

AGREEMENT FOR ENGINEERING SERVICES

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

THIS AGREEMENT is made, entered into, and executed by and between the **Harris County Flood Control District**, a body corporate and politic under the laws of the State of Texas, hereinafter called "District," and **Huitt-Zollars, Inc.**, a Texas corporation, hereinafter called "Engineer."

WITNESSETH, that

WHEREAS, the District desires to evaluate the hydraulic performance of bridge crossings and high-flow bypasses on Buffalo Bayou, hereinafter called the "Project"; and

WHEREAS, the District desires that the Engineer provide Engineering Services for the Project; and

WHEREAS, the Engineer represents that it is capable and qualified to perform the various services that may be required.

NOW THEREFORE, the District and the Engineer, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

SECTION I

CHARACTER AND EXTENT OF SERVICES

From time to time during the course of this Agreement, the Executive Director of the District or his designee (the "Director") may deliver to the Engineer written authorization in accordance with this Section for the performance of certain engineering services with regard to the Project, which services the Engineer shall then perform in accordance with this Agreement. The Director may authorize the Engineer to provide all or any of the engineering services in connection with the study phase of the Project that are listed in Appendix A.

The District shall have no obligation to pay for any services hereunder that have been rendered without the prior written authorization for such services by the Director. The written authorization shall specify the services to be performed, a budget amount for such services, and a required completion date for such services. During the course of any services authorized hereunder, the Engineer shall provide the District with progress reports at such times and in such manner as may be requested by the Director. If it should become evident that the Engineer will not be able to complete any service hereunder by the previously set completion date or within the previously set budget for same, the Engineer shall notify the Director as soon as possible.

SECTION II

TIME OF PERFORMANCE

Upon receipt of a written authorization to perform certain services hereunder, the Engineer shall proceed diligently to complete each service within the limits of time therein specified. The District shall have no obligation to pay for a service performed after the required completion date for same as set forth in its authorization, except to the extent the date for required completion is extended and continuation of such service is approved by further written authorization from the Director.

SECTION III

THE ENGINEER'S COMPENSATION

For and in consideration of services rendered by employees of the Engineer pursuant to this Agreement, the District shall pay the Engineer in accordance with the following maximum hourly rates:

<u>Position</u>	<u>Maximum Hourly Rate</u>
Principal-In-Charge	\$245.00
Design Principal	\$210.00
Senior Project Manager	\$210.00
QA Manager	\$190.00
Project Manager	\$185.00
Senior Civil Engineer	\$180.00
Senior Structural Engineer	\$190.00
Civil Engineer	\$175.00
Structural Engineer	\$170.00
Engineer Intern	\$120.00
Senior Planner	\$205.00
Planner	\$120.00
Planner Intern	\$ 80.00
Senior Designer	\$150.00
Designer	\$125.00
Survey Manager	\$160.00
Senior Project Surveyor (RPLS)	\$150.00
Project Surveyor	\$125.00
Surveyor Intern	\$120.00
Survey Technician	\$105.00
1-Person Survey Crew	\$ 95.00
2-Person Survey Crew	\$140.00
3-Person Survey Crew	\$170.00
Senior CADD Technician	\$130.00
CADD Technician	\$ 90.00
Administrative - Senior Project Support	\$ 95.00
Administrative - Project Support	\$ 70.00

Adjustments to fixed fee allocations may be made with prior review and written approval by the Director pursuant to Section I of this Agreement.

It is expressly understood that the Engineer shall neither seek reimbursement nor will the District be obligated to pay or reimburse the Engineer for normal business expenses such as overtime, postage, messenger services, delivery charges, mileage within Harris County, parking fees, facsimile (fax) transmissions, computer time on in-house computers and graphic systems, blueprint drawings or photocopies specifically required by Section I, or other costs or expenses, except those for which reimbursement is specifically provided in the following sentence. If approved in writing by the Director prior to their being incurred, the Engineer may be reimbursed the reasonable and necessary cost of the following, to the extent they are incurred in providing services hereunder: services performed by a subcontractor pursuant to authorization for such expense and as permitted by the County Purchasing Act, copies of reports or other documents to be delivered to the District or in accordance with instructions of the District in excess of the number specifically required by Section I, costs of travel outside of Harris County, rental costs of transportation equipment necessary to gain access to the Project site, costs of presentation materials (i.e., charts, slides, transparencies), costs of abstracting, and costs of photographic and video services.

