

**PROFESSIONAL SERVICES  
SUPPLEMENTAL AGREEMENT #1  
FOR  
WASTEWATER REHABILITATION (WW2306)**

**STATE OF TEXAS           §  
  §  
COUNTY OF TRAVIS       §**

This Supplemental Agreement No. 1 to a contract for Professional Services is made by and between the City of Pflugerville, Texas ("City") and Quiddity Engineering, LLC ("Consultant"). City and Consultant may be referred to herein singularly as "Party" or collectively as the "Parties."

WHEREAS, the City and Consultant executed an Agreement for Professional Services ("Agreement") on the 21st day of August, 2024 for the Wastewater Rehabilitation project ("Project") in the amount of \$174,345.00; and

WHEREAS, the City and Consultant desire to enter into a Supplemental Agreement #1 for Professional Services for the Project in the amount of \$557,144.00 to add professional services for the Wastewater Rehabilitation to the Agreement; and

WHEREAS, it has become necessary to amend the Agreement to modify the provisions for the Compensation; and

WHEREAS, it is necessary for the City to amend its agreements from time to time to comply with changes in state law relating to contracts of municipalities.

NOW, THEREFORE, premises considered, the City and the Consultant agree that said Agreement is amended as follows:

**I.**

Article II. Term shall be amended by changing the term of the Agreement to terminate on August 26th, 2026, with the ratification and incorporation of the remaining terms of the Agreement.

Article III. Scope of Services and Attachment A, shall be amended as set forth in the attached addendum to Attachment A.

Article III. Work Schedule and Attachment A, shall be amended as set forth in the attached addendum to Attachment A.

Article IV. Compensation to Consultant and Attachment A (Fee Schedule), shall be amended by increasing by \$557,144.00 the amount payable under the Agreement for a total of \$731,489.00, as shown by the attached Addendum to Attachment A (Fee Schedule).

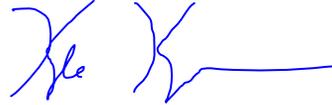
2.

Except as amended hereby and as previously amended as indicated above, the terms of the Agreement shall remain unchanged and in full force and effect.

**EXECUTED** and **AGREED** to as of the dates indicated below.

**CITY OF  
PFLUGERVILLE**

**CONSULTANT**



\_\_\_\_\_  
*(Signature)*

\_\_\_\_\_  
*(Signature)*

Printed Name: \_\_\_\_\_

Printed Name: Kyle Kaspar

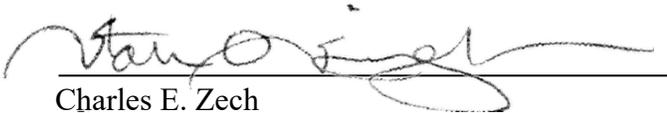
Title: City Manager/Authorized Representative  
\_\_\_\_\_

Title: Vice President

Date: \_\_\_\_\_

Date: October 14, 2025

APPROVED AS TO FORM:



Charles E. Zech

City Attorney

DENTON NAVARRO RODRIGUEZ BERNAL SANTEE & ZECH, P.C.

Stan Springerley, Senior Associate Attorney



912 S. Capital of Texas Hwy Suite 300  
Austin, Texas 78746  
Tel: 512.441.9493  
www.quiddity.com

October 14, 2025

Mr. Brandon Pritchett  
Public Utilities Director  
City of Pflugerville  
15500 Sun Light Near Way, #B  
Pflugerville, Texas 78660

Re: Professional Engineering Services for  
Rehabilitation of Wastewater Lines (Project No. WW2306) Final Design

Dear Mr. Pritchett,

Quiddity Engineering, LLC (Quiddity) appreciates the opportunity to provide this supplemental agreement to the existing Wastewater Rehabilitation (WW2306) contract (the Project) executed August 21<sup>st</sup>, 2024, for final design and construction phase engineering services.

#### **PROJECT UNDERSTANDING**

The City recently completed cleaning, televising, and smoke testing within the Gatlinburg neighborhood and along Great Basin Avenue in order to identify potential causes of inflow and infiltration (I&I). Quiddity reviewed the footage and inspection results, and developed a Preliminary Engineering Report (PER) summarizing the results and recommending rehabilitation within the project area. The recommended rehabilitation within the Gatlinburg neighborhood includes 2,681 LF of 6" sewer removal and replacement, 1,292 LF of 8" sewer removal and replacement, 411 LF of 12" sewer removal and replacement, 2 point repairs, 60 manholes reconstructed for a total of 398 VF, by-pass pumping, pavement restoration, and traffic control. The sewers within the Gatlinburg neighborhood are built in the early 1980s and do not meet the current TCEQ rules and regulations. The sewers are also predominantly under pavement. Full sections of the roadway will be replaced from joint to joint. Table 1 summarizes the defects identified and the recommended rehabilitation. Exhibit A presents an overall of the recommended rehabilitation, and Exhibit B presents detailed replacement plans for the sewers.



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Table 1 - Gatlinburg Recommended Rehab

Location	U/S MH	D/S MH	Length (LF)	Dia (in)	Defects Identified	Rehab Method
Pigeon Forge Rd	75	76	615	6 <sup>(1)</sup>	Deformed (15) Crack (6) Pipe Sag (2) Joint Offset (1)	Open Cut <sup>(1)</sup>
Pigeon Forge Rd	76	78	120	8	Deformed (1) Crack Spiral (1) Water Level Sag (2)	Open Cut <sup>(1)</sup>
Pigeon Forge Rd	78	79	251	8	Deformed (4) Water Level Sag (8)	Open Cut
Pigeon Forge Rd	85	46965	228	8	Deposits Attached Grease (2) Abandoned Survey (1)	Heavy Cleaning
PAWS	46965	46960	208	8	Water Level Sag (4)	Open Cut
PAWS	140820	140821	223	12	Deformed (1) Crack Spiral (1) Water Level Sag (2)	Open Cut
Waterbrook Dr	113	140818	165	12	Fracture Multiple (1) Water Level Sag (2)	Open Cut
Old Tract Rd	101	79	300	6 <sup>(1)</sup>	Deformed (2) Crack Longitudinal (1) Water Level Sag (4)	Open Cut
Sage Boot Dr	124	114	18	6 <sup>(1)</sup>	Alignment Right Down (1)	Point Repair
Middleway Rd	100	80	267	6 <sup>(1)</sup>	Deformed (7) Joint Offset Large (1) Joint Offset Medium (1) Water Level Sag (4)	Open Cut <sup>(1)</sup>
Quail Run Rd	109	78	598	6 <sup>(1)</sup>	Deformed (1) Joint Offset Large (1) Joint Offset Medium (1) Water Level Sag (2)	Open Cut
Sylvia Ln	110	108	299	6 <sup>(1)</sup>	Deformed (2) Water Level Sag (8)	Open Cut
Dove Haven Dr	93	81	11	6 <sup>(1)</sup>	Deformed (1)	Point Repair
Dove Haven Dr	86	87	377	6 <sup>(1)</sup>	Hole (1) Water Level Sag (2)	Open Cut <sup>(2)</sup>

(1) Recommended to be upsized to 8" for ease of future operations and maintenance activities, and due to the minimal cost difference.

It is also Quiddity's understanding that the City is replacing the waterlines within the Gatlinburg neighborhood and already has a Contractor under contract. The City intends to change order the Gatlinburg wastewater rehab



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construction into the waterline rehab Contractor’s contract so the streets where both utilities are proposed to be replaced, they can be replaced at the same time.

Quiddity understands the City desires to rehabilitate the wastewater lines within the Bohls neighborhood. The gravity sewers within these areas are predominantly PVC pipe, over 30 years old and have seen significant issues with both inflow and infiltration (I&I) and sewer deflections in the gravity lines. Table 1 presents the estimated sewer linear footage by diameter and number of manholes based on City GIS information.

**Table 2 - Gravity Sewer Linear Footage**

<b>Neighborhood</b>	<b>Gravity Line Size</b>	<b>Linear Footage</b>	<b>Manholes</b>
Bohls	6"	1,182	70
	8"	24,295	
<b>Total</b>		<b>25,477</b>	<b>70</b>

It is Quiddity’s understanding the City desires to perform a condition assessment of the Bohls neighborhood gravity sewer by means of cleaning and televising (C&TV) in order to establish the basis for which the rehabilitation is identified. A bid package of overall layout plan exhibits and specifications will be put together to directly solicit Contractors for the C&TV work. The C&TV is assumed to be completed to NASSCO standards. Smoke testing will be bid as an alternative, which can be awarded at the City’s discretion.

Quiddity will provide detailed review of the C&TV performed of the approximate 25,477 LF and 70 manholes. Quiddity will evaluate potential rehabilitation methods and draft a Preliminary Engineering Report (PER) that includes a summary of the pipe and manhole defects identified and the recommendations for the future sanitary sewer rehabilitation. The rehabilitation methods evaluated will include cured-in-place pipe (CIPP), pipe bursting, and open-cut remove and replace along existing alignment. The existing manholes are predominantly made of concrete, and Quiddity understands the City’s preferred method of rehabilitation is applying high-build epoxy coating. The PER will include GIS exhibits identifying sections with the recommended rehabilitation or replacement for which final design will be based, summary of by-pass pumping plan considerations, and an Association for the Advancement of Cost Engineering (AACE) Class IV Opinion of Probable Construction Cost (OPCC).

Final Design and Construction Phase Services for the Bohls neighborhood gravity sewer rehabilitation is **not** included with this proposal. After completion of the PER and agreement by the City on the proposed methods of rehabilitation, if requested, Quiddity can provide additional scope, compensation, and schedule associated with this work.

This proposal for the Final Design and Construction Phase services will be an amendment to the City’s *Professional Supplemental Services Agreement* (the *Agreement*) executed August 21<sup>st</sup>, 2024. Quiddity prepared the following scope of services, compensation proposal, and schedule for the City’s consideration of approval to be referenced in the *Agreement*.



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## **SCOPE OF SERVICES**

### **I. BASIC SERVICES:**

#### **A. Project Management**

1. Throughout the duration of the Project, manage project scope, schedule, quality, staff resources, communications, and project integration. Progress reports will be provided monthly with monthly invoices. Schedule updates will be provided with milestone deliverables.
2. Lead Project Kickoff Meeting (at City's office) and prepare meeting minutes.
3. Lead virtual monthly project progress meetings with the City, prepare agenda and meeting minutes. Assumed eight (8) monthly progress meetings with the City through Final Design and Bid Phase.
4. Coordinate with stakeholders (City, HOAs, property owners).

