



PROFESSIONAL SERVICES AGREEMENT

(Version 9-22-2023)

This AGREEMENT ("Agreement") is entered by and between **Freese and Nichols, Inc** (the "Professional"), located at **10497 Town and Country Way, Suite 500, Houston TX 77024** and the **City of League City** ("City"), a home-rule municipality, located at 300 W. Walker St., League City, Texas 77573 on the date set forth below.

Terms:

1. **Scope of Services:** Professional will perform the services as set forth in **Exhibit A**, which is attached and incorporated herein, and which can be generally described as **Development of a flood mitigation feasibility study for Lower Clear Creek and Dickinson Bayou to conform with requirements of the United States Army Corps of Engineers program Section 203 of WRDA**. Services related to design, bid, or construction of a public work shall conform to the requirements set forth in **Exhibit B**, if applicable. If there is a conflict between the terms of this Agreement and Exhibits A (or B, if applicable), the terms of this Agreement will prevail.
2. **Term and Termination:** This Agreement shall commence on **TBD** and shall expire on **TBD**. City reserves the right to terminate this Agreement for convenience upon seven (7) days written notice to Professional. Upon such termination, City shall pay Professional, at the rate set out in **Exhibit A**, for services satisfactorily performed up through the date of termination. Notwithstanding any provision in this Agreement to the contrary, City will not be required to pay or reimburse Professional for any services performed or for expenses incurred by Professional after the date of the termination notice that could have been avoided or mitigated by Professional.
3. **Compensation:** Professional shall be paid for the services as set forth in **Exhibit A**. In no event shall the total compensation exceed **\$5,000,000** during the term of this Agreement. City shall tender payment (including progress/partial payments) for services only after such services are completed and are deemed to be acceptable under this Agreement, in the sole reasonable discretion of City. Professional must submit to City invoices for all services provided, which invoices must include details and dates of service. Payment by City shall be made within thirty (30) days of receipt of an invoice, except for any portion of the invoiced amount that City disapproves as not compliant under this Agreement, in the sole reasonable discretion of City. If City disapproves any amount submitted for payment by Professional, City shall give Professional specific reasons for disapproval in writing.
4. **Insurance:** Professional **is** required during the Contract Term to maintain insurance as set forth below: (a) Comprehensive General Commercial Liability insurance covering bodily injury and property damage, with minimum coverage limits—exclusive of defense costs—of \$1,000,000 per occurrence and \$2,000,000 aggregate; (b) Professional Liability (errors and omissions/malpractice) insurance with minimum coverage limits—exclusive of defense costs—of \$2,000,000 per occurrence; and (c) If at any point during the Contract Term it is foreseeable that Professional will enter upon City premises: (i) Worker's Compensation coverage with statutory limits for the State of Texas, and (ii) Commercial Automobile Liability coverage with minimum coverage limits—

exclusive of defense costs—of \$1,000,000 per occurrence and \$2,000,000 aggregate. All policies must contain a waiver of subrogation against City. Comprehensive General Liability and Commercial Automobile Liability policies must name the City as Additional Insured. Professional shall pay all insurance deductibles and deductibles must not exceed \$10,000 unless approved in advance by City. Professional shall provide City Certificates of Insurance evidencing these insurance requirements prior to the start of work.

5. **Liquidated Damages:** Liquidated damages **are not** applicable to this transaction. Professional acknowledges that time is of the essence in performing this Agreement. City and Professional (collectively, the “Parties”) agree that if Professional is late in performing any service designated as **Time Critical** on the Scope of Services attached to this Agreement, City will suffer loss, damages, or other harm from Professional’s delay. The Parties agree that the amount of loss, damages, or harm likely to be incurred as a result of Professional’s delay is incapable or difficult to precisely estimate, and therefore the Parties desire to stipulate the amount of such loss, damages, or harm. Accordingly, Professional shall have deducted from any amounts owed under this Agreement liquidated damages equal to the number of calendar days of the delay(s) times the daily rate, which rate shall be one-tenth of one percent (0.1%) times the compensation shown in the Scope of Services for such Time Critical service. The Parties further agree that: (i) the liquidated damages specified herein are not a penalty but rather bear a reasonable relationship to, and is not plainly or grossly disproportionate to, the probable loss likely to be incurred by City as a result of Professional’s delay; (ii) one of the reasons for City and Professional to agree to such amounts is the uncertainty and cost of litigation regarding the question of actual damages; and (iii) City and Professional are sophisticated business parties and negotiated this Agreement at arm’s length.
6. **Independent Professional:** Professional is an independent Professional and is not an employee, partner, joint venture, or agent of City. Professional understands and agrees that he/she will not be entitled to any benefits generally available to City employees. Professional shall be responsible for all expenses necessary to carry out the services under this Agreement and shall not be reimbursed by City for such expenses except as otherwise provided in this Agreement.
7. **Intellectual Property:** This Agreement shall be an Agreement for services and the parties intend and consider any work created as a result of this Agreement, including any and all documentation, images, products or results, to be a work (the “Work”) for hire under federal copyright law. Ownership of the Work shall belong to and remain the exclusive property of City. The Work may be edited at any time within City’s discretion. If the Work would not be considered a work-for-hire under applicable law, Professional hereby assigns, transfers, and conveys any and all rights, title and interest to City, including without limitation all copyrights, patents, rights of reproduction, rights to ownership, and right to secure registrations, renewals, reissues and extensions thereof. As the sole copyright holder of the Work, City maintains and asserts the rights to use, reproduce, make derivative works from, and/or edit the Work in any form of medium, expression or technology now known or hereafter developed, at any time within City’s discretion. Professional shall not sell, disclose or obtain any other compensation for the services provided herein or the Work. If the Work is one to which the provisions of 17 U.S.C. § 106A apply, Professional hereby waives and appoints City to assert on Professional’s behalf Professional’s moral rights or any equivalent rights regarding the form or extent of any alteration to the Work (including, without limitation, removal or destruction) or the making of any derivative works based on the Work, including, without limitation, photographs, drawings or other visual reproductions of the work, in any medium, for City’s purposes.

8. **Confidentiality:** During the course of the services to be provided under this Agreement, Professional may become privy to confidential information of City. Professional agrees to treat as confidential the information or knowledge that becomes known to Professional during performance of this Agreement and to not use, copy, or disclose such information to any third party unless authorized in writing by City. This provision does not restrict the disclosure of any information that is required to be disclosed under applicable law. Professional shall promptly notify City of any misuse or unauthorized disclosure of City's confidential information and upon expiration of this Agreement shall return to City all confidential information in Professional's possession or control. Professional shall further comply with all information security policies of City that may apply and shall not make any press releases, public statements or advertisement referring to the services provided under this Agreement or the engagement of Professional without the prior written approval of City.
9. **Warranties and Representations:** Professional warrants and agrees that Professional shall perform its services and conduct all operations in conformity with all applicable federal, state, and local laws, rules, regulations, and ordinances. For any service performed on premises owned or controlled by City, Professional warrants and agrees that Professional will perform said services in compliance with all City rules, including but not limited to, prohibitions related to tobacco use, alcohol, and other drugs.
10. **Licenses/Certifications:** Professional represents and warrants that it will obtain and maintain in effect, and pay the cost of, all licenses, permits or certifications that may be necessary for Professional's performance of this Agreement. If Professional is a business entity, Professional warrants, represents, covenants, and agrees that it is duly organized, validly existing and in good standing under the laws of the state of its formation; and is duly authorized and in good standing to conduct business in the State of Texas, that it has all necessary power and has received all necessary approvals to execute and deliver the Agreement and is authorized to execute this Agreement according to its terms on behalf of Professional.
11. **Performance/Qualifications:** Professional agrees and represents that Professional has the personnel, experience, and knowledge necessary to qualify Professional for the particular duties to be performed under this Agreement. Professional warrants that all services performed under this Agreement shall be performed consistent with generally prevailing professional or industry standards.
12. **Conflict of Interest:** Professional warrants, represents, and agrees that Professional presently has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with Professional's performance of the services hereunder. Professional further warrants and affirms that no relationship or affiliation exists between Professional and City that could be construed as a conflict of interest with regard to this Agreement.
13. **INDEMNIFICATION: PROFESSIONAL SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS CITY , AND EACH OF ITS OFFICIALS, OFFICERS, AGENTS AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, ACTIONS, SUITS, DEMANDS, PROCEEDINGS, COSTS, DAMAGES AND LIABILITIES, INCLUDING WITHOUT LIMITATION ATTORNEYS' FEES AND REASONABLE LITIGATION COSTS, ARISING OUT OF, CONNECTED WITH, OR RESULTING FROM ANY ACTS OR OMISSIONS OF PROFESSIONAL**

OR ANY AGENT, EMPLOYEE, SUBCONTRACTOR, OR SUPPLIER OF PROFESSIONAL IN THE EXECUTION OR PERFORMANCE OF THIS CONTRACT, TO THE EXTENT THE CLAIM ARISES FROM NEGLIGENCE, WILLFUL ACT, BREACH OF CONTRACT OR VIOLATION OF LAW.

