



PROFESSIONAL SERVICES AGREEMENT

(version 9-16-2019)

This AGREEMENT (“Agreement”) is entered by and between **LJA Engineering, Inc.** (“Professional”), located at **1904 W. Grand Parkway N, Suite 100 Katy, TX 77449** 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 **City-Wide 2-D Drainage Model Project**. Services related to design, bid, or construction of a public work shall conform to the requirements set forth in **Exhibit B**. If there is a conflict between the terms of this Agreement and Exhibits A or B, the terms of this Agreement will prevail.
2. **Term and Termination:** This Agreement shall commence on **December 13, 2019** and shall expire on **May 22, 2022**. 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 **\$772,588.00** 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 to maintain insurance through the term of this Agreement.

If required by the City, Professional shall maintain Comprehensive General Liability insurance coverage of \$1,000,000 per occurrence or medical malpractice insurance (whichever applies) throughout the entire term of the Agreement. If at any point during the Agreement, Professional will enter City property, Professional shall also maintain the following insurance: (i) Worker’s Compensation coverage with statutory limits for the State of Texas, including Employers Liability coverage of \$500,000 per accident; (ii) Commercial Automobile Liability coverage of \$1,000,000 Combined Single Limit; (iii) for engineers and architects only: Professional Liability coverage of \$5,000,000 per claim; and (iv) for builders only: Builder’s Risk coverage in the amount of the construction cost, including protection against named windstorm and flood. 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 (and in the case of professional liability must not exceed \$150,000). Professional shall provide City Certificates of Insurance evidencing these insurance requirements prior to the start of work. To the fullest extent permitted by law, Professional's total liability to City for any and all injuries, claims, losses, expenses or damages whatsoever arising out of or in any way related to the Project or this Agreement from any causes including, but not limited to, Professional's negligence, errors, omissions, strict liability, or breach of contract and whether claimed directly or by way of contribution shall not exceed the proceeds of the applicable insurance policies required by Professional under this Agreement.

5. **Liquidated Damages:** 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 for hire under federal copyright law. Upon payment in full for Professional's services, ownership of the work shall belong to and remain the exclusive property of the City. The work may be edited at any time within the 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 of League 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, the 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 the City's discretion. Professional shall not sell, disclose or obtain any other compensation for the services provided herein. If the work is one to which the provisions of 17 U.S.C. § 106A apply, the Professional hereby waives and appoints the City to assert on the Professional's behalf the 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 the City's purposes. Any reuse by the City, without specific written verification or adaptation by Professional, shall be at City's sole risk and without liability to Professional. Any modification of the plans will be evidenced on the plans and be signed and sealed by a licensed professional prior to re-use of modified plans.
8. **Confidentiality:** During the course of the work and/or services to be provided under this Agreement, Professional may come in contact with confidential information of the City. Confidential information shall not extend to: (a) information that at the time of disclosure or subsequently is published or otherwise generally available to the public other than through any act or omission on the part of Professional; (b)

information that Professional can demonstrate by written records was lawfully in the possession of Professional at the time of disclosure and not otherwise subject to a non-disclosure agreement; (c) information that Professional can demonstrate by written records was acquired from a third party who had the lawful right to make such disclosure; (d) information that Professional can demonstrate by written records was independently developed by Professional without reference to the materials comprising the information disclosed under this Agreement; or (e) information that Professional is required to disclose pursuant to applicable law, legally enforceable order, decree, regulation or rule, or by deposition or trial testimony pursuant to subpoena. Professional agrees to treat as confidential the information or knowledge that becomes known to Professional during performance of this Agreement and not to use, copy, or disclose such information to any third party unless authorized in writing by the City. This provision does not restrict the disclosure of any information that is required to be disclosed under applicable law. Professional shall promptly notify the City of any misuse or unauthorized disclosure of its confidential information and upon expiration of this Agreement shall return to the City all confidential information in Professional's possession or control. Professional shall further comply with all information security policies of the 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 the 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 represents that all services performed under this Agreement shall be performed consistent with generally prevailing professional or industry standard of care.
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 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 REASONABLE ATTORNEYS' FEES AND REASONABLE LITIGATION COSTS TO THE EXTENT THAT THE DAMAGE IS CAUSED BY OR RESULTS FROM AN ACT OF NEGLIGENCE OF PROFESSIONAL OR ANY AGENT, EMPLOYEE,**