The District shall have no obligation to pay compensation or reimbursement for any service or expense in excess of the amount budgeted for same in its written authorization, except to the extent the budget for such service is increased and continuation of such service is approved by further written authorization from the Director.

At the option of the Director, the Director may also issue work authorization(s) for performance of specified professional services to be compensated on a lump sum basis upon acceptance by Engineer. If a work authorization specifies payment on a lump sum basis for certain services, the hourly rates set out above shall not apply. In addition, where work performed pursuant to a work authorization is to be compensated on a lump sum basis, the budget for same shall not be increased pursuant to Section I or Section III of this Agreement, except to the extent that additional services are assigned to be performed by the Engineer by further written authorization from the Director.

SECTION IV TIME OF PAYMENT

During the performance of the services provided herein, at intervals of not fewer than thirty (30) days each, the Engineer shall submit to the District a statement sworn to by the Engineer or an officer of the Engineer, in a form acceptable to the County Auditor of Harris County and in compliance with Section III, setting forth the services completed and the compensation due for the same that have not been previously billed or paid. All hourly charges shall be itemized on the basis of the hourly rates and shall be certified in writing by the Engineer to be true and correct. The Director and the Harris County Auditor shall approve each statement after review, with such modifications as may be deemed appropriate. The District shall pay each statement approved within thirty (30) days after approval by the Director and the County Auditor, provided that the approval or payment of any such statement shall not be considered to be evidence of performance by the Engineer to the point indicated by such statement, or of the receipt of or acceptance by the District of the work covered by such statement. The Engineer shall in no case submit an invoice for less than \$500.00, except where the invoice is for the final payment.

Time sheets corroborating the information provided in the statement, signed by individuals performing services under this Agreement and their supervisor(s), showing the name of each individual performing services hereunder, the date or dates that he or she performed said services, his or her hourly rate, the total amount billed for each individual, and the total amount billed for all individuals, and including such other details as may be requested by the Harris County Auditor for verification purposes, shall be kept and maintained by the Engineer for a period of five (5) years after the completion of performance hereunder. The Director and/or the County Auditor shall have the right, after giving written notice, to review any and all documents or other data in the custody of the Engineer, in connection with any statement submitted by the Engineer to the District for approval and payment by the District.

SECTION V TERMINATION

The District may terminate this Agreement at any time by notice in writing to the Engineer. Upon receipt of such notice, the Engineer shall discontinue all services in connection with the performance of this Agreement. As soon as practicable after receipt of notice of termination, the Engineer shall submit a statement, showing in detail the services performed under this Agreement to the date of termination. The District shall pay the Engineer the prescribed compensation for the services actually performed under this Agreement, less such payments on account of the charges as have been previously made. Copies of all complete or partially complete designs, plans, specifications, and other documents prepared or obtained under this Agreement shall be delivered to the District when and if the Agreement is terminated.

SECTION VI ADDRESS OF NOTICES AND COMMUNICATIONS

All notices and communications under this Agreement shall be mailed by certified mail, return receipt requested, or delivered to the Engineer at the following address:

Huitt-Zollars, Inc.
10350 Richmond Avenue, Suite 300
Houston, Texas 77042-4248
Attn: Gregory R. Wine, P.E., LEED AP

All notices and communications under this Agreement shall be mailed by certified mail, return receipt requested, or delivered to the District at the following address:

Harris County Flood Control District
9900 Northwest Freeway
Houston, Texas 77092
Attn: Executive Director

SECTION VII LIMIT OF APPROPRIATION

The Engineer clearly understands and agrees, such understanding and agreement being of the absolute essence to this Agreement, that the District shall have available the total maximum sum of \$350,000.00, specifically allocated to fully discharge any and all liabilities incurred by the District pursuant to the terms of this Agreement, and that the total maximum compensation the

Engineer may become entitled to hereunder and the total maximum sum the District shall become liable to pay to the Engineer hereunder shall not under any conditions, circumstances, or interpretations hereof exceed the said total maximum sum provided for in this Section and certified as available therefor by the County Auditor as evidenced by the issuance of a purchase order from the Harris County Purchasing Agent.

