

**PROFESSIONAL SERVICES AGREEMENT  
FOR  
SECONDARY COLORADO RIVER RAW WATER LINE**

STATE OF TEXAS           §  
  §  
COUNTY OF TRAVIS       §

This Agreement is entered into by and between the City of Pflugerville, a Texas Municipal Corporation (“City”), acting by and through its City Manager, and Freese and Nichols, Inc. (“Consultant”), both of which may be referred to herein singularly as “Party” or collectively as the “Parties.”

The Parties hereto severally and collectively agree, and by the execution hereof are bound, to the mutual obligations herein contained and to the performance and accomplishment of the tasks hereinafter described.

**I. DEFINITIONS**

As used in this Agreement, the following terms shall have meanings as set out below:

“City” is defined in the preamble of this Agreement and includes its successors and assigns.

“Consultant” is defined in the preamble of this Agreement and includes its successors.

“City Manager” shall mean the City Manager and/or his designee.

**II. TERM**

2.1 This agreement shall become effective upon execution by the City and shall remain in effect until satisfactory completion of the Scope of Work unless terminated as provided for in this Agreement.

2.2 If funding for the entire Agreement is not appropriated at the time this Agreement is entered into, City retains the right to terminate this Agreement at the expiration of each of City’s budget periods, and any subsequent contract period is subject to and contingent upon such appropriation.

**III. SCOPE OF SERVICES**

Consultant agrees to provide the services described in this Article III entitled Scope of Services in exchange for the compensation described in Article IV. Compensation. Scope of Services are detailed in *Attachment Scope of Services and Schedule* which are incorporated by reference as if written and copied herein.

All work performed by Consultant hereunder shall be performed to the satisfaction of the City Manager. The determination made by City Manager shall be final, binding and conclusive on all Parties hereto. City shall be under no obligation to pay for any work performed by Consultant, which is not satisfactory to City Manager. City shall have the right to terminate this Agreement, in accordance with Article VII. Termination, in whole or in part, should Consultant’s work not be satisfactory to City Manager; however, City shall have no obligation to terminate and

may withhold payment for any unsatisfactory work, as stated herein, even should City elect not to terminate.

#### **IV. COMPENSATION TO CONSULTANT**

4.1 In consideration of Consultant's performance in a satisfactory and efficient manner, as determined solely by City Manager, of all services and activities set forth in this Agreement, City agrees to pay Consultant an amount not to exceed seven million three hundred nine thousand seven hundred sixty six dollars (\$7,309,766.00) as total compensation, to be paid to Consultant as further detailed in Attachment Fee Breakdown.

4.2 No additional fees or expenses of Consultant shall be charged by Consultant nor be payable by City. The parties hereby agree that all compensable expenses of Consultant have been provided for in the total payment to Consultant as specified in section 4.1 above. Total payments to Consultant cannot exceed that amount set forth in section 4.1 above, without prior approval and agreement of all parties, evidenced in writing and approved by the City.

4.3 Final acceptance of work products and services require written approval by City. The approval official shall be the City Manager. Payment will be made to Consultant following written approval of the final work products and services by the City Manager. City shall not be obligated or liable under this Agreement to any party, other than Consultant, for the payment of any monies or the provision of any goods or services.

#### **V. OWNERSHIP OF DOCUMENTS**

5.1 Any and all writings, documents or information in whatsoever form and character produced by Consultant pursuant to the provisions of this Agreement is the exclusive property of City; and no such writing, document or information shall be the subject of any copyright or proprietary claim by Consultant.

5.2 Consultant understands and acknowledges that as the exclusive owner of any and all such writings, documents and information, City has the right to use all such writings, documents and information as City desires, without restriction. Any use of such writings, documents and information on extensions of this project or on any other project without specific adaptation by Consultant shall be at the City's sole risk and without liability to the Consultant.

#### **VI. RECORDS RETENTION**

6.1 Consultant and its subcontractors, if any, shall properly, accurately and completely maintain all documents, papers, and records, and other evidence pertaining to the services rendered hereunder (hereafter referred to as "documents"), and shall make such materials available to the City at their respective offices, at all reasonable times and as often as City may deem necessary during the Agreement period, including any extension or renewal hereof, and the record retention period established herein, for purposes of audit, inspection, examination, and making excerpts or copies of same by City and any of its authorized representatives.

6.2 Consultant shall retain any and all documents produced as a result of services provided hereunder for a period of four (4) years (hereafter referred to as "retention period") from the date of termination of the Agreement. If, at the end of the retention period, there is litigation or other questions arising from, involving or concerning this documentation or the services provided hereunder, Consultant shall retain the records until the resolution of such litigation or other such

questions. Consultant acknowledges and agrees that City shall have access to any and all such documents at any and all times, as deemed necessary by City, during said retention period. City may, at its election, require Consultant to return said documents to City prior to or at the conclusion of said retention.

6.3 Consultant shall notify City, immediately, in the event Consultant receives any requests for information from a third party, which pertain to the documentation and records referenced herein. Consultant understands and agrees that City will process and handle all such requests.

## VII. TERMINATION

7.1 For purposes of this Agreement, "termination" of this Agreement shall mean termination by expiration of the Agreement term as stated in Article II. Term, or earlier termination pursuant to any of the provisions hereof.

7.2 *Termination Without Cause.* This Agreement may be terminated by either Party upon 15 calendar days' written notice, which notice shall be provided in accordance with Article VIII. Notice.

7.3 *Termination For Cause.* Upon written notice, which notice shall be provided in accordance with Article VIII. Notice, City may terminate this Agreement as of the date provided in the notice, in whole or in part, upon the occurrence of one (1) or more of the following events, each of which shall constitute an Event for Cause under this Agreement:

7.3.1 The sale, transfer, pledge, conveyance or assignment of this Agreement without prior approval, as provided in Article XII. Assignment and Subcontracting.

7.4 *Defaults With Opportunity for Cure.* Should Consultant default in the performance of this Agreement in a manner stated in this section 7.4 below, same shall be considered an event of default. City shall deliver written notice of said default specifying such matter(s) in default. Consultant shall have fifteen (15) calendar days after receipt of the written notice, in accordance with Article VIII. Notice, to cure such default. If Consultant fails to cure the default within such fifteen-day cure period, City shall have the right, without further notice, to terminate this Agreement in whole or in part as City deems appropriate, and to contract with another consultant to complete the work required in this Agreement. City shall also have the right to offset the cost of said new Agreement with a new consultant against Consultant's future or unpaid invoice(s), subject to the duty on the part of City to mitigate its losses to the extent required by law.

7.4.1 Bankruptcy or selling substantially all of company's assets

7.4.2 Failing to perform or failing to comply with any covenant herein required

7.4.3 Performing unsatisfactorily

7.5 *Termination By Law.* If any state or federal law or regulation is enacted or promulgated which prohibits the performance of any of the duties herein, or, if any law is interpreted to prohibit such performance, this Agreement shall automatically terminate as of the effective date of such prohibition.

7.6 Regardless of how this Agreement is terminated, Consultant shall affect an orderly transfer to City or to such person(s) or firm(s) as the City may designate, at no additional cost to City, all completed or partially completed documents, papers, records, charts, reports, and any

other materials or information produced as a result of or pertaining to the services rendered by Consultant, or provided to Consultant, hereunder, regardless of storage medium, if so requested by City, or shall otherwise be retained by Consultant in accordance with Article VI. Records Retention. Any record transfer shall be completed within thirty (30) calendar days of a written request by City and shall be completed at Consultant's sole cost and expense. Payment of compensation due or to become due to Consultant is conditioned upon delivery of all such documents, if requested.

7.7 Within forty-five (45) calendar days of the effective date of completion, or termination or expiration of this Agreement, Consultant shall submit to City its claims, in detail, for the monies owed by City for services performed under this Agreement through the effective date of termination. Failure by Consultant to submit its claims within said forty-five (45) calendar days shall negate any liability on the part of City and constitute a **Waiver** by Consultant of any and all right or claims to collect monies that Consultant may rightfully be otherwise entitled to for services performed pursuant to this Agreement.

7.8 Upon the effective date of expiration or termination of this Agreement, Consultant shall cease all operations of work being performed by Consultant or any of its subcontractors pursuant to this Agreement.

7.9 *Termination not sole remedy.* In no event shall City's action of terminating this Agreement, whether for cause or otherwise, be deemed an election of City's remedies, nor shall such termination limit, in any way, at law or at equity, City's right to seek damages from or otherwise pursue Consultant for any default hereunder or other action.

## VIII. NOTICE

Except where the terms of this Agreement expressly provide otherwise, any election, notice or communication required or permitted to be given under this Agreement shall be in writing and deemed to have been duly given if and when delivered personally (with receipt acknowledged), or three (3) days after depositing same in the U.S. mail, first class, with proper postage prepaid, or upon receipt if sending the same by certified mail, return receipt requested, or upon receipt when sent by a commercial courier service (such as Federal Express or DHL Worldwide Express) for expedited delivery to be confirmed in writing by such courier, at the addresses set forth below or to such other address as either Party may from time to time designate in writing.

If intended for City, to: City of Pflugerville  
Attn: Patricia Davis, P.E.  
City Engineer  
P.O. Box 589  
Pflugerville, Texas 78691

If intended for Consultant, to: Freese and Nichols, Inc.  
Attn: Kendall King, P.E.  
Principal

## IX. INSURANCE

9.1 Prior to the commencement of any work under this Agreement, Consultant shall furnish copies of all required endorsements and an original completed Certificate(s) of Insurance to the City, which shall be clearly labeled “*Secondary Colorado River Raw Water Line*” in the Description of Operations block of the Certificate. The original Certificate(s) shall be completed by an agent and signed by a person authorized by that insurer to bind coverage on its behalf. The City will not accept Memorandum of Insurance or Binders as proof of insurance. The original certificate(s) or form must have the agent’s original signature, including the signer’s company affiliation, title and phone number, and be mailed, with copies of all applicable endorsements, directly from the insurer’s authorized representative to the City. The City shall have no duty to pay or perform under this Agreement until such certificate and endorsements have been received and approved by the City. No officer or employee, other than the City Attorney, shall have authority to waive this requirement.

9.2 The City reserves the right to review the insurance requirements of this Article during the effective period of this Agreement and any extension or renewal hereof and to modify insurance coverages and their limits when deemed necessary and prudent by City Attorney based upon changes in statutory law, court decisions, or circumstances surrounding this Agreement. In no instance will City allow modification whereupon City may incur increased risk.

9.3 A Consultant’s financial integrity is of interest to the City; therefore, subject to Consultant’s right to maintain reasonable deductibles in such amounts as are approved by the City, Consultant shall obtain and maintain in full force and effect for the duration of this Agreement, and any extension hereof, at Consultant’s sole expense, insurance coverage written on an occurrence basis, by companies authorized and admitted to do business in the State of Texas and with an A.M Best’s rating of no less than A- (VII), in the following types and for an amount not less than the amount listed below:

City of Pflugerville

### **Insurance Requirements**

Consultant performing work on City property or public right-of-way for the City of Pflugerville shall provide the City a certificate of insurance evidencing the coverage provisions identified herein. Consultant shall provide the City evidence that all subcontractors performing work on the project have the same types and amounts of coverage as required herein or that the subcontractors are included under the contractor’s policy. The City, at its own discretion, may require a certified copy of the policy.

All insurance companies and coverage must be authorized by the Texas Department of Insurance to transact business in the State of Texas and must be acceptable to the City of Pflugerville.

Listed below are the types and amounts of insurance required. The City reserves the right to amend or require additional types and amounts of coverage or provisions depending on the nature of the work.

<b>Type of Insurance</b>	<b>Amount of Insurance</b>	<b>Provisions</b>
Commercial General (Public) Liability to include coverage for: Premises/Operations	1,000,000 per occurrence, 2,000,000 general aggregate  Or	City to be listed as additional insured and provide 30 days' notice of cancellation or material change in coverage
Products/ Completed Operations  Independent Contractors  Personal Injury  Contractual Liability	2,000,000 combined single coverage limit	City to be provided a waiver of subrogation  City prefers that insurer be rated B+V1 or higher by A.M. Best or A or higher by Standard & Poors
Business Auto Liability	1,000,000 combined single limit	City to be provided a waiver of subrogation
Workers' Compensation & Employers Liability	Statutory Limits 1,000,000 each accident	City to be provided a waiver of subrogation
Professional Liability	1,000,000	

Questions regarding this insurance should be directed to the City of Pflugerville (512) 990-6100. A contract will not be issued without evidence of Insurance. City will only accept the ACORD 25 or ISO certificate of insurance forms.

9.4 The City shall be entitled, upon request and without expense, to receive copies of the policies, declaration page and all endorsements thereto as they apply to the limits required by the City, and may require the deletion, revision, or modification of particular policy terms, conditions, limitations or exclusions (except where policy provisions are established by law or regulation binding upon either of the Parties hereto or the underwriter of any such policies). Consultant shall be required to comply with any such requests and shall submit a copy of the replacement certificate of insurance to City at the address provided below within 10 days of the requested change. Consultant shall pay any costs incurred resulting from said changes.

City of Pflugerville  
Capital Improvement Program  
P.O. Box 589  
Pflugerville, Texas 78691-0589

9.5 Consultant agrees that with respect to the above required insurance, all insurance policies are to contain or be endorsed to contain the following provisions:

- Name the City, its officers, officials, employees, volunteers, and elected representatives as ***additional insured by endorsement under terms satisfactory to the City***, as respects operations and activities of, or on behalf of, the named insured performed under contract with the City, with the exception of the workers' compensation and professional liability policies;
- Provide for an endorsement that the "other insurance" clause shall not apply to the City of Pflugerville where the City is an additional insured shown on the policy;
- Workers' compensation and employers' liability policies will provide a waiver of subrogation in favor of the City.
- Provide thirty (30) calendar days advance written notice directly to City of any suspension, cancellation, non-renewal or material change in coverage, and not less than ten (10) calendar days advance notice for nonpayment of premium.

9.6 Within five (5) calendar days of a suspension, cancellation or non-renewal of coverage, Consultant shall provide a replacement Certificate of Insurance and applicable endorsements to City. City shall have the option to suspend Consultant's performance should there be a lapse in coverage at any time during this Agreement. Failure to provide and to maintain the required insurance shall constitute a material breach of this Agreement.

9.7 In addition to any other remedies the City may have upon Consultant's failure to provide and maintain any insurance or policy endorsements to the extent and within the time herein required, the City shall have the right to order Consultant to stop work hereunder, and/or withhold any payment(s) which become due to Consultant hereunder until Consultant demonstrates compliance with the requirements hereof.

9.8 Nothing herein contained shall be construed as limiting in any way the extent to which Consultant may be held responsible for payments of damages to persons or property resulting from Consultant's or its subcontractors' performance of the work covered under this Agreement.

9.9 It is agreed that, excepting Professional Liability, Consultant's insurance shall be deemed primary and non-contributory with respect to any insurance or self-insurance carried by the City of Pflugerville for liability arising out of operations under this Agreement.

9.10 It is understood and agreed that the insurance required is in addition to and separate from any other obligation contained in this Agreement.

9.11 Consultant and any of its Subcontractors are responsible for all damage to their own equipment and/or property.

## **X. INDEMNIFICATION**

**10.1 CONSULTANT covenants and agrees to INDEMNIFY and HOLD HARMLESS, the CITY and the elected officials, employees, officers, directors, volunteers and representatives of the CITY, individually and collectively, from and against any and all**

costs, claims, liens, damages, losses, expenses, fees, fines, penalties, proceedings, actions, demands, causes of action, or liability for damages caused by or resulting from an act of negligence, intentional tort, intellectual property infringement, or failure to pay a subcontractor or supplier committed by the CONSULTANT or the CONSULTANT's agent, CONSULTANT under contract, or another entity over which the CONSULTANT exercises control. Such acts may include personal or bodily injury, death and property damage, made upon the CITY directly or indirectly arising out of, resulting from or related to CONSULTANT'S activities under this Agreement, including any negligent or intentional acts or omissions of CONSULTANT, any agent, officer, director, representative, employee, consultant or subcontractor of CONSULTANT, and their respective officers, agents employees, directors and representatives while in the exercise of the rights or performance of the duties under this Agreement. The indemnity provided for in this paragraph shall not apply to any liability resulting from the negligence of CITY, its elected officials, employees, officers, directors, volunteers and representatives, in instances where such negligence causes personal injury, death, or property damage. In no event shall the indemnification obligation extend beyond the date with when the institution of legal or equitable proceedings for the professional negligence would be barred by any applicable statute of repose or statute of limitations.

10.2 The provisions of this INDEMNITY are solely for the benefit of the Parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity. CONSULTANT shall advise the CITY in writing within 24 hours of any claim or demand against the CITY or CONSULTANT known to CONSULTANT related to or arising out of CONSULTANT's activities under this AGREEMENT.

**10.3 Duty to Defend – Consultant covenants and agrees to hold a DUTY TO DEFEND the CITY and the elected officials, employees, officers, directors, volunteers and representatives of the CITY, individually and collectively, from and against any and all claims, liens, proceedings, actions or causes of action, other than claims based wholly or partly on the negligence of, fault of, or breach of contract by the CITY, the CITY'S agent, the CITY'S employee or other entity, excluding the CONSULTANT or the CONSULTANT'S agent, employee or sub-consultant, over which the CITY exercises control. CONSULTANT is required under this provision and fully satisfies this provision by naming the CITY and those representatives listed above as additional insured under the CONSULTANT'S general liability insurance policy and providing any defense provided by the policy upon demand by CITY.**

**10.4 CONSULTANT is required to perform services to the City under the standard of care provided for in Texas Local Government Code § 271.904 (d)(1-2).**

10.5 Employee Litigation – In any and all claims against any Party indemnified hereunder by any employee of CONSULTANT, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation herein provided shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for CONSULTANT or any subcontractor under worker's compensation or other employee benefit acts.

10.6 Force Majeure - City agrees that the CONSULTANT is not responsible for damages arising from any circumstances such as strikes or other labor disputes; severe weather disruptions, natural disasters, fire or other acts of God; riots, war or other emergencies; or failure of any third



party governmental agency to act in timely manner not caused or contributed to by CONSULTANT.

## **XI. ASSIGNMENT AND SUBCONTRACTING**

11.1 Consultant shall supply qualified personnel as may be necessary to complete the work to be performed under this Agreement. Persons retained to perform work pursuant to this Agreement shall be the employees or subcontractors of Consultant. Consultant, its employees or its subcontractors shall perform all necessary work.

11.2 It is City's understanding and this Agreement is made in reliance thereon, that Consultant intends to use the following subcontractors in the performance of this Agreement: AmaTerra Environmental, Inc., Raba Kistner Consultants, Inc., 7 Arrows Land Staff, The Rios Group and McGray and McGray. Any deviation from this subcontractor list, whether in the form of deletions, additions or substitutions shall be approved by City prior to the provision of any services by said subcontractor.