SUBPROFESSIONAL, OR SUPPLIER OF PROFESSIONAL, OR ANOTHER ENTITY OVER WHICH PROFESSIONAL EXERCISES CONTROL IN THE EXECUTION OR PERFORMANCE OF THIS CONTRACT

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 effected 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:** If applicable, 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 prior to City's acceptance, bearing such loss or damage 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:** 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. **Prohibition on Boycotting Israel:** Pursuant to Section 2270.002 of the Texas Government Code, by executing this Agreement Professional verifies that Professional: (1) does not boycott Israel; and (2) will not boycott Israel during the term of this Agreement.
32. **Prohibition Against Business with Iran, Sudan or Foreign Terrorists Organizations:** Professional warrants, covenants, and represents that Professional is not engaged in business with Iran, Sudan, or any company identified on the list referenced in Section 2252.152 of the Texas Government Code.
33. **Mutual Waiver of Consequential Damages.** Notwithstanding any provision of this

Agreement to the contrary, in no event shall either party be liable to the other for consequential, incidental, punitive, special, or exemplary damages, including lost revenues, profits, delays, or other economic loss arising from any cause including breach of warranty, breach of contract, tort, strict liability or any other cause whatsoever. To the extent permitted by law, any statutory remedies that are inconsistent with this provision of the agreement are waived.

Executed on this ____ day of _____, _____. *(date to be filled in by City Secretary)*

LJA ENGINEERING, INC. - “Professional”

James E. Brown, PE – Senior Vice President

CITY OF LEAGUE CITY – “City”

John Baumgartner – City Manager

Attest:

Diana Stapp, City Secretary

Approved as to Form:

Office of the City Attorney

Exhibit A

Scope of Services/Description of Products/Payment Schedule

(9 number of pages, including this page)

Scope of Services and fee schedule to the City of League City as noted on attached proposal.

November 18, 2019

PROPOSAL

Christopher Sims
Director
Engineering
City of League City
500 W Walker St
League City, Texas 77573

Re: Proposal for City of League City Master Drainage Plan 2020 to 2021
LJA Proposal No. 19-04479

Dear Mr. Sims:

LJA Engineering, Inc. (LJA) is providing this scope and fee estimate at the request of the City of League City to prepare a Master Drainage Plan as part of a sub grant from the Texas Division of Emergency Management Hazard Mitigation Grant Program (DR-4322), Hurricane Harvey.

The objective of this project is to create a high-level Master Drainage Plan to identify strategies for mitigation of flooding problems and to address improved drainage infrastructure required for future development. There are five goals to achieve this objective.

- 1. Define existing baseline conditions for the drainage infrastructure and identify existing and potential future flooding problems in the City.*
- 2. Evaluate the severity and complexity of the problems and the potential solutions using criteria provided by City.*
- 3. Identify opportunities and constraints for the proposed solutions and develop a strategy for the watersheds that provide appropriate improvements for future drainage infrastructure.*
- 4. Create a comprehensive Master Drainage Plan to document recommendations for required improvement projects.*
- 5. Develop more detailed cost and implementation information for identified immediate and future improvement projects.*

We propose the following scope of work in order to achieve these goals for the following watersheds:

Phase I Clear Creek Watersheds - Clear Creek, Corum Ditch, Interurban Ditch, Newport – Landing Ditch, Robinson Bayou, and Jarbo Bayou.

Phase II Dickinson Bayou Watersheds – Magnolia Bayou, Bordens Gully, West Dickinson Bayou, Prairie Estates Ditch, and Benson Bayou.