#### **B. Gatlinburg Final Design**

1. 90% Design
  - Review survey data and conduct walk through to verify existing conditions.
  - Right of Entry (ROE) for MH 46965 within the backyard.
  - Establish final design layout and dimensions of proposed improvements.
  - Determine final construction methods for each segment of the proposed improvements.
  - Develop and finalize a traffic control/ phasing plan to be used for sequencing the project construction as required.
  - Develop and finalize a recommended bypass pumping plan.
  - Develop and finalize Tree Preservation Plan.
  - Identify utility conflicts and a conflict resolution plan, including proposed utility relocations as identified.
  - Develop and finalize 90% documents consisting of construction plans (cover sheet, site layout, plan and profiles, utility relocations, pavement replacement, standard details, special details as necessary).
  - Conduct internal QA/QC and address comments.
  - Finalize 90% design contract documents, technical specifications, and supplemental specifications.
  - Develop and finalize 90% Engineer's Opinion of Probable Construction Cost.
  - Participate in coordination meetings associated with the planning, design of the project, and coordinate project improvements with adjacent projects.
  - Prepare and submit 90% design package to the City for review.
  - Conduct and attend 90% design workshop with the City staff.
  - Prepare written responses to the City comments.
  - Submit plans to external agencies for review (City Planning & Development Services, TCEQ)

#### **Deliverables for 90% Design:**

- Electronic copies (PDF) of 90% construction plans, contract documents, technical specifications, and OPCC.



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2. 100% Design

- Address City comments on 90% design package.
- Address external agency comments on 90% design package.
- Participate in coordination meetings associated with the planning, design of the project, and coordinate project improvements with adjacent projects.
- Prepare final construction plans, contract documents, and technical specifications.
- Prepare final Engineer's Opinion of Probable Construction Cost.
- Perform internal QA/QC and address comments.

**Deliverables for 100% Design:**

- Electronic copies (PDF) of 100% signed and sealed construction plans, contract documents, technical specifications, and OPCC.

**C. Gatlinburg Bid Phase Services**

1. Assist City with soliciting bid from Contractor.
2. Address questions and issue Addenda (as necessary).
3. Review and evaluate bid from Contractor.
4. Assist City with change order to Contract and City Council agenda item.
5. Prepare conformed documents
6. Coordinate contract execution between the Contractor and the City.

**Deliverables for Bid Phase:**

- Recommendation of Award, including bid tabulation (PDF format).
- Electronic Copies of the Conformed Documents to be provided to the client.

**D. Bohls Cleaning & Televising**

1. Obtain and review record drawings of sanitary sewers, maintenance records, and existing C&TV.
2. Develop overall plan layouts Exhibits of the proposed C&TV limits.
3. Prepare and submit 90% design documents consisting of contract documents, technical specifications, and exhibits of the proposed work area and traffic control details to the City for review. Exhibits will be prepared utilizing GIS.
4. Address comments from internal QA/QC and City reviews.
5. Prepare a 100% design submittal, including signed and sealed technical specifications and construction exhibits, for a single package ready for bidding. Bid package would include smoke testing as an alternate bid for the same project area.
6. Prepare an AACE Class II 100% OPCC.
7. Assist the City with soliciting bid and reviewing the bid.
8. Provide a recommendation of award and assist the City with City Council agenda item for award of the contract.
9. Attend the pre-con with the contractor. Coordinate with the City and the Contractor throughout the cleaning and televising.

**Deliverables for Bohls Cleaning & Televising:**

- Electronic copies of 90% contract documents, technical specifications, and GIS exhibits of proposed C&TV limits for City review.
- Electronic copies of signed and sealed contract documents, technical specifications, and GIS exhibits of proposed C&TV limits for bidding.
- Recommendation of Award for C&TV contract.

**E. Bohls Preliminary Design**

1. Review C&TV video and reports of approximately 25,477 LF of sanitary sewer C&TV.
2. Review C&TV video and reports of approximately 70 manholes C&TV.
3. Review smoke testing results if awarded.
4. Evaluate methods for sanitary sewer rehabilitation and manhole rehabilitation and prepare recommendations.
5. Conduct site visit to confirm existing conditions.
6. Prepare a Preliminary Engineering (PER) report summarizing the identified issues and the recommended rehabilitation. The PER will include GIS exhibits of the recommended rehabilitation, considerations for traffic control, by-pass pumping, and access. The PER will also include an ACEC Class III OPCC and will identify permitting agencies and key project stakeholders.
7. Perform internal quality assurance and quality control. Address internal QA/QC comments.
8. Submit electronic copies of the PER to the City for review.
9. Conduct a PER review workshop with the City to discuss review comments.
10. Address City review comments and issue final PER.

**Deliverables for Bohls Preliminary Design:**

- Electronic copies of draft Preliminary Engineering Report for City review.
- Electronic copies of finalized Preliminary Engineering Report.

**II. ADDITIONAL SERVICES****A. Topographic and Boundary Survey**

1. The Topographic survey will include a ROW to ROW survey within the Gatlinburg neighborhood and along Great Basin Avenue to include a survey of the existing wastewater manholes with invert elevations, existing sidewalks, trees (Caliper and Types within the Right of Way), cleanouts, 811 utility designation of dry utilities, a survey of a sufficient amount of property / lot boundary corners to establish right of way and or boundary lines. Survey will be limited to sections shown in Exhibit A identified to be removed and replaced.

**B. Environmental**

1. Phase I ESA - Quiddity will prepare the Phase I ESA consistent with the procedures included in American Society for Testing and Materials (ASTM) Practice E1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Elements of the Phase I ESA will include a site visit, review of historical information, interviews with people familiar



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with the site including local government inquiries to obtain relevant information regarding the environmental conditions of the subject property, and review of compiled regulatory agency database information that may provide an indication of recognized environmental conditions, historical controlled recognized environmental conditions, and environmental risk on or near the subject property.

2. Threatened, Endangered, and Protected Species Habitat Assessment - Per the PEA Environmental Questionnaire, *a habitat assessment will be conducted as part of the due diligence review*. As such, Quiddity will develop a threatened, endangered, and protected species habitat assessment report.

This report will provide an evaluation of existing habitats and assess the potential for occurrence and impacts to federally listed threatened, endangered, otherwise protected species associated with the Site. The assessment will include a preliminary review of data from the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC), Texas Parks and Wildlife Department's (TPWD) Rare, Threatened, and Endangered Species of Texas (RTEST) County List, TPWD's Natural Diversity Database (TXNDD), and other additional resources that may indicate the presence of potentially suitable T&E species habitat. Additionally, a field survey will be performed to verify the potential for presence or absence of each listed species preferred suitable habitat. Recommendations regarding avoidance or mitigation for T&E and protected species will also be addressed.

3. Cultural Resources Background Review and Texas Historical Commission (THC) Consultation - Quiddity recommends a cultural resources background review and THC consultation for multiple reasons, including:
  - 1) The PEA Environmental Questionnaire states *SHPO/THC Consultation will be conducted for the proposed project*.
  - 2) The project will utilize federal funds, therefore is subject to compliance with Section 106 of the National Historic Preservation Act (NHPA).
  - 3) The project is sponsored by the City of Pflugerville, a political subdivision of the State of Texas, and therefore necessitates compliance with the Antiquities Code of Texas (ACT), administered by the Texas Historical Commission (THC).

This scope of work includes a cultural resources desktop review and THC consultation to determine what, if any, permits and/or additional work may be required for the project to comply with both state and federal regulations.

SWCA will conduct a thorough archaeological literature and records search for the proposed project and surrounding area. SWCA will review the Texas Archeological Sites Atlas (Atlas) online database for any previously recorded surveys and historic-age or prehistoric archaeological sites located in, or immediately adjacent to the project area. If needed, an SWCA archaeologist will physically examine site files, records, and maps files housed at the Texas Archeological Research Laboratory and the THC



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Library. In addition, the Atlas review will include the following types of information: NRHP properties, State Antiquities Landmarks (SALs), OTHMs, Recorded Texas Historic Landmarks (RTHLs), cemeteries, and local neighborhood surveys. SWCA will also review the Texas Department of Transportation's Texas Historic Overlay, a mapping / geographic information system (GIS) database with historical maps and resource information covering most portions of the state. Other critical factors that SWCA will examine include the level of previous disturbances from residential and commercial development, types of soils present, Potential Archeological Liability Maps (PALMs), and any obvious standing structures greater than 45 years in age that appear on U.S. Geological Survey (USGS) topographic maps. Together, the gathered information will allow SWCA to identify any areas that have the potential to contain significant, undocumented cultural resources and evaluate archaeological potential within the project area.

Once the records search is complete, SWCA will report the findings of the review and make professional recommendations for the proposed project in a standard SWCA formatted report and complete a State Historic Preservation Office (SHPO) consultation letter. Following a review of the report and consultation letter by Quiddity and the City of Pflugerville, SWCA will make necessary edits to the documents and submit for agency consultation.

4. WIFIA PEA Questionnaire – Complete the PEA Questionnaire for WIFIA funding and coordinate with the City's subconsultant for completion and submittal.

### **C. Geotechnical**

1. Arias will provide geotechnical services for the project includes 4-20' and 1-25' boring totaling 105 vertical feet along the project alignment. Arias will conduct laboratory testing and issue a Geotechnical Data Report and Geotechnical Design Memorandum summarizing bedding and backfill recommendations, modulus of soil reaction for buried pipelines, pavement design recommendations for new flexible pavement construction, pavement design thicknesses for the proposed pavements based on traffic information, general recommendations for construction, and general recommendations for groundwater control. Please see **Exhibit C** for their full scope of work and geotechnical boring layout.

### **D. Subsurface Utility Engineering**

1. Includes QL-A test holes along the alignment to confirm the location and depth of adjacent utilities along the alignment. Once the utilities needed to confirm have been identified, a proposal will be provided with test hole locations. It's assumed 7 test holes are needed ranging in depth from 0-13'.

### **E. Supplemental Services**

1. Task if supplemental services are identified to support completion not otherwise identified in this scope of services document. Upon identifying the need of supplemental services, Quiddity will provide



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the City a scope and fee. The City shall give Quiddity authorization to utilize the Supplemental Services task for the scope and fee prior to initiating efforts.

