

ENGINEERING SERVICES AGREEMENT

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

THIS AGREEMENT is between **Harris County**, a body corporate and politic under the laws of the State of Texas, hereinafter called "County", acting herein for the **Harris County Toll Road Authority (HCTRA)**, a division of the County; and **Earth Engineering, Inc.**, hereinafter called the "Engineer" or "Company".

WITNESSETH:

WHEREAS, the County proposes to hire the Engineer to provide construction materials testing and geotechnical engineering services for Heavy Highway, Bridge and Drainage maintenance projects, hereinafter called the "Project";

WHEREAS, the Engineer has represented to the County that it is qualified and prepared to perform all of the services described in the Scope of Services, Appendix A, attached hereto and incorporated herein by reference as if copied herein verbatim (Scope of Services), and has submitted a proposal to provide professional engineering services for the Project;

WHEREAS, the County is satisfied that the Engineer is capable of performing the necessary services required for the Project and desires to contract with the Engineer to perform the services described in the Scope of Services;

WHEREAS, the provisions of Chapter 262, Texas Local Government Code, Competitive Bidding Law do not apply to the proposed agreement because the contract is for professional engineering services; and

WHEREAS, the County has determined and found that it would be in the best interest of the County to delegate to the Executive Director of HCTRA supervisory and management authority over the Engineer;

WHEREAS, the Engineer will control the methods and means in performing the work set out in the Scope of Services;

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth below, the parties agree as follows:

1. General

- a. In performing professional engineering services under this Agreement, the Engineer will function solely and exclusively for the benefit of the County and not for the benefit of the contractors for the Project or any other party. All services rendered by the Engineer under this Agreement shall be performed

under the supervision of Harris County. The Engineer shall render services in accordance with generally accepted professional standards and use the degree of care and skill reasonably necessary to ensure compliance with all applicable laws and regulations.

- b. The Engineer shall be responsible for the professional quality, technical accuracy and the coordination of all deliverable documents and services furnished by the Engineer under this Agreement. The Engineer shall, without additional compensation, correct or revise all errors and deficiencies in its documents.
- c. The Engineer will collaborate with the County's personnel to facilitate the implementation of a Project Database within the County's Electronic Document Management System known as "MANAGE-IT". The Electronic Document Management System will provide electronic management that shall govern the distribution and file copies of all Project related correspondence, request for information (RFIs), change orders, pay estimates, reports, plans, and technical data. The County and the Engineer will use "MANAGE-IT" to facilitate the effective electronic exchange of Project information and documents with members of the design team and other interested stakeholders.
- d. The Engineer will collaborate with the County's personnel to facilitate the maintenance of the Project Database. Project files shall be entered into the database by the Engineer on a timely basis and made available by the County on "MANAGE-IT" at all times for performance of daily Project activities. Other documents, including those used for legal review, audit requests/requirements, and open records request purposes, shall be entered by the County staff assisting the Engineer team. The Engineer shall also ensure that all Project files are appropriately entered into the database:
 1. At all critical milestones;
 2. At established periodic intervals; and
 3. Following completion of the work as a final Project record, including applicable record drawings.

2. Scope of Services

The services to be provided herein in regard to the Project are defined in Appendix A ("Scope of Services").

3. Compensation and Payment

- a. The Engineer shall be entitled to payment based on hourly rates and reimbursement as set forth in this section, and the Engineer agrees that such payment will constitute full compensation for the performance of services under this Agreement. The County shall not be obligated to pay in excess of

\$100,000.00 and the Engineer shall not be obligated to perform further services hereunder once such sum has been earned, except to the extent that HCTRA has given prior written authorization to perform additional services and receive compensation therefore from funds in excess of such figure and within the maximum sum available under 3.c.

- (1) All hourly billing for defined services and any additional services not included in the Scope of Services under this Agreement, including changes in the contractual scope of work and revision of work satisfactorily performed, will be performed only when approved in advance and authorized by the County. Services will be reimbursed at the salary rates and reimbursement as set forth in Appendix B (Harris County Fee Schedule), provided that should the Commissioners Court of Harris County revise the Harris County Fee Schedule from time to time during the term of this Agreement, the Engineer shall be entitled to payment based on hourly rates and reimbursement as set forth in each revised Harris County Fee Schedule as it becomes effective for use in future County testing and geotechnical contracts, and the Engineer agrees that such payment will constitute full compensation for the performance of services under this agreement. Payment will be made to the extent that such direct salary costs and subcontracts are reasonable and necessary for the performance of such services. The reimbursable hourly salary rates cannot exceed those set forth in Appendix B. Payment will be made on the basis of certified time and expense records and in accordance with those payment procedures set forth in subparagraph b., below. Overtime for field services is applicable for any hours worked over 40 hours per week performed on a HCTRA Project by any one individual. Hours exceeding 40 hours performed on a HCTRA Project in a pay cycle shall be billed at the hourly rate(s) for each employee using the following multipliers: 1.0 for any Engineer classified position and 1.5 times for any Lab Technician classified position. The Engineer must seek written HCTRA approval prior to scheduling a worker for overtime. If the Contractor works a regular second night shift, then the Inspector/Lab Technician assigned to work the second shift (between the hours of 8:00 pm and 5:00 am) will do so as normal working hours and will not receive overtime until they work over 8 hours per day or more than 40 hours per week. If the Engineer consistently requires overtime to support Project work, the Engineer may be required to add an additional Project member(s) at the contract rate(s) indicated in Appendix B attached. The Engineer also shall be entitled to expense reimbursement as set forth in Appendix B. Other expenses, if any, may be reimbursed hereunder only when HCTRA determines that incurring such expenses is not required as part of the original Scope of Services and provides written approval of such expense in advance of it being incurred.

- (2) Where subcontractors are employed by the Engineer to perform services specified in this Agreement, the Engineer will be reimbursed for subcontractors' salaries and hourly rates, on the same basis as described for the Engineer's own personnel in subparagraph a. (1), of this Paragraph. Reimbursement to the Engineer for non-salary costs incurred by subcontractors will be on the same basis as if the costs were incurred by the Engineer. The Engineer will be paid a subcontract administrative fee equal to ten percent (10%) of all subcontractor invoiced amounts. Total contract amounts shall include subcontractor fees.
- b. It is understood and agreed that monthly payments will be made to the Engineer by the County based on the following procedures: On or about the fifteenth day of each month during the performance of services hereunder and on or about the fifteenth day of the month following completion of all services hereunder, the Engineer shall submit to the County two (2) copies of invoices showing the amounts due for services performed during the previous month, set forth separately for work under this Agreement and for additional services (accompanied by supporting certified time and expense records of such charges in a form acceptable to the County Auditor). It is specifically understood that any requests for travel reimbursements shall comply with those procedures for travel reimbursement to County employees established by the Harris County Auditor. HCTRA shall review such invoices and approve them within ten (10) calendar days with such modifications as are consistent with this Agreement and forward same to the County Auditor. The County shall pay each such invoice as approved by the County Auditor within twenty (20) calendar days after the County Auditor's approval of same. Invoices are due and payable 30 days from receipt.
- c. It is expressly understood and agreed that the County has available the total maximum sum of **\$110,000.00** as hereinafter certified available for the purpose of satisfying the County's obligations under the terms and provisions of this Agreement. The County shall not be liable under any circumstances or any interpretations hereof for any costs under the Agreement except for those certified available for this Agreement by the Harris County Auditor, as evidenced by the issuance of a purchase order by the Harris County Purchasing Agent for the certified amount. Once the funds are expended for the purpose of satisfying the County's obligations under the terms and provisions of this Agreement, the County shall have no further obligations nor shall the Engineer be required to perform further services hereunder.

4. Time of Performance

It is understood and agreed that the time for performance of the Engineer's services under this Agreement shall begin with receipt of the Notice to Proceed and end **550** calendar days from that date and remain in full force and effect until Project completion.