11.3 Any work or services approved for subcontracting hereunder shall be subcontracted only by written contract and, unless specific waiver is granted in writing by the City, shall be subject by its terms to each and every provision of this Agreement. Compliance by subcontractors with this Agreement shall be the responsibility of Consultant. City shall in no event be obligated to any third party, including any subcontractor of Consultant, for performance of services or payment of fees. Any references in this Agreement to an assignee, transferee, or subcontractor, indicate only such an entity as has been approved by the City.

11.4 Except as otherwise stated herein, Consultant may not sell, assign, pledge, transfer or convey any interest in this Agreement, nor delegate the performance of any duties hereunder, by transfer, by subcontracting or any other means, without the consent of the City Council, as evidenced by passage of an ordinance. As a condition of such consent, if such consent is granted, Consultant shall remain liable for completion of the services outlined in this Agreement in the event of default by the successor Consultant, assignee, transferee or subcontractor.

11.5 Any attempt to transfer, pledge or otherwise assign this Agreement without said written approval, shall be void ab initio and shall confer no rights upon any third person. Should Consultant assign, transfer, convey, delegate, or otherwise dispose of any part of all or any part of its right, title or interest in this Agreement, City may, at its option, cancel this Agreement and all rights, titles and interest of Consultant shall thereupon cease and terminate, in accordance with Article VII. Termination, notwithstanding any other remedy available to City under this Agreement. The violation of this provision by Consultant shall in no event release Consultant from any obligation under the terms of this Agreement, nor shall it relieve or release Consultant from the payment of any damages to City, which City sustains as a result of such violation.

## **XII. INDEPENDENT CONTRACTOR**

Consultant covenants and agrees that he or she is an independent contractor and not an officer, agent, servant or employee of City; that Consultant shall have exclusive control of and exclusive right to control the details of the work performed hereunder and all persons performing same, and shall be responsible for the acts and omissions of its officers, agents, employees, contractors, subcontractors and consultants; that the doctrine of respondent superior shall not apply as between City and Consultant, its officers, agents, employees, contractors, subcontractors and consultants, and nothing herein shall be construed as creating the relationship of employer-employee, principal-agent, partners or joint ventures between City and Consultant. The Parties hereto

understand and agree that the City shall not be liable for any claims which may be asserted by any third party occurring in connection with the services to be performed by the Consultant under this Agreement and that the Consultant has no authority to bind the City.

### **XIII. CONFLICT OF INTEREST**

13.1 Consultant acknowledges that it is informed that the Charter of the City of Pflugerville and its Ethics Code prohibit a City officer or employee, as those terms are defined in Section 11.06 of the Ethics Code, from having a financial interest in any contract with the City or any City agency such as city owned utilities. An officer or employee has a “prohibited financial interest” in a contract with the City or in the sale to the City of land, materials, supplies or service, if any of the following individual(s) or entities is a Party to the contract or sale: a City officer or employee; his parent, child or spouse; a business entity in which the officer or employee, or his parent, child or spouse owns ten (10) percent or more of the voting stock or shares of the business entity, or ten (10) percent or more of the fair market value of the business entity; a business entity in which any individual or entity above listed is a subcontractor on a City contract, a partner or a parent or subsidiary business entity.

13.2 Pursuant to the subsection above, Consultant warrants and certifies, and this Agreement is made in reliance thereon, that it, its officers, employees and agents are neither officers nor employees of the City. Consultant further warrants and certifies that it will comply with the City’s Ethics Code.

13.3 Certificate of Interested Parties (TEC Form 1295). For contracts needing City Council approval, or any subsequent changes thereto requiring City Council approval, the City may not accept or enter into a contract until it has received from the Consultant a completed, signed, and notarized TEC Form 1295 complete with a certificate number assigned by the Texas Ethics Commission (“TEC”), pursuant to Texas Government Code § 2252.908 and the rules promulgated thereunder by the TEC. The Consultant understands that failure to provide said form complete with a certificate number assigned by the TEC may prohibit the City from entering into this Agreement. Pursuant to the rules prescribed by the TEC, the TEC Form 1295 must be completed online through the TEC’s website, assigned a certificate number, printed, signed and notarized, and provided to the City. The TEC Form 1295 must be provided to the City prior to the award of the contract. The City does not have the ability to verify the information included in a TEC Form 1295, and does not have an obligation or undertake responsibility for advising Consultant with respect to the proper completion of the TEC Form 1295.

### **XIV. AMENDMENTS**

Except where the terms of this Agreement expressly provide otherwise, any alterations, additions, or deletions to the terms hereof, shall be effected by amendment, in writing, executed by both City and Consultant, and, if applicable, subject to formal approval by the City Council.

### **XV. SEVERABILITY**

If any clause or provision of this Agreement is held invalid, illegal or unenforceable under present or future federal, state or local laws, including but not limited to the City Charter, City Code, or ordinances of the City of Pflugerville, Texas, then and in that event it is the intention of the Parties hereto that such invalidity, illegality or unenforceability shall not affect any other clause or provision hereof and that the remainder of this Agreement shall be construed as if such invalid, illegal or unenforceable clause or provision was never contained herein; it is also the intention of the Parties hereto that in lieu of each clause or provision of this Agreement that is invalid, illegal, or unenforceable, there be added as a part of the Agreement a clause or provision as similar in terms to such invalid, illegal or unenforceable clause or provision as may be possible, legal, valid and enforceable.

#### **XVI. LICENSES/CERTIFICATIONS**

Consultant warrants and certifies that Consultant and any other person designated to provide services hereunder has the requisite training, license and/or certification to provide said services, and meets all competence standards promulgated by all other authoritative bodies, as applicable to the services provided herein.

#### **XVII. COMPLIANCE**

Consultant shall provide and perform all services required under this Agreement in compliance with all applicable federal, state and local laws, rules and regulations.

#### **XVIII. NONWAIVER OF PERFORMANCE**

Unless otherwise specifically provided for in this Agreement, a waiver by either Party of a breach of any of the terms, conditions, covenants or guarantees of this Agreement shall not be construed or held to be a waiver of any succeeding or preceding breach of the same or any other term, condition, covenant or guarantee herein contained. Further, any failure of either Party to insist in any one or more cases upon the strict performance of any of the covenants of this Agreement, or to exercise any option herein contained, shall in no event be construed as a waiver or relinquishment for the future of such covenant or option. In fact, no waiver, change, modification or discharge by either Party hereto of any provision of this Agreement shall be deemed to have been made or shall be effective unless expressed in writing and signed by the Party to be charged. In case of City, such changes must be approved by the City Council, as described in Article XVI. Amendments. No act or omission by a Party shall in any manner impair or prejudice any right, power, privilege, or remedy available to that Party hereunder or by law or in equity, such rights, powers, privileges, or remedies to be always specifically preserved hereby.

#### **XIX. LAW APPLICABLE**

**19.1 THIS AGREEMENT SHALL BE CONSTRUED UNDER AND IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND ALL OBLIGATIONS OF THE PARTIES CREATED HEREUNDER ARE PERFORMABLE IN TRAVIS COUNTY, TEXAS.**

19.2 Venue for any legal action or proceeding brought or maintained, directly or indirectly, as a result of this Agreement shall be heard and determined in a court of competent jurisdiction in Travis County, Texas.

## **XX. LEGAL AUTHORITY**

The signer of this Agreement for Consultant represents, warrants, assures and guarantees that he has full legal authority to execute this Agreement on behalf of Consultant and to bind Consultant to all of the terms, conditions, provisions and obligations herein contained.

## **XXI. PARTIES BOUND**

This Agreement shall be binding on and inure to the benefit of the Parties hereto and their respective heirs, executors, administrators, legal representatives, and successors and assigns, except as otherwise expressly provided for herein.

## **XXII. CAPTIONS**

The captions contained in this Agreement are for convenience of reference only, and in no way limit or enlarge the terms and/or conditions of this Agreement.

## **XXIII. INCORPORATION OF EXHIBITS**

Each of the Exhibits listed below is an essential part of the Agreement, which governs the rights and duties of the Parties, and shall be incorporated herein for all purposes:

Attachment "A" - Scope of Services and Schedule, including Project Description/Scope of Services; Fee Summary for Professional Services and Proposed Project Schedule

## **XXIV. ENTIRE AGREEMENT**

This Agreement, together with its authorizing ordinance and its exhibits, if any, constitute the final and entire agreement between the Parties hereto and contain all of the terms and conditions agreed upon. No other agreements, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or to bind the Parties hereto, unless same be in writing, dated subsequent to the date hereto, and duly executed by the Parties, in accordance with Article XIV. Amendments.

## **XXV. MISCELLANEOUS CITY CODE PROVISIONS**

**25.1 Representations and Warranties by Consultant.** If Consultant is a corporation, partnership or a limited liability company, Consultant warrants, represents, covenants, and agrees that it is duly organized, validly existing and in good standing under the laws of the state of its incorporation or organization and is duly authorized and in good standing to conduct business in the State of Texas.

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

state corporation or limited liability company that is not subject to the Texas Franchise Tax, whichever is applicable.

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

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

**25.5 Texas Family Code Child Support Certification.** Consultant certifies that they are not delinquent in child support obligations and therefore is not ineligible to receive payments under the Agreement and acknowledges that the Agreement may be terminated and payment may be withheld if this certification is inaccurate.

**25.6 Texas Government Code Mandatory Provision.** The City of Pflugerville may not enter into a contract with a company for goods and services unless the contract contains a written verification from the company that it; (i) does not boycott Israel; (ii) will not boycott Israel during the term of the contract; (iii) does not boycott energy companies; (iv) will not boycott energy companies during the term of the contract; (v) does not have a practice, policy, guidance or directive that discriminates against a firearm entity or firearm trade association; and (vi) will not discriminate during the term of the contract against a firearm entity or firearm trade association (Texas Government Code, Chapter 2271.002; 2274.002).

Company hereby verifies that it does not boycott Israel, and agrees that, during the term of this agreement, will not boycott Israel as this term is defined in the Texas Government Code, Section 808.001, as amended. Company hereby verifies that it does not boycott energy companies, and agrees that, during the term of this agreement, will not boycott energy companies as this term is defined in Texas Government Code, Section 809.001, as amended. Company hereby verifies that it does not have a practice, policy, guidance or directive that discriminates against a firearm entity or firearm trade association, and agrees that, during the term of this agreement, will not discriminate against a firearm entity or firearm trade association as those terms are defined in Texas Government Code, Section 2274.001, as amended.

Further, Company hereby certifies that it is not a company identified under Texas Government Code, Section 2252.152 as a company engaged in business with Iran, Sudan, or Foreign Terrorist Organizations.

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

**CITY OF  
PFLUGERVILLE**

**CONSULTANT**

\_\_\_\_\_

\_\_\_\_\_


\_\_\_\_\_

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

Printed Name: Sereniah Breland

Title: City Manager

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

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

Printed Name: **Kendall King**

Title: **Principal**

Date: 2/4/2022

APPROVED AS TO FORM:

\_\_\_\_\_  
Charles E. Zech  
City Attorney  
DENTON NAVARRO ROCHA BERNAL & ZECH, P.C.

**SCOPE OF SERVICES AND SCHEDULE**

ARTICLE I

**PROJECT DESCRIPTION:** The City of Pflugerville (Owner) is proceeding with design and bid phase services for the Secondary Colorado River Raw Water Line Project (The Project). The Project will include design and bid phase services for 78,000 linear feet (LF) of 42-inch water pipeline and improvements to the Colorado River Intake Pump Station. Construction phase services will be contracted at a later date. Concurrent with project design, the Owner will coordinate with Lower Colorado River Authority (LCRA) to increase permitted Colorado Right. If this coordination results in changes to design components after the preliminary design phase, re-design will be an additional service. The Project will have the following facilities:

1. Expansion of existing Colorado River Intake Pump Station to 21 MGD, including pumps, motors, piping, valves, and electrical equipment. Pump station will include HVAC, structural, plumbing, fire protection, electrical, instrumentation, and controls as required. Basic Services assume that the electrical room will not have to be expanded or replaced with a new building.
2. Design of expanded copper ion system at the Colorado River Intake for zebra mussel mitigation. No other intake modifications are included in Basic Services.
3. Back-up electric generating facilities containment structures and an automatic transfer switch. Evaluation of diesel verses natural gas power.
4. Security facilities including fencing, crash barriers at gates, access control, cameras, and cybersecurity.
5. 78,000 linear feet of 42- inch diameter pipeline from the Colorado River Intake Pump Station to Lake Pflugerville, including air valves, blowoff valves, road crossings, flow control structures, flowmeters, and cathodic protection.
6. Approximately 7,100 linear feet of the 42-inch diameter pipeline may be constructed by trenchless methods at 40 different locations, including:
  - a. Shelton Road ROW
  - b. Boggy Creek
  - c. Delwau Lane ROW and Union Pacific Railroad ROW
  - d. Unnamed Creek Between Delwau Lane and MLK Boulevard
  - e. Martin Luther King Jr. Boulevard (FM 969) ROW
  - f. Walnut Creek
  - g. Loyola Lane ROW
  - h. Austin Energy Transmission Lines South of Old Manor Road
  - i. Old Manor Road ROW
  - j. Apartment Building Parking Lots South of U.S. Highway 290
  - k. U.S. Highway 290 ROW
  - l. Unnamed Creek Crossing 800' North of U.S. Highway 290
  - m. Unnamed Creek Crossing 2400' North of U.S. Highway 290
  - n. Landfill Drainage Channel
  - o. Unnamed Creek Crossing 500' North of Landfill Drainage Channel
  - p. Unnamed Creek Crossing 1500' South of Cameron Road
  - q. Unnamed Creek Crossing Along Cameron Road
  - r. Barr Lane ROW
  - s. Blue Goose Road ROW
  - t. Cameron Road ROW
  - u. Unnamed Creek Crossing 600' South of Parmer Lane
  - v. Parmer Lane (FM 734) ROW
  - w. Harris Branch

- x. Unnamed Creek/Wetland Crossing 1800' North of Harris Branch
- y. Lower Colorado River Authority (LCRA) Transmission Lines South of Howard Lane
- z. Unnamed Creek Crossing 600' South of Howard Lane
- aa. Howard Lane ROW and Unnamed Creek Crossing South of Howard Lane
- bb. Gregg Lane ROW
- cc. Unnamed Creek Crossing North of Gregg Lane
- dd. Unnamed Creek Crossing 1700' North of Gregg Lane
- ee. Killingworth Lane ROW
- ff. Gilleland Creek
- gg. Lower Colorado River Authority (LCRA) Transmission Lines South of TX-130
- hh. Unnamed Creek Crossing and Drainage Structure South of Texas Highway 130 ROW
- ii. Texas Highway 130 (TX 130) ROW
- jj. Pecan Street ROW
- kk. Wilbarger Creek
- ll. Unnamed Creek Crossing 3300' South of Lake Pflugerville
- mm. Unnamed Creek Crossing 3800' South of Lake Pflugerville
- nn. Pflugerville Parkway ROW

The Project will include the following construction and equipment bid packages:

1. Long-Lead Equipment Package (pumps/motors, VFD, generator, valves)
2. Pump Station Improvements
3. Proposed Water Pipeline Bid Package 1
4. Proposed Water Pipeline Bid Package 2

If more construction or equipment bid packages are included, then additional compensation will be mutually agreed upon.

The Project will use the Construction Manager at Risk (CMAR) delivery method.

The Owner will procure a Program Manager that will act as Owner's representative for the design of the project.

**BASIC SERVICES:** FNI shall render the following professional services in connection with the development of the Project. Basic Services will be billed lump sum.

A. PROJECT MANAGEMENT

Upon execution of this Agreement, FNI shall:

1. Conduct kickoff meeting to review scope, schedule, and budget; determine any special conditions that may affect design and/or construction; discuss administrative requirements of Owner; and to develop design criteria.
2. Manage efforts of internal design team and sub-consultants on the Project and perform Quality Control review of all deliverables.
3. Prepare meeting agendas and minutes with action items and attend the following meetings:
  - a. Attend up to 20 project coordination meetings with Owner (to occur every 3 weeks).
  - b. Attend 3 meetings with utility providers needed for the project.
  - c. Attend 4 workshops for review of milestone design submittals.
  - d. Attend 2 public meetings needed for the Project and prepare engineering display documents needed for the public meetings.



- e. Attend 6 total meetings with Austin Water, Austin Energy and TxDOT needed for the project.
  - f. Attend 10 meetings with CMAR.
4. Prepare a Microsoft Project schedule and provide monthly updates including necessary revisions to bring the Project back on schedule if needed. The project schedule will not be resource loaded.
  5. Prepare monthly reporting including status report, recent activities, upcoming activities, action items log, decisions made log, budget updates, schedule updates, and scope changes. Prepare monthly invoices.
  6. Assist Owner with procurement of CMAR.
  7. Deliverables include the following:
    - a. Agendas and minutes for all meetings
    - b. Project schedule updated monthly
    - c. Monthly reporting
    - d. Monthly invoices

B. STUDY PHASE: FNI shall provide professional services in this phase as follows:

1. Advise Owner as to the necessity of Owner's providing or obtaining data or services from others and assist Owner in connection with any such services. Collect and review existing data, reports, mapping, geotechnical information and records from Owner. Review documents associated with the project. Provide analyses of Owner's requirements for the Project, including planning, surveys, site evaluations and comparative studies of prospective sites and solutions.
2. Determine pump station system capacity and head requirements over the study period. Determine system operations protocols in conjunction with the Owner. Utilize the hydraulic model produced by Garver, LLC. Determine preferred location of facilities based upon hydraulic conditions, ease of operations, site conditions, and cost. Determine size and capacity of pump station, pipeline, and related facilities. Prepare a life cycle cost analysis of pipe diameter.
3. Review alignment analysis completed in preliminary design and verify easement needs presented. Obtain GIS mapping of the route corridors, where available. Study shall include analysis of hydraulics, construction costs, conflicts with existing infrastructure, land costs (to be provided by Owner), environmental considerations, accessibility, and permitting requirements. Study will include site visits to points of public access.
4. Complete stormwater drainage and water quality analysis for pump station site improvements.
  - a. Prepare onsite drainage analysis for pump station site improvements. Calculations will include impervious cover changes, peak flow calculations, and comparison of existing and proposed site conditions.
    - i. Drainage analysis will be summarized in a brief memorandum,
    - ii. Based on location of the site at the mouth of Boggy Creek and the Colorado River no mitigation is assumed in accordance with City of Austin (COA) (Drainage Criteria Memorandum (DCM) 1.2.2.F. This assumption will be verified during the study phase.
  - b. Prepare water quality calculations for pump station site improvements. Calculations will

include total and net site areas and required water quality volume.