**III. EXCLUSIONS**

This proposal does not include the following items but they may be needed for the project: construction phase services, metes and bounds, easement acquisition, value engineering, multiple bidding packages or re-bidding of the work, full construction management, construction inspections by a field project representative. Should any of these services be deemed necessary, Quiddity can provide additional scope, compensation, and schedule by separate authorization.

**IV. COMPENSATION**

Compensation for the SERVICES described above will be as follows and further detailed on enclosed **Exhibit D**.

<u>SERVICES</u>	<u>Type</u>	<u>Compensation</u>
<b>I. GATLINBURG BASIC SERVICES</b>		
A. Project Management	Time and Materials NTE	\$71,310
B. Final Design	Time and Materials NTE	\$228,875
C. Bid Phase	Time and Materials NTE	<u>\$21,640</u>
	<b>SUBTOTAL</b>	<b>\$321,825</b>
<b>II. GATLINBURG ADDITIONAL SERVICES</b>		
A. Topographic and Boundary Surveying	Time and Materials NTE	\$33,895
B. Environmental	Time and Materials NTE	\$16,579
C. Geotechnical Services	Cost + 10%	\$20,350
D. Subsurface Utility Engineering	Cost + 10%	\$25,000
E. Supplemental Services	Hourly	<u>\$20,000</u>
	<b>SUBTOTAL</b>	<b>\$115,824</b>
<b>III. BOHLS BASIC SERVICES</b>		
A. Preliminary Engineering	Time and Materials NTE	<u>\$87,590</u>
	<b>SUBTOTAL</b>	<b>\$87,590</b>
<b>IV. BOHLS ADDITIONAL SERVICES</b>		
A. Cleaning & Televising	Time and Materials NTE	<u>\$31,905</u>
	<b>SUBTOTAL</b>	<b>\$31,905</b>
	<b>TOTAL</b>	<b>\$557,144</b>

**V. PROJECT SCHEDULE**

Quiddity will complete the scope of services defined herein according to the attached Project Schedule shown in **Exhibit E**. Tables 1 and 2 below provides a summary of the major milestones. Note that durations are in calendar days, commencing with receipt of written notice-to-proceed.

**Table 1 - Gatlinburg Construction Schedule**

Milestone/Deliverable	Estimated Date	Calendar Days to Completion <sup>(1)</sup>
NTP	10/29/2025	
90% Design	2/9/2026	103
100% Design	3/30/2026	152
Open Bid	4/14/2026	167
Construction Substantial Completion	2/22/2027	481

**Notes:** (1) Days presented are cumulative calendar days from Notice to Proceed

**Table 2 – Bohls Cleaning & Televising**

Milestone/Deliverable	Estimated Date	Calendar Days to Completion <sup>(1)</sup>
NTP	10/29/2025	
Submit 90% C&TV Package	11/28/2025	30
Submit Final C&TV Package	12/18/2025	50
Solicit Bid	1/15/2026	78
Field Work Completed	5/20/2026	203
Draft PER to City	7/22/2026	266
Finalize PER	8/26/2026	301

**Notes:** (1) Days presented are cumulative calendar days from Notice to Proceed

**SPECIAL CONSIDERATIONS**

This proposal is based on the following special considerations:

1. All work under this proposal shall be subject to the *Professional Services Agreement for Wastewater Rehabilitation (WW2306)* between Quiddity Engineering, LLC and the City of Pflugerville executed August 21<sup>st</sup>, 2024
2. The proposed fees shall be considered in their entirety for the scope of services. Should you wish to contract with us for only a portion of the work, we reserve the right to negotiate individual scope items on their own merits.
3. This proposal shall be valid for sixty (60) days from this date and may be extended upon approval by this office.



Mr. Brandon Pritchett

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We thank you for the opportunity to submit this Proposal and look forward to working with you. An executed copy of this proposal will serve as our notice to proceed. Please return the signed copy to our office. Should you have any questions, please call 512.941.9493.

Sincerely,

A handwritten signature in blue ink, appearing to read "N. Alfaro".

Nieves C. Alfaro, PE  
Vice President

Sincerely,

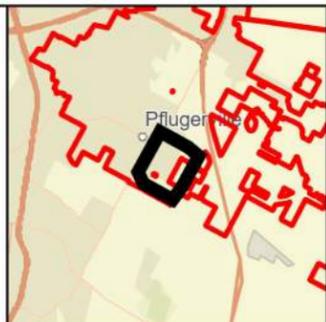
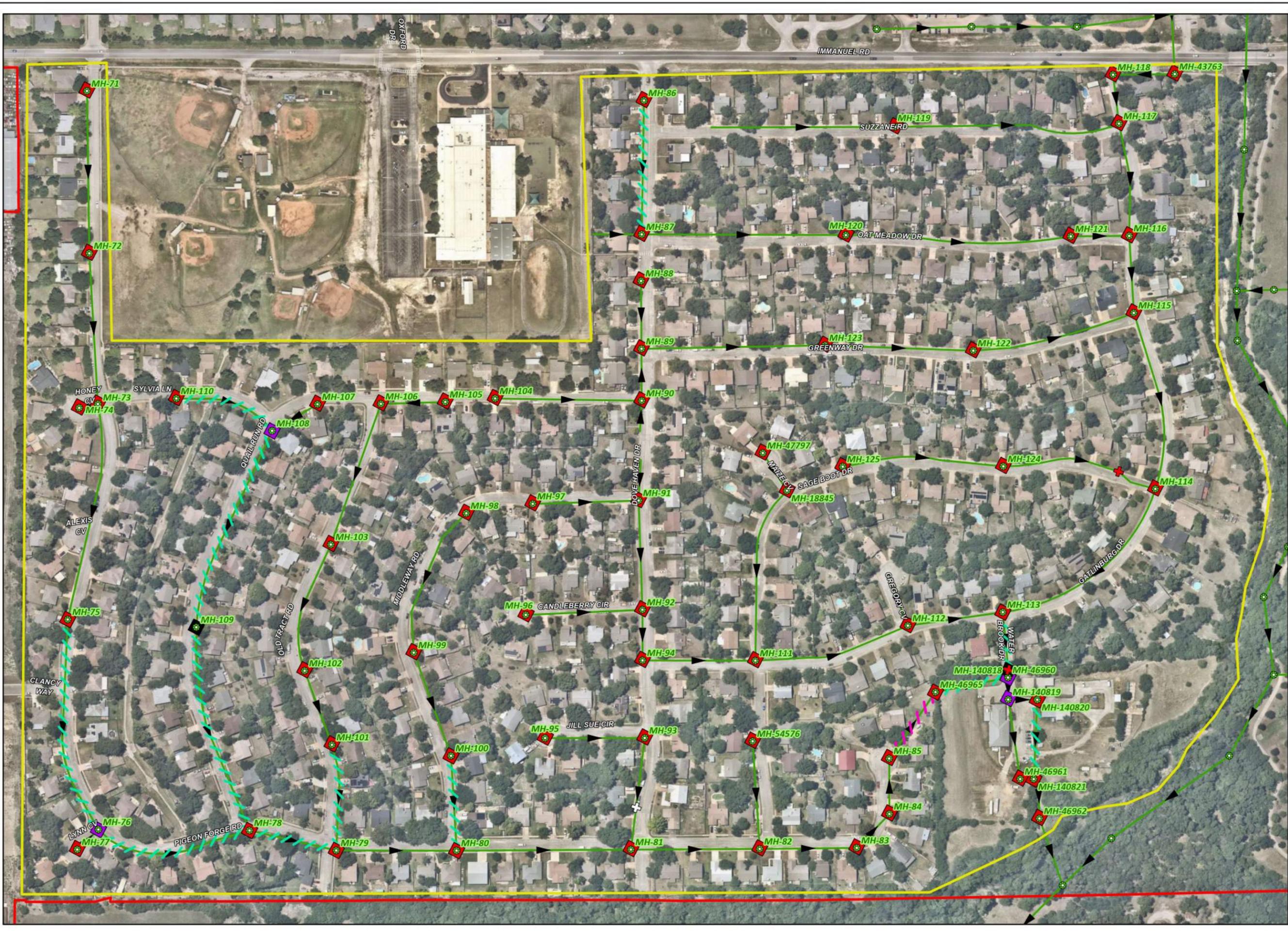
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Kyle H. Kaspar, PE  
Manager

AMM

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Enclosure(s)



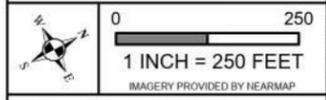
**VICINITY MAP**  
1 INCH = 5 MILES

**Legend**

- Sewer Manhole
  - Gravity Sewer Line
  - Gatlinburg Neighborhood
  - City Limits
- MH Repairs**
- Reconstruct
  - Rehab
  - Repair
  - Adjustment
  - Remove and Replace
  - Abandon
- Pipe Repairs**
- Open Cut
  - Heavy Cleaning
  - Pipe Burst
- Point Repairs**
- Point Repair
  - Service Connection Repair
  - Heavy Cleaning (Localized)

**EXHIBIT A**  
**GATLINBURG OVERALL**  
**REHAB RECOMMENDATIONS**

**CITY OF PFLUGERVILLE**  
TRAVIS COUNTY, TEXAS



Disclaimer: This product is offered for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property, governmental and/or political boundaries or related facilities to said boundary. No express warranties are made by Quiddity Engineering concerning the accuracy, completeness, reliability, or usability of the information included within this exhibit.



**QUIDDITY**  
Texas Board of Professional Engineers Registration No. F-23290

Project Number: 05674-001B-P Date: 8/16/2025 User Name: tds  
 Path: V:\Practices\Workspace\Corporate Services\GIS\Projects\GIS\Innovativa\A\_MountPflugervillePflugerville.aprx





Existing 6" along Sylvia Lane has a 0.10% slope, less than the minimum required 0.50% slope.

Remove 70 LF 6" Sewer

Prop 102 LF 6" Sewer @ 2.00% Slope

Existing sewer crosses under existing 30" RCPs with approximately 2.5' of cover.

