



**CITY OF HOUSTON**  
**INVITATION TO BID (ITB)**  
**KENSWICK DRIVE EXTENSION**  
**GEORGE BUSH INTERCONTINENTAL AIRPORT (IAH)**  
**SOLICITATION NO.: H73-KENSDE-2025-002**

**Date Issued:** August 30, 2024

**Pre-bid Conference and Site Visit(s):** September 12, 2024, at 10:00 A.M. (CST). Attendees meet at IDO Building, Auditorium No. 1 111 Sandifer Drive, Humble, TX 77338. A Site Visit will take place immediately after the pre-bid meeting. The site visit is the only opportunity for bidders to see the site prior to the Bid Due Date.

**Questions Deadline:** September 19, 2024, By 3:00 P.M. (CST).

**Solicitation Due Date:** October 24, 2024, at 10:30 A.M. (CST). City Secretary Office, City of Houston City Hall Annex, Public Level, Room P101 900 Bagby Street, Houston, TX 77002

**Solicitation Contact Person:** Gabriel Carey  
Sr. Procurement Specialist  
Gabriel.carey@houstontx.gov  
(281) 233-8030

**Project Summary:** The objective of this project is to provide a typical TXDOT turnaround intersection at Kenswick Drive and Will Clayton Parkway. In doing so, this project will improve traffic flow and allow direct access to Will Clayton Parkway and Lee Road.

**NIGP Code: 912-00**  
**MBE Goal: 28%**  
**WBE Goal: 8%**

Initial  
CH

DocuSigned by:  
  
6121834A077C41A... 8/21/2024 | 4:24 CDT

Jedediah Greenfield  
Chief Procurement Officer  
City of Houston



City of Houston - Department of Aviation – Infrastructure Division

**PROJECT MANUAL**  
**KENSWICK DRIVE EXTENSION**  
**GEORGE BUSH INTERCONTINENTAL AIRPORT (IAH)**  
**HAS PROJECT No.: 935**  
**HAS Contract No.: LOA 715G-015**  
**VOLUME NO. 1 OF 3 TOTAL VOLUMES**

Division 00

May 23, 2024

AtkinsRéalis North America  
900 Memorial City Way, Suite 400  
Houston, TX 77024  
(713) 576-8500

**Doc.**  
**No.**      **Document Title**

Document 00010

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NOTE: Capitalized Specification Sections are included in <https://www.houstonpermittingcenter.org/media/6386/download>, and are incorporated in Project Manuals by reference as if copied verbatim. Documents listed "for filing" are to be provided by Bidder and are not included in this Project Manual unless indicated for example only. The Document numbers and titles hold places for actual documents to be submitted by Contractor during Bid, post-bid, or construction phase of the Project. Specification Sections marked with an asterisk (\*) are amended by a supplemental specification, printed on blue paper and placed in front of the Specification it amends. Documents in the 00200, 00300 and 00400 series of Division 00, except for Document 00410B – Bid Form, Part B, are not part of the Contract.

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00450	Bidder's Statement of MWBE/PDBE/DBE Status
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00455	Ownership Information Form

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- 00480 Form SCM-1 Reference Verification
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- 00604 History of OSHA Actions and List of On-the-job Injuries
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02-01-2024

<b><u>Doc. No.</u></b>	<b><u>Document Title</u></b>
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Document 00041

**LIST OF PREQUALIFIED ASBESTOS & LEAD ABATEMENT, MOLD, SOIL REMEDIATION,  
DEMOLITION AND PETROLEUM STORAGE TANK REMOVAL CONTRACTORS**

**1.0 DOCUMENT INCLUDES**

- A. Authorization.
- B. List of Authorized Contractors.

**2.0 RELATED DOCUMENTS**

- A. Section 13280 – Hazardous Materials Remediation
- B. Section 13281 – Abatement of Asbestos/Lead Containing Materials

**3.0 AUTHORIZATION**

- A. The List of Prequalified Asbestos, Lead, Mold Abatement, Soil Remediation, Demolition, and Petroleum Storage Tanks Removal Contractors (“List”) was authorized on June 28, 2017 and October 26, 2021 by City of Houston Council Motion Nos. 2017-0321 and 2021-0573.
- B. Only those firms on the List can be utilized by Bidder in subcontracting for the above-mentioned scope of work included in the Work.
- C. The List is administered by General Services Department. All inquiries should be directed to Gabriel Mussio (832-393-8079).

**4.0 LIST OF AUTHORIZED CONTRACTORS**

- A. As of the date specified in paragraph 3.0.A., all contractors listed in paragraph 4.0.B were licensed in the State of Texas for this type of work. Authorized Contractors must maintain their license to be on this list.
- B. Authorized Contractors:
  - 1. AAR Incorporated, 6640 Signat Drive, Houston TX 77041, 713-466-6800
  - 2. Allen & Company Environmental Services, 8815 Emmot Road, Suite 1500, Houston, Texas 77040, 281-741-4227

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3. ARC Abatement, Inc. 6827 Signat Drive, Houston, TX 77041, 713-849-7738
4. Arrow Services Incorporated, 10202 Airline Drive, Suite A, Houston, Texas 77037, 281-445-1246
5. CRG Texas, LLC, 2504 Avenue I, Houston, TX 77471, 713-474-1570
6. Cherry Demolition, Inc., 6131 Selinsky, Houston TX 770485, 713-987-0000
7. DNB Enterprises, Inc., 20560 FM 1488, Bldg. C, Magnolia, TX 77355, 281-516-1999
8. Emanuel Enterprises, LLC, 8607 Kempridge Street, Houston, Texas 77080, 281-932-1138
9. ESE Partners, LLC, 19416 Park Row, Suite 120, Houston, TX 77084, 281-501-6100
10. Grant Mackay Demolition Co., 3717 Mesa Drive, Houston, Texas 77013, 713-670-0135
11. Inland Environmental, Ltd., 25380 Sorters Road, Porter, TX 77325, 281-354-7500
12. Lonestar Remediation & Demolition, Inc., 8718 Timberwilde Street, San Antonio, TX 77250, 210-240-4741
13. Remediation Resq LLC dba Restoration, 10413 Rockley, Suite 300, Houston, Texas 77099, 281-777-7872
14. RNDI Companies, Inc., 14434 Bandera Street, Houston, TX 77015, 713-443-7540
15. Sitek Omni Services, LLC, 1780 Roughneck Drive, Humble, Texas 77338, 281-812-1461
16. SSCI Environmental & Consulting, Inc., 17041 El Camino Real, Suite 200, Houston, TX 77058, 281-486-1943
17. TRT Abatement, LLC, 3003 Bingle Road, Houston, TX 77055, 832-230-8871

END OF DOCUMENT

Document 00042

DESIGNATED SUBCONTRACTORS AND SUPPLIERS

1.0 DESIGNATED SUBCONTRACTORS AND SUPPLIERS

A. Subcontract work for the following Sections to firm(s) listed and for reason(s) stated below:

1. Not Applicable

END OF DOCUMENT

Document 00200

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Document 00200

**INSTRUCTIONS TO BIDDERS**

1.0 *RELATED DOCUMENTS*

- A. Document 00210, Supplementary Instructions to Bidders.
- B. Document 00320, Geotechnical Information.
- C. Document 00330, Existing Conditions.
- D. Document 00410 – Bid Form, Parts A & B.
- E. Document 00495, Post-Bid Procedures.
- F. Document 00520, Agreement.
- G. Document 00700, General Conditions.
- H. Document 00800, Supplementary Conditions.

2.0 *DEFINITIONS*

- A. Definitions set forth in Document 00700, General Conditions, and in other documents of Project Manual, are applicable to Bid Documents.
- B. *Addendum*: Written or graphic instrument issued prior to Bid opening, which clarifies, modifies, corrects, or changes Bid Documents.
- C. *Alternate*: The total amount bid for additions to work, as described in Section 01110, Summary of Work. Each Alternate includes cost of effects on adjacent or related components, and Bidder's overhead and profit.
- D. *Bid*: A complete and properly signed offer to perform the Work in accordance with this Document and Document 00210, Supplementary Instructions to Bidders.
- E. *Bid Date*: Date and time set for receipt of Bids as stated in Document 00210, Supplementary Instructions to Bidders, or as modified by Addenda.
- F. *Bid Documents*: Project Manual, Drawings, and Addenda.
- G. *Bid Supplement*: A Bid submittal that is required in Document 00410, Bid Form.
- H. *Bidder*: Person or firm, identified in Document 00410B, Bid Form, Part B, including its successors, and its authorized representative.

- I. *Code*: Code of Ordinances, Houston, Texas.
- J. *Low Bidder*: Apparent successful Bidder that qualifies as a responsible Bidder and that submits Bid with lowest Total Bid Price.
- K. *Project Manager*: Person designated in Document 00100, Advertisement for Bids, and Document 00220, Request for Bid Information, to represent the City during bidding and post-bid periods.
- L. *Project Manual*: Volume assembled for the Work that includes the bidding requirements, sample forms, Conditions of the Contract, and Specifications.
- M. *Security Deposit*: A certified check, cashier's check, or bid bond in the amount of 10 percent of the Total Bid Price.
- N. *Total Bid Price*: Total amount bid for performing the Work as identified by Bidder in Document 00410B, Bid Form, Part B, which amount includes:
  - 1. Stipulated Price;
  - 2. Total Base Unit Prices;
  - 3. Total Extra Unit Prices;
  - 4. Total Cash Allowances; and
  - 5. Total Alternates.

3.0 *NOTICE TO BIDDERS*

- A. Chapter 18, Ethics and Financial Disclosure, of the City of Houston Code of Ordinances makes it unlawful for a Contractor to offer any contribution to a candidate for City elective office (including elected officers and officers-elect) during a certain period of time prior to and following the award of the Contract by the City Council. The term "Contractor" includes proprietors of proprietorships, all partners of partnerships, and all officers, directors, and holders of 10 percent or more of the outstanding shares of corporations. A statement disclosing the names and business addresses of each of those persons will be required to be submitted with each bid or proposal; for a City Contract. Bidder shall complete and submit Document 00455, Ownership Information Form, with its Bid to comply with this requirement. See Chapter 18 of

the Code for further information.

- B. Chapter 15, Article VIII, of the City's Code provides that no contract shall be let, nor any other business transaction entered into, by the City with any person indebted to the City or a qualifying entity, if the contractor or transaction comes within the provisions of Section 15-1 (c) of the Code. Exceptions are provided in Section 15-126 of the Code. Bidder shall complete and submit Document 00455, Ownership Information Form, with its Bid to comply with this requirement.
- C. Neither bidder(s) nor any person acting on bidder(s)'s behalf shall attempt to influence the outcome of the award by the offer, presentation or promise of gratuities, favors, or anything of value to any appointed or elected official or employee of the City of Houston, their families or staff members. All inquiries regarding the solicitation are to be directed to the designated City Representative identified on the first page of the solicitation. Upon issuance of the solicitation through the pre-award phase and up to the date the City Secretary publicly posts notice of any City Council agenda containing the applicable award, aside from bidder's formal response to the solicitation, through the pre-award phase, written requests for clarification during the period officially designated for such purpose by the City Representative, neither bidder(s) nor persons acting on their behalf shall communicate with any appointed or elected official or employee of the City of Houston, their families or staff through written or oral means in an attempt to persuade or influence the outcome of the award or to obtain or deliver information intended to or which could reasonably result in an advantage to any bidder. However, nothing in this paragraph shall prevent a bidder from making public statements to the City Council convened for a regularly scheduled session after the official selection has been made and placed on the City Council agenda for action, or to a City Council committee convened to discuss a recommendation regarding the solicitation.
- D. **Compliance with Certain State Law Requirements.**
1. *Anti-Boycott of Israel.* Contractor certifies that Contractor is not currently engaged in, and agrees for the duration of this Agreement not to engage in, the boycott of Israel as defined by Section 808.001 of the Texas Government Code.
  2. *Anti-Boycott of Energy Companies.* Contractor certifies that Contractor is not currently engaged in, and agrees for the duration of this Agreement not to engage in, the boycott of energy companies as defined by Section 809.001 of the Texas Government Code.
  3. *Anti-Boycott of Firearm Entities or Firearm Trade Associations.* Contractor certifies that Contractor does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, or will not discriminate against a firearm entity or firearm trade association for the duration of this Agreement, as defined by Section 2274.001 of the Texas Government Code.
  4. *Certification of No Business with Foreign Terrorist Organizations.* For purposes of Section 2252.152 of the Code, Contractor certifies that, at the time of this Agreement neither Contractor nor any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of Contractor, is a company listed by the Texas Comptroller of Public Accounts under Sections 2252.153 or 2270.0201 of the Texas Government Code as a company known to have contracts with or provide supplies to a foreign terrorist organization.
- E. **Zero Tolerance Policy for Human Trafficking and Related Activities.** The requirements and terms of the City of Houston's Zero Tolerance Policy for Human Trafficking and Related Activities, as set forth in Executive Order 1-56, as revised from time to time, are incorporated into this Contract for all purposes. Bidder has reviewed Executive Order 1-56, as revised, and shall comply with its terms and conditions as they are set out at the time of this Contract's effective date. Bidder shall notify the City's Chief Procurement Officer, City Attorney, and the Director of any information regarding possible violation by the Bidder or its subcontractors providing services or goods under this Contract within 7 days of Bidder becoming aware of or having a



reasonable belief that such violations may have occurred, have occurred, or are reasonably likely to occur.

- F. The requirements of Subchapter J, Chapter 552, Government Code, may apply to this bid and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

**G. Prospective Vendor Responsibility.**

The City will award contracts only to the responsible vendor possessing the ability to perform successfully under the terms and conditions of a proposed procurement. The City's policy is to award contracts only to a prospective vendor whom the City's contracting department has determined to be responsible, considering the following non-exhaustive factors:

- Record of integrity and business ethics, including timely payments to subcontractors/subconsultants, business judgment, reputation, and reliability.
- History of compliance with public policy and applicable laws, or the lack thereof.
- Record of past performance, including but not limited to, poor performance, failure to achieve reasonable progress, or defaulting on existing or previous City of Houston contracts, if any.
- Capacity to perform the required work or provide the required goods or services, which may include having (or having the ability to obtain) adequate financial and technical resources to perform the contract and any necessary equipment, facilities, organization, experience, efficiency, operational control, or technical skills, as applicable.
- Financial responsibility, including the ability to provide adequate bonds and insurance, as applicable.
- History of compliance with prevailing wage and other labor standards requirements.
- Record of failure to make good faith efforts to meet MWBE goals.
- Qualification and eligibility to receive an award under applicable laws and regulations, including any federal rules or regulations (e.g., 2 CFR Part 200).
- Ineligibility due to being suspended or debarred by federal, state, city, or county governmental agencies.

**4.0 BID DOCUMENTS**

- A. The Bid Documents may be obtained at

location specified in Document 00210, Supplementary Instructions to Bidders.

- B. The Bid Documents are made available only for the purpose of bidding on the Work. Receipt of Bid Documents does not grant a license for other purposes.

- C. On receipt of Bid Documents, Bidder shall verify that documents are legible and complete, compare contents of Project Manual with Document 00010, Table of Contents, and compare Index of Drawings with Document 00015, List of Drawings. Bidder shall notify Project Manager if Bid Documents are incomplete.

- D. If City of Houston Standard Specifications or Standard Details are required by the Project Manual, Bidder shall refer to Document 00210, Supplementary Instructions to Bidders for purchase information.

**5.0 EXAMINATION OF DOCUMENTS, SITE, AND LOCAL CONDITIONS**

- A. Bidder shall examine Project site, become familiar with local conditions under which the Work shall be performed, conduct appropriate investigations, and correlate personal observations with requirements of the Bid Documents before submitting a Bid.

- B. Bidder shall make site investigations to the extent Bidder deems necessary to ascertain extent of subsurface conditions.

- C. Failure of Bidder to perform the investigations prior to submitting a Bid does not relieve Bidder of responsibility for investigations, interpretations and proper use of available information in the preparation of its Bid.

- D. Bidder shall observe limitations of access to occupied or restricted site as stated in Document 00210, Supplementary Instructions to Bidders.

**6.0 INTERPRETATIONS DURING BIDDING**

- A. Bidder shall immediately submit Document 00220, Request for Bid Information, to Project Manager upon finding errors, discrepancies, or omissions in Bid Documents. Confirmation of receipt of questions by the City is the responsibility of Bidder. Verbal discussions and answers are not binding.

- B. Document 00220, Request for Bid Information, must be received at least 10 days before the Bid Date to allow issuance of Addenda in accordance with Paragraph 7.O.D. Replies, if issued, are by Addenda.

7.0 *ADDENDA*

- A. Addenda that affect bidding requirements are applicable only through issuance of the Notice to Proceed. Addenda that affect the Contract are a part of the Contract.
- B. BIDDERS WHO SUBMIT A BID ON THIS PROJECT SHALL BE PRESUMED TO HAVE RECEIVED ALL ADDENDA AND TO HAVE INCLUDED ANY COST THEREOF IN THEIR BIDS, REGARDLESS OF WHETHER THEY ACKNOWLEDGE THE ADDENDA OR NOT.
- C. The City will make Addenda available at same location where the Bid Documents may be obtained. The City will notify plan holders of record when Addenda are available. Bidders are responsible for obtaining Addenda after notification.
- D. No Addendum will be issued later than noon on Monday before Bid Date, except Addenda with minor clarifications, withdrawing request for Bids, or postponing Bid Date.

8.0 *SUBSTITUTION OF PRODUCTS*

- A. No substitutions of Products will be considered during the bidding period.

9.0 *PREPARATION OF BIDS*

- A. Bidder shall fill in applicable blanks in Document 00410A&B, Bid Form, Parts A & B, and Bid Supplements. In addition, Bidder shall bid all Alternates. Bidder shall properly sign Document 00410B, Bid Form.
- B. Bidder shall initial all pages, except signature page, of Document 00410B, Bid Form, Part B.
- C. Bidder is responsible for all costs incurred by the Bidder, associated with preparation of its Bid and compliance with Post-bid Procedures.
- D. Bidder may not adjust preprinted price on line items stating "Fixed Unit Price" in the description on the Bid Form.
- E. Bidder may increase, but not decrease, preprinted price on line items stating "Minimum Bid Price" in the description on the Bid Form by crossing out the minimum and inserting revised price on the line above. Bidder **may not** decrease the preprinted price on line items stating "Minimum Bid Price".

- F. Bidder may decrease, but not increase, preprinted price on line items stating "Maximum Bid Price" in the description on the Bid Form by crossing out the maximum and inserting revised price on the line above. Bidder **may not** increase the preprinted price on line items stating "Maximum Bid Price".
- G. Bidder shall insert a price no greater than the maximum preprinted range and no less than the preprinted range for line items stating "Fixed Range Unit Price" in the description on the Bid Form by crossing out prices noted and inserting revised price on the line above.
- H. Bidder may not adjust Cash Allowance amounts.

10.0 *BID SUBMISSION*

- A. City Secretary will receive Bids on Bid Date at location specified in Document 00210, Supplementary Instructions to Bidders.
- B. Bids submitted after Bid Date will be returned to Bidder unopened.
- C. Verbal, facsimile, or electronic Bids are invalid and will not be considered.
- D. Bidder shall submit in person or by mail one copy of the signed Document 00410, Bid Form, Parts A and B, along with required Security Deposit, and required Bid Supplements, in a sealed, opaque envelope. In addition, Bidder shall clearly identify Project, Bid Date and Bidder's name on outside of envelope. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed for postal delivery.

11.0 *BID SECURITY*

- A. Bidder shall submit a Security Deposit with its Bid.
- B. Certified Check or Cashier's Check
  - 1. Bidder shall make check payable to the City of Houston.
  - 2. A check is submitted on the condition that if Bidder is named Low Bidder and fails either to timely and properly submit documents required in Document 00495, Post-Bid Procedures, the City will cash the check in accordance with Paragraph 11.0.E.
- C. Bid Bond
  - 1. The bid bond must be a valid and

- enforceable bond, signed by a surety that complies with other requirements set out by law.
2. The bid bond must name the City of Houston as obligee, and be signed by the Bidder as principal and signed and sealed by the surety.
  3. The bid bond must be conditioned such that if Bidder is named Low Bidder and then fails to timely and properly submit documents required in Document 00495, Post-Bid Procedures, surety will be obligated to pay to the City an amount in accordance with Paragraph 11.0.E.
- D. Security Deposits will be retained until after the Contract is awarded or all Bids are rejected.
- E. Low Bidder forfeits Security Deposit if it fails to timely and properly submit documents required in Document 00495, Post-Bid Procedures. The City may claim an amount equal to the difference between the Total Bid Price of the defaulting Bidder and the Total Bid Price of the Bidder awarded the Contract. If Security Deposit is a check, the City will reimburse any remaining balance to the defaulting Bidder.
- 12.0 SUBCONTRACTORS AND SUPPLIERS**
- A. The City may reject proposed Subcontractors or Suppliers.
  - B. Refer to Document 00800,– Supplementary Conditions, for MWBE, PDBE, DBE and SBE goals.
- 13.0 MODIFICATION OR WITHDRAWAL OF BID**
- A. A Bidder may modify or withdraw a Bid submitted before the Bid Date by written notice to the City Secretary. The notice may not reveal the amount of the original Bid and must be signed by the Bidder.
  - B. Bidder may not modify or withdraw its Bid by verbal, facsimile, or electronic means.
  - C. A withdrawn Bid may be resubmitted up to the time designated for receipt of Bids.
- 14.0 BID DISQUALIFICATION**
- A. The City may disqualify a Bid if the Bidder:
    1. fails to provide required Security Deposit in the proper amount;
    2. improperly or illegibly completes information required by the Bid Documents;
  3. fails to sign Bid or improperly signs Bid;
  4. qualifies its Bid; or
  5. improperly submits its Bid.
- B. When requested, Low Bidder shall present satisfactory evidence that Bidder has regularly engaged in performing construction work as proposed, and has the capital, labor, equipment, and material to perform the Work.
- 15.0 PREBID MEETING**
- A. A prebid meeting is scheduled to be held at the place, time, and date listed in Document 00210, Supplementary Instructions to Bidders.
  - B. All Bidders, subcontractors, and suppliers are invited to attend.
  - C. Representatives of City Engineer will attend.
- 16.0 OPENING OF BIDS**
- A. Bids are opened by the City Secretary and publicly read in City Council Chambers on the Public Level in City Hall Annex at 11:00 a.m. on Bid Date.
  - B. Place and date of Bid opening may be changed in accordance with Sections 15-45(c) of the City Code.
- 17.0 EVALUATION AND CONSIDERATION OF BIDS**
- A. Project Manager will tabulate, record, and evaluate Bids.
  - B. The City may reject all Bids or may reject any defective Bid.
- 18.0 ACCEPTANCE OF THE BID**
- A. The City will send to Low Bidder Document 00498, Notice of Intent to Award. Acceptance by the City is conditioned upon Bidder's timely and proper submittal of documents required in Document 00495, Post-Bid Procedures.
  - B. The Bid remains open to acceptance and is irrevocable for the period of time stated in Document 00410A, Bid Form, Part A.

END OF DOCUMENT

Document 00210

**SUPPLEMENTARY INSTRUCTIONS TO BIDDERS**

*The following Paragraphs modify Document 00200 - Instructions to Bidders. Where a portion of the Instructions to Bidders is modified or deleted by these Supplementary Instructions, the unaltered portions of the Instructions to Bidders remains in effect.*

**PARAGRAPH 2.0 – DEFINITIONS:**

Add the following sub-Paragraphs to this Paragraph:

- O. *Office of Business Opportunity (OBO):* All references to Affirmative Action Contract Compliance Division (AACC) set forth in Document 00700 – General Conditions and in other documents of the Project Manual, shall refer to, and include, the Office of Business Opportunity.

If there is no bid of a Local Business that meets these criteria, the City will award the contract to the lowest responsible bidder.

**PARAGRAPH 4.0 – BID DOCUMENTS**

Add the following sub-Paragraphs to this Paragraph:

- A. Add the following Paragraph A.1:

- 1. Bid documents may only be obtained electronically at the Houston Airport System's website: <https://www.fly2houston.com/biz/opportunities/solicitations/>

- D. Add the following Paragraph D.1:**

- 1. Copies of the City Standard Specifications and Details may be acquired at no cost on the Houston Airport System's website <https://www.fly2houston.com/biz/resources/building-standards-and-permits/>)  
" HOUSTON AIRPORTS DESIGN STANDARDS"

- E. The following plan rooms, whose names, addresses, phone and fax numbers were last updated on April 9, 2007, have been authorized by the City to display Bid Documents for examination:

(Note: The Bid Documents furnished to the plan rooms for examination can be in electronic format, in hard copies, or in any other formats pertaining to each City Contracting Division's discretion.)

1. Associated General Contractors (AGC-HHUI), Highway, Heavy Utilities and Industrial Branch, 2400 Augusta St., Suite 305 , Houston, TX 77057, 713-334-7100, Fax 713-334-7130. Email: [msimons@agctx.org](mailto:msimons@agctx.org)  
(Attention: Mellora Connelly)
2. Houston Minority Business Development Center, 2900 Woodridge, Suite 124, Houston, TX 77087, 713-644-0821, Fax 713-644-3523. Email: [gtamez@gacompanies.com](mailto:gtamez@gacompanies.com)
3. The Builders' Exchange of Texas, Inc., 4047 Naco Perrin Blvd., Ste. 100 San Antonio, TX 78217, 210-564-6900, Email: [editor@virtualbx.com](mailto:editor@virtualbx.com)

F. Add the following sub-Paragraph F.1:

1. **Designation as a Hire Houston First City Business (CB) or Local Business (LB)**

To be designated as a City Business ("CB") or as a Local Business ("LB") for the purposes of the Hire Houston First Program, as set out in Article XI of Chapter 15 of the Houston City Code, a bidder or proposer must submit the **Hire Houston First Application and Declaration** to the Director of the Office of Business Opportunity and receive notice that the application has been processed and the appropriate designation (if any) is awarded, prior to the submission of a bid or proposal. Bidders must show evidence of HHF designation (as applicable) prior to, or accompanying, the submission of a bid or proposal.

The absence of a Hire Houston First designation does not preclude a business from bidding on City of Houston contracts.

2. The City will award this contract to a "Local Business", as that term is defined in Section 15-176 of the City of Houston Code of Ordinances ("the Code"):
  - If the bid of the Local Business is less than \$100,000 and is the lowest responsible bid or is within 5% of the lowest bid received, or
  - If the bid of the Local Business is more than \$100,000 and is the lowest responsible bid or is within 3% of the lowest bid received, and

- Unless the Director determines that such an award would unduly interfere with contract needs, as provided in Section 15-181 of the Code.

**Download the HHF Application and Declaration** from the Office of Business Opportunity Webpage at the City of Houston e-Government Website, located at:

<http://www.houstontx.gov/obo/hirehoustonfirst.html>

or, delivered to:

Office of Business Opportunity  
611 Walker, 7th Floor  
Houston, Texas 77002.  
Phone: (832) 393-0951  
Fax: (832) 393-0646  
hirehoustonfirst@houstontx.gov

**PARAGRAPH 5.0 – EXAMINATION OF DOCUMENTS, SITE, AND LOCAL CONDITIONS**

D. Add the following sub-Paragraph D.1:

1. Work will be performed in public right-of-way. The site may be examined at any time during daylight hours.

**PARAGRAPH 8.0 – SUBSTITUTION OF PRODUCTS**

Not Applicable.

**PARAGRAPH 9.0 – PREPARATION OF BIDS**

Add the following sub-Paragraph I to this Paragraph:

- I. For math errors the City encounters in analyzing Bids, the following guidance will be used:

In the event of a conflict between:

The Bid Price is:

- |   |   |
|---|---|
| 1. Individual Unit Price and<br>Extension of that Unit Price    | Individual Unit Price times<br>Estimated Quantity |
| 2. A Unit Price extension and<br>total of Unit Price Extensions | Sum of all Individual Unit Price<br>Extensions    |
| 3. Individual Alternate and                                     | Sum of all Individual Alternates                  |

4.	total of Alternates Individual subtotals for Stipulated Price, Base Unit Prices, Extra Unit Prices, Contractor Bonus, Cash Allowances, and Alternates; and the Total Bid Price	Sum of Individual subtotals for Stipulated Price, Base Unit Prices, Extra Unit Prices, Contractor Bonus, Cash Allowances and Alternates
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**PARAGRAPH 10.0 – BID SUBMISSION**

Add the following sub-Paragraph A.1 to this Paragraph:

A. Add the following sub-Paragraph A.1:

1. Sealed bids, in triplicate, one (1) original marked “Original” and two (2) copies of the bids (also includes two (2) USB drives of all required submittals identified in Document 00410 Section 1.0 Offer) will be received by the City Secretary of the City of Houston, in the City Hall Annex, Public Level, 900 Bagby, Room P101, Houston, Texas 77002, until 10:30 A.M., (CT) on 10/24/24.