The contract period in which work authorizations may be issued may not be longer than two years after the date of contract execution or contract amendment. The Engineer is responsible for notifying HCTRA thirty days prior to the end of the contract.

5. The County's Option to Terminate

- a. The County has the right to terminate this Agreement at its sole option at any time, with or without cause, by providing written notice of such intention to terminate and by stating in said notice the "Termination Date." Upon such termination, the County shall compensate the Engineer in accordance with Paragraph 3. above, for those services that were provided under this Agreement prior to its termination and that have not been previously invoiced to the County. The Engineer's final invoice for said services will be presented to and paid by the County in the same manner set forth in Paragraph 3. b, above.
- b. Termination of this Agreement and payment in settlement as described in subparagraph a. of this Paragraph shall extinguish all rights, duties, obligations, and liabilities of the County and the Engineer under this Agreement and this Agreement shall be of no further force and effect; provided, however, such termination shall not act to release the Engineer from liability for any previous default either under this Agreement or under any standard of conduct set by law. No termination of this Agreement shall have the effect of terminating the Engineer's obligations under Sections 7 (Delays and Damages), 8 (Inspection of the Engineer's Books and Records), 13 (Appearance as Witness), or 16 (Indemnification).
- c. If the County shall terminate this Agreement as provided in this Paragraph, no fees of any type, other than fees due and payable at the Termination Date, shall thereafter be paid to the Engineer.
- d. The County's rights and options to terminate this Agreement, as provided in any provision of this Agreement, shall be in addition to, and not in lieu of, any and all rights, actions and privileges otherwise available under law or equity to the County by virtue of this Agreement or otherwise. Failure of the County to exercise any of its rights, actions, options or privileges to terminate this Agreement as provided in any provision of this Agreement shall not be deemed a waiver of any rights, actions or privileges otherwise available under the law or equity with respect to any continuing or subsequent breaches of this Agreement or of any other standard of conduct set by law.
- e. Copies of all completed and partially completed documents prepared under this Agreement shall be delivered to the County upon the Engineer's receipt of termination payment when and if this Agreement is terminated.

6. Source of Fee Payments

The County intends to pay for design and construction with the proceeds from the sale and issuance of bonds and a yearly revenue fund account. It is expressly acknowledged that all payments owing for Engineering services performed under this Agreement shall be made solely from these sources of funds for financing design and construction of the Project. The County shall be under no liability under this Agreement to make payment to the Engineer from any other source. In addition, the County reserves the right, at its sole discretion, at any time prior to issuance by the County of the written notice to proceed as provided in Paragraph 4., above, to cancel this Agreement and in the event of such cancellation, the Engineer shall not be entitled to any payment, nor have any claim for compensation or damages resulting from such cancellation. In no event shall the liability of the County under this Agreement exceed the amount hereunder certified as available by the County Auditor.

7. Delays and Damages

Except as otherwise provided herein, the Engineer agrees that no other charges or claims for damage shall be made by it against the County for any delays or hindrances occurring during the progress of the Engineer in providing to the County the services specified in this Agreement.

8. Inspection of the Engineer's Books and Records

The Engineer will permit the County, or any duly authorized agent of HCTRA, to inspect and examine the pertinent books and records of the Engineer, but only for the purpose of verifying the direct salary costs, overtime work, and out-of-pocket expenses for additional services charged to the Project described in and contemplated by Paragraph 3. a., above.

9. Personnel, Equipment, and Material

a. The Engineer represents that it presently has, or is able to obtain, adequate qualified personnel in its employment for performance of the services required under this Agreement and that the Engineer shall furnish and maintain, at its own expense, adequate and sufficient personnel and equipment, in the opinion of HCTRA, to perform the services when and as required and without delays. It is understood that HCTRA will approve assignment and release of all key engineering personnel and that the Engineer shall submit written notification of all key engineering personnel changes monthly for HCTRA's approval prior to the implementation of such changes. Services described in this Agreement shall be performed under the direction of an engineer licensed to practice professional engineering in the State of Texas.

b. All employees of the Engineer or subcontractors of the Engineer shall have such knowledge and experience as will enable them to perform the duties

assigned to them. Any employee of the Engineer or subcontractor of the Engineer who, in the opinion of HCTRA, is incompetent or by his conduct becomes detrimental to the Project shall, upon request of HCTRA, immediately be removed from association with the Project.

- c. Except as otherwise specified in Paragraph 10. below, the Engineer shall furnish all equipment, transportation, supplies, and materials required for its operations under this Agreement.

10. Items to be Furnished to the Engineer by HCTRA

The following items will be supplied to the Engineer by HCTRA.

- a. Digital copies of construction contract plans and specifications for the Project area.
- b. Access to approved shop drawings, construction drawings and all other necessary items to verify that materials furnished conform to the contract plans and specifications.

11. Subletting

The Engineer shall not sublet, assign, or transfer all or any part of the services in this Agreement without the prior written approval of HCTRA. Responsibility to HCTRA for sublet work shall remain with the Engineer.

12. Conferences

At the request of HCTRA, the Engineer shall provide appropriate personnel for conferences at its offices, or attend conferences at the various offices of HCTRA, or at the site of the Project, and shall permit inspections of its offices by HCTRA, or others when requested by HCTRA.

13. Appearance as Witness

If requested by the County, or on its behalf, the Engineer shall prepare such engineering exhibits and plats as may be requested for all hearings and trials related to the Project and, further, it shall prepare for and appear at conferences and shall furnish competent expert engineering witnesses to provide such oral testimony and to introduce such demonstrative evidence as may be needed throughout all trials and hearings with reference to any litigation relating to the Project. Compensation for trial preparation and appearance by the Engineer in courts regarding litigation matters will be made in accordance with the provisions of Paragraph 3. a. (1), above.

14. Compliance with Laws

The Engineer shall comply with all federal, state, and local laws, statutes, ordinances, rules and regulations, and, to the extent that the Engineer has actual knowledge, the orders and decrees of any courts or administrative bodies or tribunals in any matter affecting the performance of this Agreement, including, without limitation, it is understood that the Engineer shall be responsible for complying with Worker's Compensation laws, minimum and maximum salary and wage statutes and regulations, licensing laws and regulations. When required, the Engineer shall furnish the County with certification of compliance with said laws, statutes, ordinances, rules, regulations, orders, and decrees specified above.

The Engineer shall strictly comply with Section 2251.022 Texas Government Code, and shall require that its sub-contractors fully comply with Section 2251.023 Texas Government Code.

15. Insurance

The Engineer shall obtain, keep and maintain any and all insurance that may be required by law or that may be required by any agreement the County has with any other party concerning the Project. The Engineer's insurance policies shall be the primary policies. Under no circumstances will the County be liable for any policy premiums or deductibles. The Minimum Insurance Requirements are attached hereto as Appendix C. 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 stated in attached Exhibit C.

16. Indemnification

TO THE EXTENT ALLOWED BY LAW, THE ENGINEER AGREES TO INDEMNIFY AND HOLD HARMLESS THE COUNTY, 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 THE ENGINEER EXERCISES CONTROL) IN THE PERFORMANCE OF THE SERVICES DEFINED IN THIS AGREEMENT. THE ENGINEER SHALL ALSO SAVE THE COUNTY 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 COUNTY, IN LITIGATION OR OTHERWISE RESISTING SUCH CLAIMS OR LIABILITIES.

17. Delivery of Notices, Etc.

- a. All routine written notices, invoices, change orders, etc. are to be delivered to the Deputy Director, Engineering/Construction at the Harris County Toll Road Authority, 7701 Wilshire Place Drive, Houston, Texas 77040, or at such other place or places as the County may designate by written notice delivered to the Engineer.

All formal notices and demands under this Agreement shall be delivered to the Harris County Toll Road Authority, 7701 Wilshire Place Drive, Houston, Texas 77040. Attention: Executive Director.