3-30" STM  
Exist FL = 699.8

Prop SS MH  
6" FL In = 694.37  
6" FL Out = 694.27

Prop 86 LF 6" Sewer @ 0.50% Slope

Prop SS MH  
6" FL In = 694.90  
6" FL Out = 694.80

24" STM  
US FL = 698.9  
DS FL = 697.5

Prop 120 LF 6" Sewer @ 0.50% Slope

Remove 60 LF 6" Sewer

Reconstruct - MH-110  
MH Depth = 7.1 VF  
Exist FL = 695.5

MH-108  
MH Depth = 9.3 VF  
Exist FL = 695.2

Prop SS MH  
Rim Elev = 704.00  
6" FL In (W) = 692.23  
6" FL In (N) = 697.00  
6" FL Out (S) = 692.13

Remove 60 LF 6" Sewer

Prop 430 LF 6" Sewer @ 2.80% Slope

Prop SS MH  
Rim Elev = 692.50  
6" FL In = 685.00  
6" FL Out = 684.90

Prop 170 LF 6" Sewer @ 2.30% Slope

**MH-110 TO MH-108**

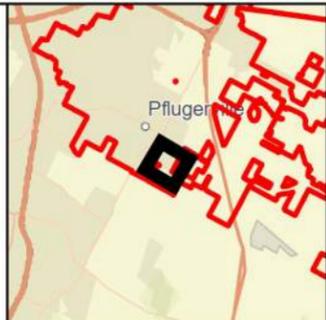
Open Cut  
Cut/Plug 6" Existing Wastewater Line - 1 EA  
Removal and Disposal of Existing Manhole - 1 EA  
6" PVC Gravity Sanitary Sewer Pipe, All Depths - 299 LF  
Remove and Replace Asphalt Pavement - 1,097 SY  
Remove and Replace Concrete Sidewalks - 81 SY  
Remove and Replace Concrete Curb, Gutter, and Concrete Curb and Gutter - 260 LF  
Remove and Replace Concrete Driveway - 15 SY  
Manhole Reconstruction (Standard Manholes 4' Dia.) - 7.1 VF  
Sanitary Sewer Manhole (0'-6') - 2 EA  
Remove and Replace Manhole (0'-6') - 1 EA  
Service Reconnection by Open Cut Excavation, Up To 5 LF of Lateral, All Depths - 4 EA

**MH-108 TO MH-109**

Open Cut  
Cut/Plug 6" Existing Wastewater Line - 1 EA  
Abandonment of Sanitary Sewer Manhole - 1 EA  
6" PVC Gravity Sanitary Sewer Pipe, All Depths - 600 LF  
Remove and Replace Asphalt Pavement - 1,915 SY  
Remove and Replace Concrete Sidewalks - 52 SY  
Remove and Replace Concrete Curb, Gutter, and Concrete Curb and Gutter - 265 LF  
Remove and Replace Concrete Driveway - 84 SY  
Sanitary Sewer Manhole (0'-6') - 2 EA  
Service Reconnection by Open Cut Excavation, Up To 5 LF of Lateral, All Depths - 7 EA

MH-109  
MH Depth = 8.0 VF  
Exist FL = 681.96

Prop SS MH  
Rim Elev = 688.50  
6" FL In = 681.00  
6" FL Out = 680.90



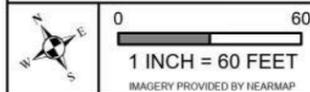
**VICINITY MAP**  
1 INCH = 5 MILES

**Legend**

- Sewer Manhole
- Gravity Sewer Line**
- 4"
- 6"
- 8"
- 12"
- 24"
- 32"
- 42"
- Gaitlinburg Neighborhood
- City Limits
- TCAD Parcels
- Storm Manhole
- Storm Inlet
- Storm Gravity Main
- Drainage Structure
- Water Facility
- Fire Hydrant
- Reuse Valves
- Reuse Meters
- Reuse Lines
- Water Distribution Main
- Raw Waterline

**EXHIBIT B**  
**MH-110 to MH-109**  
**REPLACEMENT**

CITY OF PFLUGERVILLE  
TRAVIS COUNTY, TEXAS



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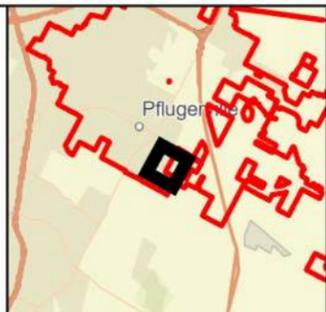
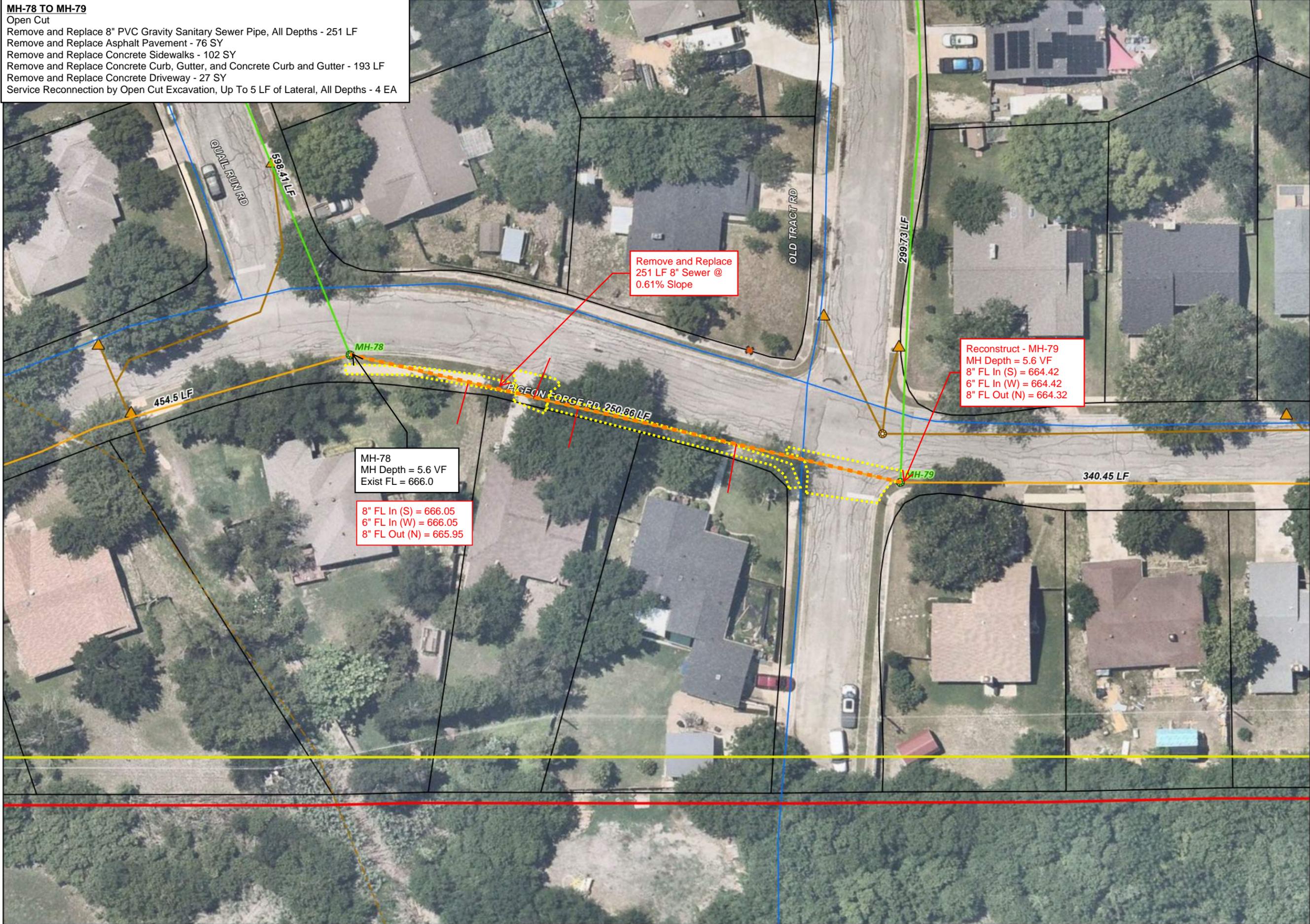
**QUIDDITY**

Texas Board of Professional Engineers Registration No. F-23290

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**MH-78 TO MH-79**  
 Open Cut  
 Remove and Replace 8" PVC Gravity Sanitary Sewer Pipe, All Depths - 251 LF  
 Remove and Replace Asphalt Pavement - 76 SY  
 Remove and Replace Concrete Sidewalks - 102 SY  
 Remove and Replace Concrete Curb, Gutter, and Concrete Curb and Gutter - 193 LF  
 Remove and Replace Concrete Driveway - 27 SY  
 Service Reconnection by Open Cut Excavation, Up To 5 LF of Lateral, All Depths - 4 EA



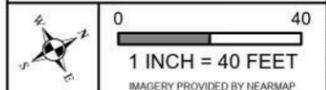
**VICINITY MAP**  
 1 INCH = 5 MILES

**Legend**

- Sewer Manhole
- Gravity Sewer Line**
- 4"
- 6"
- 8"
- 12"
- 24"
- 32"
- 42"
- Gaitlinburg Neighborhood
- City Limits
- TCAD Parcels
- Storm Manhole
- Storm Inlet
- Storm Gravity Main
- Drainage Structure
- Water Facility
- Fire Hydrant
- Reuse Valves
- Reuse Meters
- Reuse Lines
- Water Distribution Main
- Raw Waterline

