

---

# PROFESSIONAL SERVICES AGREEMENT

(Professional Engineering Services)

---

## 1. PARTIES

- 1.1 Parties. The Parties to this Professional Services Agreement (“Agreement”) are **InfraTECH Engineers & Innovators, LLC** (“Engineer”), and **Harris County** (“County”), on behalf of its Harris County Engineering Department (“HCED”). County and Engineer each may also be referred to individually herein as a “Party,” or collectively as the “Parties.”

## 2. PURPOSE

- 2.1 Project Description. County intends for Professional Engineering Services in connection with Fairmont Parkway 2 from 700 feet west of Canada Drive to Underwood Road - 2024, located in Harris County, Precinct 2 (“Project”). This Project is identified as UPIN 24102MF3KK01.
- 2.2 Scope of Work. In addition to any applicable attachments to this Agreement describing the Scope of Work, County desires that Engineer provide Professional Engineering Services in the survey, design, and construction phases of the Project, as further described in Exhibit A attached.
- 2.3 Professional Engineering Services. The professional services to be performed under this Agreement are within the scope of professional engineering, as defined by state law, and will be provided in connection with the professional employment or practice of a person who is licensed or registered as a professional engineer. The professional engineering services shall be performed in accordance with Tex. Occ. Code Ann. §§ 1001.001, et. seq, as amended.
- 2.4 Professional Services Procurement Act. The work to be performed under this Agreement cannot be purchased on the basis of competitive bids since it is encompassed within Texas Government Code §2254.002(2).

## 3. ENGINEER’S REPRESENTATIONS

- 3.1 Applicable Expertise. Engineer and the person executing this Agreement on behalf of Engineer certify and represent that Engineer (including Engineer’s agents, employees, volunteers, and subcontractors, as applicable) possesses the skills, qualifications, expertise, experience, education, knowledge, ability, and financial resources to perform all services and/or deliverables contemplated in this Agreement without significant disruption of those deliverables.
- 3.2 Permits and Licensing. Engineer represents that Engineer (including Engineer’s agents, employees, volunteers, and subcontractors, as applicable) possesses all special certifications, licenses, inspections and permits required by law to carry out the Scope of Work contemplated in this Agreement. Engineer’s agents, employees, volunteers, and subcontractors, as applicable, shall maintain appropriate accreditation and licensing, as required, through the State of Texas or other applicable licensing entities. Prior to the performance of any services under this Agreement, Engineer shall, upon written (including electronic) request, provide proof of valid licensure to HCED (including a listing of all licenses and expiration dates).
- 3.3 Authorized to Conduct Business. Engineer represents that Engineer is authorized to conduct the business and carry out the Scope of Work contemplated in this Agreement. Prior to starting performance under this Agreement, Engineer shall, upon written (including electronic) request, provide proof to HCED of the authority to do business in this state or at the location specified in this Agreement.
- 3.4 Ability to Perform. HCED will award contracts only to the most highly qualified available responsible provider/contractor possessing the ability to perform successfully under the terms, conditions, and budget of a proposed procurement. Consideration will be given to such matters as provider integrity, compliance with public policy, record of past performance, and financial and technical resources. Engineer represents

that Engineer has the administrative, managerial, and financial capability to ensure proper planning, management and completion of the Scope of Work described in this Agreement and further has the administrative capacity and capabilities to carry out all duties and responsibilities under this Agreement.

- 3.5 Conflict of Interest Certification. Pursuant to Chapter 176 of the Texas Local Government Code, Engineer certifies that Engineer has completed any required conflict of interest disclosures or questionnaires (see [www.ethics.state.tx.us](http://www.ethics.state.tx.us)). If this certification is materially incomplete or inaccurate, Engineer acknowledges that County shall have the right to terminate this Agreement without prior notice.
- 3.6 Certificate of Interested Parties Form 1295. Engineer certifies that it has accurately completed and submitted a notarized Certificate of Interested Parties Form 1295 ("Form 1295") in accordance with Texas Government Code §2252.908 and the rules adopted thereunder. Engineer acknowledges that it is responsible for making any and all necessary updates and/or corrections to the applicable Form 1295 during the term of this Agreement. Engineer must either (1) mail the completed Form 1295 to the Harris County Engineering Department at 1111 Fannin Street, 11th Floor, Houston, TX 77002, Attn: Administrative Services or (2) submit the form by email to [HCEDAdminSvc@harriscountytexas.gov](mailto:HCEDAdminSvc@harriscountytexas.gov).
- 3.7 Disbursements to Persons with Outstanding Debt Prohibited. Engineer certifies, by execution of this Agreement, that neither Engineer nor any of Engineer's principals owe any debts as defined in Local Government Code Section 154.045 (including delinquent property taxes). Engineer understands that certain disbursements are prohibited and that County may apply any funds due to Engineer under this Agreement to any outstanding balance of certain debts pursuant to Section 154.045. If this certification is inaccurate, County may also terminate this Agreement. In addition, Engineer hereby assigns any payments under this Agreement to the Harris County Tax Assessor-Collector for the payment of any current or future delinquent taxes.
- 3.8 Internet Access. Engineer shall maintain appropriate internet access, which will enable Engineer to access any secure online invoicing, reporting, or other web-based system designed for more efficient communication with HCED. As requested, Engineer shall submit required reports, invoices and related documents through an applicable secure internet site in a manner required to protect any confidential information submitted. Engineer shall review all instruction materials and/or attend all HCED provided training that is necessary for Engineer to properly utilize applicable web-based information systems.

#### **4. SPECIFIC SCOPE OF WORK/SERVICES AND/OR DELIVERABLES**

- 4.1 Specific work, products, services, licenses and/or deliverables. Engineer shall provide the work, products, services, licenses and/or deliverables required to be provided by Engineer and as set out in this Agreement and in Attachment A and all other referenced attachments incorporated in this Agreement (altogether referred to as the Scope of Work). The provisions in this Agreement labeled 'Scope of Services' or 'Scope of Work' shall take precedence over anything conflicting in any attached Engineer proposal or correspondence. Engineer shall submit any and all project-related documents and invoices through the cloud-based project management software utilized by HCED for planning and management of all projects using real-time project data.
- 4.2 Written Authorization. From time to time during the course of this Agreement, HCED may deliver to Engineer written (including electronic) authorization (sometimes referred to as a notice-to-proceed, task-order, work-order or job-order) for providing certain work, products, services, licenses and/or deliverables contemplated in this Agreement, which Engineer shall then perform in accordance with this Agreement. Engineer shall not begin or proceed to the next design phase of the Scope of Work until Engineer receives from HCED a written (including electronic) authorization to proceed. County shall have no obligation to pay for and Engineer shall have no obligation to provide any work, services, products, or deliverables not rendered in accordance with a prior written authorization as described by this Section. Engineer shall complete the services called for by the calendar days and by the deadlines specified in this Agreement, including exhibits and written authorizations.

## 5. ADDITIONAL AND SPECIAL REQUIREMENTS

- 5.1 Cooperation with Other Service Providers. County may engage the services of other service providers for work related to the work, products, services, licenses and/or deliverables in this Agreement. Engineer shall reasonably cooperate with such other service providers and will not commit or permit any act that may interfere with the performance of work by any other service provider.
- 5.2 Non-Assignability. Unless otherwise authorized in this Agreement, neither party shall assign, in whole or in part, any duty or obligation of performance under this Agreement without the express written permission of the other party, except that the express written permission of HCED shall be considered the permission of County. Such written permission will not be unreasonably withheld, unreasonably conditioned, or unreasonably delayed. However, with notice to HCED, Engineer may assign this Agreement to any affiliate of Engineer that controls, is controlled by, has resulted from a merger with, or is under common control with, Engineer if the assignee is at least as capable and qualified to provide the deliverables contemplated in this Agreement. This provision is not intended to restrict any assignment that is required by Section 9.406 of the Texas Business and Commerce Code.
- 5.3 Independent Contractor/Parties. County expects Engineer to meet the high standards set forth in this Agreement and looks to Engineer for results only. Unless otherwise required by law or regulation, County shall not direct the methods used to obtain those results, and Engineer shall perform the services as an independent contractor under the sole supervision, management, direction, and control of Engineer. As an independent contractor, Engineer will accept directions pertaining to the goals to be attained and the results to be achieved, as applicable, pursuant to this Agreement, but Engineer shall be solely responsible for the manner in which Engineer will perform the services under this Agreement. Any methods that might be discussed in any training sessions given by HCED are not mandatory unless specifically required in writing in this Agreement or by law. Engineer is not obligated to maintain any set, regular hours, nor to perform any set number of hours of service in fulfilling the obligations under this Agreement, unless otherwise specifically set out in this Agreement. This Agreement is not intended to create a joint enterprise, joint venture, business partnership, agency, franchise, or employment relationship, under Texas law. The personnel and staff of Engineer are independent contractors or employees of Engineer and shall not for any purposes be considered employees or agents of County. Engineer assumes full responsibility for the actions of any employees and agents while performing any services incident to this Agreement, and Engineer shall remain solely responsible for the supervision, daily direction, control and payment, if any, of salaries (including withholding of income and social security taxes), workers' compensation or disability benefits and like requirements and obligations.
- 5.4 Employee Retention. Engineer agrees to maintain the organizational and administrative capacity and capabilities to carry out all duties and responsibilities under this Agreement. The personnel Engineer assigns to perform the duties and responsibilities under this Agreement will be properly trained and qualified for the functions they are to perform. If specific qualifications are set forth in job descriptions required by the funding entity and/or in this Agreement, unless a written waiver is granted, Engineer shall only assign personnel with the required qualifications to fulfill those functions. Notwithstanding transfer or turnover of personnel, Engineer remains obligated to perform all duties and responsibilities under this Agreement without degradation and in accordance with the terms of this Agreement.
- 5.5 Significant Organizational Change Notification. Engineer shall notify County immediately and in advance of any significant organizational change that could affect Engineer's ability to carry out all duties and responsibilities under this Agreement, including any change of Engineer's name or identity, ownership or control, or payee identification number. Engineer shall also provide written notice to County within 10 working days of the change. Engineer shall provide ownership information to County immediately upon any such change.
- 5.6 Adverse Actions Reporting. Engineer shall inform HCED, in writing, of any concluded investigation of Engineer (including Engineer's agents, employees, volunteers, and subcontractors, as applicable, providing work, products, services, licenses and/or deliverables under this Agreement) that is conducted by or on behalf of a government entity or other licensing or accreditation entity (including any state board of

examiners) and whose outcome included public censure or other public sanction (or any pending investigations, administrative actions, or lawsuits, that relate to the work under this Agreement or that could adversely affect any performance or obligation in this Agreement). If at any time a license of Engineer's agents, employees, volunteers, and subcontractors, as applicable, providing work, products, services, licenses and/or deliverables under this Agreement required to be maintained to fulfill the Commitments in this Agreement is suspended, revoked or is determined to be out of compliance in Texas or any other state, this Agreement may be terminated immediately without prior notice, at the option of HCED, effective the date of the suspension, revocation or non-compliance. Engineer is not entitled to receive payment for services that were performed by Engineer while the required license was suspended or revoked. Engineer agrees to immediately inform HCED, in writing, of any adverse professional review action that is taken by a professional association or society and that is based on the professional competence or professional conduct of Engineer's agents, employees, volunteers, and subcontractors, as applicable, providing work, products, services, licenses and/or deliverables under this Agreement. County may, at its sole option, terminate this Agreement, upon notice of such adverse professional review action.