- b. All written notices, demands, and other papers or documents to be delivered to the Engineer under this Agreement shall be delivered to Earth Engineering, Inc., 4877 Langfield Road, Houston, Texas 77040, Attention: Moe A. Shihadeh, P.E., or at such other place or places as the Engineer may designate by written notice delivered to the County.

18. Reports of Accidents, Etc.

Within 24 hours after the occurrence of any accident or other event which results in, or might result in, injury to the person or property of any third person (other than an employee of the Engineer), whether or not it results from or involves any action or failure to act by the Engineer or any employee or agent of the Engineer and which arises in any manner from the performance of this Agreement, the Engineer shall send a written report of such accident or other event to the County, setting forth a full and concise statement of the facts pertaining thereto. The Engineer shall also immediately send the County a copy of any summons, subpoena, notice, or other documents served upon the Engineer, its agents, employees, or representatives, or received by it or them, in connection with any matter before any court arising in any manner from the Engineer's performance of work under this Agreement.

19. The County's Acts

Anything to be done under this Agreement by the County may be done by such persons, corporations, or firms as the County may designate.

20. Limitations

Notwithstanding anything herein to the contrary, all covenants and obligations of the County under this Agreement shall be deemed to be valid covenants and obligations only to the extent authorized by the Act creating the County and permitted by the laws and the Constitution of the State of Texas.

21. Captions Not a Part Hereof

The captions or subtitles of the several sections and divisions of this Agreement constitute no part of the content hereof, but are only labels to assist in locating and reading the provisions hereof.

22. Controlling Law, Venue

This Agreement shall be governed and construed in accordance with the laws of the State of Texas. This Agreement shall be performed entirely in Harris County, Texas and the parties hereto acknowledge that venue is proper in Harris County, Texas, for all disputes arising hereunder and waive the right to sue or be sued elsewhere.

23. Successors and Assigns

The County 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.

24. Independent Contractor

Notwithstanding any provision of this Agreement, the Engineer shall at all times act as an independent contractor, not as an employee of the County, and the Engineer shall be responsible for the means and methods employed in performing services hereunder.

- a. The Services performed by the Engineer under this Agreement are performed by the Engineer as an independent contractor. This Agreement is not intended to create and shall not constitute a partnership or joint venture between the parties. The Engineer shall have and retain the exclusive right of control over employment, firing, discipline, compensation, insurance, and benefits in accordance with the applicable laws of the State of Texas. The Engineer has no authority to bind or otherwise obligate the County orally, in writing or by any act or omission. Nothing contained herein shall establish an agency, employee-employer relationship, partnership, joint enterprise, joint employer, or joint venture relationship by or between the County and the Engineer.
- b. The Engineer warrants that it will comply with all applicable federal and state laws including, but not limited, to the Prompt Pay Act, in the payment of its employees or subcontract employees.
- c. The Engineer is solely responsible for the payment of wages and any applicable benefits to workers for Services performed for the County. The Engineer shall be responsible for withholding federal and state income taxes,

paying Federal Social Security taxes, maintaining unemployment insurance and maintaining workers' compensation insurance in an amount and under such terms as required by the applicable laws of the State of Texas.

- d. The Engineer's workers are not entitled to any contributions by or benefits from the County for any pension plan, bonus plan or any other benefit plan. The Engineer and the workers furnished by the Engineer shall not be entitled to any fringe benefits or similar benefits afforded to employees of the County. The County is not liable for payment of any federal or state taxes and charges including, but not limited to, income withholding taxes, social security, unemployment, workers' compensation, and similar taxes and charges. This Article shall survive the expiration or termination of this Agreement.

25. Certificate of Interested Parties (Form 1295)

Texas law requires all parties who enter into any contract with the County that must be approved by Commissioners Court to disclose all Interested Parties. Texas Ethics Commission Form 1295, must be completed in its entirety. If changes to this Form are necessary during this Agreement, the Engineer will notify and send the County an updated and complete version.

26. Additional Statutory Requirements

Company represents and certifies that, at the time of execution of this Agreement, Company (including 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 Company engage in scrutinized business operations or other business practices that would cause it to be listed during the term of this Agreement.

27. Dispute Resolution

In an effort to resolve any conflicts that arise during the design or construction of the Project or following the completion of the Project, the County and the Engineer agree that all disputes between them arising out of or relating to this Agreement shall first be submitted to non-binding mediation unless the parties mutually agree otherwise. This provision does not preclude available legal remedies in the event the parties are unable to resolve said conflicts through mediation.

28. Historically Underutilized Business Requirements

The State of Texas maintains a Historically Underutilized Business Program, which identifies any business at least 51 percent owned by an Asian Pacific American, African American, Hispanic American, Native American, woman and/or Service Disabled Veteran, who reside in Texas and actively participate in

the control, operations and management of the entity's affairs as a Historically Underutilized Business.

In accordance with Section 284.007 of the Texas Transportation Code, the County shall make a good faith effort to meet or exceed goals provided under Section 284.007(b) for awarding contracts and subcontracts associated with a project it operates, maintains, or constructs to historically underutilized businesses. For purposes of this section, the term "historically underutilized business" has the meaning given to such term in subsection (d) of Section 284.007, Transportation Code.

The Engineer agrees to reasonably assist the County in its efforts to meet or exceed the goals provided under Section 284.007(b) for awarding contracts or subcontracts to historically underutilized businesses.

The Engineer will take affirmative steps to assure that minority firms and specifically women's business enterprises are used when possible and will not be discriminated against on the grounds of race, color, religious creed, sex, or national origin in consideration for an award.

Affirmative steps shall include:

1. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
2. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
3. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises; and
4. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises.

The Engineer shall submit evidence of compliance to Appendix X when requested by County.

[SIGNATURE PAGE FOLLOWS]

APPROVED AS TO FORM:

CHRISTIAN D. MENELEE
County Attorney

HARRIS COUNTY

DocuSigned by:
By: Marcy Linebarger
0B97D5E185374E3
MARCY LINEBARGER
Senior Assistant County Attorney
25GEN0806

By: _____
LINA HIDALGO
County Judge

Date: _____

EARTH ENGINEERING, INC.

DocuSigned by:
By: Moe Shihadeh
3AC17970440E4AD...
Name: Moe Shihadeh
Title: Founding Principal
Date: 4/9/2025

APPENDIX A

SCOPE OF SERVICES

Earth Engineering, Inc.

Construction Materials Testing Services in Support of Heavy Highway, Bridge, and Drainage Maintenance and Other Related Maintenance

PROJECT LOCATION / DESCRIPTION

Heavy highway, bridge, and drainage maintenance project is a countywide project that will have active construction ongoing in each precinct. This project will also include work within HCTRA limits of Tomball Tollway.

PROJECT SCOPE

This project includes rail replacement, lift station rehabilitation, pavement repair, roadside ditch repair, digital message sign retrofit, bearing pad replacement and other miscellaneous construction. This project will also include Tomball Tollway permeable friction course surface pavement replacement and other inspection services as needed.

SERVICES TO BE PROVIDED BY THE ENGINEER

The Engineer shall provide Construction Materials Testing (CMT) and Geotechnical Engineering services for the following Harris County Toll Road Authority (HCTRA) project(s):

Heavy Highway, Bridge, & Drainage Maintenance
Tomball Tollway Surface Pavement Replacement

Under this Agreement, the Engineer shall provide all labor, material, and supervision necessary to perform professional CMT services including, but not limited to, the following:

GENERAL REQUIREMENTS

The Engineer shall perform professional construction materials testing and geotechnical investigation services set forth below in connection with the design, construction, or maintenance of the Assigned Project. The Engineer, as needed and requested by HCTRA, will provide qualified personnel to execute the functions of the identified scope and will report to HCTRA's Project Manager.