E. Add the following Paragraph “E.” to Section 10:

E. Bidders shall submit Document 00470 Bidder’s MWSBE Participation Plan (or 00470D Bidder’s DBE Participation Plan if FAA funded project) with the bid. If the MWSBE goal is not met, the Document 00471 Pre-bid Good Faith Efforts, and Document 00472 Bidder’s MWSBE Goal Deviation Request form shall also be included in the submission with the bid (If the DBE goal is not met, following Section 2.A.12. of Document 00806).

**11.0 – BID SECURITY:** Add the following Paragraph 1. to Section 11.0.A.:

1. Bidder shall submit a Security Deposit in the form of:
  - a.) Certified Check;
  - b.) Cashier’s Check; or
  - c.) Bid Bond

Bidder should submit just one form of Security Deposit among the three listed above, and such form shall be issued according to Section 11.0.B and 11.0.C.

**PARAGRAPH 15.0 – PREBID MEETING**

Add the following sub-Paragraph A.1 to this Paragraph:

- A. Add the following Paragraph A.1:
1. A Prebid Meeting will be held at Houston Airport System *George Bush Intercontinental Airport*, Auditorium No.1, 111 Standifer Drive, Humble Texas 77338, at 10:00 A.M. (CT) October 24, 2024
  2. Pre-bid Meeting Questions will be due from bidders at 3:00 P.M. (CT), September 19, 2024
  3. A Site Visit will begin after the Pre-bid Meeting. The meeting and site visit are the only opportunity for bidders to see the site prior to Bid Due Date.

16.0 – OPENING OF BIDS: Replace Section B with the following:

- B. Place and date of Bid opening may be changed in accordance with Section 15-45(c) of the City Code.

The following Section is added as part of this solicitation:

3.0 – NOTICE TO BIDDERS

F. RESOLVING PROTESTS

1. Protests will be handled in accordance with City of Houston Administrative Policy AP 5-12. <http://www.houstontx.gov/adminpolicies/5-12.pdf>.

END OF DOCUMENT



Document 00220

REQUEST FOR BID INFORMATION

PROJECT: Kenswick Drive Extension

PROJECT No.: 935

TO: Gabriel Carey  
16930 John F Kennedy Blvd  
Houston, Texas 77032

Phone No. 281-230-8030

Fax \_\_\_\_\_

Email Addr. Gabriel.carey@houstontx.gov

(Type or Print question legibly; use back if more space is needed)

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This request relates to \_\_\_\_\_ and/or \_\_\_\_\_  
Drawing / Detail No. Specification Section No.

Attachments to this request: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Type or Print Name)

\_\_\_\_\_  
(Type or Print Company Name)

END OF DOCUMENT

Document 00320

GEOTECHNICAL INFORMATION

1.0 DOCUMENT INCLUDES

- A. Soils investigation reports.
- B. Bidder's responsibilities.

2.0 RELATED DOCUMENTS

- A. Document 00340 – Environmental Information
- B. Section 02260 - Trench Safety Systems

3.0 SITE INVESTIGATION REPORTS

- A. In the design and preparation of Contract documents for this Project, the City and Design Consultant have used information in geotechnical reports for the investigation and analysis of soils and subsurface conditions at the Project site.
- B. A copy of each report is available for examination at the City of Houston offices located at 611 Walker Street, Houston, Texas 77002.
- C. Neither the City nor Design Consultant is responsible for accuracy or completeness of any information or data.

4.0 GEOTECHNICAL REPORTS

Report No. G143-20, prepared by the firm of Aviles Engineering Corporation, Entitled Geotechnical Investigation, dated February 2021, consisting of 156 pages.

5.0 BIDDER RESPONSIBILITIES

- A. Bidder shall take full responsibility for interpretation and use of information contained in above listed reports for its bidding and construction purposes.
- B. Bidder may perform additional soils investigations as Bidder deems appropriate.

END OF DOCUMENT



**GEOTECHNICAL INVESTIGATION  
HOUSTON AIRPORT SYSTEM  
KENSWICK DRIVE EXTENSION  
GEORGE BUSH INTERCONTINENTAL AIRPORT  
HAS PROJECT 935  
HOUSTON, TEXAS**

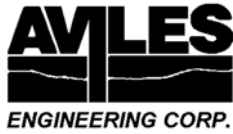
**Reported to  
Atkins North America, Inc.  
Houston, Texas**

**by**

**Aviles Engineering Corporation  
5790 Windfern  
Houston, Texas 77041  
713-895-7645**

**REPORT NO. G143-20**

**February 2021**



February 26, 2021

Ms. Meghan Sheehan, P.E. (NH, NJ)  
Atkins North America, Inc.  
10 High Street, Suite 705  
Boston, Massachusetts 02110

**Reference:     Geotechnical Investigation  
                  Houston Airport System  
                  Kenswick Drive Extension  
                  George Bush Intercontinental Airport  
                  Houston, Texas  
                  HAS Project No. 935  
                  AEC Report No. G143-20**

Dear Ms. Sheehan,

Aviles Engineering Corporation (AEC) is pleased to present this report of the results of our geotechnical investigation for the above referenced project. This investigation was authorized by Mr. Benedikt Goebel, Division Manager of Atkins North America, Inc. (Atkins) on August 22, 2020 via Task Order No. 4 (plus Addendum 1) of Subcontract No. 1008074. Project terms and conditions were in accordance with the Master Subcontract Agreement between Atkins and AEC, dated June 24, 2019. The project scope of services is in accordance with AEC Proposal No. G2019-11-10, dated November 25, 2019 and AEC Proposal G2021-01-03R1, dated January 13, 2021.

AEC appreciates the opportunity to be of service to you. Please call us if you have any questions or comments concerning this report or when we can be of further assistance.

Respectfully submitted,  
**Aviles Engineering Corporation**  
(TBPELS Firm Registration No. F-42)

Wilber L. Wang, P.E. (TX)  
Senior Engineer

2/26/2021

Yusuf Yurttas, EIT  
Staff Engineer

Md. Rakib Hasan, Ph.D., E.I.T.  
Staff Engineer

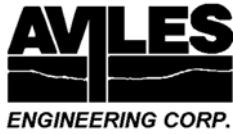
Reports Submitted:     1     Atkins North America, Inc. (electronic)

Z:\ENGINEERING\REPORTS\2020\G143-20 IAH KENSWICK AND LEE ROAD EXTENSION AT WILL CLAYTON PARKWAY  
- ATKINS\G143-20 FINAL.DOCX



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### **APPENDIX B**

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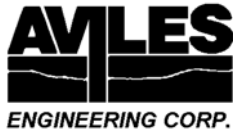
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**GEOTECHNICAL INVESTIGATION  
HOUSTON AIRPORT SYSTEM  
KENSWICK DRIVE EXTENSION  
GEORGE BUSH INTERCONTINENTAL AIRPORT  
HAS PROJECT 935  
HOUSTON, TEXAS**

**1.0 INTRODUCTION**

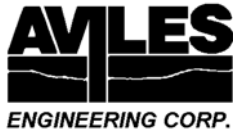
**1.1 Project Description**

The report submitted herein presents the results of Aviles Engineering Corporation's (AEC) geotechnical investigation for the Houston Airport System's (HAS) proposed Kenswick Drive Extension at Bush Intercontinental Airport (IATA Code IAH) in Houston, Texas. A vicinity map is presented on Plate A-1, in Appendix A.

According to 90 percent review drawings dated February 5, 2021 and Engineer's Design Report (EDR) dated December 4, 2020, prepared by Atkins North America, Inc. (Atkins), the project consists of: (i) connecting Kenswick Drive to Lee Road by creating a pass-through new intersection between the eastbound and westbound lanes of Will Clayton Parkway; (ii) adding U-turn lanes in each direction along Will Clayton Parkway at the new intersection; (iii) adding an additional southbound lane along Kenswick Drive on the north side of the new intersection and widening Lee Road to accommodate the new intersection on the south side of the intersection with Will Clayton Parkway's westbound lanes; (iv) adding traffic signals to the new intersection; and (v) a new 1.4 acre by 9 to 9.5 feet deep detention pond within the median along Will Clayton Parkway on the east side of the new intersection. The proposed pavement additions (taken from Atkins' drawings) are shown on Plate A-2, in Appendix A, for reference. Based on Atkins' drawings (see Plate C-3, in Appendix C), a 10 inch thick continuously reinforced concrete pavement (CRCP) will be used for all the proposed pavement sections.

**1.2 Purpose and Scope**

The purpose of this geotechnical investigation is to evaluate the subsurface soil and groundwater conditions at the project site and to develop geotechnical engineering recommendations for design and construction of the pavement, traffic signal foundations, and detention pond. The scope of this geotechnical investigation is summarized below:



1. Drilling and sampling eleven soil borings ranging from 10 to 20 feet below existing grade.
2. Performing soil laboratory testing on selected soil samples.
3. Engineering analyses and recommendations for CRCP pavement, including pavement thickness, base design, and subgrade preparation.
4. Recommendations for traffic signal pole foundations.
5. Performing slope stability analyses on a selected cross-section of the proposed detention pond and providing recommendations for erosion protection measures (if needed).
6. Construction recommendations for CRCP pavement, traffic signal pole foundations, and pond excavation.

## 2.0 SUBSURFACE EXPLORATION

Subsurface conditions at the site were investigated by drilling eleven soil borings ranging from 10 to 20 feet deep at the site. Boring locations was marked in the field by AEC personnel. The total drilling footage was 140 feet. After completion of drilling, the locations of Borings B-1 through B-10 were surveyed by TPO Technologies. The location of Boring B-11 was not surveyed; coordinates and elevations presented are based on GPS data and previous topographic survey information. Boring survey data (in State Plane Grid Coordinates, Texas South Central Zone, US Survey Feet) is presented on the representative boring logs and is also summarized on Table 1. The boring locations are presented on the Boring Location Plan on Plate A-2, in Appendix A.

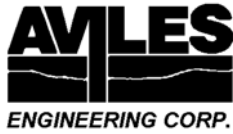
**Table 1. Boring Survey Data**

<b>Boring No.</b>	<b>Northing (Grid, ft)</b>	<b>Easting (Grid, ft)</b>	<b>Boring Surface Elevation (ft)</b>
B-1	13923864.64	3139965.72	80.68
B-2	13923560.21	3140422.67	80.82
B-3	13923647.84	3140921.99	81.30
B-4	13923526.60	3140983.86	80.00
B-5	13923686.64	3141438.61	80.17
B-6	13923477.74	3141916.33	78.40
B-7	13922849.80	3140930.23	81.41
B-8	13923175.51	3140919.54	81.73
B-9	13924075.64	3141013.27	79.58
B-10	13924492.78	3140928.78	79.34
B-11 <sup>(a)</sup>	13923608.15	3141868.21	80.3

Notes: (a) Boring not surveyed. Coordinates and elevations estimated from available information.

Soil Borings: Prior to drilling, existing pavement at Borings B-1, B-2, and B-5 through B-10 was cut with a core barrel. The borings were advanced using dry auger method. Undisturbed samples of cohesive soils were





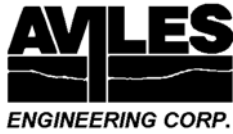
obtained from the borings by pushing 3-inch diameter thin-wall, seamless steel Shelby tube samplers in accordance with ASTM D 1587. Strength of the cohesive soils was estimated in the field using a hand penetrometer. The undisturbed samples of cohesive soils were extruded mechanically from the core barrels in the field and wrapped in aluminum foil; all samples were sealed in plastic bags to reduce moisture loss and disturbance. The samples were then placed in core boxes and transported to the AEC laboratory for testing and further study. Groundwater readings were obtained during drilling and upon completion of drilling. Borings B-1 through B-10 were grouted with cement-bentonite upon completion of drilling and existing pavement (where present) was patched with non-shrink grout. Boring B-11 was left open for at least 1 day so that an additional groundwater reading could be obtained and was backfilled with bentonite chips afterwards. Details of the soils encountered in our borings are presented on Plates A-3 through A-13A, in Appendix A. AEC initially prepared boring logs for Borings B-1 through B-11 in the Geosystem software program. AEC then prepared boring logs for Borings B-4 through B-6 and B-11 in the gINT software program, in accordance with Harris County Flood Control District (HCFCD) guidelines (for detention pond analysis. A key to symbols for the boring logs in the Geosystem program is presented on Plate A-14, in Appendix A, while a legend for the boring logs in the gINT program is presented on Plate A-15, in Appendix A.

Sample Pits: In addition to soil borings, a sample pit was excavated in the vicinity of Boring B-4 to collect subgrade materials for Standard Proctor and California Bearing Ratio (CBR) testing (see Section 3.0 of this report). AEC used a drill rig with a continuous flight auger to collect samples continuously from a depth of 0 to 4 feet below grade. The samples were then bagged and transported to the AEC laboratory for testing. The pit was backfilled with bentonite chips upon completion of field work.

Dynamic Cone Penetrometer (DCP) Tests: Four DCP tests were performed in accordance with ASTM D 6951 to a depth of at least 36 inches adjacent to the locations of Borings B-1, B-4, B-7, and B-9. AEC used the DCP test data to estimate CBR versus penetration depth. CBR values versus penetration depth for each DCP test are presented on Plates B-4 through B-7, in Appendix B.

### **3.0 LABORATORY TESTING**

Soil laboratory testing was performed by AEC personnel. Samples from the borings were examined and classified in the laboratory by a technician under supervision of a geotechnical engineer. Laboratory tests were performed on selected soil samples to evaluate the engineering properties of the foundation soils in accordance with applicable ASTM Standards. Atterberg limits, moisture contents, percent passing a No. 200 sieve, specific



gravity, and dry unit weight tests were performed on selected samples to establish the index properties and confirm field classification of the subsurface soils. Strength properties of cohesive soils were estimated by unconfined compression (UC), unconsolidated-undrained (UU), and consolidated-undrained (CU) triaxial tests performed on undisturbed samples. The test results are presented on the representative boring logs. Classification of soils for engineering purposes, terms used on boring logs, and reference ASTM Standards for laboratory testing are presented on Plates A-16 through A-18, in Appendix A. Specific gravity test results are summarized in Table 2.

**Table 2. Summary of Specific Gravity Tests**

Sample ID and Description	Specific Gravity
B-11, 8'-10', Lean Clay with Sand (CL)	2.691

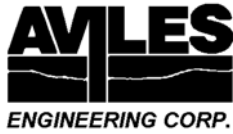
Sulfate Content and pH Tests: AEC performed sulfate content tests on selected soil samples in accordance with Texas Department of Transportation (TxDOT) test method Tex-145-E to determine if the onsite soils have a potential for sulfate attack on lime-stabilized subgrade for pavements. AEC also performed pH tests alongside all the sulfate content tests in accordance with TxDOT test method Tex-128-E. Sulfate and pH test results are presented on Table 3.

**Table 3. Sulfate Content and pH Test Results**

Sample ID and Description	Sulfate Content (mg/kg)	pH	Treatment Level for Roadway Subgrade <sup>(1)</sup>
B-2, 2'-4', Lean Clay (CL)	7	8.22	Level 1
B-5, 1'-2', Fill: Lean Clay with Sand (CL)	0	8.23	Level 1

Notes: (1) Evaluation of sulfate attack on stabilized subgrade for roadways is based on TxDOT's "Guidelines for Treatment of Sulfate-Rich Soils and Bases in Pavement Structures" criteria.

According to TxDOT's "Guidelines for Treatment of Sulfate-Rich Soils and Bases in Pavement Structures", different levels of treatment are required if roadway subgrade will be stabilized. As defined by TxDOT's document: (i) Level 1 treatment (Traditional Treatment) can be used for roadway subgrades that have a sulfate content of 3,000 ppm or less; (ii) Level 2 treatment (Modified Treatment) can be used for roadway subgrades that have a sulfate content between 3,000 ppm and 8,000 ppm; and (iii) Level 3 treatment (Alternative Treatment) is required when the sulfate content is greater than 8,000 ppm. Based on Table 3, the existing soils along the alignment have very low sulfate contents (i.e. significantly less than 3,000 ppm). Based on the results



presented in Table 3, Level 1 treatment (Traditional Treatment) can be used for roadway subgrade stabilization.

Organic Matter Content: AEC performed organic matter content tests on selected soil samples in accordance with ASTM D 2974. Organic content test results are summarized on Table 4 and presented on Plate A-19, in Appendix A.

**Table 4. Organic Matter Content Test Results (ASTM D 2974)**

Sample ID and Description	Organic Content (%)	Level of Concern/Stabilizer Options
B-1, 1'-2', Fill: Sandy Fat Clay (CH)	2.22	Concern/Increase lime stabilization rate by 1 percent to a total of 6 percent.
B-6, 1'-2', Lean Clay (CL)	2.26	Concern/Increase lime stabilization rate by 1 percent to a total of 6 percent.

Compaction and CBR: Soil (from the ground surface to a depth of 4 feet below grade) recovered from the sample pit were mixed and split in general accordance with ASTM C 702. After splitting, Atterberg limits and a Percent Passing a 200 sieve analysis were performed to determine the index properties and grain size distribution of the sample. The sample was then molded and compacted in accordance with ASTM D 698 (Standard Proctor). After the sample was compacted, it was soaked for a period of 96 hours and a CBR (ASTM D 1883) test was performed.

Compaction and index property test results are presented on Plate B-1, in Appendix B. A summary of sample pit index properties is presented on Table 5. CBR test results are presented on Plates B-2 and B-3, in Appendix B. A summary of CBR test results is presented on Table 6.

**Table 5. Sample Pit Soil Properties**

Sample ID and Description	Liquid Limit (%)	Plasticity Index (%)	Percent Passing #200 Sieve (%)	ASTM D 698 Maximum Dry Density (pcf)	ASTM D 698 Optimum Moisture Content (%)
B-4, 0'-4', Lean Clay with Sand (CL)	42	27	78.7	111.8	13.9

**Table 6. California Bearing Ratio Test Results (ASTM D 1883)**

Sample ID	Percent Compaction (%), ASTM D 698	Dry Density (pcf)	CBR (%)
B-4, 0'-4', Lean Clay with Sand (CL)	95	106.2	3.55
	90	100.6	2.70
	85	95.0	1.85

Crumb Tests: To evaluate the dispersive characteristics of clayey soils at the proposed detention pond, crumb tests were performed on selected soil samples in accordance with ASTM D 6572, Method A. The results of the crumb tests are summarized in Table 7, and are presented on Plate A-20, in Appendix A.

**Table 7. Summary of Crumb Test Results**

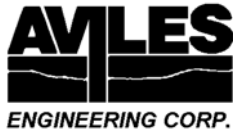
Sample ID and Description	Dispersive Grade	Dispersive Classification
B-5, 1'-2', Fill: Lean Clay with Sand (CL)	1	Non-dispersive
B-11, 4'-6', Lean Clay with Sand (CL)	4	Highly dispersive

Double Hydrometer Tests: To evaluate the dispersive characteristics of clayey soils at the proposed detention pond, a double hydrometer test was performed on selected soil samples in accordance with ASTM D 4221. The results of the double hydrometer tests are summarized in Table 8, and are presented on Plate A-21, in Appendix A. When the percent dispersion is less than 30, it indicates that the soil is non-dispersive. When the percent dispersion equals 30 but is less than 50, it indicates that the soil is intermediately dispersive. When the percent dispersion is greater than 50, it indicates that the soil is dispersive.

**Table 8. Summary of Double Hydrometer Test Results**

Sample ID and Description	Dispersion (%)	Dispersive Classification
B-11, 2'-4', Lean Clay with Sand (CL)	95.34	Highly dispersive

Consolidated-Undrained Triaxial Tests: A CU triaxial test was performed to determine design soil parameters for slope stability analyses of the proposed detention pond. Using the CU data, AEC plotted the stress paths and determined the  $k_f$  (critical state) line from the stress paths in accordance with the US Army Corps of Engineers Engineering Manual, Appendix D, Section D-4. Based on the  $k_f$  line, AEC determined the strength parameters (cohesion and friction angle) of the soil. Mohr's circles were developed based on the failure criterion (maximum effective stress obliquity) presented in ASTM D 4767. The governing failure criterion is presented on the stress path drawn for the CU test (see Note 1 from the CU test stress path diagram). The Mohr Coulomb diagram (with



Mohr's Circles at failure) generated from the CU triaxial test is presented on Plate A-22, in Appendix A. The CU test data (including stress paths) are presented in Appendix E-1. The shear strength parameters obtained from the CU triaxial tests are summarized below in Table 9.

**Table 9. Summary of Shear Strength Parameters from CU Triaxial Tests**

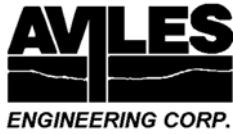
Sample ID and Description	Effective Stress		Total Stress	
	c' (psf)	φ' (deg)	c <sub>cu</sub> (psf)	φ <sub>cu</sub> (deg)
B-11, 8'-10', Lean Clay with Sand (CL)	350	31.0	570	13.6

#### 4.0 SITE CONDITIONS

Based on AEC's site visit, the proposed intersection will be located with the current grass median between the eastbound and westbound lanes of Will Clayton Parkway. The central portion of the median is covered with woods, with grassy areas located on the north and south sides of the proposed intersection area. Will Clayton Parkway is currently a median-divided 6 lane (3 lanes in each direction) concrete roadway. Kenswick Drive on the north side of Will Clayton Parkway (westbound lanes) is a median-divided 4 lane (2 lanes in each direction) concrete roadway. Lee Road on the south side of Will Clayton Parkway (eastbound lanes) is a 2 lane (1 lane in each direction) asphalt roadway. A summary of pavement sections encountered in AEC's borings is presented on Table 10.

**Table 10. Existing Pavement Encountered at Borings**

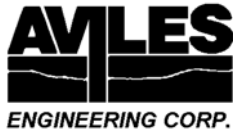
Boring No.	Roadway	Pavement Thickness
B-1	Will Clayton Parkway (westbound)	8.5" concrete
B-2	Will Clayton Parkway (eastbound)	8.25" concrete
B-5	Will Clayton Parkway (westbound)	8.5" concrete
B-6	Will Clayton Parkway (eastbound)	8.15" concrete, 5" stabilized sand and gravel base
B-7	Lee Road	7.5" concrete, 6" stabilized sand and gravel base
B-8	Lee Road	5.5" asphalt, 7.5" stabilized sand and gravel base
B-9	Kenswick Drive	11" concrete, 6" stabilized sand and gravel base
B-10	Kenswick Drive	11.5" concrete, 6.5" stabilized sand and gravel base



#### 4.1 Subsurface Conditions

Soil strata encountered in our borings are summarized below.

<u>Boring</u>	<u>Depth (ft)</u>	<u>Description of Stratum</u>
B-1	0 - 0.7	Pavement: see Table 10 in Section 4.0 of this report.
	0.7 - 2	Fill: soft to firm, Sandy Fat Clay (CH), with silty sand pockets
	2 - 6	Stiff, Fat Clay (CH), with silty sand partings
	6 - 10	Stiff to very stiff, Lean Clay (CL), with silty sand partings
B-2	0 - 0.7	Pavement: see Table 10 in Section 4.0 of this report.
	0.7 - 2	Fill: very stiff, Lean Clay with Sand (CL), with fat clay pockets
	2 - 10	Hard, Lean Clay (CL), with ferrous nodules
B-3	0 - 4	Fill: very stiff to hard, Lean Clay with Sand (CL)
	4 - 10	Firm to hard, Lean Clay (CL), with ferrous nodules
	10 - 12	Stiff to very stiff, Fat Clay (CH), with slickensides, sand partings, calcareous nodules, and ferrous stains
	12 - 14	Stiff to very stiff, Lean Clay with Sand (CL), with calcareous powder pockets, ferrous stains, and silt seams
	14 - 20	Very stiff, Fat Clay (CH), with slickensides
B-4	0 - 2	Fill: hard, Lean Clay with Sand (CL), with silty sand seams, fat clay pockets, roots, and calcareous powder pockets
	2 - 6	Very stiff to hard, Fat Clay (CH), with silty sand partings
	6 - 8	Hard, Lean Clay (CL), with silty sand pockets and ferrous nodules
	8 - 12	Stiff to very stiff, Fat Clay (CH), with slickensides and calcareous powder pockets
	12 - 14	Silty Clayey Sand (SC-SM), with fat clay seams and calcareous pockets
	14 - 16	Hard, Lean Clay (CL), with calcareous nodules and silty sand seams
	16 - 18	Very stiff to hard, Fat Clay (CH), with slickensides
	18 - 20	Very stiff, Lean Clay (CL), with slickensides
B-5	0 - 0.7	Pavement: see Table 10 in Section 4.0 of this report.
	0.7 - 6	Fill: stiff to hard, Lean Clay with Sand (CL)
	6 - 10	Very stiff, Lean Clay (CL), with ferrous nodules
B-6	0 - 1.1	Pavement and base: see Table 10 in Section 4.0 of this report.
	1.1 - 8	Stiff to hard, Lean Clay (CL), with ferrous nodules
	8 - 10	Very stiff, Fat Clay (CH), with calcareous powder seams and nodules
B-7	0 - 1.1	Pavement and base: see Table 10 in Section 4.0 of this report.
	1.1 - 2	Fill: firm to stiff, Lean Clay (CL), with calcareous nodules and fat clay pockets
	2 - 10	Stiff to very stiff, Lean Clay (CL)
B-8	0 - 1.1	Pavement and base: see Table 10 in Section 4.0 of this report.
	1.1 - 2	Fill: very stiff, Sandy Silty Clay (CL-ML), with lean clay and calcareous powder pockets



<u>Boring</u>	<u>Depth (ft)</u>	<u>Description of Stratum</u>
B-8 (cont.)	2 - 4	Silty Clayey Sand (SC-SM), with ferrous nodules
	4 - 10	Firm to hard, Lean Clay (CL), with calcareous nodules
B-9	0 - 1.4	Pavement and base: see Table 10 in Section 4.0 of this report.
	1.4 - 2	Fill: very stiff, Lean Clay (CL), with fat clay pockets, ferrous and calcareous nodules, roots, and silty sand pockets
	2 - 8	Stiff to very stiff, Lean Clay (CL), with calcareous and ferrous nodules
	8 - 10	Stiff to very stiff, Fat Clay (CH), with slickensides and ferrous stains
B-10	0 - 1.5	Pavement and base: see Table 10 in Section 4.0 of this report.
	1.5 - 4	Fill: hard, stabilized Sandy Lean Clay (CL)
	4 - 6	Fill: firm to very stiff, Fat Clay (CH), with sandy lean clay pockets and calcareous nodules
	6 - 10	Fill: soft to firm, Lean Clay (CL), with fat clay pockets and calcareous nodules
B-11	0 - 2	Fill: very stiff, Silty Clay with Sand (CL-ML), with calcareous and ferrous nodules
	2 - 12	Soft to hard, Lean Clay with Sand (CL), with ferrous nodules
	12 - 14	Stiff to very stiff, Fat Clay (CH), with ferrous nodules
	14 - 16	Stiff to very stiff, Lean Clay with Sand (CL), with ferrous nodules, fat clay lenses, and sand pockets
	16 - 20	Very stiff, Fat Clay (CH)

Subsurface Soil Properties: The cohesive soils encountered in the borings (including fill) have slight to very high plasticity (see “Degree of Plasticity of Cohesive Soils” on Plate A-16, in Appendix A), with Liquid Limits (LL) ranging from 24 to 69 and Plasticity Indices (PI) ranging from 7 to 48. The cohesive soils encountered are classified as “CL-ML”, “CL”, and “CH” type soils while the granular soils are classified as “SC-SM” type soils in accordance with ASTM D 2487.

Groundwater: Groundwater levels encountered in the borings during drilling are summarized in Table 11.

**Table 11. Summary of Boring Groundwater Depths**

<b>Boring No.</b>	<b>Date Drilled</b>	<b>Boring Depth (ft)</b>	<b>Groundwater Depth (ft)</b>
B-1	11/4/20	10	Dry (Drilling) Dry (Complete)
B-2	11/4/20	10	Dry (Drilling) Dry (Complete)
B-3	11/4/20	20	Dry (Drilling) Dry (Complete)
B-4	11/4/20	20	Dry (Drilling) Dry (Complete)



Boring No.	Date Drilled	Boring Depth (ft)	Groundwater Depth (ft)
B-5	11/4/20	10	Dry (Drilling) Dry (Complete)
B-6	11/4/20	10	Dry (Drilling) Dry (Complete)
B-7	11/4/20	10	Dry (Drilling) Dry (Complete)
B-8	11/4/20	10	Dry (Drilling) Dry (Complete)
B-9	11/4/20	10	Dry (Drilling) Dry (Complete)
B-10	11/4/20	10	Dry (Drilling) Dry (Complete)
B-11	1/26/21	20	Dry (Drilling) Dry (Complete) Dry (1/27/21)

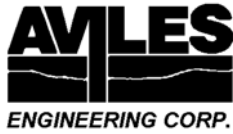
The information in this report summarizes conditions found on the dates the borings were drilled. However, it should be noted that our groundwater observations are short term; groundwater depths and subsurface soil moisture contents will vary with environmental variations such as frequency and magnitude of rainfall and the time of year when construction is in progress.