SECTION VIII SUCCESSORS AND ASSIGNS

The District and the Engineer bind themselves and their successors, executors, administrators, and assigns to the other party of this Agreement and to the successors, executors, administrators and assigns of such other party in respect to all covenants of this Agreement. Neither the District nor the Engineer shall assign, sublet, or transfer its or his interest in this Agreement without the written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of any public body that may be a party hereto.

SECTION IX PUBLIC CONTACT

Engineer shall under no circumstances release any material or information developed in the performance of services hereunder, without the prior express written permission of the Director. Contact with the news media, private citizens, or community organizations shall be the sole responsibility of the District. Inquiries concerning this Agreement or any Requested Service shall be referred to the Director.

SECTION X COMPLIANCE AND STANDARDS

The Engineer agrees to perform the work hereunder in accordance with generally accepted standards applicable thereto and shall use that degree of care and skill commensurate with the Engineer's profession to comply with all applicable state, federal, and local laws, ordinances, rules, and regulations relating to the work to be performed hereunder and the Engineer's performance. The Engineer represents that, prior to performing hereunder, it has or shall obtain all necessary licenses, ownership, or permission for use of any and all proprietary information, materials, or trade secrets employed in the performance of work hereunder for the District and agrees that he shall not copy, reproduce, recreate, distribute, or use any such proprietary information, materials, or trade secrets of any third party, except to the extent permitted by such third parties, or as otherwise authorized by law.

In accordance with TEX. GOV'T CODE ANN. § 2270.002, the Engineer warrants and represents that it does not boycott Israel and agrees that it will not boycott Israel during the term of this contract.

The Engineer represents and certifies that, at the time of execution of this Agreement, the Engineer (including, in this provision, any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of the same) is not listed by the Texas Comptroller of Public Accounts pursuant to Chapters 2252 or 2270 of the Texas Government Code, nor will the Engineer engage in scrutinized business operations or other business practices that could cause it to be listed during the term of this Agreement.

SECTION XI
LICENSE REQUIREMENTS

The Engineer shall have and maintain any licenses or certification required by the State of Texas or recognized professional organization governing the services performed under this Agreement.

SECTION XII
CERTIFICATE OF INTERESTED PARTIES

In compliance with Government Code § 2252.908, the Engineer must submit a completed Certificate of Interested Parties Form 1295, including an unsworn declaration and the Certification of Filing, printed after completing the electronic filing requirements on the Texas Ethics Commission website (see www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm), to the District along with this signed Agreement.

SECTION XIII
CONFLICT OF INTEREST CERTIFICATION

The Engineer certifies that the Engineer has complied with Chapter 176 of the Texas Local Government Code by completing and filing any required conflict of interest disclosures or questionnaires (see www.ethics.state.tx.us). If this certification is materially incomplete or inaccurate, the Engineer acknowledges that the District shall have the right to terminate this Agreement without prior notice.