The Engineer shall perform, at a minimum and not limited to, the following duties:

1. Construction Materials Testing,
2. Inspection of construction materials used and placed,
3. Verification of mix designs,
4. Review of material submittals,
5. Sampling and Testing per ASTM standards,
6. Non-Destructive construction material examinations on placed materials,
7. Geotechnical Investigations,
8. Forensic Studies,
9. Inspection of Structural Steel,
10. Subject Matter Expert reports and reviews on situational findings

The Engineer will assign field personnel to the Project for which services shall be performed, and reports issued, with the degree of care and skill exercised by reputable members of the profession at the time services are provided. The Engineer will obtain written approval of assignment from HCTRA prior to implementation. Unless otherwise instructed by HCTRA, the Engineer shall minimize the need for HCTRA to apply its own resources to assignments.

TASK DESCRIPTIONS AND FUNCTION CODES

FUNCTION CODE 330 – MATERIALS SAMPLING AND TESTING SERVICES

330.1 JOB CONTROL

A. Field and Laboratory Materials Sampling and Testing

The Engineer shall perform all sampling and testing of components and materials in accordance with the standard specifications, and all other standard and special specifications and special provisions applicable in this agreement.

The Engineer shall furnish a qualified Field and Laboratory Testing Technician to complete all the required construction materials sampling, testing and inspection services on the Project as required by HCTRA in accordance with the Harris County Toll Road Authority Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, 2017 and May 2019 Update, the Special Provisions, the Special Specifications, the Plans for the assigned jobs and the Approved Materials Guide Schedule for Sampling and Testing. Scheduling of the required materials testing/sampling will be done through HCTRA's designated Project staff who will communicate with the lab daily concerning the materials sampling/testing schedule. The estimated number of samples and tests are based on quantities in the executed construction contract. The HCTRA PM or Resident Engineer may determine that additional cylinders are required.

B. Reports

The Engineer shall ensure all testing reports are completed in full and in a timely manner, as required by the Harris County Fee Schedule referred to in Appendix B, including the Engineer's signature. The Engineer will complete additional reports as necessary to monitor and document the construction progress, as required by HCTRA. The format and documentation requirements will be as established by HCTRA personnel.

The Engineer shall upload material test reports for construction to MANAGE-IT periodically as test results are accumulated. Passing test reports shall be uploaded in a timely manner, not to exceed every seven (7) days. The Engineer will report failing laboratory test results to HCTRA's Project management team and contractor by telephone and provide an email/MANAGE-IT notification within 24 hours of the failing test.

C. Field Sampling/Testing

The Engineer shall perform testing on the project. The Engineer shall complete:

1. Daily materials sampling and testing activities and reports,
2. Conduct material sampling, transporting, and testing as required according to testing standards,
3. Prepare construction material testing reports and upload copies of the reports to MANAGE-IT, and
4. Provide print and reproduction as authorized by HCTRA.

Testing frequencies may be increased if directed by HCTRA.

The Engineer shall review and recommend approval or rejection for all sampling and testing documentation submitted by the contractor for compliance with applicable HCTRA regulations, standards, and contract requirements.

The Engineer shall verify and certify that all materials used meet the governing specifications or identify materials that do not meet specifications and recommend action that should be taken.

The Engineer shall work closely with HCTRA to resolve all material discrepancies before the next monthly estimate is processed.

D. Construction Meeting

The Engineer shall attend pre-construction meetings prior to beginning work to ensure proper lines of communication are outlined and pre-construction requirements associated with the Project are documented and communicated to the Construction Contractor.

The Engineer shall attend construction meetings to address material sampling/testing issues when requested. The Engineer may be asked to attend the weekly/bi-weekly construction progress meetings regularly.

E. Special Tasks

The Engineer must maintain the appropriate AASHTO and/or A2LA accreditation recognizing their competency to perform the pertinent construction materials and geotechnical testing services.

The Engineer shall provide certified personnel, outlined in their Quality Assurance and Quality Control (QA/QC) plan, that are knowledgeable of all materials testing procedures. All personnel performing acceptance tests must provide certifications and must maintain the certifications throughout the project.

The Engineer shall provide HCTRA with a copy of the Engineer's Quality Assurance/Quality Control (QA/QC) procedures prior to beginning work on the Project.

The Engineer shall perform the QA/QC program as required to ensure the Engineer's staff is performing its duties properly.

The Engineer shall assist HCTRA in preparation and documentation of factual evidence for claim negotiations, hearings, or litigation, as required.

The Engineer shall monitor the use of technicians to optimize utilization of available technicians and minimize overtime by using multiple technicians. The Engineer shall use the Project master numbering system for labeling of all test specimens.

The Engineer shall maintain and perform periodic calibration of all on-site testing equipment.

The Engineer shall, when requested, provide HCTRA with a copy of all working field notes.

F. Visitors to the Project

The Engineer or its representatives are to politely greet any visitor, identify himself/herself, and direct the visitor to the on-site HCTRA representative.

If the visitor is a member of the Media, politely decline any interview request. Direct all media requests for interviews or questions concerning the construction Project to HCTRA Communications at telephone number: (713) 587-7800 or to another Project Spokesperson designated by HCTRA. No consultant or contractor is authorized to speak for or on behalf of the County.

G. MANAGE-IT

The Engineer is required to use MANAGE-IT and its integrated Document Control System in accordance with procedures issued by HCTRA. HCTRA will provide a system login account and training of the

Engineer's personnel sufficient to facilitate access to the Project data and completion of reporting and maintenance obligations. Any new or changed information that is procedurally required to be maintained by the Engineer on MANAGE-IT must be entered into MANAGE-IT within 24 hours of that information being known to the Engineer.

The Engineer shall enter all test data, including all mix designs, for both concrete and asphalt, into MANAGE-IT.

330.2 DELIVERABLES FOR TASK 330.1

The Engineer shall provide, at a minimum and not limited to, the following deliverables:

- A. Monthly Deficiency Reports to track material issues (one per month)
- B. Certification Verifications
- C. Testing documentation as applicable
- D. Letters of Certification
- E. Test Exception Letter

APPENDIX B

FEE SCHEDULE

Earth Engineering, Inc.



Harris County, Texas

1001 Preston St., Suite 934
Houston, Texas 77002

Commissioners Court

Request for Court Action

File #: 24-1590

Agenda Date: 3/26/2024

Agenda #:

Department: County Engineer

Department Head/Elected Official: Milton Rahman, PhD, P.E., PMP, CFM, ENV SP, County Engineer

Regular or Supplemental RCA: Regular RCA

Type of Request: Policy

Project ID (if applicable): 21208MF24001

Vendor/Entity Legal Name (if applicable): N/A

MWDBE Contracted Goal (if applicable): N/A

MWDBE Current Participation (if applicable): N/A

Justification for 0% MWDBE Participation Goal: N/A - Goal not applicable to request

	YES	NO	ABSTAIN
Judge Lina Hidalgo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Rodney Ellis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Adrian Garcia	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Tom S. Ramsey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comm. Lesley Briones	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Request Summary (Agenda Caption):

Request for approval to adopt an updated Fee Schedule and General Notes for Geotechnical Engineering and Construction Materials Engineering Services, UPIN 21208MF24001, Countywide.

Background and Discussion:

Harris County has completed updates to the 2015 Construction Materials Engineering Services Labor and Unit Rates presented to the Commissioner's Court on March 31, 2015. The updated fee schedule and general notes have been amended to correspond with updates to the 2024 Harris County Engineering Department standards and specifications and include provisions related to geotechnical services.

Expected Impact:

Significant increase in clarity to designers and contractors utilizing HCED Regulations and Specifications.
Increase in quality of infrastructure delivered to Harris County Residents.

Alternative Options:

Rejection of approval to the Fee Schedule and General Notes reduces the quality of services received for Harris County Infrastructure.

Alignment with Goal(s):

- ☐ Justice and Safety
- ☐ Economic Opportunity
- ☐ Housing
- ☐ Public Health

Presented to Commissioners Court

March 26, 2024

Approve: G/R

File #: 24-1590

Agenda Date: 3/26/2024

Agenda #:

- ☐ Transportation
☐ Flooding
☐ Environment
☒ Governance and Customer Service

Prior Court Action (if any):

Date	Agenda Item #	Action Taken
3/31/2015		Recommendation to Adopt a Corrected Rate Schedule for Construction Materials Engineering and Testing Effective Immediately to Replace and Supersede the Version Approved on September 23, 2014.

