

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" or "HCFCD," and **Pacheco Koch Consulting Engineers, Inc.**, a Texas corporation, hereinafter called "Engineer."

WITNESSETH

WHEREAS, the District desires to construct the TC Jester Detention Basin, Harris County Flood Control Unit K500-23-00, hereinafter called the "Project"; and

WHEREAS, the District desires that the Engineer perform Design, Bidding, and Construction Phase Engineering Services in connection with the Project; and

WHEREAS, the Engineer represents that it is capable and qualified to perform the services and prepare the items set forth herein.

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

SECTION I

SCOPE OF AGREEMENT

The Engineer agrees to perform professional engineering services in connection with the Project, as stated in the sections to follow, and for rendering such services the District agrees to pay the Engineer compensation, as stated in the sections to follow.

SECTION II

CHARACTER AND EXTENT OF SERVICES

The Engineer shall perform the services with regard to the Project listed in Appendix A hereto, hereinafter referred to as "Basic Services." The services furnished hereunder shall be completed to the satisfaction of the District.

SECTION III

ADDITIONAL SERVICES

Upon written request from the Executive Director of the District or his designee ("Director"), the Engineer shall furnish Additional Services for the Project, as described in Appendix B hereto. All Additional Services shall be completed to the satisfaction of the District.

It is expressly understood and agreed that the Engineer shall not furnish any of the Additional Services without first obtaining written authorization from the Director. The District shall have no obligation to pay for Additional Services that have been rendered without prior written authorization from the Director.

SECTION IV

TIME FOR PERFORMANCE

All Basic Services shall be completed within 367 calendar days of the notice to proceed. It is understood and agreed that the time during which the Engineer's work is under review by the District shall not be included in the calendar day time allowed for completion. All Additional Services shall be completed within the time set forth in the applicable work authorization.

Where the Director determines, in his sole discretion, that good cause exists, the Director may extend the time for performance of Basic Services or Additional Services. Any extensions of time granted by the Director shall be in writing.

SECTION V

THE ENGINEER'S COMPENSATION

For and in consideration of the Basic Services performed by the Engineer, as set forth in Section I, the District shall pay the Engineer a fixed fee of \$1,344,482.00, with monthly payments toward same based on the percentage of each task completed during the preceding calendar month, subject to acceptance by the District. The fee allocation by task to be used for billing purposes is as follows:

	<u>Amount</u>
A.1 CONSTRUCTION DOCUMENTS	
A.1.A 50% Submittal	\$290,658.00
A.2.B Bid Ready Submittal	\$174,395.00
A.3.C Final Submittal	<u>\$116,263.00</u>
	\$581,316.00

Adjustments to the fee allocation may be made within the Total Basic Services Fee with prior review and written approval by the Director.

The District shall reimburse the Engineer according to the following rates for Additional Services provided pursuant to Section III by employees of the Engineer:

<u>Responsibility</u>	<u>Maximum Hourly Rate</u>
Principal	\$245.00
Associate Principal.....	\$210.00
QA/QC Manager	\$225.00
Senior Project Manager	\$200.00
Professional Engineer	\$150.00
Graduate Engineer.....	\$115.00
CAD Technician	\$ 95.00

<u>Responsibility</u>	<u>Maximum Hourly Rate</u>
Senior Landscape Architect (AP)	\$210.00
Landscape Architect.....	\$120.00
Landscape Task Lead.....	\$ 95.00
Survey Senior Project Manager	\$165.00
Survey Project Manager/Coordinator	\$120.00
Survey 3-Person Crew	\$210.00
Survey 2-Person Crew	\$165.00
Survey Crew Member	\$100.00
Survey Senior Technician	\$ 95.00
Technician	\$ 85.00
Administrative Assistant	\$ 75.00
Research Assistant	\$ 55.00

The District may also authorize Additional Services to be compensated on a fixed fee basis upon acceptance by the Engineer. The District shall pay the Engineer a prorated amount of the fixed fee monthly, based on the percentage of the task completed during the preceding calendar month, subject to acceptance by the District. Where authorization of Additional Services is made on a fixed fee basis, the hourly rates set out above shall not apply.