SECTION XIV
INDEMNIFICATION

TO THE EXTENT ALLOWED BY LAW, THE ENGINEER AGREES TO INDEMNIFY AND HOLD HARMLESS THE DISTRICT, ITS OFFICERS, EMPLOYEES, AND AGENTS FROM LIABILITY, LOSSES, EXPENSES, DEMANDS, REASONABLE ATTORNEYS' FEES, AND CLAIMS FOR BODILY INJURY (INCLUDING DEATH) AND PROPERTY DAMAGE TO THE EXTENT CAUSED BY THE NEGLIGENCE, INTENTIONAL TORT, INTELLECTUAL PROPERTY INFRINGEMENT OF THE ENGINEER (INCLUDING THE ENGINEER'S AGENTS, EMPLOYEES, VOLUNTEERS, AND SUBCONTRACTORS/CONSULTANTS UNDER CONTRACT, OR ANY OTHER ENTITY OVER WHICH ENGINEER EXERCISES CONTROL) IN THE PERFORMANCE OF THE SERVICES DEFINED IN THIS AGREEMENT. THE ENGINEER SHALL ALSO SAVE THE DISTRICT HARMLESS FROM AND AGAINST ANY AND ALL EXPENSES, INCLUDING REASONABLE ATTORNEYS' FEES, IN PROPORTION TO THE ENGINEER'S LIABILITY, THAT MIGHT BE INCURRED BY THE DISTRICT, IN LITIGATION OR OTHERWISE RESISTING SUCH CLAIMS OR LIABILITIES.

SECTION XV

INSURANCE REQUIREMENTS

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

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

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

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

(i)	Each Occurrence	\$1,000,000
(ii)	Personal and Advertising Injury	\$1,000,000
(iii)	Products/Completed Operations	\$1,000,000
(iv)	General Aggregate (per project)	\$2,000,000

- (c) Professional Liability/Errors and Omissions, in an amount not less than One Million Dollars (\$1,000,000) per claim and in the aggregate.

- (d) Umbrella/Excess Liability in an amount not less than One Million Dollars (\$1,000,000) per occurrence and in the aggregate. *The District shall be named Additional Insured on primary/non-contributory basis.*

- (e) Automobile Liability insurance to include the Engineer's liability for death, bodily injury, and property damage resulting from the Engineer's activities covering use of owned, hired, and non-owned vehicles, with combined single limit of not less than One Million Dollars (\$1,000,000) for each accident. *The District shall be named Additional Insured on primary/non-contributory basis.*

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

Delivery of Policies. Immediately upon execution of this Agreement and before any services are commenced by the Engineer, the Engineer shall provide the District evidence of all of the above coverage on forms and with insurers acceptable to the District. The Engineer must maintain a valid Certificate of Insurance as described herein on file with the District at all times during the term of this Agreement. The Engineer must either (1) mail the Certificate of Insurance to the District at 9900 Northwest Freeway, Houston, TX 77092, Attn: Contract Management or (2) submit it by email to HCFCD_AdminServices@hcfcd.org.

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

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

- (a) Be less than 12 months old;
- (b) Include all pertinent identification information for the Insurer, including the company name and address, policy number, NAIC number or AMB number, and an authorized signature;
- (c) Include the project name and reference numbers and indicate the name and address of the Project Manager in the Certificate Holder Box; and
- (d) Be appropriately marked to accurately identify:
 - (i) All coverage and limits of the policy;
 - (ii) Effective and expiration dates;
 - (iii) Waivers of subrogation, endorsement of primary insurance and additional insured language, as described herein.