14. **Force Majeure:** Neither party shall be liable to the other for (i) any delay in performance; (ii) any other breach; (iii) any loss or damage; or (iv) any contribution to or aggravation of any of the foregoing; arising solely from uncontrollable forces such as fire, theft, storm, war, or any other cause that could not have been reasonably avoided by the party's exercise of due diligence.
15. **Notices:** Any notice given under this Agreement by either party to the other may be affected either by personal delivery in writing or by mail, registered or certified postage prepaid with return receipt requested. Mailed notices shall be addressed to the addresses of the Parties as they appear in the contract. Notices delivered personally shall be deemed communicated at the time of actual receipt. Mailed notices shall be deemed communicated three (3) days after mailing.
16. **Texas Family Code Child Support Certification:** Pursuant to Section 231.006 of the Texas Family Code, Professional certifies that it is not ineligible to receive the award of or payments under the Agreement and acknowledges that the Agreement may be terminated, and payment may be withheld if this certification is inaccurate.
17. **State Auditor:** Professional understands that acceptance of funds under the Agreement constitutes acceptance of the authority of the Texas State Auditor's Office, or any successor agency (collectively, the "Auditor"), to conduct an audit or investigation in connection with those funds. Professional agrees to cooperate with the Auditor in the conduct of the audit or investigation, including without limitation providing all records requested. Professional will include this provision in all contracts with permitted subprofessionals.
18. **Jurisdiction:** Any disputes under this Agreement shall be brought in a court of competent jurisdiction in Galveston, Texas and governed by Texas law.
19. **Alternative Dispute Resolution:** To the extent that Chapter 2260, Texas Government Code, is applicable to this Contract and is not preempted by other applicable law, the dispute resolution process provided for in Chapter 2260 and the related rules adopted by the Texas Attorney General Pursuant to Chapter 2260, shall be used by City and Professional to attempt to resolve any claim for breach of contract made by Professional that cannot be resolved in the ordinary course of business. The Director of Finance of City shall examine Professional's claim and any counterclaim and negotiate with Professional in an effort to resolve such claims. This provision shall not be construed as a waiver by City of its right to seek redress in the courts.
20. **Entire Agreement:** This Agreement contains the entire understanding between the Parties and supersedes all prior agreements, arrangements, and understanding, oral or written between the Parties relating to this Agreement. This Agreement may not be modified except by mutual written agreement of the Parties executed subsequent to this Agreement.
21. **Eligibility to Receive Payment:** Professional certifies that, as a matter of state law, it is not ineligible to receive the Agreement and payments pursuant to the Agreement and acknowledges that the Agreement may be terminated, and payment withheld if this representation is inaccurate.

22. **Payment of Debt/Delinquency to State:** Professional certifies that it is not indebted to the City of League City and is current on all taxes owed to the City of League City. Professional agrees that any payments owing to Professional under the Agreement may be applied directly toward any debt or delinquency that Professional owes the City of League City regardless of when it arises, until such debt or delinquency is paid in full.
23. **Products and Materials Produced in Texas:** If Professional will provide services under the Agreement, Professional covenants and agrees that in performing its duties and obligations under the Agreement, it will purchase products and materials produced in Texas when such products and materials are available at a price and delivery time comparable to products and materials produced outside of Texas.
24. **Risk of Loss:** All work performed by Professional pursuant to the Agreement will be at Professional's exclusive risk until final and complete acceptance of the work by City. In the case of any loss or damage to the work, or the need to redo or revise the work for any reason except to accommodate a City request to materially alter the work, prior to City's acceptance, bearing the costs of such loss or damage to or such redo or revision of the work will be Professional's responsibility.
25. **Publicity:** Professional shall not use City's name, logo or likeness in any press release, marketing materials or other public announcement without receiving City's prior written approval.
26. **Legal Construction/Severability:** In the event that any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision, and this Agreement shall be construed as if such invalid, illegal or unenforceable provisions had never been contained in it. To this end, the provisions of this Agreement are declared to be severable. The Parties may mutually agree to renegotiate the Agreement to cure such illegality/invalidity or unconstitutionality if such may be reasonably accomplished.
27. **Limitations:** The Parties are aware that there are constitutional and statutory limitations on the authority of City to enter into certain terms and conditions of the Agreement, including, but not limited to, those terms and conditions relating to liens on City's property; disclaimers and limitations of warranties; disclaimers and limitations of liability for damages; waivers, disclaimers and limitations of legal rights, remedies, requirements and processes; limitations of periods to bring legal action; granting control of litigation or settlement to another party; liability for acts or omissions of third parties; payment of attorneys' fees; dispute resolution; indemnities; and confidentiality (collectively, the "Limitations"). Any terms and conditions related to the Limitations will not be binding on City except to the extent authorized by the laws and Constitution of the State of Texas.
28. **Sovereign Immunity:** The Parties agree that neither the execution of the Agreement by City nor any other conduct, action or inaction of any City representative relating to the Agreement constitutes a waiver of sovereign immunity by City.
29. **Authority:** The Parties stipulate that in entering into this Agreement, the City is performing a solely governmental function and not a proprietary function. Professional warrants and represents that Professional has full power and authority to enter into and perform this Agreement and to make the grant of rights contained herein. The person signing on behalf of City represents that he/she has authority to sign this Agreement on behalf of City.

30. **Non-Waiver:** The Parties specifically agree that neither the occurrence of an event giving rise to a breach of contract claim nor the pendency of a claim constitute grounds for the suspension of performance by Professional. No covenant or condition of this Agreement may be waived except by written consent of the waiving party. Forbearance or indulgence by one party in any regard whatsoever shall not constitute a waiver of the covenant or condition to be performed by the other party.
31. **Prohibitions Pursuant to Texas Government Code:** By executing this Agreement Professional verifies that Profession (1) does not boycott Israel and will not during the term of this Agreement per Section 2274.002; (2) is not engaged in business with Iran, Sudan, or any company on the list referenced in Section 2252.152; (3) does not boycott energy companies and will not during the term of this Agreement per 2274.002; and (4) does not have a practice, policy, guidance, or directive of this Agreement against a firearm entity or firearm trade association and will not during the term of this Agreement per 2274.002.

(signature block on next page)

Executed on _____. *(date to be filled in by City Secretary)*

Click or tap here to enter text. - “Professional”

Click or tap here to enter text.

CITY OF LEAGUE CITY – “City”

Click or tap here to enter text.

Attest:

Diana Stapp, City Secretary

Approved as to Form:

Office of the City Attorney

Exhibit A

**Scope of Services/Description of Products/Payment
Schedule** (33 pages, including this page)

I. STUDY AUTHORITY

The original authority to study flood risk management for Lower Clear Creek and Dickinson Bayou, Texas was included within the Water Resources Development Act of 2022 and has been supplemented by additional study authority.

1. Approval by the U.S. Army Corps of Engineers (USACE) Galveston District for the feasibility study to be conducted by the League City under Section 203 of the Water Resources Development Act of 1986, as amended, which offers the potential of an expedited study and reimbursement of study costs. Section 203 provides that the Assistant Secretary of the Army (ASA[CW]) has 180-days after receipt of a non-Federal 203 feasibility study to make its recommendation to Congress.

II. STUDY PURPOSE

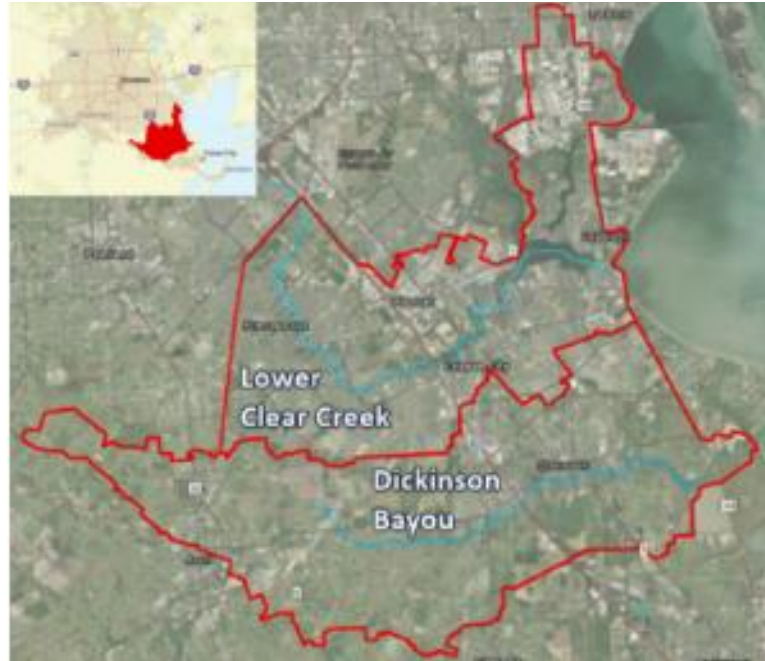
The purpose of this study is to develop a comprehensive flood mitigation plan for the Lower Clear Creek and Dickinson Bayou Watersheds with a focus on the riverine impacts along the main channel beginning near Farm to Market Road 1959 through the outlet of Clear Creek/Clear Lake into Galveston Bay. In conjunction with Harris County Flood Control District's MAAPnext effort, Freese and Nichols, Inc. (FNI) developed state-of-the-art hydrologic and hydraulic models leveraging current NOAA Atlas 14 rainfall, 2018 LiDAR data, and a 1D/2D unsteady-state modeling approach. FNI evaluated both existing and future conditions flood risks based on the 24-hour duration 2-, 5-, 10-, 50-, 100-, and 500-year Atlas 14 storm events, as well as Hurricane Harvey and included projections of sea level rise. FNI identified vulnerabilities in the watersheds, including instances of flooding at structures and the resulting damage estimates, as well as impacts to critical infrastructure and transportation systems.

The primary national benefit of a flood risk management project is the general welfare of the public and improvement to national income and development. Other economic benefits of the project on water supply, recreation, habitation, as well as environmental benefits associated with improved water quality will be considered qualitatively in the feasibility study.

To advance projects serving the welfare of citizens of League City and the surrounding area, particularly Harris County and Galveston County, League City leading a partnership or other local stakeholders sought and received approval from the USACE Galveston District for advancing the feasibility analysis under the 203 Authority.

III. STUDY AREA

The primary study area includes the Cities of League City, Friendswood, Webster, Seabrook, Dickinson as well as the counties of Harris, Galveston and Brazoria.



IV. STUDY PARTICIPATION AND COORDINATION

Study participation and coordination takes on an important role in the identification and screening of project alternatives. To that extent, study participation and coordination will be earlier and more vigorous than in prior Feasibility Study efforts. Study Participation and Coordination will be important in the plan formulation process.

