

**EXHIBIT 1**  
**SCOPE OF SERVICES AND DELIVERABLES**

EXHIBIT 1  
CITY OF SAN MARCOS  
RATTLER ROAD WATER LINE EXTENSION  
SCOPE OF SERVICES

**Project Understanding**

The work to be performed by Kimley-Horn and Associates, Inc. (“Kimley-Horn” or the “Consultant”) under this contract will consist of providing Design Phase (PER, 30%, 90%, and 100% Documents) Plans, Specifications, and Estimates for the Rattler Road Water Line Extension project. The project consists of the following improvements:

- This project consists of the extension of approximately 2,500LF of a 12-inch waterline along Rattler Road starting at Old Bastrop Hwy to near Rattler Road and SH-123 intersection. The waterline extension is expected to be within the ROW.

**Basic Scope of Services**

**Phase I – Project Management & Meetings**

1. Project Management: This task consists of effort associated with project administration, coordination with City staff, coordination and supervision of the project team including subconsultants, and quality management so that project milestones and deliverables meet schedule and budget constraints. This task also includes developing a project schedule and workplan, site visits (up to two) and monthly invoicing and billing.
2. Meetings
  - a. Project Coordination Meetings: Two (2) project coordination meeting have been budgeted for the Design Phase. It is assumed that meetings will be held prior to beginning 30% and 90% design. Kimley-Horn will attend meetings with City of San Marcos Staff to determine project constraints and needs as well as discuss design considerations.
  - b. Project Workshop Meetings: Four (4) project workshop meetings have been budgeted for the Design Phase, following each milestone submittal (PER/30/90/100%). These meetings are to discuss comments received from the City of San Marcos.
  - c. Public Meetings: One (1) public meeting has been budgeted which consists of preparing exhibits and attending the meeting.
  - d. Design Team Coordination: Six (6) Project Team meetings including Kimley-Horn and Subconsultants.
3. Permitting:
  - a. City of San Marcos Permitting & Coordination: Kimley-Horn will submit to City of San Marcos the final plans for review and comment by the relevant departments, including drainage, transportation, arborist, w/ww, etc. This scope does not include any other regulatory review outside of City of San Marcos. If additional permitting efforts are discovered through milestone submittals, then this could be additional services. The project includes submitting the PS&E two (2) times to the City of San Marcos.

**Deliverables:**

- Monthly Status Report: Kimley-Horn will provide a monthly status report, including a summary of work completed as part of the invoice submitted to City of San Marcos.
- Workshop and Coordination meetings as scoped.

EXHIBIT 1  
CITY OF SAN MARCOS  
RATTLER ROAD WATER LINE EXTENSION  
SCOPE OF SERVICES

**Phase II – Preliminary Phase:**

1. Preliminary Phase Design & 30% Plans
  - a. 30%: Kimley-Horn will provide two (2) hard copies of Deliverables and one (1) pdf electronic copy. At a minimum, the deliverable for this task will contain the following:
    - i. Preliminary Alignment options, up to two (2) alignments, on a Full-Size exhibit
    - ii. Alignment OPCC for up to two (2) options.
    - iii. Memo documenting recommended alignment (assume 1 page)
    - iv. Cover Sheet -1 Sheet
    - v. Plans of the selected alignment– Up to 8 Sheets (1:40 Scale) of 11"x17" sheets.
  - b. Specifications – Table of Contents only, including list of technical specifications, special provisions, and special specifications.
  - c. Engineer's Opinion of Probable Construction Costs (OPCC). Kimley-Horn will provide conceptual opinions of probable construction cost to reflect changes for the conceptual design. Kimley-Horn has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Kimley-Horn at this time and represent only Kimley Horn's judgment as a design professional familiar with the construction industry. Kimley-Horn cannot and does not guarantee that proposal, bids or actual construction costs will not vary from the provided opinions of probable costs.
  - d. Permitting requirements for final design.
  - e. QA/QC – Kimley-Horn will provide quality assurance and quality control checks prior to each milestone submittal.
  - f. Revisions to QA/QC: Kimley Horn will provide revisions and comments responses to the QA/QC to include acceptance, corrected, and verified documentation.
  - g. 30% Comment Response Letter.