Notwithstanding anything that may be construed to the contrary herein, in no event shall the Engineer be entitled to compensation and reimbursement in excess of \$763,166.00 for performing Additional Services hereunder. Nor shall the Engineer be required to perform Additional Services hereunder after becoming entitled to compensation and reimbursement of \$763,166.00 for Additional Services.

Adjustments to the Additional Services budget allocation may be made with written approval by the Director.

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, blue-line drawings or photocopies specifically required in Section II, 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 expenses 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 II, 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.

SECTION VI

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 Harris County Auditor and in compliance with

Section V, setting forth the services completed and the compensation due for the same, plus the amounts payable under Section III (Additional Services and Charges) 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 the 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 VII

TERMINATION

The Director 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 that proportion of the total fee which the services actually performed under this Agreement bear to the total services called for herein, 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 VIII

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:

Pacheco Koch Consulting Engineers, Inc.
7557 Rambler Road, Suite 1400
Dallas, Texas 75231
Attn: Mark A. Pacheco, P.E., RPLS

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 IX

LIMIT OF APPROPRIATION

The Engineer clearly understands and agrees, such understanding and agreement being of the absolute essence to this Agreement, that District shall have available the total maximum sum of \$1,344,482.00 specifically allocated to fully discharge any and all liabilities that may be incurred by 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 X

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 the 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 XI

PUBLIC CONTACT

The 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 Project shall be referred to the Director.

SECTION XII

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, he 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 it 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. § 2271.002, 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.

The Engineer warrants and represents, in accordance with Tex. Gov't Code Ann. § 2274.002, that unless the Engineer meets an exemption under subsection (c), then, as required by subsection (b), the Engineer's signature on this Agreement constitutes the Engineer's written verification that it does not boycott energy companies and will not boycott energy companies during the term of the contract.

The Engineer warrants and represents, in accordance with Tex. Gov't Code Ann. § 2274.002, that unless the Engineer meets an exemption under subsection (c) or section 2274.003, then, as required by subsection (b) of section 2274.002, the Engineer's signature on this Agreement constitutes the Engineer's written verification that it does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and will not discriminate against a firearm entity or firearm trade association during the term of the contract.

SECTION XIII

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 XIV

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 XV

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/forms/CIQ.pdf). 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 XVI

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 XVII

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.hctx.net.

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 XVIII

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 XIX

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.

EXECUTED on _____.

APPROVED AS TO FORM:

HARRIS COUNTY FLOOD CONTROL
DISTRICT

CHRISTIAN D. MENEFEE
Harris County Attorney


DocuSigned by:

By _____
MITZI TURNER
Assistant County Attorney

By _____
LINA HIDALGO
County Judge

ATTEST:

PACHECO KOCH CONSULTING
ENGINEERS, INC.

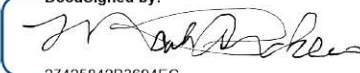
DocuSigned by:


Ryan Plasse

Name

Principal

Title

DocuSigned by:


Mark A. Pacheco

Name

President

Title

APPENDIX A

GENERAL SCOPE OF BASIC SERVICES

GENERAL

The intent of the basic services is to prepare construction documents for the TC Jester Detention Basin; Project ID K500-23-00-E002. The Basin is located adjacent to Cypress Creek in the Cypress Creek Watershed in Northern Harris County. The Project area is bounded to the west by TC Jester Boulevard, to the north by Cypresswood Drive and to the south and east by the Northgate residential development. The project consists of detailed design for the Alternative 2 as described in our approved Preliminary Engineering Report entitled, TC Jester Stormwater Detention Basin PER, dated July 28, 2021. The detailed design is for a single construction phase. The scope of services for basic services is as follows:

Reference Materials and Standards:

- Harris County Flood Control District (HCFCD):
 - Criteria Manual for the Design of Flood Control and Drainage Facilities in Harris County.
 - Policy and Design Criteria Manual for the Design of Flood Control and Drainage Facilities.
 - Surveying Guidelines.
 - HCFCD Drawing and Graphic Standards.
 - Geotechnical Guidelines.
 - Harris County Floodplain Reference Marks (<http://www.harriscountyfrm.org/>).
 - HCFCD Natural Stable Channel Design Guidance Manual
 - Design Guideline for HCFCD Wet Bottom Detention Basins with Water Quality Features.
 - HCFCD Hydrology and Hydraulics Guidance Manual.
 - Atlas 14 PCPM Changes (July 2019)
- Wherever there are differences in requirements between the reference materials and standards and this scope, the Engineer shall perform services in accordance with the stricter requirements.
- Units of Measure - This Project shall be prepared using English units.
- Deliverables in Electronic Format: In addition to the hard copy Project deliverables required below, the Engineer shall submit electronic copies of intermediate and final reports, documents, plans and other work products on Compact Disks (CDs) or other suitable media.
 - Submit text files in Microsoft Word 97 or later version.
 - Submit design drawing files and exhibits in AutoCAD Civil 3D 2011 or later version format.
 - Submit a duplicate of text and drawing files in PDF format using Acrobat 5.0 or later version.
 - Submit photographs in a digital format converted to a JPEG image and stored on the CD. Images shall have a resolution no lower than 1024 X 768.
- Project Management during Basic Services: Perform Project management and administration necessary for completion of the Project. Services shall include, but are not limited to, the following:
 - Provide sub-consultant contract management.
 - The Engineer shall not subcontract any part of its Contract without approval by the Director.

- The Engineer shall evaluate Sub-Consultant proposals to the same extent as if the services were performed by the Engineer.
- The Engineer shall be responsible for services performed by Sub-Consultants to the same extent as if the services were performed by the Engineer.
- The Engineer shall replace any Sub-Consultant when requested to do so by the Director, who shall state the reasons for such request.
- The Engineer shall provide the Director with a copy of any of its Consultant subcontracts at the Director's request.
- Attend Project kickoff meeting and monthly status meetings. Provide an agenda for each meeting and follow up with meeting minutes after each meeting.
- Provide monthly Project Status updates to document progress.
- Develop and maintain a Project schedule in Microsoft Project format. Submit schedule updates on a monthly basis.
- Coordinate with private and public utility companies for phone, fiber, cable, power internet, petrochem and municipal utility districts to obtain permits or permission to cross pipeline rights-of-ways limited to the following known lines:
 - Sunoco 12" pipeline
 - Explorer 10" pipeline
 - Kinder Morgan 6" pipeline
 - Louetta Road Utility District 12" & 15" sanitary
 - Harris County MUD 20 and 211 storm
 - Harris County Precinct 4 108" RCP & 120" CMP storm
 - Terranova West Subdivision 66" RCP storm

1. CONSTRUCTION DOCUMENTS

Prepare drawings in accordance with HCFCD's latest Drawing and Graphic Standards, and Surveying Guidelines. Construction drawings shall be prepared so they are legible and to scale when printed on 11"x17" size paper. Prepare specifications and special provisions for a Project Manual in a format prescribed by the District. Prepare a final cost estimate of probable construction cost using the District pay items. Follow Quality Assurance/Quality Control (QA/QC) procedures that meet or exceed the District's own requirements (written procedure available upon request). The Engineer may choose to use the District's procedures, or submit their own for approval prior to proceeding with design. Prepare a comprehensive Project schedule to be maintained at all times and submitted with monthly invoices Progress submittals are as discussed in the following:

Plans – Three submittals (50%, Bid Ready and Final Submittals): The submittals shall include the following plansheets as a minimum and shall have been reviewed for quality assurance. The submittal requirements are outlined below:

A. 50% Submittal

Includes the following as a minimum:

- 1) HCFCD standard details and note sheets
- 2) Plans meet HCFCD CAD Standards
- 3) Survey topo and control sheets meet HCFCD Survey Standards
- 4) Plan and profile sheets show all base right-of-ways (HCFCD, UE's, SSE's, PL'S, etc) and adjacent land development information (subdivision name, lot lines, street names)
- 5) Design plans meet the final PER recommended plan and supporting H&H analysis. Include report for reference.
- 6) Design plans meet scope objective