Freese and Nichols, Inc. (CONSULTANT) will coordinate with USACE Galveston District to establish a protocol for coordination or consultation with other agencies for tasks such as, for example, filing the Draft Environmental Impact Statement (DEIS) with the U.S. Environmental Protection Agency (USEPA) and coordinating with Tribal Nations.

V. STUDY SCOPE OF WORK

Attachment 1 provides the Work Breakdown Structure (WBS) and detailed Scope of Work (SOW) for the study efforts that will be followed by and will guide the A-E consultant. To complete this effort the scope of the project is split into five (5) major phases.

- Phase 1 – Scoping and Management Measure Identification
- Phase 2 - Alternative Evaluation (Tentatively Selected Plan Milestone)
- Phase 3 – Draft Feasibility Report/EIS
- Phase 4 – Final Report/EIS
- Phase 5 – Post Submittal

In general, the study during each phase includes the following tasks which will be developed in greater detail as the project advances. 1) project management; 2) public meetings and communications; 3) planning efforts to evaluate project feasibility; 4) performing H&H analysis; 5) performing engineering analysis including cost estimates; 6) economic benefit analysis; 7) environmental and NEPA planning

VI. APPENDICES

The IFR/EIS will include the following technical appendices to support the findings of the recommended project plan:

- Economics
- Engineering and H&H
- Relocations
- Cost & Schedule Estimates
- Real Estate Plan
- USFWS Coordination Act Report
- Hazardous, Toxic & Radioactive Waste
- Cultural Resources (National Historic Preservation Act Section 106)
- Clean Water Act 404(b)(1)
- Biological Assessment
- Water Quality Certification
- Habitat Evaluation Procedure
- Public Notice Comments
- Public & Scoping Meeting Report
- Alternative Plan Cost Estimates

VII. THE RECOMMENDED PLAN

The CONSULTANT will present a Recommended Plan in the IFR/EIS that will describe in detail the following project attributes:

- Major components
- Plan Design Reference
- Construction Methodology and Schedule
- Real Estate Consideration
- Detailed Cost Estimates
- Operation and Maintenance/Dredging
- Economic Benefits and Costs
- Federal and Non-Federal Costs
- Status of the Non-Federal Sponsor
- Financial Analyses of the Non-Federal Sponsor's Capabilities
- Risk and Uncertainty

VIII. USACE ASSISTANCE AND REVIEWS

The CONSULTANT will coordinate with USACE to have USACE perform the following actions during the development of the IFR/EIS:

1. Participate in a Planning Charette to be held at the start of the study efforts to ensure study scope, expectations, and risk management are understood by all study participants.

2. Participate in discipline specific review meetings for Economics, Hydrology & Hydraulics, and NEPA.
3. Conduct an Agency Technical Review (ATR) of the alternative milestone deliverable package.
4. Conduct a review of the selected project plan's cost estimates and cost & schedule risk analysis (CSRA) by USACE's Cost Engineering Center of Expertise.
5. Conduct an Agency Technical Review (ATR) of the Draft IFR/EIS.
6. Coordinate the transfer of non-federal funds to the U.S. Fish and Wildlife Service (USFWS) to prepare the study's Planning Aid Letter (PAL) and the Coordination Act Report (CAR).

The Section 203 Final IFR/EIS will be submitted to the ASA (CW) for policy review to be performed by USACE's Regional Integration Team (RIT). The intent is for ASA (CW) to submit the reviewed decision document to Congress within one hundred eighty (180) days of receipt of the Final IFR/EIS.

IX. DELIVERABLES

Within twenty-four (24) months from Notice to Proceed, the CONSULTANT will deliver a Draft IFR/EIS with Appendices.

Within thirty-four (34) months from Notice to Proceed, the CONSULTANT will deliver a Final IFR/EIS with Appendices

X. PRICE/FEE

The CONSULTANT's firm-fixed contract price of \$4,998,179, to be authorized by Phase, is proposed to accomplish all tasks as listed and described in Section V and Attachment 1 of this scope of service document. The proposed fee does not include transfer of funds to USACE Galveston District for assistance as described in Section VIII of this scope of services document. Table 1 provides the firm-fixed contract price proposal breakout by major WBS task.

Table 1. A-E Consultant Firm-Fixed Contract Price/Fee

Phase	Task	PRICE/FEE
1	1.1 Project Management	\$ 93,633
	1.2 Public Meetings/Communications	\$ 126,905
	1.3 Planning	\$ 103,985
	1.4 H&H	\$ 159,079
	1.5 Engineering	\$ 160,213
	1.6 Economics	\$ 147,170
	1.7 Environmental	\$ 389,952
PHASE 1 SUBTOTAL		\$ 1,180,937
2	2.1 Project Management	\$ 118,063
	2.2 Public Meetings/Communications	\$ 94,777
	2.3 Planning	\$ 60,135

	2.4 H&H	\$ 197,770
	2.5 Engineering	\$ 194,774
	2.6 Economics	\$ 261,823
	2.7 Environmental	\$ 355,756
	PHASE 2 SUBTOTAL	\$ 1,283,098
3	3.1 Project Management	\$ 94,943
	3.2 Public Meetings/Communications	\$ 101,526
	3.3 Planning	\$ 48,890
	3.4 H&H	\$ 198,769
	3.5 Engineering	\$ 170,607
	3.6 Economics	\$ 216,534
	3.7 Environmental	\$ 594,589
PHASE 3 SUBTOTAL		\$ 1,425,858
4	4.1 Project Management	\$ 94,929
	4.2 Public Meetings/Communications	\$ 102,456
	4.3 Planning	\$ 91,073
	4.4 H&H	\$ 117,638
	4.5 Engineering	\$ 74,583
	4.6 Economics	\$ 41,673
	4.7 Environmental	\$ 318,108
PHASE 4 SUBTOTAL		\$ 840,460
5	5.1 Project Management	\$ 43,892
	5.2 Public Meetings/Communications	\$ 43,278
	5.3 Planning	\$ 23,111
	5.4 H&H	\$ 29,599
	5.5 Engineering	\$ 36,868
	5.6 Economics	\$ 20,744
	5.7 Environmental	\$ 70,334
PHASE 5 SUBTOTAL		\$ 267,826
TOTAL		\$4,998,179

*Total Fee Budget NTE \$5,000,000

ATTACHMENT 1
SCOPE OF SERVICES
League City Lower Clear Creek and Dickinson Bayou Flood Risk Reduction Study
Phase 1 Detailed Scope of Services and
Conceptual Outline of Scope of Services for Phases 2-5

This scope of services is to prepare a policy-compliant Section 203 Federal Feasibility Study and Environmental Impact Statement. Under Section 203 authority, feasibility studies prepared by a non-Federal entity must comply with all requirements that would apply to a feasibility study undertaken by the U.S. Army Corps of Engineers (USACE), including full compliance with the National Environmental Policy Act (NEPA). The study area spans across two watersheds, Clear Creek and Dickinson Bayou, covering three counties (Galveston, Harris, Brazoria) and several cities including League City.

This study was authorized in WRDA 2022, but to date has remained unfunded. To accelerate the lifesaving infrastructure needed League City is pursuing performing the required feasibility and environmental impact statement as a Section 203 study.

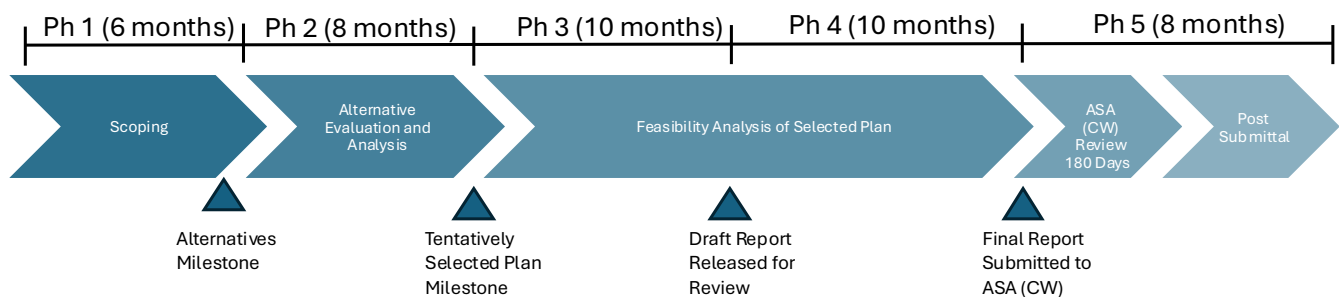
This effort will focus on identifying flood risk reduction projects that could be cost shared with the Federal government and constructed in partnership with the U.S. Army Corps of Engineers (USACE).

To complete this effort the scope of the project is split into five (5) major phases.

- Phase 1 – Scoping and Management Measure Identification
- Phase 2 - Alternative Evaluation (Tentatively Selected Plan Milestone)
- Phase 3 – Draft Feasibility Report/EIS
- Phase 4 – Final Report/EIS
- Phase 5 – Post Submittal

The overall project is anticipated to be completed across 36 months with key phase deadlines listed below:

- Phase 1: 6 Months
- Phase 2: 8 months
- Phase 3: 10 months
- Phase 4: 10 months
- Phase 5: 8 months



These phases are aligned with the typical USACE civil works feasibility planning process and intended to align the project throughout its lifecycle with following all federal law, policy, and guidance to produce a fully compliant integrated feasibility study and environmental impact statement (IFS/EIS). In accordance with Section 161 of the Water Resources Development Act (WRDA) of 2020, League City will utilize and pay USACE to perform inherently governmental functions and to provide technical and policy review and analysis as allowed within current law and guidance. When Phase 3 is complete the final IFS/EIS will be submitted to the Assistance Secretary of the Army for Civil Works (ASA(CW)), who is allotted a 180-day review period. If accepted the feasibility study, investment recommendation, and NEPA Record of Decision signed by the ASA(CW) will be submitted to the White House Office of Management and Budget (OMB) for clearance and approval to forward to the appropriate congressional committees for consideration. It is hoped that the investment recommendation will be included in the WRDA of 2028 or 2030. Following that authorization the ASA(CW) may budget and allocate preconstruction engineering and design activities for the project with funds identified by Congress. The project would also become eligible to receive funding from Congress or the Administration to advance design and construction activities.