Location:

Address (if applicable):

Precinct(s): Choose an item.

Fiscal and Personnel Summary				
Service Name	Engineering			
	Current Fiscal Year Cost			Annual Fiscal Cost
	Labor	Non-Labor	Total	Recurring Expenses
Funding Sources				
Existing Budget				
Other- H/C Commissioner Pct. 3 (10%	\$	\$	\$	\$
Choose an item.	\$	\$	\$	\$
Choose an item.	\$	\$	\$	\$
Total Current Budget	\$	\$	\$	\$
Additional Budget Request (<i>Requires Fiscal Review Request Form</i>)				
Choose an item.	\$	\$	\$	\$
Choose an item.	\$	\$	\$	\$
Choose an item.	\$	\$	\$	\$
Total Additional Budget Request	\$	\$	\$	\$
Total Funding Request	\$	\$	\$	\$
Personnel (Fill out section only if requesting new PCNs)				
Current Position Count for Service	-	-	-	-
Additional Positions Request	-	-	-	-
Total Personnel	-	-	-	-

Anticipated Court Date: March 26, 2024

Anticipated Implementation Date (if different from Court date): April 1, 2024

File #: 24-1590

Agenda Date: 3/26/2024

Agenda #:

Emergency/Disaster Recovery Note: Not an emergency, disaster, or COVID-19 related item

Contact(s) name, title, department: Cassandra Green, P.E.; Director, Interim - Technical Services; HCED

Attachments (if applicable):

2024 Harris County Fee Schedule - Geotechnical Engineering and Construction Materials Engineering Services
Labor and Unit Rates/ General Notes.

Harris County Fee Schedule
Geotechnical Engineering and Construction Materials Engineering Services
Labor and Unit Rates
April 1, 2024

Harris County Fee Schedule “General Notes” 2024

1 GENERAL

- 1.1 All Geotechnical Engineering and Construction Materials Engineering services including sampling, field and laboratory testing, and inspection services ("Services") performed by the Consultant are required to follow HCED, HCFCD, and/or TXDOT Guidelines and must be authorized by Harris County.
- 1.2 Services not specifically authorized by Harris County will not be paid for.
- 1.3 Failure to perform specified services in accordance with Harris County requirements may result in the cancellation of the Consultant's purchase order.
- 1.4 Harris County requires the use of internet-based software program(s) to maintain consistent administrative and technical control of its projects throughout the County.

2 ENGINEERING SERVICES

- 2.1 Engineering Services shall be performed by a professional engineer in good standing licensed in the State of Texas and employed full-time by the Consultant (the "Consultant's Engineer").
- 2.2 All Construction Materials Engineering reports relating to Services performed by the Consultant shall be reviewed and signed by the Consultant's Engineer. The Consultant's Engineer does not need to sign specimen pick-ups or Project cancellation reports.
- 2.3 For engineering review of services and engineering reports by the Consultant's Engineer, Harris County will compensate the Consultant at the "Project Engineer" rate of ½ (0.5) hour of engineering time for each engineering report. Engineering review time will not be allowed on specimen pick-up reports, cancellation reports, and revised or updated reports to include additional data on a report such as additional compressive strength tests on concrete cylinders and CSS molded specimen reports.
- 2.4 Harris County shall also compensate the Consultant at the respective rate of the Consultant's Engineer when attending Project-related on-site and progress meetings at the request of Harris County.
- 2.5 Overtime will not be allowed for any engineering services.

3 FIELD SERVICES

- 3.1 "Sampling" is defined as the process of procuring materials for subsequent testing or examination that is performed by a certified technician with knowledge of appropriate sampling procedures.
- 3.2 "Specimen Pickup" is defined as the process of retrieving "specimens" usually prefabricated in the field such as cylinders, beams, or cubes, and transporting those specimens to the laboratory for subsequent testing or examination.

Harris County Fee Schedule
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- 3.3 Field Services shall be performed by the Consultant's certified engineering technicians and invoiced based on the technician's certification level in accordance with the Fee Schedule and project documents. Certifications should be obtained through NICET, ACI, TX-APA / HMA, ACCP, and programs associated with ASNT – TC1A.
- 3.3.1** A non-certified technician may be allowed to assist a certified technician on a Project provided two or more technicians are required.
- 3.3.2** Specimen Pickup shall be performed, whenever possible, as part of a scheduled field trip or by the full-time technician assigned to the Project.
- 3.3.3** Specimen Pickup not performed as a part of a scheduled field trip or by the technician assigned to the Project shall be compensated at the technician rate as straight time, not a 4-hour minimum. Specimen pick-up shall be invoiced based on the technician's certification level but will not exceed the Code 10700 rate.
- 3.3.4** Field sieve analysis drilled shaft slurry tests, and lime slurry percent-solids determination shall be performed in the field as part of the field inspection services without an additional testing charge.
- 3.3.5** The rates for coring of Portland cement concrete or asphaltic concrete (HMAC) are inclusive of the coring equipment and patching of the core hole with a conventional concrete mixture for concrete or cold-patch asphaltic materials for asphaltic concrete. The technician's time for performing the coring and vehicle charges will be in addition to the applicable coring rates. Patching with specialty materials will be reimbursed by Harris County at cost plus 10%.
- 3.3.6** A minimum of a 30-minute unpaid lunch shall be taken by the field technician for work over eight (8) hours unless otherwise approved in writing by Harris County.
- 3.4 Harris County shall compensate the Consultant for reasonable travel time as agreed upon by Harris County and Consultant, prior to project commencement, and based on Google Maps at the time of the proposed travel and invoiced to the nearest ¼ (0.25) hour. The compensation will be based on a portal-to-portal basis between the Consultant's facility and the Harris County Project or other Project-related locations.

4 LABORATORY SERVICES

- 4.1 Fees for laboratory tests are inclusive of sample preparation unless specifically noted in the attachment. Compensation shall not be paid for personnel services and or materials related to such testing, except as specifically noted in this attachment.
- 4.2 Unless otherwise requested by Harris County, an aggregate correction factor will not be determined for use in adjusting the aggregate gradation and asphalt content when testing HMAC in accordance with ASTM D6307. Laboratory reports should include a note indicating that an aggregate correction factor was not used in the calculation of the reported results.

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5 OTHER SERVICES

5.1 GEOTECHNICAL SERVICES

- 5.1.1** All geotechnical borings shall be staked by the Consultant and shall be compensated at the rate applicable to the lab representative performing the staking but shall not exceed the Code 10400 rate.
- 5.1.2** Geotechnical logging shall be performed by a qualified technician (with a min. NICET II Soils or SB101/102) or a graduate engineer or a graduate geologist for geotechnical sampling and soil classification. Logging shall be compensated at the Code 10700 rate. Costs for logging services shall be in addition to fees for geotechnical drilling and sampling services.
- 5.1.3** Borings shall be sampled in accordance with HCED, HCFCD, and or TXDOT Geotechnical Investigation Guidelines.

5.2 TRAFFIC CONTROL

- 5.2.1** If traffic control is necessary during the geotechnical field operations, qualified personnel or a qualified subcontractor must be engaged to provide traffic control. The proposed use of traffic control must be approved in advance by Harris County.

6 REPORTING

Consultant shall document all field and laboratory services in a written report prepared in accordance with project specifications and standard methods.