- i. Water Quality analysis will be summarized in a brief memorandum,
  - ii. FNI will coordinate with COA Water Protection Department (WPD) and/or Development Review regarding water quality needs and potential mitigation based on pump station design changes.
5. Prepare a memorandum containing recommended pipeline route, facility locations, pipeline and pump station schematic layouts, pump station floor plan conceptual layouts, and conceptual design criteria with appropriate exhibits to indicate the considerations involved and alternative solutions (where indicated) and setting forth FNI's findings and recommendations with opinions of probable construction costs for the Project. Estimates of the cost of land and rights-of-way, compensation for or damages to properties and interest and financing charges will be provided by Owner or others so designated by Owner. Temporary construction costs shall be provided by FNI's subconsultant. In arriving at its opinion of probable construction cost for the Project, FNI will include the estimates furnished by Owner and will have no responsibility to determine the accuracy or validity of these estimates.
6. Furnish one (1) electronic copy of the memorandum and present and review it in person with Owner and CMAR. Receive and address Owner's comments and issue the final memorandum.
7. Deliverables for the Study Phase include:
  - a. Draft copy of Study Phase Memorandum
  - b. Final copy of Study Phase Memorandum

C. PRELIMINARY DESIGN PHASE. After Owner has accepted the Study Phase Reports and has issued written authorization to proceed with the Preliminary Design Phase, FNI shall:

1. Based upon final location of facilities, prepare the final hydraulic design basis of the system, including pipe diameters, pump station capacity, phasing, preliminary pump selection, preliminary design of flow control valves, pipe and valve selection, flowmeter selection, generator selection, conceptual surge control method and miscellaneous appurtenances.
2. Conduct a workshop with Owner's staff to discuss layouts, equipment selection, construction materials, operation and maintenance criteria, Owner's preferences, and alternatives to be studied. FNI will bring lead designers from the major disciplines to the workshop.
3. Prepare preliminary floor plan layouts and sections for pump station,. Include conceptual design and layout of structural, electrical, and HVAC.
4. Prepare preliminary one-line diagrams of power systems. Prepare power load studies for facilities to support preliminary design of utility power systems. Meet with electric utility companies and Owner to coordinate electric utility system design and power contracts. Prepare preliminary P&ID's and equipment tagging schedules. Perform a cost evaluation on bringing fiber to the pump station site.

5. Prepare preliminary site layout for pump station showing any required improvements (access roads, parking, fencing, site piping).
6. Based upon desktop pipeline route study from the Study Phase, proceed with final pipeline alignment selection.
  - a. Provide GIS alignment to surveyor to prepare property boundary information in GIS format. Obtain Right of Entry.
  - b. FNI will review alignment in the field and make modifications to avoid conflicts and determine the final pipeline alignment. Final alignment will be based upon property considerations, constructability, hydraulics, pump station and delivery point locations, construction costs, conflicts with existing infrastructure, land costs (to be provided by Owner), environmental considerations, accessibility, and permitting requirements.
  - c. FNI will meet with Austin Water, Austin Energy, Austin Parks, COA Development Services, TxDOT, Union Pacific Railroad, LCRA, Travis County, Oncor, Gas Providers, Telecommunication Providers, and USACE to discuss the proposed alignment. Meetings will be to coordinate the third-party requirements and seek approval of the final alignment. FNI will gather mapping of existing utilities to assist in route selection and pipeline design.
  - d. FNI will update GIS mapping based upon the field alignment selection and provide copies to Owner and CMAR. FNI will receive comments from Owner and CMAR and finalize the pipeline alignment, update GIS Mapping and issue one (1) electronic copy of final alignment map books to Owner and Surveyor.
7. Deliverables for the Preliminary Design Phase include the following:
  - a. Draft Copy of Pipeline Alignment Map Books
  - b. Final Copy of Pipeline Alignment Map Books

D. FINAL DESIGN PHASE: After approval of the Study Phase Memorandum and final pipeline alignment, FNI shall provide professional services in this phase as follows:

1. Coordinate with CMAR as required.
2. Prepare front end documents (using Owner's standard documents), including bid documents, general conditions, and special conditions for the construction and equipment packages, based upon Owner's standard documents. Meet with Owner to resolve review comments, and revise documents accordingly.
3. Advise Owner of need for and recommend scope of additional Special Services, if needed, not already included in Article II of this Scope of Work. The cost of such additional Special Services shall be paid by Owner and are not included in the services performed by FNI.
4. Prepare applications for routine permits such as road and railroad crossing permits, COA general permits and TCEQ Approval. Environmental and United States Army Corp of Engineers (USACE) permitting are included as Special Services in Article II. Preparation of applications

and supporting documents for government grants or for planning advances is an Additional Service. Owner will pay all permit application fees.

5. Furnish such information and applications necessary to utility companies whose facilities may be affected, or services may be required for the Project. Provide site civil design of the facility sites to support the electric utilities site requirements, including site grading, roads, underground duct banks, and equipment pads if necessary. Easements for utilities companies will be provided as a Special Service.
  6. Prepare revised opinion of probable construction cost at the 60%, 90% and 100% submittals.
  7. 60% Documents: Prepare drawings, specification table of contents, construction contract documents, designs, and layouts of improvements to be constructed. Furnish Owner one (1) electronic copy of drawings and specification table of contents marked "Preliminary" for approval by Owner. FNI will meet with the Owner to present the plans and specifications and receive comments. Review documents will include dimensional layout drawings, plans, sections and elevations for all the trades, typical details, and most special details. The draft specifications will include major equipment items. Pipeline plans will include plan and profile sheets, pipeline appurtenances, and typical details. FNI will receive comments from Owner and CMAR and address comments in the 90% Review.
  8. 90% Review: Furnish one (1) electronic copy of drawings, specifications, and bid forms marked "Preliminary" for approval by Owner. FNI will meet with the Owner to present the plans and specifications and receive comments. Review documents will include all plans and specifications with minor corrections and notes remaining. FNI will receive comments from Owner and CMAR and address comments in the 100% documents. Upon final approval by Owner, FNI will provide Owner one (1) electronic copy of "Final" plans and specifications.
  9. 100% Review: Furnish one (1) electronic copy of drawings, specifications, and bid forms marked "Final" for approval by Owner. FNI will meet with the Owner to present the plans and specifications and receive comments. Review documents will include all final plans and specifications. FNI will receive comments from Owner and CMAR and address comments in the Issued for Bid documents. Upon final approval by Owner, FNI will provide Owner one (1) electronic copy of "Final" plans and specifications.
  10. Deliverables for the Final Design Phase include:
    - a. Front end documents for construction and equipment packages
    - b. Routine Permit Applications (Road Crossing, Railroad Crossing, Travis County, COA, City of Pflugerville, TCEQ Approval)
    - c. Information to utility companies to acquire utility service (electric, telephone, water, wastewater, gas)
    - d. OPCC at 60%, 90% and 100% submittals
    - e. 60% submittal of Plans and Specifications Table of Contents
    - f. 90% submittal of Plans and Specifications
    - g. 100% Plans and Specifications
    - h. Final Plans and Specifications
- E. BID OR NEGOTIATION PHASE: Upon completion of the design services on individual bid packages and approval of "Final" drawings and specifications by Owner, FNI will proceed with the performance of

services in this phase as follows. These services will be performed for each separate bid package identified in this scope of work.

1. Assist Owner/CMAR in securing bids. Provide a copy of the notice to bidders for Owner/CMAR to use in notifying construction news publications and publishing appropriate legal notice. The cost for publications shall be paid by Owner.
2. Assist Owner/CMAR by responding to questions and interpreting bid documents. Prepare and issue addenda to the bid documents if necessary.
3. Assist the Owner/CMAR in conducting pre-bid conferences for the construction projects and coordinate responses with Owner/CMAR. Response to the pre-bid conference will be in the form of addenda issued after the conference.
4. At Owner request, FNI will assist Owner in the opening, tabulating, and analyzing the bids received. Review the qualification information provided by the apparent low bidder to determine if, based on the information available, they appear to be qualified to construct the project. Recommend award of contracts or other actions as appropriate to be taken by Owner.
5. Assist Owner in the preparation of Construction Contract Documents for construction contracts. Provide ten (10) sets of Construction Contract Documents which include information from the selected bidders' bid documents, legal documents, and addenda bound in the documents for execution by the Owner and construction contractor. Distribute five (5) copies of these documents to the contractor with a notice of award that includes directions for the execution of these documents by the construction contractor. Provide Owner with the remaining five (5) copies of these documents for use during construction. Additional sets of documents can be provided as an additional service.
6. Furnish contractor copies of the drawings and specifications for construction pursuant to the General Conditions of the Construction Contract.
7. Deliverables for the Bid or Negotiation Phase include:
  - a. Notice to Bidders
  - b. Electronic copies of plans, specifications, bidding documents, and addenda
  - c. Tabulation of selection criteria for Proposers
  - d. Recommendation of Award with tabulation of bids
  - e. Notice of award to selected bidder
  - f. Conformed contract documents for execution
  - g. Copies of conformed contract documents for Contractor and Owner

## ARTICLE II

**SPECIAL SERVICES:** Special Services to be performed by FNI include the following. Special Services will be billed at a not to exceed fee using hourly bill rates (cost plus max)

### A. ENVIRONMENTAL SERVICES

1. Environmental Compliance Technical Memorandum

- a. Construction of the waterline will require environmental regulatory compliance at the local, state, and federal levels. FNI would evaluate the proposed water line for compliance by first implementing a desktop survey and file review. This effort will review a variety of publicly available information including but not limited to US Geological Survey (USGS) National Hydrography Dataset, USGS 7.5-minute topographic maps, US Fish and Wildlife Service (USFWS) National Wetland Inventory, Federal Emergency Management Agency floodplain maps, USFWS county list of potentially occurring threatened or endangered species, Texas Parks and Wildlife Department's (TPWD) Natural Diversity Database, and recent and historic aerial imagery.
- b. Following the desktop survey and file review, FNI staff would perform a pedestrian survey to map resources and evaluate potential project impacts. This effort would include a habitat assessment for protected species and a waters of the US (WOTUS) delineation. The WOTUS delineation would be performed according to regulatory guidance and requirements including 1987 USACE Wetland Delineation Manual, Great Plains Regional Supplement, and Regulatory Guidance Letters. Results of this effort would be documented in a Technical Memorandum, with Wetland Determination Data Forms, supporting figures, and confirmation that a NWP could be used.

2. Prepare Environmental Resource Inventory (ERI)

- a. At the local level, FNI would ensure the project complies with City of Austin Land Development Code with preparation of an Environmental Resource Inventory (ERI). An ERI includes a survey for Critical Environmental Features (CEFs) and any impacts to CEFs may require a waiver or mitigation. CEFs can include springs, wetlands, canyon rimrock, caves, and bluffs for example. In addition, Travis County and City of Pflugerville may also require some level of environmental compliance which FNI would evaluate if necessary. Information collected during Task 1 would be used to complete the City of Austin ERI.

B. SUBSURFACE UTILITY ENGINEERING SERVICES (PERFORMED BY SUBCONSULTANT)

1. The Rios Group will perform Quality Level "B" SUE at proposed roadway crossings. A 100-foot wide corridor, centered on the proposed alignment, will be completed at fourteen (14) roadway crossings, listed below.
  - a. East Pflugerville Parkway
  - b. East Pecan Street
  - c. SH-130
  - d. Killingsworth Lane
  - e. Gregg Lane
  - f. Howard Lane
  - g. East Parmer Lane
  - h. Cameron Road
  - i. Blue Goose Road
  - j. US 290
  - k. Old Manor Road
  - l. Loyola Lane
  - m. Martine Luther King Boulevard
  - n. Delwau Lane

2. Quality Level "B" SUE at five (5) pipeline crossings noted below. The same 100-foot wide corridor will be utilized for this investigation.
  - a. Atmos Energy 8" pipeline at Pecan Street
  - b. Atmos Energy 12" Pipeline at Howard Lane
  - c. Sunoco 8" pipeline south of Martin Luther King Boulevard
  - d. Enterprise Products 20" pipeline south of Martin Luther King Boulevard
  - e. Kinder Morgan 16" pipeline east of Tracor Lane and south of Martin Luther King Boulevard
  
3. Complete 200' of QL"B" SUE on the existing City of Pflugerville 30" CSC water line (parallel to the proposed alignment) at 1000-foot intervals and any known PI. This information will give locations of existing utilities for purposes of identifying utility crossings for permitting and to help avoid change orders during construction.
  
4. Complete up to fifty (50) Quality Level "A" SUE test holes at location to be determined by FNI following a review of the QL "B" information.
  
5. Deliverables include:
  - a. A utility file in CAD format depicting all designated and located utilities.
  - b. A summary sheet of all test hole coordinate data and depth information.
  - c. 8.5" x 11" Test Hole Data Forms for all test hole locations completed. These plans will be signed and sealed by a Professional Engineer and delivered in electronic PDF form.

C. SURVEYING, EASEMENT DOCUMENTS, AND PLATTING SERVICES (PERFORMED BY SUBCONSULTANT):

1. McGray and Mcgray Land Surveyors, Inc. (Surveyor) will provide an Aerial mapping topographic survey of the proposed water line as shown in exhibits provided by FNI. The topographic survey will include a 200' wide swath extending approximately 100 feet left and right of the existing pipe alignment. The topographic survey will include, but not limited to, locating existing features such as water valves, water meters, curb & gutter, asphalt, buildings, sidewalks, medians, fences, driveways, storm & sewer manholes, inlets, storm drain outfalls, and larger, tops and toes of slope, power poles, mailboxes, signs, telephone risers, existing easements and other visible features. Supplemental ground surveys will be used to locate obscured areas, utilities and drainage features. Deliverables will include an AutoCAD drawing file showing features located, ground elevations, a Land XML file, along with one-foot interval contours. Provide copies of the survey field notes, a hardcopy of the coordinates and an ASCII file of the coordinates for the points located.
  
2. Surveyor will locate QL-B marks as established by The Rios Group. It is assumed that this task will be at road crossing as well as a few crossings along the route and is not intended to locate lines running parallel to the existing waterline.
  
3. The Surveyor will locate up to 50 QL-A SUE testholes.
  
4. The Surveyor will locate up to 76 geotechnical boreholes.

5. Surveyor will prepare a property base map of tracts of land where easements and Deeds exhibits will be prepared that include boundary lines, existing right-of-way lines, existing easements, improvements within 100 feet on both sides of proposed alignment, owner names with deed information, and appraisal district number. Deliverables will include an AutoCAD file and Google Earth kmz file.
6. Surveyor will prepare metes and bounds descriptions with exhibits on letter size paper (8.5" x 11") of maximum 80 proposed easements that meet or exceed the requirements of the Texas Board of Professional Land Surveying for easements. Surveyor's Deliverables will include three (3) signed and sealed originals per acquisition.

D. PHYSICAL MODEL OF PUMP SUCTION PIPING/INTAKE (BY SUBCONSULTANT)

1. Develop Physical Model

- a. Four pumps will be simulated in detail
- b. The upstream model boundary will be a portion of the 36-inch influent pipe.
- c. A model up to 10-ft tall can be used. Depending on the final configuration, this may not reach the highest influent pipes. The worst-case conditions will occur at lower levels so CEH may simulate the highest influent pipe at a lower level that it is expected to operate at. Depending on the final model scale, the model will be capable of simulating up to approximately 40-ft of water depth.
- d. The scale is approximated at this time and is estimated to be on the order of a 1:4 to 1:5 scale. This scale will be adjusted as needed based on final flow rates and pump throat sizes. The final scale will be chosen so that all scaling factors exceed the Hydraulic Institute minimum requirements.
- e. The scale is subject to change once additional pump is provided. If the final pump selection will not be made prior to the modeling CEH will propose a range of pump bells to be simulated that would encompass all pumps being considered for this project. This approach is done frequently when modeling is conducted prior to the final pumps be selected.
- f. Model design drawings will be prepared and submitted for approval prior to construction. The overall model basin will be constructed with a tolerance of +/- 0.25 model inches. The model pumps will be constructed to within +/- 0.06 model inches.

2. Instrumentation / Data Collection – The following data will be collected and recorded for each test:

- a. Flow Rate – The total model flow rate will be determined with an ASME standard orifice meter. Individual pump flow rates will be measured with elbow meters calibrated in-situ or other suitable flow meters with an accuracy of +/- 2 percent or better.
- b. Water Levels – The water level in the pump sump will be recorded with a point or staff gauge with an accuracy of 3 mm (.01 ft) or better.
- c. Vortices – Vortex formation will be visually observed. Dye will be used to aid in the



visualization of vortex formation. Digital photographs and video footage will be used to document vortex formation.

- d. Velocities – Velocity fluctuations and turbulence levels will be measured in the pump throat of one pump throat. The velocity meter will be capable of measuring the axial component of the flow velocity and will have a repeatability of +/- 2-percent. The velocities will be measured on a constant radius, at 8 points around the pump throat.
  - e. Pre-Swirl – A swirl meter will be installed in each pump. Each swirl meter consists of 4 straight vanes mounted on a shaft.
3. Model Testing Program - The model testing will be carried out in four phases. The actual test conditions will be determined with additional input from the pump manufacturer, design engineer, and end user. Each phase is described below:
- a. Baseline tests – Baseline tests will be conducted with the original intake design. It is anticipated that up to 8 baseline tests will be conducted and the data mentioned in the instrumentation and data collection section of this proposal will be collected during each test. The worst-case conditions will be determined during this phase of testing. These tests will be used to determine the nature and severity of hydraulic phenomena occurring within the pump intake structure.
  - b. Modification Tests – Modification tests will be conducted and modifications will be performed to bring the pump intake within the performance criteria. All proposed modifications would be presented to FNI for approval. Approximately 2 weeks have been allocated to modification testing. Changes will be limited to non-structural modifications only (i.e. the overall intake size and shape will remain unchanged).
  - c. Witness Test – Following modification testing, a one-day witness test can be held at Clemson Engineering Hydraulics facility to demonstrate the models with and without the proposed modifications. Preliminary modification drawings and a draft report will be available at the witness test.
  - d. Documentation Tests – Following the witness test, it is anticipated that up to 12 documentation tests will be conducted to document the performance of the pump intake with the recommended modifications in place. The cost of evaluating the performance of the intake with the proposed modifications is included in this proposal. The model will be capable of conducting 1.5 x Froude tests as well as minimum water level tests.

#### 4. Reporting

- a. CEH will prepare a project report containing methodology, procedures, conclusions and recommendations, as well as all data and documentation acquired during the testing for each of the intakes. A draft report will be made available at the witness test. Raw video footage of the testing will be provided in DVD format.

### E. CORROSION ENGINEERING SERVICES

#### 5. Field Evaluation

- a. Review site plans, proposed pipeline alignment and materials, foreign pipeline crossing,

parallel piping systems and existing cathodic protection systems, electrical High Voltage (EHV) transmission lines, sources of stray DC current, topography and soil types and conditions

b. Mobilization

- i. Conduct in-situ soil resistivity (80 locations)
- ii. Conduct stray current (DC) investigation in proposed alignment. The purpose of performing this investigation is to identify potential sources of stray current and nearby metallic pipelines that may be affected by the proposed cathodic protection system.

c. Review geotechnical report. Geotechnical group will be requested to test a minimum of 10 samples collected from the proposed pipeline depth for:

- i. As-received and saturated electrical resistivity per ASTM G-187 and pH as per ASTM G-51
- ii. Chemical analysis for major anions and cations as per ASTM 4327, ASTM 6919, and AWWA 41108

d. Analyze collected data and prepare a technical memorandum. The memorandum will include the collected field data and provide conclusions and recommendations for cathodic protection based on the soil conditions with respect to the proposed pipeline materials.