#### 4.2 Geologic Faults

AEC performed a desktop fault study which included a review of public maps, available literature, and aerial photographs. According to the published maps “*Principal Active Faults of the Houston Area (after O’Neill and Van Siclen, May 1984)*”, and “*Principal Surface Faults in the Central Houston Metropolitan Area (after O’Neill, Van Siclen, with additions by C. Norman, May 13, 2004)*”, no documented faults are located within the project area. The closest faults to the project area are the Jetero Fault, which crosses Lee Road approximately 0.6 miles south of Will Clayton Parkway and the Lee Fault which crosses Lee Road approximately 1.5 miles south of Will Clayton Parkway. A follow-up Phase I Geologic Fault Study should not be necessary.

Limitations: The desktop fault study provided in this report is limited to a review of available literature, aerial photographs, and maps. Distances are scaled from maps. Faults may exist in, cross, or adjoin the project area which were not identified in this report due to the following reasons: limitations of the scope of work and cost, no field observations were conducted; lack of documentation in the literature; and faults may have not been visible on the aerial photographs due to clarity of the aerial photographs, the presence of vegetation and





environmental features, and modification of the land surface by human activities. Faults may also be present below ground but do not currently have surface expressions. Identification of these faults is beyond the scope of work for this study.

#### **4.3 Hazardous Materials**

No signs of visual staining or odors were encountered during field drilling or during processing of the soil samples in the laboratory. However, AEC notes that the presence of potential hazardous material at other locations within the project area cannot be discounted based upon the very small and limited number of samples taken.

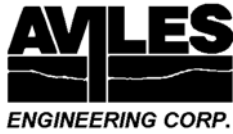
#### **4.4 Subsurface Variations**

It should be emphasized that: (i) at any given time, groundwater depths can vary from location to location, and (ii) at any given location, groundwater depths can change with time. Groundwater depths will vary with seasonal rainfall and other climatic/environmental events. Subsurface conditions may vary away from and in between the boring locations.

Clay soils in the Greater Houston area typically have secondary features such as slickensides, calcareous/ferrous nodules, and contain sand/silt seams/lenses/layers/pockets. It should be noted that the information in the boring logs are based on 3-inch diameter soil samples which were generally obtained from the borings at intervals of 2 feet continuously from the ground surface to a depth of 10 feet below grade (or the boring termination depth of 10 feet in Borings B-1, B-2, and B-5 through B-10), and intermittently at 5 foot intervals thereafter to the boring termination depth of 20 feet (in Borings B-3, B-4, and B-11). A detailed description of the soil secondary features may not have been obtained due to the small sample size and sampling interval between the samples. Therefore, while AEC's logs show some soil secondary features, it should not be assumed that the features are absent where not indicated on the logs.

### **5.0 ENGINEERING ANALYSIS AND RECOMMENDATIONS**

According to 90 percent review drawings dated February 5, 2021 and EDR dated December 4, 2020, prepared by Atkins, the project consists of: (i) connecting Kenswick Drive to Lee Road by creating a pass-through new intersection between the eastbound and westbound lanes of Will Clayton Parkway; (ii) adding U-turn lanes in



each direction along Will Clayton Parkway at the new intersection; (iii) adding an additional southbound lane along Kenswick Drive on the north side of the new intersection and widening Lee Road to accommodate the new intersection on the south side of the intersection with Will Clayton Parkway's westbound lanes; (iv) adding traffic signals to the new intersection; and (v) a new 1.4 acre by 9 to 9.5 feet deep detention pond within the median along Will Clayton Parkway on the east side of the new intersection. Based on Atkins' drawings (see Plate C-3, in Appendix C), a 10 inch thick CRCP will be used for all the proposed pavement sections.

## **5.1 Intersection, U-Turns, and Roadway Widening/Reconstruction**

As noted in Section 5.0 of this report, the proposed roadway improvements include: (i) extension of Kenswick Drive through the Will Clayton Parkway median to Lee Road; (ii) addition of U-turn lanes along Will Clayton Parkway at the new intersection; (iii) adding an additional lane to Kenswick Drive (by reducing the existing median) to the north of the Will Clayton Parkway westbound lanes; and (iv) reconstruction of Lee Road to the south of the Will Clayton Parkway eastbound lanes.

Construction Specifications: Based on the EDR, AEC understands that the proposed driveway is to be designed and constructed in accordance with the 2015 HAS Design Criteria Manual and Texas Department of Transportation (TxDOT) requirements. For TxDOT design requirements, AEC has referred to the 2019 TxDOT Pavement Manual.

### **5.1.1 Estimated Traffic Loading**

Estimated Traffic Loading: To assist with pavement design, Atkins provided AEC with a Traffic Operations Analysis memo, dated December 4, 2020. Relevant information that AEC used from Atkins' memo is presented on Plates C-1 and C-2, in Appendix C. AEC used the estimated AM and PM Peak Hour traffic estimates for 2022 and 2032 to estimate traffic loading in vehicles per day (vpd). Based on the provided information, AEC notes that Kenswick Drive north of Will Clayton Parkway will have the highest traffic volume. AEC conservatively used those traffic volumes for CRCP pavement design. Based on TxDOT requirements, AEC has considered a pavement design life of 30 years. AEC notes that assumed traffic loading and its impact on pavement design is highly sensitive to parameters such as percent heavy trucks, truck factor, and traffic volume growth rate. Differences between assumed and actual traffic parameters can have significant effects on overall pavement thickness design and ultimate roadway performance.



Pavement design is based on the anticipated design number of 18-kip Equivalent Single Axle Loads (ESAL) the pavement is subjected to during its design life. The equation to calculate the number of 18-kip ESAL repetitions to use for pavement design is presented in Equation (1). Assumptions made by AEC to estimate 18-kip ESAL repetitions are presented on Table 12.

$$18\text{-kip ESAL} = (\text{ADT})(\text{T})(\text{T}_f)(\text{D})(\text{L})(\text{G})(\text{Y})(365) \quad \text{.....Equation (1)}$$

- where: ESAL = 18-kip Equivalent Single-Axle Load repetitions.  
 ADT = Average Daily Traffic, vehicles per day.  
 T = Percent of heavy trucks.  
 T<sub>f</sub> = Truck factor.  
 D = Directional factor.  
 L = Lane factor.  
 G = Growth factor.  
 Y = Design life, in years.

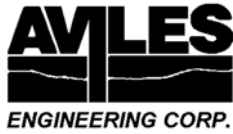
**Table 12. Parameters for Estimation of Traffic Loads**

Parameters	Kenswick Extension/U-Turn Lanes/Lee Road
Average Daily Traffic (ADT)	7575 vpd (estimated from EDR for 2022)
Percent Heavy Trucks (T)	2% (approximation)
Truck factor (T <sub>f</sub> )	0.2 (assumed)
Directional factor (D)	0.5 (traffic in both directions)
Lane factor (L)	1.0 (2 lanes in each direction)
Total Growth Rate Factor (G)	3.4 (8.5% annual growth rate from 2022 to 2032, estimated from EDR)
Design life (Y)	30 years (TxDOT standard)
Estimated 18-kip ESAL Loading over Design Life	7,223,102

AEC notes that the calculated number of 18-kip ESAL repetitions are highly sensitive to parameters such as percent heavy trucks, truck factor, and traffic volume growth rate in pavement design. Differences between assumed and actual traffic parameters can have significant effects on overall pavement thickness design and ultimate pavement performance.

### 5.1.2 Continuously Reinforced Concrete Pavement

According to Section 2.5.2 of the 2015 HAS Design Criteria Manual, the typical roadway pavement section for HAS projects is an 8 inch thick CRCP over a five inch thick cement treated base and nine inches of stabilized



subgrade. An alternative section is an 8 inch thick CRCP over a five inch thick asphalt treated base and nine inches of stabilized subgrade. The stabilized subgrade should be either lime-fly ash or cement-fly ash, depending on if cohesive soils or sandy soils are encountered. Atkins’ drawings and EDR indicate a 10 inch CRCP over a five inch thick (split into two 2.5 inch thick lifts) asphalt treated base and twelve inches of lime stabilized subgrade will be used. Atkins’ proposed pavement section drawing is presented on Plate C-3, in Appendix C, for reference.

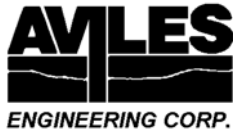
The pavement design recommendations developed below are in accordance with Chapter 8 Section 3 of the 2019 TxDOT Pavement Design Manual. CRCP design is based on the anticipated design number of 18-kip ESALs the pavement is subjected to during its design life, and in accordance with the TxDOT Manual, to provide a pavement that will limit the number of punchouts per mile to 10 or less. AEC used the TxCRCP-ME version 07b spreadsheet to perform CRCP design. The parameters that were used in computing the CRCP section are as follows:

Design Life (years)	30
Maximum Number of Punchouts per Mile	10
Total Number of Lanes in One Direction	1
Total Design Traffic in One Direction	7.22 million 18-kip ESALs
Mean Concrete Modulus of Rupture ( $S'_c$ )	570 psi (at 28 days)
Soil Classification of Subgrade	CL
Base Type	Asphalt treated base
Modulus of Base Layer	400 ksi (for ATB)
Subgrade Modulus of Reaction (k)	25 psi/in (selected by TxCRCP-ME)
Composite Effective Modulus of Subgrade Reaction ( $k_1$ )	263 psi/in (selected by TxCRCP-ME)

AEC performed analysis on a 10 inch thick CRCP for the driveway design. Based on Borings B-2 through B-5, B-8, and B-9, the surficial soils in the vicinity of the proposed pavement improvements consist primarily of lean clay (CL) soils. Based on the soil conditions encountered, AEC recommends the exposed subgrade be stabilized with hydrated lime. Due to the low CBR values from AEC’s lab CBR tests and field DCP tests, AEC increased the thickness of the lime stabilized subgrade from 9 to 12 inches in order to provide a better working platform during construction. The recommended pavement section for all the proposed pavements for the Kenswick Drive Extension project is presented on Table 13.

**Table 13. Recommended Roadway Rigid Pavement Section**

Pavement Layer	Thickness (in)
CRCP	10



Pavement Layer	Thickness (in)
Asphalt treated base	5 (split into two 2.5" thick lifts)
Lime Stabilized Subgrade	12 (upper 9" density controlled)
Number of Punchouts per Mile	7.3 (see Plate C-4, in Appendix C)

AEC used the TxCRCP-ME spreadsheet to perform CRCP design; pavement design inputs and results are presented in Plate C-4, in Appendix C. According to the TxCRCP-ME spreadsheet, a 10 inch thick CRCP with 5 inches of asphalt treated base will have 7.3 punchouts per mile, which is less than the maximum 10 punchouts per mile required by TxDOT’s Pavement Manual.

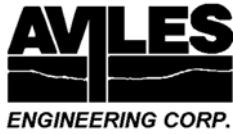
CRCP: CRCP should be in accordance with Item 360 of the 2014 TxDOT Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges.

Asphalt Treated Base: Asphalt treated base (ATB) should be in general accordance with Item 292 of the 2014 TxDOT Standard Specifications. As discussed with Atkins, the 5 inch thick layer of ATB should be placed in two, 2.5 inch thick lifts. The gradation of the ATB should meet a SP-B Intermediate gradation, as presented on Table 8 of Item 344 of the 2014 TxDOT Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges. The ATB should be compacted in accordance with Section 4.5.1 of Item 292, “Density Control”, to 97 percent of its maximum Tex-126-E dry density. Tack coat shall be in accordance with Section 2.4 and 4.4.2 of Item 292.

Prime Coat: Prime coat (placed between the base and the stabilized subgrade), should be in accordance with Item 310 of the 2014 TxDOT Standard Specifications.

5.1.3 Reinforcing Steel

Reinforcing steel for the CRCP should be in accordance with TxDOT Roadway Standard Sheet CRCP(1)-20 (i.e. single layer of steel for CRCP with thickness between 7 and 13 inches. According to Sheet CRCP(1)-20, an 10 inch thick CRCP should be reinforced with a single layer of #6 bars spaced at 7 inch centers in the longitudinal direction, and #5 bars spaced at 48 inch center in the transverse direction.



#### 5.1.4 Embankment

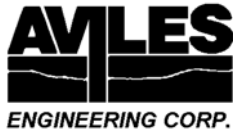
Based on the provided drawings, the proposed pavements will mostly be constructed at or near existing grade. However, AEC anticipates that embankment fill will be required for areas (if any) where the final pavement grade will be above existing grade. Embankment fill should be in general accordance with Item 132 of the 2014 TxDOT Standard Specifications. AEC recommends that Item 132 Type A material be used as embankment, if possible. Type A material is a granular soil free from vegetation or other objectionable material and has a liquid limit (LL) of 45 or less, a plasticity index (PI) of 15 or less, and a bar linear shrinkage of 2 or more. If Type A material is not readily available, then AEC recommends a Type C material with the following requirements: a clean (free of vegetation and debris) cohesive soil with at least 50 percent passing a number 200 sieve, LL of 49 or less, and a PI between 15 and 35. Embankment soil should be placed in maximum loose lifts of 12 inches thick and then compacted in accordance with Section 3.4.2 “Density Control” of Item 132. Type A material should be compacted to a minimum of 98 percent of its Tex-114-E maximum dry density at a moisture content between optimum and 3 percent above optimum, whereas Type C material should be compacted to between 98 and 102 percent of its Tex-114-E maximum dry density at a moisture content between optimum and 3 percent above optimum.

#### 5.1.5 Pavement Subgrade Preparation

Based on the provided drawings, the proposed pavement will mostly be constructed at or near existing grade. As noted in Section 5.1.2 of this report, AEC encountered lean clay soil at the ground surface in the vicinity of Borings B-2 through B-5, B-8, and B-9. The PI of the material varied from 7 to 30 for the CL soils. Based on the soil types and PI results, AEC recommends that the pavement subgrade be stabilized with a minimum of 6 percent hydrated lime (by dry soil weight). The recommended 6 percent hydrated lime includes the additional 1 percent lime required due to the presence of organics, as presented on Table 4 in Section 3.0 of this report)

Clearing and grubbing of trees and vegetation, roadway grading, and demolition of existing pavement and base should be performed in general accordance with the relevant Item 1XX series of the 2014 TxDOT Standard Specifications. Where possible, subgrade preparation should extend a minimum of 2 feet beyond the paved area perimeters.

Subgrade Preparation: For areas that are not currently paved, the top 6 inches of existing soil and any deleterious materials at the ground surface should be stripped and wasted. After surface stripping, the subgrade should be cut



to grade to accommodate the pavement section presented in Table 13 in Section 5.1.2 of this report. After cutting to grade, we recommend that a competent soil technician inspect the exposed subgrade to determine if there are any unsuitable soils or other deleterious materials. Excavate and dispose of unsuitable soils and other deleterious materials which will not consolidate; the excavation depth should be increased when inspection indicates the presence of organics and deleterious materials to greater depths. The exposed soils should be proof-rolled in accordance with Item 216 of the 2014 TxDOT Standard Specifications to identify and remove any weak, compressible, or other unsuitable materials; such over-excavations should be backfilled in general accordance with Type A or Type C Item 132 embankment fill (see Section 5.1.4 of this report).

After proof rolling, scarify the exposed subgrade to a depth of 12 inches and stabilize with a minimum of 6 percent lime (by dry soil weight). Lime stabilization shall be performed in accordance with Item 260 of the 2014 TxDOT Standard Specifications. After application of lime, the upper 9 inches of stabilized subgrade should be compacted in accordance with Section 4.4.2 “Density Control” of Item 265. The subgrade should be compacted to at least 95 percent of its Tex-127-E maximum dry density at a moisture content between optimum and 3 percent above optimum.

#### 5.1.6 Potential Vertical Rise (PVR)

As required by Atkins, AEC estimated the Potential Vertical Rise (PVR) of soils within the proposed paved areas. AEC notes that according to the TxDOT 2019 Pavement Design Manual, the proposed roadway improvements do not fall within those required for PVR mitigation strategies, which are typically only performed for major roadways with high speeds, high ADT, and CRCP more than 12 inches. Regardless, based on the soil conditions encountered in Borings B-2 through B-5, B-8, and B-9, PVR mitigation strategies should not be necessary for this project. AEC also notes that PVR mitigation is not typically performed for non-TxDOT roadway projects in the Houston, based on AEC’s experience with other roadway projects for HAS and the City of Houston (COH).

Estimated Soil Movements: PVR is an estimate of the potential of an expansive soil to swell from its current state. Expansive clays exhibit a potential to shrink and swell with changes in their moisture contents. The changes in the soil moisture content are usually caused by variations in the seasonal amount of rainfall and evaporation rates or other localized factors like the moisture withdrawal by nearby trees. AEC determined PVR within the zone of seasonal moisture variation, which is typically considered to be 10 feet deep in the Greater Houston area.



PVR was computed for Borings B-2 through B-5, B-8, and B-9 using TxDOT test method Tex-124-E. PVR results based on in-situ moisture contents are presented on Table 14. According to the TxDOT 2019 Pavement Design manual, the desired minimum PVR values are 1.5 inches for main lanes and 2.0 inches for frontage roads.

**Table 14. Estimated PVR for Roadway Borings**

<b>Boring</b>	<b>PVR (in), based on in-situ moisture conditions</b>
B-2	1.2
B-3	0.8
B-4	2.1
B-5	1.1
B-8	0.2
B-9	2.1

PVR Mitigation: Based on Table 14, the PVR exceeds 2 inches in Borings B-4 and B-9. To reduce the PVR to at least 2 inches, the top 24 inches of highly expansive clay soils along the project alignment in the vicinity of Borings B-4 and B-9 be excavated and either replaced with 2014 TxDOT Item 132 Type A embankment fill, or by stabilizing the excavated clay soil with at least 6 percent hydrated lime and then compacting it back in place. Compacted soil (whether embankment fill imported from offsite, or existing onsite soil stabilized with lime) should be placed in accordance with Section 3.4.1 (Ordinary Compaction) of Item 132 of the 2014 TxDOT Standard Specifications. Other methods for reducing PVR, such as horizontal or vertical moisture barriers, geo-synthetic reinforcement, subgrade drainage, etc. can also be considered, if allowed by HAS. However, as noted above, it is AEC’s opinion that the PVR mitigation strategies presented above would be cost-excessive and ultimately unnecessary for this category of roadway project. However, the decision to include PVR mitigation should ultimately be decided by HAS.

## **5.2 Traffic Signal Poles**

Atkins’ drawings indicate that traffic signal poles will be added to the intersection of Kenswick Drive and both the eastbound and westbound lanes of Will Clayton Parkway. Foundations for traffic signal poles must resist both axial loads and lateral loads (shear forces and overturning moments). Based on Borings B-3 and B-4, AEC recommends that the traffic signal poles at the intersection of Kenswick Drive and Will Clayton Parkway be supported on straight-sided drilled shafts.





### 5.2.1 Straight Sided Drilled Shafts

Traffic signal poles should be designed and installed as per COH Public Works Traffic and Transportation Construction Details drawings-02893 series and in accordance with Section 02893 of the latest edition of the City of Houston Standard Construction Specifications (COHSCS).

Foundation Length: Traffic signal pole foundation diameter and length should be selected in accordance with COH Construction Detail drawing 02893-5. The foundation design table presented on COH drawing 02893-5 requires the use of 30 inch diameter drilled shafts. The drilled shaft length will be either 14 feet or 18 feet, depending on the traffic signal mast arm assembly height and the predominant soil type encountered. Based on Borings B-3 and B-4, the predominant soil type will be cohesive soils.

Drilled Shaft Construction: Drilled shaft foundations should be constructed in accordance with Section 02465 of the latest edition of the COHSCS. The ultimate length of the drilled shafts will be based on COH Construction Detail drawing 02893-5 (which shows traffic pole foundations that are either 14 or 18 feet long). Based on Borings B-3 and B-4, AEC anticipates that cohesive soils will be encountered during traffic signal pole construction. Based on Table 11 in Section 4.0 of this report, AEC does not anticipate that groundwater will be encountered during construction. However, groundwater levels tend to fluctuate during the year and if groundwater is present during shaft excavation, it could cause sidewall sloughing or caving.

If groundwater is encountered, or if caving/sloughing occurs during the drilled shaft construction, we recommend that either a temporary steel casing and/or bentonite slurry be used to maintain integrity of the shaft excavations. In accordance with Section 02465 of the latest edition of the COHSCS, polymer slurry should not be used for shaft construction.

For slurry method, the bentonite slurry should be used prior to encountering groundwater or granular soils and the slurry head should be maintained at least 5 feet higher than the groundwater at the site during construction. The concrete should be placed using a tremie to displace the lower density slurry. Care must be taken to ensure that tremie is positioned and maintained at the bottom of excavation until a height of 5 feet of concrete has been poured. As more concrete is added, the tremie should be maintained at a minimum distance of 5 feet below the top of the concrete pour.



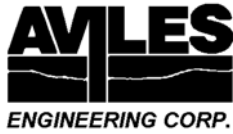
New drilled shafts should not be excavated within 3 shaft diameters (edge to edge) of an open shaft excavation, or one in which concrete has been placed in the preceding 24 hours, to prevent movement of fresh concrete from the recently filled footing to an adjacent unfilled footing. Placement of concrete should be accomplished as soon as possible after excavation to reduce changes in the state of stress and possible sloughing in the foundation soils. No shafts should be left open overnight or poured without the prior approval of the Owner's Representative.

In addition, each footing excavation should be inspected by a qualified Owner's Representative prior to placing concrete, to check that (1) the footing excavation has been constructed to the specified dimensions at the recommended depth and formation, as well as (2) excessive cuttings and any soft-compressible materials have been removed from the bottom of the excavation.

### **5.3 Detention Pond**

Based on Atkins' drawings, a detention pond with a surface area of approximately 1.4 acres will be added within the grass median along Will Clayton Parkway, on the east side of the new intersection. Atkins' detention pond plan and profile drawings (90 percent review, dated February 5, 2021) are presented on Plates D-1 and D-2, in Appendix D, for reference. The drawings indicate that the bottom of the pond will range from an elevation of +73.00 feet Mean Sea Level (MSL) at the west (inlet) end to an elevation of +71.58 feet MSL at the east (outlet) end. The top of bank of the pond will be at an elevation of approximately +81.0 feet MSL. Based on these elevations, the pond depth varies from approximately 9 to 9.5 feet. The pond will have a side slope inclination of approximately H:V = 4:1, and will typically have a dry bottom when not in use during storm events. The 100 year water surface elevation (WSE) was not available at the time this report was prepared.

Based on the provided drawings, AEC selected the east bank of the pond (the east bank is in line with the pond baseline, from approximately Station 8+80 to Station 10+10) to perform slope stability analyses, based on the information encountered in Boring B-11. AEC performed the slope stability analyses based on three different conditions: the short-term condition, long-term condition, and rapid drawdown condition. AEC understands that stormwater from the detention pond will eventually flow into a channel maintained by HCFCD. As a result, AEC performed the stability analyses in general accordance with the requirements of the HCFCD Geotechnical Guidelines presented in Appendix D of the October 2018 HCFCD Policy Criteria & Procedure Manual (PCPM).



### 5.3.1 Slope Stability Analyses

Design Soil Parameters: Soil parameters used in the analyses include moist unit weights, undrained shear strengths (developed from UU triaxial tests), effective stress shear strength (developed using total stress parameters and pore water pressure measurements), and total stress shear strength obtained from CU triaxial tests. Design soil parameters used for AEC's slope stability analyses of the east bank of the pond are presented on Plate D-3, in Appendix D.

Soil and Groundwater Conditions: Based on Borings B-4 through B-6 and B-11, the subsurface conditions within the detention pond area (considering a pond depth ranging from 9 to 9.5 feet) generally consist of soft to hard lean/fat clay (CL/CH), with approximately 2 to 6 feet of lean/silty clay (CL/CL-ML) fill material present at the ground surface in Borings B-4, B-5, and B-11. Groundwater was not encountered in the borings.

Clay Desiccation Zone: AEC notes that the fat clay soils present in Borings B-4 and B-11 have plasticity indices that range from 35 to 46, indicating that the clay soils have high to very high expansive potential (see "Degree of Plasticity of Cohesive Soils" on Plate A-16, in Appendix A). Exposing these fat clays to the atmosphere and cycles of wetting-drying from seasonal moisture changes will result in desiccation, cracking, and a reduction in their shear strengths, which in turn will result in progressive slope movement and eventual slope failure. We considered the desiccation zone for fat clay to be approximately 10 feet below the ground/slope surface. For fat clay within the desiccation zone, we estimated effective stress residual shear strengths ( $c'_r$  and  $\phi'_r$ ) to evaluate slope stability for both the long-term condition and rapid drawdown condition based on A. Saleh and S. Wright (1977).

Based on AEC's discussions with HCFCD, we also reduced the  $c'$  and  $c_{cu}$  of lean clay soils (with a PI greater than 20) within the non-desiccated (i.e. weathered) zone based on a combination of methods by G. Mesri (1999) and S. Wright (2005). The derived reduced soil parameters for weathered soils are presented on Plate D-4, in Appendix D.

Slope Analysis Method: We used the Simplified Bishop Method of Slices option in the 2020 GeoStudio (SLOPE/W) computer program to analyze slope stability for 2-dimensional limiting equilibrium. The program has the capability to compute pore water pressures based on a defined piezometric surface.



Groundwater Level: For the analyses, we considered different groundwater conditions for short-term, long-term, and rapid drawdown conditions. For short-term and rapid drawdown conditions (based on AEC's previous discussions with HCFCD), AEC considered the groundwater level to be at the ground surface, from top of the slope to the proposed detention pond bottom. For long-term condition, AEC considered the groundwater level to be equal to the groundwater levels measured in the borings (i.e. dry, since groundwater was not encountered in the borings).

Required Safety Factor: HCFCD requires a minimum Safety Factor (SF) of 1.3 for short-term conditions, 1.5 for long-term conditions, and 1.25 for rapid drawdown conditions. Stability analyses for the detention pond slopes were conducted for the short-term (end-of-construction), long-term, and rapid drawdown conditions. A brief description of these conditions is presented below:

1. End-of-Construction Condition - This condition models rapid construction loading taking place, so that there is no time for the induced excess pore water pressure to dissipate or for consolidation to occur during the loading period. Unconsolidated-undrained shear strength parameters were used for this analysis.
2. Long-Term Condition - This condition models long-term steady seepage through embankments and the long-term stability of slopes in stiff clays. Effective stress shear strength parameters (obtained from CU triaxial tests with pore water pressure measurements) were used for this analysis.
3. Rapid Drawdown Condition - Most slope failures in the Harris County/Houston area occur under rapid drawdown conditions. This condition models when the slope becomes fully saturated and consolidated and is at equilibrium with the existing stress system, then encounters rapid drawdown and simultaneously allows no drainage to occur. In accordance with HCFCD guidelines, both effective stress and total stress shear strength parameters were used for this analysis.

Slope Stability Analysis of East Bank of Detention Pond from Station 8+80 to 10+10: A 300 psf construction surcharge was added to the top of bank for the short-term condition while a 250 psf surcharge was added to the top of the bank for the long-term condition. The results of the slope stability analyses of the east bank of the pond under short-term, long-term, and rapid drawdown conditions are presented on Plates D-5 through D-12, in Appendix D. A summary of the SF for the proposed detention pond slopes under short-term, long-term, and rapid drawdown conditions is presented on Table 15.

**Table 15. Slope Stability Analysis Results of East Bank of Detention Pond**

Slope Inclination	Estimated Minimum Safety Factor (SF)			
	Short-Term	Long-Term	Rapid Drawdown	
			(Effective Stress)	(Total Stress)
H:V = 5:1 Slope	11.56 (GS, Plate D-5)	3.26 (GS, Plate D-7)	2.15 (GS, Plate D-9)	1.99 (GS, Plate D-11)
	13.82 (LS, Plate D-6)	3.40 (LS, Plate D-8)	2.29 (LS, Plate D-10)	2.21 (LS, Plate D-12)

Notes: (1) GS = Global Slide; and LS = Local Slide.

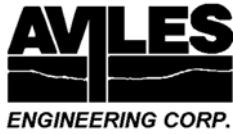
Based on the summary in Table 15, the calculated SF's for the east bank of the detention pond meet HCFCD requirements under short-term, long-term, and rapid-drawdown conditions. Corresponding analysis outputs from the GeoStudio 2020 computer program are presented on Plates D-13 through D-55, in Appendix D.

### 5.3.2 Erosion Protection of Detention Pond

Erodible Soils: Granular soils and low plasticity silty clays are highly susceptible to the migration of fines or *piping*. Piping is a phenomenon where seeping water progressively erodes or washes away soil particles, leaving large voids (pipes) in the soil. These voids progressively continue to erode and work their way back into the soil, or they may collapse. Piping is most likely to take place in fine, cohesionless soils which are permeable enough to allow seepage through them, but whose grain size is small enough to be disturbed by the seepage forces.