**Deliverables:**

- Preliminary Alignment Options Exhibit w/ OPCC and a memo documenting the recommended alignment
- 30% Plans
- 30% Comment Response Letter

EXHIBIT 1  
CITY OF SAN MARCOS  
RATTLER ROAD WATER LINE EXTENSION  
SCOPE OF SERVICES

**Phase III – Design Phase (90% & 100%):**

1. 90% Plans:
  - a. 90%: Kimley-Horn will provide one (1) pdf electronic copy of 11" x 17" plan sets. At a minimum, the plan set will contain the following:
    - i. Cover Sheet (assume 1 sheet)
    - ii. General Notes (assume up to 2 sheets)
    - iii. Project Layout Sheet: Kimley-Horn will provide a layout of the project with plan sheet references (assume 1 sheet)
    - iv. Overall Quantity Sheet: Kimley-Horn will provide a quantity table that includes individual sheet quantities and the overall project quantities (assume 1 sheet)
    - v. Erosion Control Plans and Details (assume 4 sheets)
    - vi. Traffic Control Plans and Details. This project assumes that the traffic control plan can be handled by flaggers and standard barricades, signs, and barriers as needed and will not require a detour plan (assume 4 sheets)
    - vii. Water Line Plan and Profile Sheets (assume up to 8 sheets)
    - viii. Standard Details: City of San Marcos details will be used where available. City of Austin details will be used otherwise (assume up to 2 sheets)
    - ix. Project Specific/Special Details (assume up to 1 sheet)
  - b. Specifications: Kimley-Horn will provide a list of Standard Specifications: City of San Marcos Division 1 specifications will be used. City of Austin standard specifications will be used if need to supplement the specifications. Kimley-Horn will also provide Project Specific/Special Specifications as needed for this project.
  - c. Engineer's Opinion of Probable Construction Costs (OPCC). Kimley-Horn will update opinions of probable construction cost to reflect changes from 60% design. Kimley-Horn has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Kimley-Horn at this time and represent only Kimley Horn's judgment as a design professional familiar with the construction industry. Kimley-Horn cannot and does not guarantee that proposal, bids, or actual construction costs will not vary from the provided opinions of probable costs.
  - d. Construction Project Schedule: Kimley-Horn will develop a Construction Schedule for the project consisting of design, bid and construction phases. The schedule will be updated during design.
  - e. QA/QC – Kimley-Horn will provide quality assurance and quality control checks prior to each milestone submittal.

EXHIBIT 1  
CITY OF SAN MARCOS  
RATTLER ROAD WATER LINE EXTENSION  
SCOPE OF SERVICES

- f. Revisions to QA/QC: Kimley Horn will provide revisions and comments responses to the QA/QC to include acceptance, corrected, and verified documentation.
- g. 90% Comment Response Letter.
- h. Bid Schedule

Deliverables:

- o 90% Plans, OPCC, Specifications and Construction Project Schedule
  - o 90% Comment Response Letter
  - o Bid Schedule
2. Final 100% Plans:
- a. Final 100%: one (1) pdf electronic copy of 11" x 17" plan sets. Upon approval by the City, two (2) hard copies of 11" x 17" plan sets, one (1) pdf copy, and one (1) CAD copy of the sealed plans will be provided.

**Phase IV – Subconsultant Services**

- 1. Topographic Survey: Kimley-Horn has brought McGray & McGray Land Surveyors, Inc. to provide topography services for the project. See Attachment A for their scope for the topography and survey services.
- 2. Geotechnical: Kimley-Horn has brought Arias & Associates, Inc. to provide geotechnical services for this project. The scope for the geotechnical services is attached to this document as Attachment A.

**Phase V – Expenses**

- 1. Assumes 12 site visits throughout the duration of the project as standard IRS rates (currently \$.624/mile.
- 2. Assumes 1000 copies at \$0.10/page for use in review and task execution.

Total is estimated to be \$774.

**Schedule**

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

- 30% Design Documents Submittal (60 days)
- 90% Design Documents Submittal (100 days)
- 100% Design Documents Submittal (60 days)

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

EXHIBIT 1  
CITY OF SAN MARCOS  
RATTLER ROAD WATER LINE EXTENSION  
SCOPE OF SERVICES

**Fee and Expenses**

Kimley-Horn will perform the services in Tasks 1-5 on a labor fee plus expense basis with the maximum labor fee shown below.

I	Project Management & Meetings	\$ 16,540.00
II	Preliminary Phase (PER)	\$ 27,735.00
III	Design Phase (90% & 100%)	\$ 63,465.00
IV	Subconsultant Services	\$ 38,495.10
V	Expenses	\$ 774.00

**Maximum Labor Fee** **\$ 147,009.10**

Kimley-Horn will not exceed the total maximum labor fee shown without authorization from the Client. Individual task amounts are provided for budgeting purposes only. Kimley-Horn reserves the right to reallocate amounts among tasks as necessary.

**City Responsibilities**

1. The City will provide to Kimley-Horn all data in the City's possession relating to Kimley-Horn's services on the Project. Kimley-Horn will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by the City.
2. The City will give prompt notice to Kimley-Horn whenever the City observes or becomes aware of any development that affects the scope or timing of Kimley-Horn's services.
3. The City will examine information submitted by Kimley-Horn and render in writing or otherwise provide comments and decisions in a timely manner.
4. The City shall distribute the milestone submittals by KH to the appropriate reviewing departments required to achieve a permit by the City of San Marcos.