- 7) Confirm geotechnical recommendations, boring logs and soil profiles meet HCFCD Geotechnical guidelines
- 8) Confirm the design footprint fits within the existing and proposed HCFCD rights-of way
- 9) Utilities shown with utility conflict table
- 10) Traffic Control Plan
- 11) Quantity take off using standard HCFCD pay items
- 12) QA/QC documentation

B. Bid Ready Submittal

Incorporate the District's 50% comments. The Bid Ready set is to be signed and sealed by a Professional Engineer (P.E.) licensed in the State of Texas and includes a PDF file of the plans suitable in the Engineer's opinion as complete and ready to bid as well as all CAD files. The submittal shall include all items from the 50% submittal, the Project Manual, as well as any remaining details required to bid the Project.

C. Final Submittal

- 1) Incorporate the District's Bid Ready comments and deliver a PDF of the plans and Project Manual signed and sealed by a Professional Engineer licensed in the State of Texas.
- 2) Plansheets prepared per HCFCD CAD Standards
 - a. HCFCD Cover Sheet, Location & Vicinity Map [1 sheet]
 - b. Index of Drawings with revision date of each sheet shown [2 sheets]
 - c. Harris County Express Review Sheets (HCFCD & HCFD) [2 sheets]
 - d. General Notes [1 sheet]
 - e. Project symbols and abbreviations [1 sheet]
 - f. Project survey control and control point detail sheets showing survey baseline, survey data tables, existing and proposed HCFCD right-of-way, public and private easements crossing and adjacent to District ROW [1 sheet]
 - g. Existing topographic survey [4 sheets]
 - h. Overall project layout [3 sheets]
 - i. Geometric layout sheets [6 sheets]
 - j. Proposed Points layout sheets [6 sheets]
 - k. Proposed point data tables [4 sheets]
 - l. Detention basin Plan and Profile Sheets with proposed design top of banks, bottom widths, flowlines, hydraulic structures, piping and appropriate design labeling. Include existing and proposed right-of-way, existing topography baseline location/control, existing and proposed drainage structures/features, existing utilities (public and private), existing tree preservation and ROW encroachment locations [4 sheets]
 - m. Detention basin cross sections [4 sheets]
 - n. Inflow weir structures [2 sheets]
 - o. Outflow pipes plan and profiles [2 sheets]
 - p. Inflow pipes plan and profiles [2 sheets]
 - q. Construction/site access plan (maintenance road) and demolition plan [4 sheets]
 - r. Stormwater Pollution Prevention Plan (SWPPP) standard BMP plan [2 sheets]
 - s. SWPPP standard HCFCD details [2 sheets]
 - t. HCFCD standard detail sheets & miscellaneous detail sheets (structural, access gate and TxDOT) [12 sheets]
 - u. K100-00-00 Cypress Creek low water crossing structure detail – temporary crossing for construction [1 sheet]
 - v. Traffic Control Plan [2 sheets]

- w. Soil boring & piezometer locations & profiles [14 sheets]
- x. Stormwater quality features and calculations [1 sheet]

Deliverables:

- 1) PDF file of plans and all CAD files. Prepare drawings and CAD files in accordance with HCFCD's latest Drawing and Graphic Standards, and Surveying Guidelines. [Time included in Level of Effort for each plan sheet]
- 2) Project Manual - Prepare and submit through coordination with the District Design Project Manager a completed Project Manual, signed and sealed by a Professional Engineer (P.E.) licensed in the State of Texas, including special provisions, Summary of Work, and all Project specific specifications. The Project Manual will be submitted in PDF format bookmarked for each section.

Additional items to submit:

- 1) Engineer's estimate using HCFCD pay items in standard HCFCD format. Including assessment of expected construction time in calendar days using the HCFCD provided table.
- 2) Develop and maintain utility contact and conflict table for entire site. SUE subconsultant will provide test hole data for pipelines on the Basin 2 access road alignment south of Cypress Creek.