These two phases are considered time critical will be staggered to allow for scheduling of resources and public meetings to be more efficiently executed and meet the the May 2021 deadline with FEMA.

Other watersheds are currently being studied by others to update existing conditions models and propose improvements to reduce the risk of flooding. These watersheds will not be studied but will be summarized and referenced by this Master Drainage Plan based on the information available. These include:

Gum Bayou, Magnolia Creek, Cedar Gully, and Bensons Bayou

1. Problem and Alternative Identification

a. Identify Problems

- i. Collect and review information (reports and other studies, gage data, etc.)
 1. Review and determine if any information from previous reports is valid or if reports should be retired.
 2. Collect additional topographic survey of hydraulic structures to tie elevations of as-built. The number of structures and level of detail is unknown at this time. A Not to Exceed allowance for topographic survey will be included in the fee.
- ii. Verify watershed boundaries delineation based on most recent topographic information.
- iii. Develop Base Conditions models of the watershed. Items included in the base condition modeling include;
 1. For the identified streams, develop analysis using Atlas 14 rainfall for the 2-, 5-, 10-, 25- and 100-year storm frequencies.
- iv. Determine level of service for the main stem and studied tributaries based on the results of the base conditions models.
- v. Create a 2D model to determine sheet flow issues within the watershed and delineate subwatersheds.
- vi. Update existing InfoWorks models of storm sewer systems for improvements made since 2013 for the North Service Area, Bensons Bayou, and Tallow Forest-Mary Lane. Additional areas can be modeled for an additional fee.
- vii. Identify problem areas based on results of baseline condition modeling
 1. Examine flooded structures and NFIP claims data provided by the City.
 2. Examine depth of flooding based on results of various models to help determine problem areas.

3. Determine roadways which are impacted by flooding or sheet flow which impede movement within the watershed.
- viii. Determine areas of possible future development.
- ix. Identification of constraints affecting the watershed.
 1. Desktop Environmental Review
 - a. Wetlands will be identified from the National Wetlands Inventory
 - b. Pipelines, oil wells, and superfund sites will be identified from available databases created and maintained by the US and the State of Texas.
 - x. Prepare Technical Memorandum on Baseline Conditions within the watershed.
- b. Evaluate Alternatives
 - i. Determine candidate alternatives to potentially solve Existing Flooding Issues and incorporate into baseline models for Atlas 14 rainfall, or where capacity limitations exist, to the highest level of service. These alternatives could include:
 1. Channel systems to capture sheet flow
 2. Tributary improvements which could include;
 - a. Widening
 - b. Bridge replacements
 - c. New channels
 3. Sub-Regional Detention
 4. Storm sewer systems improvements in the areas currently modeled in InfoWorks for the North Service Area, Bensons Bayou, and Tallow Forest-Mary Lane areas. Additional areas can be modeled for an additional fee.
 5. Buy-out of repetitive loss structures or structures deep in the floodplain
 6. Structure elevations
 7. Floodproofing
 8. Flood Damage Prevention Ordinance updates
 9. Alternative analyses
 - a. Meet with City personnel to review and rank alternatives
 - b. Perform hydraulic analysis of at most two (2) alternatives
 - ii. Determine appropriate alternatives to evaluate to solve Future Flooding Issues and incorporate into baseline models. These alternatives could include:
 1. Channels to accommodate future development and provide outfall depth and conveyance.
 2. Channel systems to capture sheet flow.
 3. Tributary improvements which could include;
 - a. Widening
 - b. Bridge replacements
 - c. New channels
 4. Sub-Regional Detention
 5. Alternative analyses
 - a. Meet with City personnel to review and rank alternatives
 - b. Perform hydraulic analysis of at most two (2) alternatives
 - iii. Prepare Technical Memorandum on the selection of alternatives to be analyzed and the results of the analysis.