**EXHIBIT B**  
**MH-78 to MH-79**  
**REPLACEMENT**

CITY OF PFLUGERVILLE  
 TRAVIS COUNTY, TEXAS

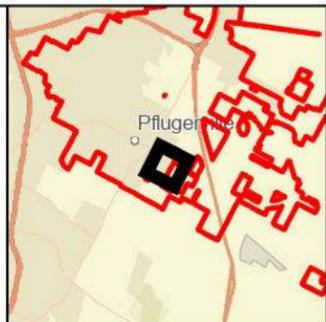
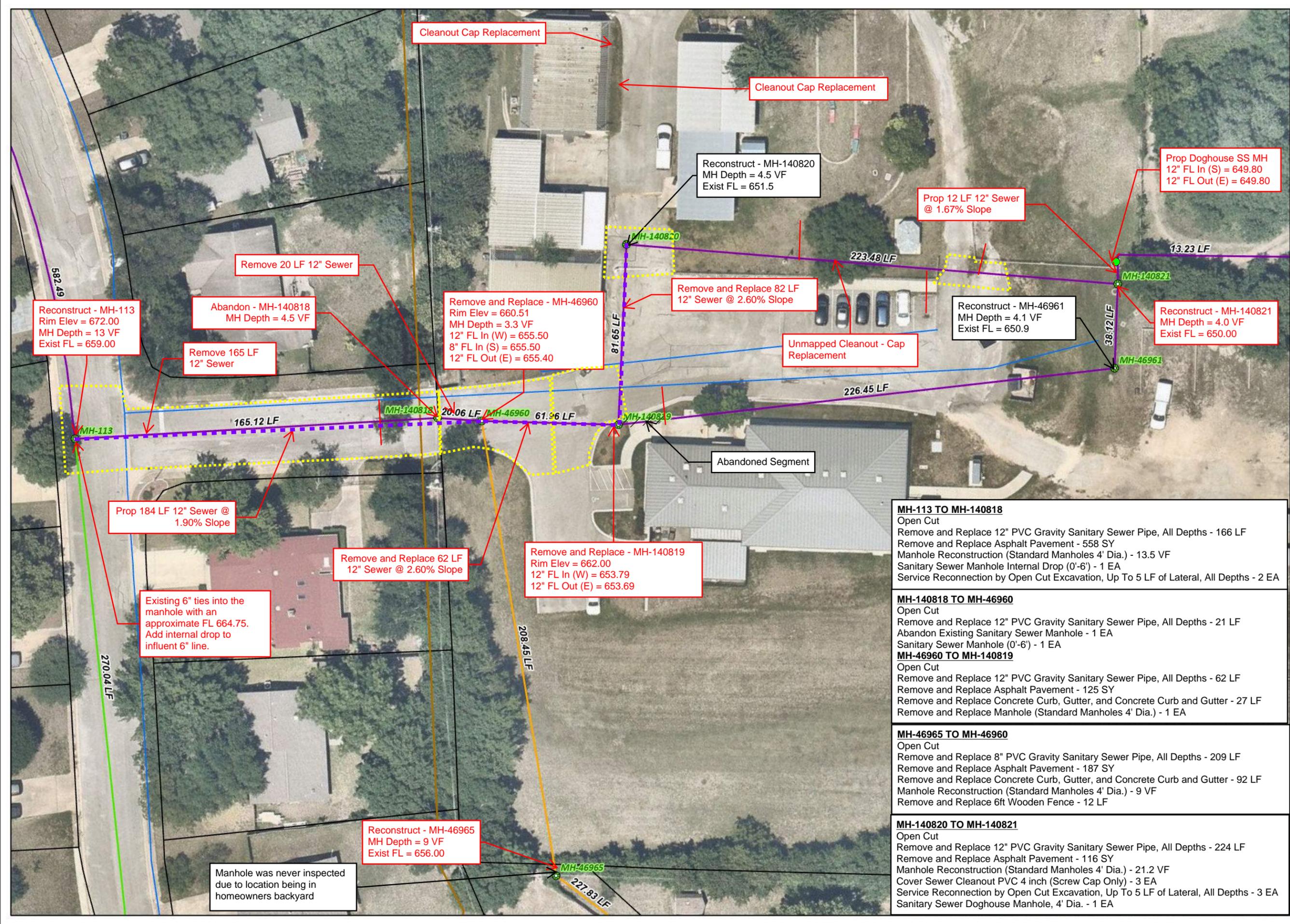


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 Project Number: 05874-001B - P  
 Date: 8/5/2025  
 User Name: amirah





**VICINITY MAP**  
1 INCH = 5 MILES

**Legend**

- Sewer Manhole
- Gravity Sewer Line
  - 4"
  - 6"
  - 8"
  - 12"
  - 24"
  - 32"
  - 42"
- Gaitlinburg Neighborhood
- City Limits
- TCAD Parcels
- Storm Manhole
- Storm Gravity Main
- ⊕ Water Facility
- + Fire Hydrant
- ⊕ Reuse Valves
- ⊕ Reuse Meters
- Reuse Lines
- Water Distribution Main
- Raw Waterline

**MH-113 TO MH-140818**  
Open Cut  
Remove and Replace 12" PVC Gravity Sanitary Sewer Pipe, All Depths - 166 LF  
Remove and Replace Asphalt Pavement - 558 SY  
Manhole Reconstruction (Standard Manholes 4' Dia.) - 13.5 VF  
Sanitary Sewer Manhole Internal Drop (0'-6") - 1 EA  
Service Reconnection by Open Cut Excavation, Up To 5 LF of Lateral, All Depths - 2 EA

**MH-140818 TO MH-46960**  
Open Cut  
Remove and Replace 12" PVC Gravity Sanitary Sewer Pipe, All Depths - 21 LF  
Abandon Existing Sanitary Sewer Manhole - 1 EA  
Sanitary Sewer Manhole (0'-6") - 1 EA

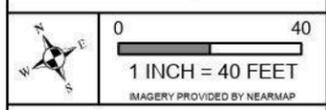
**MH-46960 TO MH-140819**  
Open Cut  
Remove and Replace 12" PVC Gravity Sanitary Sewer Pipe, All Depths - 62 LF  
Remove and Replace Asphalt Pavement - 125 SY  
Remove and Replace Concrete Curb, Gutter, and Concrete Curb and Gutter - 27 LF  
Remove and Replace Manhole (Standard Manholes 4' Dia.) - 1 EA

**MH-46965 TO MH-46960**  
Open Cut  
Remove and Replace 8" PVC Gravity Sanitary Sewer Pipe, All Depths - 209 LF  
Remove and Replace Asphalt Pavement - 187 SY  
Remove and Replace Concrete Curb, Gutter, and Concrete Curb and Gutter - 92 LF  
Manhole Reconstruction (Standard Manholes 4' Dia.) - 9 VF  
Remove and Replace 6ft Wooden Fence - 12 LF

**MH-140820 TO MH-140821**  
Open Cut  
Remove and Replace 12" PVC Gravity Sanitary Sewer Pipe, All Depths - 224 LF  
Remove and Replace Asphalt Pavement - 116 SY  
Manhole Reconstruction (Standard Manholes 4' Dia.) - 21.2 VF  
Cover Sewer Cleanout PVC 4 inch (Screw Cap Only) - 3 EA  
Service Reconnection by Open Cut Excavation, Up To 5 LF of Lateral, All Depths - 3 EA  
Sanitary Sewer Doghouse Manhole, 4' Dia. - 1 EA

**EXHIBIT B  
PAWS SEWER LINES  
REPLACEMENT**

**CITY OF PFLUGERVILLE**  
TRAVIS COUNTY, TEXAS



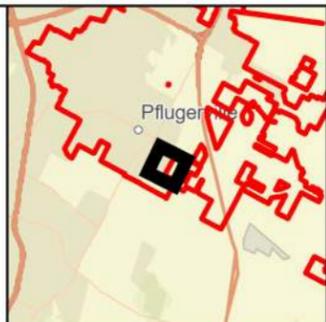
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Date: 8/12/2025  
 User Name: ygarca  
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The existing sewer is curved according to record drawings, narrowly missing the existing storm manhole



**VICINITY MAP**  
1 INCH = 5 MILES

**Legend**

- Sewer Manhole
- Gravity Sewer Line
  - 4"
  - 6"
  - 8"
  - 12"
  - 24"
  - 32"
  - 42"
- ▭ Gaitlinburg Neighborhood
- ▭ City Limits
- ▭ TCAD Parcels
- Storm Manhole
- ▲ Storm Inlet
- Storm Gravity Main
- ⊕ Water Facility
- ⊕ Fire Hydrant
- ⊕ Reuse Valves
- ⊕ Reuse Meters
- Reuse Lines
- Water Distribution Main
- Raw Waterline

Reconstruct - MH-100  
Exist Rim Elev = 674.5  
MH Depth = 7 VF  
Exist FL = 667.5

Remove 267 LF 6" Sewer

Prop 130 LF 6" Sewer @ 1.82% Slope

Prop SS MH  
Rim Elev = 670.00  
6" FL In = 665.13  
6" FL Out = 665.03

Prop 136 LF 6" Sewer @ 1.82% Slope

24" STM  
US FL = 664.7  
DS FL = 660.9

24" STM  
US FL = 664.7  
DS FL = 660.9

Strm MH  
Exist FL = 659.4

Reconstruct - MH-80  
Exist Rim Elev = 667.5  
MH Depth = 5.3 VF  
Exist FL = 662.67

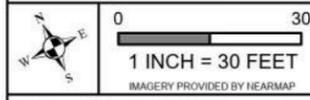
Prop SS MH  
Rim Elev = 667.5  
8" FL In (S) = 662.72  
6" FL In (W) = 662.72  
8" FL Out (N) = 662.72

24" STM  
US FL = 662.0  
DS FL = 660.4

**MH-100 TO MH-80**  
Open Cut  
Remove and Replace 6" PVC Gravity Sanitary Sewer Pipe, All Depths - 268 LF  
Remove and Replace Asphalt Pavement - 879 SY  
Remove and Replace Concrete Sidewalks - 54 SY  
Remove and Replace Concrete Curb, Gutter, and Concrete Curb and Gutter - 136 LF  
Remove and Replace Concrete Driveway - 55 SY  
Remove Sidewalks & Driveways - 745 SF  
Manhole Reconstruction (Standard Manholes 4' Dia.) - 12.3 VF  
Service Reconnection by Open Cut Excavation, Up To 5 LF of Lateral, All Depths - 4 EA

**EXHIBIT B**  
**MH-100 to MH-80**  
**REPLACEMENT**

CITY OF PFLUGERVILLE  
TRAVIS COUNTY, TEXAS



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Path: V:\Practices\Workspace\Corporate Services\GIS\Projects\GIS\Innovation\A\_MountPflugervillePflugerville.aprx  
 Project Number: 05874-001B-P  
 Date: 8/5/2025  
 User Name: amirah







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

September 8, 2025  
Arias Project No. 2025-573

VIA Email: [amoon@quiddity.com](mailto:amoon@quiddity.com)

Mr. Alan M. Moon, P.E.  
Senior Project Manager  
Quiddity  
912 S. Capital of Texas Highway, Suite 300  
Austin, TX 78746

**RE: Proposal for Geotechnical Engineering Services**  
City of Pflugerville Gatlinburg Wastewater Rehabilitation  
Pflugerville, Texas

Dear Mr. Moon:

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 summary of the scope, a site plan, 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 includes the rehabilitation of 6" sewer, 8" sewer, and 12" sewer in the Gatlinburg neighborhood in Pflugerville, Texas. The removal and replacement of the following segments is planned:

- Approximately 2,680 LF of 6" sewer along Pigeon Forge Road, Sylvia Lane, Quail Run Road, Old Tract Road, and Dove Haven Road. The installation depth will range from 5 – 10 ft.
- Approximately 1,300 LF of 8" sewer along Pigeon Forge Road. The installation depth will be 5 ft.
- Approximately 410 LF of 12" sewer along Water Brook Drive. The installation depth will range from 3 – 14 ft.