6. Cathodic Protection Design & Specifications

- a. Provide 60% design & specifications
- b. Provide 90% design & specifications
- c. Provide 100% and final bid cathodic protection design and specifications. All design work will apply to new construction only
- d. Take part in up to six (6) design review meetings
- e. Provide a cathodic protection construction cost estimate

7. Evaluation of the existing cathodic protection system

- a. Review of as-builts and any surveys performed on the system post construction. This system is associated with the Colorado River Contract #3 (approximately 15 miles of 30-inch raw water line)
- b. Survey existing cathodic protection system. This will include:
  - i. As-found pipeline to soil potentials from each test station
  - ii. Sacrificial anode potentials from each anode test station
  - iii. Current output from each anode test station
  - iv. Recording of the GPS location for each test station
  - v. Photos of test stations needing repair or replacement

8. Analyze collected data and prepare a technical memorandum. The memorandum will include the collected field data and provide conclusions and recommendations.

## F. SURGE PROTECTION ENGINEERING SERVICES

### 1. Project Management

- a. Kick-off Meeting - Conduct one (1) meeting with the City to confirm the goals, schedule, and deliverables for the project. Design criteria for air and vacuum valve sizing and location shall be identified at the Kick-off Meeting.
- b. QC Plan – Prepare a QC Plan to be implemented for each deliverable of the project. The QC Plan will document that a senior technical advisor has reviewed the reported information and made necessary comments and recommendations for changes.
- c. Monthly One Page Reports – Prepare and submit monthly One Page Reports documenting current project status and upcoming deadlines.
- d. Transient Results Meetings – Participate in two (2) progress meetings. One meeting after preliminary transient recommendations based on 60% design plans and one meeting after surge analysis completed based on 90% design plans.

### 2. Transient Analysis: Prepare a hydraulic surge analysis of the Secondary Raw Water Pipeline.

- a. Phase I – Collect Data: Engineer will review proposed pipeline alignment sheets prepared for the 42-inch pipeline from the Colorado River Intake Pump Station. Such data will be reviewed, evaluated, and formatted, as needed, for input to simulation model building. Engineer will also review record drawings of the existing 30-inch pipeline and Colorado River Intake Pump Station. Such data will be reviewed, evaluated, and formatted, as needed, for input into the simulation model. Engineer will review and verify completeness and consistency of pipeline alignment sheet data and record data to ensure that it represents the current design, including pipeline elevation profile, pipeline materials, design pressure, and locations and size of combination air and vacuum valves.
- b. Phase II – Building of Synergi Pipeline Simulator (SPS) model for the system: FNI will build the surge analysis computer model using Synergi Pipeline Simulator (SPS) Version 10.4. Model will include the existing 30-inch and proposed 42-inch pipeline elevation profile, Colorado River Intake Pump Station pumps, valves, and piping, and locations and sizes of combination air and vacuum valves. The SPS computer model will be calibrated to meet the steady state flow operating conditions established for the system, with target pressures and flowrates based on design parameters. The surge model will include appropriate boundary conditions for characterizing the upstream supply and the downstream delivery.
- c. Phase III – Transients Case Simulations based on 60% Design Drawings: Engineer will model up to five hydraulic transient scenarios including:
  - i. Power failure at the Colorado River Intake Pump Station with a single 42-inch pipeline in service. All running pumps trip simultaneously.
  - ii. Power failure at the Colorado River Intake Pump Station with a single 30-inch

- pipeline in service. All running pumps trip simultaneously.
- iii. Power failure at the Colorado River Intake Pump Station with both the 30-inch and 42-inch pipeline in service. All running pumps trip simultaneously.
- iv. Mainline valve closure near Lake Pflugerville
- v. Single pump trip at the Colorado River Intake Pump Station with a single 42-inch pipeline in service and the control valve begins to close on the stopped pump. A single pump trips and the remaining pumps continue to run.

Base Case Simulations - The above transient cases shall be simulated for base case conditions as determined for the designed rate of flow. All surge protection devices shall be included in analysis.

Surge Resolution Simulations - If either the maximum allowable surge pressures or the worst-case allowable vacuum conditions are violated under the above simulated transient scenarios, then additional surge protection devices will be sized and added to the model, and the simulations will be re-run to meet the desired conditions.

- d. Phase IV – Transients Case Simulations based on 90% Design Drawings: Engineer will revise model based on updated drawings and model five hydraulic transient scenarios including:
  - i. Power failure at the Colorado River Intake Pump Station with a single 42-inch pipeline in service. All running pumps trip simultaneously.
  - ii. Power failure at the Colorado River Intake Pump Station with a single 30-inch pipeline in service. All running pumps trip simultaneously.
  - iii. Power failure at the Colorado River Intake Pump Station with both the 30-inch and 42-inch pipeline in service. All running pumps trip simultaneously.
  - iv. Mainline valve closure near Lake Pflugerville
  - v. Single pump trip at the Colorado River Intake Pump Station with a single 42-inch pipeline in service and the control valve begins to close on the stopped pump. A single pump trips and the remaining pumps continue to run.

Base Case Simulations - The above transient cases shall be simulated for base case conditions as determined for the designed rate of flow. All surge protection devices shall be included in analysis.

Surge Resolution Simulations - If either the maximum allowable surge pressures or the worst case allowable vacuum conditions are violated under the above simulated transient scenarios, then additional surge protection devices will be sized and added to the model, and the simulations will be re-run to meet the desired conditions.

- e. Phase V – Technical Memorandum Preparation: Review and interpret results of computer simulations and provide a technical memorandum with graphs and plots of simulation results. The draft technical memorandum will be submitted for review and comments. A meeting or phone conference will be scheduled to review and discuss comments. A final technical memorandum will be issued that includes the resolution of comments. The final approved recommendations for the transient study will be incorporated into the final design of the Secondary Raw Water Line by the design engineers.
  - i. Deliverable:

1. Draft Technical Memorandum
2. Final Transient Technical Memorandum

G. GEOTECHNICAL ENGINEERING (BY FNI AND SUBCONSULTANT)

1. A geotechnical investigation will be performed to complete a Geotechnical Data Report (GDR) and Geotechnical Baseline Report (GBR) for the Project.
2. Geotechnical Investigation. The geotechnical investigation will include soil and rock exploration, laboratory testing, and related engineering analysis and reporting. The purpose of the of the geotechnical investigation will be to provide general understanding of the subsurface conditions along the proposed alignment and recommendations for pipe embedment and backfill, trenchless crossing construction methods, and recommendations for subgrade preparation and backfill associated with any required structures, such as manholes.
  - a. A site visit will be performed to select and stake locations for the borings to be performed as a part of the geotechnical investigation after performing a desktop review of available geotechnical information, existing underground utilities, and accessibly to the boring locations. A geotechnical investigation plan will be prepared to finalize the scope and summarize the objectives of the geotechnical investigation to be performed under a subcontract. The geotechnical investigation plan will include a boring location map that shows the borings to be performed along the proposed alignment.
  - b. Right of way or other permits will be obtained from the City of Austin, City of Pflugerville, Travis County, and TxDOT prior to commencement of the field exploration activities. Traffic control devices will be provided if required. Clearing may be required for access to some of the boring locations that are away from paved areas.
  - c. Up to eighty (80) borings will be performed, each to a maximum depth of 50 feet below existing grade. The borings conducted will be advanced using standard rotary drilling equipment with continuous flight augers or rotary wash methods. Subsurface samples will be collected using two (2) inch diameter split spoon sampling devices in conjunction with the standard penetration test (SPT) for non-cohesive soils and with three (3) inch diameter Shelby tube samples for cohesive soils. If rock is encountered, the rock core will be collected using an NX or similar sized core barrel. Groundwater observations within the borings will be performed during drilling and after completion of drilling and sampling.
  - d. Each boring will be logged by geotechnical engineers or geologists experienced with logging borings, directing field geotechnical investigations, and handling and transporting samples. Visual classification of the material will be performed during logging in general accordance with ASTM D2488.
  - e. Piezometers will be constructed in up to eight (8) of the borings to evaluate groundwater conditions for some of the trenchless crossings. Piezometers will be constructed and developed in accordance with the requirements of the Texas Department of Licensing and Regulation and reported to the State of Texas. Piezometers will remain in place through construction for use and monitoring by the contractor and ultimately will be removed and abandoned during by the contractor.
  - f. Upon completion of the drilling and sampling the borings will be backfilled in

accordance with requirements of the Texas Department of Licensing and Regulation. Any borings performed in paved areas will be patched with like material in accordance with applicable roadway standards after backfilling is performed. For borings performed in unpaved areas, the ground surface will be restored to the existing conditions.

- g. Laboratory testing will be performed on samples obtained from the borings to determine soil classification and pertinent engineering properties of such materials. Laboratory tests will be appropriately assigned for specific materials encountered during the geotechnical investigation are expected to include:
    - i. Atterberg Limits
    - ii. Percent Passing No. 200 Sieve
    - iii. Sieve Analysis (Gradation) with Hydrometer
    - iv. Moisture Content
    - v. Dry Unit Weight
    - vi. Unconfined Compressive Strength
    - vii. Corrosivity Testing (electrical resistivity/conductivity, pH, and sulfate/chloride content)
    - viii. Tensile Strength (Rock Only)
    - ix. Slake Durability (Rock Only)
    - x. Cherchar Testing (Rock Only)
    - xi. Miller Number Testing (Rock Only)
  - h. A summary of the findings of the geotechnical investigation and recommendations will be provided in a Geotechnical Design Memorandum Report (GDM), which will include the elements listed below. The GDM will not be considered a contract document.
    - i. As-drilled boring location map, boring logs, laboratory test results, and a key to the symbols used.
    - ii. Discussion of the surface and subsurface conditions and soil and rock properties indicated by the field observations and laboratory testing and implications for the design.
    - iii. Groundwater level measurements from piezometers.
    - iv. Pipeline backfill and embedment and other earthwork related recommendations for use during the design development.
    - v. Foundation design recommendations and considerations for structures associated with the pipeline.
    - vi. General discussion of expected construction issues.
3. Geotechnical Data Report. A Geotechnical Data Report (GDR) will be prepared to summarize the findings and results of the geotechnical investigation and associated laboratory testing and provide only factual, objective information. The GDR will include a description of the geologic setting, description and discussion of the geotechnical investigation program, boring logs, test pits, and other related site investigations, a description and discussion of all field and laboratory testing, and results of such testing. The GDR is not to contain any conclusions or recommendations based on the data collected. The GDR will be considered a contract document.
4. Geotechnical Baseline Report. A Geotechnical Baseline Report (GBR) will be prepared to describe the geotechnical conditions anticipated to be encountered for the construction of up to ten (10) of the trenchless crossings along the pipeline alignment. The GBR will focus on the more significant trenchless crossings along the pipeline, such as the longer crossings underneath TxDOT ROW, underneath creeks or other areas where groundwater is a concern, or otherwise

areas where the geology is complex. The GBR will be only the geotechnical interpretive document upon which the contractor may rely for bidding and construction. The GBR will be limited to interpretive discussion and baseline statements of information contained in the GDR. The GBR will be prepared in accordance with the ASCE's Suggested Guidelines for Geotechnical Baseline Reports for Construction. The GBR will be considered a contract document.

#### H. EASEMENT ACQUISITION SERVICES (BY SUBCONSULTANT)

1. Right-of-Entry and Easement Acquisition Services will be performed for maximum 80 easements.
2. Pre-Acquisition Services
  - a. Confirm ownership and easement information.
  - b. Attendance of public information meetings, project design meetings, route development field visits by land manager.
3. Title/Curative Services
  - a. Review preliminary title commitment for properties where permanent easements are to be obtained or preliminary title search information for properties where temporary easements are to be obtained.
  - b. Secure title commitments and updates in accordance with insurance rules and requirements for parcel payment submissions for properties which will be acquired in fee simple and for permanent easements.
  - c. Secure title insurance for all permanent easements. Cure all exceptions on Schedule C, when applicable. Written approval by the City of Pflugerville will be required for any exceptions to coverage.
4. Right of Entry
  - a. Prepare Right of Entry packets to include Landowner Bill of Rights, maps and paperwork to be executed.
  - b. The agent will initiate and participate in landowner meetings for ROE documents.
  - c. Upload Right of Entry executed documents to central location for access by City, its agents and employees.
5. Negotiation Services
  - a. Determine values for TCE's based on the Tax Appraisal Value x 10% with negotiations up to Tax Appraisal Value x 1.5 x 10%. In this scenario, a floor for a minimum amount to be offered of \$500.00 will be used. If TCE's cannot be acquired using this method within 30 days of the initial offer letter, an appraisal will be ordered by the City.
  - b. Request Appraisals to be ordered for all permanent offers.

- c. Prepare the initial offer letter and any other documents required or requested by the City of Pflugerville in an acceptable form.
  - d. Contact each property owner or owner's designated representative and present the written offer in person where practical. When owners do not wish to have offers delivered in person, they will be mailed via certified mail with return receipt for documentation of delivery/receipt. Maintain follow-up contacts and secure the necessary instruments upon acceptance of the offer for the closing.
  - e. Provide a copy of the appraisal report for the subject property exclusively to the property owner or authorized representative at the time of the offer for permanent easements.
  - f. Provide a compensation summary to the property owner or authorized representative at the time of the offer for temporary easements.
  - g. Respond to property owner inquiries verbally and/or in writing within two business days.
  - h. Prepare a separate negotiator contact report for each parcel file for each contact.
  - i. Maintain parcel files of original documentation related to the purchase of the real property or property interests/acquisition of the Easement.
  - j. Present counteroffers in a form as directed by the City. Transmit any written counteroffer from property owners including supporting documentation, and Agent's recommendation with regard to the counteroffer.
  - k. Prepare Final Offer letter, as necessary. Appraisals will be done by the City's chosen appraiser for Temporary Construction Easements prior to Final Offer letters.
6. Acquisition/Closing Services
- a. Prepare check request, review closing documents facilitate execution of all necessary documents. Attend closings and provide closing services in conjunction with Title Company for all permanent easements.
  - b. Transport any documents to City and landowner for signatures for all temporary easements.
  - c. Record or cause to be recorded all original instruments immediately after closing at the respective County Clerk's Office.
  - d. Review Title Policy and give to City for permanent storage.
7. Project/Document Administration
- a. Maintain current status reports of all parcel and project activities and provide monthly or as requested to the City.
  - b. Participate in project review meetings as requested.
  - c. Provide copies of all incoming and outgoing correspondence as generated if requested.



- d. Maintain copies of all correspondence and contacts with property owners.
  - e. Update database with current status information and documentation.
8. Initiate and Coordinate Appraisal with city approved appraisers
- a. Secure written permission from owner to enter the property from which land is to be acquired. Maintain permission letters with appraisal reports.
  - b. Prepare and conduct personal pre-appraisal contact with interest owner(s) for each parcel wherein an appraisal is needed.
  - c. Contact property owners or their designated representative to offer opportunity to accompany the appraiser on the appraiser's inspection of subject property. Maintain record of contact in file.
  - d. All completed appraisals will be administratively reviewed and approved by the City of Pflugerville.
9. Condemnation Support
- a. Condemnation support by the land acquisition agent (7 Arrows) will be limited to 25% of the total easements on the project.
  - b. Upon receipt of a copy of the final offer, research and produce an updated "Condemnation Limited Title Report" (search parameters set by City and/or outside legal counsel).
  - c. Prepare a condemnation package as directed by the City and deliver the package to the City's designee or legal counsel.
  - d. Upon notification from the City request the update of appraisal.
  - e. Appear as Expert Witness as requested.
10. FNI Support for easement acquisition will be limited to one site visit per parcel. Expert testimony is limited to 7 Arrows. Expert testimony by FNI will be an additional service.

I. ARCHEOLOGICAL INVESTIGATION SERVICES (BY SUBCONSULTANT)

1. Coordination Letter

- a. Consult available desktop-level background information to determine the project's potential for impacting significant archeological and/or historical resources and compile that information into an ACT and Section 106 coordination letter for delivery to the Texas Historical Commission (THC) and (if necessary) USACE. The letter will outline the proposed project, summarize available background information, including the 2003 archeological survey, and provide recommendations for project-related regulatory compliance. send the approved letter to the THC for their formal, 30-day regulatory review. Provide the THC's comments and anticipated concurrence with letter's recommendations.

- b. If the preliminary effects assessment does not change, the letter will seek agency concurrence that 1) a 100 percent pedestrian archeological survey will NOT be required to assess project-related effects to archeological cultural resources and that 2) an architectural history survey is not necessary. However, it is likely that portions/segments of the proposed pipeline easement will require archeological field survey since the exact locations and reach of the temporary construction easements are not known. Should these easements reach into previously unsurveyed areas and/or previously recorded archeological sites, those areas will likely require survey. Such recommendations, however, will ultimately be the THC's and/or USACE's responsibility.
2. Archeology Field Survey and Reporting (if required)
    - a. Prepare an Antiquities Permit application per the requirements of the ACT. This permit application package will include a summary of the known resources in the vicinity, the proposed field methods, and an application form. The application will be submitted to the City for their review, approval, and signature on the permit application form as a sponsor of the project. The fully signed permit application package will then be submitted to the THC for their review and eventual permit issuance. Simultaneously with permit application preparation, make final arrangements for on-site survey, should it be necessary.
  3. Archeological Field Survey (if required)
    - a. Once a permit has been issued and schedule allows, staff archeologists will travel to the survey area to conduct an archeological survey in accordance with the THC's minimum standards for "100% intensive linear surveys" (pedestrian inspection with subsurface tests at a rate of 1 shovel test per 100 meters of corridor). Should temporary easements or previously recorded archeological sites require revisit, shovel testing is recommended for this survey effort; backhoe trenching could also be required, but the prior survey conducted extensive trenching to document the potential for deeply buried resources. Observations will be recorded through notes, photographs, field forms, and with hand-held GPS. Any archeological sites observed within the survey tract will be documented in accordance with THC standards. Based upon findings from the previous archeological survey, site revisits could occur should new easements reach into areas previously unsurveyed.
  4. Draft Reporting
    - a. After field investigations, prepare TexSite form(s) for any archeological site(s) recorded or revisited. Prepare a comprehensive report that details project components, field methods and observations, recorded sites (if any), and regulatory recommendations for the proposed pedestrian trail project. A draft will be electronically submitted to FNI for review and comment, then (upon revision/approval) sent to the THC and USACE for their review under the ACT and Section 106 (respectively).
  5. Curation and Final Report Preparation
    - a. Upon THC approval (typically 30 days after receipt), prepare final reports in accordance with the Antiquities Permit requirements and the scope provided and submit all photographs, notes, and forms to a state approved curation facility for permanent curation.

ARTICLE III

**SUPPLEMENTAL SERVICES:** Supplemental Services to be performed by FNI, if authorized by Owner, which are not included in the above-described basic services, are described as follows. These services will be billed at a not to exceed fee using hourly bill rates (cost plus max).