EXHIBIT 1  
CITY OF SAN MARCOS  
RATTLER ROAD WATER LINE EXTENSION  
SCOPE OF SERVICES

**Additional Services**

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

1. Performing Geotechnical Investigation outside of the basic services listed above.
2. No Bid Phase services, or Construction Phase services are included in this scope. If Bid Phase services or Construction Phase services are required they will be additional services.
3. No record drawings are included in this scope. If production of record drawings is required this will be additional services.
4. If alignment changes are required after 30% design, then this can cause additional services.
5. This project assumes that the traffic control plan can be handled by flaggers and standard barricades, signs, and barriers as needed and will not require a detour plan.
6. Subsurface Utility Engineering is assumed to be provided by the City of San Marcos, however if it is needed to be provided by Kimley-Horn, then it will be additional services.
7. Performing Environmental Investigation or Environmental permit preparation and submittal.
8. Performing right-of-entry services if necessary for the project.
9. Kimley-Horn will provide up to 4 submittals for this project per the scope of services provided. Any additional submittals will considered additional services.
10. Performing title searches for easement or joint-use agreement preparation.
11. Kimley-Horn provided a work plan on this project that follows the schedule also attached to the this scope. If the schedule gets delayed beyond a minor setback, then this could have an impact on the work plan, available budget, and cause additional services.
12. Preparation of additional easement/ boundary exhibits beyond the number identified in the Scope of Services.
13. Acting as an agent of the City in the acquisition of permanent or temporary easements.
14. Preparation of platting documents and/or real property survey for site acquisition.
15. Utility Relocations that are unavoidable in order for KH to submit the work for a constructable site plan, including dry utilities and other water, wastewater, reclaimed, storm drain, culvert, conveyance, or use of any other purpose.
16. Accompanying the City when meeting with the TCEQ, U.S. Environmental Protection Agency, or other regulatory agencies during the course of the Project, beyond those meetings identified above.
17. Preparing applications and supporting documents for government grants, loans, or planning advances.

EXHIBIT 1  
CITY OF SAN MARCOS  
RATTLER ROAD WATER LINE EXTENSION  
SCOPE OF SERVICES

18. Appearing before regulatory agencies or courts as an expert witness in any litigation with third parties or condemnation proceedings arising from the development or construction of the Project, including the preparation of engineering data and reports for assistance to the City.
19. Providing professional services associated with the discovery of any hazardous waste or materials in the project site.
20. If an additional 3<sup>rd</sup> party viewer is added to the project in which Kimley-Horn is being required to provide comment responses and coordination, this will be additional services.