Quality Assurance and Quality Control (QA/QC). Follow QA/QC procedures that meet or exceed the District's own requirements (written procedure available upon request). The Engineer may choose to use the District's procedures, or submit their own for approval prior to proceeding with design. Includes a separate planset indicating proof of QA/QC procedures. HCFCD's QA/QC procedures will be utilized for the submittals shown below. Includes preparation of Comments sheet for all submittals.

- 1) 50% Submittal
- 2) Bid Ready Submittal
- 3) Final Submittal

Project Management services shall include, but are not limited to, the following:

- 1) Project management and administration necessary for completion of the Project. Includes assessment of current construction budget relative to project scope. Engineer's estimate will be verified relative to project scope and recently bid HCFCD projects.
- 2) Provide sub-consultant contract management.
- 3) Assist Environmental subconsultant with permit exhibits.
- 4) Attend Project kickoff meeting and monthly status meetings. Provide an agenda for each meeting and follow up with meeting minutes after each meeting. There will be a total of 13 meetings. Provide monthly Project Status updates to document progress. Provide notes for Plan-in-Hand meetings, Item E8.
- 5) Attend a total of two comment resolution meetings to discuss HCFCD comments received for the 50% and Bid Ready submittals.
- 6) Produce and maintain a Project schedule in Microsoft Project format. Submit schedule updates on a monthly basis.
- 7) Conduct "plan in hand" site visits with appropriate HCFCD personnel for the 50% and Bid Ready submittals.
- 8) Coordinate with HCFCD to obtain permit(s) from appropriate Floodplain Administrator(s).

- 9) Coordinate with private and public utility companies for phone, fiber, cable, power internet, petrochemical and municipal utility districts to obtain permits or permission to cross pipeline rights-of-ways limited to the following known lines:
- a. Sunoco 12" pipeline
 - b. Explorer 10" pipeline
 - c. Kinder Morgan 6" pipeline
 - d. Louetta Road Utility District 12" & 15" sanitary
 - e. Harris County MUD 20 and 211 storm
 - f. Harris County Precinct 4 108" RCP & 120" CMP storm
 - g. Terranova West Subdivision 66" RCP storm

APPENDIX B

GENERAL SCOPE OF ADDITIONAL SERVICES

The Engineer shall render the following Additional Services in connection with the Project when authorized in writing by the Director:

1. COMMUNITY ENGAGEMENT SERVICES

- A. Provide support services required to plan, prepare for, and conduct a community engagement meeting related to the Project in accordance with District guidelines.

2. ADJACENT PROJECT COORDINATION MEETINGS

- A. Coordination meetings with HCFCD personnel and HCFCD's consultants for the following projects:
 - 1) HCFCD Westador Stormwater Detention Basin Project, Project ID K500-27-00-E001, located approximately 2 miles downstream of the TC Jester Stormwater Detention Basin.
 - 2) HCFCD Cypress Creek Watershed Implementation Plan.

3. SURVEY SERVICES

- A. Perform survey in accordance with the District's Surveying Guidelines and other District design requirements as designated in writing by the Director.
- B. Topographic Survey. Category 6, Condition II
 - 1) Manage Clearing Subcontractor per Item 8 below.
 - 2) Survey control and benchmark circuit based on at least 3 Harris County Flood Control Reference Monuments tied to the Texas State Plane Coordinate System, South Central Zone (No. 4204), per Manual. Control points will be set in accordance with the requirements listed under Section IV Control Surveying.
 - 3) Perform Topographic survey of ground elevations and all existing surface features on a 100' x 100' grid. Length of line to cut based on Exhibit A to this document and provide DTM/TIN file.
 - a. Total length of line to cut is approximately 48,000LF.
 - b. Width of line to cut is 6ft. Area indeterminate.
 - 4) Cross sections of Cypress Creek required at inflow/outfall locations. An additional shot will be acquired 100 ft outside the bank/ROW on each side. Cypress Creek is approximately 100 ft wide. The total width of the cross sections is 300 ft. The length of design requires nine cross sections one at each outfall location and two additional cross sections 100 feet upstream and downstream of the outfall locations. Total length is 2,700 feet.
 - 5) Survey profile detail of north bank of Cypress Creek between project limits (approximately 7,000LF) and east end of the south bank for 3,000LF for a total of 10,000 LF.
 - 6) Survey 40ft cross sections at 100ft intervals for approximately 3500ft for proposed maintenance access/construction access road for Basin 2 (east basin).
 - 7) Prepare and review survey base map and process field data
 - 8) Survey line clearing - Through the use of a qualified subconsultant operating clearing equipment, Pacheco Koch will clear a 100' x 100' grid through the site to accommodate the topographic survey of the site. Included in this item is Clearing Subconsultant with Hydro Ax rental, or similar to clear lanes through the site vegetation.
 - 9) Provide as-built surveys suitable to determine final quantities of excavated material upon completion of construction. Provide information for the Record Drawings.