Tasks performed under each phase are anticipated to follow a similar pattern of high-level conceptual analysis followed by refinement and recommendation in subsequent phases. Therefore, major work areas have been identified which will have continuous effort across each phase. The major work areas are listed below:

Task 1: Project Management
Task 2: Public Meetings and Communications
Task 3: Planning
Task 4: Hydrology and Hydraulics
Task 5: Engineering
Task 6: Economics
Task 7: Environmental

As the project advances the phase number will proceed the task item (i.e. 1.1 (Phase 1 Task 1), 2.1 (Phase 2 Task 1)).

The project delivery team (PDT) will consist of:

- Project Manager
- Assistant Project Manager
- Senior Project Advisor
- Task Leads
- Discipline Project Advisors (as appropriate)

Phase 1 – Scoping and Management Measure Identification

Phase 1 includes the first major components of the feasibility study process. Scoping, including the identification of management measures. The scoping process will proceed include critical up-front tasks such as public meetings, initiation of NEPA activities, screening of management measures, identification of alternative arrays, set up of economic models, H&H model set up and other activities. While not required as part of a 203 study the intent of this study is to follow the USACE feasibility study process and will conclude at the “Alternatives Milestone” deliverable to USACE for review to continuously document efforts during the study. Following the alternative milestone, management arrays making up 3 project alternatives will be identified for further analysis. Those alternatives will be advanced and refined to identify a Tentatively Selected Plan based on a comprehensive benefit approach in Phase 2.

1.1 Project Management

1.1.1 Project Administration and Controls

- Provide monthly invoicing, progress projects and other typical project management activities to maintain scope, schedule, and budget
- Kickoff meetings and recurring biweekly 0.5-hour PDT team meetings
- Coordination with local government officials, consultants, technical support, and other coordination to complete the project
- Participation in meetings with League City, USACE, technical and milestone review meetings; public meetings; and meetings with stakeholders with meeting minutes to be issued within 3 business days of meetings to all attendees
- Review the completed study material to assure that conclusions and decisions reached are consistent with sound engineering and planning practices, conform to USACE and other governmental policies and requirements, and developing the financing plan for the project.
- Develop a work breakdown structure (WBS) to organize and capture project schedule and cost information
- Data and document management

1.1.2 Project Guidelines

- Develop and enforce Project Management Plan to include planning risk register, decision management plan, and change management plan
- Develop Quality Management Plan and perform quality control and assurance checks and technical reviews
- Develop Risk Management Plan
- Develop baseline schedule and earned value tracking

1.1.3 Management of USACE Scopes of Work for Federal and Technical Assistance

- Prepare draft MOA scope of work for inherently government activities, negotiate and finalize agreements with USACE
- Prepare draft MOA scope of work for technical assistance, negotiate and finalize agreements with USACE

1.2 Public Meetings and Communications

Communications serve a critical role in involving local stakeholders and the public into buying into proposed solutions. As part of Phase 1 the focus will be on the implementation of a NEPA-compliant public involvement process to support project scoping

1.2.1 Develop Strategic Communications Plan

- Develop a strategic communication plan to support external project communications. This plan should identify the purpose and goals for strategic communications, identify the roles and responsibilities among team members, internal communication protocols, stakeholder communication monitoring, media relations protocols

1.2.2 Communication Materials and Tools

- Create materials and tools as requested to fulfill the goals of the strategic communication plan, including but not limited to project branding, graphical infographics, 3D renderings, handouts, information cards, presentations, video production, project email, external facing website

1.2.3 Stakeholder Management

- Create a database of stakeholders who provide feedback or are invited to provide feedback including elected officials and relevant staff members

1.2.4 Scoping Meetings (NEPA)

- Draft, finalize, and provide notice of scoping meetings to USACE for submission to USEPA for publication in the Federal Register to support the study and maintain compliance with NEPA requirements
- Publish meeting notices with local printed media outlets
- Prepare public meeting materials
- Hold 2 large scale public meetings, 1 in League City, and 1 in Galveston County during the scoping phase of the project to gather ideas and feedback
- Prepare a draft and final scoping meeting comments report to be used to inform the formulation of alternative project plans. Summarize the results and comments received during the public scoping period
- Prepare and facilitate working group meetings in coordination with the Clear Creek Steering Committee and the Dickinson Bayou Steering Committee and BAYTRAN drainage committee.

1.2.5 Alternative Analysis Meetings

- Following identification of management measures and alternative array:
- Publish meeting notices with local printed media outlets
- Prepare public meeting materials
- Hold 2 large scale public meetings, 1 in League City, and 1 in Galveston County to inform the public and solicit feedback on the selected alternative array
- Complete any required NEPA outreach and engagement documentation

1.3 Planning

1.3.1 Goals, Objectives, Constraints and Opportunities Identification

- In collaboration with League City develop and define the study area's goals, objectives, constraints and opportunities. Further refine following input from the public scoping meetings.

1.3.2 Review of Prior Studies & Reports

- Review prior studies and reports, develop “prior studies and reports” subsection. Establish study authority, purpose and need, study partner, study area, historical background. Known previous studies and ongoing efforts to coordinate with include:
- Clear Creek and Dickinson Flood Studies
- SAFER study
- Clear Creek Federal Project
- GLO RBFS
- TWDB FIF
- TAMU IDRT

1.3.3 Identify Management Measures (Structural & Non-Structural)

- Document the management measures recommended in the Lower Clear Creek and Dickinson Bayou Flood studies and coordinate with local entities to understand status of previously identified management activities that may be advancing (e.g. Friendswood Regional Basin, Whitcomb Terracing).
- Additional management activities covering both structural and non-structural solutions to reducing flood risk will be identified and investigated to determine relative benefits and costs to assist with alternative identification.
- Two workshops with study partners selected in coordination with League City and USACE will be held prior to public meetings. One to discuss the results of previous studies and brainstorm additional management measures, and a second to discuss the results of preliminary engineering analysis of identified management measures to assist with alternative formulation.

1.3.4 Alternative Milestone Deliverable

- Prepare screening and evaluation criteria for management measures to determine which measures are advanced into alternatives for further study
- Formulate Alternative Plans by working across all disciplines to assemble and present a series of management measures including costs and benefits
- Recommend a final alternative array and document the decision process to arrive at those alternative and present to the USACE vertical team as a “Alternative Measures Milestone”

1.4 Hydrology and Hydraulics

As a flood risk reduction project dependable modeling and analysis of management measures will be accomplished through detailed H&H models. These models form the foundation of the project analysis and will be reviewed by USACE through independent technical review to coordinate modeling approach

1.4.1 Coordination and Meetings

- Biweekly meetings will be held to allow for coordination between H&H modeling teams

1.4.2 Data Collection and Previous Studies

- Collect and organize data needed to update existing models to allow creation of existing condition models

1.4.3 H&H Planning

- Define the without project condition scenario using applicable USACE policy
- Identify problems, opportunities and constraints anticipated in the H&H modeling
- Identify the goals and objectives of H&H modeling

1.4.4 Determination of Federal Authority based on Without Project Models

- Identify what areas within the study area meet a criteria of 1.5 square miles of contributing area or generate more than 800 cfs in peak runoff flow in the 10% AEP event
- Identify areas within the study area that meet a criteria of a generating a peak flow greater than 1,800 cfs in a 1% AEP event

1.4.5 Assess existing flood risk

- Research flood history within the study area
- Quantify existing property, demographics, and critical infrastructure for the 10%, 1% and 0.2% AEP events

1.4.6 Future Flood risk

- Assess using a simplified approach the additional property, demographics, and critical infrastructure that could be a risk for the 10%, 1% and 0.02% AEP events

1.4.7 Hotspot Analysis

- Using historical claims, GIS background data, and hydraulic modeling results to identify areas of existing and/or future flood risk to inform recommended locations for flood risk reduction measures

1.4.8 Screening Analysis

- Working with planning team identify management measures to include in models to test benefits that could be recognized from project implementation
- The list of management measures to be modeled will be followed, each measure will be modeled individually to understand how it impacts water surface elevations and flows across both watersheds for eight frequency events (50%, 20%, 10%, 4%, 2%, 1%, 0.5%, 0.2% AEP) Exhibits will be created for each management measure to be shared at scoping meetings and serve as the basis for discussion using the current conditions model

- Assist planning team with alternative creation

1.4.9 Modeling Framework

- Investigate and summarize current policy on H&H guidance within the USACE planning process. This is anticipated to align the project modeling approach with USACE modeling practices in terms of boundary conditions, storm types, joint probability, sea level rise and other modeling methodologies
- Investigate and summary current policy regarding future condition inclusion in the USACE planning process. Topics to research include impervious area development for future years, future population growth, current or planned flood risk reduction projects
- Prepare a technical memorandum to document the H&H guidance and standards intended to be used throughout the project

1.4.10 Detailed Without Project Modeling

- Existing condition modeling created during Lower Clear Creek and Dickinson Bayou Flood studies (LCCDBFS) will be updated with relevant changes to the watersheds since the studies were completed in 2021. The HEC-RAS models will be updated to version 6.4.1 or later. Models produced as part of the GLO Texas Regional Flood Basin study will be assessed to determine if they are well suited for adoption over the 2021 LCCDBFS models
- Execute current condition models for the 50%, 20%, 10%, 4%, 2%, 1%, 0.5%, 0.2% Atlas 14 AEP events
- Validate current conditions model against 2 historical storm events and perform minor adjustment to the models, recently built LCCDB and GLO RBFS models have been calibrated and assumed effort is minor updates
- Summarize current model results based on inundation and depth grids and graphics at key locations to guide management measures coordination
- Develop flooding damage metrics to use as comparison for management measure improvements

1.4.11 Base Conditions Modeling

- Base conditions are based on revising the current condition model to a common starting point of 2040. Expected changes between current condition and base condition include hydrologic parameters to account for additional development and changes to tailwaters based on sea level rise, and potentially changes to rainfall based on Atlas 15 if available.
- Execute base condition models for the 50%, 20%, 10%, 4%, 2%, 1%, 0.5%, 0.2% Atlas 14 AEP events
- Summarize current model results based on inundation and depth grids and graphics at key locations to guide management measures coordination
- Develop flooding damage metrics to use as comparison for management measure improvements

1.4.12 Future Conditions Modeling

- Future conditions are based on revising the base condition model to a future date of 2090. Expected changes between current condition and base condition include hydrologic parameters to account for additional development and changes to tailwaters based on sea level rise, and potentially changes to rainfall based on Atlas 15 if available.