**EXHIBIT 2**  
**DETAILED FEE SCHEDULE**

**EXHIBIT 2- FEE ESTIMATE**  
**City of San Marcos, Texas**  
**Rattler Road Water Line Extension**

Professional Service Description	Total Task Cost	Staff						Civil Subconsultants
		Principal	Project Manager	Design Engineer	Engineer II	Engineer I	Clerical Staff	Sub 1
<b>I - Project Management &amp; Meetings</b>	\$ 16,540.00	\$265.00	\$225.00	\$185.00	\$185.00	\$155.00	\$95.00	\$0.00
<b>1. Project Management</b>								
a. Schedule and Work Plan	\$ 1,390	1	5					
b. Site Visit(s)	\$ 1,640		4		4			
c. Monthly Billing & Invoicing (up to 12 months)	\$ 3,230	2	12					
<b>2. Meetings</b>								
a. Project Coordination Meetings (assume 2)	\$ 1,720	2	2		4			
b. Project Workshop Meetings (assume 4)	\$ 2,170	2	4		4			
c. Public Meetings (assume 1)	\$ 675	1	1		1			
d. Design Team Coordination (assume 6)	\$ 2,805	3	4		6			
<b>3. Permitting</b>								
a. CoSM Permitting & Coordination	\$ 2,910	2	4		8			
<b>II. Preliminary Phase (PER)</b>	\$ 27,735.00	23.0	23.0	0.0	89.0	0.0	0.0	\$0.00
<b>1. Preliminary Phase Design &amp; 30% Plans</b>								
a. 30% Deliverables	\$ -							
i. Preliminary Alignment Options (up to 2)	\$ 3,940	2	2		16			
ii. Alignment OPCC (up to 2)	\$ 1,930		2		8			
iii. Memo	\$ 860	1	1		2			
iv. Cover Sheet (assume 1 sheet)	\$ 1,640	1	2		5			
v. Plans of the Selected Alignment (up to 8 sheets, 1:40 scale)	\$ 8,830	2	4		40			
b. Specifications (Table of Content only)	\$ 1,190		2		4			
c. OPCC	\$ 1,190		2		4			
d. QA/QC	\$ 4,240	16						
e. Revisions to QA/QC	\$ 2,380		4		8			
f. 30% Comments Response Letter	\$ 1,535	1	4		2			
<b>III. Design Phase (90 &amp; 100%)</b>	\$ 63,465.00	22.0	95.0	0.0	196.0	0.0	0.0	\$0.00
<b>1. 90% Plans</b>								
a. 90% Plan Set	\$ -							
i. Cover Sheet (assume 1 sheet)	\$ 595		1		2			
ii. General Notes (assume up to 2 sheets)	\$ 595		1		2			
iii. Project Layout Sheet (assume 1 sheet)	\$ 2,380		4		8			
iv. Overall Quantity Sheet (assume 1 sheet)	\$ 1,190		2		4			
v. Erosion Control Plans & Details (assume 4 sheets)	\$ 3,860		4		16			
vi. Traffic Control Plans & Details (assume 4 sheets of standard TCP, no detours)	\$ 3,860		4		16			
vii. Water Line Plan Sheets (assume up to 8 sheets)	\$ 16,130	2	20		60			
viii. Standard Details (assume up to 2 sheets)	\$ 1,190		2		4			
ix. Project Specific/ Special Details (assume up to 1 sheet)	\$ 965		1		4			
b. Specifications	\$ 2,910	2	4		8			
c. OPCC	\$ 4,760		8		16			
d. Construction Project Schedule	\$ 1,430	2	4					
e. QA/QC	\$ 3,180	12						
f. Revisions to QA/QC	\$ 4,760		8		16			
g. 90% Comment Response Letter	\$ 2,330	2	8					
<b>4. Final 100% Plans</b>								
a. Final 100% Plans	\$ 13,330	2	24		40			
<b>IV. Subconsultant Services (Including 5% Markup)</b>	\$ -	-	-	-	-	-	-	\$ 38,495.10
1. Survey (McGray)								\$ 21,463.60
2. Geotechnical (Arias)								\$ 17,031.50
<b>V. Expenses (Reimbursables)</b>	\$ 774.00	0.0	0.0	0.0	0.0	0.0	0.0	\$ -
<b>I - Project Management &amp; Meetings</b>	\$ 16,540.00	13.0	36.0	0.0	27.0	0.0	0.0	\$0.00
<b>II. Preliminary Phase (PER)</b>	\$ 27,735.00	23.0	23.0	0.0	89.0	0.0	0.0	\$0.00
<b>III. Design Phase (90 &amp; 100%)</b>	\$ 63,465.00	22.0	95.0	0.0	196.0	0.0	0.0	\$0.00
<b>IV. Subconsultant Services (Including 5% Markup)</b>	\$ -	-	-	-	-	-	-	\$38,495.10
<b>V. Expenses (Reimbursables)</b>	\$ 774.00							
<b>SUBTOTAL</b>	\$ 108,514.00	58.0	154.0	0.0	312.0	0.0	0.0	\$38,495.10
<b>TOTAL COST</b>								\$147,009.10

The hours listed above are an estimate. The hours assigned to the Phase are not exclusive to the Phase which they are assigned. The total fee will not exceed the total contract amount as discussed in Article 2. The hourly rates of this contract shall apply throughout the