2. Develop Watershed Strategy

- a. Develop hierarchy of alternatives
 - i. Determine opportunities for teaming with other agencies
 - ii. Determine damage reduction for the alternatives.
 - iii. Develop cost estimates for each alternative.
 - iv. Develop scoring system for existing issues to determine priority areas.
 - v. Score the alternatives based on effectiveness, cost-benefit analysis and other appropriate factors.
- b. Coordinate with stakeholders to determine the most appropriate alternatives which should be included and hierarchy of projects
- c. Based on hierarchy of projects and stakeholder input, develop the most efficacious strategy for reducing flood losses within the watershed.
- d. Prepare Technical Memorandum providing documentation on process of developing the watershed strategy.

3. Create Watershed Plan Document

- a. Plan Preparation - Prepare maps, tables, and other exhibits to document the analysis and recommendations and compile all data into a formal Watershed Plan using the report template provided by the District, including:
 - i. A summary and schedule for implementation of all projects recommended for implementation.
 - ii. A short summary of the three Engineering Technical Memorandums.
 - iii. A separately bound Appendix with supporting data.
- b. Prepare suitable material for City website posting to provide public access to summarized presentations and data representing the Master Drainage Plan for this area, including:
 - i. Interactive maps showing project locations and photographs of current conditions, previous flooding, and similar facilities in other locations. Creation of geodatabase of layers including ROW requirements, proposed alignments, etc.
 - ii. Power point presentations from previous public meetings edited appropriately to make them suitable for long-term posting.

4. Project Management

- i. Coordination Meetings
 1. Prepare for and attend at most seventeen (17) monthly coordination meetings.
 2. Prepare monthly Progress Reports summarizing task completed and planned and potential problems and their resolution.
- ii. Assist City in the preparation of Texas Division of Emergency Management Hazard Mitigation Grant Program reports and certifications.

5. QA/QC

- i. Conduct a peer-review of computer models, geodatabases, and reports for consistency with project scope, modeling criteria, and engineering standards.

6. Meetings

- i. Prepare for and attend four (4) presentations to the Transportation and Infrastructure Committee.
- ii. Prepare for and attend at most seventeen (17) monthly coordination meetings.

- iii. Prepare and conduct at most six (6) public meetings in the Clear Creek Watershed and the Dickinson Bayou Watersheds.
7. Additional Details defining Project Scope -
- a. Develop design details for projects in the Watershed Strategy providing more accurate estimates, ROW acquisition, utility and bridge modifications, environmental or other mitigation, and O&M requirements assuming two alternatives will be examined for each studied stream.
 - b. Environmental Mitigation - Research and investigate recognized environmental conditions or other sensitive features identified for each improvement project and prepare a written summary of findings, including a plan and cost estimate for avoiding, remediating, and/or mitigating environmental conditions and features.
 - c. Cost Estimate - Using City or other available databases and cost methodology, develop detailed preliminary engineering costs and resulting benefits for each project, including financing, engineering, property acquisition, utility and bridge relocations, environmental mitigation, construction, and long-term operation and maintenance.
 - d. Implementation Plan - Create an implementation plan for each project to address funding, permitting, and scheduling requirements.
 - e. Additional Services - Identify the major uncertainties associated with each project that should be further addressed during the future design process and recommend additional studies or activities to reduce these uncertainties.
 - f. Prepare a Preliminary Project Plan to document all work on this goal including;
 - i. Preliminary plan and profile drawings.
 - ii. Inundation mapping of each project for the 100-year event.
 - iii. Tabulation of costs for all components of the project.
 - iv. Tables showing the reduction in flood profiles created by the project.
 - v. Narrative explaining the major constraints and risks that remain and recommendations for resolution in future activities.
 - vi. Explanation of the potential for project sponsorship and possible multi-use project purposes, if any, that may be appropriate.
 - vii. Potential schedule for further development and funding of the project.
8. Additional Services - to be provided as needed and specifically authorized by the City and agreed to by the Engineer, including (but not be limited to) the following activities which were not identified in the scope of work under the previous tasks. LJA would provide a proposal for each Additional Service prior to acceptance and authorization by the City.
- a. Additional InfoWorks models of storm sewer for areas other than the North Service Area, Bensons Bayou, Tallow Forest-Mary Lane, Bayou Brae Subdivision, Autumn Lakes and the Greater Bay Colony
 - b. FEMA Letter of Map Revision Applications for each studied stream.
 - c. Development of improved hydrologic and hydraulic modeling data for any additional channels found to have deficiencies which need to be addressed.
 - d. Additional stakeholder or special meetings as may be required by the City.
 - e. Collection of more detailed environmental or survey data, including field investigations to confirm the potential for conflicts and costs associated with utility relocations and/or permitting and mitigation of other sensitive conditions.