- 5.7 Subcontracts. Unless otherwise explicitly set out in this Agreement, Engineer shall not enter into any subcontract for the work, products, services, licenses and/or deliverables under this Agreement unless, prior to any written authorization to proceed with work done in part by the subcontractor, Engineer has provided to HCED the qualifications of the subcontractor to perform and meet the standards of this Agreement. Engineer shall comply with all Texas Administrative Code and Texas professional licensing agency requirements for choosing any professionally-licensed subcontractor.
- 5.8 Professional Standards. Where specifically-applicable standards are not explicitly set forth in this Agreement, as someone with expertise in the field, Engineer must provide the work, products, services, licenses and/or deliverables in accordance with generally-accepted standards applicable to Engineer's profession or industry. Engineer and County agree and acknowledge that County is entering into this Agreement in reliance on the Engineer's competence and qualifications, as those were presented to County by Engineer with respect to professional services. Engineer shall at all times utilize the skill and attention to fully, timely, and properly render professional services for the development of The Project to final completion as set out in, or reasonably inferred from, the Scope of Work/Services. This shall be done in a manner utilizing the degree of care ordinarily used by licensed professionals performing similar services on projects of a similar nature and scope within the State of Texas. A professional engineer assigned by Engineer to manage the Scope of Work who is licensed to practice in the State of Texas shall be present and represent Engineer at meetings of any official nature concerning The Project, including, but not limited to, scope meetings, status meetings, pre-bid meetings, any pre-construction meetings and any construction meetings (for construction-related projects) with County staff and/or contractors, unless otherwise set forth in the Scope of Work or approved in writing by HCED.
- 5.9 County Procedures. To effectively perform the services stated above, Engineer must become familiar with various procedures, policies, data collection systems, and other information of County. Engineer shall adhere to all applicable County engineering guidelines, standards, and design criteria (see <http://www.eng.hctx.net>). HCED will assist Engineer in obtaining the information. Unless otherwise required by law, Engineer agrees to keep any sensitive information confidential and not disclose it to outside parties without first obtaining County's written authorization.
- 5.10 Ownership of Work Product. For the purposes of assigning ownership of Engineer work product, the work performed will be deemed, to the extent authorized by law, to have been done on a works-made-for-hire basis, as that term is understood in copyright law. In the event and to the extent that such works are determined not to constitute works-made-for-hire, Engineer hereby irrevocably assigns and transfers to County all right, title, and interest in such works, including, but not limited to, copyrights. County shall be the absolute and unqualified owner of all completed or partially-completed Engineer work product prepared pursuant to this Professional Services Agreement and shall have the same force and effect as if prepared by County, including mylar reproductions, drawings, preliminary layouts, electronic documents and drawings, record drawings, sketches, plans, cost estimates, inventions, designs, computer input/output information, computer applications, software, firmware, computations, and other documents (including the original electronic file format). Engineer may retain one set of reproducible copies for Engineer's sole use in

preparation of studies or reports for County only. Engineer is expressly prohibited from selling, licensing or donating such documents, or using such documents in the preparation of other work for any other client, without the prior express written permission of HCED. Engineer warrants that Engineer's work product will not in any way constitute an infringement or other violation of any copyright, trade secret, trademark, patent, invention, proprietary information, non-disclosure, or any other right of any third party, and Engineer will defend any claim, suit, or proceeding brought against County on the issue of infringement of any copyright by virtue of anything supplied by Engineer to HCED under this Agreement.

- 5.11 Trade Secrets. In connection with the work, products, services, licenses, Scope of Work, and/or deliverables provided under this Agreement, HCED may disclose to Engineer certain documents, data, and/or other information that is proprietary, confidential, or a trade secret (Trade Secrets). Engineer must not divulge or otherwise make unauthorized use of Trade Secrets or other protected information, procedures, or policies of HCED, any former employee, contractor, client, customer, or consultant, in the exercise of duties under this Agreement. Except to the extent authorized by a third party, neither Party shall copy, recreate, or use any proprietary information of a third party in the performance of services under this Agreement.
- 5.12 Nondisclosure and Confidentiality of Information. To the extent permitted by law, Engineer must keep confidential the contents of all discussions with local, state, and federal officials, as well as the contents of all local, state, and federal records and all other information obtained during performance under this Agreement. To fulfill Engineer's obligations under this Agreement, Engineer may be provided access to information, systems, operations, or procedures that are security sensitive or have been identified as confidential. This confidential information may include information from one of the government entity funding sources, such as a Texas or federal agency. Engineer and the person executing this Agreement on behalf of Engineer acknowledge that (a) access to this information (whether electronic, written or oral, formal or informal) is provided solely to Engineer for the purpose of discharging the duties in this Agreement, (b) premature or unauthorized disclosure of this information can irreparably harm the interests of County and may constitute a violation of state and/or federal law, and (c) the information may represent confidential or proprietary information, the release of which may be restricted or prohibited by law. Therefore, Engineer must (1) not access any information without express written authorization of HCED; (2) not copy, recreate, or use any information or document obtained in connection with this Agreement other than for the performance of this Agreement; (3) to the extent permitted by law, keep confidential the contents of all discussions with county, state, and federal officials, as well as the contents of all county, state, and federal records and all other information obtained during performance under this Agreement, unless authorized in writing by appropriate HCED officials; (4) not, except to the extent required by law, or necessary for the performance of this Agreement, release, disclose, reveal, communicate, impart or divulge any information or any summary or synopsis of the information in any manner or any form whatsoever to outside parties without the express written consent of HCED; (5) take all steps necessary to protect confidential information from disclosure to third parties and have a system in effect that must include a method to ensure the confidentiality of records and other information relating to any person according to applicable federal and state law, rules and regulations; (6) not reproduce, copy, or disseminate such confidential information, except to those who need to know such information and are obligated to maintain its confidentiality, including Engineer's partners, principals, representatives or employees as necessary to fulfill obligations under this Agreement; (7) notify HCED immediately of all requests for confidential information; and (8) immediately report to HCED all unauthorized disclosures or uses of confidential information.
- 5.13 Public Comment and Public Information Act. To the extent permitted by law, all contact with the news media, citizens of County, the State of Texas or other governmental agencies concerning The Project will be the responsibility of HCED. In the event Engineer is subject to the Texas Public Information Act, upon receipt of a written request for any information by Engineer developed in the performance of services under this Agreement, Engineer shall provide written notice to HCED of the request along with a copy of the request, and give HCED the opportunity to respond to the request prior to any release by Engineer. Unless required by law, under no circumstances shall Engineer release any material or information developed in the performance of services under this Agreement without the express prior written permission of HCED.



- 5.14 Applicable Laws. Engineer shall comply (and assure compliance by Engineer's agents, employees, volunteers, and subcontractors, as applicable, providing work, products, services, licenses and/or deliverables under this Agreement) with all applicable state, federal, and local laws, ordinances, regulations, executive orders, rules, directives, standards, guidelines, and instructions relating to the work to be performed. Engineer shall immediately bring to County's attention any conflicts between any applicable state, federal, and local laws, ordinances, regulations, executive orders, rules, directives, standards, guidelines, and instructions relating to the work to be performed. If laws or regulations change and affect any provision of this Agreement, this Agreement shall be deemed amended to conform to those changes in the laws or regulations on the date such laws or regulations become effective. If any such changes (that occur after the effective date of this Agreement and that Engineer should not reasonably have anticipated) require significant changes or additions to the Scope of Work that were not contemplated by the Parties, the Parties shall negotiate in good faith for the purpose of creating reasonable and equitable written modifications to this Agreement.
- 5.15 Records Retention and Management. Engineer shall maintain complete, accurate, and readily accessible records that are necessary to document and support the fulfillment of the obligations in this Agreement, including performance, design, underlying calculations, and financial records, as well as a copy of this Agreement. Engineer shall maintain and make available for inspection the Records for a minimum of four (4) years following either the end of the federal fiscal year in which any obligations were performed under this Agreement or the termination date of this Agreement, whichever is longer (or longer if necessary to resolve any litigation, claims, financial management review, or audit findings).
- 5.16 Authority of Harris County Engineer. The Harris County Engineer ("County Engineer") shall decide any and all questions that may arise as to the interpretation of this Agreement and all questions as to the acceptable fulfillment of this Agreement by Engineer. It is mutually agreed by both Parties that the County Engineer shall act as referee between the Parties in all questions arising under the terms of this Agreement and that the decisions of the County Engineer shall be final and binding alike on all Parties. If agreed to in writing by Engineer and the County Engineer (or designee), Engineer and the County Engineer may make adjustments to the Scope of Work that do not destroy the purposes of this Agreement. In making the aforementioned adjustments to the Scope of Work, Engineer and the County Engineer may adjust any corresponding firm fixed or maximum prices that neither increase the maximum amount of funds that Commissioners Court has authorized to be encumbered nor destroy the purposes of this Agreement. Any of the aforementioned adjustments to the Scope of Work and/or corresponding adjustments to any firm fixed or maximum prices (collectively, "Adjustments") may be reflected by a written Special Amendment to the Scope of Work in this Agreement ("Special Amendment"). Nothing contained in this section shall be construed to authorize the County Engineer to alter, vary, or amend any of the terms or provisions of this Agreement, other than the aforementioned Adjustments. The County Engineer is authorized on behalf of the County to make Adjustments (as defined herein) and execute a corresponding Special Amendment without further action by Commissioners Court. The Harris County Auditor ("County Auditor") is authorized, without further action by Commissioners Court, to certify additional funding for any Adjustments upon execution of a Special Amendment by the County Engineer.
- 5.17. Foreign Terrorists Organizations. In accordance with Tex. Gov't Code Ann. Chapter 2252 Subchapter F, Engineer warrants and represents that, at the time of execution of this Agreement and for the duration of the Term of this Agreement and any Renewal Terms, Engineer does not appear on the Texas State Comptroller's list of companies known to have contracts with or provide supplies or services to a foreign terrorist organization.
- 5.18 Anti-Boycott. In accordance with Tex. Gov't Code Ann. § 2270.002, Engineer warrants and represents that it does not boycott Israel and agrees that it will not boycott Israel during the term of this contract.

## **6. INSURANCE**

- 6.1 Coverage and Limits. During the Term of this Agreement and any extensions thereto, Engineer at its sole cost and expense shall provide insurance of such type and with such terms and limits as may be reasonably associated with this Agreement. As a minimum, Engineer shall provide and maintain the following coverage and limits:

- (a) Workers Compensation, as required by the laws of Texas, and Employers' Liability, as well as All States, United States Longshore & Harbor Workers Compensation Act and other endorsements, if applicable to the Project, and in accordance with state law.

Employers' Liability

(i)	Each Accident	\$1,000,000
(ii)	Disease – Each Employee	\$1,000,000
(iii)	Policy Limit	\$1,000,000

- (b) Commercial General Liability, including but not limited to, the coverage indicated below. This policy will provide coverage for personal and bodily injury, including death, and for property damage, and include an endorsement for contractual liability. Coverage shall not exclude or limit the Products/Completed Operations, Contractual Liability, or Cross Liability. Where exposure exists, County may require coverage for watercraft, blasting, collapse, explosions, blowout, cratering, underground damage, pollution, and other coverage. *County shall be named Additional Insured on primary/non-contributory basis.*

(i)	Each Occurrence	\$1,000,000
(ii)	Personal and Advertising Injury	\$1,000,000
(iii)	Products/Completed Operations	\$1,000,000
(iv)	General Aggregate (per project)	\$1,000,000

- (c) Professional Liability/Errors and Omissions, in an amount not less than One Million Dollars (\$1,000,000) per claim and in the aggregate.
- (d) Umbrella/Excess Liability in an amount not less than One Million Dollars (\$1,000,000) per occurrence and in the aggregate. *County shall be named Additional Insured on primary/non-contributory basis.*
- (e) Automobile Liability insurance to include Engineer's liability for death, bodily injury, and property damage resulting from Engineer's activities covering use of owned, hired, and non-owned vehicles, with combined single limit of not less than One Million Dollars (\$1,000,000) for each accident. *County shall be named Additional Insured on primary/non-contributory basis.*

- (f) Any other coverage required of Engineer pursuant to statute.

6.2 Delivery of Policies. Immediately upon execution of this Agreement and before any Services are commenced by Engineer, Engineer shall provide County evidence of all of the above coverage on forms and with insurers acceptable to County. Engineer must maintain a valid Certificate of Insurance as described herein on file with County at all times during the term of this Agreement. Engineer must either (1) mail the Certificate of Insurance to the Harris County Engineering Department at 1111 Fannin Street, 11th Floor, Houston, TX 77002, Attn: Administrative Services or (2) submit it by email to HCEAdminSvcs@harriscountytexas.gov.

6.2.1 Issuers of Policies. Coverage shall be issued by company(s) licensed by the Texas Department of Insurance to do business in Texas, unless said coverage is not available or economically feasible except through an excess or surplus lines company, in which case the company(s) should be registered to do business in Texas. Companies shall have an A.M. Best rating of at least A-VII.