- Execute future condition models for the 50%, 20%, 10%, 4%, 2%, 1%, 0.5%, 0.2% Atlas 14 AEP events
- Summarize current model results based on inundation and depth grids and graphics at key locations to guide management measures coordination
- Develop flooding damage metrics to use as comparison for management measure improvements

1.4.13 Current, Base, Future Modeling ITR Package

- Compile all submittal files, H&H documentation, model files, and supporting documents needed for USACE to complete an ITR. Models to be submitted will include: 1. Current conditions model with frequency events and management measures screening model results. 2. Base condition models with frequency events. 3. Future condition models with frequency events
- Hold half day workshop with USACE and League City to present results and findings
- Respond to ITR comments and hold follow up meeting to address

1.4.14 Documentation

- Develop feasibility report documenting the H&H analysis of the phase 1 work performed including discussion of model development, modeling methodologies, screening analysis, and results of alternative analysis
- Develop H&H appendix to be included in feasibility report, this appendix is anticipated to be further developed in each phase as additional project detail is advanced

1.5 Engineering

The engineering task is instrumental to evaluating the various alternatives for a feasibility, cost, and real estate perspective and to maintain compliance with USACE feasibility planning policy. Engineering level of detail will increase through each phase but at the conclusion must meet USACE design maturity requirements and receive cost certification from the Walla Walla PCX for the final feasibility report to receive approval. This scope of work assumes a design maturity of 10%. Additional level of detail required to reach the required design maturity and the associated additional level of effort will be determined following Phase 2 when a TSP is selected.

1.5.1 Engineering Coordination

- Biweekly coordination meetings will be held to allow coordination across teams including PDT
- Attend other meetings as requested

1.5.2 Engineering and Documentation

- Gather and collect relevant engineering reports, studies, completed projects and history of projects across the study area
- Infrastructure mapping and data collection for roads, utilities, treatment plants, easements, etc
- Create engineering screening criteria for evaluating screening of management measures

1.5.3 Management Measure Engineering Analysis

- Prepare conceptual designs for each management measure to consider the likely footprint and order of magnitude quantities for parametric estimating
- Estimate high level real estate needs for each management measure
- Estimate high level relocations requirements for each management measure
- Estimate project footprint for each management measure to provide the environmental team to assess potential environmental impacts
- Provide high level feedback of operations and maintenance considerations of each management measure
- Estimate disposal and placement locations for each management measure
- Prepare conceptual design/construction schedules for each management measure and document assumptions
- Prepare conceptual construction costs for each management measure with risk appropriate contingency included

1.5.4 Documentation

- Document engineering analysis as part of the Feasibility report which is anticipated to grow as the project progresses
- Document engineering analysis as part of the Engineering Appendix which is anticipated to grow and the project progresses

1.6 Economics

Economics work is a key portion of the analysis to justify a potentially significant investment of public funds into flood risk reduction. To recognize all a wider swath of benefits that could result from this project several models will be utilized that are not certified by USACE and will require single use model approval in accordance with ER 1105-2-412. Additional models will be pursued in the context of a comprehensive benefit analysis.

1.6.1 Economics Coordination

- Biweekly coordination meetings will be held to allow coordination across teams including PDT
- Attend other meetings as requested for sharing expertise and results of economic analysis

1.6.2 Comprehensive Benefits Framework

- Prepare a comprehensive benefit framework and decision-making process memo. This document should describe how benefits will be assessed and how planning decisions are made. The document should be structured to consider the four traditional accounts (National Economic Development [NED], Regional Economic Development [RED], Other Social Effects [OSE], and Environmental Quality [EQ])
- Provide framework documentation to League City and USACE vertical team for comment and address one round of comments

1.6.3 Documentation

- Prepare an economic analysis memo to detail economic analysis standards, period of analysis, discount rate, and other assumptions. This document will grow and be refined as phases continue
- Prepare working draft of economics appendix

1.6.4 Single Use Model Approval

- Submit documents for single use approval for any non-certified economic modeling tools proposed to be used to establish comprehensive benefits and respond to comments to obtain model use approval letters from USACE. This will likely include regional economics, socioeconomics and habitation.

1.6.5 Economic Model Refinement and Results

- Set up study wide HEC-FDA model and refine approach specific to Lower Clear Creek and Dickinson Bayou
- Set up study wide LifeSim model and refine approach specific to Lower Clear Creek and Dickinson Bayou
- Set up other economics as approved by USACE following Task 1.6.4

1.7 Environmental (NEPA)

The environmental task will be scoped during phase 1 and additional level of detail will be added to the EIS in phases 2 - 4 to create a NEPA compliant EIS. Due to time requirements to complete a NEPA compliant EIS much of this work will begin in Phase 1 but be more fully developed in phases 2 - 4. Significant coordination with USACE is expected as part of the inherently governmental functions.

1.7.1 Existing Conditions/Affected Environment Section

- Existing conditions characterizing the human and natural environment will be analyzed. Develop affected environment setting including development of historic and existing conditions. Establish existing conditions of study area for all relevant natural and human resources based on desktop and, where needed, resource surveys. This section of the EIS includes the existing conditions of the following resources within the project area: water resources (floodplains; hydrology; wetlands; groundwater & surface water quality); biological resources (vegetation; fish and wildlife; threatened and endangered species; critical habitat; and invasive species); physical resources (air quality; noise; hazardous, toxic, and radioactive waste and materials; visual quality and aesthetics; land use; transportation; navigation; and geology and soils); public health & safety; cultural resources; socioeconomics; environmental justice; recreation; unavoidable adverse environmental effects, etc. Others as identified.

1.7.2 Coordination with USFWS (PAL/CAR)

- The USFWS PAL will describe fish and wildlife resources within the Study area. Review and incorporate USFWS PAL into the Study's planning efforts. USACE will lead this effort in accordance with the MOA.

1.7.3 Environmental Consequences/Impacts Section

- This section of the EIS includes the impact analysis of the alternatives (including the No Action alternative) on the resources described in the Affected Environment section. Identify, document, and analyze relevant conditions, issues, and effects associated with defining the proposed action and alternatives, including the No-Action (future without project) alternative. The Environmental Consequences section of the document will be structured to include only the information required to perform the analysis. Incorporate appropriate analyses and information provided by the Planning/Plan Formulation Team, Cooperating Agencies, or other approved sources into the EIS, in appropriate level of detail and editing compiled document.

Phase 2 – Alternative Evaluation and Analysis

Following the scoping and identification of the final alternative array, further detailed analysis of each alternative will be performed to identify the Tentatively Selected Plan. This includes agency consultation, continued public and stakeholder outreach and advancement to a higher level of detail the tasks begun in Phase 1.

2.1 Project Management

- Continue management activities

2.2 Public Meetings and Communications

- Continue outreach and engagement activities
- Draft Report/Draft EIS specific meetings/outreach
- Regulatory engagement

2.2.1 Alternative Analysis Meetings

- Publish meeting notices with local printed media outlets
- Prepare public meeting materials
- Hold 2 large scale public meetings, 1 in League City, and 1 in Galveston County to inform the public and solicit feedback on the selected alternative array
- Complete any required NEPA outreach and engagement documentation

2.3 Planning

- Coordination with HQ, ASA(CW), OMB, Congress, League City
- Refine TSP
- Prepare Draft Report Deliverable
- Coordinate reviews/respond to comments

2.3.1 Tentatively Selected Plan (TSP) or Locally Preferred Plan (LPP) Identification

- Perform a comparison analysis on the final array of alternative project plans. The project alternative with-project alternative average annual benefits will be compared to average annual costs. The with-project alternative that produces the highest net benefits (average annual benefits – average annual costs) is then selected as the TSP or a LPP will be identified

2.4 Hydrology and Hydraulics

- Prepare/finalize draft technical analyses/report/appendix
- Respond to comments

2.4.1 Alternative Modeling and Reviews

- Following selection of the final alternative array:
- Modify base and future condition H&H models to represent the post-project condition for up to three alternatives. Water surface profiles for both pre- and post-project conditions will be developed for flood frequency events ranging from 50% AEP to 0.2% AEP. Models will not evaluate the Standard Project Flood (SPF) or Probable Maximum Flood (PMF). Models will evaluate the “land side” of flood risk. Sea level rise will be considered in the selection of boundary conditions as done in LCCDBFS. Combined probability and coastal flood risk will not be

evaluated as this is already being studied in detail under the Coastal Texas Protection and Restoration Feasibility Study

- Create H&H risk products to provide inputs to benefit calculations and other economic calculations and environmental data requirements
- Compile all submittal files, H&H documentation, model files, and supporting documents needed for USACE to complete an ITR. Models to be submitted will include: 1. Base condition models with frequency event for each of the three modeled alternatives. 2. Future condition models with frequency events for each of the three modeled alternatives
- Hold half day workshop with USACE and League City to present results and findings
- Respond to ITR comments and hold follow up meeting to address
- Prepare conceptual design/construction schedules for each alternative and document assumptions

2.5 Engineering

- Prepare/finalize draft technical analyses/report/appendix
- Respond to comments

2.5.1 Cost Estimates and Documentation

- Prepare cost estimating standards in compliance with USACE policy and standards. Cost estimates are expected to increase in level of detail as project progress through subsequent phases
 - Develop construction cost estimates for 3 future with-project (FWP) alternatives, for the proposed action. Utilize the screening level cost estimates as basis for developing detailed estimates for each alternative plan
 - Develop a breakdown of construction/O&M schedule including contracts involved. Prepare language, tables, and costs required for plan formulation documentation.
 - Provide an MII/MCACES estimate, including risk analysis, for the tentatively selected plan.
- 1) Develop cost estimate for construction and O&M.
 - 2) Develop detailed schedule for construction and O&M (Gantt chart with contract breakdown).
 - 3) Update relocation costs (if needed).
- Provide MCACES Documentation, including Total Project Cost Summary (TCPS), Estimate Backups, Estimate Documentation, and Cost Narrative (including Appendix).