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

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

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

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

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

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

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

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

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

SECTION XVI

OWNERSHIP OF PLANS, COPYRIGHT

The District shall be the absolute and unqualified owner of any information, programs, Mylar reproductions, plans, preliminary layouts, sketches, reports, cost estimates, inventions, software, firmware, designs, computer applications, computations, computer input/output information, and other documents or materials prepared pursuant to this Agreement, including source codes therefor, with the same force and effect as if the District prepared the same. The District shall have an exclusive and perpetual copyright in and to any and all materials produced for the District pursuant to this Agreement and the Engineer shall convey and assign, and does hereby convey and assign, to District all right, title, and interest, including but not limited to copyright, the Engineer may have or may acquire in and to such materials. The Engineer agrees that work performed hereunder for the District will be deemed to have been done, to the extent authorized by law, on a "works made for hire" basis. In the event and to the extent such works are determined not to constitute "works made for hire" as that term is understood in copyright law, the Engineer hereby irrevocably assigns and transfers to the District all right, title, and interest in and to such works, including, but not limited to, copyrights. The Engineer agrees to promptly deliver to the District copies, in a form acceptable to the Director, of any and all such information, programs, Mylar reproductions, plans, preliminary layouts, sketches, reports, cost estimates, inventions, software, firmware, designs, computer applications, documents, materials and/or data, including the source codes therefor, upon request from the District. Copies of all complete or partially complete information, programs, Mylar reproductions, plans, preliminary layouts, sketches, reports, cost estimates, inventions, software, firmware, designs, computer applications, and other documents and materials, including source codes therefor, prepared pursuant to this Agreement, shall also be delivered to the District when and if the Agreement is terminated, or upon completion of performance hereunder, whichever occurs first. The Engineer may retain one (1) set of reproducible copies of such documents and materials, but such copies shall be for the Engineer's use in the preparation of studies or reports for the District only. The Engineer is expressly prohibited from selling, licensing, or otherwise marketing or donating such documents or materials, or using the same in the preparation of work for any other client without the express written permission of the Director. The Engineer does not intend or represent that construction documents or materials will be suitable for reuse. If the District reuses the same, such action shall be at the District's risk and without liability to the Engineer. If the Engineer furnishes partially complete plans, layouts, sketches, specifications, or other documents and materials by virtue of termination under Section VII above, the Engineer shall not be held accountable or responsible for the completeness of any document or material so produced.

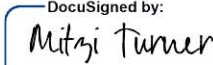
SECTION XVII
MODIFICATIONS

This instrument contains the entire Agreement between the parties relating to the rights herein granted and obligations herein assumed. Any oral or written representations or modifications concerning this instrument shall be of no force or effect, excepting a subsequent modification in writing signed by both parties hereto.

EXECUTED in triplicate originals _____.

APPROVED AS TO FORM:

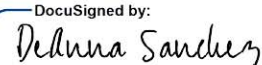
VINCE RYAN
Harris County Attorney

DocuSigned by:

By _____
MITZI TURNER
Assistant County Attorney

HARRIS COUNTY FLOOD CONTROL
DISTRICT

By _____
ED EMMETT
County Judge

ATTEST:

DocuSigned by:


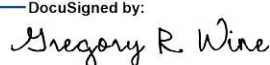
DeAnna Sanchez

Name

Lead Project Administrator

Title

HUITT-ZOLLARS, INC.

DocuSigned by:


Gregory R. Wine

Name

Senior Vice President

Title

APPENDIX A

1. Project Management

- A. Kick-Off Meeting - Conduct a project kick-off meeting with HCFCD's staff.
 - 1) Establish clear lines of communication.
 - 2) Review the scope of services and project schedule.
 - 3) Clearly define project goals and objectives.
 - 4) Discuss and obtain existing data, reports and WEB-DST
- B. Project Schedule - Develop and maintain a project schedule listing tasks, milestones, deadlines, and parties involved in the project with estimated start and completion dates. The schedule will be updated on a monthly basis.
- C. Monthly Progress Reports - Submit monthly progress reports with each invoice using HCFCD's Project Performance Certification form. Include an updated schedule with the Project Performance Certification, which includes a summary of tasks in progress and completed, tasks to be accomplished in the next month, Project Metrics, and a Project Metrics Summary.
- D. Project Status Meetings - Schedule and coordinate periodic project status meetings (weekly phone calls, and monthly in person meetings) including:
 - 1) Identifying appropriate participants for each meeting.
 - 2) Developing and distributing agenda prior to meetings.
 - 3) Developing and distributing minutes for each meeting.
- E. QA/QC - Perform Quality Assurance/Quality Control activities using HCFCD's QA/QC process.

2. Hydraulic Modeling and Analysis

- A. Site Visit - Conduct a site visit to Buffalo Bayou from SH6 to Congress Road.
- B. Preparation of Base Model - Obtain and evaluate available models and available background information on Buffalo Bayou. Prepare a model of the Buffalo Bayou from SH6 to Congress Street Bridge in downtown Houston to support the study. Huitt-Zollars will utilize the available HCFCD HEC-RAS unsteady state model as a starting point to develop the base model for existing conditions. Prepare an inundation map for the base model for 100-yr and 500-yr design storm events.
- C. Bridge Modification H&H Modeling - There are thirty three bridge crossing and four pipeline crossing in FEMA effective HEC-RAS model between State Highway 6 and Congress Street which could potentially be evaluated in this study.