6.2.2 Certificates of Insurance. Engineer shall provide unaltered Certificates of Insurance which evidence the required coverage and endorsements and satisfy the following requirements:

- (a) Be less than 12 months old;
- (b) Include all pertinent identification information for the Insurer, including the company name and address, policy number, NAIC number or AMB number, and an authorized signature;

- (c) Include the Project name and reference numbers and indicates the name and address of the Project Manager in the Certificate Holder Box; and
- (d) Be appropriately marked to accurately identify:
  - (i) All coverage and limits of the policy;
  - (ii) Effective and expiration dates;
  - (iii) Waivers of subrogation, endorsement of primary insurance and additional insured language, as described herein.

6.2.3 Certified Copies of Policies and Endorsements. Upon request, Engineer shall furnish certified copies of insurance policies and endorsements to County.

6.2.4 Renewal Certificates. Renewal certificates are due to County at least thirty (30) days prior to the expiration of the current policies.

6.2.5 Subcontractors. If any part of the Agreement is sublet, insurance shall be provided by or on behalf of any subcontractor, and shall be sufficient to cover their portion of the Agreement. Engineer shall furnish evidence of such insurance to County as well.

6.3 Additional Insured. Engineer shall include County and its respective officers, directors, agents, and employees as an Additional Insured on the Commercial General Liability, Automobile Liability, and Umbrella/Excess Liability insurance certificates. Engineer's coverage shall be primary insurance to any similar insurance maintained by County and must contain an endorsement stating such. Coverage to County as an Additional Insured on any of Engineer's insurance coverage shall not be subject to any deductible.

6.4 Deductibles. Engineer shall be responsible for and pay any claims or losses to the extent of any deductible amounts applicable under all such policies and waives any claim it may have for the same against County, its officers, directors, agents, or employees.

6.5 Claims-made Policies. All insurance policies written on a claims-made basis, including Professional Liability/Errors and Omissions, shall be maintained for a minimum of two (2) years following completion of all services under this Agreement ("Extended Reporting Period"). Engineer shall obtain or maintain full prior acts coverage at least to the effective date of this Agreement in the event of a carrier or policy change.

6.6 Waiver of Subrogation. Engineer waives any claim or right of subrogation to recover against County, its officers, directors, agents, and employees ("Waiver of Subrogation"). Each policy required under this Agreement must contain a Waiver of Subrogation endorsement.

6.7 Notice of Cancellation, Non-Renewal, or Material Change. Engineer shall provide County with thirty (30) days' minimum written notification in the event of cancellation, non-renewal, or material change to any or all of the required coverage.

6.8 Remedies for Noncompliance. Failure to comply with any part of this Section is a material breach of this Agreement. Engineer could immediately, and without notice, have all compensation withheld or suspended, be suspended from providing further Services, or be terminated from this Agreement for any lapse in coverage or material change in coverage which causes Engineer to be in noncompliance with the requirements of this Section.

## **7. FUNDING, COMPENSATION AND/OR BASIS FOR PAYMENT, METHOD, AND LIMITATIONS**

7.1. Payments/Compensation. For and in consideration of the work, products, services, licenses or deliverables provided under this Agreement and during the term of this Agreement, subject to the limitations in this Agreement, County shall pay Engineer in accordance with the fee schedule and rates specified in this Agreement, including in the Attachments up to the total maximum amount specifically appropriated, encumbered, and then certified as available by the County Auditor.

7.2. Funding and Appropriations Limit. County shall have no obligation to pay for and Engineer shall have no obligation to provide any work, products, services, licenses and/or deliverables until sufficient funds are



certified by the County Auditor. County intends to initially appropriate, encumber, and certify as available by the County Auditor the total maximum sum of **ONE MILLION SIX HUNDRED TWO THOUSAND AND NO/100 DOLLARS (\$1,602,000.00)** to pay and discharge any and all liabilities that County may incur arising out of this Agreement. Any other provision notwithstanding, County shall never be liable to pay Engineer any greater amount under this Agreement than is specifically appropriated, encumbered, and then certified as available by the County Auditor.

- 7.3. Auditor's Certification of Funds. The issuance of a purchase order pursuant to this Agreement represents certification by the Harris County Auditor that funds, in the amount of the purchase order total, are available to satisfy all financial obligations of Harris County hereunder.
- 7.4. Funding Out/Non-Appropriation. It is further understood that pursuant to Local Government Code Chapter 111, when and if the work, products, services, licenses and/or deliverables and charges provided for herein are equal to or exceed the amounts certified available, Engineer is authorized to terminate some or all of Engineer's work, products, services, licenses and/or deliverables under this Agreement unless the County Auditor certifies that additional funds are available, in which event Engineer agrees to continue to provide the products, services and/or deliverables to the extent funds are available. When all the funds certified by the County Auditor, together with any additional funds thereafter certified, are expended, County will have no further liability, and the sole and exclusive remedy of Engineer will be to immediately terminate this Agreement unless the County Auditor certifies additional funds.
- 7.5. Billing Statements/Invoices. Unless otherwise indicated in this Agreement, no later than the 10th day after the end of each calendar month within the term of this Agreement, Engineer shall submit to HCED a billing statement or invoice for all unpaid products, services and/or deliverables, along with any applicable rates, including the applicable firm fixed price and any applicable percentage completed for specific tasks/deliverables as specified in this Agreement. The data in the billing statement or invoice must be in a format designated by HCED and the County Auditor, and must include any purchase order number. An authorized agent of Engineer must certify and swear under penalty of perjury that the work was performed, the work was properly authorized in writing by HCED, and all information contained in the statement or invoice is true and correct. All products, services and/or deliverables billed must be rendered during this Agreement term. Engineer shall submit to HCED billing statements or invoices limited to work done and products, services and/or deliverables provided pursuant to this Agreement, and Engineer shall not include in such billing statements or invoices any work, products, services, licenses and/or deliverables provided, required to be performed, or billed under or pursuant to any other agreements with County. HCED will review each statement or invoice and approve it with any modifications HCED deems appropriate after mutual consultation and agreement with Engineer. HCED will then forward the approved statement or invoice to the County Auditor for payment. County will pay Engineer the proper amounts due and owing under this Agreement within thirty (30) calendar days of receipt of the approved statement or invoice to extent allowed by law. Each statement or invoice must include a monthly inventory of work, products, services, licenses and/or deliverables provided during the billing period and any other details HCED reasonably requests for verification purposes, which might include:
- (a) The date(s) work, products, services, licenses and/or deliverables were provided;
  - (b) Meetings and lists of attendees, if applicable;
  - (c) Detailed description of the work, products, services, licenses and/or deliverables provided;
  - (d) The total amount billed, and any other details of the work, hours, or services as may be requested by the County Auditor;
  - (e) If applicable, the case number for which services were performed;
- 7.6. Overpayments. Within 10 calendar days after request by HCED, Engineer must reimburse to County all funds paid by County to Engineer that any funding entity or auditor determines have been improperly paid to, or expended by, Engineer. County may withhold, suspend, or reduce any and all payments due to Engineer until any overpayments are reimbursed.
- 7.7. Costs of Substitute Services. If Engineer fails to perform any of its obligations under the Agreement and County procures substitute services upon such terms as are appropriate, County shall deduct the reasonable

costs for such services from any payments owed to Engineer under this or other agreements. Engineer must reimburse to County, within thirty (30) calendar days after request by County, any additional costs of such substitute services beyond what has already been deducted by County. County may also withhold, suspend, or reduce payments due to Engineer until the costs of such substitute services are reimbursed to County by Engineer. This provision is not intended to waive or preclude any other remedies the parties may otherwise have in law, equity, or elsewhere in this Agreement and is in addition to and not in lieu of any other remedies.

- 7.8. Billing Audits. County and its designee shall have the right to examine and audit all of Engineer's billings/invoices and all of Engineer's backup and support data for billings/invoices for this Agreement. Upon HCED's request, Engineer agrees to make such data and supporting documentation available to the County Auditor or designee in Harris County, Texas. Engineer shall maintain complete and accurate records necessary to fulfill any obligations in this Agreement, including a copy of this Agreement, including detailed time records identifying each person performing services that were billed on an hourly basis, the corresponding dates of the services, the applicable firm fixed price and the percentage completed for specific tasks as specified in this Agreement, any applicable hourly or cost-plus rates, the total amount billed for each person as applicable, and the total amount billed for all persons as applicable. Engineer shall maintain and make available for inspection (electronically or in Harris County during regular business hours) the Records for a minimum of four (4) years days following either the end of the federal fiscal year in which any obligations were performed under this Agreement or the termination date of this Agreement (or longer if necessary to resolve any litigation, claims, financial management review, or audit findings). All payments made by County are subject to re-evaluation and refund or withholding of future payments conditioned on the results of the audit.
- 7.9. County Auditor to Make Final Decision. The decision of the County Auditor as to the amount owed shall be final if there is any dispute between County and Engineer as to the amount owed to Engineer for any monthly statement or invoice submitted by Engineer. County agrees to notify Engineer of any questionable item and is authorized to withhold payment until all questions are resolved either by final audit or by agreement of the Parties.

## **8. TERM OF THE AGREEMENT**

- 8.1 Time Period. The time period for performance ("Term") of this Agreement shall begin upon execution by all of the Parties and end on the later date of (a) Project completion or (b) a year minus a day from execution by all of the Parties.

## **9. TERMINATION PROVISIONS**

- 9.1 Determination of Material and Non-Material Breaches. The County Engineer shall determine whether a breach of this Agreement by either Party is material or non-material. The County Engineer's determination shall be final and binding alike on all Parties.
- 9.2 Non-Material Breaches. If either Party refuses or fails to perform any of its non-material obligations in this Agreement, the other Party may give written notice of the failure. If the breaching Party fails or refuses to cure the failure of any non-material obligation in the notice within ten (10) calendar days after notice is given, the other Party may terminate this Agreement immediately. HCED is authorized to give notice for County.
- 9.3 Material Breaches.
- 9.3.1 Suspension. HCED may suspend this Agreement immediately for any material breach by giving a notice of suspension. As soon as the notice of suspension is received, Engineer shall discontinue all services in connection with the performance of this Agreement. HCED is authorized to suspend on behalf of County.

9.3.2 Termination. The County may terminate this Agreement for a material breach at any time by notice in writing to the Engineer.

9.4 No Waiver of Remedies. The provisions in this Section are not intended to waive or preclude any other remedies the parties may otherwise have in law, equity, or elsewhere in this Agreement. The right to terminate for a material and non-material breach is in addition to and not in lieu of any other remedies.

9.5 Termination Statement. As soon as practicable after receiving notice of termination, Engineer must submit a statement or invoice to HCED that complies with the requirements in this Agreement. This statement or invoice must show in detail the unbilled/uninvoiced services performed for County under this Agreement to the date of termination. If the payments were to be made in lump sums and services were rendered after the last lump sum payment, the statement or invoice shall reflect the prorated amount due.

9.6 Return of Documents after Termination. If permitted by law and any established ethical requirements applicable to specific professionals, Engineer shall promptly deliver to HCED all completed or partially completed work product, designs, data, information, and documents prepared under this Agreement on behalf of County. Within 2 business days after the effective date of termination, Engineer shall return to HCED all records, files, documents, notes and other items in Engineer's possession, if any, relating to any assignments or work that Engineer has undertaken or been given under this Agreement, if permitted by law and any established ethical requirements applicable to specific professionals. Engineer shall deliver to HCED all completed or partially-completed designs, drawings and specifications prepared under this Agreement, including the original electronic file format. Nothing in this section is intended to require Engineer to surrender Engineer's own records to HCED after termination.

9.7 Agreement Transition. In the event the Agreement ends by either expiration or termination, Engineer shall, at the request of the County, assist in the transition until such time that a replacement engineer can be named. Engineer acknowledges its responsibility to cooperate fully with the replacement engineer and the County to ensure a smooth and timely transition to the replacement engineer. Such transitional period shall not extend more than ninety (90) days beyond the expiration/termination date of the Agreement, or any extension thereof. During any transition period, all other terms and conditions of the Agreement shall remain in full force and effect as originally written.

## **10. INDEMNIFICATION**

10.1 No Waiver of Governmental Immunity. County does not waive any immunity or defense on behalf of itself, its employees or agents as a result of the execution of this Agreement.

10.2 General Indemnity. To the extent allowed by law, Engineer agrees to indemnify and hold harmless County, HCED, their officers, employees, and agents from liability, losses, expenses, demands, reasonable attorneys' fees, and claims for bodily injury (including death) and property damage to the extent caused by the negligence, intentional tort, intellectual property infringement of Engineer (including Engineer's agents, employees, volunteers, and subcontractors/consultants under contract, or any other entity over which Engineer exercises control, in the performance of the services defined in this Agreement). Engineer shall also save County harmless from and against any and all expenses, including reasonable attorneys' fees that might be incurred by the County, in litigation or otherwise resisting such claims or liabilities.

