327.70						
PER TOTAL	\$136,378.30						

TASK DESCRIPTION	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	ASSOCIATE ENGINEER (EIT)	CADD OPERATOR	ADMIN/CLERICAL	TOTAL LABOR HRS. & COSTS
DETAILED DESIGN PHASE							
TASK 9: PROJECT MANAGEMENT							
PROJECT MANAGEMENT (6 months)	6	30	6			18	60
PUBLIC MEETING	4	4	4	4	4		20
TASK 10: OBTAIN DESIGN SURVEY							
COORDINATE WITH SURVEYOR TO OBTAIN DESIGN SURVEY		2		4			6
TASK 11: EASEMENT DOCUMENTS							
COORDINATE WITH SURVEYOR TO PREPARE DOCUMENTS FOR TWO EASEMENTS		2		4			6
PREPARE TWO FIGURES FOR TEMPORARY CONSTRUCTION EASEMENTS				4			4
TASK 12: REVIEW AND OBTAIN ADDITIONAL GEOTECHNICAL EVALUATION							
REVIEW EXISTING GEOTECH EVALUATION							0
COORDINATE WITH GEOTECHNICAL ENGINEER TO OBTAIN ADDITIONAL GEOTECH EVALUATION		2	4				6
TASK 13: PREPARE DETAILED DESIGN DRAWINGS							
60% Design							
ADJUST EXISTING WALLACE ADDITION WATER AND WASTEWATER PROJECT PLANS		2	8	16	16		42
COVER, LAYOUT/INDEX, NOTES (2), STD DETAILS (6)		1	4	8	16		29
ESC DETAILS, ESC SHEETS (6)		2	8	16	16		42

**ATTACHMENT B
FEE SCHEDULE
PRELIMINARY ENGINEERING REPORT, DESIGN, BIDDING AND CONSTRUCTION PHASES
METHOD OF PAYMENT: TIME AND MATERIALS - AMOUNT NOT TO EXCEED**



PRIME PROVIDER NAME: RPS Klotz Associates, Inc.
PROJECT NAME: City of San Marcos - Wallace Addition Neighborhood Drainage Improvements

TASK DESCRIPTION	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	ASSOCIATE ENGINEER (EIT)	CADD OPERATOR	ADMIN/CLERICAL	TOTAL LABOR HRS. & COSTS
DRAINAGE AREA MAPS (2)	1	2	8	24	12		47
DITCH AND UNDERGROUND UTILITY PLAN/PROFILE SHEETS (6)	1	6	12	24	40		83
OPINION OF PROBABLE COST FOR 60% SUBMITTAL		1	4	8			13
90% Design							
COVER, LAYOUT/INDEX, NOTES (2), STD DETAILS (6)	1	1	4	8	12		25
ESC DETAILS, ESC SHEETS (6)		1	4	8	12		25
DRAINAGE AREA MAPS (2)	1	2	4	12	8		27
DITCH AND UNDERGROUND UTILITY PLAN/PROFILE SHEETS (6)	1	2	4	12	12		31
OPINION OF PROBABLE COST FOR 90% SUBMITTAL		1	4	6			11
Final Design							
COVER, LAYOUT/INDEX, NOTES (2), STD DETAILS (6)		1	2	4	8		15
ESC DETAILS, ESC SHEETS (6)		1	2	4	4		11
DRAINAGE AREA MAPS (2)		1	2	4	4		11
DITCH AND UNDERGROUND UTILITY PLAN/PROFILE SHEETS (6)		2	2	4	8		16
OPINION OF PROBABLE COST FOR FINAL SUBMITTAL		1	4	4			9
TASK 14: PREPARE TECHNICAL SPECIFICATIONS AND BID FORM							
TECHNICAL SPECIFICATIONS AND BID FORM		8		18		4	30
TASK 15: PROJECT PERMITTING INVESTIGATION AND PERMITTING							
INVESTIGATE REQUIRED TXDOT, TCEQ AND/OR OTHER AGENCY REGULATIONS	4	4	10	24			42
PREPARE AND PROVIDE FORMS FOR PERMITTING		4	8	12		12	36
PREPARE AND PROVIDE EXHIBITS FOR PERMITTING		4	8	24	40		76
QA/QC REVIEW							
QA/QC REVIEW AND FINAL LOOK	6	12					18
HOURS SUB-TOTALS	24	99	116	256	212	34	741
CONTRACT RATE PER HOUR	\$278.67	\$213.68	\$139.76	\$106.99	\$102.40	\$86.95	
SUBTOTAL LABOR COSTS	\$6,688.01	\$21,154.80	\$16,212.72	\$27,390.36	\$21,709.14	\$2,956.15	\$96,111.18
LABOR COST							\$96,111.18
DETAILED DESIGN PHASE DIRECT EXPENSES	# OF UNITS	COST/UNIT					
Mileage (number x current state rate)	210	\$0.535					\$112.35
Courier Services (Deliveries)	1	\$50.00					\$50.00
Printing (8 1/2" X 11")	500	\$0.05					\$25.00
Printing (11" X 17")	300	\$0.15					\$45.00
Printing (22" X 34")	50	\$1.30					\$65.00
SUBTOTAL DETAILED DESIGN PHASE DIRECT EXPENSES							\$297.35
DETAILED DESIGN PHASE SUBCONSULTANT EXPENSES	BASE COST	MARKUP					
Land Survey - McGray & McGray (Area 2)	\$5,637.00	0.1					\$6,200.70
Land Survey - McGray & McGray (Area 3)	\$7,137.00	0.1					\$7,850.70
Land Survey - McGray & McGray (Easements)	\$15,000.00	0.1					\$16,500.00
Geotechnical Engineering - HVJ Associates, Inc. (not included)	\$0.00	0.1					\$0.00
DETAILED DESIGN PHASE SUBTOTAL SUBCONSULTANT EXPENSES							\$30,551.40