4. GEOTECHNICAL INVESTIGATION

- A. Perform in accordance with the District's Geotechnical Investigation Guidelines and other District requirements.
- B. Review the "Bid Ready" plans for the purpose of confirming that the design recommendations of the geotechnical report are complied with.
- C. Boring Logs in the final plans shall be signed and sealed by the Professional Engineer licensed in the State of Texas who was responsible for signing and sealing the Geotechnical Work the plans are based upon.
- D. Scope includes (detailed scope included in Ninyo & Moore's attached proposal):
 - 1) Geotechnical Field Study
 - 2) Boring Locations and Logging
 - 3) Laboratory Testing
 - 4) Engineering/Reporting
 - 5) *Slope stability analysis for additional cross section – Optional*
 - 6) *Clearing sub – Optional*

5. ENVIRONMENTAL SITE ASSESSMENT

- A. Perform in accordance with District requirements.
- B. Scope includes (detailed scope included in SWCA's attached proposal):
 - 1) USACE Nationwide Permitting
 - 2) *Environmental Record Review – Optional*
 - 3) *Additional Nationwide Permit Applications – Optional*
 - 4) *Individual Permit Applications – Optional*

6. IMPACT ANALYSIS

- A. Prepare, sign and seal a letter summarizing the impact of the Project on flood profiles and peak flows Analysis will be performed for the 10-year, 100-Year, and 500-year storm events based on pre-Atlas 14 rainfall data. This effort assumes the existing conditions models used in the Preliminary Engineering Report entitled, TC Jester Stormwater Detention Basin PER, dated July 28, 2021 do not require updates to flow or geometric data. A proposed conditions model will be developed by incorporating the basin layout, volume, inflow weirs, and outflow pipes from the Construction Plans into the existing conditions hydraulic model. Prepare, sign and seal a report detailing the impact of the Project on flood profiles and peak flows. The preparation of the models, reports, exhibits and appendices shall follow HCFCF's Quality Assurance/Quality Control procedures. Specific Scope Items for this task are listed below.
 - 1) Incorporate Detention Basin Design per construction plans into existing conditions hydraulic RAS model – Basin volume, basin layout, inflow weirs and outflow pipes.
 - 2) Demonstrate no adverse impacts – compare existing and proposed water surface elevations along Cypress Creek
 - 3) Prepare Draft Report
 - 4) Prepare Final Report
 - 5) QA/QC of models and reports

Gauge Coordination and model updates (detailed scope included in Gauge's attached proposal)

7. PRE-DESIGN

- A. Revisit the vegetation buffer along T.C. Jester Boulevard and tree protection plan. The basin designs will be revised to accommodate the new vegetation buffer and the detention volume will be verified to be equal to or greater than the volume specified in the approved

K500-23-00-E002 PER dated July 28, 2021. Does not include additional modeling for impact of revised basin configuration.

- B. Confirm the detention basins are compliant with the current FAA/Wildlife Hazard Requirements as outlined in the draft PCPM Chapter 10 Wildlife Hazard Attractant - Aviation. Includes desktop and field study with summary report. The basin designs will be revised to accommodate FAA/Wildlife Hazard Requirements and detention volumes will be verified to be equal to or greater than the volume specified in the approved K500-23-00-E002 PER dated July 28, 2021.