## **11. MISCELLANEOUS**

11.1 Notices. Any notice required to be given under this Agreement ("Notice") may be given by hand delivery or certified United States Mail, postage prepaid, return receipt requested, addressed to the Parties at the following:

ENGINEER: Anwar Zahid, PhD, P.E.  
President & CEO  
InfraTECH Engineers & Innovators, LLC  
11111 Wilcrest Green Drive, Suite 410  
Houston, TX 77042  
Email: zahidul.siddique@infratech-us.com, anwar.zahid@infratech-us.com

COUNTY: Dr. Milton Rahman, PhD, P.E., PMP, CFM, ENV SP  
Executive Director & County Engineer  
Harris County Engineering Department  
1111 Fannin Street, 11<sup>th</sup> Floor  
Houston, TX 77002  
Email: AgreementInfo@harriscountytexas.gov

All other communications may be sent by electronic means or in the same manner as Notices described herein.

- 11.2 Receipt of Notice. Notice shall be considered given and complete upon successful electronic transmission or upon deposit in the United States Mail.
- 11.3 Change of Address. Each Party shall have the right to change its respective address by giving at least ten (10) days' written notice of such change to the other Party.
- 11.4 Force Majeure. Neither Party will be liable for any failure or delay in performing its obligations under this Agreement if such failure or delay is due to any cause beyond the reasonable control of such Party if such cause is generally recognized under Texas law as constituting impossible conditions. The existence of such causes of delay or failure will extend the period of performance in the exercise of reasonable diligence until after the causes of delay or failure have been removed. Each Party must inform the other in writing with proof of receipt within 10 business days of the existence of such Force Majeure event or otherwise waive this right as a defense.
- 11.5 E-Mail Addresses. Engineer affirmatively consents to the disclosure of e-mail addresses that are provided to County or HCED. This consent is intended to comply with the requirements of the Texas Public Information Act, Texas Government Code § 552.137, and shall survive termination of this Agreement. This consent shall apply to e-mail addresses provided by Engineer and any agents acting on Engineer's behalf and shall apply to any e-mail address provided in any form for any reason, whether related to this Agreement or otherwise.
- 11.6 Entire Agreement (Merger). This Agreement contains the entire agreement and understanding between the parties relating to the rights granted to and the obligations of the parties. All prior negotiations, discussions, correspondence and previous understandings are superseded by this Agreement. Any oral representation or modification concerning this Agreement shall be of no force or effect.
- 11.7 No Oral Modifications. Unless otherwise explicitly stated in this Agreement, this Agreement cannot be changed except by a written subsequent modification authorized by all parties.
- 11.8 Inducements. In making the award of this contract, County relied on Engineer's assurances and representations made in this Agreement. Any false assurances and representations by Engineer shall be immediate grounds for termination of this Agreement without prior notice at the option of County.
- 11.9 Contract Construction. The titles assigned to the various Articles of this Agreement are for convenience. Titles shall not be considered restrictive of the subject matter of any Article or other part of this Agreement. Likewise, the provisions of purpose in this Agreement are intended to be a general introduction and are not intended to expand the scope of the Parties' obligations or alter the plain meaning of the terms and conditions in this Agreement.


- 11.10 Ambiguities. Ambiguities, if any, shall not be interpreted against the drafter of this Agreement.
- 11.11 No Waiver of Default. Any waiver by either Party of one or more defaults on the part of the other Party in the performance of obligations under this Agreement is not a waiver of any subsequent defaults.
- 11.12 Remedies Cumulative. Unless otherwise specified elsewhere in this Agreement, the rights and remedies of County are not exclusive, but are cumulative of all rights and remedies that exist now or in the future.
- 11.13 No Third Party Beneficiaries. Unless explicitly provided in this Agreement, there is no intent by either Party to create or establish third party beneficiary status or rights in any third party, and no such third party shall have any right to enforce any right or enjoy any benefit created or established under this Agreement.
- 11.14 Non-Exclusivity. Unless explicitly provided in this Agreement, nothing shall prevent either Party from contracting with other parties for the provision of the same or similar services or deliverables that are contemplated by this Agreement.
- 11.15 Limited Personal Liability. Nothing in this Agreement shall be construed as creating any personal liability on the part of any officer, director, employee, or agent of County.
- 11.16 Dispute Resolution Process. The Parties will meet and confer in good faith to work together to resolve problems or disputes that may arise. In the event a dispute arises between the parties involving the provisions or interpretation of any term or condition of the Agreement, and if both parties desire to attempt to resolve the dispute prior to termination or expiration of the Agreement, or withholding payments, then the parties may refer the issue to a mutually-agreeable dispute resolution process.
- 11.17 Survivability Clause. Any provision, section, subsection, paragraph, sentence, clause or phrase of this Agreement that, by its plain meaning, is intended to survive the expiration or earlier termination of this Agreement, including indemnification provisions, shall survive such expiration or earlier termination. If an ambiguity exists as to survival, the provision shall be deemed to survive.
- 11.18 Savings/Severability Clause. If any provision, section, subsection, paragraph, sentence, clause or phrase of this Agreement, or the application of same to any person or set of circumstances, is held to be invalid, void, or unenforceable by a court of competent jurisdiction, that part of this Agreement shall be reformed, if reasonably possible, to comply with the applicable provisions of law. In any event, the remaining provisions the same shall continue in full force and effect, provided that the unenforceable or invalid provision is not material to the overall purpose and operation of this Agreement. If necessary in order to make this Agreement valid and enforceable, the Parties shall meet to confer upon an amendment or modification.
- 11.19 Time is of the Essence. Time is of the essence with respect to Engineer's performance under this Agreement, and Engineer shall perform all services diligently until completed.
- 11.20 Choice of Law. This Agreement shall be construed according to the laws of the State of Texas without giving effect to its conflict of laws provisions. Venue lies only in Harris County as per Texas Civil Practice and Remedies Code Sec. 15.015, and any alternative dispute resolution, suit, action, claim, or proceeding with respect to or arising out of this Agreement must be brought solely in the courts or locations that are situated in the State of Texas, County of Harris. Both parties irrevocably waive any claim that any proceeding brought in Harris County has been brought in an inconvenient forum.
- 11.21 Exhibit List. The following attachments are a part of this Agreement:
- Exhibit A. Scope of Services  
Exhibit B. Schedule  
Exhibit C. Compensation for Professional Services  
Exhibit D. Engineer Team Acknowledgments

- 11.22 Tax Exemption. Pursuant to Texas Tax Code §151.309, as a political subdivision, County claims exemption from sales and use taxes and will provide exemption certificates upon written request. County shall not be liable to reimburse or pay any personal property taxes, charges, or fees assessed against Engineer.
- 11.23 Electronic or Facsimile Signatures and Duplicate Originals. Pursuant to the requirements of the Uniform Electronic Transactions Act in Chapter 322 of the Texas Business and Commerce Code and the Federal Electronic Signatures in Global and National Commerce Act (beginning at 15 U.S.C. Section 7001), the Parties have agreed that the transactions under this Agreement may be conducted by electronic means. Pursuant to these statutes, this Agreement may not be denied legal effect or enforceability solely because it is in electronic form or because it contains an electronic signature. This Agreement may be executed in duplicate counterparts and with electronic or facsimile signatures with the same effect as if the signatures were on the same document. Each multiple original of this document shall be deemed an original, but all multiple copies together shall constitute one and the same instrument.
- 11.24 Signatory Authorized to Execute Agreement. The person executing this Agreement on behalf of each Party represents that he or she is duly authorized by the policy of the Party's governing body to legally obligate and execute this Agreement on behalf of the Party.

**HARRIS COUNTY**


By: \_\_\_\_\_  
Lina Hidalgo  
Harris County Judge

**INFRATECH ENGINEERS & INNOVATORS, LLC**

By:  \_\_\_\_\_  
Anwar Zahid, PhD, P.E.  
Vice President

APPROVED AS TO FORM:

**CHRISTIAN D. MENEFEE**  
Harris County Attorney

By:  \_\_\_\_\_  
Kevin Markowski  
Assistant County Attorney  
CAO File Number 24GEN3356





## **EXHIBIT A**

### **SCOPE OF WORK**

#### **Fairmont Parkway - 2 - from 700' west of Canada Drive to Underwood Road- 2024, UPIN No. 24102MF3KK01, Precinct 2**

#### **GENERAL**

The intent of the basic services is to prepare preliminary engineering and design documents for Fairmont Parkway - from 700' west of Canada Drive to 600' east of Underwood Road (Segment 2) in Harris County, Texas, Precinct 2. Because the segment limits will not end at intersecting streets, roadway and drainage transitions/ends must be coordinated between segment(s) design engineers to assure compliance with applicable Harris County regulations and ensure project match before and after both segments are completed. Drainage end may differ from roadway end to account for drainage mitigation. Should adjacent sections be constructed during the same timeframe, coordination will need to occur for traffic control, phasing and tie ins. Project limits may change slightly from the limits indicated as agreed to by segment design engineers and approved by Harris County to assure that traffic and drainage transitions are seamless. The goal of the project is to promote transportation and pedestrian mobility by improving road conditions, enhancing traffic flow and creating a pedestrian-friendly environment. The project scope is to perform the following:

- widen existing pavement to add a 12-foot lane in each direction,
- repair damaged roadway base where damaged, mill and overlay roadway surface
- widen Spring Gully Bridges,
- construct 8-foot sidewalks along the north right of way (ROW) and 10-foot sidewalks where required along the south ROW
- regrade roadside ditches due to roadway widening and new sidewalks
- relocate and/or modify existing traffic signals as needed to accommodate roadway widening,
- and to cut, regrade, and reconstruct earthen and/or concrete lined channel in the median ditch.

A comprehensive drainage study has been completed, has been provided, and will assist in development of plans and specifications for the project. Drainage infrastructure has been proposed to account for impacts from area-wide roadway improvements, mitigate peak flow and to address known drainage issues in the area.

The proposed project will include the Drainage Impact Analysis, Survey, Structural, Utility Coordination, and Subsurface Utility Exploration (SUE) for the segment.

#### **Reference Materials and Standards:**

- Harris County Engineering Department (HCED):
  - Harris County Public Infrastructure Engineering Division "Guidelines for Engineers having Engineering Contracts with Harris County, Texas, for the Design of Roads and Bridges and the Preparation of Plans and Specifications" (1988 Design Guidelines), and "HCED Infrastructure

- (Subdivision) Regulations.”
- Manual of Practice for Land Surveying in the State of Texas (October 2021)
  - Guidelines for Consultants performing Geotechnical Investigations (January 2011)
  - Regulations of Harris County, Texas for the Construction of Driveways and/or Culverts on County Easements and Rights-of-Way (September 2005)
  - Harris County Engineering Department Standard Specifications (2023)
  - Harris County Flood Control District (HCFCD):
    - Policy, Criteria, and Procedure Manual for Approval and Acceptance of Infrastructure (July 2019)
    - Land Surveying Guidelines (2019)
    - Hydrology & Hydraulics Guidance Manual (2009)
    - Geotechnical Guidelines (2021)
    - Harris County Floodplain Reference Marks
    - Harris County Flood Control District Standard Construction Specifications and Details (2020)
    - Harris County Flood Control District (HCFCD) Policy, Criteria and Procedures Manual (PCPM) Interim Guidelines and Criteria for Atlas 14 Implementation, July 2019 (or later version if applicable)
    - HCFCD Hydrology & Hydraulics Guidance Manual (HHGM), December 2009 (or later version if applicable).
    - MAAPnext White Papers
    - Harris County Flood Control District Technical Manuals
  - Other Standards:
    - The Texas Manual on Uniform Traffic Control Devices
    - Harris County Public Infrastructure Department Storm Water Quality Guidance Document for New Development/Redevelopment Projects, April 4, 2004 (or later version if applicable)
    - Harris County Storm Water Quality Management Regulations 2004 (or later version if applicable)
    - Rules of Harris County, Including the Harris County Toll Road Authority, A Division of Harris County, and the Harris County Flood Control District for the Construction of Facilities Within Harris County and the Harris County Flood Control District Rights-of Way, October 1, 2020 (or later version if applicable)
    - Harris County Public Infrastructure Department Traffic Control Guidelines
    - TxDOT 2024 Specifications
    - TxDOT Bridge Design Manual-LRFD
    - ASCE SUE Guideline
    - ASTM Standards
    - OSHA Standards
    - Manual on Uniform Traffic Control Devices (11<sup>th</sup> Edition)
  - For Design Documentation Report and other requirements: U.S Army Corps of Engineers:
    - ER 1110-2-1150 – Engineering and Design for Civil Works Projects
    - ER 110-1-12 – Quality Management
  - Units of Measure – This project shall be prepared using English units.
  - Deliverables: EOR shall submit electronic copies of intermediate and final reports, documents, plans, and other work products on USB, if requested.