- f. Development of additional alternatives beyond the initial recommended alternatives approved for analysis by the City.
- g. Development of design details for additional immediate improvement projects beyond the number currently identified in the scope of work.

The fee for each major task is proposed on a time and material basis as follows:

Task	Fee
Topographic Survey Allowance	\$ 100,000.00
1. Problem and Alternative Identification	\$ 352,680.00
2. Develop Watershed Strategy	\$ 107,652.00
3. Create Watershed Plan Document	\$ 76,340.00
4. Project Management	\$ 35,320.00
5. QA/QC	\$ 27,200.00
6. Meetings	\$ 73,396.00
TOTAL	\$ 772,588.00

Other Services

Task	Fee
Additional InfoWorks models of storm sewer for areas other than the North Service Area, Bensons Bayou, and Tallow Forest-Mary Lane.	TBD
FEMA Letter of Map Revision Applications for each studied stream.	\$ 80,000.00 per stream (ESTIMATED)
Development of improved hydrologic and hydraulic modeling data for any additional channels found to have deficiencies which need to be addressed.	TBD
Additional stakeholder or special meetings as may be required by the City.	\$5,000 Each
Collection of more detailed environmental or survey data, including field investigations to confirm the potential for conflicts and costs associated with utility relocations and/or permitting and mitigation of other sensitive conditions.	TBD
Development of additional alternatives beyond the initial recommended alternatives approved for analysis by the City.	TBD
Development of design details for additional immediate improvement projects beyond the number currently identified in the scope of work.	TBD

An estimated schedule is attached.

Christopher Sims
November 18, 2019
Page 7

Any future work under this Additional Services provision will require written approval of a detailed scope, schedule, and budget prior to release of the formal work authorization.

We appreciate the opportunity to submit this proposed scope of work and look forward to working with you on this project. If you have any questions, please call me at 713.953.5221.

Best Regards,

A handwritten signature in dark ink, appearing to read "John S. Grounds, III". The signature is stylized with a large "J" and "S" and a distinct "G".