We understand that open-cut installation methods will be utilized throughout the alignment. Full depth removal and replacement of the pavement along the alignment is also planned. ESAL loads have not been provided to us for the preparation of this proposal.

If the waterline invert depth or locations change, we should be notified so that we can modify our scope accordingly.

### **Proposed Investigation**

Based on published geologic and nearby project experience, the site is mapped as being underlain by Austin Chalk (Kau) and Taylor Group (Kta). Based on our understanding of the planned construction and the boring location plan provided by the client, 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>
Alignment	20	4	80
	25	1	25
<b>Total</b>			<b>105</b>

A boring location map is presented on attached Exhibit A – Vicinity Map. 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. We have assumed that the City of Pflugerville will not require permits program. The 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. Any modifications to the standard traffic control plans are beyond the scope of this proposal and will be performed by others if required. It is important to mention that the Texas One-Call system only clears public utilities. Arias requests Quiddity to provide maps of existing private utilities prior to our site mobilization. Arias will not be responsible for damaged private utilities not informed to us

The borings will be drilled through the existing roadway/pavement section, where encountered, with a traditional truck-mounted rig using augers. 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 within the augered excavation and reported for borings drilled through pavements; we have not included coring of asphalt. 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 and capped with at least 12 inches of sackrete and cold-patch asphalt to match existing surface elevation if boring is drilled through pavement. No other site restoration measures, other than backfilling and patching of 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, fines content (percent passing the No. 200 sieve), and unconfined compressive strength testing. The actual laboratory program will depend upon the type of soils/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;
- Pavement design recommendations for new flexible pavement construction;
- Pavement design thicknesses for the proposed pavements based on the traffic information provided by the client;
- 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 outlined scope of services be a lump sum of **\$18,500**. A Geotechnical Cost Breakdown is presented on the attached Exhibit. 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 (**\$18,500**).

After our reports are submitted, additional engineering time required to attend teleconferences, meetings, site visits, review plans or specifications, will be charged at the hourly rates included in our Exhibit B. Additional soil borings and lab testing can be also performed on a time and material basis at the rates included in our Exhibit B. Also, stand-by time incurred in the field due to situations out of the control of Arias (e.g. right of access issues) will be charged at **\$225.00/hour**.

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;
- The ground at the time of the field investigation should be dry and strong enough to support the weight of the drilling vehicles. Otherwise, the client will be informed about the need for additional authorization to utilize an all-terrain vehicle to access boring locations;
- We will be provided with existing maps of known utilities, and we will notify Texas 811 at least 72 hours prior to drilling;
- Right of Entry (ROE) to access the boring locations will be obtained by others prior to our mobilization;
- Boring locations will require traffic control;
- We will obtain City of Pflugerville ROW excavation permit prior to drilling; and
- Drilling will commence during normal daytime working hours (8 am to 5 pm, Monday to Friday).

### **Schedule**

Upon receiving written authorization, and weather and site conditions permitting, we can initiate our field investigation within 2 weeks of permit approval. Permit submittal and approval is expected to take 2 to 3 weeks. Drilling of the boreholes is expected to take 2 to 3 days. Laboratory testing will take 2 to 3 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 Quiddity'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 [mahima.upreti@ariasinc.com](mailto:mahima.upreti@ariasinc.com).

Should you have any questions, please do not hesitate to contact Mahima Upreti, E.I.T. by email or on her direct line at (512) 457-9708. We appreciate the opportunity provided and look forward to being on your project team.

Sincerely,

### **ARIAS & ASSOCIATES, INC.**

TBPE Registration No: F-32



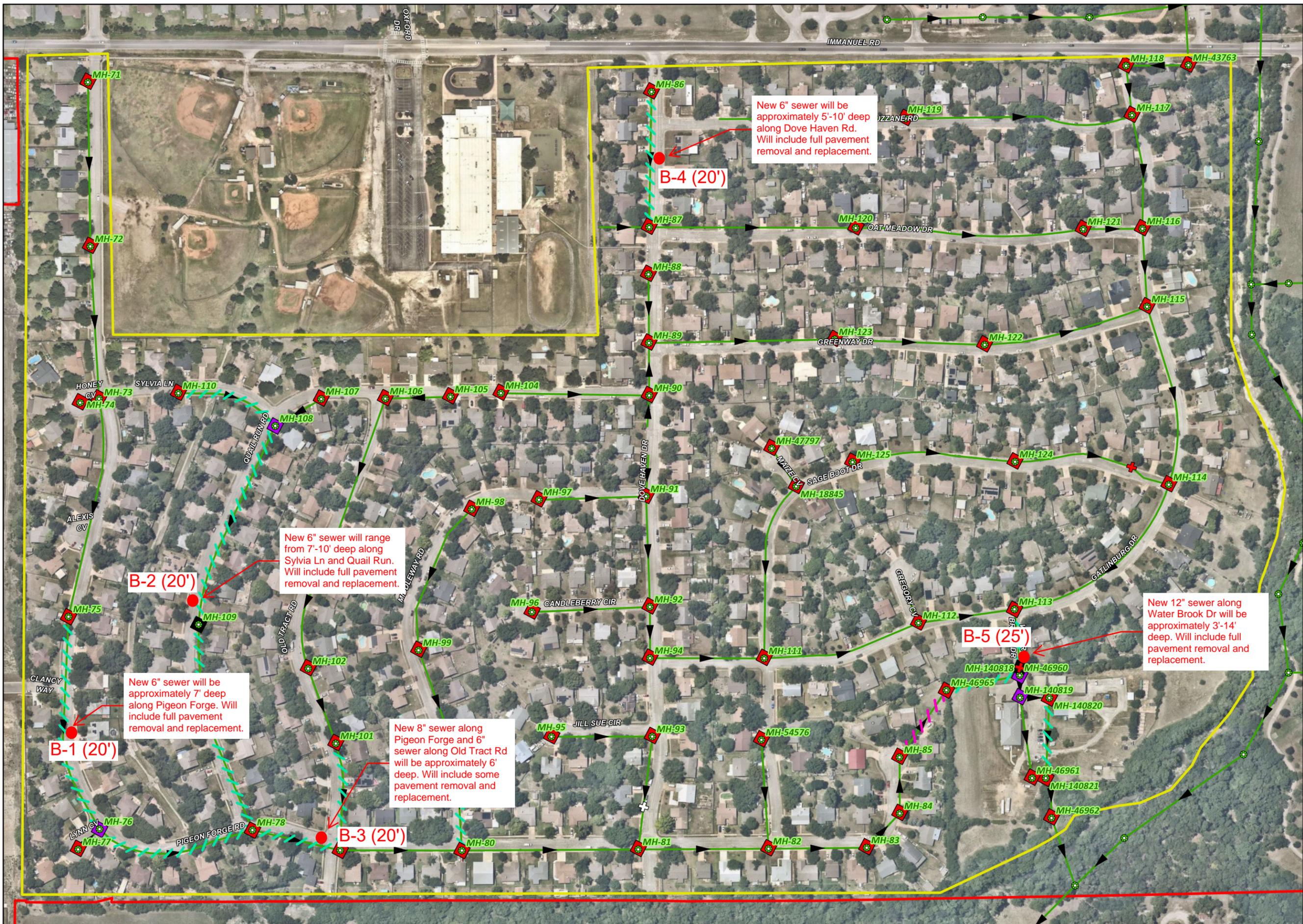
Mahima Upreti, E.I.T.  
Geotechnical Engineer



John S. Landwermeyer, P.E.  
Managing Principal, Austin Operations

#### Attachments:

- Exhibit A – Vicinity Map with Boring Locations
- Exhibit B – Geotechnical Cost Breakdown



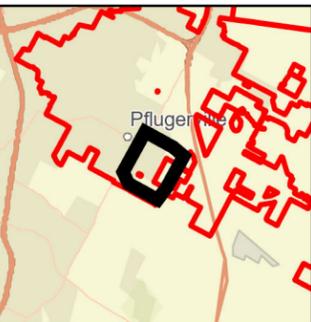
New 6" sewer will be approximately 5'-10' deep along Dove Haven Rd. Will include full pavement removal and replacement.

New 6" sewer will range from 7'-10' deep along Sylvia Ln and Quail Run. Will include full pavement removal and replacement.

New 6" sewer will be approximately 7' deep along Pigeon Forge. Will include full pavement removal and replacement.

New 8" sewer along Pigeon Forge and 6" sewer along Old Tract Rd will be approximately 6' deep. Will include some pavement removal and replacement.

New 12" sewer along Water Brook Dr will be approximately 3'-14' deep. Will include full pavement removal and replacement.