6.1 Reports shall contain the following:

- 6.1.1** Project Name, Consultant Report Number, and Harris County Job Number.
 - 6.1.2** Personnel name and certification typed or printed legibly.
 - 6.1.3** Time of departure from Consultant's facility.
 - 6.1.4** Time of arrival at Project.
 - 6.1.5** Standby time, if any.
 - 6.1.6** Services requested and performed.
 - 6.1.7** Time of departure from Harris County project.
 - 6.1.8** Time of arrival at Consultant's facility.
 - 6.1.9** Overtime hours, if any.
 - 6.1.10** Appropriate Specification and or Test Method as defined in Project Documents.
 - 6.1.11** Signature of Engineer reviewing the report.
- 6.2** Reports shall contain hours of service for each visit to the Harris County Project, including Specimen Pickup.
- 6.3** All reports must be received by Harris County and uploaded into their respective folder via the internet-based system(s) utilized within 7 calendar days of the original date of service or completion of required laboratory tests.
- 6.4** Final reports presenting strength test results shall be sent to Harris County within three (3) business days following the test date.

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- 6.5 Failing laboratory test results must be reported to Harris County by telephone and by email within one business day of the date of the failing test.

7 COMPENSATION AND INVOICING

- 7.1 Compensation of Consultant for personnel performing sampling, testing, inspection, and traffic control services shall be as stated in the Fee Schedule and shall include reasonable travel time, as agreed upon by Harris County and Consultant prior to project commencement and based on Google Maps at the time of proposed travel. The compensation will be based on a portal-to-portal basis between the Consultant's facility and the Harris County Project or other Project-related locations.
- 7.2 Fees for services are inclusive of all tools, equipment, and consumable supplies needed to perform the subject services, except for coring or as specifically noted in the attachment.
- 7.3 Fees for services performed on an hourly basis shall be recorded to the nearest $\frac{1}{4}$ (0.25) hour and will be compensated at the applicable rate.
- 7.4 Overtime for field services is applicable for any hours worked before 6:00 a.m. or after 6:00 p.m., Monday through Friday, and any hours worked on Saturday, Sunday, or a holiday or over 8 hours per day. The overtime rate is 1.5 times the standard rate. Harris County will compensate the Consultant for weekend or after-hours work for CSS, concrete compression tests, etc.
- 7.5 A minimum charge of four (4) hours for field technician, vehicle, and equipment (where charged on an hourly rate) shall apply to each visit to the Project site or an authorized off-site location for sampling, observation, inspection, or testing as outlined in the Fee Schedule. The maximum Vehicle Charge shall be eight (8) hours at the rate outlined in the Fee Schedule.
- 7.6 All hourly services invoiced shall be accompanied by the Consultant representative's signed time sheet, including the name and classification of the individual. Hourly services shall be invoiced to the nearest $\frac{1}{4}$ (0.25) hour.
- 7.7 A minimum of 30-minute lunch shall be taken for continuous work of more than eight (8) hours on Harris County Projects.
- 7.8 If a technician has departed for the Project, prior to receipt of a cancellation notice, the Consultant shall be compensated at the applicable technician rate for the time required to and from the Consultant's facility plus the applicable Vehicle Charge. A two (2) hour minimum shall apply.
- 7.9 If a technician/inspector is assigned to more than one Harris County Project in one day, his or her actual time on both Projects shall be charged (i.e., no minimum charge for both Projects), provided the total time exceeds four (4) hours. All hours invoiced must be supported by copies of reports and a signed timesheet or daily activity report sheets, which contain the name of the personnel, and their certification, and shall be signed by an HCED inspector.

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- 7.10 Consultant may be reimbursed by Harris County for services of a qualified subcontractor or consultant, authorized in advance by Harris County, at cost plus 10%.
- 7.11 Reproduction charges shall be compensated at current commercial rates.
- 7.12 All reimbursable expenses of the Consultant shall be supported by documentation acceptable to Harris County. Reimbursable such as photographs, reproduction material, delivery, background checks, safety training/orientation, traffic control, parking, and badging, etc., shall be invoiced and reimbursed at cost + 10%. Receipts for reimbursable expenses must be submitted with the Consultant's invoice for the reimbursable expense. Harris County shall not reimburse the Consultant's unsupported reimbursable expenses.
- 7.13 For preparation, input, reproduction, mail-out distribution, and filing of Reports by the Consultant's Administrative / Clerical Support Staff, Harris County will compensate the Consultant at the Administrative Assistant and Clerical Support rate for $\frac{1}{2}$ (0.5) hour for each report issued. Administrative / Clerical Support Staff will be allowed only once for each report. This rate will apply only to the initial issuance of a report and does not apply to updated or revised reports which may include additional data on a report such as additional compressive strength tests on concrete cylinder and CSS molded specimen reports.

Harris County Fee Schedule
Geotechnical Engineering and Construction Materials Engineering Services
Labor and Unit Rates
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Categories	Code	Description	Standard	Unit	Rate
Labor Rates	10100	Principal, P.E.		Hr.	266
Labor Rates	10200	Senior Engineer, P.E. (10 yrs experience)		Hr.	218
Labor Rates	10300	Project Engineer, P.E. or Project Geologist, P.G.		Hr.	176
Labor Rates	10400	Graduate Engineer, Graduate Geologist or Project Manager		Hr.	122
Labor Rates	10500	Technician, NICET IV		Hr.	112
Labor Rates	10600	Technician, NICET III, HMA – II		Hr.	107
Labor Rates	10700	Technician, NICET II, ACI Construction Inspector, HMA – 1A, Logger or both TxDOT Soil SB-101 and SB-102		Hr.	96
Labor Rates	10750	Technician, ACI Field Grade I and TxDOT Soil SB –102		Hr.	83
Labor Rates	10800	Technician, ACI Field Grade I, TxDOT Soil SB – 101, or SB-102 or HMA – 1B		Hr.	69
Labor Rates	10900	Technician (Non-Certified)		Hr.	59
Labor Rates	11000	Senior Certified Welding Inspector, SCWI or Non Destructive Tester, ACCP Level III		Hr.	138
Labor Rates	11100	Welding Inspector, CWI or Non Destructive Tester, ACCP II		Hr.	122
Labor Rates	11200	Associate Welding Inspector CAWI		Hr.	80
Labor Rates	11400	Non Destructive Tester, ACCP II with Assistant (2 man crew)		Hr.	181
Labor Rates	11500	Administrative Assistant and Clerical Support		Hr.	75
Labor Rates	15000	Vehicle Charge		Hr.	13
Labor Rates	15100	Reimbursable Expenses			Cost+10%
Labor Rates	15200	Services provided by quotation			Cost+10%
Aggregates	20100	Sieve Analysis – Coarse Aggregates	C136	Ea.	66
Aggregates	20200	Sieve Analysis – Fine Aggregates	C136	Ea.	66
Aggregates	20300	Rel. Density & Absorption – Coarse Aggregates	C127	Ea.	98
Aggregates	20400	Rel. Density & Absorption – Fine Aggregates	C128	Ea.	119
Aggregates	20500	Bulk Density & Voids in Aggregate	C29	Ea.	46
Aggregates	20600	Absorption – Coarse Aggregates	C127	Ea.	54
Aggregates	20700	Absorption – Fine Aggregates	C128	Ea.	54
Aggregates	20800	Finer Than 75-um (No. 200) Sieve	C117	Ea.	60
Aggregates	20900	Organic Impurities in Fine Aggregates	C40	Ea.	59
Aggregates	21000	LA Abrasion (Fine and Coarse Aggregate)	C131/535	Ea.	251
Aggregates	21100	Clay Lumps and Friable Particles	C142	Ea.	67
Aggregates	21200	Lightweight Particles	C123	Ea.	320
Aggregates	21300	Sand Equivalent	D2419	Ea.	79
Aggregates	21400	Na/Mg Sulfate Soundness of Aggregates (5 Cycles)	C88	Ea.	426
Aggregates	21500	Na/Mg Sulfate Soundness of Aggregates (add'l Cycles)	C88	Ea.	246