## **A - GENERAL SCOPE OF BASIC SERVICES**

### **1. PROJECT MANAGEMENT**

Engineer of Record (EOR) will perform project management and administration necessary for completion of the project. EOR will provide the project management of the project from initiation to completion of the bid phase. Services shall include, but not limited to, the following:

#### **A. Meetings:**

- Attend Project kickoff meetings and monthly/biweekly status meetings through the PER and Design Phases. Provide an agenda prior to each status meeting and follow up with meeting minutes for each meeting within 3 business days.
- Attend bi-weekly segment leads coordination meeting with Entech and PM
- Provide biweekly project status updates to document progress.
- Coordinate for Right-of-Way, Traffic Control and Utility Meeting per HCED guidelines.

#### **B. Sub-Consultant Management:**

- Coordination, monitor and manage the project sub-consultants, as necessary. EOR shall ensure all components in the scope of work are being met by monitoring progress and taking corrective action (QA/QC) when necessary.
- Provide sub-consultant contract management.
  - The EOR shall not subcontract any part of its Contract without approval by HCED Assistant Director.
  - The EOR shall evaluate sub-consultant proposal to the same extent as if the services were performed by HCED Assistant Director.
  - The EOR shall be responsible for services performed by sub-consultants.
  - The EOR shall replace any sub-consultant when requested to do so by HCED Assistant Director, who shall state the reasons for such request.
  - The EOR shall provide HCED with copy of any of its consultant subcontracts at HCED Assistant Director request.

#### **C. Utility Coordination:**

- Assist with coordination with Private and Public utility companies and Railroad to obtain permits or permission to cross pipeline or Railroad rights-of-ways.
  - Identify ROW needs.
  - Identify Utility conflicts and recommend solutions.
  - MUD utilities, other agencies (e.g., water authorities, and/or COH, etc.).

#### **D. Project Controls:**

- Develop and maintain a project schedule in Microsoft Project format. Prepare a comprehensive project schedule to be maintained at all times and submitted with monthly invoices. The documents shall be prepared to include the following as a

minimum, and additional report requirement.

- Identify conflicts and delays that could impact technical, schedule, and resource risks that could jeopardize the agreed-upon scope, schedule, and cost. A risk plan will be developed which will identify tasks, sorted from highest to lowest priority that the consultant will manage to reduce risk to an acceptable level.
- Invoices:
  - Prepare progress reports (HCED Template) and submit them to HCED with the invoice by the month. The consultant will submit, in a format acceptable to HCED, the invoice that explains all project costs that are based on a percentage of completion for each task, timesheets and updated schedule.

E. Project Closeout:

- Project closeout for basic service as directed by HCED Assistant Director.

## 2. PRELIMINARY ENGINEERING REPORT

Prepare a Preliminary Engineering Report (PER), confirming the details and selected alternative for Segment 2 prepared in the study report (STUDY REPORT) developed by WSB & Associated dba Nathelyne A. Kennedy & Associates (NAK) dated April 22, 2022.

Engineering drawings and exhibits included in the report shall be in accordance with HCED standards and guidelines. The report preparation shall follow Quality Assurance/Quality Control (QA/QC) procedures that meet or exceed HCED's requirements. Preparation of construction estimate including driveway replacement within HC ROW, utility conflict list, exhibits and rendering for public engagement meetings.

Any deviations from the alternative selected in the STUDY REPORT will need to be coordinated with the PM, and reflected in the PER. Components of the PER are as follows:

- A. Evaluation of existing site conditions: Conduct an onsite review of existing site conditions, and existing problems, and identify any constraints. Research/collect/review previous drainage studies, traffic studies, geotechnical reports, construction plans, public and private utility data, right-of-way information, and adjacent land use. Review ongoing and planned projects in the project area. Procure new topographic surveys and utility investigations. Geotechnical investigations, environmental and cultural resources assessments will be procured by others.
- B. Hydrologic and Hydraulic (H&H) Analysis:  
A previously completed drainage analysis has been provided that involved conducting a detailed hydrologic and hydraulic (H&H) model, which incorporated Atlas 14 Data. The report, developed by Omega Engineers, was approved by the Harris County Flood Control District on April 14, 2022. The provided report and models will be utilized in confirming the selected alternative for the segment. Existing and Proposed Condition hydrologic and hydraulic calculations which were performed in EPA-SWMM as part of the previous analysis will be reviewed and updated using EPA or XP-SWMM to include recently collected topographic survey data.

We will evaluate alternatives developed in the 2022 study report, confirming the findings in assessing, developing or validating the proposed alternatives with the current survey and design data.

1) Drainage Impact Analysis and Reporting

a. Bridge Widening – Spring Gully (B109-00-00): Analyze impacts associated with widening the Fairmont Parkway bridges.

- i. Obtain the effective FEMA HEC-RAS and HEC-HMS models from HCFCD.
- ii. Existing condition discharges will be adopted from the FEMA effective models for the 10-yr, 50-yr, 100-yr, and 500-yr storm events. The 500-year storm event is used as proxy for the Atlas 14 100-year storm event.
- iii. Update the existing condition HEC-RAS model, as appropriate, based on project survey or field observations (Revised Existing Condition).
- iv. Determine existing conditions 10-yr, 50-yr, 100-yr, and 500-yr water surface elevations at the crossings.
- v. Create a Proposed Condition model which includes the bridge modifications associated with the widening of the bridges and determine if those modifications result in any negative impacts. Mitigation alternatives will be created and analyzed to reduce/eliminate increases in water surface elevation along the channel.
- vi. Determine proposed conditions 10-yr, 50-yr, 100-yr, and 500-yr water surface elevations at the crossings. The proposed condition shall document a no-adverse impact compared to existing conditions.

b. Hydrologic Impact Analysis

- i. Obtain and evaluate preliminary project EPA-SWMM models used in the 2022 report developed by Omega Engineering.
- ii. Modify existing condition EPA-SWMM models based on project survey or field observations. Use the updated existing condition models to determine the allowable discharge to each outfall location for the 2-, 10- and 100-year Atlas 14 storm events.
- iii. Develop modified proposed condition EPA-SWMM models in conjunction with updated proposed design conditions, incorporating drainage system profiles and cross sections.
- iv. Determine required mitigation volume and outfall discharge restriction required to limit proposed condition discharge to equal or less than existing condition for the 2-, 10-, and 100-year storm events
- v. Coordinate with adjacent Roadway Segments to share detailed hydrologic and hydraulic information to verify gaps or overlaps in drainage area boundaries do not occur and to coordinate flow and/or water surface elevation details where storm water runoff is conveyed between roadway segments.

c. Drainage Impact Analysis Report

- i. Prepare a draft and final drainage impact analysis report for the bridge crossings at Spring Gully and hydrologic impact analysis.

C. Findings and Recommendations: Compare the STUDY REPORT alternatives, and present factors such as operation, cost constructability, schedule, utility conflicts, ROW acquisition,

maintenance requirements, and safety. Provide recommended alternatives or confirm STUDY REPORT recommended alternative for final design and implementation.

D. Report Preparation:

- The outline of the report will be as shown below:
  - Executive Summary
  - Section 1: Introduction
  - Section 2: Existing Conditions
  - Section 3: Hydrology and Hydraulics
  - Section 4: Proposed Conditions
  - Section 5: Alternatives Analysis
  - Section 6: Recommended Alternative
  - Section 7: Implementation Plan
  - Section 8: References
  - Section 9: List of Exhibits
  - Sections 10: Appendices
- Pre-Client Presentation: The consultant shall present a draft of Client presentation to HCED for feedback
- Client Presentation: The consultant shall incorporate feedback received in the Pre-Client Presentation meeting.
- Deliver one Draft and one final report hard copy, a pdf file of the report plans, exhibits, and all CAD files and models in electronic format.

**3. CONSTRUCTION DOCUMENTS**

EOR and subconsultants shall respond to comments provided by the County and shall prepare design deliverables as outlined below. Prepare drawings in accordance with HCFCD's latest Drawing and Graphic Standards, and HCED Surveying Guidelines. Construction drawings shall be prepared so they are legible and to scale when printed on 11"x17" size paper and 22"x34" size paper. Construction drawings may be prepared using MicroStation.

Prepare specifications and scope in Attachments L & M format prescribed by HCED. Prepare a final cost estimate of probable construction cost using HCED pay items. Follow Quality Assurance/Quality Control (QA/QC) procedures that meet or exceed HCED's own requirements. The EOR may choose to use HCED's procedures or submit their own for approval prior to proceeding with design.

Prepare a comprehensive project schedule to be always maintained and submitted with monthly invoices. Progress submittals are as discussed in the following:

A. 50% Submittal:

- 1) Deliver 11"x17" plans, a PDF file of the plans, and all CAD files. The submittal shall include the following as a minimum and shall have been reviewed for quality assurance:
- 2) Plans, include at the minimum:
  - a. HCED Cover Sheet
  - b. Index of Drawings with revision date of each sheet shown
  - c. Harris County Flood Control Express Review Sheet



- d. Harris County Express Review Sheet
  - e. Project Vicinity Map
  - f. General Notes
  - g. Legends and Abbreviations
  - h. Project Layout
  - i. Drainage Area Map
  - j. Project Survey Control and Control Point Detail Sheets showing survey baseline, survey
- 3) Additional items to submit:
- Draft EOR's estimate using HCED pay items in standard HCED format
  - Assessment of current construction budget relative to Project scope
  - Separate plan set indicating proof of following QA/QC procedures
  - Utility Conflict Table, showing all utilities in conflict, whether or not a relocation is required, if so, who is responsible for coordinating the relocation, and what is the current status.
- 4) Participate in Pre-Submittal meeting with HCED
- 5) Conduct a 50% "plan in hand" site visit with appropriate HCED personnel
- B. Bid Ready Submittal:
- 1) Incorporate HCED's 50% comments and stamped Plans as preliminary, and a PDF file of the plans **suitable in the EOR's opinion as complete and ready to bid** as well as all CAD files. The CAD files are provided "as-is" and are not the bidding documents. The submittal shall include all items from the 50% submittal as well as any remaining details required to bid the Project. Details needed to construct Project Items to submit include:
- a. Plan and Profile Sheets
  - b. Structural Detail Sheets
  - c. Grading Layouts
  - d. Driveway Summary
  - e. Traffic Control Plan
  - f. Pavement Marking and Signing Layouts
  - g. Bridge Layouts and Details
  - h. Demolition Plan
  - i. Construction Access Plan
  - j. Typical Cross Sections and Point Tables
  - k. Appropriate Harris County & HCFCD standard detail sheets as required
  - l. Signal Standards
  - m. Stormwater Pollution Prevention Plan (SWPPP)
  - n. Stormwater Quality Management Plan
  - o. Standard BMP plan
  - p. Cross Sections (if required)
  - q. Project Sign(s)
  - r. Soils Boring Logs
  - s. Hydrologic and Hydraulic Data Sheets
  - t. Cross Culvert Layouts
  - u. Drainage Plan and Profile Sheets
  - v. Segment Transition Details for Drainage
  - w. Concrete Lined Channel Details
  - x. Misc Drainage Details

2) Additional Items to Submit:

- Prepare and submit a completed Attachment L including special provisions, Summary of Work, and all Project specific specifications
- EOR's estimate using HCED pay items in standard HCED format
- Assessment of expected construction time in calendar days using HCED guidelines
- Storm Water Pollution Prevention Plan (SWPPP), including Standard HCFCF and HCED Details
- CIVCAST Bidding Sheet
- The PDF of comments previously provided during the 50% submittal with responses to all questions and comments within the PDF
- Separate plan set indicating proof of following QA/QC procedures
- Prepare exhibits and rendering for HCED presentation
- Updated Utility Conflict Table showing all utilities in conflict, and whether or not a relocation is required. If so, include who is responsible for coordinating the relocation, and what is the current status
- Final Drainage Impact Analysis Report
- Final Scour Report

3) Participate in Pre-Submittal meeting with HCED.