**VICINITY MAP**  
1 INCH = 5 MILES

**Legend**

- Sewer Manhole
- Gravity Sewer Line
- Gatlinburg Neighborhood
- City Limits
- MH Repairs**
- Reconstruct
- Rehab
- Repair
- Adjustment
- Remove and Replace
- Abandon
- Pipe Repairs**
- Open Cut
- Heavy Cleaning
- Pipe Burst
- Point Repairs**
- Point Repair
- Service Connection Repair
- Heavy Cleaning (Localized)

**EXHIBIT G  
GATLINBURG OVERALL  
REHAB RECOMMENDATIONS**

**CITY OF PFLUGERVILLE**  
TRAVIS COUNTY, TEXAS



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**QUIDDITY**  
Texas Board of Professional Engineers Registration No. F-23290

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 Project Number: 056714-0018 - P  
 Date: 8/19/2025  
 User Name: ida

**Exhibit B - Geotechnical Cost Estimate  
COP - Gatlin Wastewater Rehabilitation  
Pflugerville, 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 (Drilling Plan, One-Call, Traffic Controls)	6	hr	\$ 125.00	\$ 750.00
	Engineering Technician (Staking of Borings, Utility Clearance)	6	hr	\$ 85.00	\$ 510.00
	Trip Charge	2	ea	\$ 65.00	\$ 130.00
	Excavation Permit (COP permits)	0	ea	\$ 500.00	\$ -
	Senior Geotechnical Engineer		hr	\$ 195.00	\$ -
	Principal Engineer	2	hr	\$ 230.00	\$ 460.00
				<b>1.1 Subtotal</b>	<b>\$ 1,850.00</b>
<b>1.2 Drilling and Sampling</b>					
	Mobilization (Truck drill rig)	1	ea	\$ 600.00	\$ 600.00
	Air Compressor	2	day	\$ 225.00	\$ 450.00
	Soil Drilling and Sampling - Up to 50 feet	85	ft	\$ 27.00	\$ 2,295.00
	Rock Coring - Up to 50 feet	20	ft	\$ 33.00	\$ 660.00
	Backfill holes	105	ft	\$ 4.00	\$ 420.00
	Borehole Asphalt Patch	5	ea	\$ 75.00	\$ 375.00
	Drill Logger	18	hr	\$ 85.00	\$ 1,530.00
	Trip Charge (Arias - Logger)	2	ea	\$ 65.00	\$ 130.00
				<b>1.2 Subtotal</b>	<b>\$ 6,460.00</b>
<b>1.3 Traffic Control</b>					
	Traffic Control Services	2	ea	\$ 1,500.00	\$ 3,000.00
				<b>1.3 Subtotal</b>	<b>\$ 3,000.00</b>
				<b>Field Exploration TOTAL:</b>	<b>\$ 11,310.00</b>
<b>2 Laboratory Soil Testing</b>					
<b>2.1 Arias Laboratory</b>					
	Moisture Content (ASTM D2216)	8	ea	\$ 20.00	\$ 160.00
	Atterberg Limits (ASTM D4318)	8	ea	\$ 85.00	\$ 680.00
	Particle Gradation, Including No. 200 sieve (ASTM D422)	8	ea	\$ 85.00	\$ 680.00
	Unconfined Compressive Strength (rock or soil) (ASTM D7012 or D2166)	4	ea	\$ 75.00	\$ 300.00
	Controlled Pressure Swell (ASTM D4546)	0	ea	\$ 350.00	\$ -
	Soluble Sulfate (TEX 145-E)	0	ea	\$ 80.00	\$ -
	Soluble Chloride (ASTM D512)	0	ea	\$ 70.00	\$ -
	Soil pH (TEX-128-E)	0	ea	\$ 65.00	\$ -
	Laboratory Resistivity (ASTM G57)	0	ea	\$ 85.00	\$ -
	Engineer in Training	2	hr	\$ 125.00	\$ 250.00
				<b>2.1 Subtotal</b>	<b>\$ 2,070.00</b>
				<b>Laboratory Testing TOTAL:</b>	<b>\$ 2,070.00</b>
<b>3 Engineering and Reporting</b>					
<b>3.1 Geotechnical Data Report (GDR)</b>					
	Principal Engineer	6	hr	\$ 230.00	\$ 1,380.00
	Senior Geotechnical Engineer	0	hr	\$ 195.00	\$ -
	Engineer in Training	16	hr	\$ 125.00	\$ 2,000.00
	Data Processing	2	hr	\$ 70.00	\$ 140.00
				<b>3.1 Subtotal</b>	<b>\$ 3,520.00</b>
<b>3.2 Geotechnical Design Memorandum (GDM)</b>					
	Principal Engineer	2	hr	\$ 230.00	\$ 460.00
	Senior Geotechnical Engineer	0	hr	\$ 195.00	\$ -
	Engineer in Training	8	hr	\$ 125.00	\$ 1,000.00
	Data Processing	2	hr	\$ 70.00	\$ 140.00
				<b>3.2 Subtotal</b>	<b>\$ 1,600.00</b>
				<b>Engineering TOTAL:</b>	<b>\$ 5,120.00</b>
<b>Project Total</b>					<b>\$ 18,500.00</b>





		Project Principal	QA/QC Manager	Project Manager	Design Lead	Graduate Engineer	Drafting	Field Project Representative	GIS Support	Proj. Admin	Sub-Total	Other Directs	Total Budget	Task Level Total
		PL	Prof Eng V	Prof Eng III	Prof Eng I	Grad Eng I	Designer II	FPR II	GIS II	Admin II				
		\$295	\$295	\$250	\$195	\$135	\$155	\$145	\$130	\$75				
<b>C - Bidding Phase</b>														
1	Assist City with soliciting bid from Contractor			2	8	4					\$2,600		\$2,600	\$21,640
2	Address questions and issue Addenda (as necessary)			2	4	8	8				\$3,600		\$3,600	
3	Review and evaluate bid from Contractor			2	4						\$1,280		\$1,280	
4	Assist City with change order to Contract and City Council agenda item			6	4	4					\$2,820		\$2,820	
5	Prepare conformed construction contract documents.			4	8	16	24				\$8,440		\$8,440	
6	Coordinate contract execution between the Contractor and the City.			2	6	8				2	\$2,900		\$2,900	
<b>Total Task C</b>														
<b>D - Cleaning &amp; Televising</b>														
1	Obtain and review record drawings.			2	4	6					\$2,090		\$2,090	\$31,905
2	Develop overall plan layout exhibits of the proposed C&TV limits			2	4	8			20		\$4,960		\$4,960	
3	Prepare and submit 90% design documents consisting of contract documents, technical specifications, exhibits, and traffic control plans.			2	8	20					\$4,760		\$4,760	
4	Internal QA/QC and address comments. Address comments from City reviews.		6	4	4	12			6		\$5,950		\$5,950	
5	Prepare a 100% design submittal, including signed and sealed contract documents, technical specifications and construction exhibits, for a single solicitation package.		2	4	8	16					\$5,310		\$5,310	
7	Prepare an AACE Class II 100% OPCC of the C&TV effort.			2	2	6					\$1,700		\$1,700	
8	Assist the City with soliciting bid and reviewing the bid.			2	2	4					\$1,430		\$1,430	
9	Provide a recommendation of award and assist the City with City Council agenda item for award of the contract.			6	4	4					\$2,820		\$2,820	
10	Attend the pre-con with the Contractor. Coordinate with the City and the Contractor throughout the cleaning and televising.		1	4	4	6					\$2,885		\$2,885	
<b>Total Task D</b>														
<b>E - Preliminary Engineering</b>														
1	Review City provided pipe and manhole defect analysis of sanitary sewer and manholes.			4	16	50			10		\$12,170		\$12,170	\$87,590
2	Evaluate methods for sanitary sewer and manhole rehabilitation, and prepare recommendations.		4	16	24	40					\$15,260		\$15,260	
3	Conduct site visit to confirm existing conditions at critical defect locations.			4	8	8					\$3,640		\$3,640	
4	Prepare PER summarizing identified issues and recommended rehabilitation. PER will include GIS exhibits, considerations for traffic control, by-pass pumping and access. PER will also include AACE Class II OPCC, identify permitting agencies and key project stakeholders.		6	20	40	80			40	4	\$30,870		\$30,870	
5	Perform internal QA/QC and address comments.		6	8	10	20					\$8,420		\$8,420	
6	Submit electronic copies of the PER to the City for review.			2	2	4					\$1,430		\$1,430	
7	Conduct a PER review workshop with the City to discuss review comments.		4	4	4	4					\$3,500		\$3,500	
8	Address City review comments and issue final PER.		4	16	16	20			10		\$12,300		\$12,300	
<b>Total Task E</b>														
<b>Hours Subtotal</b>		<b>0</b>	<b>91</b>	<b>421</b>	<b>647</b>	<b>762</b>	<b>422</b>	<b>0</b>	<b>86</b>	<b>48</b>				
<b>SUBTOTAL ALL SERVICES</b>		<b>\$ -</b>	<b>\$ 26,845</b>	<b>\$ 105,250</b>	<b>\$ 126,165</b>	<b>\$ 102,870</b>	<b>\$ 65,410</b>	<b>\$ -</b>	<b>\$ 11,180</b>	<b>\$ 3,600</b>	<b>\$353,730</b>	<b>\$0.00</b>	<b>\$353,730</b>	<b>\$441,320</b>



		QA/QC Surv. Mngr	Reg. Prof Surveyor	3-Person Survey Crew	Project Surveyor	Drafting	Env Project Manager	Env Project Manager	Env Scientist	GIS	Proj. Admin	Sub-Total	Other Directs	Total Budget	Task Level Total
		Sur Mngr	RPLS	Field Crew	Proj Surv III	Surv Tech II	Env PM II	Env PM I	Env Sci I	GIS II	Admin II				
		\$265	\$225	\$255	\$160	\$120	\$185	\$170	\$85	\$140	\$75				
<b>Additional Services</b>															
<b>A - Surveying</b>															
1	Gatlinburg Tboundary: Research, Survey and Drafting	2	4	0	40	20						\$10,230		\$10,230	\$33,895
2	Gatlinburg Topographic Survey	1	2	90	0	0						\$23,665		\$23,665	
<b>Total Task A</b>															
<b>B - Environmental</b>															
1	Field Reconnaissance								8			\$680		\$680	\$16,579
2	Phase I ESA Report						2	4	12	8		\$3,190	\$1,000.00	\$4,190	
3	Response to Comments						2		2	4		\$1,100		\$1,100	
4	Threatened and Endangered Species Habitat Assessment Report						2	2	28	5		\$3,790		\$3,790	
5	Cultural Resources												\$4,439.09	\$4,439	
6	WIFIA PEA Questionnaire							14				\$2,380		\$2,380	
<b>Total Task B</b>															
<b>C - Geotech</b>															
1	Geotech											\$0	\$20,350.00	\$20,350	\$20,350
<b>Total Task C</b>															
<b>D - Subsurface Utility Engineering</b>															
1	QL-A											\$0	\$25,000.00	\$25,000	\$25,000
<b>Total Task D</b>															
<b>E - Supplemental Services</b>															
1	Supplemental Services (as needed)											\$20,000		\$20,000	\$20,000
<b>Total Task E</b>															
<b>Hours Subtotal</b>		3	6	90	40	20	6	20	50	17	0				
<b>SUBTOTAL ALL SERVICES</b>		\$ 795	\$ 1,350	\$ 22,950	\$ 6,400	\$ 2,400	\$ 1,110	\$ 3,400	\$ 4,250	\$ 2,380	\$ -	\$33,895	\$0.00	\$33,895	\$115,824