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Categories	Code	Description	Standard	Unit	Rate
Portland Cement Concrete	30050	Mix Design Review	None	Ea.	533
Portland Cement Concrete	30100	Compressive Str. Cylinder	C39	Ea.	21
Portland Cement Concrete	30200	Flexural Str. Beam	C78	Ea.	33
Portland Cement Concrete	30300	Split Tensile Str.(Incl prep)	C496	Ea.	132
Portland Cement Concrete	30400	Time of Set by Penetration	C403	Ea.	409
Portland Cement Concrete	30500	Linear Shrinkage & Thermal Coef (Bar)	C531	Set 3	395
Portland Cement Concrete	30600	Length Change of Hydraulic-Cement Mortar and Concrete	C490/C157	Set 3	156
Portland Cement Concrete	30700	Density of Structural Lightweight Concrete	C567	Ea	98
Portland Cement Concrete	30800	Concrete Coring, Minimum Charge	C42	Min	639
Portland Cement Concrete	30900	Concrete Coring (4" Diameter to 6" Thickness)	C42	Ea.	127
Portland Cement Concrete	31000	Concrete Coring, 4", Additional Thickness (Over 6" to 12")	C42	In	12
Portland Cement Concrete	31100	Concrete Coring, Additional Thickness (Over 12")	C42	In	15
Portland Cement Concrete	31110	Concrete Coring (6" Diameter to 6" Thickness)	C42	Ea.	192
Portland Cement Concrete	31112	Concrete Coring, 6", Additional Thickness (Over 6" to 12")	C42	In	18
Portland Cement Concrete	31113	Concrete Coring, 6", Additional Thickness (Over 12")	C42	In	24
Portland Cement Concrete	31200	Preparation of Core, Cap & Test	C42	Ea.	95
Portland Cement Concrete	31300	Measuring Length of Core	C174	Ea.	34
Portland Cement Concrete	31400	Pachometer Survey (Magnetic Induction)	None	Day	116
Portland Cement Concrete	31500	Probe Penetration Test Equipment (Plus Probes)	C803	Day	111
HMAC	40100	Mix Design Review	None	Ea.	533
HMAC	40200	HMAC Design (In-Place)	None	Ea.	2780
HMAC	40300	Trial Batch (Up to 5 Points) Excludes Testing	None	Ea.	1966
HMAC	40400	Additional Points	None	Ea.	283
HMAC	40500	Extraction/Gradation	Tex-210F	Ea.	245
HMAC	40600	Specific Gravity	D2041 & Tex-201F	Ea.	87
HMAC	40700	HVEEM Stability	Tex-208F	Set	115
HMAC	40800	Bulk Density – Lab Molded or Cores	Tex-207F	Set	65
HMAC	40900	Bulk Density Core	Tex-207F	Ea.	62
HMAC	41000	Molding Specimens	Tex-206F	Set	77
HMAC	41100	Maximum Theoretical Specific Gravity	Tex-227F	Ea.	110
HMAC	41200	Apparent Specific Gravity	Tex-202F	Ea.	82
HMAC	41300	Abson Recovery	Tex-211F	Ea.	394
HMAC	41400	Moisture Susceptibility	Tex-531C	Ea.	573

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Categories	Code	Description	Standard	Unit	Rate
HMAC	41500	Penetration	D5	Ea.	104
HMAC	41600	Ductility	D113	Ea.	138
HMAC	41700	Viscosity	D2170	Ea.	115
HMAC	41800	Asphalt Coring, Minimum Charge	None	Min.	639
HMAC	41900	Asphalt Coring (4" Dia. to 6" Thickness)	None	Ea	113
HMAC	42000	Asphalt Coring (4" Dia. over 6" Thickness)	None	In	11
HMAC	42150	Asphalt Coring (6" Dia. to 6" Thickness)	None	Ea.	180
HMAC	42160	Asphalt Coring (6" Dia. over 6" Thickness)	None	In	16
HMAC	42200	Measuring Thickness of Asphalt	D3549	Ea.	27
HMAC	42300	PMA Extraction/Gradation	D2172	Ea.	328
HMAC	42400	PMA Extraction/Gradation	D6307	Ea.	203
HMAC	42500	Asphalt Content	D4125	Ea.	104
HMAC	42600	Molding Superpave Specimens	Tex-241-F	Set	565
HMAC	42700	Hamburg Wheel	Tex-242-F	Ea.	1130
Structural Steel	50100	Radiographic Source, Iridium	None	Day	148
Structural Steel	50200	Radiographic Source, Cobalt 60	None	Day	171
Structural Steel	50300	Ultrasonic Equipment	E114/E273/E587/E797	Day	110
Structural Steel	50400	Magnetic Particle Inspection	E709	Day	44
Structural Steel	50500	Skidmore-Wilhelm Tension Indicator	None	Day	174
Structural Steel	50600	Torque Wrench	None	Day	64
Structural Steel	50700	Discontinuity (Holiday) Equipment	None	Day	115
Structural Steel	50800	Dry Film Thickness Equipment (Tooke Gauge)	D4138	Day	44
Structural Steel	50900	Dry Film Thickness Equipment (Magnetic)	D7091	Day	44
Masonry	60100	Compressive Strength, Mortar Cubes	C109	Set 6	169
Masonry	60200	Compressive Strength, Mortar Cubes	C109	Ea.	28
Masonry	60300	Compressive Strength, Mortar or Grout Cylinder	C780/C39	Ea.	28
Masonry	60400	Compressive Strength, Grout Prism	C1019	Set 3	180
Masonry	60500	Measurement, Brick	C67	Ea.	71
Masonry	60600	Compressive Strength Test, Brick	C67	Ea.	40
Masonry	60700	Flexural Strength Test, Brick	C67	Ea.	55
Masonry	60800	Absorption of Brick, 24 hr.	C67	Ea.	87
Masonry	60900	Absorption of Brick, 5 hr.	C67	Ea.	86
Masonry	61000	Measurement, CMU	C140	Ea.	37

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Categories	Code	Description	Standard	Unit	Rate
Masonry	61100	Weight, CMU	C140	Ea.	104
Masonry	61200	Moisture Content, CMU	C140	Ea.	104
Masonry	61300	Compressive Strength, CMU	C140	Ea.	170
Masonry	61400	Compressive Strength, CMU Hollow Prism	C1314	Ea.	226
Masonry	61500	Compressive Strength, CMU Grouted Prism	C1314	Ea.	339
Fireproofing	70100	Density of SFRM	E605	Ea.	46
Fireproofing	70200	Cohesion/Adhesion of SFRM (Equipment only)	E736	Ea.	35
Roofing	80400	Compressive Strength of Lwt. Insulating Concrete	C495	Set 4	146
Roofing	80500	Compressive Strength of Lwt. Insulating Concrete	C495	Ea.	38
Roofing	80600	Unit Weight of Lwt. Insul. Concrete	C495	Set 2	66
Soils	90100	Liquid and Plastic Limits	D4318	Ea.	76
Soils	90200	Moisture Content of Soils by Mass	D2216	Ea.	12
Soils	90300	Moisture Content by Microwave	D4643	Ea.	38
Soils	90400	Sieve Analysis	D422	Ea.	69
Soils	90500	Sieve Analysis w/ Hydrometer	D422/D7928	Ea.	164
Soils	90600	Percent Passing #200 Sieve	D1140	Ea.	59
Soils	90700	Specific Gravity	D854	Ea.	71
Soils	90800	pH of Soils	D4972	Ea.	21
Soils	90900	Unconfined Compressive Strength	D2166	Ea.	54
Soils	91100	Unconsolidated-undrained Triaxial Compression	D2850	Ea.	77
Soils	91200	One-Dimension Consolidation	D2435	Ea.	479
Soils	91300	Consolidation, Additional Increment	D2435	Ea.	62
Soils	91400	Dispersive Characteristic by Pinhole Test	D4647	Ea.	345
Soils	91500	Dispersive Characteristic by Crumb Test	D6572	Ea.	46
Soils	91600	Double Hydrometer	D4221	Ea.	266
Soils	91700	Soil Suction – Filter Paper	None	Ea.	69
Soils	91900	California Bearing Ratio	D1883	Ea.	259
Soils	92000	Soil Shrinkage Factors by Mercury Method	D427	Ea.	77
Soils	92100	Soil Shrinkage Factors by Wax Method	D4943	Ea.	97
Soils	92200	One-Dimensional Swell, Cohesive Soil	D4546	Ea.	373
Soils	92300	OMD Standard Compaction	D698	Ea.	246
Soils	92400	OMD Modified Compaction	D1557	Ea.	263
Soils	92500	Max. & Min. Density – Sand	D4253/D4254	Ea.	320