A. Texas Water Development Board Coordination. FNI shall provide the following services associated with the TWDB funding process as described herein. Pre-Application phase will be completed by others.

1. APPLICATION PHASE.

- a. FNI shall schedule and attend one (1) application meeting with the Owner and other consultants including the Owner's financial advisor and bond counsel to discuss roles and application process. FNI will be required to submit TWDB-0217.
- b. FNI shall prepare and submit one (1) full application with the Owner, the Owner's financial advisor, and the Owner's bond counsel for relevant non-engineering related information.
- c. FNI shall coordinate with TWDB throughout the application review to address comments and provide additional information as necessary.
- d. FNI shall review TWDB's "Board Memorandum" prior to TWDB staff's recommendation of funding presentation to TWDB board.
- e. FNI shall attend the TWDB's Board Meeting where funding request is submitted for TWDB Board commitment of funds.
- f. FNI shall assist, the Owner's financial advisor, and the Owner's bond counsel in the TWDB funding closing process.

2. POST CLOSING PHASE.

- a. FNI shall schedule and attend one (1) meeting with the Owner on Post Closing Phase process and roles for this phase of the Project.
- b. FNI shall prepare the "Outlay" process on behalf of the Owner to show the TWDB how funding is being spent, and to request draws on the funding loan.
- c. Outlays shall be prepared by FNI on a monthly basis throughout the TWDB's review and approval process of the Project's Environmental Information Document ("EID") and Engineering Feasibility Report ("EFR").
- d. Outlays shall be prepared by FNI on a monthly basis during the Construction Phase of the Project.

3. FNI shall coordinate internally and with the Owner and TWDB to prepare and submit to TWDB on behalf of the Owner:

- a. One (1) National Environmental Policy Act ("NEPA") level EID (see Allowances item A.10)

- b. One (1) EFR; and
  - c. Design Plans and Specifications for TWDB Review.
4. FNI shall assist the Owner with CWSRF federal land acquisition requirements.
  5. While the Project is in the Construction Phase, FNI shall coordinate with the Contractor and the Owner on monthly Davis-Bacon wage requirements certification and American Iron & Steel certification which is to be included in Outlay submissions described above.
  6. FNI shall submit any change orders on behalf of the Owner and coordinate with TWDB for approval.
  7. FNI shall assist the Owner in obtaining a TWDB Certificate of Approval (“COA”).
  8. FNI shall assist the Owner in identification of any remaining, unused funds that might be used for any other Owner wastewater projects.
  9. FNI shall prepare an EID as required by the TWDB DWSRF (31 TAC §371, Subchapter E). The EID shall be a stand-alone, self-contained document describing the Project in sufficient detail to allow for resource agency review without reference to an engineering study or other documents. The EID will address the proposed improvements consisting of approximately 78,000 LF of 42-inch water pipeline and improvements at the Colorado River Intake Pump Station. The EID format shall follow the guidelines provided by the TWDB. The following subtasks shall be completed for the EID:
    - a. Gather and Review Existing Information – Much of the data collected in Task 1 would be applicable to this subtask as this task involves assembly and review data such as aerial photographs, USGS topographic maps, National Wetlands Inventory (NWI) maps, the USGS National Hydrography Dataset (NHD), preliminary engineering reports, and soils data within the area of the proposed project. Much of the data collected in Task 1 would be applicable to this subtask.
    - b. Conduct Pedestrian Survey – Much of the data collected in Task 1 would be applicable to this subtask as FNI’s pedestrian survey observations within the proposed project area would be used to document existing environmental conditions and assess potential project impacts for EID preparation purposes.
    - c. Environmental Risk Database Review – FNI shall review environmental risk database reports to assess the potential for hazardous materials contamination on property being acquired as part of the project. FNI shall summarize the results of the database review in a technical memorandum and the results will be incorporated into the final EID.
    - d. Coordination with Project Design Engineers – Utilizing information gathered during the desktop review and site visit, FNI will coordinate with the project engineers to determine what environmental requirements may be required by the Texas Water Development Board for EID purposes.
    - e. Agency Coordination – FNI shall submit coordination/notification letters and the draft EID to appropriate agencies, as required, potentially including U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, Texas Commission on Environmental Quality,

Texas Parks and Wildlife Department, Bureau of Land Management, Bureau of Reclamation, local managers of the Federal Flood Insurance Program, the local council of government, and other regional agencies or local governments that may have jurisdiction. Comments received from the agencies shall be incorporated into the final EID. If necessary, FNI shall work with the Owner to prepare and submit written responses to address state and/or federal resource agency comments. We assume that this project shall be non-controversial and that agency comments shall be minimal. If an unusual level of agency comments may cause FNI's budget to be exceeded, FNI will notify the Owner's Project Manager for written authorization before proceeding.

- f. Preparation of Draft and Final EID – FNI shall prepare a draft EID following appropriate TWDB guidelines (form TWDB-0801). The draft EID shall be submitted to the Owner's Project Manager for review and comment. FNI shall incorporate comments into the draft EID and submit the revised draft EID to Project Manager to be made available for public review prior to the TWDB required public meeting. After the public meeting and agency coordination, the EID shall be finalized by incorporating required changes or comments received into the final document. The Final EID shall be submitted to the TWDB for approval.
- g. Public Meeting – FNI shall assist Owner's Project Manager with holding one (1) Public Meeting, held at a physical location determined by Owner, by preparing a public notice for Owner to submit to local newspaper(s), participating in the public meeting, and summarizing the results of the meeting into the EID. The Owner shall be responsible for having the public notice published and all costs associated with the publication and for providing verbatim transcript services, if required

10. FNI will use information obtained in the Study and Preliminary Design Phases and use it to prepare an Engineering EFR. Upon TWDB review, incorporate required comments for approval of EFR.

- B. New Pump Station Electrical Building. As part of the expansion of the Colorado River Intake Pump Station, an analysis of the existing electrical room will be required. The intent is to fit all electrical improvements (including at least one VFD) into the existing electrical room. If this is not possible, this allowance will account for design of a new electrical building on the Colorado River Intake Pump Station site. This includes architectural, structural, electrical and mechanical/plumbing design associated with a new building.
- C. Unforeseen Engineering. The purpose of this task will be to cover out of scope design items associated with the existing pump station expansion or pipeline design. Examples of these items are modifications to the intake (outside of the copper ion system), modifications to the pump station in excess of those presented in Garver's Preliminary Engineering Report and re-routing of the pipeline due to unforeseen field conditions.

#### ARTICLE IV

**ADDITIONAL SERVICES:** Additional Services to be performed by FNI, if authorized by Owner, which are not included in the above-described basic services, are described as follows:

- A. Providing construction phase services.

- B. FNI attending condemnation hearings for impacted properties.
- C. Field (backhoe) testing related to archeological investigation.
- D. Providing services to investigate existing conditions or facilities, or to make measured drawings thereof, or to verify the accuracy of drawings or other information furnished by Owner.
- E. Making revisions to drawings, specifications or other documents when such revisions are 1) not consistent with approvals or instructions previously given by Owner or 2) due to other causes not solely within the control of FNI.
- F. Providing consultation concerning the replacement of any Work damaged by fire or other cause during the construction and providing services as may be required in connection with the replacement of such Work. Performing investigations, studies, and analysis of work proposed by construction contractors to correct defective work. Any services required as a result of default of the contractor(s) or the failure, for any reason, of the contractor(s) to complete the work within the contract time. Providing services after the completion of the construction phase not specifically listed in Article II. Visits to the site in excess of the number of trips included in Article II for periodic site visits, coordination meetings, or contract completion activities. Providing services made necessary because of unforeseen, concealed, or differing site conditions or due to the presence of hazardous substances in any form. Providing services to review or evaluate construction contractor(s) claim(s), provided said claims are supported by causes not within the control of FNI. Providing value engineering studies or reviews of cost savings proposed by construction contractors after bids have been submitted. Provide follow-up professional services during Contractor's warranty period.
- G. Investigations involving consideration of operation, maintenance and overhead expenses, and the preparation of rate schedules, earnings and expense statements, feasibility studies, appraisals, evaluations, assessment schedules, and material audits or inventories required for certification of force account construction performed by Owner.
- H. Preparing applications and supporting documents for government grants, loans, or planning advances and providing data for detailed applications.
- I. Providing shop, mill, field or laboratory inspection of materials and equipment. Observe factory tests of equipment at any site remote to the project or observing tests required as a result of equipment failing the initial test.
- J. Conducting pilot plant studies or tests.
- K. Preparing Operation and Maintenance Manuals or conducting operator training.
- L. Preparing data and reports for assistance to Owner in preparation for hearings before regulatory agencies, courts, arbitration panels or any mediator, giving testimony, personally or by deposition, and preparations therefore before any regulatory agency, court, arbitration panel or mediator.
- M. Furnishing the services of a Resident Project Representative to act as Owner's on-site representative during the Construction Phase. The Resident Project Representative will act as directed by FNI in order to provide more extensive representation at the Project site during the Construction Phase. Through more extensive on-site observations of the work in progress and field checks of materials and equipment by the Resident Project Representative and assistants, FNI shall endeavor to provide further

protection for Owner against defects and deficiencies in the work. Furnishing the services of a Resident Project Representative is subject to the provisions of Article I, D and Attachment RPR.

If Owner provides personnel to support the activities of the Resident Project Representative who is FNI or FNI's agent or employee, the duties, responsibilities and limitations of authority of such personnel will be set forth in an Attachment attached to and made a part of this Agreement before the services of such personnel are begun. It is understood and agreed that such personnel will work under the direction of and be responsible to the Resident Project Representative. Owner agrees that whenever FNI informs him in writing that any such personnel provided by the Owner are, in his opinion, incompetent, unfaithful or disorderly, such personnel shall be replaced.

- N. Furnishing Special Inspections required under chapter 17 of the International Building Code. These Special Inspections are often continuous, requiring an inspector dedicated to inspection of the individual work item, and they are in addition to General Representation and Resident Representation services noted elsewhere in the contract. These continuous inspection services can be provided by FNI as an Additional Service.
- O. Furnishing Inspections and Commissioning Reports required by International Energy Efficiency Code (IECC).
- P. Assisting Owner in preparing for, or appearing at litigation, mediation, arbitration, dispute review boards, or other legal and/or administrative proceedings in the defense or prosecution of claims disputes with Contractor(s).
- Q. Performing investigations, studies and analyses of substitutions of equipment and/or materials or deviations from the drawings and specifications.
- R. Assisting Owner in the defense or prosecution of litigation in connection with or in addition to those services contemplated by this Agreement. Such services, if any, shall be furnished by FNI on a fee basis negotiated by the respective parties outside of and in addition to this Agreement.
- S. Providing environmental support services including the design and implementation of ecological baseline studies, environmental monitoring, impact assessment and analyses, permitting assistance, and other assistance required to address environmental issues.
- T. Design, contract modifications, studies or analysis required to comply with local, State, Federal or other regulatory agencies that become effective after the date of this agreement.
- U. Services required to resolve bid protests or to rebid the projects for any reason.
- V. Additional surge modeling to be performed of the by-pass line near Lake Pflugerville
- W. Preparing a Pre-Construction Notification (PCN) application package.
- X. Providing services related to the preparation of a Jurisdiction Determination (JD) Report and all related agency coordination.
- Y. Performing presence/absence surveys for federally listed species and all related agency coordination.
- Z. Providing services related to mussel surveys, aquatic resource relocations, and all related agency coordination.

- AA. Development of a tree mitigation plan.
- BB. Preparation of a Storm Water Pollution Prevention Plan (SWPPP).
- CC. Preparation of a Phase 1 or Phase II Environmental Site Assessment (ESA).

ARTICLE V

**TIME OF COMPLETION:** FNI is authorized to commence work on the Project upon execution of this Agreement and agrees to complete the services in accordance with the following schedule:

- Notice to Proceed: February 10, 2022
- Preliminary Design Submittal: April 21, 2022
- 60% Design Submittal: July 13, 2022
- 90% Design Submittal: October 5, 2022
- 100% Design Submittal: November 23, 2022
- Final Design Submittal: December 19, 2022
- Bid Phase Services: March 6, 2023

If FNI’s services are delayed through no fault of FNI, FNI shall be entitled to adjust contract schedule consistent with the number of days of delay. These delays may include but are not limited to delays in Owner or regulatory reviews, delays on the flow of information to be provided to FNI, governmental approvals, etc. These delays may result in an adjustment to compensation as outlined on the face of this Agreement and in Attachment CO.

ARTICLE VI

**RESPONSIBILITIES OF Owner:** Owner shall perform the following in a timely manner so as not to delay the services of FNI:

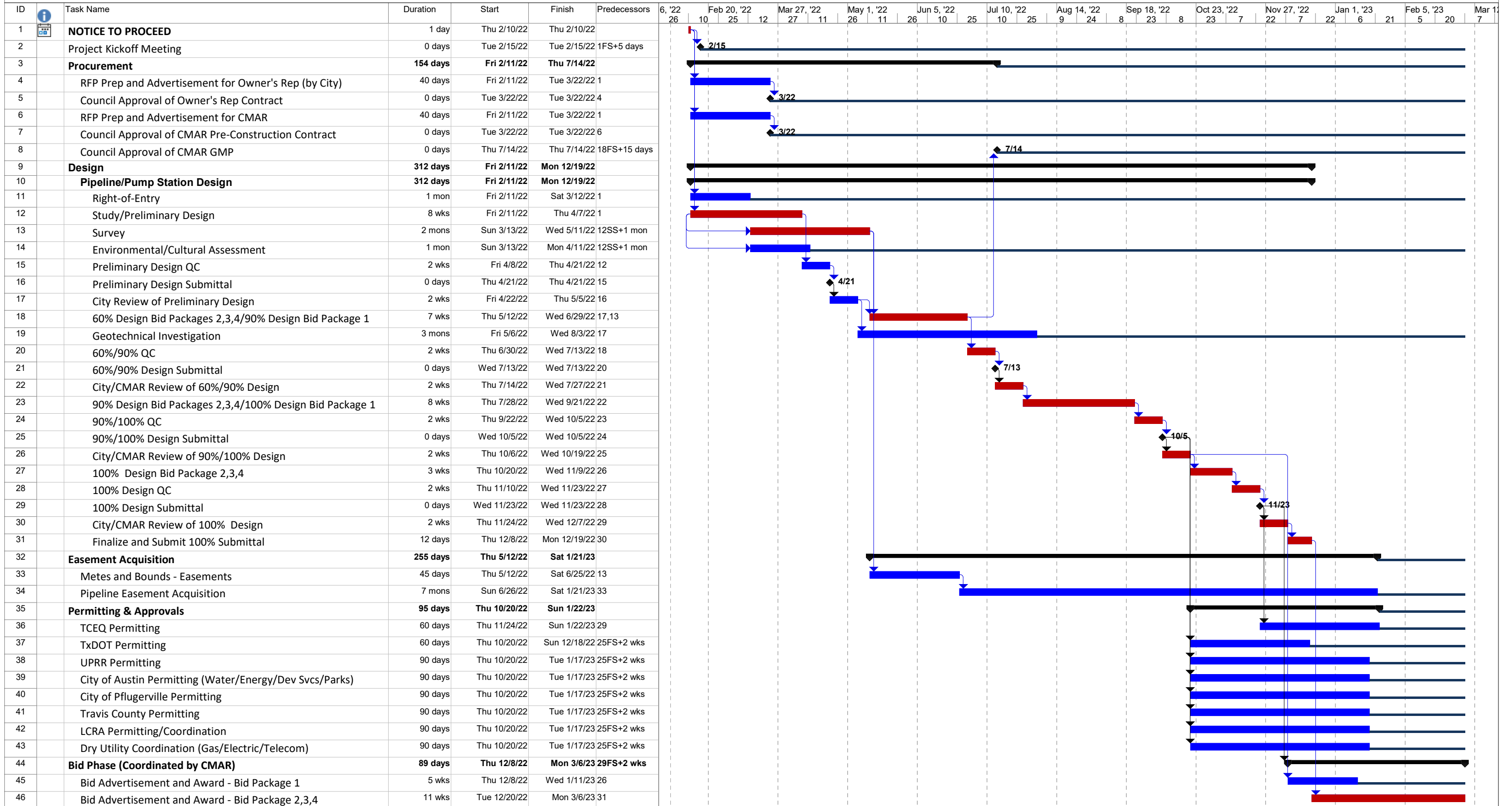
- A. Provide all criteria and full information as to Owner’s requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which Owner will require to be included in the drawings and specifications.
- B. Assist FNI by placing at FNI’s disposal all available information pertinent to the Project including previous reports and any other data relative to design or construction of the Project.
- C. Arrange for access to and make all provisions for FNI to enter upon public property as required for FNI to perform services under this Agreement.
- D. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by FNI, and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of FNI. The review time laid out in the attached project schedule is two weeks for all design deliverables.