Huitt-Zollars will compare the results of the unsteady state model for 100-yr and 500-yr design storm events with the information received during the public comment period to determine if the list of suggested bridge modifications appears to be sufficient (29 bridge locations). Huitt-Zollars will provide recommendations to HCFCD to update the list of bridge locations to be evaluated for modification and finalize the list (up to 37 bridge and pipe crossings could be evaluated in this study) based upon HCFCD's input.

Evaluate the hydraulic performance of selected bridge and pipe crossings for 100-yr and 500-yr storm events (high flow conveyance storm events). Identify potential modifications to existing bridges and pipe crossings that would lower the water surface elevation in Buffalo Bayou during high flow conveyance storm events. Determine the water surface elevation reduction due to each single bridge modification as well as water surface elevation reduction due all the bridges being modified together. Prepare an inundation map for the collective bridge modifications model for 100-yr and 500-yr design storm events. Identify number of parcels, structures and length of road that may be removed from the mapped boundary comparing to the base model.

Investigate the feasibility/constructability of proposed bridge modifications; outline overall requirements, challenges and limitations of such work. Meet with HCFCD and identify potential modifications and improvements that are feasible and have desired benefit/impacts to be recommended for further investigation/design and construction.

- D. Oxbow/Bypass H&H Modeling - Develop high flow bypass channels/culverts at selected locations between Beltway 8 and Shepherd Drive (13 bypass locations). The analysis shall include the 100-year and 500-year design storm. The high flow bypass channel/culverts will be modeled primarily by modifying existing cross sections, adding cross sections and adding culvert structures. For larger oxbow/bypass locations Huitt-Zollars will would consider adding junction nodes and parallel channels.

For each oxbow bypass location, recommend a high flow bypass channel, high flow bypass culvert or a combination of the two based on construction feasibility and existing geometry and add those improvements to the Base HEC-RAS model for analysis (propose one improvement per location).

Evaluate the performance of the high flow bypass channels/culverts individually and collectively. Prepare an inundation map for the collective high flow bypass channels/culverts improvements for 100-yr and 500-yr design storm events. Identify number of parcels, structures and length of road that may be removed from the mapped boundary comparing to the base model .

Investigate feasibility/constructability of proposed high flow bypass channels/culverts; outline overall requirements, challenges and limitations of such work. Meet with HCFCD and identify potential modifications and improvements that are feasible and have desired benefit/impacts to be recommended for further investigation/design and construction.

- E. Determination of Impact - Investigate the potential environmental impact as well as detention requirements.

Once the bridge and oxbow modification locations are determined to be feasible, coordinate with the HCFCD Environmental Team for further guidance on environmental regulations and permitting. Evaluate and approximate areas of potential environmental impacts associated with installation of the high flow bypass channels and bridge modifications using WEB-DST and directions provided by HCFCD.

Identify downstream impacts and approximate detention requirements to mitigate the impacts using HEC-RAS models or HEC-HMS models. Detention requirements will be identified for up to three combinations of bridge modifications and high flow bypass channel/culvert improvements. The size and location of the mitigations/detention will be at the conceptual level.

- F. Prepare Report and Exhibits - Prepare and submit a report documenting the findings of this investigation. The report will be prepared in accordance with HCFCD guidelines and criteria.
- G. Opinion of Probable Construction Cost – Prepare an opinion of probable construction cost based on proposed bridge modifications and oxbow bypass improvements at the conceptual level.

3. Surveying

- A. Perform a topographic survey of Buffalo Bayou at the Beltway 8 Bridge crossing from 100 feet upstream to 100 feet downstream of the bridge. The survey shall include the existing bridge structures and topography underneath the bridge.
- B. Upon written authorization from HCFCD, perform a topographic survey of Buffalo Bayou 1,000 feet upstream of the Beltway 8 Bridge (northern bank to edge of water).
- C. The survey shall include identifying and locating aboveground utilities, pipelines, man-made structures, and other structures in HCFCD's ROW within the designated survey area.
- D. Prepare a topographic survey drawing of the surveyed areas.