Although granular soils were not encountered in Borings B-4 through B-6 and B-11, silty clay (CL-ML) fill material was encountered at the surface of Boring B-11; as noted above, this material is susceptible to erosion, and AEC suggests that this material be over-excavated and replaced with compacted select clay fill, if budget allow, although AEC understands this may be cost-inefficient, considering the overall small amount of silty clay encountered in the borings compared to the predominantly lean/fat clay (CL/CH) encountered throughout the pond area.

Dispersive Soils: Based on the results of crumb tests and double hydrometer tests (see Tables 7 and 8 in Section 3.0 of this report), the soils at the proposed detention pond generally consist of highly dispersive clays. Highly dispersive clayey soils are highly susceptible to reacting with certain ions that are present in either surface runoff



or groundwater and can dissolve and erode over time, resulting in slope loss and movement. Wherever dispersive soils are present in the detention pond slopes, AEC recommends that local drainage at the top of the pond slopes be improved to limit the time that water will be allowed to sit on top of them. To improve surface drainage and mitigate the impact of dispersive clays, adding backslope interceptor swales around the perimeter of the pond and reducing the spacing of interceptor outfalls closer together can be considered. Backslope interceptor swales should be in accordance with Section 11.1 of the October 2018 HCFCO PCPM. If backslope interceptor swales cannot be installed, then AEC recommends that wherever encountered during construction, dispersive soils be over-excavated to a depth of at least 3 feet below existing grade and replaced with compacted select clay fill. Select clay fill should be in accordance with Item 2.1 of Section 02314 of the 2020 HCFCO Standard Construction Specifications and Details.

### 5.3.3 Pond Excavation

The contractor should be responsible for designing, constructing, and maintaining safe excavations and protecting existing structures in the vicinity of the proposed detention basins. Excavations should be in accordance with OSHA, Safety and Health Regulations, 29 CFR, Part 1926, Subpart P (Excavation and Trenches). OSHA soil classifications based on our borings are presented in Table 16.

**Table 16. OSHA Soil Classification of Pond Soils**

Boring	Depth (ft)	Elevation (ft)	OSHA Soil Classification	Soil Type
B-4	0 - 2	80.0 to 78.0	C	Fill: hard CL
	2 - 10	78.0 to 70.0	B	Very stiff to hard CH/CL
B-5	0 - 6	80.2 to 78.2	C	Fill: stiff to hard CL
	6 - 10	78.2 to 70.2	B	Very stiff CL
B-6	0 - 10	78.4 to 68.4	B	Stiff to hard CL/CH
B-11	0 - 2	80.3 to 78.3	C	Fill: very stiff CL-ML
	2 - 4	78.3 to 76.3	C	Soft to firm CL
	4 - 10	76.3 to 70.3	B	Stiff to hard CL

Notes: (1) CH = Fat Clay, CL = Lean Clay, CL-ML = Silty Clay.

(2) OSHA Soil Types for soils in the top 20 feet below grade.

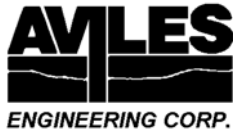
A: Cohesive soils with  $q_u = 1.5$  tsf or greater ( $q_u$  = Unconfined Compressive Strength of the Soil).

B: Cohesive soils with  $q_u = 0.5$  tsf or greater.

C: Cohesive soils with  $q_u =$  less than 0.5 tsf, fill materials, or granular soil.

C\*: Submerged cohesive soils; dewatered cohesive soils can be considered OSHA Type B.

We recommend that the surcharge on the banks be limited to 300 psf or less during construction. If fill will be placed on slopes steeper than H:V = 4:1, then the slopes should be cut back into benches to provide a good



construction joint between the existing soil and new select fill, in accordance with Item 3.5 of Section 02315 of the 2020 HCFCF Standard Construction Specifications and Details. Where possible, each bench should be a minimum of 8 feet wide and a maximum of 3 feet high. Voids in the excavated slopes (if any) should be backfilled with select clay fill in accordance with Item 2.1 of Section 02314 of the 2020 HCFCF Standard Construction Specifications and Details.

Detention Pond Soil and Groundwater Conditions: Based on Borings B-4 through B-6 and B-11, the subsurface conditions within the detention pond area (considering a pond depth ranging from 9 to 9.5 feet) generally consist of soft to hard lean/fat clay (CL/CH), with approximately 2 to 6 feet of lean/silty clay (CL/CL-ML) fill material present at the ground surface in Borings B-4, B-5, and B-11.

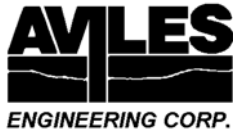
Based on Table 11 in Section 4.1 of this report, groundwater was not encountered in the borings performed in the vicinity of the detention pond. AEC does not anticipate that groundwater will be encountered during basin excavation; if groundwater is encountered during construction, open drainage method (such as sump and pump) will likely be sufficient for groundwater control. Generalized groundwater control recommendations are presented in Section 6.2 of this report.

## **6.0 CONSTRUCTION CONSIDERATIONS**

### **6.1 Site Preparation and Grading**

To mitigate site problems that may develop following prolonged periods of rainfall, it is essential to have adequate drainage to maintain a relatively dry and firm surface prior to starting any work at the site. Adequate drainage should be maintained throughout the construction period. Methods for controlling surface runoff and ponding include proper site grading, berm construction around exposed areas, and installation of sump pits with pumps.

Pumping Soils: AEC notes that silty clay (CL-ML) was encountered at the ground surface in the vicinity of Borings B-8 and B-11. **Silty soils are prone to pumping when they are saturated after rainfall. Pumping soils are not able to support construction equipment.** If rainfall occurs and pumping soils are encountered at the ground surface, methods to mitigate the effect of the pumping soils include: (i) providing positive drainage around the pumping soils area, including cutting drainage swales as necessary; (ii) excavate and replace the pumping soils with competent, compacted clay fill that is free from debris or other deleterious materials; (iii)



adding lime or fly ash to the pumping soils in order to dry out the soil, as well as increase soil strength; (iv) using woven geotextiles (such as a Mirafi RS series, or equivalent) to reinforce and separate weak/wet underlying soil layers; or (v) a combination of the above methods.

## **6.2 Groundwater Control**

The need for groundwater control will depend on the depth of excavation relative to the groundwater depth at the time of construction. If there is heavy rain prior to or during construction, the groundwater table may be higher than indicated in this report; higher seepage is also likely and may require a more extensive groundwater control program. In addition, groundwater may be pressurized in certain areas of the project area, requiring further evaluation and consideration of the excess hydrostatic pressures. Groundwater control should be in general accordance with Section 02241 of the 2020 HCFCD Standard Construction Specifications and Details.

The Contractor should be responsible for selecting, designing, constructing, maintaining, and monitoring a groundwater control system and adapt his operations to ensure the stability of the excavations. Groundwater information presented in Section 4.1 and elsewhere in this report, along with consideration for potential environmental and site variation between the time of our field exploration and construction, should be incorporated in evaluating groundwater depths. The following recommendations are intended to guide the Contractor during design and construction of the dewatering system.

Groundwater control methods typically can be classified into three categories: (i) open pumping, where water is allowed to flow into an excavation and is collected in ditches or sumps and pumped away; (ii) predrainage, where the water table is lowered before excavation using wellpoints, ejector/eductor systems, deep wells, etc.; and (iii) cut off or exclusion, where the groundwater is prevented from entering the excavation by an impermeable barrier, such as by sheet piling, grouting, deep soil mixing, ground freezing, slurry shields, etc.

Cohesive Soils: Groundwater control in cohesive soils can typically be performed using open pumping methods. Seepage rates are lower than in granular soils and groundwater is usually collected in sumps and/or channeled by gravity flow to storm sewers. If cohesive soils contain significant secondary features, seepage rates will be higher. This may require larger sumps and drainage channels, or if significant granular layers are interbedded within the cohesive soils, methods used for granular soils may be required. Where it is present, pressurized groundwater will also yield higher seepage rates.





Granular Soils: Groundwater control in granular soils will typically require predrainage methods or cutoff/exclusion methods. For excavations that are less than 15 feet deep that will occur within saturated sands, a predrainage method such as wellpoints can be considered. For excavations that are greater than 15 feet deep, other predrainage methods that can be considered include multiple staged wellpoints, ejectors/eductors (primarily for use when silty soils are present), or deep wells with submersible pumps. Generally, with predrainage methods, the groundwater depth should be lowered at least 3 feet below the excavation bottom to be able to work on a firm surface when water-bearing granular soils are encountered.

If predrainage methods cannot be used, then a cutoff/exclusion method such as interlocking water-tight sheet piles, drilled shaft/secant pile wall (with grout between the shafts/piles), or jet grouting of the granular strata may be necessary.

Extended Dewatering: Extended and/or excessive dewatering can result in settlement of existing structures in the vicinity of the dewatering operations; the Contractor should take the necessary precautions to minimize the effect on existing structures in the vicinity of the dewatering operation. We recommend that the Contractor verify the groundwater depths and seepage rates prior to and during construction and retain the services of a dewatering expert (if necessary) to assist them in identifying, implementing, and monitoring the most suitable and cost-effective method of controlling groundwater.

Bottom Heave or Boiling: For excavation in cohesive soils, the possibility of bottom heave must be considered due to the removal of the weight of excavated soil. In lean and fat clays, heave normally does not occur unless the ratio of Critical Height to Depth of Cut (see Plate E-1, in Appendix E) approaches one. In silty clays, heave does not typically occur unless an artificially large head of water is created with impervious sheeting in bracing the cut. If the excavation extends below groundwater and the soils at or near the bottom of the excavation are mainly sands or silts, the bottom can fail by blow-out (boiling) when a sufficient hydraulic head exists. The potential for boiling or in-flow of granular soils increases where the groundwater is pressurized. To reduce the potential for boiling of excavations terminating in granular soils below pressurized groundwater, the groundwater table should be lowered at least 3 feet below the excavation.



### **6.3 Construction Monitoring**

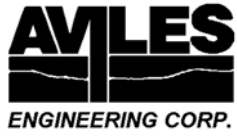
Site preparation (including clearing and proof-rolling) and earthwork operations should be monitored by qualified geotechnical professionals to check for compliance with project documents and changed conditions, if encountered.

### **7.0 GENERAL**

The information contained in this report summarizes conditions found on the date the borings were drilled. The attached boring log is a true representation of the soils encountered at the specific boring location on the date of drilling. Reasonable variations from the subsurface information presented in this report should be anticipated. AEC should be notified immediately when conditions encountered during construction are significantly different from those presented in this report.

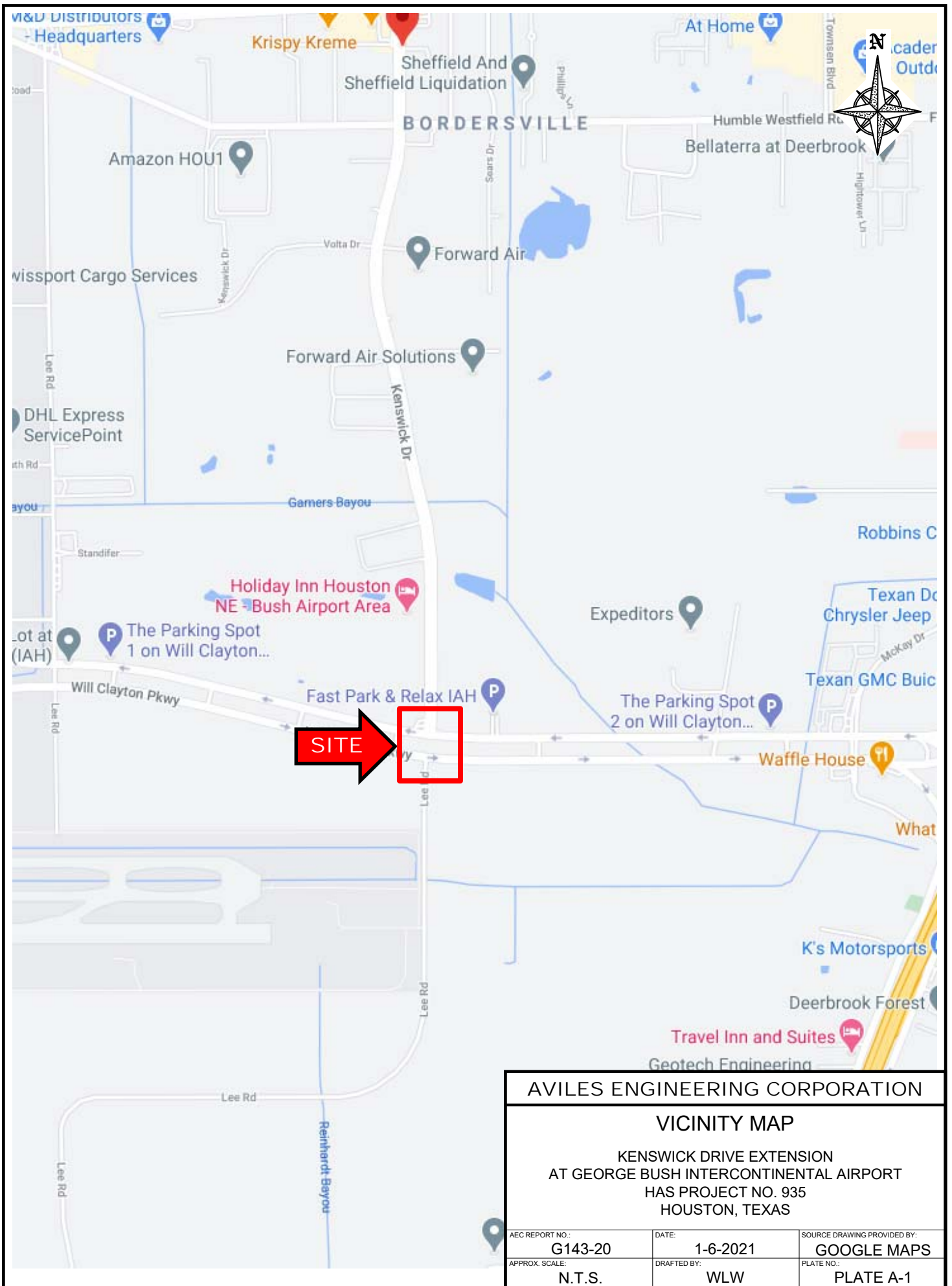
### **8.0 LIMITATIONS**

The investigation was performed using the standard level of care and diligence normally practiced by recognized geotechnical engineering firms in this area, presently performing similar services under similar circumstances. The report has been prepared exclusively for the project and location described in this report and is intended to be used in its entirety. If pertinent project details change or otherwise differ from those described herein, AEC should be notified immediately and retained to evaluate the effect of the changes on the recommendations presented in this report and revise the recommendations if necessary. The scope of services does not include a fault investigation. The recommendations presented in this report should not be used for other structures located at this site or similar structures located at other sites, without additional evaluation and/or investigation.

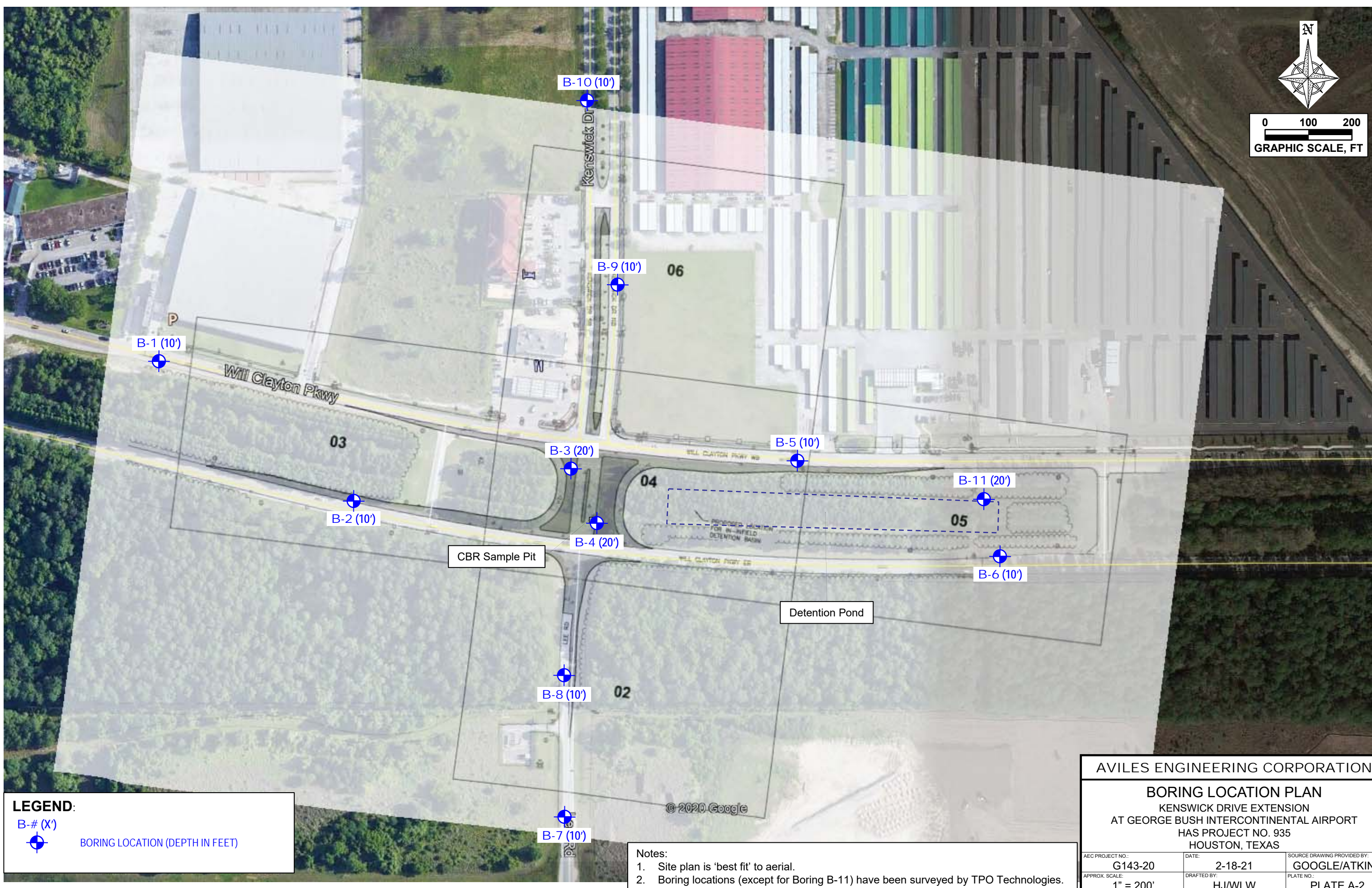
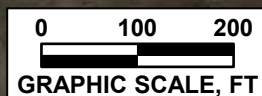



## APPENDIX A

Plate A-1	Vicinity Map
Plate A-2	Boring Location Plan
Plates A-3 to A-13A	Boring Logs
Plate A-14	Key to Symbols - Geosystem Logs
Plate A-15	Legend - gINT Logs
Plate A-16	Classification of Soils for Engineering Purposes
Plate A-17	Terms Used on Boring Logs
Plate A-18	ASTM & TXDOT Designation for Soil Laboratory Tests
Plate A-19	Organic Matter Test Results
Plate A-20	Crumb Test Results
Plate A-21	Double Hydrometer Test Results
Plate A-22	Mohr-Coulomb Diagrams (from CU Triaxial Tests)



<b>AVILES ENGINEERING CORPORATION</b>		
<b>VICINITY MAP</b>		
KENSWICK DRIVE EXTENSION AT GEORGE BUSH INTERCONTINENTAL AIRPORT HAS PROJECT NO. 935 HOUSTON, TEXAS		
AEC REPORT NO.:	DATE:	SOURCE DRAWING PROVIDED BY:
G143-20	1-6-2021	GOOGLE MAPS
APPROX. SCALE:	DRAFTED BY:	PLATE NO.:
N.T.S.	WLW	PLATE A-1



**LEGEND:**  
 B-# (X')  
 BORING LOCATION (DEPTH IN FEET)

**Notes:**  
 1. Site plan is 'best fit' to aerial.  
 2. Boring locations (except for Boring B-11) have been surveyed by TPO Technologies.

AVILES ENGINEERING CORPORATION		
<b>BORING LOCATION PLAN</b>		
KENSWICK DRIVE EXTENSION AT GEORGE BUSH INTERCONTINENTAL AIRPORT HAS PROJECT NO. 935 HOUSTON, TEXAS		
AEC PROJECT NO.:	DATE:	SOURCE DRAWING PROVIDED BY:
G143-20	2-18-21	GOOGLE/ATKINS
APPROX. SCALE:	DRAFTED BY:	PLATE NO.:
1" = 200'	HJ/WLW	PLATE A-2

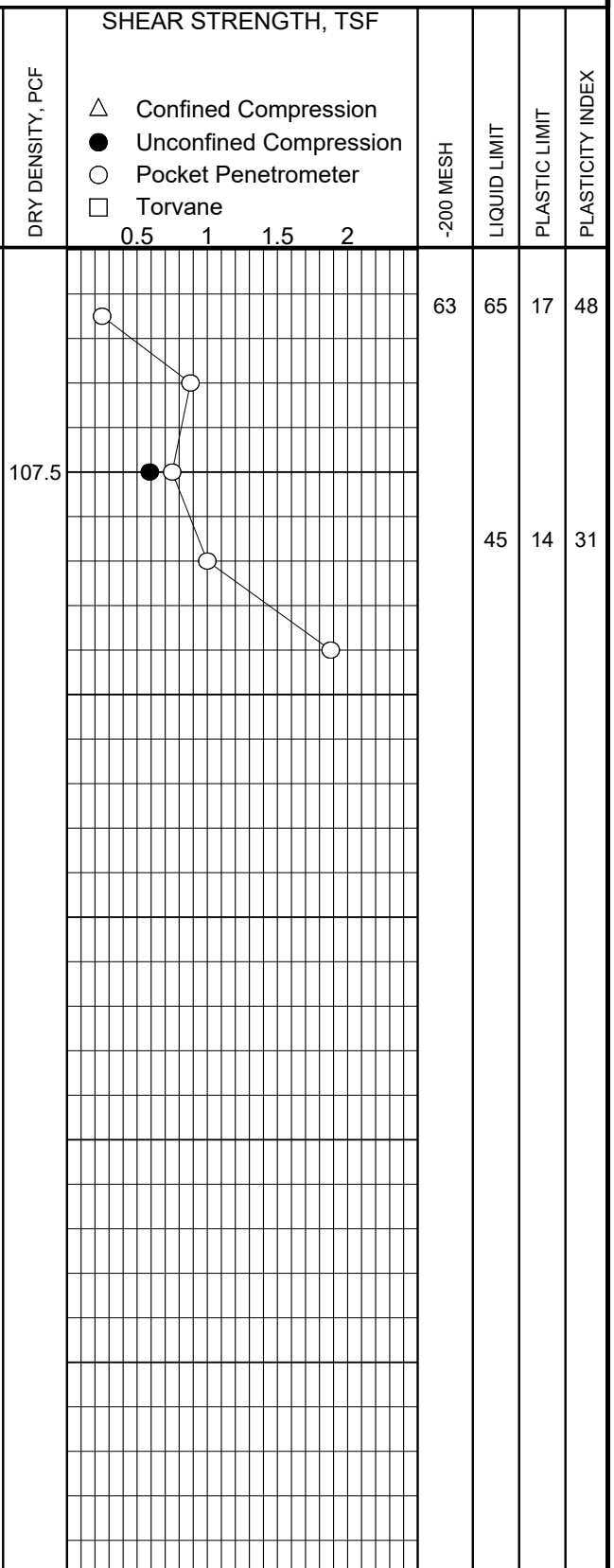
PROJECT: **IAH Kenswick and Lee Road Extension**

BORING **B-1**

DATE **11/04/2020** TYPE **4" Dry Auger**

LOCATION **See Boring Location Plan**

DEPTH IN FEET	SYMBOL	SAMPLE INTERVAL	DESCRIPTION	S.P.T. BLOWS / FT.	MOISTURE CONTENT, %	DRY DENSITY, PCF	SHEAR STRENGTH, TSF				-200 MESH	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
							0.5	1	1.5	2					
0			GRID Coordinates (US Survey ft): Texas State Plane Zone: 4204 Easting: 3139965.72 Northing: 13923864.64 Elevation: 80.68				△ Confined Compression ● Unconfined Compression ○ Pocket Penetrometer □ Torvane								
0			Pavement: 8.5" concrete												
0			Fill: soft to firm, gray Sandy Fat Clay (CH), with silty sand pockets and stabilized sand layer at top												
4			Stiff, gray and dark gray Fat Clay (CH), with silty sand partings -gray and tan, with ferrous nodules 4'-6'												
8			Stiff to very stiff, gray and tan Lean Clay (CL), with silty sand partings -with fat clay seams 8'-10'												
10			Termination Depth = 10 Feet												
12															
16															
20															
24															
28															



BORING DRILLED TO 10 FEET WITHOUT DRILLING FLUID  
 WATER ENCOUNTERED AT N/A FEET WHILE DRILLING   
 WATER LEVEL AT N/A FEET AFTER COMPLETE

DRILLED BY JH Drilling DRAFTED BY AZ LOGGED BY JS

PROJECT: **IAH Kenswick and Lee Road Extension**

BORING **B-2**

DATE **11/04/2020** TYPE **4" Dry Auger**

LOCATION **See Boring Location Plan**

DEPTH IN FEET	SYMBOL	SAMPLE INTERVAL	DESCRIPTION	S.P.T. BLOWS / FT.	MOISTURE CONTENT, %	DRY DENSITY, PCF	SHEAR STRENGTH, TSF				-200 MESH	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
							0.5	1	1.5	2					
0			GRID Coordinates (US Survey ft): Texas State Plane Zone: 4204 Easting: 3140422.67 Northing: 13923560.21 Elevation: 80.82												
0			Pavement: 8.25" concrete												
0			Fill: very stiff, gray and tan Lean Clay with Sand (CL), with fat clay pockets												
4			Hard, gray and tan Lean Clay (CL), with ferrous nodules -with clayey sand seams 2'-4' and silty sand pockets and partings 2'-6'												
8			-with calcareous nodules 6'-10'												
10			Termination Depth = 10 Feet												
12															
16															
20															
24															
28															

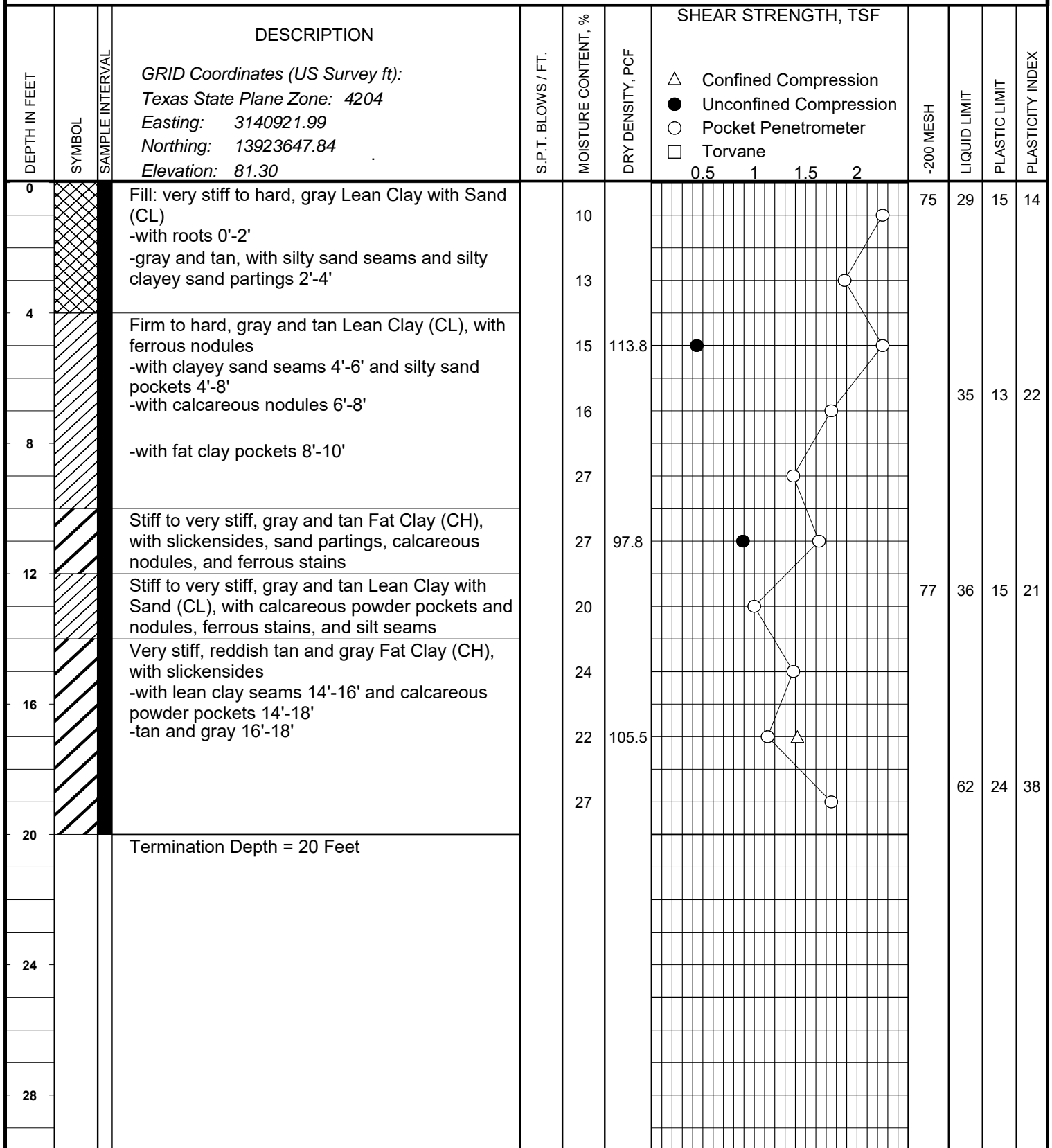
BORING DRILLED TO 10 FEET WITHOUT DRILLING FLUID  
 WATER ENCOUNTERED AT N/A FEET WHILE DRILLING   
 WATER LEVEL AT N/A FEET AFTER COMPLETE   
 DRILLED BY JH Drilling DRAFTED BY AZ LOGGED BY JS