E. Pay all fees for permit applications.



Pflugerville  
Secondary Colorado River Raw Water Line  
PROJECT SCHEDULE



Date: Tue 2/1/22

Critical Split	.....	Rolled Up Task	■	External Tasks	■	Inactive Task	■	Duration-only	■	Finish-only	■
Task	■	Rolled Up Milestone	◇	Project Summary	■	Inactive Milestone	◇	Manual Summary Rollup	■	Deadline	↓
Milestone	◇	Rolled Up Progress	■	Group By Summary	■	Inactive Summary	◇	Manual Summary	■	Slack	■
Summary	■	Split	■	Percent Complete	■	Manual Task	■	Start-only	■	Critical	■

# ATTACHMENT FEE BREAKDOWN

City of Pflugerville Secondary Raw Water Line 2/1/2022 Detailed Cost Breakdown	<b>Project Fee Summary</b> Basic Services \$ 3,700,038 Special Services \$ 3,609,728 Total Project \$ 7,309,766
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Tasks				Management and Transmission / Utilities Team													
Phase	Task	Basic or Special	Task Description	Anne Hoskins	Daniel Stoutenburg	Michael Lafferty	Davin Hatley	Cassie Grady	Rosa Valdez	Justas Rutkauskas	Rachel Coker	Kira Iles	David Sloan	David Bennett	Kelly Wood	Rusty Gibson	
				Project Manager	Task Leader - Bid Package 3	PE - Bid Package 3	CAD Designer - Bid Package 3	CAD Designer - Bid Package 1,2,4	Task Leader - Bid Package 4	EIT - Bid Package 4	EIT - Bid Package 1,2	Treatment PE	Treatment Technical Advisor	QA/QC	Task Leader - Bid Package 1,2	Senior Advisor	
				\$221	\$221	\$165	\$164	\$164	\$165	\$145	\$145	\$190	\$253	\$253	\$253	\$253	
<b>A Project Management</b>																	
	1	Basic	Conduct external kickoff meeting	4	4	4					8	4				12	
	2	Basic	Manage internal design team / subconsultants and perform quality review of deliverables (13 months)	416	156	110	26	26	26	26	26	26	26	26	26	104	12
	3a	Basic	Attend 17 project coordination meetings with Owner (half in person)	39	39	56					39					39	
	3b	Basic	Attend 3 meetings with utility provider		18	18					22					18	
	3c	Basic	Attend 4 workshops for milestone design submittals	32	32	32			32		36	24	40	12	40	32	24
	3d	Basic	Attend 2 public meetings with display documents	12	12	12					20					12	
	3e	Basic	Attend 6 Meetings with Austin Water, Austin Energy and Texas Department of Transportation	24	24	24					28					24	
	3f	Basic	Attend 10 meetings with CMAR (half by phone) and assist with CMAR procurement	30	30	30			30	30	30	12			30	12	
	4	Basic	Prepare MS Project schedule and monthly updates	24													
	5	Basic	Prepare monthly one page report and invoice	24													
	6	Basic	Assist Owner with procurement of CMAR	40	40	24				24	4					8	
	7	Basic	Deliverables: Agendas, Minutes, Monthly Schedule, Monthly Reporting, Monthly Invoices														
<b>B Study Phase</b>																	
	1	Basic	Collect and review existing data	24	40	40			40	40	60	24	6			24	
	2a	Basic	Determine pump station / pipeline size, capacity, head requirements, system operations protocols, location.	24	60	60			60	60	80	6	4			40	
	2b	Basic	Prepare life cycle cost analysis of pipe diameter.	4	8	12			8	12	8					6	
	3	Basic	Review alignment analysis, verify easement needs, complete site visits to points of public access	12	40	40			40	40	24					24	
	4a	Basic	Prepare onsite drainage analysis for pump station with memo	8	24		40	40			8						
	4b	Basic	Prepare water quality calculations for pump station with memo and coordinate with COA	12	24	24					8						
	5	Basic	Prepare Study Phase Memorandum and OPCC	12	40	60	80	80	60	60	60	50	20			20	24
	6	Basic	Review memorandum with Owner in person	6	6	6				6		6	6			12	
	7	Basic	Deliverables: Draft Memo, Final Memo														
<b>C Preliminary Design Phase</b>																	
	1	Basic	Prepare final hydraulic design basis	12	40	40			12	12	40					24	
	2	Basic	Conduct hydraulic design basis workshop with Owner and design leads from major disciplines (see Item A3c)	6	6	6					8					12	
	3	Basic	Prepare preliminary floor plan layouts and sections. Include conceptual design/layout for structural, electrical, HVAC.	12	24	24	160	160		40	60				24	24	
	4	Basic	Prepare preliminary one-line diagrams, power load study, PI&D and equipment tagging	4	8						12					12	
	5	Basic	Prepare preliminary site layout	12			96	96		40	60				24	24	24
	6	Basic	Proceed with final pipeline alignment from study phase	24	40	40			40	40							
	6a	Basic	Obtain right-of-entry; provide GIS alignment to surveyor	4	12	12											
	6b	Basic	Review alignment in field; determine final pipeline alignment	12	24	24			24	24							
	6c	Basic	Meet with Austin Water, A Enstnirgy, Texas Department of Transportation, Union Pacific Railroad, Travis County and United States Corps of Engineers [see item A3e]	24	40	40			40	40	40						
	6d	Basic	Update GIS mapping to final alignment (1) based on field alignment selection and then (2) based on Owner comments. Prepare final map book.	24	40	40			40	40	24				32	12	
	7	Basic	Deliverables: Draft Map Book, Final Map Book														
<b>D Final Design Phase</b>																	
	1	Basic	Coordinate with CMAR as required	96	96	12			12	12	12	8				8	
	2	Basic	Prepare front end documents for construction and equipment packages, revise per Owner comment	12	12	12			12	12	12					6	
	3	Basic	Advise Owner of additional Special Services needs	12													
	4	Basic	Prepare permit applications (road crossings, railroad crossings, Texas Commission on Environmental Quality)	12	40	40		16	24	24	12					6	
	5	Basic	Coordinate with affected utility companies	12	24	24		8	24	24	12					6	
	6	Basic	Prepare revised OPCC (60%, 90% and 100%)	12	24	24				12	12	12				6	
	7	Basic	Prepare 60% drawings, spec TOC, construction contract documents. Meet with Owner to review (see Item A3c)	12	80	80	600	1,000	80	80	80	60	12	40	60	40	40
	8	Basic	Prepare 90% drawings, specifications, bid proposals. Meet with Owner to review (see Item A3c)	24	80	80	600	1,000	80	80	80	40	12	40	60	40	40
	9	Basic	Prepare 100% drawings, specifications, bid proposals, OPCC. Meet with owner to review (see Item A3c).	24	24	40	800	1,000	24	16	40	24	8	40	40	40	40

<b>City of Pflugerville</b> <b>Secondary Raw Water Line</b> <b>2/1/2022</b> <b>Detailed Cost Breakdown</b>	<b>Project Fee Summary</b>		
	<b>Basic Services</b>	\$	3,700,038
	<b>Special Services</b>	\$	3,609,728
	<b>Total Project</b>	\$	7,309,766

Tasks			Management and Transmission / Utilities Team													
Phase	Task	Basic or Special	Task Description	Anne Hoskins	Daniel Stoutenburg	Michael Lafferty	Davin Hatley	Cassie Grady	Rosa Valdez	Justas Rutkauskas	Rachel Coker	Kira Iles	David Sloan	David Bennett	Kelly Wood	Rusty Gibson
				Project Manager	Task Leader - Bid Package 3	PE - Bid Package 3	CAD Designer - Bid Package 3	CAD Designer - Bid Package 1,2,4	Task Leader - Bid Package 4	EIT- Bid Package 4	EIT - Bid Package 1,2	Treatment PE	Treatment Technical Advisor	QA/QC	Task Leader - Bid Package 1,2	Senior Advisor
	10	Basic	Deliverables: 60% design documents, 90% design documents, 100% design documents, Final design documents, front end documents, permit applications	\$221	\$221	\$165	\$164	\$164	\$165	\$145	\$145	\$190	\$253	\$253	\$253	\$253
<b>E</b>			<b>Bid or Negotiation Phase</b>													
	1	Basic	Assist Owner / CMAR in securing bids (4 bid packages)	12	12	24			12	12	24				24	
	2	Basic	Assist Owner / CMAR by responding to questions; Prepare and issue addenda	6	24	24	80	80	24	24	24	24			24	
	3	Basic	Assist Owner /CMAR in conducting pre-bid conference		8	8										
	4	Basic	Assist Owner in opening, tabulating, analyzing bids received; review qualifications and recommend award	6	8	12			8	8	12	4			8	
	5	Basic	Prepare ten (10) sets of Construction Contract Documents	6			30	30	4	4	4	4				
	6	Basic	Furnish contractor copies of drawings and specifications	2	4	4										
	7	Basic	Deliverables: Notice to Bidders, Electronic bid documents/addenda, selection criteria, recommendation of award, bid tab, notice of award, conformed documents													
<b>Article II</b>			<b>Special Services</b>													
	A	Special	Environmental Services	12	12											
	B	Special	Subsurface Utility Engineering Services	12	12	20										
	C	Special	Surveying, Easement Documents, and Platting Services	12	12	20				24	24					
	D	Special	Physical Model of Pump Suction Piping/Intake	12	8						20				12	
	E	Special	Corrosion Engineering Services	12	12	24			12	12						
	F	Special	Surge Protection Engineering Services	12	8	12			12	12						
	G	Special	Geotechnical Engineering	12	12	24		60								
	H	Special	Easement Acquisition Services	40	60	60			60	60						
	I	Special	Archeological Field Investigation	12	12	24			12	12						
<b>Article III</b>			<b>Supplemental Services</b>													
	A	Special	Texas Water Development Board Coordination	30	30											
	B	Special	New Pump Station Electrical Building	8	12	12					24				24	
	C	Special	Unforeseen Design	40	60	60	80	80	40	60	60	24			40	
<b>Total Hours / Quantity</b>				<b>1,343</b>	<b>1,517</b>	<b>1,418</b>	<b>2,592</b>	<b>3,676</b>	<b>892</b>	<b>1,175</b>	<b>1,020</b>	<b>364</b>	<b>106</b>	<b>266</b>	<b>831</b>	<b>216</b>
<b>Total Effort</b>				<b>\$ 312,883</b>	<b>\$ 351,336</b>	<b>\$ 245,227</b>	<b>\$ 442,959</b>	<b>\$ 627,846</b>	<b>\$ 153,795</b>	<b>\$ 178,407</b>	<b>\$ 154,552</b>	<b>\$ 72,586</b>	<b>\$ 28,155</b>	<b>\$ 70,448</b>	<b>\$ 221,180</b>	<b>\$ 57,167</b>

**City of Pflugerville  
Secondary Raw Water Line  
2/1/2022  
Detailed Cost Breakdown**

Tasks				Structural Team					HVAC/Plumbing Team					Catholic Tea			
Phase	Task	Basic or Special	Task Description	Kendall King	Derek Gianan	Marissa Mendoza	Peter Bartels	Tran Duong	Alex Davila	Brad Watson	Ram Manoj	Satish Ravindran	Nick Prisco	Adam Young	Scott Vaughan	Ron Deal	
				CMAR Coordinator	Scheduler	Accounting	Structural PE	Structural EIT	Structural CAD	Structural QC	HVAC EIT	HVAC PE	HVAC PE	HVAC QC	Plumbing	Catholic Lead PE	
				\$253	\$157	\$157	\$221	\$145	\$103	\$253	\$145	\$190	\$190	\$253	\$190	\$190	
<b>A</b>			<b>Project Management</b>														
	1	Basic	Conduct external kickoff meeting														
	2	Basic	Manage internal design team / subconsultants and perform quality review of deliverables (13 months)	12	12	26		26			26	4					
	3a	Basic	Attend 17 project coordination meetings with Owner (half in person)	8													
	3b	Basic	Attend 3 meetings with utility provider														
	3c	Basic	Attend 4 workshops for milestone design submittals														
	3d	Basic	Attend 2 public meetings with display documents														
	3e	Basic	Attend 6 Meetings with Austin Water, Austin Energy and Texas Department of Transportation														
	3f	Basic	Attend 10 meetings with CMAR (half by phone) and assist with CMAR procurement	30													
	4	Basic	Prepare MS Project schedule and monthly updates														
	5	Basic	Prepare monthly one page report and invoice														
	6	Basic	Assist Owner with procurement of CMAR	150													
	7	Basic	Deliverables: Agendas, Minutes, Monthly Schedule, Monthly Reporting, Monthly Invoices														
<b>B</b>			<b>Study Phase</b>														
	1	Basic	Collect and review existing data														
	2a	Basic	Determine pump station / pipe size, capacity, head requirements, system operations protocols, location.														
	2b	Basic	Prepare life cycle cost analysis of pipe diameter.														
	3	Basic	Review alignment analysis, verify easement needs, complete site visits to points of public access														
	4a	Basic	Prepare onsite drainage analysis for pump station with memo														
	4b	Basic	Prepare water quality calculations for pump station with memo and coordinate with COA														
	5	Basic	Prepare Study Phase Memorandum and OPCC														
	6	Basic	Review memorandum with Owner in person														
	7	Basic	Deliverables: Draft Memo, Final Memo														
<b>C</b>			<b>Preliminary Design Phase</b>														
	1	Basic	Prepare final hydraulic design basis														
	2	Basic	Conduct hydraulic design basis workshop with Owner and design leads from major disciplines (see Item A3c)														
	3	Basic	Prepare preliminary floor plan layouts and sections. Include conceptual design/layout for structural, electrical, HVAC.								24	8	2	2	1		
	4	Basic	Prepare preliminary one-line diagrams, power load study, PI&D and equipment tagging														
	5	Basic	Prepare preliminary site layout														
	6	Basic	Proceed with final pipeline alignment from study phase														
	6a	Basic	Obtain right-of-entry; provide GIS alignment to surveyor														
	6b	Basic	Review alignment in field; determine final pipeline alignment														
	6c	Basic	Meet with Austin Water, A Enstlinery, Texas Department of Transportation, Union Pacific Railroad, Travis County and United States Corps of Engineers [see item A3e]														
	6d	Basic	Update GIS mapping to final alignment (1) based on field alignment selection and then (2) based on Owner comments. Prepare final map book.														
	7	Basic	Deliverables: Draft Map Book, Final Map Book														
<b>D</b>			<b>Final Design Phase</b>														
	1	Basic	Coordinate with CMAR as required														
	2	Basic	Prepare front end documents for construction and equipment packages, revise per Owner comment														
	3	Basic	Advise Owner of additional Special Services needs														
	4	Basic	Prepare permit applications (road crossings, railroad crossings, Texas Commission on Environmental Quality)														
	5	Basic	Coordinate with affected utility companies														
	6	Basic	Prepare revised OPCC (60%, 90% and 100%)														
	7	Basic	Prepare 60% drawings, spec TOC, construction contract documents. Meet with Owner to review (see Item A3c)				4	21	21	2	36	12	2	3	3		
	8	Basic	Prepare 90% drawings, specifications, bid proposals. Meet with Owner to review (see Item A3c)				4	22	22	2	24	12		3	2		
	9	Basic	Prepare 100% drawings, specifications, bid proposals, OPCC. Meet with owner to review (see Item A3c).				4	21	21	2	16	8		2	2		

**City of Pflugerville  
Secondary Raw Water Line  
2/1/2022  
Detailed Cost Breakdown**

Tasks				Structural Team					HVAC/Plumbing Team					Cathodic Tea		
Phase	Task	Basic or Special	Task Description	Kendall King	Derek Gianan	Marissa Mendoza	Peter Bartels	Tran Duong	Alex Davila	Brad Watson	Ram Manoj	Satish Ravindran	Nick Prisco	Adam Young	Scott Vaughan	Ron Deal
				CMAR Coordinator	Scheduler	Accounting	Structural PE	Structural EIT	Structural CAD	Structural QC	HVAC EIT	HVAC PE	HVAC PE	HVAC QC	Plumbing	Cathodic Lead PE
	10	Basic	Deliverables: 60% design documents, 90% design documents, 100% design documents, Final design documents, front end documents, permit applications	\$253	\$157	\$157	\$221	\$145	\$103	\$253	\$145	\$190	\$190	\$253	\$190	\$190
<b>E</b>	<b>Bid or Negotiation Phase</b>															
	1	Basic	Assist Owner / CMAR in securing bids (4 bid packages)													
	2	Basic	Assist Owner / CMAR by responding to questions; Prepare and issue addenda								12	8				
	3	Basic	Assist Owner /CMAR in conducting pre-bid conference													
	4	Basic	Assist Owner in opening, tabulating, analyzing bids received; review qualifications and recommend award													
	5	Basic	Prepare ten (10) sets of Construction Contract Documents													
	6	Basic	Furnish contractor copies of drawings and specifications													
	7	Basic	Deliverables: Notice to Bidders, Electronic bid documents/addenda, selection criteria, recommendation of award, bid tab, notice of award, conformed documents													
<b>Article II</b>	<b>Special Services</b>															
	A	Special	Environmental Services													
	B	Special	Subsurface Utility Engineering Services													
	C	Special	Surveying, Easement Documents, and Platting Services													
	D	Special	Physical Model of Pump Suction Piping/Intake													
	E	Special	Corrosion Engineering Services													334
	F	Special	Surge Protection Engineering Services													
	G	Special	Geotechnical Engineering													
	H	Special	Easement Acquisition Services													
	I	Special	Archeological Field Investigation													
<b>Article III</b>	<b>Supplemental Services</b>															
	A	Special	Texas Water Development Board Coordination													
	B	Special	New Pump Station Electrical Building				20	80	120	10	60	36	2	6		
	C	Special	Unforeseen Design													
<b>Total Hours / Quantity</b>				<b>200</b>	<b>12</b>	<b>26</b>	<b>32</b>	<b>170</b>	<b>184</b>	<b>16</b>	<b>198</b>	<b>88</b>	<b>6</b>	<b>16</b>	<b>8</b>	<b>334</b>
<b>Total Effort</b>				<b>\$ 54,013</b>	<b>\$ 2,011</b>	<b>\$ 4,357</b>	<b>\$ 7,355</b>	<b>\$ 25,740</b>	<b>\$ 19,710</b>	<b>\$ 4,210</b>	<b>\$ 30,034</b>	<b>\$ 17,473</b>	<b>\$ 1,186</b>	<b>\$ 4,210</b>	<b>\$ 1,581</b>	<b>\$ 65,998</b>

**City of Pflugerville  
Secondary Raw Water Line  
2/1/2022  
Detailed Cost Breakdown**

Tasks				Modeling/GIS						Stormwater Team				Constructability/OPCC		Environmental	
Phase	Task	Basic or Special	Task Description	Ben Talley	Milton Arceneaux	Jessica Vassar	Sherrie Hubble	Kimberly Patak	Will Huff	Kaylyn Hudson	Dita Prasadl	Noe Ortiz	Richard Provott	Jesus Gonzalez	Tom Dixon	Ben Hagood	
				Catholic PE	Catholic CAD	Hydraulic Modeling	GIS Analyst	Stormwater QC	Stormwater PE	Stormwater PE	Stormwater EIT	Stormwater CAD	Constructability Review	Cost Estimating	Environmental	Environmental	
				\$136	\$164	\$221	\$165	\$221	\$190	\$165	\$145	\$164	\$221	\$184	\$221	\$190	
<b>A Project Management</b>																	
	1	Basic	Conduct external kickoff meeting														
	2	Basic	Manage internal design team / subconsultants and perform quality review of deliverables (13 months)			24					26						
	3a	Basic	Attend 17 project coordination meetings with Owner (half in person)														
	3b	Basic	Attend 3 meetings with utility provider														
	3c	Basic	Attend 4 workshops for milestone design submittals														
	3d	Basic	Attend 2 public meetings with display documents														
	3e	Basic	Attend 6 Meetings with Austin Water, Austin Energy and Texas Department of Transportation					2	4	4							
	3f	Basic	Attend 10 meetings with CMAR (half by phone) and assist with CMAR procurement														
	4	Basic	Prepare MS Project schedule and monthly updates														
	5	Basic	Prepare monthly one page report and invoice														
	6	Basic	Assist Owner with procurement of CMAR														
	7	Basic	Deliverables: Agendas, Minutes, Monthly Schedule, Monthly Reporting, Monthly Invoices														
<b>B Study Phase</b>																	
	1	Basic	Collect and review existing data														
	2a	Basic	Determine pump station / pipeline size, capacity, head requirements, system operations protocols, location.			24											
	2b	Basic	Prepare life cycle cost analysis of pipe diameter.														
	3	Basic	Review alignment analysis, verify easement needs, complete site visits to points of public access				60										
	4a	Basic	Prepare onsite drainage analysis for pump station with memo					4	8	24							
	4b	Basic	Prepare water quality calculations for pump station with memo and coordinate with COA					2	16	48	32						
	5	Basic	Prepare Study Phase Memorandum and OPCC											36			
	6	Basic	Review memorandum with Owner in person														
	7	Basic	Deliverables: Draft Memo, Final Memo														
<b>C Preliminary Design Phase</b>																	
	1	Basic	Prepare final hydraulic design basis														
	2	Basic	Conduct hydraulic design basis workshop with Owner and design leads from major disciplines (see Item A3c)														
	3	Basic	Prepare preliminary floor plan layouts and sections. Include conceptual design/layout for structural, electrical, HVAC.										24				
	4	Basic	Prepare preliminary one-line diagrams, power load study, PI&D and equipment tagging														
	5	Basic	Prepare preliminary site layout										24				
	6	Basic	Proceed with final pipeline alignment from study phase										24				
	6a	Basic	Obtain right-of-entry; provide GIS alignment to surveyor					16	40	320							
	6b	Basic	Review alignment in field; determine final pipeline alignment						60	60	24						
	6c	Basic	Meet with Austin Water, A Enstnery, Texas Department of Transportation, Union Pacific Railroad, Travis County and United States Corps of Engineers [see item A3e]														
	6d	Basic	Update GIS mapping to final alignment (1) based on field alignment selection and then (2) based on Owner comments. Prepare final map book.				200										
	7	Basic	Deliverables: Draft Map Book, Final Map Book														
<b>D Final Design Phase</b>																	
	1	Basic	Coordinate with CMAR as required														
	2	Basic	Prepare front end documents for construction and equipment packages, revise per Owner comment														
	3	Basic	Advise Owner of additional Special Services needs														
	4	Basic	Prepare permit applications (road crossings, railroad crossings, Texas Commission on Environmental Quality)														
	5	Basic	Coordinate with affected utility companies														
	6	Basic	Prepare revised OPCC (60%, 90% and 100%)											140			
	7	Basic	Prepare 60% drawings, spec TOC, construction contract documents. Meet with Owner to review (see Item A3c)					8	16	48	48	40					
	8	Basic	Prepare 90% drawings, specifications, bid proposals. Meet with Owner to review (see Item A3c)					4	8	40	32	40					
	9	Basic	Prepare 100% drawings, specifications, bid proposals, OPCC. Meet with owner to review (see Item A3c).					4	8	40	24	40					