8. SUBSURFACE UTILITY EXPLORATION (SUE)

- A. Conduct where appropriate a Level "A" subsurface utility exploration (SUE) to definitively locate potential utilities (public and private) that are in conflict with the Project. Located utilities shall then be shown on the plans as location verified.
Scope includes (detailed scope included in TRG's attached proposal):
 - 1) Sub-Surface Utility Investigations (Pipeline Probing)
 - 2) Sub-Surface Utility Investigations (Test Holes)

9. BIDDING PHASE (FOR A SINGLE CONSTRUCTION PHASE)

- A. Attend and assist the District in conducting the pre-bid conference including answering questions and interpreting the drawings and specifications.
- B. Prepare necessary addenda to address issues or clarifications necessary for completion of the bidding process.
- C. Review tabulated bid results for discrepancies including potential unbalancing of unit bid prices. Provide sealed bid tab. Provide a written recommendation issued on company letterhead for the award of a construction contract.
- D. Provide clarification, correct discrepancies, correct errors and omissions; assist the District in evaluating the bid proposals; and assist in the preparation of a construction contract between the District and the successful bidder.
- E. Prepare a Submittal Log in coordination with the District Design and Construction Project Managers for District approval. The log shall list those items identified in the Contract Documents that require a submittal by the Contractor for District approval. Issue the Submittal Log to the Contractor within one week after the Project is awarded.
- F. Prepare a set of "Issued for Construction Drawings" within 10 business days after bids are received. Revise the "Issued for Construction Drawings" to reflect all addenda changes made to the Bid Documents during the bid period.

10. CONSTRUCTION PHASE

- A. Assign a Professional Engineer licensed in the State of Texas to review and respond to submittals and Requests for Information (RFIs) as requested by the District within three (3) business days. Attend meetings of any official nature concerning the Project as requested by the District unless otherwise set forth in the Scope of Work or approved in writing by the District. All submittal approvals and Request for Information (RFI) responses must include the signature of either the Engineer of Record or their equally qualified designee also licensed as a professional engineer in the State of Texas. The format for the approval block on submittals and RFIs will be provided by the District.
- B. Attend the pre-construction conference scheduled and conducted by the District.
- C. Review contractor's shop drawing submittals.

- D. Make periodic visits to the Project site as requested by the District to observe the quality of the executed work with respect to the signed and sealed design plans. Personal Protective Equipment (PPE) requirements at the Project site shall be followed. When making a site visit, the Engineer shall check in with the District's Inspector at the site so it can be noted in the Daily Work Report. If the inspector is not present, the Engineer shall notify the District Construction Project Manager of he or she being on-site. This includes 36 total field visits for monthly progress and special construction.
- E. Immediately notify the District Inspector and the District Construction Project Manager of any unsafe conditions or major work deficiencies observed during the site visits.
- F. Attend a Substantial Completion inspection (a definition of Substantially Complete is provided in the Project Manual General Conditions or as provided in Special Provisions). The Engineer shall notify the District of any deficient items.

11. REVISIONS

- A. Make requested revisions to documents and materials prepared under this Agreement.
- B. 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:

Lina Hidalgo	County Judge
Rodney Ellis	Commissioner, Precinct No. 1
Adrian Garcia	Commissioner, Precinct No. 2
Tom S. Ramsey, P.E.	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 PACHECO KOCH CONSULTING ENGINEERS, 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 Lina Hidalgo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NAYS:	Comm. Rodney Ellis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ABSTENTIONS:	Comm. Adrian Garcia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Comm. Tom S. Ramsey, P.E.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Comm. 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 construct the TC Jester Detention Basin, Harris County Flood Control Unit K500-23-00, hereinafter called the "Project"; and

WHEREAS, the District desires that the Engineer perform Design, Bidding, and Construction Phase Engineering Services in connection with the Project; and

WHEREAS, the Engineer represents that it is capable and qualified to perform the services and prepare the items set forth herein.