**EXHIBIT 3**  
**PROJECT SCHEDULE**

# Rattler Road WL Extension

ID	Task Name	Duration	Start	Finish	Predecessors	Notes	Half 1, 2024		Half 2, 2024				Half 1, 2025				Half 2, 2025				Half									
							J	F	M	A	M	J	J	A	S	O	N	D	J	F		M	A	M	J	J	A	S	O	N
1	Notice to Proceed	1 day	Mon 1/1/24	Mon 1/1/24																										
2	Rattler Road 12-inch Water Line Extension	530 days	Tue 1/2/24	Mon 1/12/26			[Gantt Bar: Tue 1/2/24 to Mon 1/12/26]																							
3	Task II - 30% Design	60 days	Tue 1/2/24	Mon 3/25/24			[Gantt Bar: Tue 1/2/24 to Mon 3/25/24]																							
4	Milestone Submittal 30%	8 wks	Tue 1/2/24	Mon 2/26/24	1		[Red Arrow: Tue 1/2/24 to Mon 2/26/24]																							
5	CoSM Review	4 wks	Tue 2/27/24	Mon 3/25/24	4		[Red Arrow: Tue 2/27/24 to Mon 3/25/24]																							
6	Task III - 90/100% Design	160 days	Tue 3/26/24	Mon 11/4/24			[Gantt Bar: Tue 3/26/24 to Mon 11/4/24]																							
7	Milestone Submittal 90%	12 wks	Tue 3/26/24	Mon 6/17/24	5		[Red Arrow: Tue 3/26/24 to Mon 6/17/24]																							
8	CoSM Review	4 wks	Tue 6/18/24	Mon 7/15/24	7		[Red Arrow: Tue 6/18/24 to Mon 7/15/24]																							
9	Final Milestone Submittal 100%	8 wks	Tue 7/16/24	Mon 9/9/24	8		[Red Arrow: Tue 7/16/24 to Mon 9/9/24]																							
10	CoSM Review	4 wks	Tue 9/10/24	Mon 10/7/24	9		[Red Arrow: Tue 9/10/24 to Mon 10/7/24]																							
11	Permitting	4 wks	Tue 10/8/24	Mon 11/4/24	10		[Red Arrow: Tue 10/8/24 to Mon 11/4/24]																							
12	Task IV - Bid Phase	60 days	Tue 11/5/24	Mon 1/27/25			[Gantt Bar: Tue 11/5/24 to Mon 1/27/25]																							
13	Bid Phase (Bid opening thru Bid Award)	12 wks	Tue 11/5/24	Mon 1/27/25	11		[Red Arrow: Tue 11/5/24 to Mon 1/27/25]																							
14	Task V - Construction Phase Sevices	240 days	Tue 1/28/25	Mon 12/29/25			[Gantt Bar: Tue 1/28/25 to Mon 12/29/25]																							
15	Construction	12 mons	Tue 1/28/25	Mon 12/29/25	13		[Red Arrow: Tue 1/28/25 to Mon 12/29/25]																							
16	Task VI - Record Drawings	10 days	Tue 12/30/25	Mon 1/12/26			[Gantt Bar: Tue 12/30/25 to Mon 1/12/26]																							
17	Record Drawings	2 wks	Tue 12/30/25	Mon 1/12/26	15		[Red Arrow: Tue 12/30/25 to Mon 1/12/26]																							

Date: Tue 12/12/23

Task		Inactive Task		Manual Summary Rollup		External Milestone		Manual Progress	
Split		Inactive Milestone		Manual Summary		Deadline			
Milestone		Inactive Summary		Start-only		Critical			
Summary		Manual Task		Finish-only		Critical Split			
Project Summary		Duration-only		External Tasks		Progress			

**EXHIBIT 4**  
**AUTHORIZATION OF CHANGE IN SERVICE**

**ATTACHMENT A**  
**SUBCONSULTANTS PROPOSALS**

**McGRAY & McGRAY LAND SURVEYORS, INC.**

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

**TRANSMITTAL**

---

**TO:** Kimley-Horn  
Attn: Tara Raoof, P.E.  
10814 Jollyville Rd  
Campus IV, Suite 200  
Austin, TX 78759  
**PHONE:** (512) 418-4524  
**EMAIL:** Tara.Raoof@kimley-horn.com

**DATE:** December 12, 2023  
**FROM:** Amelia Bronk for Chris Conrad  
**RE:** Revised Proposal for Surveying  
Services for the Rattler  
Road Waterline Extension  
Project, San Marcos, Texas

---

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

**COPIES**

**DESCRIPTION**

1 Revised Proposal

For Your Approval

For Your Information

As Requested

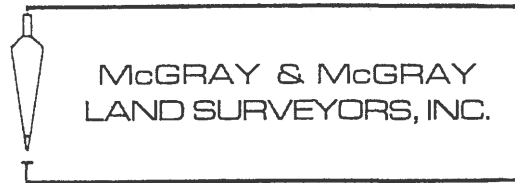
For Review and Comment

**REMARKS:** Thank you,  
Chris  
TBPELS Survey Firm #10095500

**SENT VIA:**  Delivery Service  FedEx  Mail  Fax  Email  Other:

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

December 12, 2023



Tara Raoof, P.E.  
Kimley-Horn  
10814 Jollyville Road  
Campus IV, Suite 200  
Austin, TX 78759  
(737) 270-7767

VIA EMAIL:  
Tara.Raoof@kimley-horn.com

**RE: Revised Proposal for Topographic Surveying Services for the Rattler Road  
Waterline Extension Project, San Marcos, Texas**

Dear Ms. Raoof:

We appreciate the opportunity to present you with this revised proposal for surveying services for the above referenced project. The following represents our understanding of the services being requested. Our fee follows.

**Survey Area:**

- From the intersection of Old Bastrop Road and Rattler Road, proceeding south along Rattler Road for approximately 2,500 L.F., as highlighted in “RED” on Exhibit “A”.

**Survey Control:**

- Horizontal Control: The survey will be provided in Texas State Plane, South Central Zone, NAD 83, Grid coordinates with a note defining the Grid to Surface Scale factor.
- Vertical Control: Elevations will be obtained using NAVD 88, Central Zone, EPOCH 2010.00, Geoid 2018 and at least two (2) benchmarks will be established onsite, and descriptions will be provided on the drawing.