**ATTACHMENT B
FEE SCHEDULE
PRELIMINARY ENGINEERING REPORT, DESIGN, BIDDING AND CONSTRUCTION PHASES
METHOD OF PAYMENT: TIME AND MATERIALS - AMOUNT NOT TO EXCEED**



PRIME PROVIDER NAME: RPS Klotz Associates, Inc.
PROJECT NAME: City of San Marcos - Wallace Addition Neighborhood Drainage Improvements

TASK DESCRIPTION	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	ASSOCIATE ENGINEER (EIT)	CADD OPERATOR	ADMIN/CLERICAL	TOTAL LABOR HRS. & COSTS
TOTAL EXPENSES							\$30,848.75
DETAILED DESIGN PHASE SUMMARY							
TOTAL LABOR COSTS	\$96,111.18						
TOTAL EXPENSES	\$30,848.75						
DETAILED DESIGN TOTAL	\$126,959.93						

BID PHASE	# OF UNITS	COST/UNIT	LABOR COST	TOTAL LABOR HRS. & COSTS
TASK 16: PROJECT MANAGEMENT				
PROJECT MANAGEMENT (6 months)	3			18
TASK 17: ATTEND PRE-BID CONFERENCE				
ATTEND PRE-BID CONFERENCE	4			4
TASK 18: RESPOND TO CONTRACTOR QUESTIONS/ISSUE ADDENDA				
RESPOND TO QUESTIONS/ISSUE ADDENDA (2 MAX UNLESS DESIGN ISSUE OR ERROR)	2			4
TASK 19: REVIEW BIDS AND MAKE RECOMMENDATION				
REVIEW BIDS AND MAKE RECOMMENDATION	2			4
HOURS SUB-TOTALS	7			28
CONTRACT RATE PER HOUR	\$278.67			\$213.68
SUBTOTAL LABOR COSTS	\$1,950.67			\$5,983.17
LABOR COST				\$10,932.89

BID PHASE DIRECT EXPENSES	# OF UNITS	COST/UNIT	TOTAL LABOR HRS. & COSTS
Mileage (number x current state rate)	210	\$0.535	\$112.35
Courier Services (Deliveries)	2	\$50.00	\$100.00
Printing (8 1/2" X 11")	500	\$0.05	\$25.00
Printing (11" X 17")	450	\$0.15	\$67.50
Printing (22" X 34")	100	\$1.30	\$130.00
SUBTOTAL BID PHASE DIRECT EXPENSES			\$434.85