2.5.2 Real Estate Planning and Documentation

- Prepare Real Estate standards for use throughout the project that complies with USACE policies and standards.
- Prepare real estate cost estimates (Chart of Accounts format) for alternative plan(s) and mitigation alternative plan(s) introduced during feasibility, to include value of Land, Easements, Rights of Way, Relocations and Disposals (LERRD's), acquisition, real estate plan, gross appraisal, attorneys, opinion of compensability, P.L. 91-646 relocation, and all hired labor charges. The scope and format of the estimate is directed by draft Chapter 12, ER 405-1-12, as amended.
- Prepare the real estate plan and gross appraisal for the feasibility study. The real estate plan and gross appraisal will be prepared for the tentatively selected plan and mitigation area once it has been developed. The gross appraisal will be a cost estimate or rough order of magnitude (desktop review of county appraisers' real estate value), since it's assumed value of real estate will be less than 15% of total cost to implement the project. Reference Real Estate Policy Guidance Letter No. 31.

2.6 Economics

- Prepare/finalize draft technical analyses/report/appendix
- Respond to comments

2.6.1 Quantify Other Economic Benefits

- **Other Social Effects** - The development and operation of the project, in addition to economic benefits, can lead to Other Social Effects that may be positive or negative. In this task, the OSE to be evaluated will include Health and Safety Economic Vitality, Social Connectedness, Identity, Social Vulnerability and Resistance, Participation, and Leisure and Recreation.
- **Water Supply and Agricultural Benefits** - Perform a desktop GIS analysis within a buffer of the proposed navigation channel looking at U.S. Department of Agriculture National Land Cover Data Set (NLCD) and National Agricultural Statistics Service (NASS) Cropscape to identify cultivated crops (NLCD) and crop type (Cropscape). Identify increased yields and economic impacts by crop type to be included in the economic benefits. **Other Benefits** - Evaluate the potential for other water users than agriculture such as municipal and industrial users within a given distance of the project area. If any are identified, evaluate if water supply from the project is feasible.
- **Water Quality and other Environmental Benefits** Prepare a qualitative narrative of the benefits resulting projects that result in improvements to water quality or habitat uplift or creation. Examples include bank stabilization features to reductions in sediment load to the lower reaches of Clear Creek or Dickinson Bayou or the Gulf, reestablishment of marsh or wetland habitats, or creation of new wetland habitat or features.
- **Recreation Benefits** - Perform a desktop evaluation of the potential for the development of recreation. The analysis will be performed by 1) Identifying the recreational market area 2) Estimating by extrapolation total recreation visitation to this area; 3) Identifying the needs of the primary user population; 4) Extrapolating and estimating use levels for each activity type; and 5) Extrapolating and estimating the target facility numbers to be provided for the identified activity usage levels. Average annual benefits will be estimated for each alternative plan at each recreational location. A recreational benefits summary will be prepared for the IFR main report and detailed recreational benefits report will be prepared as an attachment for the Economics appendix.

2.6.2 Alternative Analysis Benefit Analysis

- Following selected of a final alternative array and H&H modeling progressing to the point of result analysis. Economics analysis will be carried out for each of the three alternatives using the previously developed Comprehensive benefit framework
- Perform study wide modeling for comprehensive benefits approved in Task 1 by USACE. Anticipated that for each model will be run for alternatives including the “with” and “without” project in the base (2040) and future scenario (2090) for eight frequency events.
- Perform study wide HEC-FDA modeling for each alternative including with and without project in the base (2040) and future scenarios (2090) across the eight frequency events.
- Perform study wide LifeSim modeling for each alternative including with and without project in the base (2040) and future scenarios (2090) across the eight frequency events.
- Perform study wide RECONs modeling for each alternative including with and without project in the base (2040) and future scenarios (2090) across the eight frequency events.

- Perform study wide OSE calculations and modeling for each alternative including with and without project in the base (2040) and future scenarios (2090) across the eight frequency events.
- Perform study wide Environmental Quality (EQ) calculations and modeling for each alternative including with and without project in the base (2040) and future scenarios (2090) across the eight frequency events.

2.7 Environmental

- Agency Consultation activities
- Manage Public/Agency Review and comments

2.7.1 Biological Impacts (HEP) Analysis

- In order to determine the net effects of alternative project plans on biological resources an evaluation model (e.g. Habitat Evaluation Procedures [HEP]). Work will be performed in collaboration with the Planning/Plan Formulation Team and applicable State and Federal resources agencies to identify and assess specific biological resources that will be impacted as a result of alternative project plans. The biological resources evaluation model will be used to analyze proposed mitigation alternatives. The model will be used to estimate the comparative benefits and impacts of the measures and alternatives.

2.7.2 Habitat Analysis

- In order to determine the net effects of alternative project plans on ecological habitat an evaluation model (e.g. Functional Capacity Units [FCU]). Work will be performed in collaboration with the Planning/Plan Formulation Team and applicable State and Federal resources agencies to identify and assess specific ecological habitat that will be impacted as a result of alternative project plans. The ecological habitat evaluation model will be used to analyze proposed mitigation alternatives. The model will be used to estimate the comparative benefits and impacts of the measures and alternatives.

2.7.3 Develop Environmental Features to Avoid/Minimize Impacts (LEDPA)

- In order to determine the net effects of alternative project plans on ecological habitat an evaluation model. Work will be performed in collaboration with the Planning/Plan Formulation Team and applicable State and Federal resources agencies to identify and assess specific ecological habitat that will be impacted as a result of alternative project plans. The ecological habitat evaluation model will be used to analyze proposed mitigation alternatives. The model will be used to estimate the comparative benefits and impacts of the measures and alternatives.

2.7.4 Initial HTRW Site Assessment

- Update and complete the HTRW baseline conditions assessment to accurately reflect current conditions for the project features and measures. Complete a desktop HTRW assessment to identify the existence of, and potential for, HTRW contamination, which could impact or be impacted by the Tentatively Selected Plan (TSP). This assessment will follow guidance provided by Engineering Regulation 1165-2-132 and consist of a review of recent and historic aerial photographs and a review of Federal, State, and local regulatory agency database information. Include a discussion of any pipeline and petroleum well information for the project areas.

Provide an analysis of existing conditions and an analysis of HTRW impacts associated with the project features and measures. The analysis will include maps depicting any regulated sites or identified waste and incident sites that will be impacted by project activities. All sources of information will be identified, dated, and included in an appendix to the EIS report. The analysis shall include maps that depict sample sites, regulated sites, and identified waste and incident sites that may be impacted by project features and measures. All data shall be presented in a GIS database.

2.7.5 Cultural Resources Assessment in consultation with SHPO

- Through consultation with the TX SHPOs, establish the proposed project's area of potential effects (APE). Using the National Register of Historic Places, identify and update historic properties within the proposed project APE and determine the effect of the proposed project on them. Assume cultural resource field surveys will be required near major excavation areas near water bodies but will be performed during the PED phase of the project. Therefore, negotiate and execute a programmatic agreement to commit to surveys (if needed) prior to project construction. Insert programmatic agreement into the Cultural Resources National Historic Preservation Act (NHPA) Section 106 appendix. This task will be led by USACE in accordance with the MOA.

2.7.6 Socioeconomic & Recreational Resources Assessment

- A socioeconomic evaluation of the study area will be prepared which includes sufficient information to provide a basis for predicting possible social and local economic effects that can be attributable to project modifications during the study life. The Assessment will be brief and focus on study-induced changes in the economy, infrastructure, health and safety of the local population. An Environmental Justice evaluation will be conducted for localities adjacent to the study area in accordance with the requirements of Executive Order 12898. Existing demographic and census data will be utilized to identify and assess the potential for disproportionate study effects on minority and low-income populations.

2.7.7 Biological Assessment

- Prepare a draft BA that describes potential TSP project impacts on Federally-listed threatened and endangered (T&E) species. Assume USFWS PAL/CAR will not require T&E field surveys during the feasibility study. Submit a draft BA to the League City or USACE for review. A draft BA will be included in the EIS and will serve as a basis to initiate consultation with the appropriate Federal agencies for determinations regarding potential effects to T&E species or critical habitats. Assume if Endangered Species Act Section 7 consultation is required with resource agencies in regard to any T&E species that may be adversely affected by project activities, the Section 7 consultation efforts will be initiated and accomplished by League City or USACE.

2.7.8 Cumulative Impacts Assessment

- Perform a cumulative impact assessment on the environment to account for incremental impacts induced by the proposed action when added to other past, present, and reasonably foreseeable future actions of Federal agencies, non-Federal agencies, and/or persons undertaking such other actions.

2.7.9 Mitigation Plans and Adaptive Management Strategies

- Where impacts are unavoidable, impacts will be quantified, and a mitigation plan formulated. Mitigation planning will require input from resource agencies involved in the study as well as an assessment of inputs and costs associated with alternative strategies to achieve the required ecological outputs. This recommended mitigation plan will require monitoring for a period of time to ensure success, development of criteria for determining ecological success, land available for mitigation, adaptive management plan, who will monitor, and agency consultation process. In collaboration with the Planning/Plan Formulation Team and resource agencies, a mitigation plan to compensate for unavoidable environmental impacts will be developed. A monitoring and adaptive management plan will be included as part of the mitigation plan. Develop mitigation plan to include fish and wildlife Impacts and other mitigation measures as applicable for impacted resources.