**Design Surveying Services:**

- Cross sections shall be collected at a minimum of 50-foot intervals within paved areas only, 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, sidewalks, driveways, handicap ramps, guardrails, signs, visible utilities including manholes, water valves with top of nut elevations, telecom boxes, utility poles, mailboxes, irrigation heads and water meters.
- Invert elevations and size/type of utility and drainage pipes and culverts shall be identified for all manholes and culverts within the project limits.



- Locate and identify types of existing pavement surfaces for streets and driveways. Locate and identify existing lane markings and signage in detail (color, width, words and symbols.)
- Locate all trees 8" and larger within the survey area or that have a dripline that extends into the right-of-way line. Trees will be labeled in the drawing with caliper size and identification of tree species.

**Fees:**

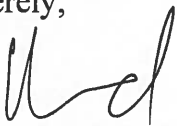
**Design Surveying Services (Non-taxable):**

2 Man Crew:	50 hrs @	\$165.00 /hr.= \$	8,250.00
Field Coordinator:	4 hrs @	\$98.00 /hr.= \$	392.00
Sr. Survey Technician:	14 hrs @	\$98.00 /hr.= \$	1,372.00
Survey Technician:	20 hrs @	\$92.00 /hr.= \$	1,840.00
LIDAR Technician:	50 hrs @	\$98.00 /hr.= \$	4,900.00
LiDAR Terrestrial Scanner:	10 hrs @	\$100.00 /hr.= \$	1,000.00
RPLS:	4 hrs @	\$145.00 /hr.= \$	580.00
Project Manager:	2 hrs @	\$165.00 /hr.= \$	330.00
<b>TOTAL = \$</b>			<b>18,664.00</b>

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

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

Sincerely,



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

Authorized to Proceed by:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

CIC:JDW:agb  
Encl.



1000 ft

Rattler Rd

El Camino

El Camino Way Dr

Old Bastrop Rd

**EXHIBIT "A"**  
**(Approximately 2.500 L.F.)**

Google Earth



13581 Pond Springs Road, Suite 210, Austin, Texas 78729 • Phone: (512) 428-5550 • Fax: (512) 428-5525

December 11, 2023  
Arias Project No. 2023-861

VIA Email: [Tara.Raof@kimley-horn.com](mailto:Tara.Raof@kimley-horn.com)

Mr. Tara Raof, P.E.  
Kimley – Horn  
10814 Jollyville Road Campus IV, Suite 200  
Austin, Texas 78759

**RE: Proposal for Geotechnical Engineering Services**  
Rattler Road Waterline Extension  
San Marcos, Texas

Dear Mr. Raof:

Arias & Associates, Inc. (Arias) is pleased to provide this proposal for geotechnical engineering services for the above referenced project. Our understanding of the project is based on the information provided by you including a map of the alignment and the requested field investigation. The following sections present our understanding of the project, proposed scope of services, fee compensation requirements, and schedule.

### **Project Information**

The project consists of the installation of approximately 2,500 LF of a 12-inch waterline. The project alignment extends along the Rattler Road, south of the intersection with Old Bastrop Road in San Marcos, Texas. We understand that the alignment will consist of open-cut installation. The depths of the waterline is unknown while preparing this proposal, however, we assume the depths will vary from 5 to 10 feet along the alignment.

### **Proposed Investigation**

Based on published geologic and nearby project experience, the site is mapped as being underlain by Pacan Gap Chalk (Kpg) formation. Based on our understanding of the planned construction, and from your request the drilling scope is presented in the following table:

<b>Borings</b>	<b>Boring depth, ft</b>	<b>No. of Borings</b>	<b>Footage</b>
Waterline	15	3	45
<b>Total</b>			<b>45</b>

A preliminary boring location map is presented on attached Exhibit A. The borings along the alignment will be drilled using a truck-mounted rig in areas clear of brush, heavy vegetation, and underground and

overhead utilities. Arias personnel will mark the boring locations and will notify Texas One-Call at least 72 hours prior to drilling. Arias requests Kimley-Horn to provide maps of existing utilities prior to our site mobilization. Arias will not be responsible for damaged utilities not informed to us.

Due to limited site constraints to drill rig access within the roadway, we anticipate borings will require traffic control with various setups that will be determined once a boring location plan has been finalized and the permitting process has begun. We will obtain an excavation permit in accordance with the City of San Marcos permit program.

The borings will be advanced using augering and sampling techniques, using either push-tube sampling (ASTM D1587) or split barrel sampler while performing the Standard Penetration Test (ASTM D1586). Continuous core sampling of the rock stratum (ASTM D2113) will be performed where competent limestone is encountered. Arias personnel will locate the borings, coordinate traffic control, direct the sampling efforts, visually classify recovered samples, and be present during drilling. Asphalt and base material thickness will be measured and reported for borings drilled through pavements. If groundwater is encountered, the groundwater levels within the open borehole will be recorded at the time of drilling and immediately following drilling. Each borehole will be backfilled with auger cuttings and bentonite. Borings drilled through pavements will be capped with at least 12 inches of sackrete and cold-patch asphalt to match existing surface elevation. No other site restoration measures, in addition to backfilling the boreholes, are included in this proposal.