PROJECT: **IAH Kenswick and Lee Road Extension**

BORING **B-3**

DATE **11/04/2020** TYPE **4" Dry Auger**

LOCATION **See Boring Location Plan**



BORING DRILLED TO 20 FEET WITHOUT DRILLING FLUID  
 WATER ENCOUNTERED AT N/A FEET WHILE DRILLING   
 WATER LEVEL AT N/A FEET AFTER COMPLETE

DRILLED BY JH Drilling DRAFTED BY AZ LOGGED BY JS

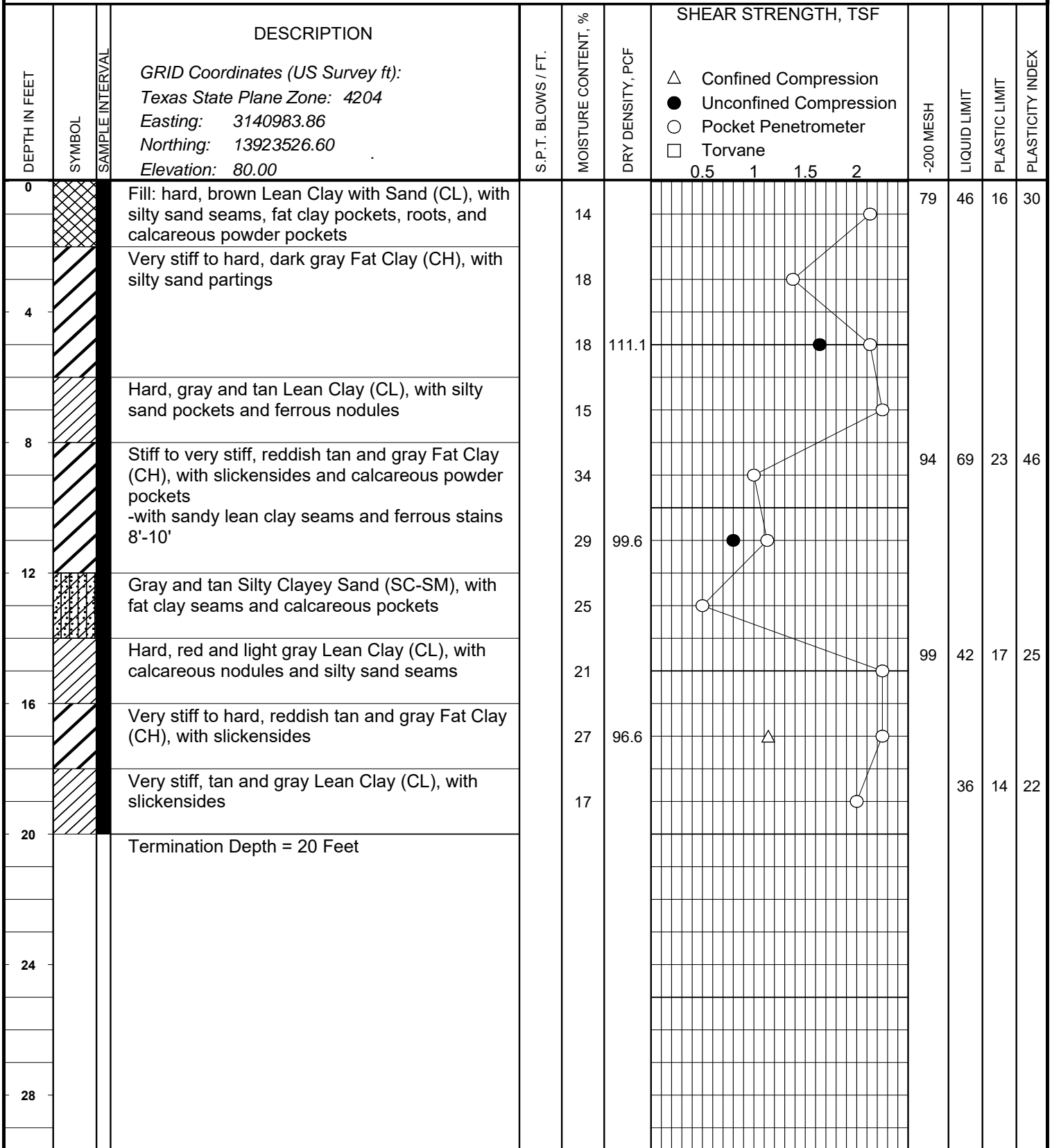


PROJECT: **IAH Kenswick and Lee Road Extension**

ENGINEERING CORP. BORING **B-4**  
 GEOTECHNICAL ENGINEERS

DATE **11/04/2020** TYPE **4" Dry Auger**

LOCATION **See Boring Location Plan**



BORING DRILLED TO 20 FEET WITHOUT DRILLING FLUID  
 WATER ENCOUNTERED AT N/A FEET WHILE DRILLING   
 WATER LEVEL AT N/A FEET AFTER COMPLETE

DRILLED BY JH Drilling DRAFTED BY AZ LOGGED BY JS



5790 Windfern  
Houston, Texas  
Telephone: (713) 895-7645  
Fax: (713) 895-7943

### LOG OF BORING B-04

DATE: 11/04/2020

PROJECT: IAH Kenswick and Lee Road Extension  
Houston, Texas

SURFACE ELEVATION (FT.):  
80.00

PROJECT NO.: G143-20

BORING TYPE: 4" Dry Auger

DEPTH (ft.)	SAMPLES	USC	WATER LEVEL	LOCATION		FIELD STRENGTH DATA	BLOW COUNT	C <sub>u</sub> (tsf)	SS (tsf)	Torvane (tsf)	DRY DENSITY (pcf)	UU / UC SHEAR STRENGTH (tsf)	FAILURE STRAIN (%)	CONFINING PRESSURE (psi)	Natural Moisture Content and Atterberg Limits			ATTERBERG LIMITS (%)			ESTIMATED ANGLE OF INTERNAL FRICTION (°)	OTHER TESTS & REMARKS				
				Northing: 13923526.60	Easting: 3140983.86										Plastic Limit	Moisture Content	Liquid Limit	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			PASSING #200 SIEVE (%)			
0					Texas State Plane, Feet, Grid <td></td> <td>20 40 60 80</td> <td>1.0 2.0 3.0 4.0</td> <td>1.0 2.0 3.0 4.0</td> <td>1.0 2.0 3.0 4.0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		20 40 60 80	1.0 2.0 3.0 4.0	1.0 2.0 3.0 4.0	1.0 2.0 3.0 4.0																
					<b>MATERIAL DESCRIPTION</b>																					
0 - 4.25					FILL: LEAN CLAY WITH SAND (CL), hard, high plasticity, brown, with silty sand seams, fat clay pockets, roots, and calcareous powder pockets, moist	P=4.25											20	40	60	80	14	46	16	30	79	
4.25 - 4.5		CH			FAT CLAY (CH), very stiff to hard, dark gray, with silty sand partings, moist	P=2.75															18					
4.5 - 4.75						P=4.25					111.1	1.64	13.0	0							18					
4.75 - 7.0		CL			LEAN CLAY (CL), hard, gray and tan, with silty sand pockets and ferrous nodules, moist	P=4.5+															15					
7.0 - 8.5		CH			FAT CLAY (CH), stiff to very stiff, very high plasticity, reddish tan and gray, with slickensides and calcareous powder pockets, moist	P=2.0															34	69	23	46	94	
8.5 - 10.5					-with sandy lean clay seams and ferrous stains 8'-10'	P=2.25															29					
10.5 - 12.5		SC SM			SILTY CLAYEY SAND (SC-SM), gray and tan, with fat clay seams and calcareous pockets, moist	P=1.0					99.6	0.80	7.8	0							25					
12.5 - 14.5		CL			LEAN CLAY (CL), hard, high plasticity, red and light gray, with calcareous nodules and silty sand seams, moist	P=4.5+															21	42	17	25	99	
14.5 - 16.5		CH			FAT CLAY (CH), very stiff to hard, reddish tan and gray, with slickensides, moist	P=4.5+															27					
16.5 - 18.5		CL			LEAN CLAY (CL), very stiff, high plasticity, tan and gray, with slickensides, moist	P=4.0															17	36	14	22		
18.5 - 20					Termination depth = 20 feet.																					

Water Level Est.: ▽ Measured: ▼ Perched: ▼  
Water Observations: Groundwater was not encountered during drilling and after completion of drilling.

Key to Abbreviations:

N -SPT Data (blows/ft) T -Torvane (tsf)  
P -Pocket Penetrometer C<sub>u</sub> -Undrained Cohesion (tsf)  
(tsf) SS-Shear Strength (P/2, tsf)

Notes:



Sample Key: SPT Shelby Tube Disturbed (Auger)

PROJECT: **IAH Kenswick and Lee Road Extension**

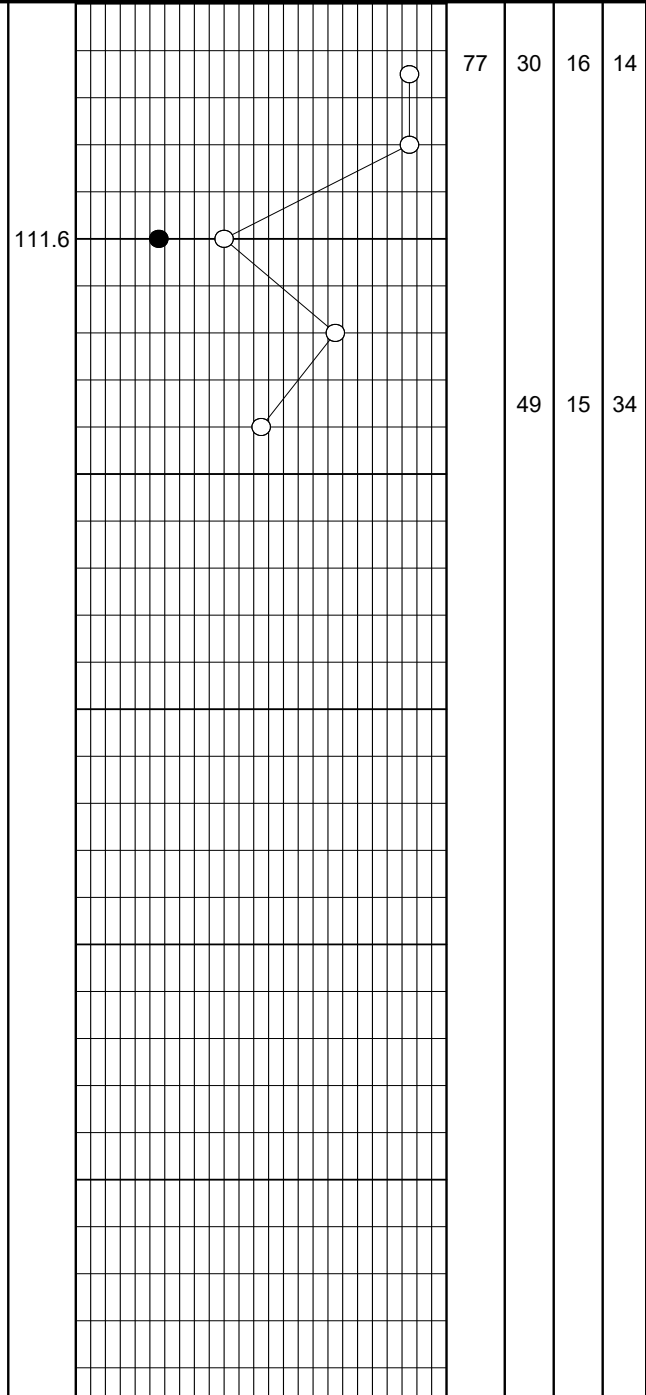
BORING **B-5**



DATE **11/04/2020** TYPE **4" Dry Auger**

LOCATION **See Boring Location Plan**

DEPTH IN FEET	SYMBOL	SAMPLE INTERVAL	DESCRIPTION	S.P.T. BLOWS / FT.	MOISTURE CONTENT, %	DRY DENSITY, PCF	SHEAR STRENGTH, TSF				-200 MESH	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
							0.5	1	1.5	2				
0			Pavement: 8.5" concrete											
0 - 4			Fill: stiff to hard, gray and dark gray Lean Clay with Sand (CL) -with fat clay pockets and calcareous nodules 1'-2' -gray and tan, with sand pockets 2'-4' -with calcareous and ferrous nodules 4'-6'											
4 - 8			Very stiff, gray and tan Lean Clay (CL), with ferrous nodules -with fat clay pockets, silt partings, and calcareous nodules 6'-8' -with silty clay seams 8'-10'											
8 - 10			Termination Depth = 10 Feet											
12														
16														
20														
24														
28														

- SHEAR STRENGTH, TSF
- △ Confined Compression
  - Unconfined Compression
  - Pocket Penetrometer
  - Torvane



BORING DRILLED TO 10 FEET WITHOUT DRILLING FLUID  
 WATER ENCOUNTERED AT N/A FEET WHILE DRILLING   
 WATER LEVEL AT N/A FEET AFTER COMPLETE   
 DRILLED BY JH Drilling DRAFTED BY AZ LOGGED BY JS



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 Houston, Texas  
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 Fax: (713) 895-7943

# LOG OF BORING B-05

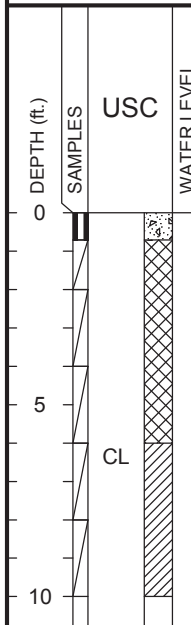
PAGE 1 OF 1

DATE: 11/04/2020  
 SURFACE ELEVATION (FT.): 80.17

PROJECT: IAH Kenswick and Lee Road Extension  
 Houston, Texas

PROJECT NO.: G143-20

BORING TYPE: 4" Dry Auger



**LOCATION**

Northing: 13923686.64  
 Easting: 3141438.61  
 Texas State Plane, Feet, Grid

**MATERIAL DESCRIPTION**

PAVEMENT 8.5" concrete

FILL: LEAN CLAY WITH SAND (CL), stiff to hard, medium plasticity, gray and dark gray, moist  
 -with fat clay pockets and calcareous nodules 1'-2'  
 -gray and tan, with sand pockets 2'-4'  
 -with calcareous and ferrous nodules 4'-6'

LEAN CLAY (CL), very stiff, high plasticity, gray and tan, with ferrous nodules, moist  
 -with fat clay pockets, silt partings, and calcareous nodules 6'-8'  
 -with silty clay seams 8'-10'  
 Termination depth = 10 feet.

FIELD STRENGTH DATA	● BLOW COUNT ●				DRY DENSITY (pcf)	UU / UC SHEAR STRENGTH (tsf)	FAILURE STRAIN (%)	CONFINING PRESSURE (psi)	Natural Moisture Content and Atterberg Limits			
	20	40	60	80					Plastic Limit	Moisture Content	Liquid Limit	
	▲ C <sub>u</sub> (tsf) ▲											
	1.0 2.0 3.0 4.0											
	■ SS (tsf) ■											
	1.0 2.0 3.0 4.0											
	◆ Torvane (tsf) ◆											
	1.0 2.0 3.0 4.0											
P=4.5+			■									
P=4.5+			■									
P=2.0	▲	■			111.6	0.56	12.0	0				
P=3.5			■									
P=2.5		■										

MOISTURE CONTENT (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)	ESTIMATED ANGLE OF INTERNAL FRICTION (°), OTHER TESTS & REMARKS
	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
LL	PL	PI			
13	30	16	14	77	1'-2' Crumb: 1
14					
17					
17					
19	49	15	34		

Water Level Est.: ▽ Measured: ▽ Perched: ▽  
 Water Observations: Groundwater was not encountered during drilling and after completion of drilling.

Sample Key:  SPT  Shelby Tube  Disturbed (Auger)

Key to Abbreviations:

N -SPT Data (blows/ft) T -Torvane (tsf)  
 P -Pocket Penetrometer C<sub>u</sub> -Undrained Cohesion (tsf)  
 (tsf) SS-Shear Strength (P/2, tsf)

Notes:

PLATE A-7A

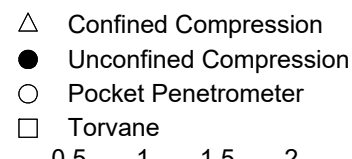
PROJECT: **IAH Kenswick and Lee Road Extension**

BORING **B-6**

DATE **11/04/2020** TYPE **4" Dry Auger**

LOCATION **See Boring Location Plan**

DEPTH IN FEET	SYMBOL	SAMPLE INTERVAL	DESCRIPTION	S.P.T. BLOWS / FT.	MOISTURE CONTENT, %	DRY DENSITY, PCF	SHEAR STRENGTH, TSF				-200 MESH	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
							△	●	○	□				
0			GRID Coordinates (US Survey ft): Texas State Plane Zone: 4204 Easting: 3141916.33 Northing: 13923477.74 Elevation: 78.40											
0			Pavement: 8.25" concrete											
0			Base: 5" stabilized sand and gravel											
0			Stiff to hard, gray and tannish gray Lean Clay (CL), with ferrous nodules											
0			-with sand pockets 1'-2' and calcareous nodules 1'-4'											
4			-gray 2'-4'											
4			-gray and tan, with sand pockets 4'-8'											
4			-with calcareous nodules 6'-8'											
8			Very stiff, gray and tan Fat Clay (CH), with calcareous powder seams and nodules											
8			Termination Depth = 10 Feet											
12														
16														
20														
24														
28														



BORING DRILLED TO 10 FEET WITHOUT DRILLING FLUID  
 WATER ENCOUNTERED AT N/A FEET WHILE DRILLING   
 WATER LEVEL AT N/A FEET AFTER COMPLETE

DRILLED BY JH Drilling DRAFTED BY AZ LOGGED BY JS



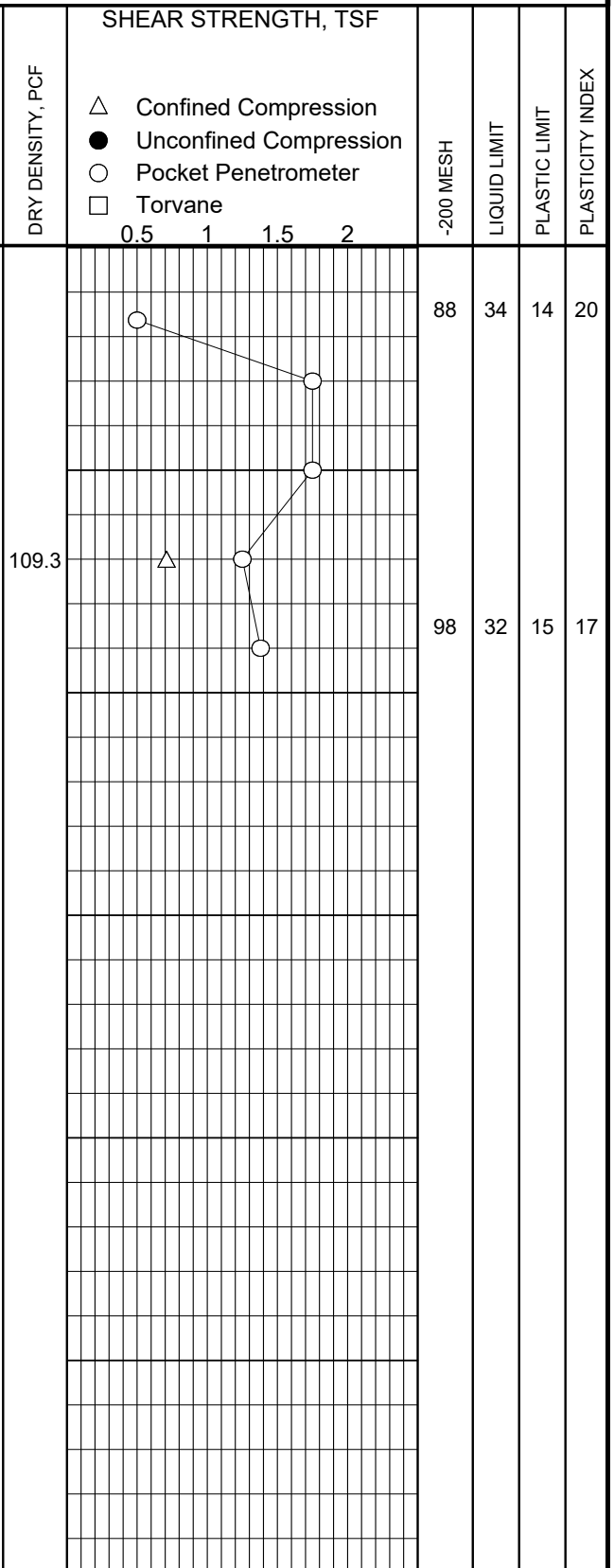
PROJECT: **IAH Kenswick and Lee Road Extension**

BORING **B-7**

DATE **11/04/2020** TYPE **4" Dry Auger**

LOCATION **See Boring Location Plan**

DEPTH IN FEET	SYMBOL	SAMPLE INTERVAL	DESCRIPTION	S.P.T. BLOWS / FT.	MOISTURE CONTENT, %	DRY DENSITY, PCF	SHEAR STRENGTH, TSF				-200 MESH	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
							0.5	1	1.5	2				
0			Pavement: 7.5" concrete											
			Base: 6" stabilized sand and gravel											
			Fill: firm to stiff, gray and dark gray Lean Clay (CL), with calcareous nodules and fat clay pockets											
4			Stiff to very stiff, gray and olive gray Lean Clay (CL)											
			-with calcareous nodules 2'-4'											
			-tannish gray and dark gray 4'-6', with ferrous nodules 4'-10'											
			-gray and dark gray, with clayey sand partings 6'-8'											
8			-gray and tan, with vertical silty sand seams 8'-10'											
			Termination Depth = 10 Feet											
12														
16														
20														
24														
28														



BORING DRILLED TO 10 FEET WITHOUT DRILLING FLUID  
 WATER ENCOUNTERED AT N/A FEET WHILE DRILLING  $\nabla$   
 WATER LEVEL AT N/A FEET AFTER COMPLETE  $\nabla$   
 DRILLED BY JH Drilling DRAFTED BY AZ LOGGED BY JS

PROJECT: **IAH Kenswick and Lee Road Extension**

BORING **B-8**

DATE **11/04/2020** TYPE **4" Dry Auger**

LOCATION **See Boring Location Plan**

DEPTH IN FEET	SYMBOL	SAMPLE INTERVAL	DESCRIPTION	S.P.T. BLOWS / FT.	MOISTURE CONTENT, %	DRY DENSITY, PCF	SHEAR STRENGTH, TSF				-200 MESH	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
							△	●	○	□				
			<p>GRID Coordinates (US Survey ft):  Texas State Plane Zone: 4204  Easting: 3140919.54  Northing: 13923175.51  Elevation: 81.73</p>											
0			Pavement: 5.5" asphalt											
			Base: 7.5" stabilized sand and gravel											
			Fill: very stiff, gray Sandy Silty Clay (CL-ML), with lean clay and calcareous powder pockets											
4			Tannish gray Silty Clayey Sand (SC-SM), with ferrous nodules											
			Firm to hard, gray and tan Lean Clay (CL), with calcareous nodules											
			-with clayey sand seams and partings 4'-8'											
			-gray, with ferrous nodules 6'-8'											
8			-with silty clayey sand seams 8'-10'											
			Termination Depth = 10 Feet											
12														
16														
20														
24														
28														

BORING DRILLED TO 10 FEET WITHOUT DRILLING FLUID  
WATER ENCOUNTERED AT N/A FEET WHILE DRILLING   
WATER LEVEL AT N/A FEET AFTER **COMPLETE**

DRILLED BY JH Drilling DRAFTED BY AZ LOGGED BY JS



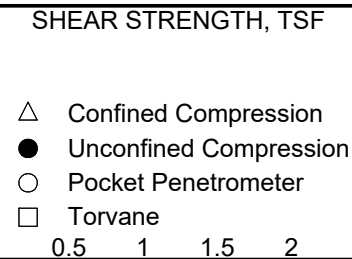
PROJECT: **IAH Kenswick and Lee Road Extension**



BORING **B-9**

DATE **11/04/2020** TYPE **4" Dry Auger**

LOCATION **See Boring Location Plan**

DEPTH IN FEET	SYMBOL	SAMPLE INTERVAL	DESCRIPTION	S.P.T. BLOWS / FT.	MOISTURE CONTENT, %	DRY DENSITY, PCF	SHEAR STRENGTH, TSF							
							-200 MESH	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX				
0			Pavement: 11" concrete											
			Base: 6" stabilized sand and gravel											
			Fill: very stiff, gray and dark gray Lean Clay (CL), with fat clay pockets, ferrous and calcareous nodules, roots, and silty sand pockets											
4			Stiff to very stiff, bluish gray and tan Lean Clay (CL), with calcareous and ferrous nodules -with silty sand pockets 2'-6' -gray and tan 4'-8'											
8			Stiff to very stiff, gray and tan Fat Clay (CH), with slickensides and ferrous stains											
			Termination Depth = 10 Feet											
12														
16														
20														
24														
28														



BORING DRILLED TO 10 FEET WITHOUT DRILLING FLUID  
 WATER ENCOUNTERED AT N/A FEET WHILE DRILLING   
 WATER LEVEL AT N/A FEET AFTER **COMPLETE**   
 DRILLED BY JH Drilling DRAFTED BY AZ LOGGED BY JS



PROJECT: **IAH Kenswick and Lee Road Extension**

BORING **B-10**

DATE **11/04/2020** TYPE **4" Dry Auger**

LOCATION **See Boring Location Plan**

DEPTH IN FEET	SYMBOL	SAMPLE INTERVAL	DESCRIPTION	S.P.T. BLOWS / FT.	MOISTURE CONTENT, %	DRY DENSITY, PCF	SHEAR STRENGTH, TSF				-200 MESH	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
							△	●	○	□				
0			GRID Coordinates (US Survey ft): Texas State Plane Zone: 4204 Easting: 3140928.78 Northing: 13924492.78 Elevation: 79.34				0.5	1	1.5	2				
0			Pavement: 11.5" concrete											
0			Base: 6.5" stabilized sand and gravel											
0			Fill: hard, stabilized, tan Sandy Lean Clay (CL) -with gravel 1.5'-2' -brown, with calcareous nodules 2'-4'											
4			Fill: firm to very stiff, brown and gray Fat Clay (CH), with sandy lean clay pockets and calcareous nodules											
4			Fill: soft to firm, grayish brown and gray Lean Clay (CL), with fat clay pockets and calcareous nodules -with ferrous nodules 6'-8' -gray and tan 8'-10'											
8			Termination Depth = 10 Feet											
12														
16														
20														
24														
28														