4) If appropriate, conduct a bid ready "plan in hand" site visit with appropriate HCED personnel.

5) Participate in a Bid Ready constructability review with both HCED's Design and Construction Project Managers and others.

6) Participate in Traffic Control Plan (TCP) Meeting with appropriate HCED personnel.

7) Coordinate with the HCED Design Project Manager to provide plans to all applicable federal, state, county, and municipal agencies, including Flood Plain Administrator, for review and comment.

8) Provide plans to the applicable utility companies for review.

C. Final Plans Submittal:

1) Incorporate the HCED's Bid Ready comments and deliver a PDF of the plans and Project Manual signed and sealed by a Professional Engineer licensed in the State of Texas.

2) Submit a final checkset for the HCED Design Project Manager review including:

- PDF of the Plans and Attachments L & M signed and sealed by a Professional Engineer licensed in the State of Texas
- Engineer's estimate using HCED pay items in standard HCED format.
- Assessment of expected construction time in calendar days
- The PDF of comments previously provided during the Bid Ready submittal with responses to all questions and comments within the PDF
- Separate plan set indicating proof of following QA/QC procedures
- Updated Utility Conflict Table showing all utilities in conflict and indicating all conflicts have been addressed

3) Review the final checkset with appropriate coordination with the HCED Design Project Manager and other HCED personnel as needed. Upon review and approval by the HCED Design Project Manager, the EOR shall:

- Incorporate any final revisions received from the HCED Design Project Manager
- Submit Original 11"x17" plans, signed and sealed by a Professional Engineer licensed

- in the State of Texas. Only sheets revised after the checkset need to be re-signed
- Plans shall include signatures of all external agency signatures including utility companies
  - Submit a PDF file of the plans, preferably vector based as “Issued for Bidding” set
  - Submit a PDF of the Attachments ready for bidding
  - Coordinate with the HCED to obtain permit from the appropriate Floodplain Administrator(s)
  - Submit all CAD files a digital terrain model compatible for use in AutoCAD Civil 3D as applicable

## **B – GENERAL SCOPE OF ADDITIONAL SERVICES**

The EOR shall render the following Additional Services in connection with the project when authorized in writing by HCED.

### **1. COMMUNITY ENGAGEMENT**

- A. Attend Two (2) public meetings

### **2. SURVEYING SERVICES**

All surveying activities and deliverables performed by and or for Harris County Engineering Department (HCED) shall be performed in accordance with the most current laws and minimum standards of practice as promulgated by the Texas Board of Professional Engineers and Land Surveyors (TBPELS). This document shall not reduce or minimize state laws in any way. TBPELS minimum standards of practice shall be applicable wherein.

#### **A. General Items**

- Survey for the design of improvements will include complete topographic surveys for the roads identified to be part of the project. Survey will include finished floor elevation for driveways culverts, outline of impacted parking lots (if any) and obtain required spot elevations.
- Perform two random cross sections from high bank to high bank from 200 feet upstream of HCFCD drainage Unit B109-00-00 to a point approximately 200 feet downstream.
- Attend Field Topo Verification Meeting to visibly check that all topo items are currently located as per the field notes. Objectives to be achieved during the field topo verification meeting include: impacts that could affect the alignment alternatives have on the Right of Way, existing structures such as signals, utilities, and property, environmental impacts and impacts to existing and proposed improvements.
- In addition to other deliverables provided for in this section, include Civil 3D 'surface' for use in design of new roadway, ditches, etc.

#### **B. Existing Right-of-Way Maps**

- Survey will be performed to TSPS Category 1B Condition 2 standards ( current standards effective September 30, 2024)
- Prepare right-of-way map of the existing right-of-way in accordance with TSPS Category 1B, Condition (II) standards and conform to Harris County Standards.

#### **C. Topographic Survey**

- Perform survey to TSPS Category 6, Condition 1 standards
- Survey to extend 100 feet into all intersecting streets. In addition, survey to include 25 feet outside of the right-of-way and up to 60 feet outside right-of-way for objects (obstructions), except those that are behind brick walls and buildings.
- Establish elevation, type and locations of physical features including buildings, structures, signs, power poles, curbs, driveways, water meters, manholes, pedestals,

ponds, light poles, etc. within proposed and existing right-of-way. Overhead crossing utilities will be limited to the low chord elevation.

- Survey will locate all public and private utilities, storm sewer outfalls, manholes, inlets, culverts, pipeline markers, utility markers, valve boxes, power poles, down guys, overhead cables, elevations of overhead cables and low points, pedestals, fences, bridge crossings, pavement stripes, signs, trees 4 inches and larger, and shrubs. Wooded/ brush areas shall be limited to an outlined area only. Survey will locate utility markings or test holes provided by SUE providers, geotechnical borings provided by others, and environmental delineations provided by others. Linework corrections will be the responsibility of the relevant marking providers.
  - Provide pipe flow line elevations, size, material and directions of all sanitary sewer lines, storm sewer lines and driveway culverts. Top of rim or top of grate and flow line elevations shall be recorded on all inlets, manholes and drainage structures.
  - Perform two cross sections from high bank to high bank from 200 feet upstream of HCFCD drainage unit B109-00-00 to a point approximately 200 feet down stream. Several (7) total cross sections will be performed along the drainage to include: two (2) upstream, three (3) between the bridges, and two (2) downstream.
  - Provide ordinary high water mark for impacted channels or streams, if applicable.
  - Provide all traffic control, labor, and equipment for the Traffic Control Plan (TCP) while performing field services in compliance with the regulations of the most recent edition of the "Texas Manual on Uniform Traffic Control Devices" and HCED Standards.
  - Prepare utility conflict table, to include risers and overhangs.
- D. Survey Control
- Horizontal Survey Control shall be referenced to the Texas State Plane Coordinate System, South Central Zone, NAD83.
  - Vertical Control shall be based on the nearest existing Harris County Reference Marker, NAVD 1988, 2001 Adj.
  - Establish survey baselines and temporary benchmarks.
  - Provide adequate number of control points that are set and recoverable.
- E. Metes and Bounds Descriptions, if necessary
- Perform survey to a Category 1A, Condition 2
  - Horizontal Survey Control shall be referenced to the Texas State Plane Coordinate System, South Central Zone, NAD83.
  - Vertical Control shall be based on the nearest existing Harris County Reference Marker, NAVD 1988, 2001 Adj.
  - Format to be provided as directed by HCED Design Project Manager.
- F. SUBSURFACE UTILITY EXPLORATION (SUE)
- During Preliminary Engineering Phase:
    - Perform Level C and D SUE
    - Identify private utilities within project boundaries
    - Identify major pipelines
    - Identify public utilities within project boundaries
    - Request records from identified utility owners
    - Develop a Utility Contact List

- Develop a Utility Conflict Table (UCT)
  - Develop a Utility Layout in CADD
  - Consider design alternatives to avoid major relocations
- G. Survey Coordination
- Attend kickoff meeting with surveyor teams for segments 1, 2, 3 and 4 to establish control points, and develop consistency among survey.
  - Meet bi-weekly with surveyor teams for segments 1, 2, 3 and 4 to assure quality control and consistency of data
  - Collect and QA/QC performed survey work bi-weekly to maintain accuracy among survey teams.
  - Coordinate with Entech surveyor for any required changes/updates.
  - As part of the coordination with Entech, surveyor will:
    - a. Adopt an agreed upon combined scale factor for the entire project
    - b. Assure utilization of the same HCED Floodplain Reference Mark(s) to establish vertical control for the project
    - c. Upon 'elevating' control, ensure agreement between segments by tying in to at least two, (2), control points and/or Temporary Benchmarks, (TBM), in adjoining segment(s) to ensure elevations 'agree' within a specified tolerance
    - d. Ensure bearings of right of way between segments agree within a specified tolerance
    - e. Ensure specified common monuments of right of way and horizontal control are located between segments and agree within a specified tolerance
  - Provide signed and sealed deliverables to Entech for submittal that have been verified for accuracy to assure seamless delivery of project. Deliverables and formats will be agreed upon in coordination with Harris County and Entech.

### **3. SUBSURFACE UTILITY EXPLORATION (LEVEL B and A)**

Provide Quality B & A SUE per ASCE Standard 38-22. Locate potential utilities (public and private) that are in conflict with the project. Located utilities shall then be shown on the plans as location verified.

- A. During Preliminary Engineering Phase:
- Perform Level B and A SUE where required to assure depth and locations of utilities that are potentially in conflict
  - Coordinate with Survey for a Utility Contact List
  - Coordinate with Survey for update of Utility Conflict Table (UCT)
  - Coordinate with Survey for inclusion in Utility Layout in CADD
  - Consider design alternatives to avoid major relocations
- B. During Design Phase:
- Identify direct utility conflicts
  - Identify constructability conflicts
  - Recommend access routes
  - Coordinate easement abandonment/release
  - Provide relocation cost estimates for utility relocations
  - Update UCT



- C. Attend Field Topo Verification Meeting to visibly check that all topo items are currently located as per the field notes or other meetings as requested by HCED Design Project Manager.
- D. In addition to the above, deliverables include but are not limited to SUE field sketch, CADD file in latest version of AutoCAD, Utility Layout Sheets signed and sealed, and test hole summary sheet of test hole information (size, material, depth).

#### **4. GEOTECHNICAL INVESTIGATION (Performed by others)**

EOR to identify boring locations and review geotechnical reports prepared by others.

#### **5. ENVIRONMENTAL ASSESSMENTS (Performed by others)**

EOR to review environmental reports prepared by others.

#### **6. TRAFFIC ANALYSIS**

Prepare a memorandum summarizing all the Traffic Operational Analysis along the studied corridor. In addition to reporting the study process and findings, corridor and intersection recommendations shall be documented to meet the traffic demands for future year. Provide recommendations and schematic exhibits of recommended improvements in signed sealed report. EOR shall coordinate with the traffic provider for the completion of the traffic tasks, which shall be included in the Study Phase Report or Design Plans.

##### **A. Traffic Study and Coordination**

- Submit a memo outlining the sources for traffic count data and methodology used to estimate the traffic volumes before proceeding to the analysis phase.
- Conduct turning movement counts at the following intersections for 13 hours each to conduct Signal Warrant Analysis.
  - Intersections:
    - Fairmont Pkwy & Genoa Red Bluff Rd/Canada
    - Fairmont Pkwy & Pecan Crossing Ln/New West Dr
    - Fairmont Pkwy & Underwood Rd
- Additionally, a 24-hour automatic tube recorder count shall be conducted.
  - East of Fairmont Pkwy & Pecan Crossing Ln/New West Dr intersection
- Perform field observations for observing existing traffic patterns
- Perform Traffic Warrant Analysis for the three intersections listed above using TMUTCD guidelines.

##### **B. Existing Condition Analysis**

Provide an existing condition capacity analysis for the intersections listed above for typical

weekday AM and PM peak conditions and provide outputs in the form of delays, volume to capacity (v/c) ratios, 50% and 95% queue length, and level of service (LOS).

C. Traffic Projections

- Based on the direction provided by the County, assume the built-out year for this project is five years past the existing year.
- Develop traffic projections for the study corridor for the future built out year using a growth rate to be approved by the County and City. H-GAC's regional travel demand model, TxDOT historic data and traffic counts from previous studies shall be used to estimate the growth rate.

D. Future Conditions Analysis and Recommendations

- Estimate future conditions capacity including delay, v/c ratios, traffic queues, and LOS for the study area intersections listed under Task 2 for typical weekday AM and PM peak hours. This shall be used as a base condition scenario for comparison with proposed alternative scenario. Any capacity limitations in no-build scenario shall be identified and recommendations shall be made as part of a preferred alternative.
- Use Synchro software to analyze signalized and unsignalized intersections, whereas Sidra shall be used to estimate operations at proposed Roundabouts. Develop Synchro model to determine the impact of proposed alternatives on roadway network.
- Recommend improvements to signing and or pavement width to improve circulation.

Assumptions:

1. Analysis will be developed for the following three scenarios: Existing, Future No-Build and Future Build with Improvements.
2. Conceptual layouts or exhibits of the proposed improvements will be provided as part of the deliverables. However, a detailed design is NOT included as part of the scope of work.