BID PHASE SUMMARY	TOTAL LABOR COSTS	TOTAL EXPENSES	BID PHASE TOTAL
	\$10,932.89	\$434.85	\$11,367.74

CONSTRUCTION PHASE	PROJECT MANAGEMENT (9months)	PROVIDE CONSTRUCTION DOCUMENTS	TOTAL LABOR HRS. & COSTS
TASK 20: PROJECT MANAGEMENT			
PROJECT MANAGEMENT (9months)	9	45	81
TASK 21: PROVIDE CONSTRUCTION DOCUMENTS			
PROVIDE CONSTRUCTION DOCUMENTS		2	18

**ATTACHMENT B
FEE SCHEDULE
PRELIMINARY ENGINEERING REPORT, DESIGN, BIDDING AND CONSTRUCTION PHASES
METHOD OF PAYMENT: TIME AND MATERIALS - AMOUNT NOT TO EXCEED**



PRIME PROVIDER NAME: RPS Klotz Associates, Inc.
PROJECT NAME: City of San Marcos - Wallace Addition Neighborhood Drainage Improvements

TASK DESCRIPTION	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	ASSOCIATE ENGINEER (EIT)	CADD OPERATOR	ADMIN/CLERICAL	TOTAL LABOR HRS. & COSTS
TASK 22: ATTEND PRE-CONSTRUCTION MEETING							
ATTEND PRE-CONSTRUCTION MEETING		3					3
TASK 23: REVIEW SHOP DRAWINGS							
REVIEW SHOP DRAWINGS		8	12	30			50
TASK 24: RESPOND TO RFIS							
RESPOND TO RFI's (up to 10)		10	20	6		4	40
TASK 25: ASSIST WITH CHANGE ORDERS							
ASSIST WITH CHANGE ORDERS (up to 3)		4	4	8	8		24
TASK 26: ATTEND CONSTRUCTION MEETINGS							
ATTEND CONSTRUCTION MEETINGS (18)		9	54			18	81
TASK 29: PERIODIC SITE VISITS							
PERIODIC SITE VISITS (9)		6	27			9	42
TASK 28: SUBSTANTIAL COMPLETION WALK-THROUGH AND PUNCH LIST							
SUBSTANTIAL COMPLETION WALK-THROUGH AND PUNCH LIST		8	16			2	26
TASK 29: RECORD DRAWINGS							
RECORD DRAWINGS	2	2	4		18		26
HOURS SUB-TOTALS	11	97	146	48	38	51	391
CONTRACT RATE PER HOUR	\$278.67	\$213.68	\$139.76	\$106.99	\$102.40	\$86.95	\$57,659.60
SUBTOTAL LABOR COSTS	\$3,065.34	\$20,727.43	\$20,405.66	\$5,135.69	\$3,891.26	\$4,434.23	\$57,659.60
LABOR COST							\$57,659.60
CONSTRUCTION PHASE DIRECT EXPENSES	# OF UNITS	COST/UNIT					
Mileage (number x current state rate)	560	\$0.535					\$299.60
Courier Services (Deliveries)	1	\$50.00					\$50.00
Printing (8 1/2" X 11")	500	\$0.05					\$25.00
Printing (11" X 17")	450	\$0.15					\$67.50
Printing (22" X 34")	450	\$1.30					\$585.00
SUBTOTAL CONSTRUCTION PHASE DIRECT EXPENSES							\$1,027.10
CONSTRUCTION PHASE SUMMARY							
TOTAL LABOR COSTS		\$57,659.60					
TOTAL EXPENSES		\$1,027.10					
CONSTRUCTION PHASE TOTAL		\$58,686.70					
GRAND TOTAL		\$333,392.67					



ATTACHMENT C

**DELIVERABLES SCHEDULE
PRELIMINARY ENGINEERING REPORT, DESIGN, BIDDING AND CONSTRUCTION PHASES**

**CITY OF SAN MARCOS
WALLACE ADDITION NEIGHBORHOOD – DRAINAGE IMPROVEMENTS**

Engineer will complete the Scope of Work based on the following schedule of deliverables:

Draft PER and Construction Cost Estimate – Twelve (12) weeks after NTP

Final PER and Construction Cost Estimate – Four (4) weeks after receipt of Draft PER comments

60 Percent Drawings – Twelve (12) weeks after receipt of 30 percent comments

90 Percent Drawings with draft manual – Six (6) weeks after receipt of 60 percent comments

Final Sealed Drawings and Manual – Three (3) weeks after receipt of 90 percent comments

Bid Phase is anticipated to last six (6) months

Construction Phase is anticipated to last nine (9) months