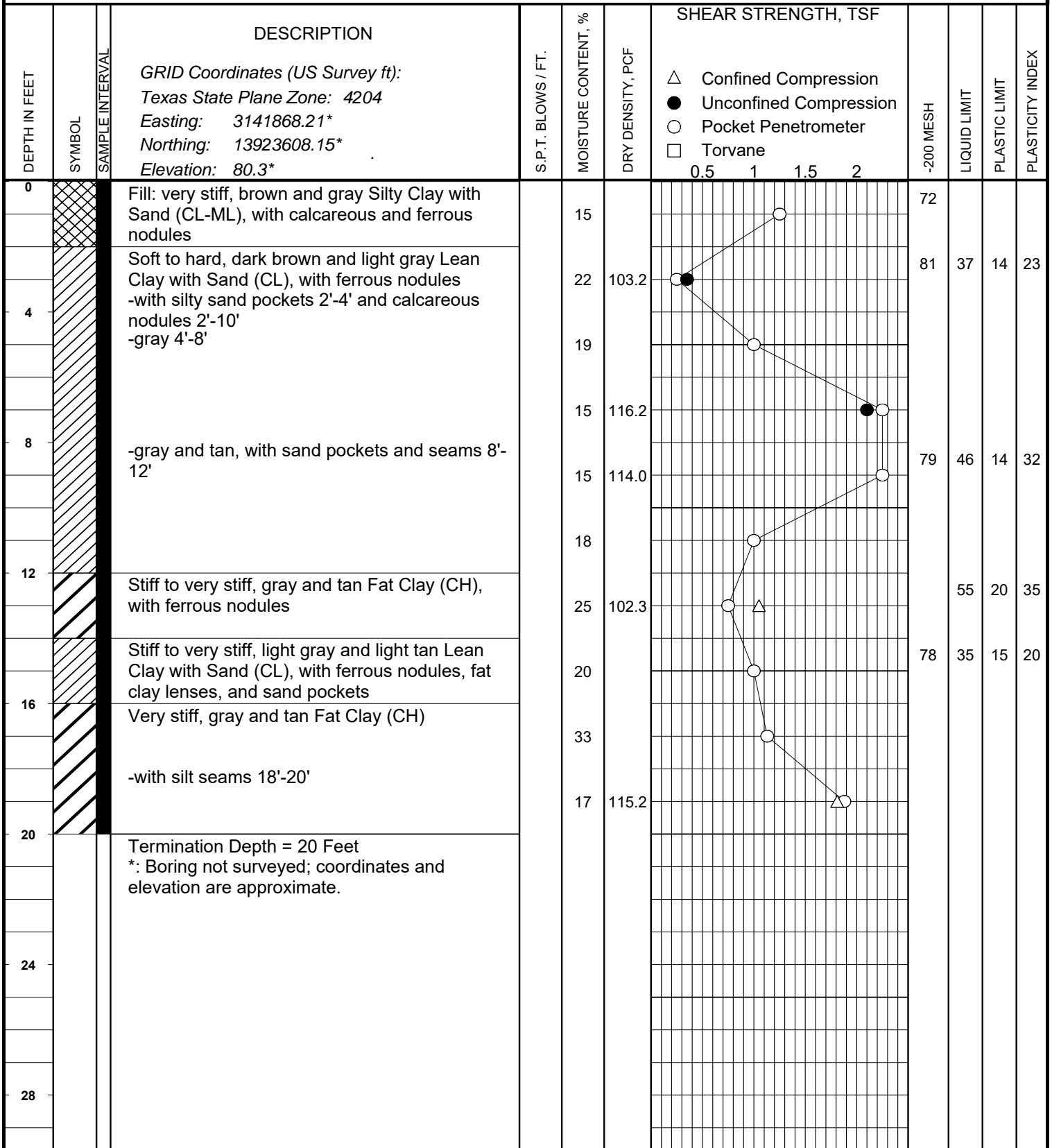
BORING DRILLED TO 10 FEET WITHOUT DRILLING FLUID  
 WATER ENCOUNTERED AT N/A FEET WHILE DRILLING   
 WATER LEVEL AT N/A FEET AFTER **COMPLETE**   
 DRILLED BY JH Drilling DRAFTED BY AZ LOGGED BY JS

PROJECT: **IAH Kenswick and Lee Road Extension**

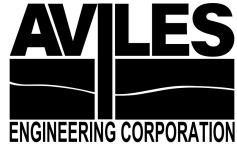
BORING **B-11**

DATE **1/26/2021** TYPE **4" Dry Auger**

LOCATION **See Boring Location Plan**



BORING DRILLED TO 20 FEET WITHOUT DRILLING FLUID  
WATER ENCOUNTERED AT N/A FEET WHILE DRILLING   
WATER LEVEL AT N/A FEET AFTER 24 HRS   
DRILLED BY V&S DRAFTED BY YY LOGGED BY YY



5790 Windfern  
Houston, Texas  
Telephone: (713) 895-7645  
Fax: (713) 895-7943

# LOG OF BORING B-11

DATE: 1/26/2021  
SURFACE ELEVATION (FT.): 80.30

PROJECT: IAH Kenswick and Lee Road Extension  
Houston, Texas

PROJECT NO.: G143-20 BORING TYPE: 4" Dry Auger

DEPTH (ft.)	SAMPLES	USC	WATER LEVEL	LOCATION		FIELD STRENGTH DATA	BLOW COUNT 20 40 60 80	C <sub>u</sub> (tsf)	SS (tsf)	Torvane (tsf)	DRY DENSITY (pcf)	UU / UC SHEAR STRENGTH (tsf)	FAILURE STRAIN (%)	CONFINING PRESSURE (psi)	Natural Moisture Content and Atterberg Limits			ATTERBERG LIMITS (%)			ESTIMATED ANGLE OF INTERNAL FRICTION (°)	OTHER TESTS & REMARKS	
				Northing: 13923608.15 Easting: 3141868.21											Plastic Limit	Moisture Content	Liquid Limit	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			PASSING #200 SIEVE (%)
				Texas State Plane, Feet, Grid																			
0				<b>MATERIAL DESCRIPTION</b>																			
0-2.5				FILL: SILTY CLAY WITH SAND (CL-ML), very stiff, brown and gray, with calcareous and ferrous nodules, moist		P=2.5																	
2.5-5		CL		LEAN CLAY WITH SAND (CL), soft to hard, high plasticity, light gray and dark brown, with ferrous nodules, moist -with silty sand pockets 2'-4' and calcareous nodules 2'-10' -gray 4'-8'		P=0.5				103.2	0.35	9.3	0										2'-4' D.Hydro:95.3% D <sub>50</sub> =0.029mm
5-10				-gray and tan, with sand pockets and seams 8'-12'		P=2.0																	4'-6' Crumb: 4
10-15		CH		FAT CLAY (CH), stiff to very stiff, gray and tan, with ferrous nodules, moist		P=4.5+				116.2	2.10	8.0	0										8'-10' CU: SG:2.691 C'= 350 psf φ'= 31.0° C <sub>cu</sub> = 570 psf φ <sub>cu</sub> = 13.6°
15-20		CL		LEAN CLAY WITH SAND (CL), stiff to very stiff, medium plasticity, light gray and light tan, with ferrous nodules, fat clay lenses, and sand pockets, moist		P=4.5+				114.0													
20-22		CH		FAT CLAY (CH), very stiff, gray and tan, moist -with silt seams 18'-20'		P=2.0																	
22-25						P=1.5				102.3	1.05	10.1	9										
25-33						P=2.0																	
33-37.5						P=2.25																	
37.5-40						P=3.75				115.2	1.81	14.4	13										
40-42				Termination depth = 20 feet.																			

Water Level Est.: ▽ Measured: ▽ Perched: ▽  
Water Observations: Groundwater was not encountered during drilling and after completion of drilling.  
Sample Key:  SPT  Shelby Tube  Disturbed (Auger)

Key to Abbreviations:  
N -SPT Data (blows/ft) T -Torvane (tsf)  
P -Pocket Penetrometer C<sub>u</sub> -Undrained Cohesion (tsf)  
(tsf) SS-Shear Strength (P/2, tsf)

Notes:  
(1) Boring was not surveyed. Coordinates and boring surface elevation are approximate.  
PLATE A-13A

# KEY TO SYMBOLS

Symbol Description

## Strata symbols



Paving



Fill



High plasticity  
clay



Low plasticity  
clay



Silty clayey sand

## Misc. Symbols



Pocket Penetrometer



Unconfined Compression



Confined Compression

## Soil Samplers



Rock core



Undisturbed thin wall  
Shelby tube

# LEGEND

## LITHOLOGY SYMBOLS



USCS Low Plasticity Lean Clay



USCS High Plasticity Fat Clay



Concrete



Fill (made ground)



USCS Clayey Sand

## SAMPLER TYPES



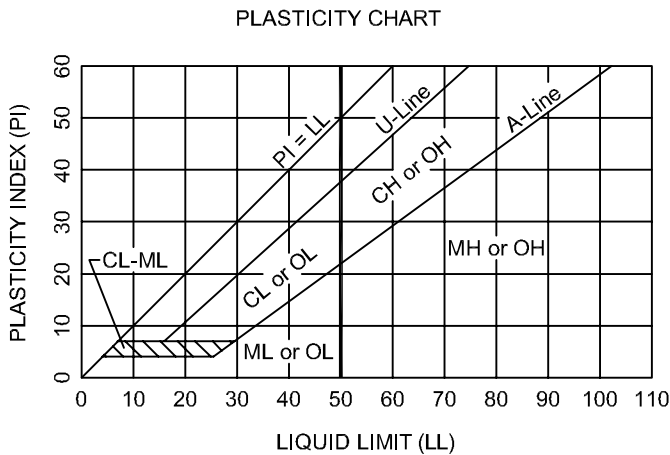
Harris County Flood Control District: Shelby Tube



Rock Core

MAJOR DIVISIONS		GROUP SYMBOL	TYPICAL NAMES	
COARSE-GRAINED SOILS (Less than 50% passes No. 200 sieve)	GRAVELS (Less than 50% of coarse fraction passes No. 4 sieve)	CLEAN GRAVELS (Less than 5% passes No. 200 sieve)		
		GW	Well-graded gravel, well-graded gravel with sand	
		GP	Poorly-graded gravel, poorly-graded gravel with sand	
		GRAVELS WITH FINES (More than 12% passes No. 200 sieve)	Limits plot below "A" line & hatched zone on plasticity chart	GM
	Limits plot above "A" line & hatched zone on plasticity chart		GC	Clayey gravel, clayey gravel with sand
	SANDS (50% or more of coarse fraction passes No. 4 sieve)	CLEAN SANDS (Less than 5% passes No. 200 sieve)		
		SW	Well-graded sand, well-graded sand with gravel	
		SP	Poorly-graded sand, poorly-graded sand with gravel	
SANDS WITH FINES (More than 12% passes No. 200 sieve)		Limits plot below "A" line & hatched zone on plasticity chart	SM	Silty sand, silty sand with gravel
	Limits plot above "A" line & hatched zone on plasticity chart	SC	Clayey sand, clayey sand with gravel	
FINE-GRAINED SOILS (50% or more passes No. 200 sieve)	SILTS AND CLAYS (Liquid Limit Less Than 50%)		ML	Silt, silt with sand, silt with gravel, sandy silt, gravelly silt
			CL	Lean clay, lean clay with sand, lean clay with gravel, sandy lean clay, gravelly lean clay
			OL	Organic clay, organic clay with sand, sandy organic clay, organic silt, sandy organic silt
	SILTS AND CLAYS (Liquid Limit 50% or More)		MH	Elastic silt, elastic silt with sand, sandy elastic silt, gravelly elastic silt
			CH	Fat clay, fat clay with sand, fat clay with gravel, sandy fat clay, gravelly fat clay
			OH	Organic clay, organic clay with sand, sandy organic clay, organic silt, sandy organic silt

NOTE: Coarse soils between 5% and 12% passing the No. 200 sieve and fine-grained soils with limits plotting in the hatched zone of the plasticity chart are to have dual symbols.

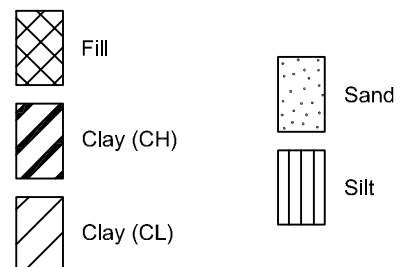


Equation of A-Line: Horizontal at PI=4 to LL=25.5, then  $PI=0.73(LL-20)$   
 Equation of U-Line: Vertical at LL=16 to PI=7, then  $PI=0.9(LL-8)$

DEGREE OF PLASTICITY OF COHESIVE SOILS

Degree of Plasticity	Plasticity Index
None .....	0 - 4
Slight .....	5 - 10
Medium .....	11 - 20
High .....	21 - 40
Very High.....	>40

SOIL SYMBOLS



TERMS USED ON BORING LOGS

SOIL GRAIN SIZE

U.S. STANDARD SIEVE

	6"	3"	3/4"	#4	#10	#40	#200		
BOULDERS	COBBLES	GRAVEL		SAND			SILT	CLAY	
		COARSE	FINE	COARSE	MEDIUM	FINE			
	152	76.2	19.1	4.76	2.00	0.420	0.074	0.002	

SOIL GRAIN SIZE IN MILLIMETERS

STRENGTH OF COHESIVE SOILS

<u>Consistency</u>	Undrained Shear Strength, Kips per Sq. ft.	<u>SPT Blowcount</u>
Very Soft .....	less than 0.25	< 2 bpf
Soft .....	0.25 to 0.50	2-4 bpf
Firm .....	0.50 to 1.00	4-8 bpf
Stiff .....	1.00 to 2.00	8-16 bpf
Very Stiff .....	2.00 to 4.00	16-32 bpf
Hard .....	greater than 4.00	>32 bpf

RELATIVE DENSITY OF COHESIONLESS SOILS FROM STANDARD PENETRATION TEST

Very Loose .....	<4 bpf
Loose .....	5-10 bpf
Medium Dense .....	11-30 bpf
Dense .....	31-50 bpf
Very Dense .....	>50 bpf

SPLIT-BARREL SAMPLER DRIVING RECORD

Blows per Foot	Description
25 .....	25 blows driving sampler 12 inches, after initial 6 inches of seating.
50/7" .....	50 blows driving sampler 7 inches, after initial 6 inches of seating.
Ref/3" .....	50 blows driving sampler 3 inches, during initial 6-inches seating interval.

NOTE: To avoid change to sampling tools, driving is limited to 50 blows during or after seating interval.

DRY STRENGTH ASTM D2488

MOISTURE CONDITION ASTM D2488

None	Dry specimen crumbles into powder with mere pressure of handling	Dry	Absence of moisture, dusty, dry to the touch
Low	Dry specimen crumbles into powder with some finger pressure	Moist	Damp but no visible water
Medium	Dry specimen breaks into pieces or crumbles with considerable pressure	Wet	Visible free water
High	Dry specimen cannot be broken with finger pressure, it can be broken between thumb and hard surface		
Very High	Dry specimen cannot be broken between thumb and hard surface		

SOIL STRUCTURE

Slickensided	Having planes of weakness that appear slick and glossy. The degree of slickensidedness depends upon the spacing of slickensides and the easiness of breaking along these planes.
Fissured	Containing shrinkage or relief cracks, often filled with fine sand or silt; usually more or less vertical.
Friable	Crumbly, can be easily crushed with light pressure.
Blocky	Clays that have a block-like or polyhedral structure.
Pocket	Inclusion of material of different texture that is smaller than the diameter of the sample.
Parting	Inclusion less than 1/8 inch thick extending through the sample.
Seam	Inclusion 1/8 inch to 3 inches thick extending through the sample.
Layer	Inclusion greater than 3 inches thick extending through the sample.
Laminated	Soil sample composed of alternating partings or seams of different soil types.
Interlayered	Soil sample composed of alternating layers of different soil types.
Intermixed	Soil sample composed of pockets of different soil types and layered or laminated structure is not evident.
Calcareous	Having appreciable quantities of calcium material.



## ASTM & TXDOT DESIGNATION FOR SOIL LABORATORY TESTS

SOIL TEST	ASTM TEST DESIGNATION	TXDOT TEST DESIGNATION
Unified Soil Classification System	D 2487	Tex-142-E
Moisture Content	D 2216	Tex-103-E
Specific Gravity	D 854	Tex-108-E
Sieve Analysis	D 6913	Tex-110-E (Part 1)
Hydrometer Analysis	D 7928	Tex-110-E (Part 2)
Minus No. 200 Sieve	D 1140	Tex-111-E
Liquid Limit	D 4318	Tex-104-E
Plastic Limit	D 4318	Tex-105-E
Standard Proctor Compaction	D 698	Tex-114-E
Modified Proctor Compaction	D 1557	Tex-113-E
California Bearing Ratio	D 1883	-
Swell	D 4546	-
Consolidation	D 2435	-
Unconfined Compression	D 2166	-
Unconsolidated-Undrained Triaxial	D 2850	Tex-118-E
Consolidated-Undrained Triaxial	D 4767	Tex-131-E
Permeability (constant head)	D 5084	-
Pinhole	D 4647	-
Crumb	D 6572	-
Double Hydrometer	D 4221	-
pH of Soil	D 4972	Tex-128-E
Soil Suction	D 5298	-
Soil Sulfate	C 1580	Tex-145-E
Organics	D 2974	Tex-148-E

# AVILES ENGINEERING CORPORATION

Consulting Engineers - Geotechnical, Construction Materials Testing, Environmental

## ORGANIC MATTER IN SOILS

*ASTM D 2974-07, Test Method C*

**Project :** Kenswick Drive Extension  
**Location of Project:** Houston, Texas

**Job No.:** G143-20  
**Date of Testing:**

Boring and Depth	B-1 (1'-2')	B-6 (1'-2')
Soil Description	Fill: Sandy Fat Clay (CH)	Lean Clay (CL)
<b>Organic Matter Content</b>	<b>2.22%</b>	<b>2.26%</b>
Furnace Temperature, °C	440	440



# AVILES ENGINEERING CORPORATION

Consulting Engineers - Geotechnical, Construction Materials Testing, Environmental

## GRAIN SIZE ANALYSIS - SIEVE & DOUBLE HYDROMETER TESTS

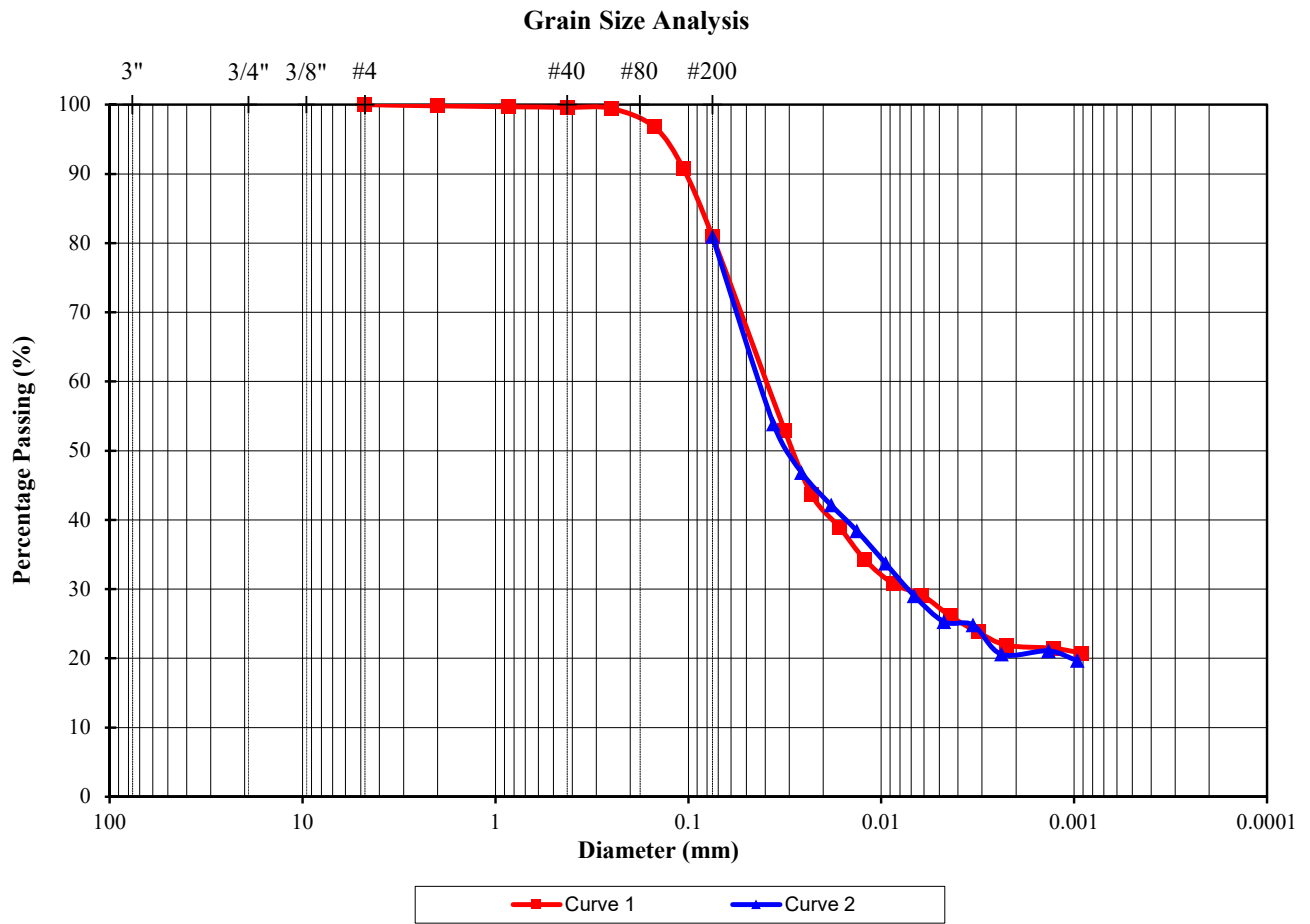
**Project:** IAH Kenswick and Lee Road Extension

**Job No.:** G143-20

**Location of Project:** Houston, Texas

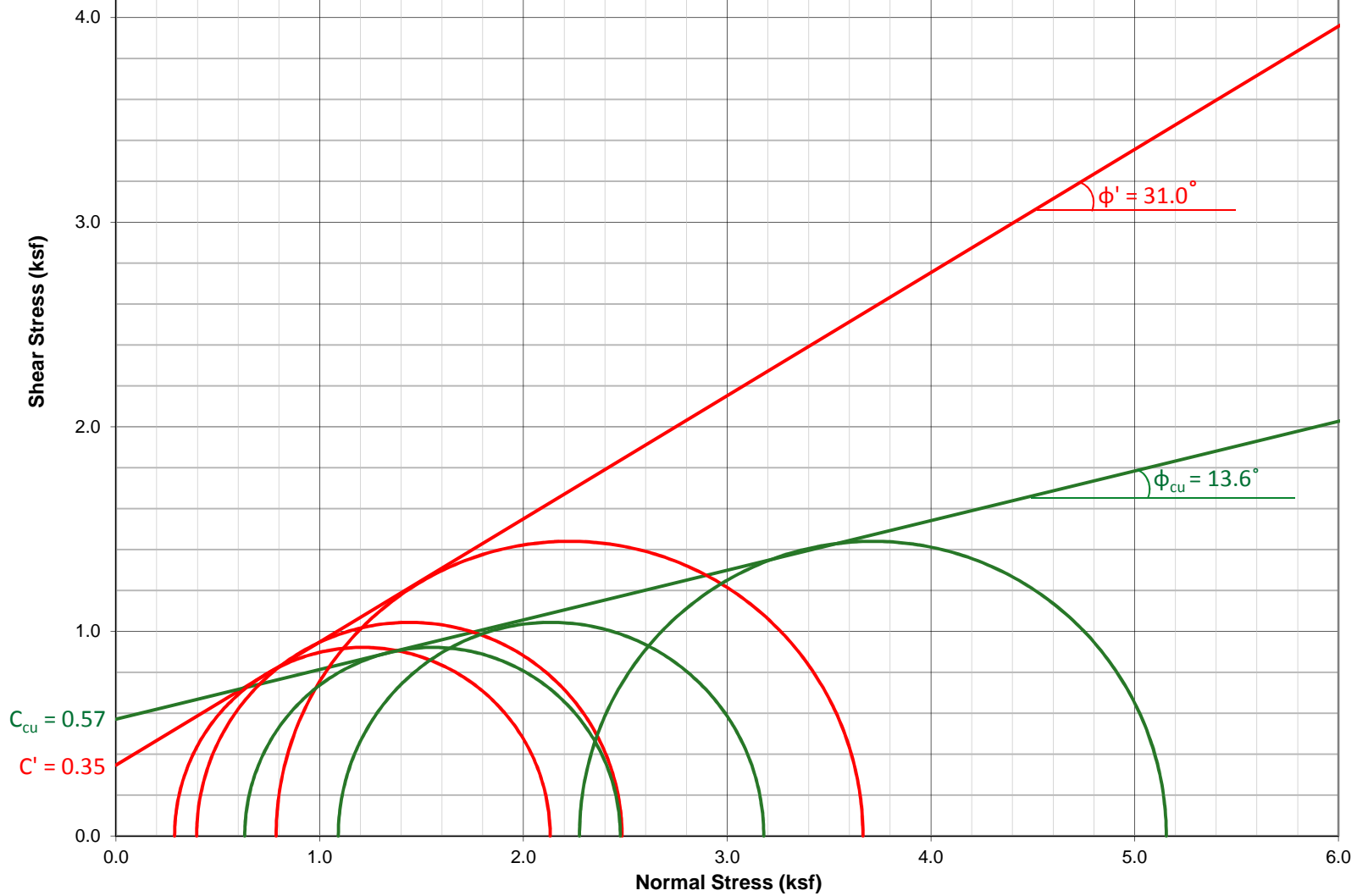
**Date of Testing:** 2/1/2021

		<b>Sand</b>			
<b>Gravel</b>		<b>Coarse to Medium</b>	<b>Fine</b>	<b>Silt</b>	<b>Clay</b>



# MOHR-COULOMB DIAGRAMS

Tan and gray LEAN CLAY WITH SAND (CL)  
LL = 46, PL = 14, PI = 32, -#200 = 79%  
 $W_p = 15.3\%$ ,  $\gamma_d = 114.0$  pcf,  $e_p = 0.473$



— Effective Stress    — Total Stress



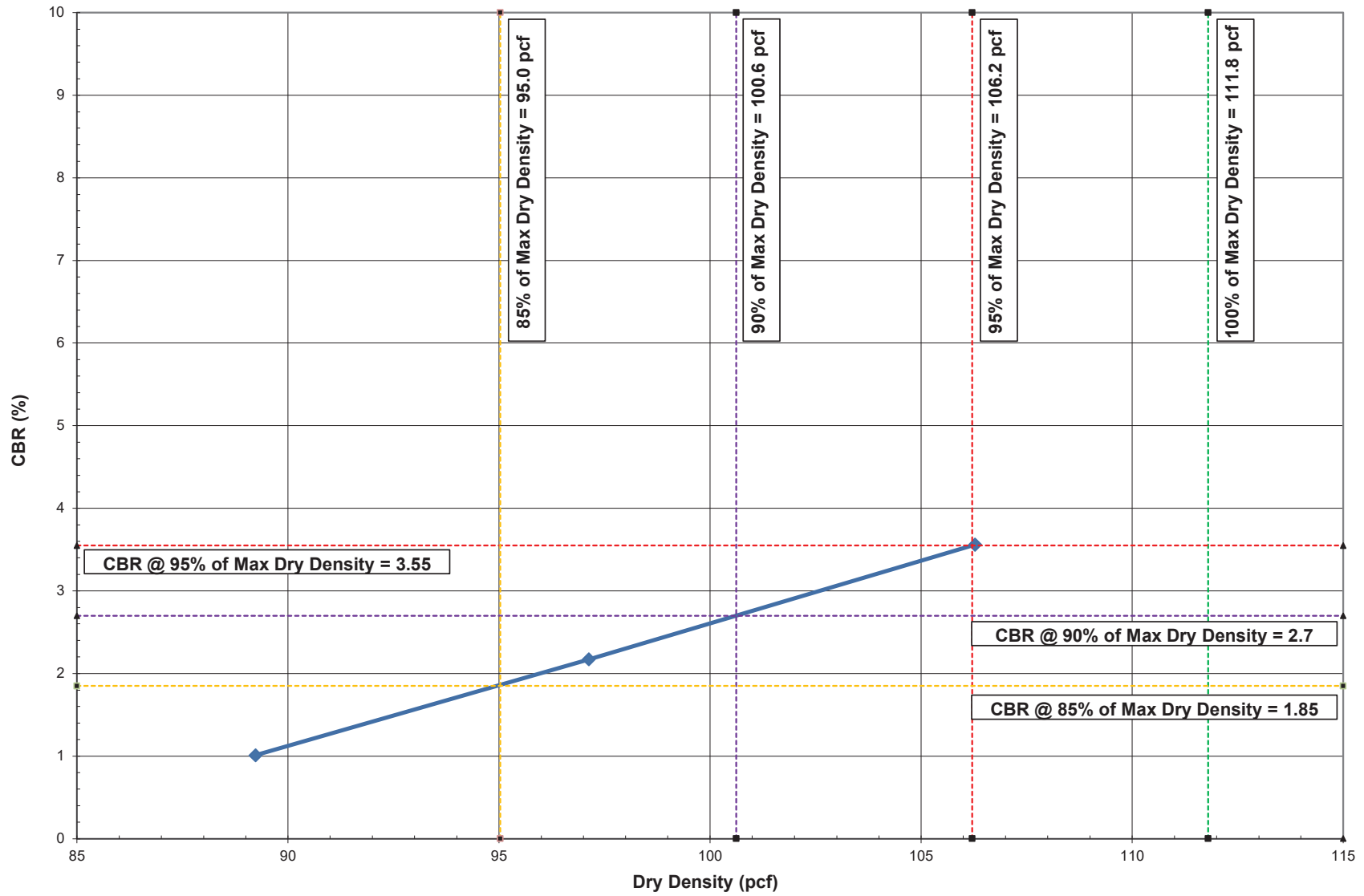
## APPENDIX B

Plate B-1	Standard Proctor Test Results
Plates B-2 and B-3	California Bearing Ratio (CBR) Test Results
Plates B-4 to B-7	Dynamic Cone Penetrometer Test Results