We will obtain boring coordinates using a hand-held GPS device accurate to about 3 horizontal meters. Elevations will be provided by others, either by surveying or by estimation from project plan and profile drawings provided to us.

Laboratory testing will be performed on recovered samples selected by the geotechnical engineer to aid in soil classification and to measure engineering properties. Laboratory testing is expected to include moisture content, Atterberg limits, and fines content (percent passing the No. 200 sieve), unconfined compressive strength testing, and corrosion testing. The actual laboratory program will depend upon the type of soil and/or rock encountered.

### **Reporting**

We will issue electronic copies of the Geotechnical Data Report (GDR) and Geotechnical Design Memorandum (GDM) prepared by a licensed professional engineer in the State of Texas. Specifically, the report will include the following:

#### **Geotechnical Data Report (GDR):**

- Description of the field exploration program;
- Description of the laboratory testing program and results;
- Soil boring plan that depicts borehole locations on a base map provided by Client;

- Profiles of soil borings along the alignment using plan and profile design information provided by others;
- Soil boring logs with soil classifications based on the Unified Soil Classification System (ASTM D 2487);
- Generalized site stratigraphy and engineering properties developed from field and laboratory data at the explored locations; and
- Depth where groundwater, if encountered, at the time of drilling and immediately after drilling.

**Geotechnical Design Memorandum (GDM):** The Geotechnical Design Memorandum will provide the following geotechnical recommendations.

- Bedding and backfilling recommendations for trenched excavations;
- Modulus of soil reaction,  $E'$ , for buried pipelines;
- General recommendations for construction; and
- General recommendations for groundwater control.

Arias will provide draft reports for review, comment, and requests for clarification, which will then be addressed in the final reports.

Please be advised that Arias & Associates, Inc. performs Construction Materials Engineering and Testing (CoMET) per project requirements. We will be pleased to provide a separate proposal for construction materials testing at your request.

### **Proposed Fee**

We propose that the fee to perform the above outline preliminary scope of services be a lump sum of **\$14,810.00**. Please note that for invoicing purposes the estimated quantities in the Geotechnical Cost Breakdown may vary (increase or decrease), depending on the actual level of effort needed to perform each item, but the lump sum fee will remain the same (**\$14,810.00**).

Should it be necessary to expand our services beyond those outlined in this proposal, we will notify the PM, send a supplemental proposal stating the additional services and fee, and will not proceed without written authorization. We will invoice only for the authorized services.

We will invoice for work completed on a monthly basis. This proposal is based on the following assumptions about site access:

- Boring locations will be clear and accessible to our truck-mounted drilling equipment. No clearing of vegetation (nor the corresponding permits and fees), trees, brush or debris is included in this proposal;
- We will be provided with existing maps of known utilities, and we will notify Texas 811 at least 72 hours prior to drilling;

- Boring locations will require traffic control;
- We will obtain a City of San Marcos permit prior to drilling; and
- Drilling will commence during normal daytime working hours (8 am to 5 pm, Monday to Friday). If drilling hour limitations increase the number of days required for our field investigation, or if after hours or weekend drilling is required, we will need to discuss adjustments to our proposed fee.

### **Schedule**

Upon receiving written authorization, and weather and site conditions permitting, we can initiate our field investigation within 1 to 2 weeks. Permit submittal and approval through the ROWMAN office is expected to take 1 to 2 weeks. Drilling of the boreholes will take about one day. Laboratory testing will take 1 to 2 weeks. We anticipate submitting draft reports about 7 to 8 weeks following receipt of written authorization. We will keep you verbally informed of our findings as they become available.

Delays sometime occur due to adverse weather, utility clearance requirements, site clearing requirements for drill rig access, obtaining ROW permits to drill, obtaining right-of-entry, and other factors outside of our control. In this event, we will communicate the nature of the delay with you and provide a revised schedule at the earliest possible date.

### **Proposal Acceptance**

We understand that proposal authorization and contract terms will be established per Kimley Horn's subcontract for Professional Services. We will begin work upon receipt of a signed copy of the subcontract. Please attach this proposal to the subcontract and email it to [asioutis@ariasinc.com](mailto:asioutis@ariasinc.com).

Should you have any questions, please do not hesitate to contact Alexandros Sioutis, E.I.T. on his direct line at (737) 220-014 or on his cell phone at (512) 698-5518. We appreciate the opportunity provided and look forward to becoming an integral part of the Project Team.