4. Community Engagement

- A. Meetings and Coordination - Prepare for and conduct up to four (4) stakeholders coordination meetings with stakeholders (public meetings are not included in this contract).
- B. Develop Public Information Tools - Develop public information tools that provide an overview of the study and specific topics to be discussed in the meeting for distribution at the stakeholders meeting and online. This includes a project-specific PowerPoint presentation, roll plots, informational maps, exhibits, project problem statement and a meeting agenda. Draft public information tools will be developed and provided by Huitt-Zollars to HCFCD for review prior to each stakeholder meeting.
- C. Stakeholder Comments Responses – Provide responses for all stakeholder comments received during stakeholder meetings. Huitt-Zollars will be responsible for managing the stakeholder comment response process and developing draft responses to all comments received during the stakeholder meetings. Comment responses will be drafted by Huitt-Zollars and then provided to HCFCD for review and distribution within 7 days of receipt of the comment.
- D. Public Meetings – Provide public meeting services outlined in Harris County Bond Project Community Engagement meeting Guidance Document dated 9/13/2018. This task includes engaging a communications/PR firm to assist with the public meeting.

5. Revisions

The Engineer shall make requested revisions to documents and materials prepared under this Agreement. The Engineer also shall provide such engineering services necessary for such revision, when they are not necessitated by any fault of the Engineer and such revisions are inconsistent with approvals or instructions previously given by the District, or are made necessary by the enactment or revision of codes, laws, or regulations issued subsequent to the preparation of such documents.

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

The Commissioners Court of Harris County, Texas, convened at a meeting of said Court at the Harris County Administration Building in the City of Houston, Texas, on _____, with the following members present, to-wit:

Ed Emmett	County Judge
Rodney Ellis	Commissioner, Precinct No. 1
Jack Morman	Commissioner, Precinct No. 2
Steve Radack	Commissioner, Precinct No. 3
R. Jack Cagle	Commissioner, Precinct No. 4

and the following members absent, to-wit: _____, constituting a quorum, when among other business, the following was transacted:

**ORDER AUTHORIZING EXECUTION OF AN AGREEMENT FOR ENGINEERING SERVICES
BETWEEN THE HARRIS COUNTY FLOOD CONTROL DISTRICT
AND HUITT-ZOLLARS, INC.**

Commissioner _____ introduced an order and made a motion that the same be adopted. Commissioner _____ seconded the motion for adoption of the order. The motion, carrying with it the adoption of the order, prevailed by the following vote:

		Yes	No	Abstain
AYES:	Judge Ed Emmett	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NAYS:	Comm. Rodney Ellis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ABSTENTIONS:	Comm. Jack Morman	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Comm. Steve Radack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Comm. R. Jack Cagle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The County Judge thereupon announced that the motion had duly and lawfully carried and that the order had been duly and lawfully adopted. The order thus adopted follows:

WHEREAS, the District desires to evaluate the hydraulic performance of bridge crossings and high-flow bypasses on Buffalo Bayou, hereinafter called the "Project"; and

WHEREAS, the District desires that the Engineer provide Engineering Services for the Project; and

WHEREAS, the Engineer represents that it is capable and qualified to perform the various services that may be required.