Deliverables:

- A memorandum summarizing the traffic analysis methodology and results along with exhibits showing proposed improvements will be provided. Up to two rounds of iteration will be performed to address comments.

**7. TRAFFIC SIGNAL DESIGN OR SIGNAL REBUILD DESIGN OR SIGNAL MODIFICATION DESIGN**

Deliverables for this design include a Traffic Signal Warrant Study, Flashing Yellow Analysis, Signal Design Plans and SOLS.

A. Traffic Signal Warrant Study

Provide a Traffic Signal Warrant Study for the intersection of Canada/ Genoa Red Bluff Road, New W Drive/Pecan Crossing Lane and Underwood Road. Existing traffic counts and projected opening day traffic volume projections will be utilized in the Traffic Signal Warrant.

B. Flashing Yellow Analysis Memo

Based upon the results of the Traffic Warrant Study, prepare an analysis for installation of yellow flashing arrow for turning movements at the intersections where traffic signals are warranted. The engineering study should be conducted to determine the appropriate left-turn signal control

mode for signalized intersections. The study will consider left-turn and right-turn volumes, crash history, 85th percentile (posted) speed, sight distance, number of left-turn lanes, number of opposing through lanes, pedestrian volumes, opposing through volumes, and intersection geometry. The results and recommendations will be summarized in a memo to be included as an addendum to the Traffic Warrant Study.

During design, develop documentation to include but not be limited to

- Advance warning signs and traffic control (TCP) design in conformance with TMUTCD latest edition and Harris County standards
- Signing and Pavement Markings (SPM) in conformance with TMUTCD latest edition and Harris County standards
- Traffic control, signing and pavement markings standard details
- Provide traffic signal relocation design including pedestrian poles, signal poles, control boxes, etc. that are in conflict with the proposed roadway improvements
- Provide construction specifications and cost estimate related to TCP and Signing and Pavement Marking details.
- Coordinate with CenterPoint Energy for SOLS and attend field meetings, as needed.

C. Signal design plans at intersections shown below should include at the minimum:

- Fairmont Pkwy & Genoa Red Bluff Rd/Canada
- Fairmont Pkwy & Pecan Crossing Ln/New West Dr
- Fairmont Pkwy & Underwood Rd

- a. Basis of Estimate
- b. Existing Conditions Layout
- c. Proposed Traffic Signal Layout including Wiring Chart
- d. Proposed Traffic Signal Elevations
- e. Permanent Signing & Pavement Markings
- f. Standard Drawing Details with design tables to be completed:
  - Mast Arm Assembly Details (100 mph Wind Zone)
  - Mast Arm Foundation (100 mph Wind Zone)
  - Luminaire Arm Details (100 mph Wind Zone)
  - Pedestrian Signal and Pole Installation Details
  - Traffic Control Plan sheet with table filled out for the posted speed limit.

D. Service outlet location and data statement from electrical provider.

E. Field meeting at the 50% level. Provide Preliminary Signal Layout and signal pole calculations prior to meeting. Controller cabinet location to be finalized at 50% meeting.

## **8. STRUCTURAL**

A. Services include:

- Preparing structural assessment report(s) for the widening of eastbound and westbound bridges at Spring Gully
- Providing engineering services during the pre-design phase of the project

B. Provide design for the widening of two bridges located at Spring Gully. Structural plans must include all necessary design requirements to include but not be limited to:

- Conceptual bridge layout exhibit with typical section

- Cost estimate
  - Bridge Layout
  - Bridge Typical Sections
  - Prepare Bridge Boring Log Sheets
  - Estimated Quantities & Bearing Seat Elevations
  - Prepare Foundation Layout
  - Prepare Bent Details
  - Prepare Abutment Details
  - Prepare Framing Plan
  - Prepare Slab Layout and Section
  - Design Beams
  - Prepare Approach Slab Details
  - Prepare Miscellaneous Details (Drainage, Waterline Mounting and Repairs)
  - Prepare load rating of existing and proposed bridges
  - OpenBridge model as the final deliverable
  - Assemble Bridge Standards
- C. The bridges will be designed to accommodate traffic and pedestrian traffic as outlined in the STUDY REPORT, or as amended and approved through the PER.
- D. Design documents will be signed and sealed by the structural engineer registered in the State of Texas.
- E. Deliverables include but are not limited to the structural assessment report, 50%, bid ready and final plans, estimates and specifications.

## 9. DRAINAGE

- A. CLOMR
- a. Based on approved Drainage Impact Analysis Report and proposed design, update base condition model for analysis.
  - b. Develop corrected effective hydraulic model commensurate with existing conditions.
  - c. Develop proposed condition model consistent with the proposed design.
  - d. Prepare CLOMR report, including report text, FEMA MT-2 forms, exhibits and appendices.
  - e. Respond to Harris County (Local Review) and FEMA comments.
- B. Scour Analysis and Reporting for Bridge Widening – Spring Gully (B109-00-00)
- a. Perform a scour analysis at bridges over Spring Gully.
  - b. Prepare a draft and final scour report for the bridge crossings at Spring Gully.
- C. Drainage Area Maps
- a. Delineate drainage areas for the proposed conditions along the project corridor and prepare drainage area maps (1" = 200').
- D. Hydrologic Studies
- a. Determine proposed conditions hydrologic parameters such as impervious cover, overland flow paths and slopes. Calculate proposed conditions discharges. ATLAS 14 rainfall data will be used when developing discharges.
  - b. Prepare hydrologic data sheets.
- E. Hydraulic Analysis
- a. Using final design data, evaluate conveyance in roadside ditches using Geopak Drainage

- or ORD/DU.
- b. Using final design data, evaluate conveyance in median ditch using HEC-RAS.
- c. Prepare hydraulic data sheets.

Assumptions:

- i. The hydraulic design above will use the final design level data while following the methodology used in the previous Drainage Impact Study. Hydrodynamic modeling of the ditches with SWMM modeling will be considered as additional services.
- F. Cross Culvert Layouts
- a. Prepare cross culvert layout sheets for 3 cross drainage structures that require replacement or modification due to deterioration or adjustment for proposed conditions (side slopes, sidewalk, clear zone requirements, etc.).
    - i. No change in type, size, or material of the culverts is proposed as specified in the previous Drainage Impact Study. No further culvert analysis will be performed.
- G. Drainage Plan and Profiles and Ditch Design
- a. Prepare one set of Drainage Plan and Plan and Profile sheets (500' per sheet) for each proposed ditch: LT roadside ditch, RT roadside ditch, and the median ditch.
    - i. Develop ditch designs (alignments and profiles) based off the latest survey data and previous Drainage Impact Study for the roadside ditches (LT and RT) and the median ditch.
    - ii. Replace cross street and driveway culverts due to deterioration or proposed condition requirements (side slopes, sidewalk, clear zone requirements, recommendation by the Study Report or the previous Drainage Impact Study, etc.).
      - 1. For System B109-00-17, reduce size of existing 42" CMP at STA 93+00 to a 36" CMP with a 1' restrictor (detailed in Final Study Report).
      - 2. Existing cross street and driveway culverts anticipated to be replaced in Segment 2 include those at Canada/Genoa Red Bluff, Pecan Crossing/New W, Underwood, and driveway culverts along the north side of Fairmont Pkwy where a new sidewalk will be installed.
      - 3. No change in type, size, or material of the culverts is proposed as specified in the previous Drainage Impact Study. No further culvert analysis will be performed.
- H. Prepare Segment Transition Details for Drainage
- a. Coordinate with adjacent segment design teams and develop drainage transition details, including ditch transition alignments, profiles, and details at the interface between Segment 2 and Segments 1 and 3.
- I. Concrete Lined Channel Details
- a. Prepare details for the concrete lined channel required in the median ditch.

- J. Miscellaneous Drainage Details
  - a. Prepare any miscellaneous drainage details required to supplement the standard details such as a cut & restore pavement detail and plugging and filling existing culverts under pavement.
- K. Compute and Tabulate Quantities
  - a. Compute and tabulate drainage quantities and provide in the required format for each milestone submittal.
- L. Drainage Cost Estimate
  - a. Prepare a drainage cost estimate using HCED pay items at each milestone submittal.
- M. Drainage Specifications, General Notes, and Standards
  - a. Identify necessary specifications and prepare General Notes for drainage items. Identify and include in the plans the necessary Harris County drainage standards

#### **10. TDLR REQUIREMENTS (PERFORMED BY OTHERS)**

- A. Register the project with the Texas Department of Licensing and Regulation (TDLR). (BY OTHERS)
- B. Review construction documents and provide comments for adherence to Texas Accessibility Standards. (BY OTHERS)
- C. Provide inspection per HC guideline prior to substantial completion. (BY OTHERS)
- D. Complete all the related tasks as requested. (BY OTHERS)

#### **11. ENCROACHMENT EXHIBITS**

- A. Provide a right-of-way encroachment table and letter using template to be provided by HCED Design Project Manager.
- B. Prepare exhibits using template to be provided by HCED Design Project Manager that includes photographs of the encroachment(s) and plan views. This will include but is not limited to landscaping, fences, mailboxes, carports, and other structures.

#### **12. FEDERAL GRANT ASSISTANCE**

- A. Assist HCED to prepare any design related exhibits and design related documentation to assist with grant requirements

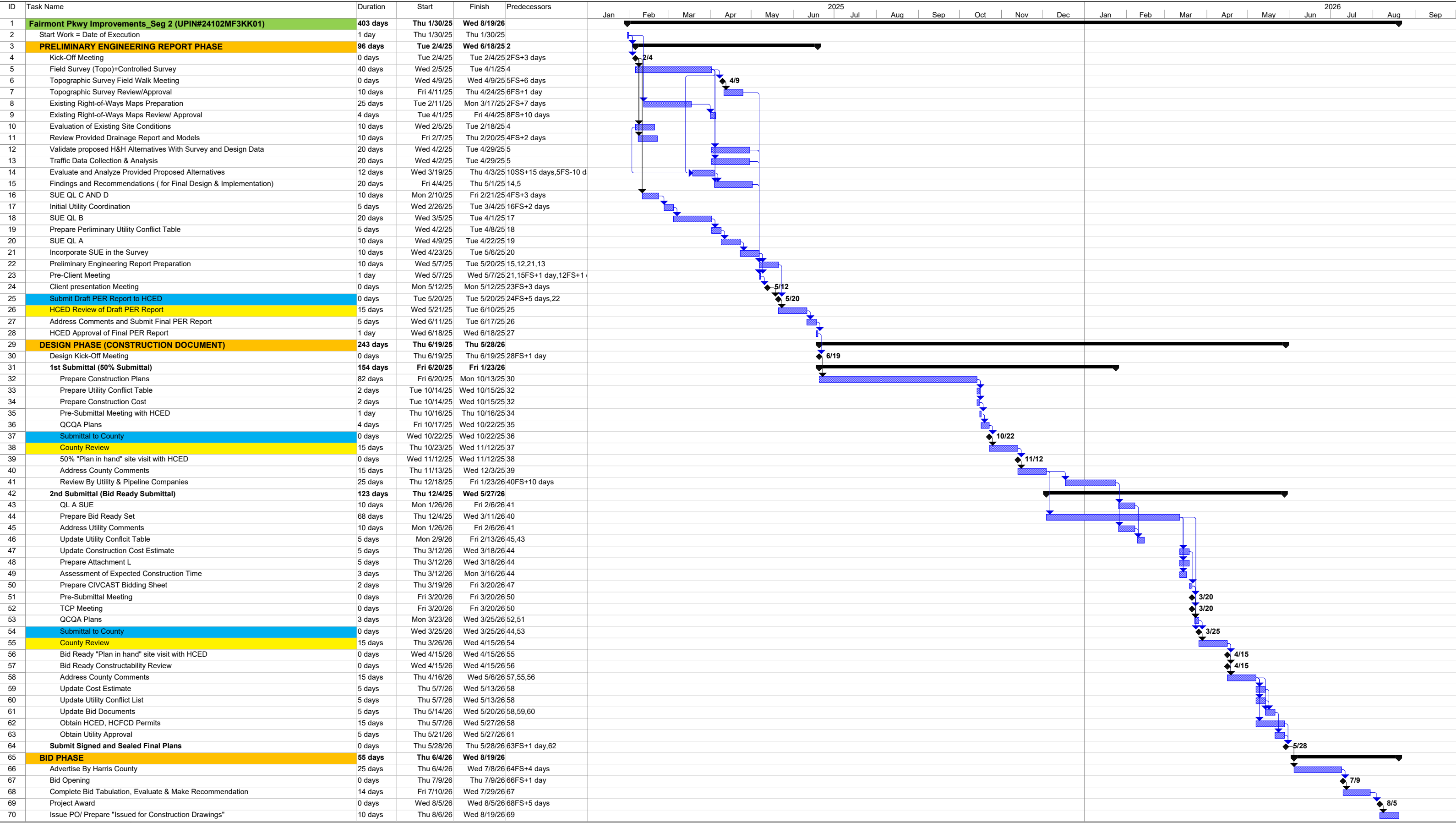
#### **13. BIDDING SERVICES**

- A. Attend and assist HCED in conducting the pre-bid conference, including answering questions and interpreting the plans and specifications.
- B. Prepare necessary addenda to address issues or clarifications necessary for completion of the bidding process, including plan revisions.
- C. Review tabulated bid results for discrepancies including potential unbalancing of unit bid prices and provide a written recommendation issued on company letterhead for the award of the construction contract.
- D. Provide clarification, correct discrepancies, correct errors and omissions; assist HCED in evaluating the bid proposals; and assist in the preparation of a construction contract between the HCED and the successful bidder.