John Grounds, III, PhD, PE, CFM, D.WRE
Vice President, Director Water Resources

JG/pa

Accepted By City of League City

By: _____

Title: _____

Date: _____

City of League City Master Drainage Plan 2020 to 2021
Project Schedule

Task	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
1. Problem and Alternative Identification																	
a. Identify Problems																	
i. Collect and review information (reports and other studies, gage data, topographic survey.)																	
ii. Verify watershed boundaries delineation based on most recent topographic information.																	
iii. Develop Base Conditions models of the ten (10) watershed For the identified streams, develop analysis using Atlas 14 rainfall for the 2-, 5-, 10-, 25- and 100-year storm frequencies.																	
iv. Determine level of service for the main stem and studied tributaries based on the results of the base conditions models.																	
v. Create a 2D model to determine sheet flow issues within the watershed and delineate subwatersheds.																	
vi. Identify problem areas based on results of baseline condition modeling																	
1. Examine flooded structures and NFIP claims data provided by the City.																	
2. Examine depth of flooding based on results of various models to help determine problem areas.																	
3. Determine roadways which are impacted by flooding or sheet flow which impede movement within the watershed.																	
vii. Determine areas of possible future development.																	
viii. Identification of constraints affecting the watershed.																	
1. Desktop Environmental Review																	
a. Wetlands will be identified from the National Wetlands Inventory																	
b. Pipelines, oil wells, and superfund sites will be identified from available databases created and maintained by the US and the State of Texas.																	
ix. Prepare Technical Memorandum on Baseline Conditions within the watershed.																	
b. Evaluate Alternatives																	
i. Determine candidate alternatives to potentially solve Existing Flooding Issues and incorporate into baseline models. These alternatives could include:																	
a. Meet with City personnel to review and rank alaternatives																	
b. Perform hydraulic analysis of at most two (2) alternatives																	
ii. Determine appropriate alternatives to evaluate to solve Future Flooding Issues and incorporate into baseline models.																	
5. Alternative analyses																	
a. Meet with City personnel to review and rank alaternatives																	
b. Perform hydraulic analysis of at most two (2) alternatives																	
iii. Prepare Technical Memorandum on the selection of alternatives to be analyzed and the results of the analysis.																	
2. Develop Watershed Strategy																	
a. Develop hierarchy of alternatives																	
i. Determine opportunities for teaming with other agencies																	
ii. Determine damage reduction for the alternatives.																	
iii. Develop cost estimates for each alternative.																	
iv. Develop scoring system for existing issues to determine priority areas.																	
v. Score the alternatives based on effectiveness, cost-benefit analysis and other appropriate factors.																	
b. Coordinate with stakeholders to determine the most appropriate alternatives which should be included and hierarchy of projects																	
c. Based on hierarchy of projects and stakeholder input, develop the most efficacious strategy for reducing flood losses within the watershed.																	
d. Prepare Technical Memorandum providing documentation on process of developing the watershed strategy.																	
3. Create Watershed Plan Document																	
a. Plan Preparation - Prepare maps, tables, and other exhibits to document the analysis and recommendations and compile all data into a formal Watershed Plan using the report template provided by the District, including:																	
i. A summary and schedule for implementation of all projects recommended for implementation.																	
ii. A short summary of the three Engineering Technical Memorandums.																	
iii. A separately bound Appendix with supporting data.																	
b. Prepare suitable material for City website posting to provide public access to summarized presentations and data representing the Master Drainage Plan for this area, including:																	
i. Interactive maps showing project locations and photographs of current conditions, previous flooding, and similar facilities in other locations. Creation of geodatabase of layers including ROW requirements, proposed alignments, etc.																	
ii. Power point presentations from previous public meetings edited appropriately to make them suitable for long-term posting.																	
4. Project Management																	
i. Coordination Meetings	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
2. Prepare monthly Progress Reports summarizing task completed and planned and potential problems and their resolution.	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
ii. Assist City in the preparation of Texas Division of Emergency Management Hazard Mitigation Grant Program reports and certifications.	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
5. QA/QC																	
i. Conduct a peer-review of computer models, geodatabases, and reports for consistency with project scope, modeling criteria, and engineering standards.																	
6. Meetings																	
i. Prepare for and attend at most seventeen (17) monthly coordination meetings.	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
ii. Prepare and conduct at most four (4) public meetings with two (2) in the Clear Creek Watershed and two (2) in the Dickinson Bayou Watershed.		Phase I KICKOFF	Phase II KICKOFF													Phase I FINAL	Phase II FINAL

M = Monthly

Riewiews by League City personnel are estimated to be two (2) weeks per submittal.