G143-20 IAH Kenswick Drive Extension  
California Bearing Ratio (ASTM D-1883)

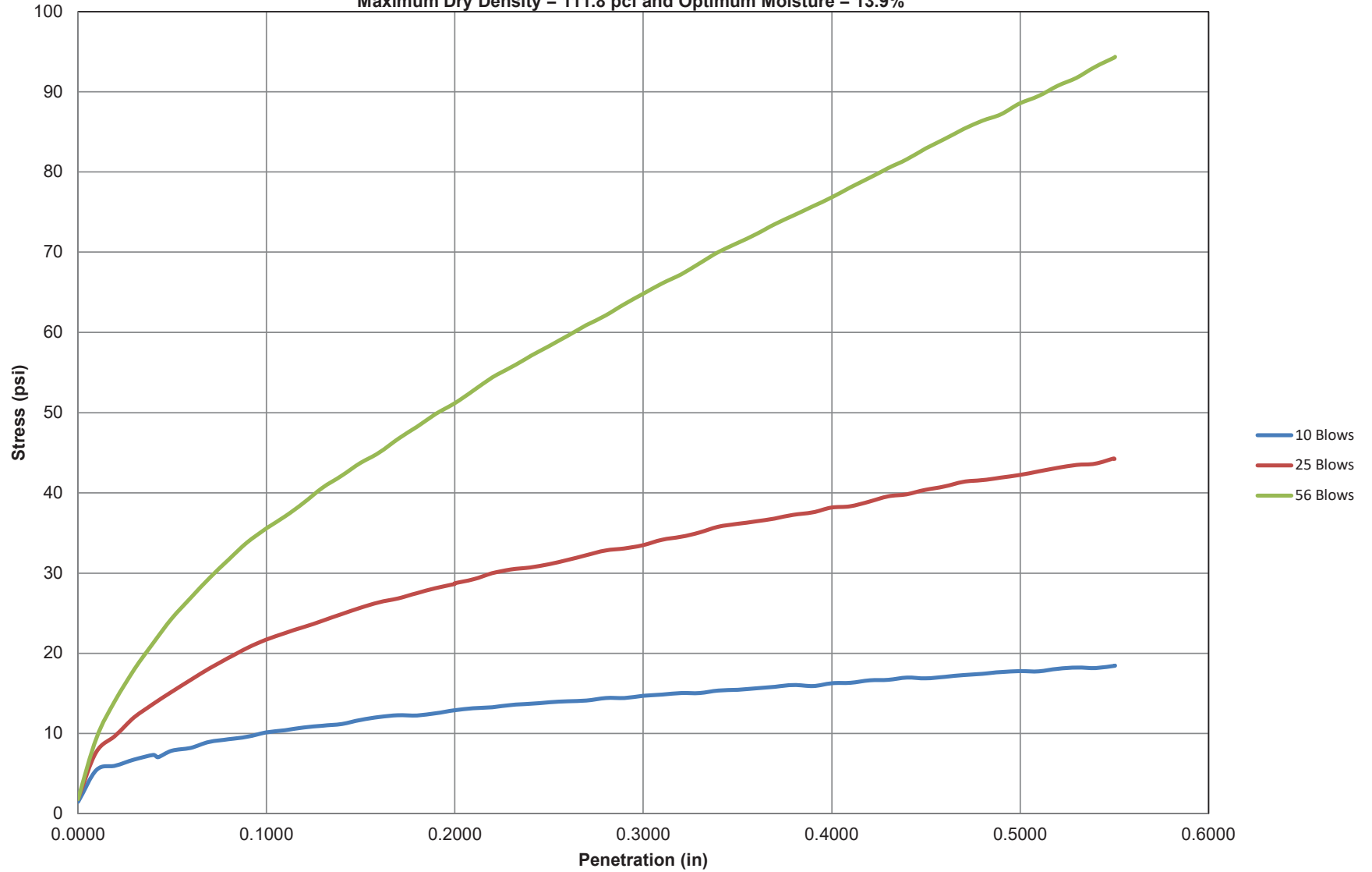
Boring/Pit B-4 Sample - Standard Proctor (ASTM D-698)  
Maximum Dry Density = 111.8 pcf and Optimum Moisture = 13.9%



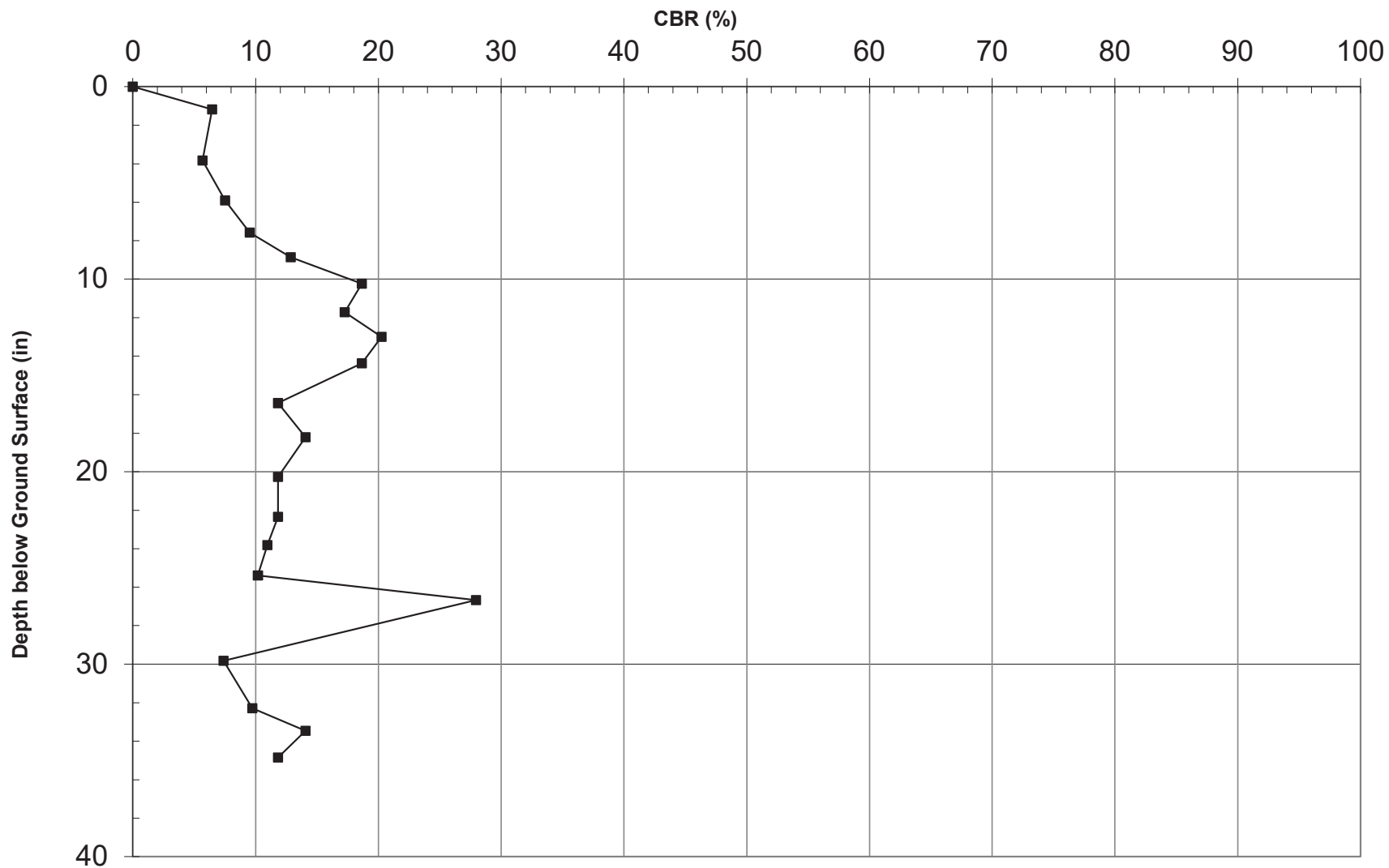


G143-20 IAH Kenswick Drive Extension  
California Bearing Ratio (ASTM D-1883)

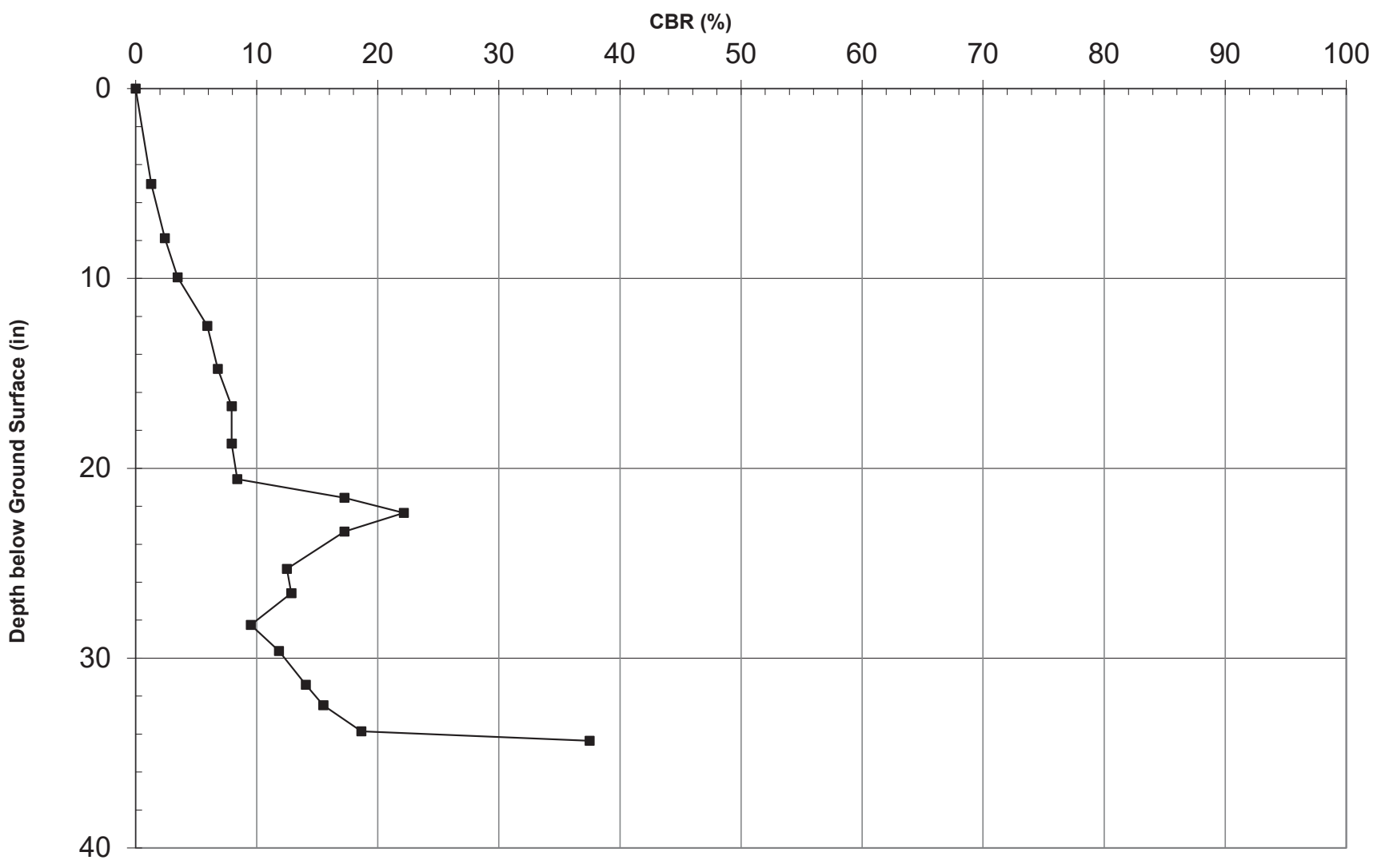
Boring/Pit B-4 Sample - Standard Proctor (ASTM D-698)  
Maximum Dry Density = 111.8 pcf and Optimum Moisture = 13.9%



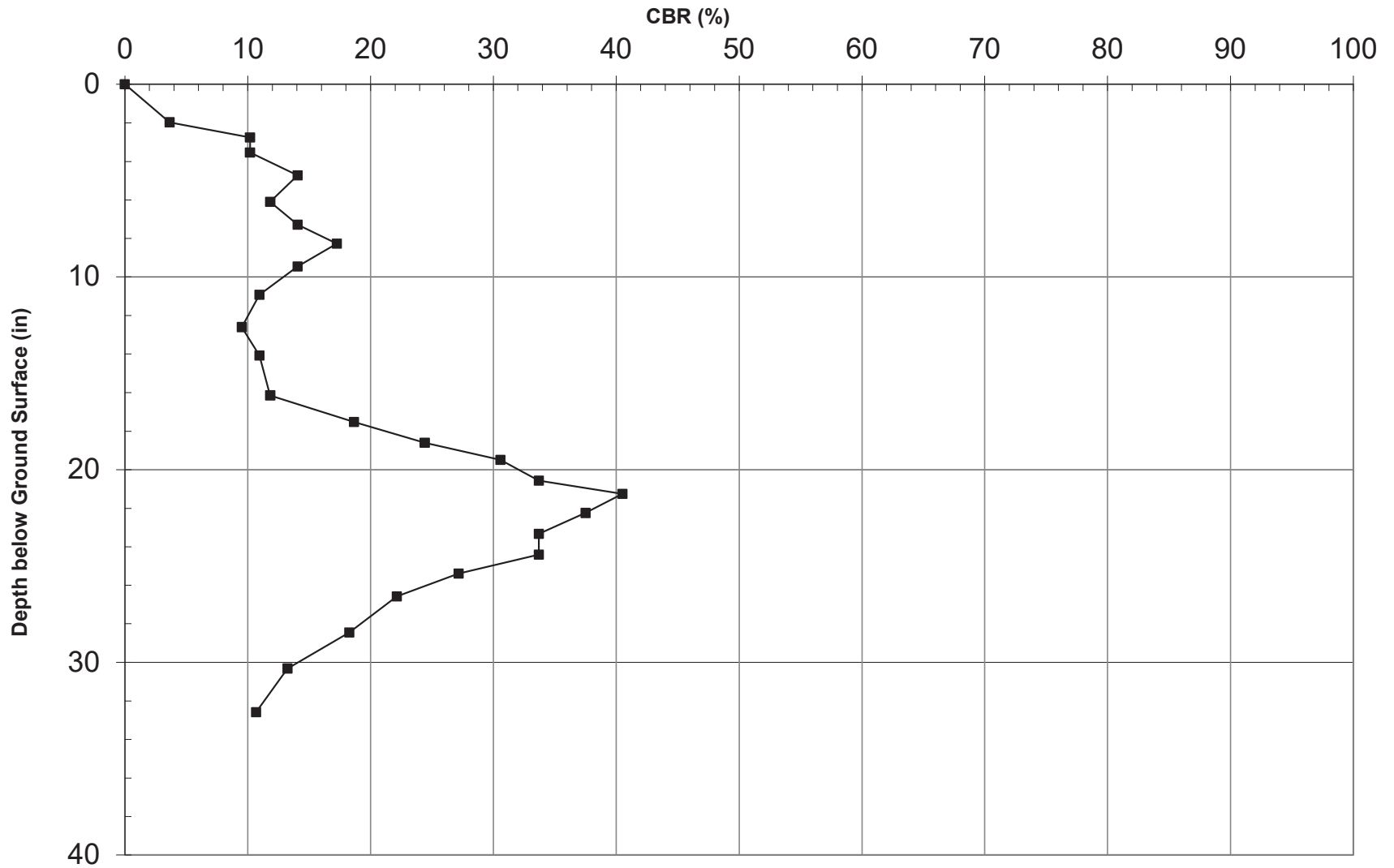
IAH Kenswick Drive Extension  
Dynamic Cone Penetrometer Test (ASTM D6951)  
CBR vs. Subgrade Depth (DCP-B1)



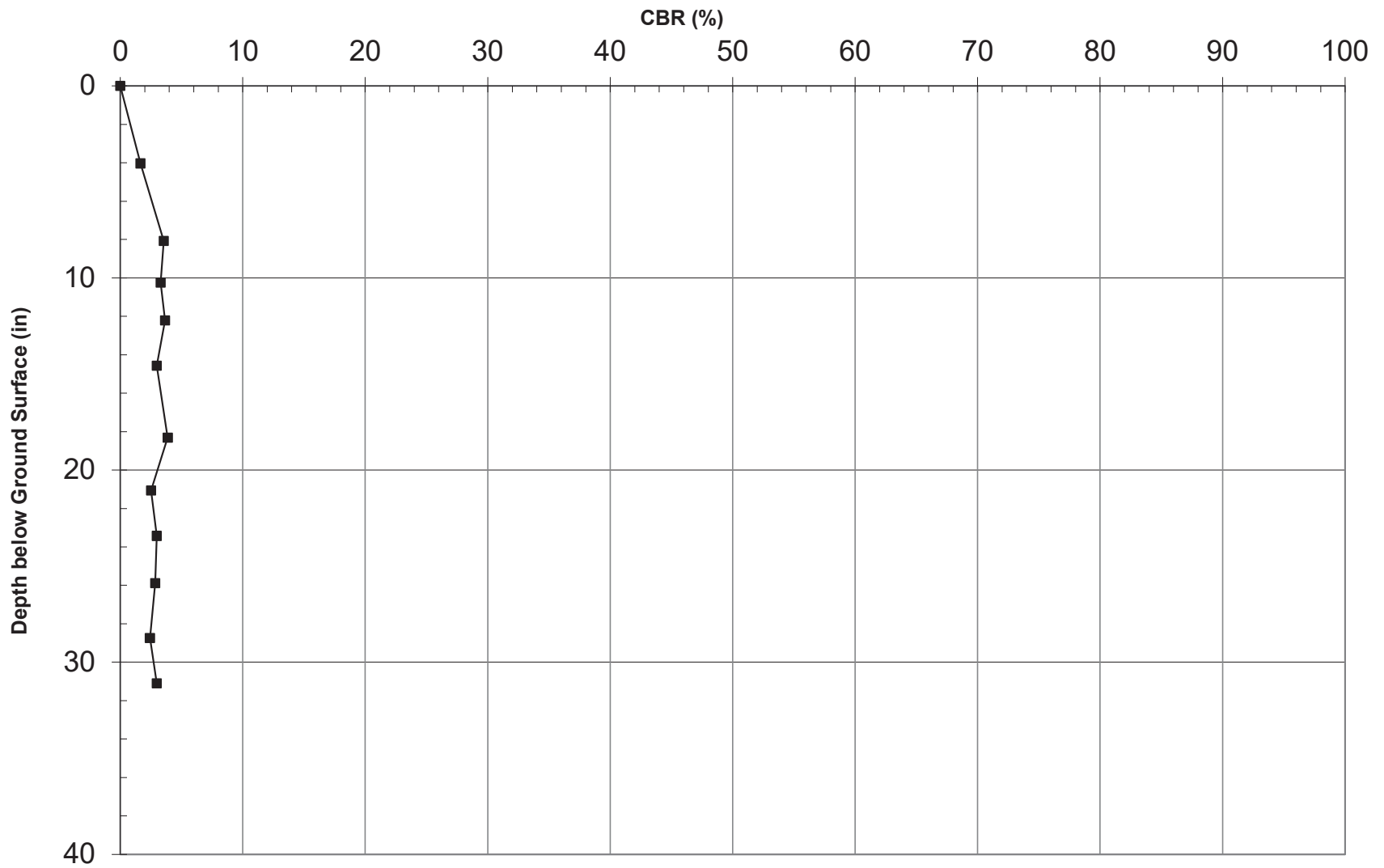
IAH Kenswick Drive Extension  
Dynamic Cone Penetrometer Test (ASTM D6951)  
CBR vs. Subgrade Depth (DCP-B4)



IAH Kenswick Drive Extension  
Dynamic Cone Penetrometer Test (ASTM D6951)  
CBR vs. Subgrade Depth (DCP-B7)



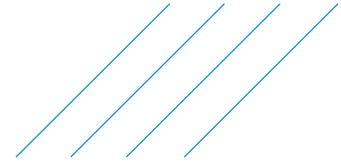
IAH Kenswick Drive Extension  
Dynamic Cone Penetrometer Test (ASTM D6951)  
CBR vs. Subgrade Depth (DCP-B9)



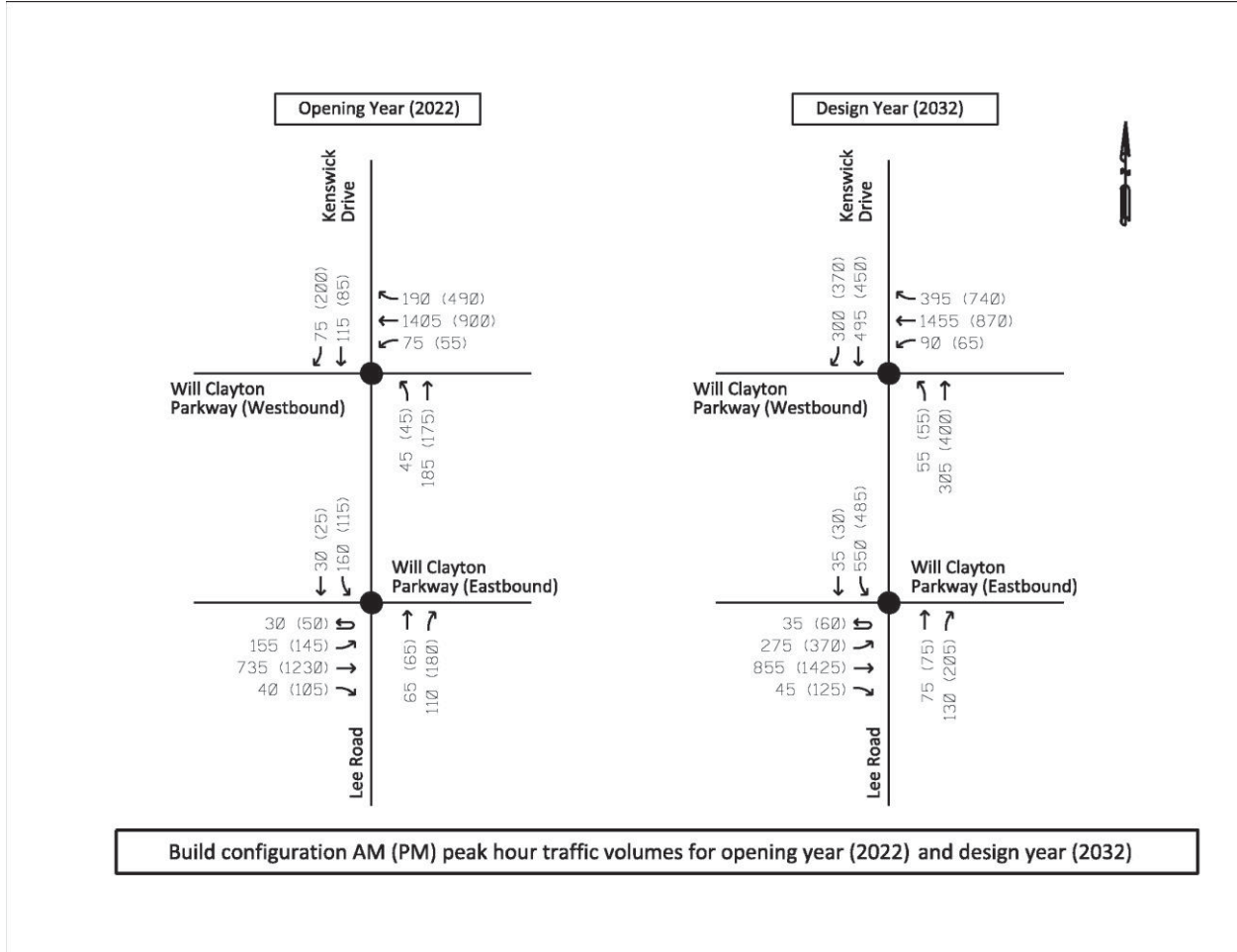


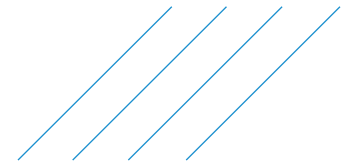
## APPENDIX C

Plates C-1 and C-2	“Estimated Traffic Volumes for Traffic Operations Analysis and Signal Warrant Study” from Atkins “Traffic Operations Analysis and Traffic Signal Warrant Analysis, Will Clayton Parkway and Kenswick Drive” memo, dated December 4, 2020
Plate C-3	Atkins drawing “Kenswick Drive Extension Typical Pavement Sections and Details”, dated February 5, 2021
Plate C-4	TXCRCP-ME v07b Results for Concrete Pavement Design



Estimated AM Peak Hour and PM Peak Hour Opening Year and Design Year Traffic Volumes—  
Used for Traffic Operations Analysis in Synchro Software





Estimated Opening Year (2022) Traffic Volumes—  
Used for Signal Warrant Study

Hour	Eastbound Approach Traffic Volume	Westbound Approach Traffic Volume	Southbound Approach Traffic Volume	Northbound Approach Traffic Volume
12:00 a.m.	356	183	24	17
1:00 a.m.	180	97	33	14
2:00 a.m.	96	122	23	9
3:00 a.m.	109	264	24	17
4:00 a.m.	199	551	44	18
5:00 a.m.	650	948	97	64
6:00 a.m.	887	1,190	206	108
7:00 a.m.	1,102	1,373	265	166
8:00 a.m.	878	1,154	208	145
9:00 a.m.	809	872	189	125
10:00 a.m.	882	1,015	177	131
11:00 a.m.	1,065	944	222	146
12:00 p.m.	1,161	1,072	264	177
1:00 p.m.	1,205	1,166	228	180
2:00 p.m.	1,482	1,074	205	143
3:00 p.m.	1,518	1,014	204	205
4:00 p.m.	1,659	1,119	242	217
5:00 p.m.	1,850	1,189	356	233
6:00 p.m.	1,350	980	262	160
7:00 p.m.	1,056	1,025	111	131
8:00 p.m.	973	751	110	96
9:00 p.m.	839	606	84	57
10:00 p.m.	797	411	48	60
11:00 p.m.	460	288	34	46
<b>Grand Total</b>	<b>21,565</b>	<b>19,406</b>	<b>3,661</b>	<b>2,664</b>



REVISIONS		
NO.	DESCRIPTION	DATE BY

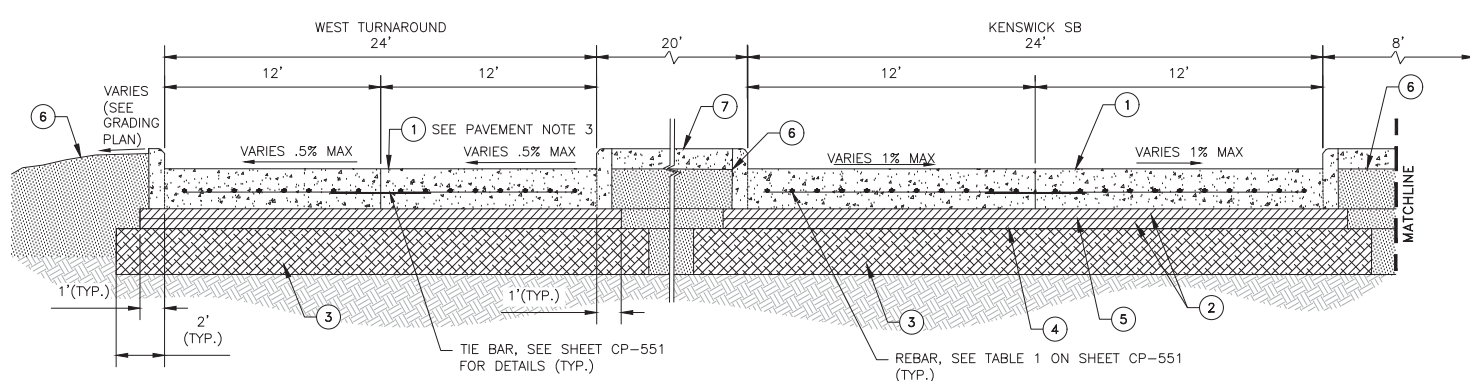
**GEORGE BUSH INTERCONTINENTAL AIRPORT (IAH)**  
**KENSWICK DRIVE EXTENSION**  
**TYPICAL PAVEMENT SECTIONS**  
**AND DETAILS**