- E. Prepare a set of “Issued for Construction Drawings” within 10 business days after bids are received. Revise the “Issued for Construction Drawings” to reflect all addenda changes made to the construction documents during the bid period.

#### **14. REVISIONS**

- A. Make requested revisions to documents and materials prepared under this Scope of Work. (Revisions due to alternative design or decision after 50% will be considered outside the Scope of Work).
- B. Provide such engineering services necessary for such revision, when they are not necessitated by any fault of the EOR, and such revisions are inconsistent with approvals or instructions previously given or are made necessary by the enactment or revision of codes, laws, or regulations issued after the preparation of such documents. (Revisions will be based on Time and Materials up to the amount agreed upon in Exhibit C).



Date: Fri 11/22/24

Task

Split

Milestone

Summary

Project Summary

External Tasks

External MileTask

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

Progress

Split

Page 1 of 1



**"EXHIBIT C" - Compensation for Professional Services****Project Name: Fairmont Parkway - 2****Project Limits: from 700' west of Canada Drive to Underwood Road****UPIN: 24102MF3KK01****Construction Cost Estimate: \$9,500,000.00****Includes only Prime Consultant Basic Services**

1	<b>Project Management (PER &amp; Design Phase)</b>	
		<b>\$150,000.00</b>
2	<b>Preliminary Engineering Report (PER)</b>	
		<b>\$89,000.00</b>
3	<b>Construction Documents (Design Phase)</b>	
		<b>\$343,000.00</b>
<b>Subtotal Basic Services (1-3):</b>		<b>\$582,000.00</b>

**Additional Services including Subconsultants**

1	<b>Community Engagement</b>	
	PER-Attend Two (2) public meetings	\$4,160.00
2	<b>Surveying Services</b>	
	PER-Existing Right of Way Maps	\$29,465.00
	PER-Topographic Survey	\$49,690.00
	PER-Survey Control	\$12,270.00
	PER-Subsurface Utility Exploration (SUE) and Geotech Borehole	\$64,180.00
	PER-Survey ODE	\$12,421.50
	PER-Survey Coordination (Kick-off Meeting)	\$430.00
3	<b>Subsurface Utility Exploration</b>	
	PER-SUE and Traffic Control for SUE	\$95,088.08
	PER-Utility Conflict Table (UCT)	\$9,077.00
	PER- Consider design alternatives to avoid major relocations	\$5,844.00
	Design Phase-Update Utility Conflict Table (UCT), etc.	\$13,026.00
	PER-Field Topo Verification	\$860.00
4	<b>Geotechnical Investigation</b>	
	PER-Review of Geotechnical Reports	\$1,788.00
5	<b>Environmental Assessments</b>	
	PER-Review of ENV Reports	\$1,165.00
6	<b>Traffic Analysis</b>	
	PER-Traffic Study and Coordination	\$35,668.00
	PER-Traffic Count	\$2,900.00
7	<b>Traffic Signal Design</b>	
	PER-Traffic Signal Warrant Study	\$21,300.00
	PER-Flashing Yellow Analysis Memo	\$4,032.00
	Design Phase-Signal Design	\$77,544.00
	Design Phase-Coordination with Electrical Provider	\$564.00
	Design Phase-Field meeting at the 50% level	\$1,128.00
8	<b>Structural</b>	
	PER-Structural Design	\$38,194.00
	Design Phase-Structural Design	\$251,426.00
9	<b>Drainage</b>	
	PER-Impact Analysis	\$54,323.00
	Drainage Design	\$197,941.00
10	<b>TDLR Requirements</b>	
		\$0.00
11	<b>Enchoachment Exhibits</b>	
	PER-ROW Encroachment Table and Letter	\$1,258.00
	PER-Prepare Exhibits	\$2,218.00
12	<b>Federal Grant Assistance</b>	
	PER-Prepare Required Documents	\$0.00
	PER-Coordinate required exhibits and documentation	\$2,430.00
13	<b>Bidding Services</b>	
	Attend pre-bid Conference	\$2,080.00
	Prepare necessary addenda	\$3,498.00
	Review tabulated bid results, provide recommendation	\$1,040.00
	Provide clarification, corrections and assistance	\$1,040.00
	Prepare "issued Construction Drawings	\$2,461.00
14	<b>Revisions</b>	
		\$18,724.00

**Subtotal Additional Services (1-14):****\$1,020,000.00**

TOTAL SERVICES (BASIC &amp; ADDITIONAL):

\$1,602,000.00

**PRELIMINARY ENGINEERING REPORT (PER) PHASE****Basic Services**1 **Project Management**

\$45,000.00

2 **Preliminary Engineering Report (PER)**

\$89,000.00

**Additional Services**1 **Community Engagement**

PER-Attend Two (2) public meetings

\$4,160.00

2 **Surveying Services**

PER-Existing Right of Way Maps

\$29,465.00

PER-Topographic Survey

\$49,690.00

PER-Survey Control

\$12,270.00

PER-Subsurface Utility Exploration (SUE) and Geotech Borehole

\$64,180.00

PER-Survey ODE

\$12,421.50

PER-Survey Coordination (Kick-off Meeting)

\$430.00

3 **Subsurface Utility Exploration**

PER-SUE and Traffic Control for SUE

\$95,088.08

PER-Utility Conflict Table (UCT)

\$9,077.00

PER- Consider design alternatives to avoid major relocations

\$5,844.00

PER-Field Topo Verification

\$860.00

4 **Geotechnical Investigation**

PER-Review of Geotechnical Reports

\$1,788.00

5 **Environmental Assessments**

PER-Review of ENV Reports

\$1,165.00

6 **Traffic Analysis**

PER-Traffic Study and Coordination

\$35,668.00

PER-Traffic Count

\$2,900.00

7 **Traffic Signal Design**

PER-Traffic Signal Warrant Study

\$21,300.00

PER-Flashing Yellow Analysis Memo

\$4,032.00

8 **Structural**

PER-Structural Design

\$38,194.00

9 **Drainage**

PER-Impact Analysis

\$54,323.00

10 **TDLR Requirements**

\$0.00

11 **Enchoachment Exhibits**

PER-ROW Encroachment Table and Letter

\$1,258.00

PER-Prepare Exhibits

\$2,218.00

12 **Federal Grant Assistance**

PER-Coordinate required exhibits and documentation

\$2,430.00

Subtotal Additional Services :

\$449,000.00

**PER PHASE- TOTAL (BASIC & ADDITIONAL):****\$583,000.00**

**CONSTRUCTION DOCUMENT (DESIGN) PHASE****Basic Services****1 Project Management****\$105,000.00****3 Construction Documents (Design Phase)****\$343,000.00****Additional Services****3 Subsurface Utility Exploration**

Design Phase-Update Utility Conflict Table (UCT), etc. \$13,026.00

**7 Traffic Signal Design**

Design Phase-Signal Design \$77,544.00

Design Phase-Coordination with Electrical Provider \$564.00

Design Phase-Field meeting at the 50% level \$1,128.00

**8 Structural**

Design Phase-Structural Design \$251,426.00

**9 Drainage**

Drainage Design \$197,941.00

Subtotal Additional Services :

**\$542,000.00****DESIGN PHASE- TOTAL (BASIC & ADDITIONAL):****\$990,000.00****BIDDING AND REVISION****13 Bidding Services**

Attend pre-bid Conference \$2,080.00

Prepare necessary addenda \$3,498.00

Review tabulated bid results, provide recommendation \$1,040.00

Provide clarification, corrections and assistance \$1,040.00

Prepare "issued Construction Drawings \$2,461.00

**14 Revisions**

\$18,724.00

**BIDDING AND REVISION- TOTAL (ADDITIONAL):****\$29,000.00**



**EXHIBIT D: ENGINEER TEAM ACKNOWLEDGMENTS**

1. The following is the group of providers selected to perform the obligations described in the Agreement.
2. If any firm listed below actively holds certification in any of the following categories, that information shall be identified in the table under “Special Designation” Box:
- ☐ MWBE (Minority and Women Owned Business Enterprise)
  - ☐ HUB (Historically Underutilized Business)
  - ☐ DBE (Disadvantaged Business Enterprise)
3. Also, all contract values must be identified in the table under “Contract Value”.

Responsibility	Firm	NAICS Code	Special Designation	Contract Value (M/WBE)	Contract Value (Non M/WBE)
Prime	infraTECH Engineers & Innovators, LLC	541330	MBE, HUB, DBE	\$875,000.00	
H&H	BGE, Inc.	541330			\$252,000.00
Structure	Aecom Technical Services Inc.	541330			\$148,000.00
Traffic Engineering	HDR Engineering, Inc.	541330			\$61,000.00
Traffic Count	C J Hensch & Associates, Inc.	541330			\$3,000.00
Surveying	RODS Surveying Inc.	541370	MWBE, HUB, DBE	\$168,000.00	
SUE	The Rios Group, Inc.	541330	MWBE, HUB, DBE	\$ 95,000.00	
Total				\$1,138,000.00	\$464,000.00

Total Contract Value in dollars: \$1,602,000.00

Percent of contract in dollars allocated to (MWBE, HUB, or DBE) Consultants: 71.04%

- ☐ The Engineer understands that it is solely responsible and liable to the County for the completion of all obligations under the Agreement.
- ☐ A proposed decrease in the contract value for any MWBE, HUB, or DBE listed on this Exhibit must be approved by the Department of Economic Equity and Opportunity (DEEO).

## ORDER OF COMMISSIONERS COURT

The Commissioners Court of Harris County, Texas, met in regular session at its regular term at the Harris County Administration Building in the City of Houston, Texas, on \_\_\_\_\_, with all members present except \_\_\_\_\_.

A quorum was present. Among other business, the following was transacted:

### **ORDER AUTHORIZING AGREEMENT BETWEEN HARRIS COUNTY AND INFRA TECH ENGINEERS & INNOVATORS, LLC FOR PROFESSIONAL ENGINEERING SERVICES**

Commissioner \_\_\_\_\_ introduced an order and moved that Commissioners Court adopt the order. Commissioner \_\_\_\_\_ seconded the motion for adoption of the order. The motion, carrying with it the adoption of the order, prevailed by the following vote:

	Yes	No	Abstain
Judge Lina Hidalgo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Rodney Ellis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Adrian Garcia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Tom S. Ramsey, P.E.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Lesley Briones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The meeting chair announced that the motion had duly and lawfully carried, and this order was duly and lawfully adopted. The order adopted follows:

#### **IT IS ORDERED** that:

1. The Harris County Judge is authorized to execute the attached Agreement between **Harris County and InfraTECH Engineers & Innovators, LLC** for Professional Engineering Services. The attached Agreement, including any addendums, may be executed with an electronic or facsimile signature. The Harris County Engineering Department is authorized to request the Harris County Purchasing Agent to expend up to **\$1,602,000.00** in consideration of the work, products, services, licenses and/or deliverables provided under this Agreement.
2. The Harris County Engineering Department and all other Harris County officials and employees are authorized to do any and all things necessary or convenient to accomplish the purpose of this Order.