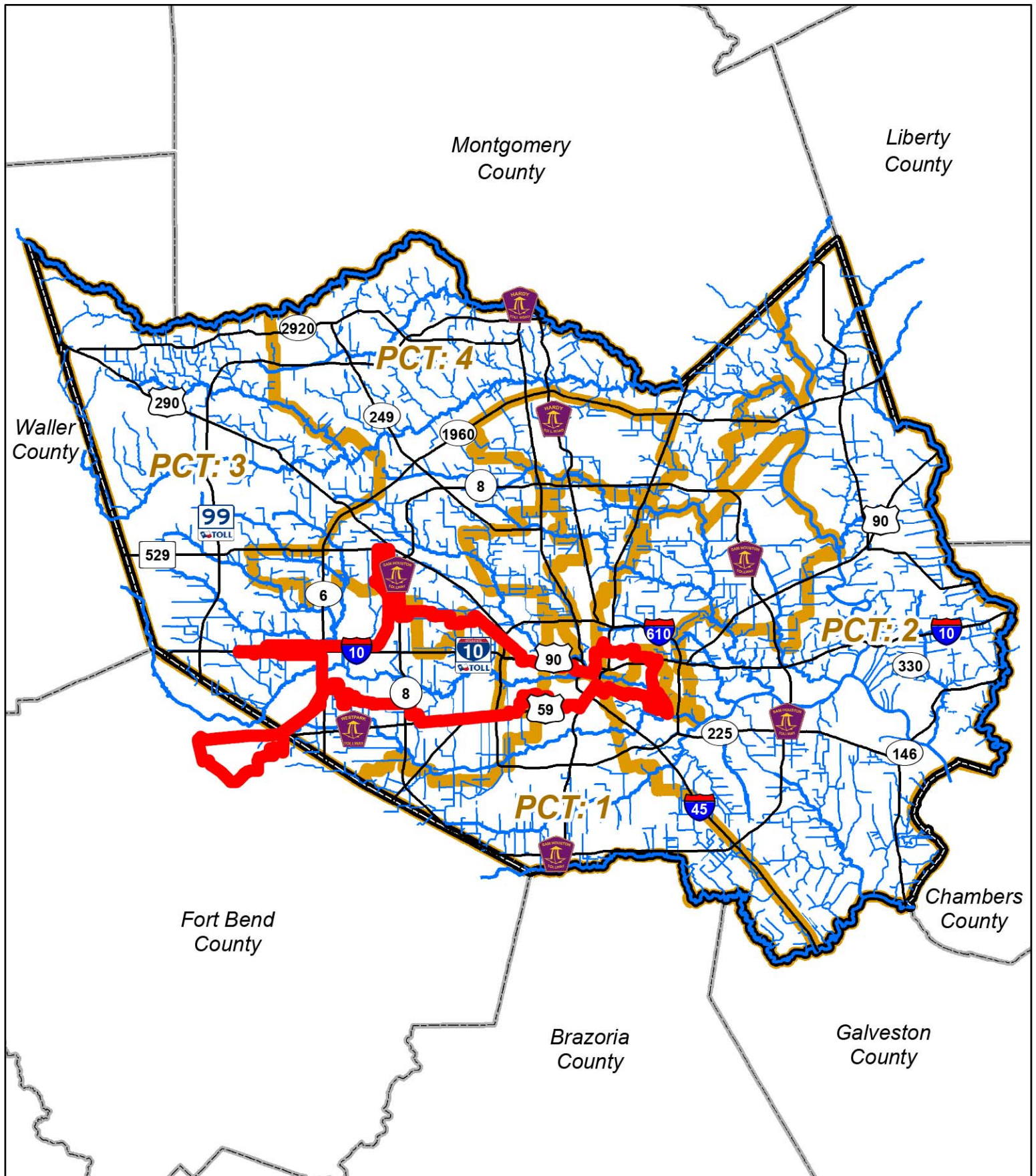
NOW, THEREFORE, BE IT ORDERED BY THE COMMISSIONERS COURT OF HARRIS COUNTY, TEXAS THAT:

Section 1: The recitals set forth in this order are true and correct.

Section 2: Exemption from the County Purchasing Act under Texas Local Government Code § 262.024(a)(4) is hereby granted.

Section 3: County Judge Ed Emmett is hereby authorized to execute for and on behalf of the Harris County Flood Control District, an Agreement by and between the Harris County Flood Control District and Huitt-Zollars, Inc. for a fee to be paid by the District of \$350,000.00 said Agreement being incorporated herein by reference for all purposes as though fully set forth verbatim herein.

PLN HUITT-ZOLLARS W100-P009 2019-57.DOCX



Project ID: W100-00-00-P009
Watershed: Buffalo Bayou
Precinct: 1, 2, 3, and 4

PCTNO