2.7.10 Section 404(b)(1) Analysis Preparation

- Perform a Section 404(b)(1) analysis and prepare a preliminary draft Section 404(b)(1) Analysis document for the TSP's proposed work that may be regulated under Section 404. Complete a Section 404(b)(1) form. The purpose of the Section 404(b)(1) evaluation is to provide information to be used in assuring conformance with state water quality standards for Clean Water Act (CWA) Section 401 water quality certification.

Phase 3 – Draft Feasibility Report and Environmental Impact Statement

Following the identification of the Tentatively Selected Plan this phase will include efforts to prepare the Draft Feasibility report and Draft EIS for public and agency review. This includes further refinement of the TSP, completing all technical analysis necessary to support the DFS/DEIS and conducting independent technical review (ITR), policy and legal compliance review, independent external peer review (if needed) and public review. This includes agency consultation, continued public and stakeholder outreach and advancement to a higher level of detail the tasks begun in Phases 1 and 2.

3.1 Project Management

- Continue management activities

3.2 Public Meetings and Communications

- Continue outreach and engagement activities
- Draft Report/Draft EIS specific meetings/outreach
- Regulatory engagement

3.3 Planning

- Coordination with HQ, ASA(CW), OMB, Congress, League City
- Refine TSP
- Prepare Draft Report Deliverable
- Coordinate reviews/respond to comments

3.3.1 Prepare Draft and Final Plan Formulation Chapter

- Write and edit the draft and final plan formulation chapter, coordinate the preparation of plates and other illustrations, compile and edit supporting appendices from other PDT elements, and assemble the report and its appendices. Respond to one round of comments and revisions by League City, USACE, other agencies and the public. Prepare responses to comments and work to resolve technical and policy comments into final draft prior to public release

3.3.2 Separable Elements Analysis

- Following identification and concurrence of the TSP carry out a separable elements analysis of the selected element to start crafting an implementation strategy. Separable elements refer to a portion of the project that physically separable from other portions of the project and which achieves either hydrology effects or produces benefits separable identifiable from those produced from other portions of the project.

3.4 Hydrology and Hydraulics

- Prepare/finalize draft technical analyses/report/appendix
- Respond to comments

3.5 Engineering

- Prepare/finalize draft technical analyses/report/appendix
- Respond to comments

3.6 Economics

- Prepare/finalize draft technical analyses/report/appendix
- Respond to comments

3.7 Environmental

- Agency Consultation activities
- Manage Public/Agency Review and comments
- Prepare Draft EIS Deliverable/Review
- Prepare a draft and final NOA of the DIFR/DEIS for publication in the Federal Register. A separate NOA will be prepared for the Final EIS. The NOA will include the location and the date and time of the public meeting for the DEIS.

Phase 4 – Final Feasibility Report and Environmental Impact Statement

This phase includes the effort following the review of the draft Feasibility Report and Draft Environmental Impact Statement. This will include refining the Recommended plan based on received comments, revising documentation, and preparing to submit the final Integrated Feasibility and Environmental Impact Statement and associated appendices.

4.1 Project Management

- Continue management activities

4.2 Public Meetings and Communications

- Continue outreach and engagement activities
- Final Report/EIS meetings and outreach
- Regulatory engagement

4.3 Planning

- Refine Recommended Plan
- Prepare Agency Decision Milestone Deliverable
- Update Draft Report to Final Report
- Coordinate Reviews

4.4 Hydrology and Hydraulics

- Update and finalize technical analyses/reports/appendix

4.5 Engineering

- Update and finalize technical analyses/reports/appendix

4.6 Economics

- Update and finalize technical analyses/reports/appendix

4.7 Environmental

- Conclude Agency consultation activities
- Update and finalize technical analysis and reports
- Prepare a draft and final NOA of the IFR/EIS for publication in the Federal Register.
- Prepare final EIS and draft Record of Decision (ROD)

Phase 5 – Post Submittal

This phase includes effort following submittal of the Final IFSEIS to the ASA(CW) during and following the 180-day review period. Primary effort is assumed to be responding to ASA(CW) comments and public outreach and engagement to build community and political support for the recommended project.

5.1 Project Management

- Continue and conclude management and closeout activities

5.2 Public Meetings and Communications

- Conclude outreach and engagement activities

5.3 Planning

- Finalize implementation planning
- Coordinate with HQ, ASA(CW), OMB, Congress, League City

5.4 Hydrology and Hydraulics

- Respond to ASA(CW) comments

5.5 Engineering

- Respond to ASA(CW) comments

5.6 Economics

- Respond to ASA(CW) comments

5.7 Environmental

- Respond to ASA(CW) comments
- Finalize Record of Decision (ROD)

Lower Clear Creek and Dickinson Bayou 203 Study 7/29/2025 Detailed Cost Breakdown	Project Fee Summary	
	Basic Services	\$ 4,998,179
	Special Services	\$ -
	Total Project	\$ 4,998,179

Tasks												
BST Task (for Project Setup)	Basic or Special	Task	Task Description	Chuck Wolf	Cory Stull	Matt Lewis	Mark Pauls	Tanner Helweg	Lincoln Abbott	Emily Bush	Alanna Jajeh	Kevin Kiniry
				QA	QA	PM	QC	H&H Lead	H&H Prod	H&H Prod	GIS	Eng Lead
			Phase 1									
			1.1 Project Management		2	50					9	-
			1.2 Public Meetings/Communications	7	16	45	-	45	-	-	-	-
			1.3 Planning	5	11	24	18	45		-	-	30
			1.4 H&H	-	24	50	60	160	200	300	40	-
			1.5 Engineering	16	40	18	-	-	-	-	-	240
			1.6 Economics	16	-	18	-	-	-	-	-	-
			1.7 Environmental	-	-	18	-	-	-	-	-	-
			Phase 2									
			2.1 Project Management	8	12	40	12	18	18	20	10	-
			2.2 Public Meetings/Communications	9	12	55	-	55	-	-	-	-
			2.3 Planning	7	8	60	20	50	100	-	-	-
			2.4 H&H	-	40	60	60	220	275	350	55	-
			2.5 Engineering	4	40	20	-	-	-	-	-	290
			2.6 Economics	16	-	20	-	-	-	-	-	-
			2.7 Environmental	-	-	12	-	-	-	-	-	-
			Phase 3									
			2.1 Project Management	12	16	80						
			2.2 Public Meetings/Communications	16	16	80	16	16				16
			2.3 Planning		16	60	20					
			2.4 H&H		16	80	80	150	300	300	40	
			2.5 Engineering		16	20					40	240
			2.6 Economics	24		12						
			2.7 Environmental			12						
			Phase 4									
			3.1 Project Management	8	12	40						
			3.2 Public Meetings/Communications	16	16	80	16	16				16
			3.3 Planning	8	24	60	16					
			3.4 H&H		24	80	40	80	150	200	40	
			3.5 Engineering		24	40						80
			3.6 Economics	8		12						
			3.7 Environmental			12						
			Phase 5									
			4.1 Project Management	4	16	40						
			4.2 Public Meetings/Communications	4	14	12						16
			4.3 Planning	2	4	40	16					
			4.4 H&H		8	12	20	20	20		20	
			4.5 Engineering	4	8	12	16					40
			4.6 Economics	4		12						
			4.7 Environmental			12						
Total Hours / Quantity				198	435	1,298	410	875	1,063	1,170	254	968

Lower Clear Creek and Dickinson Bayou 203 Study
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Tasks				Labor							
BST Task (for Project Setup)	Basic or Special	Task	Task Description	Joshua Watson	Rameez Qureshi	Courtney Corso	Engineer III	Philip Taucer	Tom Dixon	Lisa Vitale	Brynn Putnam
				Eng Prod	Re-Hab	Econ Support	Econ Support	Econ Support	Env Lead	Env Prod	Env Prod
			Phase 1								
			1.1 Project Management	-	10	10	4	-	64	90	89
			1.2 Public Meetings/Communications	-	-	-	-	-			
			1.3 Planning	-	10	10	-	-	64	90	89
			1.4 H&H	-	-	-	-	-			
			1.5 Engineering	350	-	-	-	-			
			1.6 Economics	-	90	80	80	-			
			1.7 Environmental	-	-	-	-	-	220	400	287
			Phase 2								
			2.1 Project Management	-	12	12	4	4	83	110	106
			2.2 Public Meetings/Communications	-	-						
			2.3 Planning	-	-						
			2.4 H&H	-	-						
			2.5 Engineering	500	-						
			2.6 Economics	-	230	40	80	24			
			2.7 Environmental	-	-				100	160	106
			Phase 3								
			2.1 Project Management						40	64	71
			2.2 Public Meetings/Communications			16					
			2.3 Planning						40	4	71
			2.4 H&H							64	
			2.5 Engineering	400							
			2.6 Economics		110	60	40	8			
			2.7 Environmental						200	480	317
			Phase 4								
			3.1 Project Management						60	94	89
			3.2 Public Meetings/Communications			16					
			3.3 Planning						60	94	89
			3.4 H&H								
			3.5 Engineering	120							
			3.6 Economics		110	40	40	8			
			3.7 Environmental						120	390	265
			Phase 5								
			4.1 Project Management						28	38	35
			4.2 Public Meetings/Communications			16					
			4.3 Planning								
			4.4 H&H								
			4.5 Engineering								
			4.6 Economics		20	12	12	8			
			4.7 Environmental						20	40	80
Total Hours / Quantity				1,370	592	312	260	52	1,099	2,118	1,691

Lower Clear Creek and Dickinson Bayou 203 Study
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Detailed Cost Breakdown