**SCHEDULE OF HOURLY RATES**  
Effective September 2025 - Subject to Revision

**ENGINEERING PERSONNEL**

Graduate Engineer I	\$135
Graduate Engineer II	\$165
Professional Engineer I	\$195
Professional Engineer II	\$220
Professional Engineer III	\$250
Professional Engineer IV	\$275
Professional Engineer V	\$295
Professional Engineer VI	\$315

**ELECTRICAL ENGINEERING PERSONNEL**

Electrical Graduate Engineer I	\$145
Electrical Graduate Engineer II	\$175
Electrical Professional Engineer I	\$210
Electrical Professional Engineer II	\$235
Electrical Professional Engineer III	\$260
Electrical Professional Engineer IV	\$290
Electrical Professional Engineer V	\$310

**STRUCTURAL ENGINEERING PERSONNEL**

Structural Graduate Engineer I	\$140
Structural Graduate Engineer II	\$170
Structural Professional Engineer I	\$200
Structural Professional Engineer II	\$225
Structural Professional Engineer III	\$255
Structural Professional Engineer IV	\$280
Structural Professional Engineer V	\$300

**CONSTRUCTION PERSONNEL**

Construction Manager I	\$140
Construction Manager II	\$160
Construction Manager III	\$185
Construction Manager IV	\$210
Construction Manager V	\$250
Field Project Representative I	\$ 95
Field Project Representative II	\$115
Field Project Representative III	\$135
Specialist Field Project Representative I	\$150
Specialist Field Project Representative II	\$160
Senior Specialist Field Project Representative	\$170

**SPECIALIST PERSONNEL**

Specialist I	\$130
Specialist II	\$160
Specialist III	\$195
Specialist IV	\$230
Specialist V	\$265

**PLANNING PERSONNEL**

Planner I	\$115
Planner II	\$155
Planner III	\$195
Planner IV	\$265

**DESIGNER/DRAFTING PERSONNEL**

CAD Operator I	\$100
CAD Operator II	\$110
CAD Operator III	\$130
Designer I	\$145
Designer II	\$165
Designer III	\$185

**GIS PERSONNEL**

GIS I	\$105
GIS II	\$140
GIS III	\$170
GIS IV	\$230

**ENVIRONMENTAL SCIENCE PERSONNEL**

Environmental Scientist I	\$ 85
Environmental Scientist II	\$ 90
Environmental Scientist III	\$100
Environmental Scientist IV	\$115
Senior Scientist I	\$135
Senior Scientist II	\$155
Environmental Project Manager I	\$170
Environmental Project Manager II	\$185
Senior Environmental Project Manager I	\$200
Senior Environmental Project Manager II	\$240

**OFFICE PERSONNEL**

Engineer's Assistant I	\$ 85
Engineer's Assistant II	\$ 95
Admin I	\$ 85
Admin II	\$105
Admin III	\$135
Project Admin/Accountant	\$145



**SCHEDULE OF HOURLY RATES**  
Effective September 2025 - Subject to Revision

**SURVEYING PERSONNEL**

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1-Person Field Crew	\$160
2-Person Field Crew	\$210
3-Person Field Crew	\$255
4-Person Field Crew	\$290
Scanner Equipment	\$110
Survey Technician I	\$110
Survey Technician II	\$120
Project Surveyor I	\$125
Project Surveyor II	\$140
Project Surveyor III	\$160
Project Surveyor IV	\$195
Chief of Survey Crews	\$165
Certified Photogrammetrist	\$190
Remote Pilot	\$180
Visual Observer	\$105
LiDAR Tech	\$115
Aerial Tech	\$100
Registered Professional Land Surveyor	\$225
Survey Manager	\$265

## Pflugerville Wastewater Rehab Gatlinburg Final Design & Bohls Cleaning & Televising

ID	Task Name	Duration	Start	Finish	Predecessors	2025												2026				2027	
						24 Jun	Qtr 3, 2024 Jul   Aug   Sep	Qtr 4, 2024 Oct   Nov   Dec	Qtr 1, 2025 Jan   Feb   Mar	Qtr 2, 2025 Apr   May   Jun	Qtr 3, 2025 Jul   Aug   Sep	Qtr 4, 2025 Oct   Nov   Dec	Qtr 1, 2026 Jan   Feb   Mar	Qtr 2, 2026 Apr   May   Jun	Qtr 3, 2026 Jul   Aug   Sep	Qtr 4, 2026 Oct   Nov   Dec	Qtr 1, 2027 Jan   Feb   Mar	Qtr 2, 2027 Apr   May   Jun					
1	<b>1 Great Basin and Gatlinburg Sewer Rehab</b>	<b>946 days</b>	<b>Thu 8/22/24</b>	<b>Thu 3/25/27</b>																			
2	<b>1.1 Project Kickoff</b>	<b>8 days</b>	<b>Thu 8/22/24</b>	<b>Thu 8/29/24</b>																			
6	<b>1.2 Cleaning &amp; Televising</b>	<b>206.88 days</b>	<b>Mon 8/26/24</b>	<b>Tue 6/10/25</b>	5																		
27	<b>1.3 Preliminary Engineering</b>	<b>112.88 days</b>	<b>Wed 6/11/25</b>	<b>Wed 10/1/25</b>																			
40	<b>1.4 Final Design</b>	<b>146 days</b>	<b>Fri 9/19/25</b>	<b>Fri 4/10/26</b>																			
41	1.4.1 Finalize Proposal for Final Design, and authorization by Council	29 days	Fri 9/19/25	Wed 10/29/25	37																		
42	1.4.2 Topographic Survey	20 days	Thu 10/30/25	Wed 11/26/25	41																		
43	1.4.3 Project Walkthrough - Verify Survey	5 days	Thu 11/27/25	Mon 12/1/25	42																		
44	1.4.4 Geotechnical Investigation	40 days	Thu 10/30/25	Wed 12/24/25	41																		
45	1.4.4.1 Field Work	15 days	Thu 10/30/25	Wed 11/19/25																			
46	1.4.4.2 Laboratory Testing	15 days	Thu 11/20/25	Wed 12/10/25	45																		
47	1.4.4.3 Report	10 days	Thu 12/11/25	Wed 12/24/25	46																		
48	1.4.5 Environmental	45 edays	Wed 10/29/25	Sat 12/13/25	41																		
49	<b>1.4.6 Final Design - 90% Design</b>	<b>142 days</b>	<b>Thu 11/20/25</b>	<b>Fri 4/10/26</b>																			
50	<b>1.4.6.1 Prepare 90% Drawings</b>	<b>38 days</b>	<b>Thu 11/20/25</b>	<b>Mon 1/12/26</b>																			
51	1.4.6.1.1 Sheet Setup / Incorporate Survey	10 days	Thu 11/20/25	Wed 12/3/25	42FS-5 days																		
52	1.4.6.1.2 Plan & Profile Markups	5 days	Thu 12/4/25	Wed 12/10/25	51																		
53	1.4.6.1.3 TCP, By-Pass Pumping, Details	5 days	Thu 12/11/25	Wed 12/17/25	52																		
54	1.4.6.1.4 Drafting	10 days	Thu 12/18/25	Wed 12/31/25	53																		
55	1.4.6.1.5 Post Drafting Review	3 days	Thu 12/18/25	Mon 12/22/25	53																		
56	1.4.6.1.6 Finalize P&Ps, TCP, By-Pass, Details	5 days	Thu 12/18/25	Wed 12/24/25	53																		
57	1.4.6.1.7 Drafting	8 days	Thu 12/25/25	Mon 1/5/26	56																		
58	1.4.6.1.8 Finalize Sheets	5 days	Tue 1/6/26	Mon 1/12/26	57																		
59	1.4.6.2 Project Manual	5 days	Thu 12/25/25	Mon 12/29/25	56																		
60	1.4.6.3 Quantity Take Off & OPCC	5 days	Thu 12/25/25	Wed 12/31/25	56																		
61	1.4.6.4 Internal QA/QC	5 days	Tue 1/13/26	Mon 1/19/26	58																		
62	1.4.6.5 Address QA/QC Comments	15 days	Tue 1/20/26	Mon 2/9/26	61																		
63	1.4.6.6 Submit 90% Design Package to City	0 days	Mon 2/9/26	Mon 2/9/26	62																		
64	1.4.6.7 City Review of 90% Submittal	10 days	Tue 2/10/26	Mon 2/23/26	63																		
65	1.4.6.8 90% Design Review Meeting with City	5 days	Tue 2/24/26	Sat 2/28/26	64																		
66	<b>1.4.6.9 Submit 90% Drawings For External Reviews / Approvals</b>	<b>60 days</b>	<b>Mon 2/9/26</b>	<b>Fri 4/10/26</b>																			
67	1.4.6.9.1 City Planning & Development Services	4 wks	Tue 2/10/26	Thu 3/19/26	63																		
68	1.4.6.9.2 Submit to TCEQ	60 edays	Mon 2/9/26	Fri 4/10/26	63																		
69	<b>1.4.7 Final Design - 100% Design</b>	<b>29 days</b>	<b>Mon 3/2/26</b>	<b>Mon 3/30/26</b>																			
70	1.4.7.1 Address City 90% Review Comments	10 days	Mon 3/2/26	Fri 3/13/26	65																		
71	1.4.7.2 Prepare final Project Manual	5 days	Mon 3/16/26	Fri 3/20/26	70																		
72	1.4.7.3 Quantity Take Off & OPCC	5 days	Mon 3/16/26	Fri 3/20/26	70																		
73	1.4.7.4 Internal QA/QC	5 days	Sat 3/21/26	Wed 3/25/26	72																		
74	1.4.7.5 Address Internal QA/QC Comments	5 days	Thu 3/26/26	Mon 3/30/26	73																		
75	1.4.7.6 Submit 100% Package to City	0 days	Mon 3/30/26	Mon 3/30/26	74																		
76	<b>1.5 Rehabilitation Construction Bidding</b>	<b>24 days</b>	<b>Tue 3/31/26</b>	<b>Thu 4/23/26</b>																			
77	1.5.1 Solicit bid from Gatlinburg Water Rehab Contractor	10 days	Tue 3/31/26	Mon 4/13/26	75																		
78	1.5.2 Answer Questions / Issue Addendum	5 days	Tue 4/14/26	Mon 4/20/26	77																		
79	1.5.3 Review Bid	3 days	Tue 4/14/26	Thu 4/16/26	77																		
80	1.5.4 Assist City with Contract Change Order / City Council Agenda Item	5 days	Fri 4/17/26	Thu 4/23/26	79																		

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