PSA Exhibit B

PHASE REQUIREMENTS

I. Design Phase Services are considered "Time Critical" and subject to Liquidated Damages as outlined in Item 5 of the Professional Services Agreement. This phase must conform to the following submittal types and requirements:

A. 30% Submittals should, at a minimum, include the following:

1. Plans that contain the following information:
 - a. Cover Sheet
 - b. Field Survey Plan Sheet
 - c. Design Plan Sheets that show Existing Conditions and proposed concepts with the existing and proposed work clearly identified
 - d. Demo Plan
 - e. Typical Cross-Sections
2. List of preliminary Utility Conflicts and contact information for appropriate utilities.
3. Updated Design Schedule
4. Preliminary Opinion of Probable Costs (OPCC)
5. Permitting recommendations/requirements
6. Traffic Impact Analysis (if needed)
7. Draft H&H Study and/or Preliminary Engineering Report (if needed)
8. Preliminary Land Acquisition Information (if needed)
9. Preliminary Geotechnical findings (if needed)
10. Preparation of Exhibits and attendance at Public Meeting (if needed)

B. 60% Submittals should, at a minimum, include the following:

1. Plans that contain the following information:
 - a. Cover Sheet w/ index
 - b. General Notes
 - c. Sheet Layout
 - d. Typical Cross-Sections
 - e. Survey Control
 - f. Demo Plan
 - g. Grading Plan (if needed)
 - h. Tree Protection and/or Landscape Plan (if needed)
 - i. Traffic Control Plan (if needed)
 - j. Proposed Drainage Area Map and calculations
 - k. Plan and Profile drawings with Station Numbers for Water, Sewer, Storm, Street
 - l. Intersection Details
 - m. Sidewalks, Traffic Signage, & Pavement Marking Plans
 - n. SW3P Plan Sheet(s) and Details
 - o. Standard CoLC Details applicable for project
 - p. Project Specific Requirements/Details/Notes such as
 - 1) Electrical Plans/Details
 - 2) Structural Plans/Details
 - 3) Signal Plans/Details
2. Final ROW Documents for Land Acquisition (if needed)
3. Completed Geotechnical Report (if needed)
4. List of Updated Utility Conflicts and contact information for appropriate utilities.

5. List of needed Permits, draft applications for needed Permits
6. List of Technical Specifications that are needed for Project
7. Updated Design Schedule
8. Preliminary Construction Schedule
9. Updated Preliminary OPCC
10. Preparation of Exhibits and attendance at Public Meeting (if needed)

C. 90% Submittals should, at a minimum, include the following:

1. Updated Design Plans noted above
2. Submittal Letter addressing previous comments made on 60% Review
3. Project Manual – Spec Book, Bid forms, etc.
4. SW3P Manual with appropriate documentations/signatures as applicable
5. Updated OPCC
6. Approved Permits
7. Final List of Utility Conflicts and contact information for appropriate utilities.

D. Resubmittals

1. Phase submittals that do not comply with the requirements set forth above may be rejected in the sole absolute discretion of City. Rejected submittals must be resubmitted for review after all comments have been addressed.
2. Professional will have \$400 deducted from its Compensation for each review by City of a phase submittal after two prior reviews for that same phase.

II. Bid Phase Services should, at a minimum, include the following:

- A. 100% Construction Plans submitted for final City signatures (a Digital Copy w/ signed cover sheet to be submitted prior to posting for bids).
- B. Completed Project Manual
- C. Completed SW3P Manual
- D. Final OPCC
- E. Updated Construction Schedule
- F. Preparation of Exhibits and attendance at Public Meeting (if needed)
- G. Assist with the advertisement of the project (if needed)
- H. Address any RFI during Bid process (if needed)
- I. Attend and Assist in running a Pre-Bid Meeting (if needed)
- J. Provide Addendums to Bid Documents (if needed)
- K. Once Bids are opened, prepare Bid Evaluation, check references, and provide recommendation of award to City

III. Construction Phase Services should, at a minimum, include the following:

- A. Preparation of Exhibits and attendance at Public Meeting (if needed) prior to Project Start
- B. Attendance at Construction Progress Meetings (if needed)
- C. Periodic Site Visits (minimum 1 visit per month of construction)
- D. Review, Track, and make recommendations related to RFIS, Material Submittals, Change Orders, etc.
- E. Address found Design Conflicts in the Field
- F. Provide paper & digital copies of As-Builts