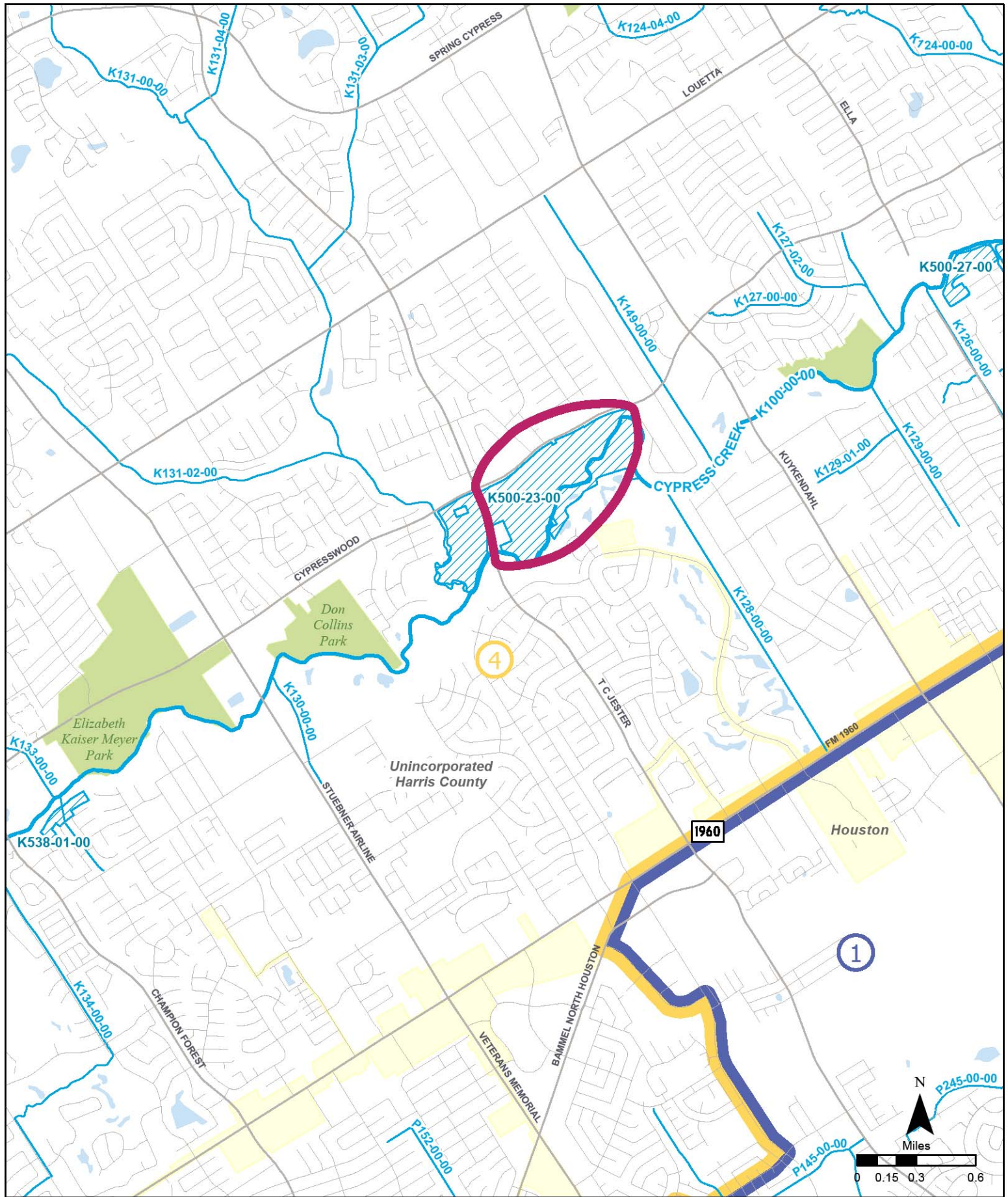
NOW, THEREFORE, BE IT ORDERED BY THE COMMISSIONERS COURT OF HARRIS COUNTY, TEXAS THAT:

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 Lina Hidalgo 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 Pacheco Koch Consulting Engineers, Inc. for a maximum fee to be paid by the District of \$1,344,482.00, said Agreement being incorporated herein by reference for all purposes as though fully set forth verbatim herein.

cip-n pacheco K500-23-E002 2022-62.docx



Project ID: K500-23-00-E002

Watershed: Cypress Creek

Precinct: 4