Sincerely,

**ARIAS & ASSOCIATES, INC.**  
TBPE Registration No: F-32



Alexandros Sioutis, E.I.T.  
Geotechnical Engineer



John Landwermeyer, P.E.  
Managing Principal

Attachments:

- Exhibit A – Boring Location Plan
- Exhibit B – Geotechnical Cost Breakdown



13581 Pond Springs Road, Suite 210, Austin, Texas 78729  
 Phone: (512) 428-5550 • Fax: (512) 428-5525

## BORING LOCATION PLAN

### Rattler Road Waterline Expansion

### San Marcos, Texas

Date: November 9, 2023	Job No.: 2023-861
Drawn By: TI	Checked By: AS
Approved By: AS	Scale: N.T.S.

**Exhibit A**



**Exhibit B - Geotechnical Cost Estimate  
Rattler Road Waterline Extension  
San Marcos, Texas**

Task	Item Description	Est. Qty.	Unit	Unit Price	Est. Total Price
<b>1 Field Exploration</b>					
<b>1.1 Planning and Coordination</b>					
	Engineer in Training (One-Call, Drilling Plan)	4	hr	\$ 120.00	\$ 480.00
	Engineering Technician (Staking Borings)	6	hr	\$ 75.00	\$ 450.00
	Support Truck (Arias)	2	ea	\$ 55.00	\$ 110.00
	Excavation Permit	1	ea	\$ 500.00	\$ 500.00
	Engineer in Training (City of San Marcos permitting)	3	hr	\$ 120.00	\$ 360.00
	Geotechnical Department Manager	4	hr	\$ 175.00	\$ 700.00
	Principal Project Manager	2	hr	\$ 210.00	\$ 420.00
				<b>1.1 Subtotal</b>	<b>\$ 3,020.00</b>
<b>1.2 Drilling and Sampling</b>					
	Rig Mobilization, Truck-mounted Rig only	1	ea	\$ 1,000.00	\$ 1,000.00
	Air Compressor	1	day	\$ 250.00	\$ 250.00
	Soil Drilling 0' to 50' depth	45	ft	\$ 25.00	\$ 1,125.00
	Backfill Borings	45	ft	\$ 8.00	\$ 360.00
	Water Truck	1	day	\$ 150.00	\$ 150.00
	Engineering Technician (Drilling Logger)	8	hr	\$ 75.00	\$ 600.00
	Support Truck (Arias - Logger)	1	ea	\$ 55.00	\$ 55.00
				<b>1.2 Subtotal</b>	<b>\$ 3,540.00</b>
<b>1.3 Traffic Control</b>					
	Mobile Operation - Incl, truck 1, AB 1, sign/stand, cones and 2 staff members - (8 hours shift)	1	day	\$ 2,500.00	\$ 2,500.00
				<b>1.3 Subtotal</b>	<b>\$ 2,500.00</b>
				<b>Field Exploration TOTAL:</b>	<b>\$ 9,060.00</b>
<b>2 Laboratory Soil Testing</b>					
<b>2.1 Arias Laboratory</b>					
	Moisture Content	9	ea	\$ 15.00	\$ 135.00
	Atterberg Limits	6	ea	\$ 85.00	\$ 510.00
	Particle Gradation, Including No. 200 sieve	6	ea	\$ 85.00	\$ 510.00
	Unconfined Compressive Strength (soil)	3	ea	\$ 75.00	\$ 225.00
	pH, Chloride, Electrical Resistivity, Soluble Sulfate	1	ea	\$ 300.00	\$ 300.00
	Engineering in Training	1	hr	\$ 120.00	\$ 120.00
				<b>2.1 Subtotal</b>	<b>\$ 1,800.00</b>
				<b>Laboratory Testing TOTAL:</b>	<b>\$ 1,800.00</b>
<b>3 Engineering and Reporting</b>					
<b>3.1 Geotechnical Data Report (GDR)</b>					
	Principal Project Manager	2	hr	\$ 210.00	\$ 420.00
	Geotechnical Department Manager	4	hr	\$ 175.00	\$ 700.00
	Engineer in Training I	6	hr	\$ 120.00	\$ 720.00
	Administrative Assistant I	3	hr	\$ 65.00	\$ 195.00
				<b>3.1 Subtotal</b>	<b>\$ 2,035.00</b>
<b>3.2 Geotechnical Data Memorandum (GDM)</b>					
	Principal Project Manager	2	hr	\$ 210.00	\$ 420.00
	Geotechnical Department Manager	4	hr	\$ 175.00	\$ 700.00
	Engineer in Training I	5	hr	\$ 120.00	\$ 600.00
	Administrative Assistant I	3	hr	\$ 65.00	\$ 195.00
				<b>3.2 Subtotal</b>	<b>\$ 1,915.00</b>
				<b>Engineering TOTAL:</b>	<b>\$ 3,950.00</b>
<b>Project Total</b>					<b>\$ 14,810.00</b>