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Categories	Code	Description	Standard	Unit	Rate
Soils	92600	Percent Solids in Lime Slurry	None	Ea.	52
Soils	92700	Optimum Lime Content – pH Method	D6276	Ea.	283
Soils	92800	Optimum Lime Content – PI Method	None	Ea.	292
Soils	94100	Cement Sand Compressive Strength	D1633	Ea.	86
Soils	94200	Cement Content of Soil-Cement	D806	Ea.	377
Soils	94300	Sieve Analysis - Base Material	C136	Ea.	115
Soils	94400	Compressive Strength Treated Base	Tex-120E	Ea.	311
Soils	94500	OMD Standard Compaction, Treated	D698	Ea.	273
Soils	94600	OMD Modified Compaction, Treated	D1557	Ea.	289
Soils	95100	Nuclear Density Gauge	D6938	Hr.	13
Slip-Lining and Manhole Repair	100200	Coring and Strength of Gunite Panel	C42/C39	Core	147
Subsurface Exploration(Geotechnical	110010	Soil Boring, Intermittent 3-in. dia. (0 to 50')	None	Ft	24
Subsurface Exploration(Geotechnical	110020	Soil Boring, Intermittent 3-in. dia. (50' to 100')	None	Ft	27
Subsurface Exploration(Geotechnical	110030	Soil Boring, Continuous 3-in. (0 to 20')	None	Ft	27
Subsurface Exploration(Geotechnical	110031	Soil Boring, Continuous 3-in. (20' to 50')	None	Ft	32
Subsurface Exploration(Geotechnical	110032	Soil Boring, Continuous 3-in. (50' to 100')	None	Ft	45
Subsurface Exploration(Geotechnical	110040	Soil Boring over 100' (Surcharge)	None	Ft	12
Subsurface Exploration(Geotechnical	110050	Wash Boring	None	Ft.	15
Subsurface Exploration(Geotechnical	111060	Auger Boring	None	Ft.	14
Subsurface Exploration(Geotechnical	110070	Undisturbed/Split-Spoon in Wash/Auger	None	Ea.	48
Subsurface Exploration(Geotechnical	110071	Piezometer Installation	None	Ft.	26
Subsurface Exploration(Geotechnical	110072	Piezometer Abandonment	None	Ft.	21
Subsurface Exploration(Geotechnical	110080	Grouting of Completed Boring	None	Ft.	13
Subsurface Exploration(Geotechnical	110090	ATV Surcharge	None	Ft.	11
Subsurface Exploration(Geotechnical	110100	Minimum Charge for the Exploration (to be used if charges are less than \$1000.00)	None	LS	1065
Subsurface Exploration(Geotechnical	110110	Mobilization/Demobilization	None	LS	746
Subsurface Exploration(Geotechnical	110120	TDH Cone Penetration Test	None	Ea.	33
Subsurface Exploration(Geotechnical	110130	ATV Mobilization Surcharge	None	LS	266
Subsurface Exploration(Geotechnical	110140	Portable Drilling Rig Operation (Crew of two)	None	Hr	320
Subsurface Exploration(Geotechnical	110150	Standby (Crew of two)	None	Hr	320
Subsurface Exploration(Geotechnical	110160	Daily Mobilization (Crew)	None	Day	565

APPENDIX C

MINIMUM INSURANCE REQUIREMENTS

Earth Engineering, Inc.

During the term of the Contract, the Contractor at its sole cost and expense shall provide primary commercial insurance of such type and with such terms and limits as may be reasonably associated with the Contract. As a minimum, the Contractor 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, USL&H (United States Longshore and Harbor Works Act) and other endorsements if applicable to the project, and in accordance with state law.

Employers' Liability

- Each Accident: \$1,000,000
- Disease—Each Employee: \$1,000,000
- Policy Limit: \$1,000,000

- B. Commercial General Liability**, including but not limited to the coverage indicated below. Coverage shall not exclude or limit Products/Completed Operations, Contractual Liability, or Cross Liability. Where exposure exists, the County may require coverage for watercraft, blasting, collapse, explosions, blowout, cratering, underground damage, pollution, or other coverage. *Harris County shall be named Additional Insured on primary/non-contributory basis.*

- Each Occurrence: \$1,000,000
- Personal and Advertising Injury: \$1,000,000
- Products/Completed Operations: \$1,000,000
- General Aggregate (per project): \$2,000,000

- C. Automobile Liability**, including coverage for all owned, hired, and non-owned vehicles used in connection with the contract. *Harris County shall be named Additional Insured on primary/non-contributory basis.*

- Combined Single Limit-Each Accident: \$1,000,000

- D. Umbrella/Excess Liability** (*Harris County shall be named Additional Insured on primary/non-contributory basis*)

- Each Occurrence/Aggregate: \$1,000,000

- E. Professional/Errors & Omissions Liability** (if applicable)

- Each Occurrence/Aggregate: \$1,000,000
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The County reserves the right to require additional insurance if necessary. Coverage shall be issued by companies licensed (by TDI) to do business in Texas and who have an A.M. Best rating of at least A-. Contractor shall furnish evidence of such insurance to the County in the form of unaltered insurance certificates. If any part of the contract is sublet, insurance shall be provided by or on behalf of any subcontractor, and shall be sufficient to cover their portion of the contract. Contractor shall furnish evidence of such insurance to the County as well.

Policies of insurance required by the contract shall waive all rights of subrogation against the County, its officers, employees and agents. If any applicable insurance policies are cancelled, materially changed, or non-renewed, contractor shall give written notice to the County at least 30 days prior to such effective date and within 30 days thereafter, shall provide evidence of suitable replacement policies. Failure to keep in force the required insurance coverage may result in termination of the contract. Upon request, certified copies of original insurance policies shall be furnished to the County.

The requirements stipulated in this attachment do not establish limits of contractor liability.
Rev. 10/2011

APPENDIX X

Disclosure of M/WBE Participation

Earth Engineering, Inc.

Name of MBE/WBE Certified Firm	EARTH ENGINEERING, INC.
Certified by:	STATE OF TEXAS – HUB PROGRAM
Address / City / State / Zip:	4877 LANGFIELD ROAD, HOUSTON, TX 77040
Name of Contact Person:	MOE A. SHIHADDEH, P.E. #75304
Email address for Contact Person:	moes@eartheng.com
Telephone number for Contact Person:	713-681-5311
Percent of Subcontract:	100%
Description of services:	Construction Materials Testing Services
6-digit NAICS code for work to be performed:	541380

**ORDER OF COMMISSIONERS COURT
Authorizing Agreement with Earth Engineering, Inc.**

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

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

**ORDER AUTHORIZING AGREEMENT WITH
EARTH ENGINEERING, INC. TO PROVIDE CONSTRUCTION MATERIALS
TESTING AND GEOTECHNICAL ENGINEERING SERVICES FOR HEAVY
HIGHWAY, BRIDGE AND DRAINAGE MAINTENANCE PROJECTS**

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

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

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

IT IS ORDERED that:

1. The Harris County Judge is authorized to execute on behalf of Harris County an agreement in an amount not to exceed \$110,000.00 with Earth Engineering, Inc. to provide construction materials testing and geotechnical engineering services for Heavy Highway, Bridge and Drainage maintenance projects. The Agreement is incorporated by reference and made a part of this order for all intents and purposes as though set out in full word for word.
 2. All Harris County officials and employees are authorized to do any and all things necessary or convenient to accomplish the purposes of this order.
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