**City of Pflugerville  
Secondary Raw Water Line  
2/1/2022  
Detailed Cost Breakdown**

Tasks			Modeling/GIS							Stormwater Team			Constructability/OPCC		Environmental	
Phase	Task	Basic or Special	Task Description	Ben Talley	Milton Arceneaux	Jessica Vassar	Sherrie Hubble	Kimberly Patak	Will Huff	Kaylyn Hudson	Dita Prasadl	Noe Ortiz	Richard Provott	Jesus Gonzalez	Tom Dixon	Ben Hagood
				Catholic PE	Catholic CAD	Hydraulic Modeling	GIS Analyst	Stormwater QC	Stormwater PE	Stormwater PE	Stormwater EIT	Stormwater CAD	Constructability Review	Cost Estimating	Environmental	Environmental
				\$136	\$164	\$221	\$165	\$221	\$190	\$165	\$145	\$164	\$221	\$184	\$221	\$190
	10	Basic	Deliverables: 60% design documents, 90% design documents, 100% design documents, Final design documents, front end documents, permit applications													
<b>E</b>			<b>Bid or Negotiation Phase</b>													
	1	Basic	Assist Owner / CMAR in securing bids (4 bid packages)													
	2	Basic	Assist Owner / CMAR by responding to questions; Prepare and issue addenda													
	3	Basic	Assist Owner /CMAR in conducting pre-bid conference													
	4	Basic	Assist Owner in opening, tabulating, analyzing bids received; review qualifications and recommend award													
	5	Basic	Prepare ten (10) sets of Construction Contract Documents													
	6	Basic	Furnish contractor copies of drawings and specifications													
	7	Basic	Deliverables: Notice to Bidders, Electronic bid documents/addenda, selection criteria, recommendation of award, bid tab, notice of award, conformed documents													
<b>Article II</b>			<b>Special Services</b>													
	A	Special	Environmental Services												12	
	B	Special	Subsurface Utility Engineering Services													
	C	Special	Surveying, Easement Documents, and Platting Services													
	D	Special	Physical Model of Pump Suction Piping/Intake													
	E	Special	Corrosion Engineering Services	104	96											
	F	Special	Surge Protection Engineering Services													
	G	Special	Geotechnical Engineering													
	H	Special	Easement Acquisition Services													
	I	Special	Archeological Field Investigation													
<b>Article III</b>			<b>Supplemental Services</b>													
	A	Special	Texas Water Development Board Coordination													220
	B	Special	New Pump Station Electrical Building													
	C	Special	Unforeseen Design													
<b>Total Hours / Quantity</b>				<b>104</b>	<b>96</b>	<b>48</b>	<b>260</b>	<b>40</b>	<b>160</b>	<b>610</b>	<b>56</b>	<b>104</b>	<b>192</b>	<b>176</b>	<b>12</b>	<b>220</b>
<b>Total Effort</b>				<b>\$ 14,710</b>	<b>\$ 16,374</b>	<b>\$ 11,178</b>	<b>\$ 44,616</b>	<b>\$ 9,206</b>	<b>\$ 31,637</b>	<b>\$ 104,812</b>	<b>\$ 8,445</b>	<b>\$ 17,738</b>	<b>\$ 44,129</b>	<b>\$ 33,679</b>	<b>\$ 2,758</b>	<b>\$ 43,472</b>



**City of Pflugerville  
Secondary Raw Water Line  
2/1/2022  
Detailed Cost Breakdown**

Tasks				TWDB							Surge Analysis			Trenchless		
Phase	Task	Basic or Special	Task Description	Alyx Martinez	Kimberly Buckley	Tam Tran	Kelsey Calvez	Heath Myers	Mark Evans	Jesse Ellis	Tom Hill	Rebecca Peters	Jason Ward	Brian Glynn	Cameron Lawrence	Clay Herndon
				Environmental	Environmental	Environmental	Environmental	Environmental	TWDB Lead	Surge PE	Surge PE	Surge PE	Surge QC	Trenchless Design Lead	Trenchless PE	QC Review
				\$121	\$253	\$121	\$121	\$145	\$157	\$145	\$253	\$190	\$221	\$221	\$165	\$253
<b>A Project Management</b>																
	1	Basic	Conduct external kickoff meeting											4		
	2	Basic	Manage internal design team / subconsultants and perform quality review of deliverables (13 months)											24		48
	3a	Basic	Attend 17 project coordination meetings with Owner (half in person)											20		
	3b	Basic	Attend 3 meetings with utility provider											6		
	3c	Basic	Attend 4 workshops for milestone design submittals											16		
	3d	Basic	Attend 2 public meetings with display documents													
	3e	Basic	Attend 6 Meetings with Austin Water, Austin Energy and Texas Department of Transportation											12		
	3f	Basic	Attend 10 meetings with CMAR (half by phone) and assist with CMAR procurement											20		
	4	Basic	Prepare MS Project schedule and monthly updates													
	5	Basic	Prepare monthly one page report and invoice													
	6	Basic	Assist Owner with procurement of CMAR													
	7	Basic	Deliverables: Agendas, Minutes, Monthly Schedule, Monthly Reporting, Monthly Invoices													
<b>B Study Phase</b>																
	1	Basic	Collect and review existing data											8	16	
	2a	Basic	Determine pump station / pipeline size, capacity, head requirements, system operations protocols, location.													
	2b	Basic	Prepare life cycle cost analysis of pipe diameter.													
	3	Basic	Review alignment analysis, verify easement needs, complete site visits to points of public access											20	20	
	4a	Basic	Prepare onsite drainage analysis for pump station with memo													
	4b	Basic	Prepare water quality calculations for pump station with memo and coordinate with COA													
	5	Basic	Prepare Study Phase Memorandum and OPCC											20	20	
	6	Basic	Review memorandum with Owner in person											6		
	7	Basic	Deliverables: Draft Memo, Final Memo													
<b>C Preliminary Design Phase</b>																
	1	Basic	Prepare final hydraulic design basis													
	2	Basic	Conduct hydraulic design basis workshop with Owner and design leads from major disciplines (see Item A3c)													
	3	Basic	Prepare preliminary floor plan layouts and sections. Include conceptual design/layout for structural, electrical, HVAC.													
	4	Basic	Prepare preliminary one-line diagrams, power load study, PI&D and equipment tagging													
	5	Basic	Prepare preliminary site layout													
	6	Basic	Proceed with final pipeline alignment from study phase											12	12	
	6a	Basic	Obtain right-of-entry; provide GIS alignment to surveyor													
	6b	Basic	Review alignment in field; determine final pipeline alignment											16	40	
	6c	Basic	Meet with Austin Water, A Enstleringy, Texas Department of Transportation, Union Pacific Railroad, Travis County and United States Corps of Engineers [see item A3e]											12		
	6d	Basic	Update GIS mapping to final alignment (1) based on field alignment selection and then (2) based on Owner comments. Prepare final map book.													
	7	Basic	Deliverables: Draft Map Book, Final Map Book													
<b>D Final Design Phase</b>																
	1	Basic	Coordinate with CMAR as required											80		
	2	Basic	Prepare front end documents for construction and equipment packages, revise per Owner comment											16		
	3	Basic	Advise Owner of additional Special Services needs													
	4	Basic	Prepare permit applications (road crossings, railroad crossings, Texas Commission on Environmental Quality)											8	8	
	5	Basic	Coordinate with affected utility companies											4	4	
	6	Basic	Prepare revised OPCC (60%, 90% and 100%)											20	20	
	7	Basic	Prepare 60% drawings, spec TOC, construction contract documents. Meet with Owner to review (see Item A3c)											28	40	
	8	Basic	Prepare 90% drawings, specifications, bid proposals. Meet with Owner to review (see Item A3c)											48	160	
	9	Basic	Prepare 100% drawings, specifications, bid proposals, OPCC. Meet with owner to review (see Item A3c).											28	40	

**City of Pflugerville  
Secondary Raw Water Line  
2/1/2022  
Detailed Cost Breakdown**

Tasks				TWDB					Surge Analysis				Trenchless			
Phase	Task	Basic or Special	Task Description	Alyes Martinez	Kimberly Buckley	Tam Tran	Kelsey Calvez	Heath Myers	Mark Evans	Jesse Ellis	Tom Hill	Rebecca Peters	Jason Ward	Brian Glynn	Cameron Lawrence	Clay Herndon
				Environmental	Environmental	Environmental	Environmental	Environmental	TWDB Lead	Surge PE	Surve PE	Surge PE	Surge QC	Trenchless Design Lead	Trenchless PE	QC Review
	10	Basic	Deliverables: 60% design documents, 90% design documents, 100% design documents, Final design documents, front end documents, permit applications	\$121	\$253	\$121	\$121	\$145	\$157	\$145	\$253	\$190	\$221	\$221	\$165	\$253
<b>E</b>	<b>Bid or Negotiation Phase</b>															
	1	Basic	Assist Owner / CMAR in securing bids (4 bid packages)													
	2	Basic	Assist Owner / CMAR by responding to questions; Prepare and issue addenda													
	3	Basic	Assist Owner /CMAR in conducting pre-bid conference													
	4	Basic	Assist Owner in opening, tabulating, analyzing bids received; review qualifications and recommend award													
	5	Basic	Prepare ten (10) sets of Construction Contract Documents													
	6	Basic	Furnish contractor copies of drawings and specifications													
	7	Basic	Deliverables: Notice to Bidders, Electronic bid documents/addenda, selection criteria, recommendation of award, bid tab, notice of award, conformed documents													
<b>Article II</b>	<b>Special Services</b>															
	A	Special	Environmental Services			86	98									
	B	Special	Subsurface Utility Engineering Services												80	
	C	Special	Surveying, Easement Documents, and Platting Services													
	D	Special	Physical Model of Pump Suction Piping/Intake													
	E	Special	Corrosion Engineering Services													
	F	Special	Surge Protection Engineering Services						704	310	58	8				
	G	Special	Geotechnical Engineering											160	160	16
	H	Special	Easement Acquisition Services													
	I	Special	Archeological Field Investigation													
<b>Article III</b>	<b>Supplemental Services</b>															
	A	Special	Texas Water Development Board Coordination	48	8	180			340							
	B	Special	New Pump Station Electrical Building													
	C	Special	Unforeseen Design													
<b>Total Hours / Quantity</b>				<b>48</b>	<b>8</b>	<b>266</b>	<b>98</b>	<b>-</b>	<b>340</b>	<b>704</b>	<b>310</b>	<b>58</b>	<b>8</b>	<b>588</b>	<b>620</b>	<b>64</b>
<b>Total Effort</b>				<b>\$ 6,040</b>	<b>\$ 2,105</b>	<b>\$ 33,473</b>	<b>\$ 12,332</b>	<b>\$ -</b>	<b>\$ 55,515</b>	<b>\$ 106,163</b>	<b>\$ 81,567</b>	<b>\$ 11,461</b>	<b>\$ 1,839</b>	<b>\$ 135,765</b>	<b>\$ 106,392</b>	<b>\$ 17,173</b>

**City of Pflugerville  
Secondary Raw Water Line  
2/1/2022  
Detailed Cost Breakdown**

Tasks			Geotech QC		Architectural		Elec QC		Total Hours	Total Labor Effort
Phase	Task	Basic or Special	Task Description	Tony Bosecker	Parris Jones	Homer Saenz	Luis Lopez	Wade Zemlock		
				Geotech QC	Architect	Architect	Architect Tech	Electrical QC		
			\$253	\$253	\$190	\$121	\$253			
<b>A</b>			<b>Project Management</b>							\$ -
	1	Basic	Conduct external kickoff meeting						40	\$ 8,634
	2	Basic	Manage internal design team / subconsultants and perform quality review of deliverables (13 months)						1,234	\$ 274,024
	3a	Basic	Attend 17 project coordination meetings with Owner (half in person)						240	\$ 51,712
	3b	Basic	Attend 3 meetings with utility provider						82	\$ 17,099
	3c	Basic	Attend 4 workshops for milestone design submittals						352	\$ 76,712
	3d	Basic	Attend 2 public meetings with display documents						68	\$ 14,112
	3e	Basic	Attend 6 Meetings with Austin Water, Austin Energy and Texas Department of Transportation						146	\$ 31,185
	3f	Basic	Attend 10 meetings with CMAR (half by phone) and assist with CMAR procurement						284	\$ 60,606
	4	Basic	Prepare MS Project schedule and monthly updates						24	\$ 5,662
	5	Basic	Prepare monthly one page report and invoice						24	\$ 5,662
	6	Basic	Assist Owner with procurement of CMAR						290	\$ 70,104
	7	Basic	Deliverables: Agendas, Minutes, Monthly Schedule, Monthly Reporting, Monthly Invoices							\$ -
										\$ -
<b>B</b>			<b>Study Phase</b>							\$ -
	1	Basic	Collect and review existing data						322	\$ 60,738
	2a	Basic	Determine pump station / pipeline size, capacity, head requirements, system operations protocols, location.						418	\$ 79,290
	2b	Basic	Prepare life cycle cost analysis of pipe diameter.						58	\$ 10,785
	3	Basic	Review alignment analysis, verify easement needs, complete site visits to points of public access						320	\$ 59,971
	4a	Basic	Prepare onsite drainage analysis for pump station with memo						156	\$ 28,825
	4b	Basic	Prepare water quality calculations for pump station with memo and coordinate with COA						166	\$ 30,283
	5	Basic	Prepare Study Phase Memorandum and OPCC					40	682	\$ 130,092
	6	Basic	Review memorandum with Owner in person						54	\$ 11,993
	7	Basic	Deliverables: Draft Memo, Final Memo							\$ -
										\$ -
<b>C</b>			<b>Preliminary Design Phase</b>							\$ -
	1	Basic	Prepare final hydraulic design basis						180	\$ 35,031
	2	Basic	Conduct hydraulic design basis workshop with Owner and design leads from major disciplines (see Item A3c)						38	\$ 8,152
	3	Basic	Prepare preliminary floor plan layouts and sections. Include conceptual design/layout for structural, electrical, HVAC.						589	\$ 106,517
	4	Basic	Prepare preliminary one-line diagrams, power load study, PI&D and equipment tagging						36	\$ 7,725
	5	Basic	Prepare preliminary site layout						400	\$ 75,046
	6	Basic	Proceed with final pipeline alignment from study phase						608	\$ 111,297
	6a	Basic	Obtain right-of-entry; provide GIS alignment to surveyor						28	\$ 5,737
	6b	Basic	Review alignment in field; determine final pipeline alignment						308	\$ 56,443
	6c	Basic	Meet with Austin Water, A Enstiner, Texas Department of Transportation, Union Pacific Railroad, Travis County and United States Corps of Engineers [see item A3e]						236	\$ 43,260
	6d	Basic	Update GIS mapping to final alignment (1) based on field alignment selection and then (2) based on Owner comments. Prepare final map book.						452	\$ 83,986
	7	Basic	Deliverables: Draft Map Book, Final Map Book							\$ -
										\$ -
<b>D</b>			<b>Final Design Phase</b>							\$ -
	1	Basic	Coordinate with CMAR as required						336	\$ 73,940
	2	Basic	Prepare front end documents for construction and equipment packages, revise per Owner comment						94	\$ 18,510
	3	Basic	Advise Owner of additional Special Services needs						12	\$ 2,758
	4	Basic	Prepare permit applications (road crossings, railroad crossings, Texas Commission on Environmental Quality)						190	\$ 35,882
	5	Basic	Coordinate with affected utility companies						124	\$ 23,100
	6	Basic	Prepare revised OPCC (60%, 90% and 100%)						282	\$ 54,781
	7	Basic	Prepare 60% drawings, spec TOC, construction contract documents. Meet with Owner to review (see Item A3c)					40	2,596	\$ 468,357
	8	Basic	Prepare 90% drawings, specifications, bid proposals. Meet with Owner to review (see Item A3c)					40	2,679	\$ 483,605
	9	Basic	Prepare 100% drawings, specifications, bid proposals, OPCC. Meet with owner to review (see Item A3c).					40	2,420	\$ 434,142