Tasks				r							
BST Task (for Project Setup)	Basic or Special	Task	Task Description	Aaron Petty	Tam Tran	Andrew Labay	David Buzan	Ryan Fikes	Matthew Harrison	Blake Simon	Kelsey Calvez
				Env Prod	Env Prod	Env Prod	Env Prod	Env Prod	Env Prod	Env Prod	Env Prod
			Phase 1								
			1.1 Project Management							13	
			1.2 Public Meetings/Communications								
			1.3 Planning								
			1.4 H&H								
			1.5 Engineering								
			1.6 Economics								
			1.7 Environmental	65	70	39	21	149	53	81	63
			Phase 2								
			2.1 Project Management							8	
			2.2 Public Meetings/Communications								
			2.3 Planning								
			2.4 H&H								
			2.5 Engineering								
			2.6 Economics								
			2.7 Environmental	36	40	24	11	92	29	41	35
			Phase 3								
			2.1 Project Management							10	
			2.2 Public Meetings/Communications								
			2.3 Planning								
			2.4 H&H								
			2.5 Engineering								
			2.6 Economics								
			2.7 Environmental	128	136	72	41	255	111	111	109
			Phase 4								
			3.1 Project Management							13	
			3.2 Public Meetings/Communications								
			3.3 Planning								
			3.4 H&H								
			3.5 Engineering								
			3.6 Economics								
			3.7 Environmental	28	28	50	50	46	31	27	43
			Phase 5								
			4.1 Project Management							8	
			4.2 Public Meetings/Communications								
			4.3 Planning								
			4.4 H&H								
			4.5 Engineering								
			4.6 Economics								
			4.7 Environmental	7	7	3	3	8	8	4	7
Total Hours / Quantity				265	281	188	126	549	231	313	257

Lower Clear Creek and Dickinson Bayou 203 Study
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Tasks										Total Hours	Total Labor Effort
BST Task (for Project Setup)	Basic or Special	Task	Task Description	Connor Kee	Kimberly Buckley	Ryan Deal	Anthony Risko	Carl Sepulveda	Eric Potts		
				Env Prod	Env Prod	Env Prod	QA/USACE	USACE Review	USACE Liason		
			Phase 1							0	\$ -
			1.1 Project Management				10			350	\$ 81,487
			1.2 Public Meetings/Communications				10		10	133	\$ 36,011
			1.3 Planning				10		10	416	\$ 103,985
			1.4 H&H				10		10	854	\$ 159,079
			1.5 Engineering					40		704	\$ 160,213
			1.6 Economics							284	\$ 53,670
			1.7 Environmental	26	18	57	40			1,606	\$ 366,972
			Phase 2							0	\$ -
			2.1 Project Management				10		10	497	\$ 118,063
			2.2 Public Meetings/Communications				10		10	151	\$ 39,777
			2.3 Planning				10		10	265	\$ 60,135
			2.4 H&H				10			1,070	\$ 197,770
			2.5 Engineering					40		894	\$ 194,774
			2.6 Economics							410	\$ 74,823
			2.7 Environmental	10	10	31	40			777	\$ 179,756
			Phase 3							0	\$ -
			3.1 Project Management				40		20	353	\$ 94,943
			3.2 Public Meetings/Communications							176	\$ 46,526
			3.3 Planning							211	\$ 48,890
			3.4 H&H							1,030	\$ 198,769
			3.5 Engineering					60		776	\$ 170,607
			3.6 Economics							254	\$ 51,534
			3.7 Environmental	59	39	117	40			2,223	\$ 500,252
			Phase 4							0	\$ -
			4.1 Project Management				20		20	355	\$ 94,929
			4.2 Public Meetings/Communications							176	\$ 47,456
			4.3 Planning							351	\$ 91,073
			4.4 H&H							614	\$ 117,638
			4.5 Engineering					40		304	\$ 74,583
			4.6 Economics							218	\$ 41,673
			4.7 Environmental	26	15	31	40			1,203	\$ 298,858
			Phase 5							0	\$ -
			5.1 Project Management							168	\$ 43,892
			5.2 Public Meetings/Communications				8		8	78	\$ 24,028
			5.3 Planning				8		8	78	\$ 23,111
			5.4 H&H				8		8	116	\$ 29,599
			5.5 Engineering				8	20	8	116	\$ 36,868
			5.6 Economics							68	\$ 15,244
			5.7 Environmental	7	3	8	60			275	\$ 70,331
Total Hours / Quantity				127	85	243	392	200	132	17,553	

Lower Clear Creek and Dickinson Bayou 203 Study 7/29/2025 Detailed Cost Breakdown	8.5	0	0	0
	Basic Services	4,998,179		
	Special Services	-		
	Total Project	4,998,179		

Tasks				Expenses						Total Expense Effort
BST Task (for Project Setup)	Basic or Special	Task	Task Description	Tech Charge	Miles	Meals	Hotel	Color (sheet)	Other	
			Phase 1							\$ -
			1.1 Project Management	-	9,800	2,400	2,405			\$ 12,146
			1.2 Public Meetings/Communications	-	9,320	2,520	5,180			\$ 14,994
			1.3 Planning	-						\$ -
			1.4 H&H	-						\$ -
			1.5 Engineering	-						\$ -
			1.6 Economics	-						\$ -
			1.7 Environmental	-	1,400				20,000	\$ 22,980
			Phase 2	-						\$ -
			2.1 Project Management	-						\$ -
			2.2 Public Meetings/Communications	-						\$ -
			2.3 Planning	-						\$ -
			2.4 H&H	-						\$ -
			2.5 Engineering	-						\$ -
			2.6 Economics	-						\$ -
			2.7 Environmental	-						\$ -
			Phase 3	-						\$ -
			2.1 Project Management	-						\$ -
			2.2 Public Meetings/Communications	-						\$ -
			2.3 Planning	-						\$ -
			2.4 H&H	-						\$ -
			2.5 Engineering	-						\$ -
			2.6 Economics	-						\$ -
			2.7 Environmental	-	600	180		875	5,000	\$ 6,337
			Phase 4	-						\$ -
			3.1 Project Management	-						\$ -
			3.2 Public Meetings/Communications	-						\$ -
			3.3 Planning	-						\$ -
			3.4 H&H	-						\$ -
			3.5 Engineering	-						\$ -
			3.6 Economics	-						\$ -
			3.7 Environmental	-						\$ -
			Phase 5	-						\$ -
			4.1 Project Management	-						\$ -
			4.2 Public Meetings/Communications	-						\$ -
			4.3 Planning	-						\$ -
			4.4 H&H	-						\$ -
			4.5 Engineering	-						\$ -
			4.6 Economics	-						\$ -
			4.7 Environmental	-						\$ -
Total Hours / Quantity				-	21,120	5,100	7,585	875	25,000	

Lower Clear Creek and Dickinson Bayou 203 Study 7/29/2025 Detailed Cost Breakdown	Project Fee Summary	
	Basic Services	4,998,179
	Special Services	-
	Total Project	4,998,179

Tasks				Subconsultants						Total
BST Task (for Project Setup)	Basic or Special	Task	Task Description	Hollaway	Econ Subs (Various)	Cultural Resources	Socioeconomic s	Air/Noise	Total Sub Effort	Total Effort
			Phase 1						\$ -	\$ -
			1.1 Project Management						\$ -	\$ 93,633
			1.2 Public Meetings/Communications	69,000					\$ 75,900	\$ 126,905
			1.3 Planning						\$ -	\$ 103,985
			1.4 H&H						\$ -	\$ 159,079
			1.5 Engineering						\$ -	\$ 160,213
			1.6 Economics		85,000				\$ 93,500	\$ 147,170
			1.7 Environmental						\$ -	\$ 389,952
			Phase 2						\$ -	\$ -
			2.1 Project Management						\$ -	\$ 118,063
			2.2 Public Meetings/Communications	50,000					\$ 55,000	\$ 94,777
			2.3 Planning						\$ -	\$ 60,135
			2.4 H&H						\$ -	\$ 197,770
			2.5 Engineering						\$ -	\$ 194,774
			2.6 Economics		120,000		50,000		\$ 187,000	\$ 261,823
			2.7 Environmental			80,000		80,000	\$ 176,000	\$ 355,756
			Phase 3						\$ -	\$ -
			2.1 Project Management						\$ -	\$ 94,943
			2.2 Public Meetings/Communications	50,000					\$ 55,000	\$ 101,526
			2.3 Planning						\$ -	\$ 48,890
			2.4 H&H						\$ -	\$ 198,769
			2.5 Engineering						\$ -	\$ 170,607
			2.6 Economics		100,000		50,000		\$ 165,000	\$ 216,534
			2.7 Environmental			40,000		40,000	\$ 88,000	\$ 594,589
			Phase 4						\$ -	\$ -
			3.1 Project Management						\$ -	\$ 94,929
			3.2 Public Meetings/Communications	50,000					\$ 55,000	\$ 102,456
			3.3 Planning						\$ -	\$ 91,073
			3.4 H&H						\$ -	\$ 117,638
			3.5 Engineering						\$ -	\$ 74,583
			3.6 Economics						\$ -	\$ 41,673
			3.7 Environmental			10,000		7,500	\$ 19,250	\$ 318,108
			Phase 5						\$ -	\$ -
			4.1 Project Management						\$ -	\$ 43,892
			4.2 Public Meetings/Communications	10,000		5,000		2,500	\$ 19,250	\$ 43,278
			4.3 Planning						\$ -	\$ 23,111
			4.4 H&H						\$ -	\$ 29,599
			4.5 Engineering						\$ -	\$ 36,868
			4.6 Economics		5,000				\$ 5,500	\$ 20,744
			4.7 Environmental						\$ -	\$ 70,331
Total Hours / Quantity				\$ 229,000	\$ 310,000	\$ 135,000	\$ 100,000	\$ 130,000		4,998,179

Exhibit B

(Not Applicable)