**City of Pflugerville  
Secondary Raw Water Line  
2/1/2022  
Detailed Cost Breakdown**

Tasks				Geotech QC		Architectural		Elec QC		Total Hours	Total Labor Effort
Phase	Task	Basic or Special	Task Description	Tony Bosecker	Parris Jones	Homer Saenz	Luis Lopez	Wade Zemlock			
				Geotech QC	Architect	Architect	Architect Tech	Electrical QC			
				\$253	\$253	\$190	\$121	\$253			
	10	Basic	Deliverables: 60% design documents, 90% design documents, 100% design documents, Final design documents, front end documents, permit applications								\$ -
<b>E</b>				<b>Bid or Negotiation Phase</b>							\$ -
	1	Basic	Assist Owner / CMAR in securing bids (4 bid packages)						120		\$ 24,375
	2	Basic	Assist Owner / CMAR by responding to questions; Prepare and issue addenda						354		\$ 66,672
	3	Basic	Assist Owner /CMAR in conducting pre-bid conference						16		\$ 3,340
	4	Basic	Assist Owner in opening, tabulating, analyzing bids received; review qualifications and recommend award						66		\$ 13,064
	5	Basic	Prepare ten (10) sets of Construction Contract Documents						82		\$ 14,868
	6	Basic	Furnish contractor copies of drawings and specifications						10		\$ 2,148
	7	Basic	Deliverables: Notice to Bidders, Electronic bid documents/addenda, selection criteria, recommendation of award, bid tab, notice of award, conformed documents								\$ -
<b>Article II</b>				<b>Special Services</b>							\$ -
	A	Special	Environmental Services						220		\$ 31,429
	B	Special	Subsurface Utility Engineering Services						124		\$ 22,676
	C	Special	Surveying, Easement Documents, and Platting Services						92		\$ 16,187
	D	Special	Physical Model of Pump Suction Piping/Intake						52		\$ 10,770
	E	Special	Corrosion Engineering Services						606		\$ 110,585
	F	Special	Surge Protection Engineering Services						1,136		\$ 211,555
	G	Special	Geotechnical Engineering	24					468		\$ 94,623
	H	Special	Easement Acquisition Services						280		\$ 52,624
	I	Special	Archeological Field Investigation						72		\$ 13,503
<b>Article III</b>				<b>Supplemental Services</b>							\$ -
	A	Special	Texas Water Development Board Coordination						856		\$ 143,574
	B	Special	New Pump Station Electrical Building		12	73	220		719		\$ 112,139
	C	Special	Unforeseen Design						544		\$ 100,797
<b>Total Hours / Quantity</b>				<b>24</b>	<b>12</b>	<b>73</b>	<b>220</b>	<b>160</b>	<b>22,385</b>		
<b>Total Effort</b>				<b>\$ 6,315</b>	<b>\$ 3,157</b>	<b>\$ 14,425</b>	<b>\$ 27,685</b>	<b>\$ 42,099</b>			<b>\$ 4,200,682</b>

<b>City of Pflugerville</b> <b>Secondary Raw Water Line</b> <b>2/1/2022</b> <b>Detailed Cost Breakdown</b>	<b>Project Fee Summary</b>		
	Basic Services		3,700,038
	Special Services		3,609,728
	<b>Total Project</b>		<b>7,309,766</b>

Tasks				Expenses						
Phase	Task	Basic or Special	Task Description	Tech Charge	Miles	Meals	Hotel	B&W (sheet)	Color (sheet)	Total Expense Effort
<b>A Project Management</b>										
	1	Basic	Conduct external kickoff meeting	40						\$ 340
	2	Basic	Manage internal design team / subconsultants and perform quality review of deliverables (13 months)	1,234						\$ 10,489
	3a	Basic	Attend 17 project coordination meetings with Owner (half in person)	240	1,600					\$ 3,120
	3b	Basic	Attend 3 meetings with utility provider	82						\$ 697
	3c	Basic	Attend 4 workshops for milestone design submittals	352	1,600					\$ 4,072
	3d	Basic	Attend 2 public meetings with display documents	68						\$ 578
	3e	Basic	Attend 6 Meetings with Austin Water, Austin Energy and Texas Department of Transportation	146						\$ 1,241
	3f	Basic	Attend 10 meetings with CMAR (half by phone) and assist with CMAR procurement	284						\$ 2,414
	4	Basic	Prepare MS Project schedule and monthly updates	24						\$ 204
	5	Basic	Prepare monthly one page report and invoice	24						\$ 204
	6	Basic	Assist Owner with procurement of CMAR	290	1,000					\$ 3,140
	7	Basic	Deliverables: Agendas, Minutes, Monthly Schedule, Monthly Reporting, Monthly Invoices							\$ -
<b>B Study Phase</b>										
	1	Basic	Collect and review existing data	322	1,000	200	200			\$ 3,872
	2a	Basic	Determine pump station / pipeline size, capacity, head requirements, system operations protocols, location.	418						\$ 3,553
	2b	Basic	Prepare life cycle cost analysis of pipe diameter.	58						\$ 493
	3	Basic	Review alignment analysis, verify easement needs, complete site visits to points of public access	320	2,000	200				\$ 4,300
	4a	Basic	Prepare onsite drainage analysis for pump station with memo	156						\$ 1,326
	4b	Basic	Prepare water quality calculations for pump station with memo and coordinate with COA	166						\$ 1,411
	5	Basic	Prepare Study Phase Memorandum and OPCC	682	500	200	200			\$ 6,595
	6	Basic	Review memorandum with Owner in person	54	1,000	100				\$ 1,249
	7	Basic	Deliverables: Draft Memo, Final Memo							\$ -
<b>C Preliminary Design Phase</b>										
	1	Basic	Prepare final hydraulic design basis	180						\$ 1,530
	2	Basic	Conduct hydraulic design basis workshop with Owner and design leads from major disciplines (see Item A3c)	38	1,000	100				\$ 1,113
	3	Basic	Prepare preliminary floor plan layouts and sections. Include conceptual design/layout for structural, electrical, HVAC.	589						\$ 5,007
	4	Basic	Prepare preliminary one-line diagrams, power load study, PI&D and equipment tagging	36						\$ 306
	5	Basic	Prepare preliminary site layout	400						\$ 3,400
	6	Basic	Proceed with final pipeline alignment from study phase	608						\$ 5,168
	6a	Basic	Obtain right-of-entry; provide GIS alignment to surveyor	28						\$ 238
	6b	Basic	Review alignment in field; determine final pipeline alignment	308	1,000	100				\$ 3,408
	6c	Basic	Meet with Austin Water, A Enstinerly, Texas Department of Transportation, Union Pacific Railroad, Travis County and United States Corps of Engineers [see item A3e]	236						\$ 2,006
	6d	Basic	Update GIS mapping to final alignment (1) based on field alignment selection and then (2) based on Owner comments. Prepare final map book.	452						\$ 3,842
	7	Basic	Deliverables: Draft Map Book, Final Map Book							\$ -
<b>D Final Design Phase</b>										
	1	Basic	Coordinate with CMAR as required	336						\$ 2,856
	2	Basic	Prepare front end documents for construction and equipment packages, revise per Owner comment	94						\$ 799
	3	Basic	Advise Owner of additional Special Services needs	12						\$ 102
	4	Basic	Prepare permit applications (road crossings, railroad crossings, Texas Commission on Environmental Quality)	190						\$ 1,615
	5	Basic	Coordinate with affected utility companies	124	2,000	200				\$ 2,634
	6	Basic	Prepare revised OPCC (60%, 90% and 100%)	282						\$ 2,397
	7	Basic	Prepare 60% drawings, spec TOC, construction contract documents. Meet with Owner to review (see Item A3c)	2,596						\$ 22,066
	8	Basic	Prepare 90% drawings, specifications, bid proposals. Meet with Owner to review (see Item A3c)	2,679						\$ 22,772
	9	Basic	Prepare 100% drawings, specifications, bid proposals, OPCC. Meet with owner to review (see Item A3c).	2,420					1000	\$ 20,820

<b>City of Pflugerville</b> <b>Secondary Raw Water Line</b> <b>2/1/2022</b> <b>Detailed Cost Breakdown</b>	<b>Project Fee Summary</b>		
	Basic Services		3,700,038
	Special Services		3,609,728
	<b>Total Project</b>		<b>7,309,766</b>

Tasks				Expenses						
Phase	Task	Basic or Special	Task Description	Tech Charge	Miles	Meals	Hotel	B&W (sheet)	Color (sheet)	Total Expense Effort
	10	Basic	Deliverables: 60% design documents, 90% design documents, 100% design documents, Final design documents, front end documents, permit applications							\$ -
										\$ -
<b>E</b>	<b><u>Bid or Negotiation Phase</u></b>									<b>\$ -</b>
	1	Basic	Assist Owner / CMAR in securing bids (4 bid packages)	120	1,000					\$ 1,695
	2	Basic	Assist Owner / CMAR by responding to questions; Prepare and issue addenda	354						\$ 3,009
	3	Basic	Assist Owner /CMAR in conducting pre-bid conference	16						\$ 136
	4	Basic	Assist Owner in opening, tabulating, analyzing bids received; review qualifications and recommend award	66	1,000					\$ 1,236
	5	Basic	Prepare ten (10) sets of Construction Contract Documents	82					1000	\$ 947
	6	Basic	Furnish contractor copies of drawings and specifications	10						\$ 85
	7	Basic	Deliverables: Notice to Bidders, Electronic bid documents/addenda, selection criteria, recommendation of award, bid tab, notice of award, conformed documents							\$ -
										\$ -
<b>Article II</b>	<b><u>Special Services</u></b>									<b>\$ -</b>
	A	Special	Environmental Services	220						\$ 1,870
	B	Special	Subsurface Utility Engineering Services	124						\$ 1,054
	C	Special	Surveying, Easement Documents, and Platting Services	92						\$ 782
	D	Special	Physical Model of Pump Suction Piping/Intake	52						\$ 442
	E	Special	Corrosion Engineering Services	606						\$ 5,151
	F	Special	Surge Protection Engineering Services	1,136						\$ 9,656
	G	Special	Geotechnical Engineering	468						\$ 3,978
	H	Special	Easement Acquisition Services	280	4,000	400				\$ 5,540
	I	Special	Archeological Field Investigation	72						\$ 612
										\$ -
<b>Article III</b>	<b><u>Supplemental Services</u></b>									<b>\$ -</b>
	A	Special	Texas Water Development Board Coordination	856						\$ 7,276
	B	Special	New Pump Station Electrical Building	719						\$ 6,112
	C	Special	Unforeseen Design	544						\$ 4,624
<b>Total Hours / Quantity</b>				<b>22,385</b>	<b>18,700</b>	<b>1,500</b>	<b>400</b>	<b>-</b>	<b>2,000</b>	
<b>Total Effort</b>				<b>\$ 190,273</b>	<b>\$ 12,623</b>	<b>\$ 1,725</b>	<b>\$ 460</b>	<b>\$ -</b>	<b>\$ 500</b>	<b>\$ 205,580</b>

<b>City of Pflugerville</b> <b>Secondary Raw Water Line</b> <b>2/1/2022</b> <b>Detailed Cost Breakdown</b>	<b>Project Fee Summary</b>		
	Basic Services		3,700,038
	Special Services		3,609,728
	<b>Total Project</b>		<b>7,309,766</b>

Tasks				Subconsultants							Total	
Phase	Task	Basic or Special	Task Description	Raba Kistner - Geotech	7Arrows - Land Services	Rios Group (TRG) - SUE	McGray - Survey	CEH - Physical Model	AmaTerra - Archeological	Gupta - Electrical	Total Sub Effort	Total Effort
<b>A</b>			<b>Project Management</b>								\$ -	\$ 642,009
	1	Basic	Conduct external kickoff meeting								\$ -	\$ 8,974
	2	Basic	Manage internal design team / subconsultants and perform quality review of deliverables (13 months)								\$ -	\$ 284,513
	3a	Basic	Attend 17 project coordination meetings with Owner (half in person)								\$ -	\$ 54,832
	3b	Basic	Attend 3 meetings with utility provider								\$ -	\$ 17,796
	3c	Basic	Attend 4 workshops for milestone design submittals								\$ -	\$ 80,784
	3d	Basic	Attend 2 public meetings with display documents								\$ -	\$ 14,690
	3e	Basic	Attend 6 Meetings with Austin Water, Austin Energy and Texas Department of Transportation								\$ -	\$ 32,426
	3f	Basic	Attend 10 meetings with CMAR (half by phone) and assist with CMAR procurement								\$ -	\$ 63,020
	4	Basic	Prepare MS Project schedule and monthly updates								\$ -	\$ 5,866
	5	Basic	Prepare monthly one page report and invoice								\$ -	\$ 5,866
	6	Basic	Assist Owner with procurement of CMAR								\$ -	\$ 73,244
	7	Basic	Deliverables: Agendas, Minutes, Monthly Schedule, Monthly Reporting, Monthly Invoices								\$ -	\$ -
											\$ -	\$ -
<b>B</b>			<b>Study Phase</b>								\$ -	\$ 434,774
	1	Basic	Collect and review existing data								\$ -	\$ 64,610
	2a	Basic	Determine pump station / pipeline size, capacity, head requirements, system operations protocols, location.								\$ -	\$ 82,843
	2b	Basic	Prepare life cycle cost analysis of pipe diameter.								\$ -	\$ 11,278
	3	Basic	Review alignment analysis, verify easement needs, complete site visits to points of public access								\$ -	\$ 64,271
	4a	Basic	Prepare onsite drainage analysis for pump station with memo								\$ -	\$ 30,151
	4b	Basic	Prepare water quality calculations for pump station with memo and coordinate with COA								\$ -	\$ 31,694
	5	Basic	Prepare Study Phase Memorandum and OPCC								\$ -	\$ 136,686
	6	Basic	Review memorandum with Owner in person								\$ -	\$ 13,242
	7	Basic	Deliverables: Draft Memo, Final Memo								\$ -	\$ -
											\$ -	\$ -
<b>C</b>			<b>Preliminary Design Phase</b>								\$ -	\$ 650,061
	1	Basic	Prepare final hydraulic design basis								\$ -	\$ 36,561
	2	Basic	Conduct hydraulic design basis workshop with Owner and design leads from major disciplines (see Item A3c)								\$ -	\$ 9,265
	3	Basic	Prepare preliminary floor plan layouts and sections. Include conceptual design/layout for structural, electrical, HVAC.								\$ -	\$ 111,523
	4	Basic	Prepare preliminary one-line diagrams, power load study, PI&D and equipment tagging							90850	\$ 90,850	\$ 98,881
	5	Basic	Prepare preliminary site layout								\$ -	\$ 78,446
	6	Basic	Proceed with final pipeline alignment from study phase								\$ -	\$ 116,465
	6a	Basic	Obtain right-of-entry; provide GIS alignment to surveyor								\$ -	\$ 5,975
	6b	Basic	Review alignment in field; determine final pipeline alignment								\$ -	\$ 59,851
	6c	Basic	Meet with Austin Water, A Enstleringy, Texas Department of Transportation, Union Pacific Railroad, Travis County and United States Corps of Engineers [see item A3e]								\$ -	\$ 45,266
	6d	Basic	Update GIS mapping to final alignment (1) based on field alignment selection and then (2) based on Owner comments. Prepare final map book.								\$ -	\$ 87,828
	7	Basic	Deliverables: Draft Map Book, Final Map Book								\$ -	\$ -
											\$ -	\$ -
<b>D</b>			<b>Final Design Phase</b>								\$ -	\$ 1,835,596
	1	Basic	Coordinate with CMAR as required								\$ -	\$ 76,796
	2	Basic	Prepare front end documents for construction and equipment packages, revise per Owner comment								\$ -	\$ 19,309
	3	Basic	Advise Owner of additional Special Services needs								\$ -	\$ 2,860
	4	Basic	Prepare permit applications (road crossings, railroad crossings, Texas Commission on Environmental Quality)								\$ -	\$ 37,497
	5	Basic	Coordinate with affected utility companies								\$ -	\$ 25,734
	6	Basic	Prepare revised OPCC (60%, 90% and 100%)								\$ -	\$ 57,178
	7	Basic	Prepare 60% drawings, spec TOC, construction contract documents. Meet with Owner to review (see Item A3c)							54820	\$ 54,820	\$ 545,243
	8	Basic	Prepare 90% drawings, specifications, bid proposals. Meet with Owner to review (see Item A3c)							54820	\$ 54,820	\$ 561,197
	9	Basic	Prepare 100% drawings, specifications, bid proposals, OPCC. Meet with owner to review (see Item A3c).							54820	\$ 54,820	\$ 509,782

<b>City of Pflugerville</b> <b>Secondary Raw Water Line</b> <b>2/1/2022</b> <b>Detailed Cost Breakdown</b>	<b>Project Fee Summary</b>		
	Basic Services		3,700,038
	Special Services		3,609,728
	<b>Total Project</b>		<b>7,309,766</b>

Tasks				Subconsultants						Total		
Phase	Task	Basic or Special	Task Description	Raba Kistner - Geotech	7Arrows - Land Services	Rios Group (TRG) - SUE	McGray - Survey	CEH - Physical Model	AmaTerra - Archeological	Gupta - Electrical	Total Sub Effort	Total Effort
	10	Basic	Deliverables: 60% design documents, 90% design documents, 100% design documents, Final design documents, front end documents, permit applications								\$ -	\$ -
<b>E</b>				<b>Bid or Negotiation Phase</b>						<b>\$ -</b>	<b>\$ 137,599</b>	
	1	Basic	Assist Owner / CMAR in securing bids (4 bid packages)								\$ -	\$ 26,070
	2	Basic	Assist Owner / CMAR by responding to questions; Prepare and issue addenda								\$ -	\$ 69,681
	3	Basic	Assist Owner /CMAR in conducting pre-bid conference								\$ -	\$ 3,476
	4	Basic	Assist Owner in opening, tabulating, analyzing bids received; review qualifications and recommend award							6025	\$ 6,025	\$ 20,325
	5	Basic	Prepare ten (10) sets of Construction Contract Documents								\$ -	\$ 15,815
	6	Basic	Furnish contractor copies of drawings and specifications								\$ -	\$ 2,233
	7	Basic	Deliverables: Notice to Bidders, Electronic bid documents/addenda, selection criteria, recommendation of award, bid tab, notice of award, conformed documents								\$ -	\$ -
<b>Article II</b>				<b>Special Services</b>						<b>\$ -</b>	<b>\$ 3,206,456</b>	
	A	Special	Environmental Services								\$ -	\$ 33,299
	B	Special	Subsurface Utility Engineering Services			284,887					\$ 284,887	\$ 308,617
	C	Special	Surveying, Easement Documents, and Platting Services				913,030				\$ 913,030	\$ 929,999
	D	Special	Physical Model of Pump Suction Piping/Intake					51,750			\$ 51,750	\$ 62,962
	E	Special	Corrosion Engineering Services								\$ -	\$ 115,736
	F	Special	Surge Protection Engineering Services								\$ -	\$ 221,211
	G	Special	Geotechnical Engineering	595,430							\$ 595,430	\$ 694,031
	H	Special	Easement Acquisition Services		711,563						\$ 711,563	\$ 769,727
	I	Special	Archeological Field Investigation						56,759		\$ 56,759	\$ 70,875
<b>Article III</b>				<b>Supplemental Services</b>						<b>\$ -</b>	<b>\$ 403,271</b>	
	A	Special	Texas Water Development Board Coordination								\$ -	\$ 150,850
	B	Special	New Pump Station Electrical Building							28750	\$ 28,750	\$ 147,001
	C	Special	Unforeseen Design								\$ -	\$ 105,421
<b>Total Hours / Quantity</b>				<b>\$ 595,430</b>	<b>\$ 711,563</b>	<b>\$ 284,887</b>	<b>\$ 913,030</b>	<b>\$ 51,750</b>	<b>\$ 56,759</b>	<b>\$ 290,085</b>		
<b>Total Effort</b>				<b>\$ 595,430</b>	<b>\$ 711,563</b>	<b>\$ 284,887</b>	<b>\$ 913,030</b>	<b>\$ 51,750</b>	<b>\$ 56,759</b>	<b>\$ 290,085</b>	<b>\$ 2,903,504</b>	<b>\$ 7,309,766</b>