PROJECT MGR:	MES
DESIGNER:	ALR
DRAWN BY:	ALR
CHECK BY:	PMW
SCALE:	
DATE:	02/05/2021

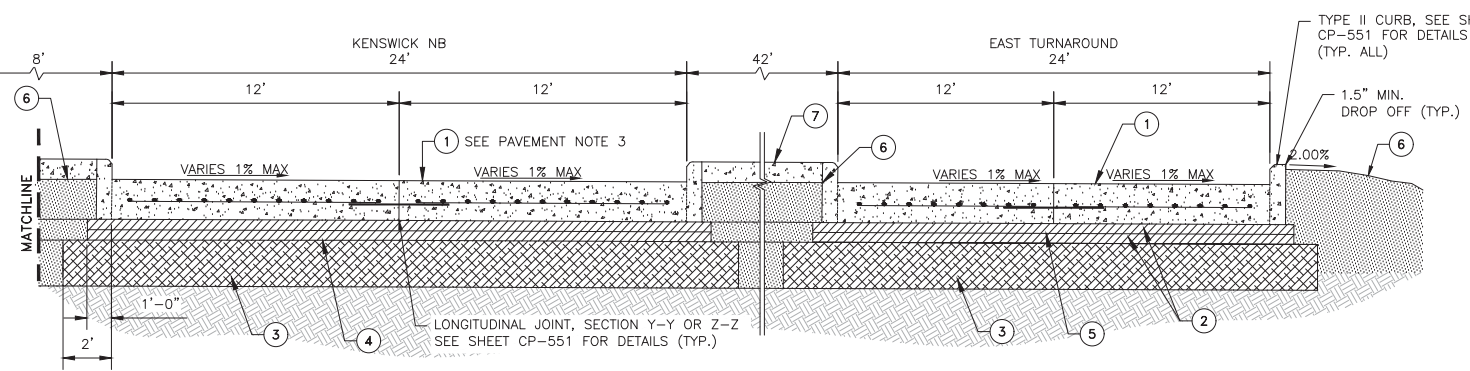
JOHN L. VERBURG, JR.  
 TEXAS REGISTRATION 125465  
 FOR REVIEW ONLY.  
 DESIGN DOCUMENTS DEPICTED  
 HERE IN ARE INCOMPLETE AND  
 MAY NOT BE USED FOR  
 REGULATORY APPROVAL, PERMIT  
 OR CONSTRUCTION.  
 02/05/2021

APPROVED BY:  
 \_\_\_\_\_  
 DIRECTOR  
 HOUSTON AIRPORT SYSTEM

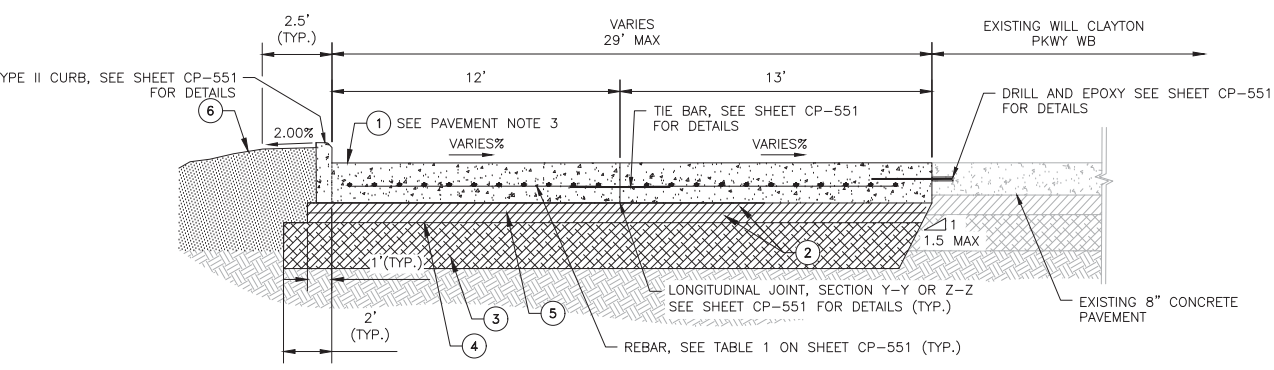
PROJECT NO.	100072032
A.I.P. NO.	
C.I.P. NO.	
H.A.S. NO.	935
SHEET NO.	



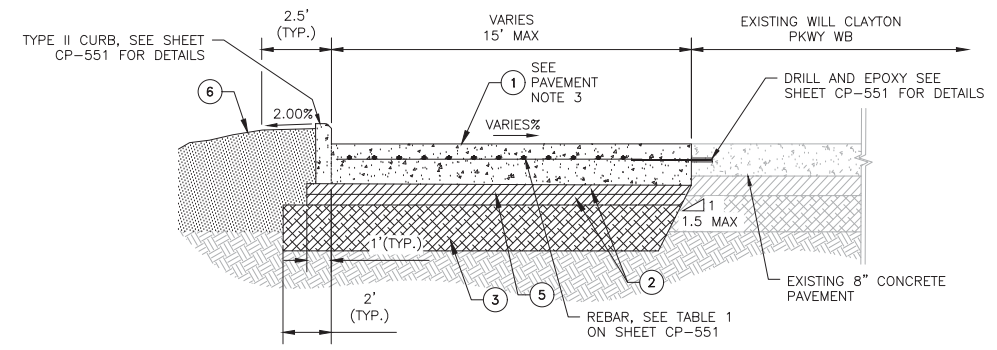
**1 INTERSECTION TYPICAL PAVEMENT SECTION**  
 CP-501 SCALE: NTS



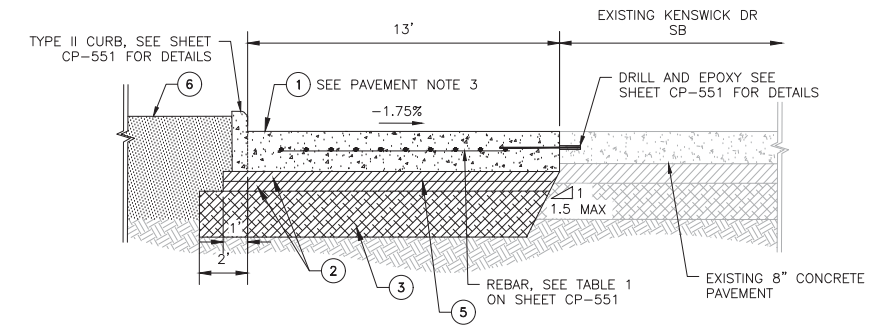
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 CP-501 SCALE: NTS



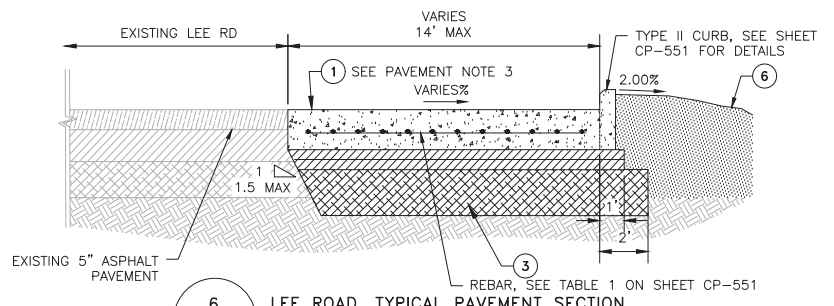
**3 WILL CLAYTON PARKWAY EB TYPICAL PAVEMENT SECTION**  
 CP-501 SCALE: NTS



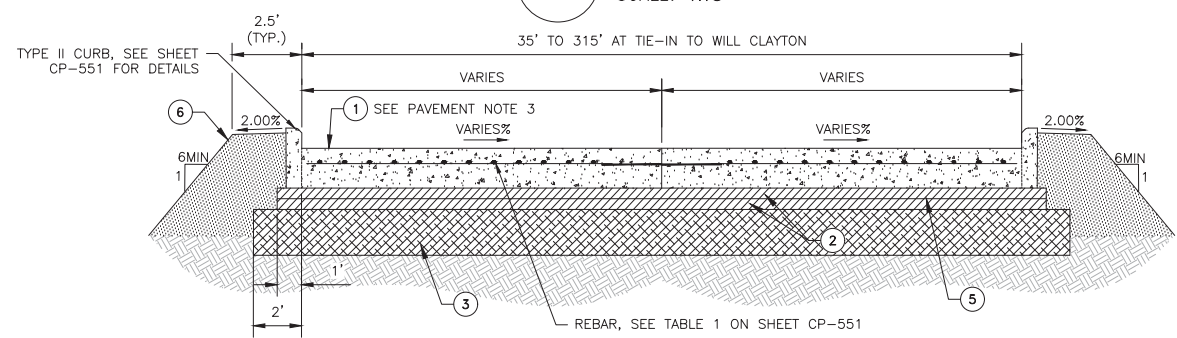
**4 WILL CLAYTON PARKWAY TYPICAL PAVEMENT SECTION**  
 CP-501 SCALE: NTS



**5 KENSWICK DRIVE TYPICAL PAVEMENT SECTION**  
 CP-501 SCALE: NTS



**6 LEE ROAD TYPICAL PAVEMENT SECTION**  
 CP-501 SCALE: NTS



**7 LEE ROAD TYPICAL PAVEMENT SECTION**  
 CP-501 SCALE: NTS

MATERIAL TABLE		
MATERIAL NO.	TXDOT ITEM	TXDOT DESCRIPTION
1	360	10" CONCRETE-CLASS P CONTINUOUSLY REINFORCED CONCRETE PAVEMENT (CRCP), USE OPTIMIZED AGGREGATE GRADATION (OGA), 5% AIR ENTRAINMENT, MAXIMUM 0.45 W/C RATIO, 4INCH MAX SLUMP-HAND PLACEMENT, 2.5 INCH MAX SLUMP-SLIP FORM OR SIDE FORM PAVING
2	292	2.5" LIFT ASPHALT TREATMENT-ASPHALT STABILIZED BASE (ASB) DENSITY CONTROLLED
3	260	12" LIME STABILIZED SUBGRADE (6% LIME CONTENT, TOP 9" DENSITY CONTROLLED)
4	310	PRIME COAT
5	292	TACK COAT
6	132	EMBANKMENT (DENSITY CONTROLLED)
7	432	5" MEDIAN CONCRETE

- PAVEMENT NOTES:**
- CLEAR AND GRUB SITE PER SPECIFICATION ITEM 100. GRUBBING CONSISTS OF THE REMOVAL AND DISPOSAL OF STUMPS, ROOTS, AND MATTED ROOTS. REMOVE MATERIAL TO BE GRUBBED, TOGETHER WITH LOGS AND OTHER ORGANIC OR METALLIC DEBRIS NOT SUITABLE FOR FOUNDATION PURPOSES. FILL DEPRESSIONS MADE BY GRUBBING WITH EMBANKMENT MATERIAL AND COMPACT TO MAKE THE SURFACE CONFORM WITH THE ORIGINAL ADJACENT SURFACE OF THE GROUND.
  - AFTER COMPLETING CLEARING AND GRUBBING OPERATIONS BRING SUBGRADE TO PROPOSED GRADE FOR LIME STABILIZATION OPERATIONS. FILL AND COMPACT LOW AREAS FOLLOWING SPECIFICATION ITEM 132 EMBANKMENT.
  - ALL CONCRETE PAVEMENT SURFACES SHALL HAVE CARPET DRAG TEXTURING WITH TILING GROOVES PER ITEM 360.

HAS FILE: C:\P\WORK\ATKINA\TX01\ROTH1017\DMG58378\1-0935-CP-501.DWG  
 PLOT DATE: 2021-02-05

## INPUT DATA

### A. Project Identification

District	HOU
County	Harris
Highway	Kenswick
CSJ	
Direction	
Station (Begin)	
Station (End)	

### B. Design Parameters

Design Life (year)	30
Number of Punchouts per Mile	10

### C. Design Traffic

Total Number of Lanes in One Direction	2
Total Design Traffic in One Direction (million ESALs)	7

## CRCP PERFORMANCE

Number of Punchouts per Mile	7.3
------------------------------	-----

### D. Concrete Layer Information

Thickness of Concrete Layer (in.)	10
28-Day Modulus of Rupture (psi)	570

### E. Support Layers Information

Soil Classification System	USCS
Soil Classification of Subgrade	CL
Base Type	ATB
Base Thickness (in.)	5
Modulus of Base Layer (ksi)	400

Composite K (psi/in.)	263
-----------------------	-----



## APPENDIX D

Plates D-1 and D-2	Atkins drawing “Kenswick Drive Extension Detention Pond Plan and Profile”, dated February 5, 2021
Plate D-3	Design Soil Parameters for Slope Stability Analyses
Plate D-4	Derivation of Reduced/Residual Strength Parameters for Weathered Soils for Slope Stability Analyses
Plates D-5 to D-12	Slope Stability Analysis for East Bank of Detention Pond between Station 8+80 and 10+10, Based on Boring B-11
Plate D-13 to D-55	SLOPE/W Computer Program Inputs and Outputs

REVISIONS

NO.	DESCRIPTION	DATE BY

GEORGE BUSH INTERCONTINENTAL AIRPORT (IAH)  
**KENSWICK DRIVE EXTENSION**  
**DETENTION POND PLAN AND PROFILE**

PROJECT MGR: MES  
 DESIGNER: ALR  
 DRAWN BY: ALR  
 CHECK BY: PMW  
 SCALE:  
 DATE: 02/05/2021

JOHN L. VERBURG, JR.  
 TEXAS REGISTRATION 125465  
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 REGULATORY APPROVAL, PERMIT  
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 02/05/2021

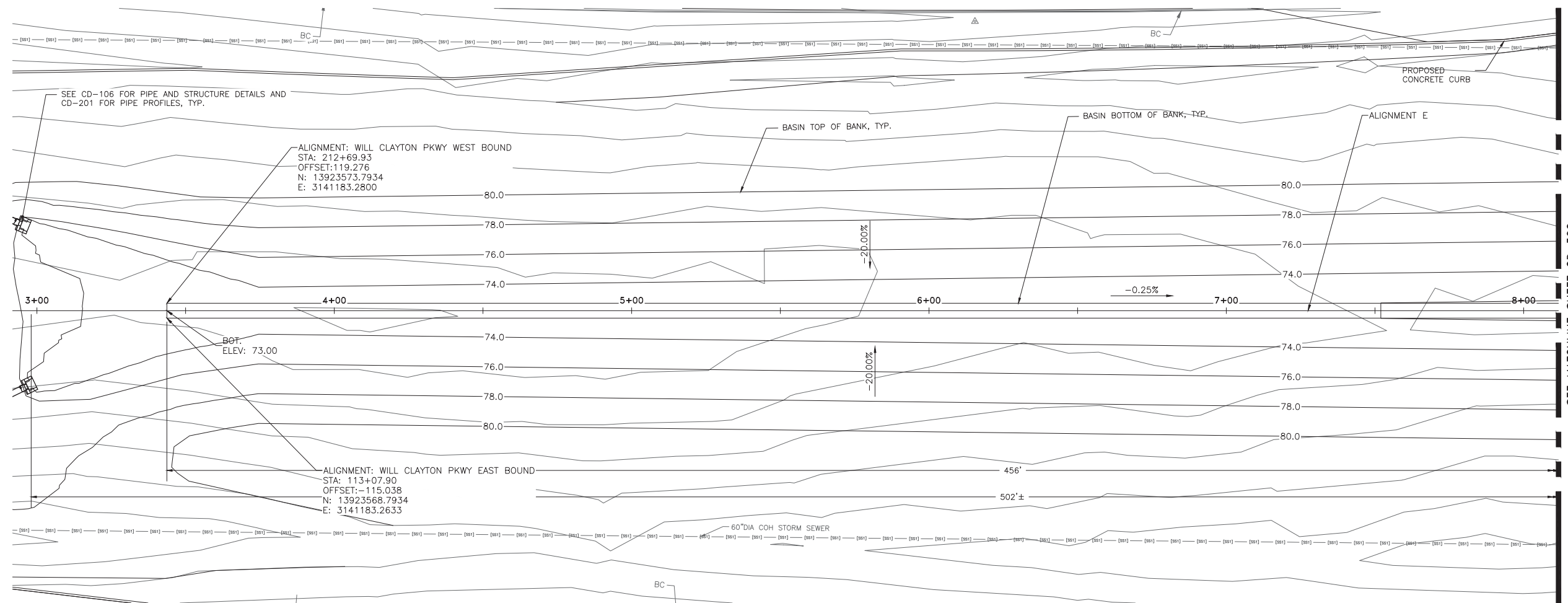
**90% SUBMITTAL  
 NOT APPROVED  
 FOR CONSTRUCTION**

APPROVED BY:  
 \_\_\_\_\_  
 DIRECTOR  
 HOUSTON AIRPORT SYSTEM

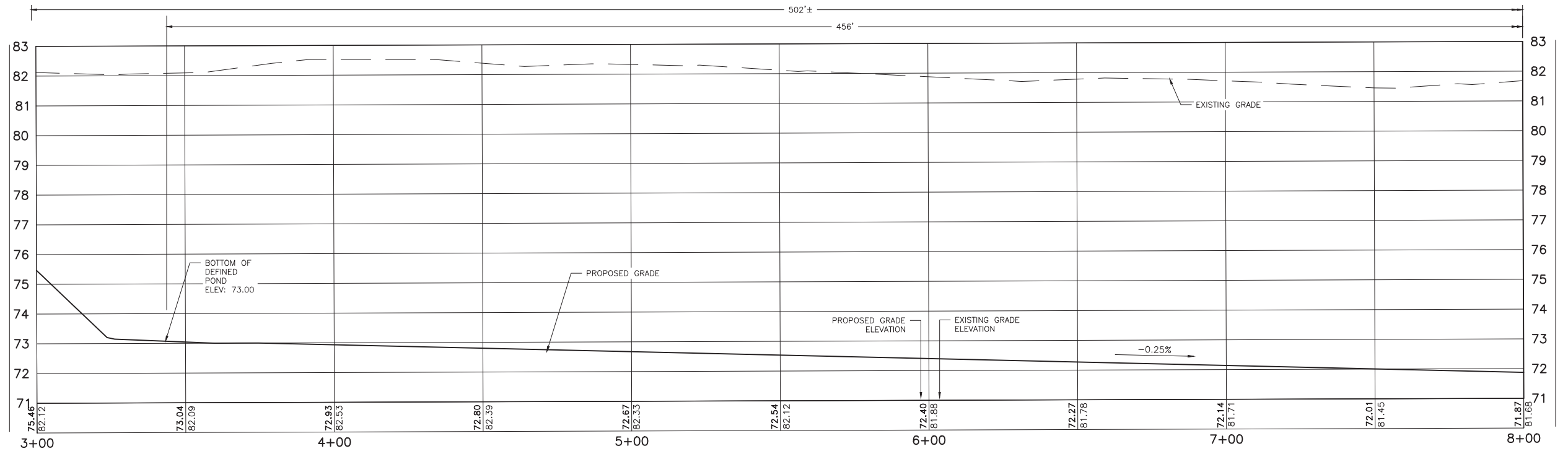
PROJECT NO.  
 100072032  
 A.I.P. NO.  
 C.I.P. NO.  
 H.A.S. NO.  
 935  
 SHEET NO.

**CD-501**

PLATE D-1



**1 DETENTION POND PLAN**  
 CD-501 SCALE: 1"=20'



**2 DETENTION POND PROFILE**  
 CD-501 SCALE: 1"=2'-0"

HAS FILE: C:\PW\WORK\ATKIN\TX01\ROTH1017\DMG58378\1-0935-CD-501.DWG  
 PLOT DATE: 2021-02-05

REVISIONS

NO.	DESCRIPTION	DATE BY

GEORGE BUSH INTERCONTINENTAL AIRPORT (IAH)  
**KENSWICK DRIVE EXTENSION  
 DETENTION POND PLAN AND PROFILE**

PROJECT MGR: MES  
 DESIGNER: ALR  
 DRAWN BY: ALR  
 CHECK BY: PMW  
 SCALE:  
 DATE: 02/05/2021

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 DIRECTOR  
 HOUSTON AIRPORT SYSTEM

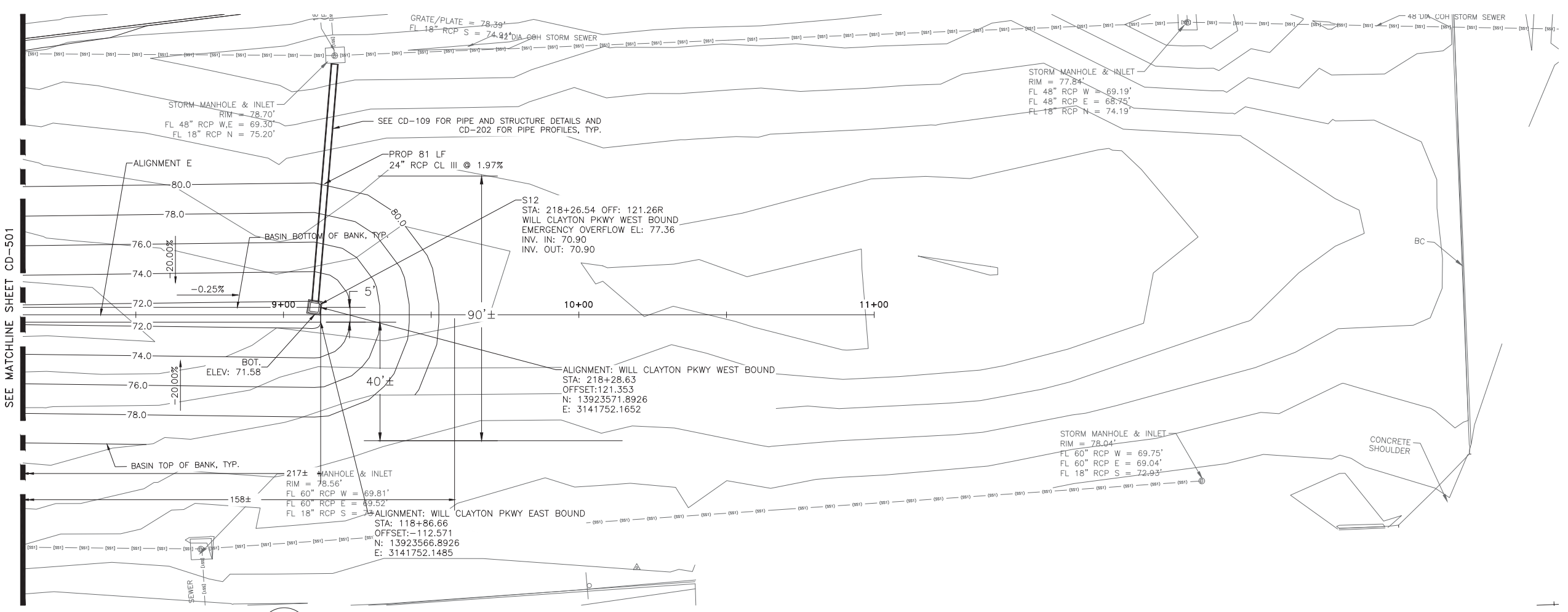
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A.I.P. NO.  
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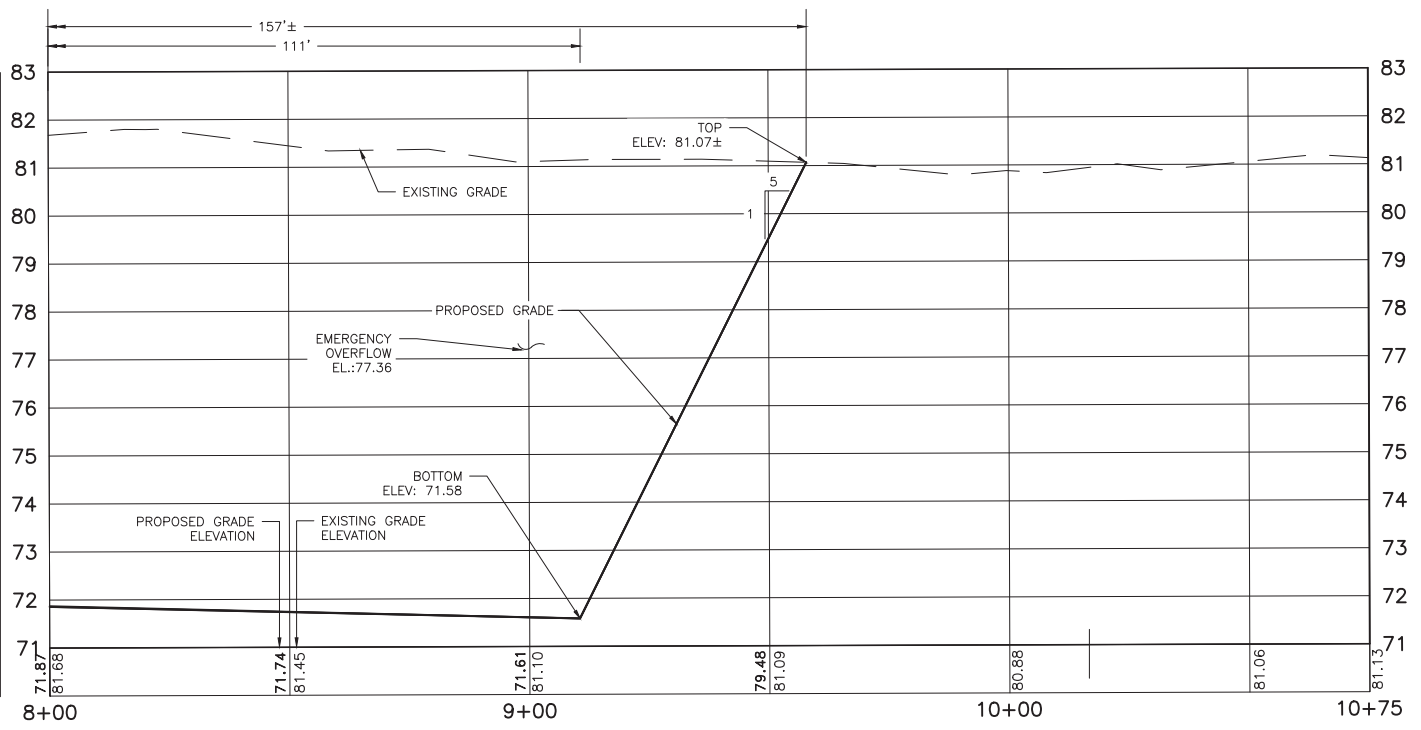
C.I.P. NO.  
 \_\_\_\_\_

H.A.S. NO.  
 935

SHEET NO.  
 \_\_\_\_\_



**1 DETENTION POND PLAN**  
 CD-502 SCALE: AS SHOWN



**2 DETENTION POND PROFILE**  
 CD-502 SCALE: AS SHOWN

HAS FILE: C:\PW\_WORK\ATKIN\TX01\ROTH1017\DM659378\1-0935-CD-501.DWG  
 PLOT DATE: 2021-02-05

**Design Soil Parameters for Slope Stability Analyses  
East Bank of Detention Pond between Station 8+80 and 10+10 (Based on Boring B-11)**

Elevation (ft)	Soil Type	$\gamma_m$ (pcf)	Short-Term/Undrained Parameters		Effective Stress Parameters		Total Stress Parameters	
			$C_u$ (psf)	$\phi_u$ (deg)	$C'$ (psf)	$\phi'$ (deg)	$C_{cu}$ (psf)	$\phi_{cu}$ (deg)
80.3 to 78.3	Fill: very stiff CL-ML	125	1,000	0	120	21	100	17
78.3 to 75.3	Soft to very stiff CL	125	700	0	80	25	110	13
75.3 to 68.3	Very stiff to hard CL	132	3,000	0	200	25	250	13
68.3 to 66.3	Stiff to very stiff CH	127	2,000	0	150 ( $C_r = 70$ )	19 ( $\phi_r = 16$ )	130 ( $C_r = 70$ )	16 ( $\phi_r = 16$ )
66.3 to 64.3	Stiff to very stiff CL	125	1,300	0	150	25	200	13
64.3 to 60.3	Very stiff CH	134	3,000	0	180 ( $C_r = 70$ )	19 ( $\phi_r = 16$ )	160 ( $C_r = 70$ )	16 ( $\phi_r = 16$ )

- Notes: (1)  $\gamma_m$  = moist unit weight of soil.  
(2)  $C_u$  = undrained cohesion,  $\phi_u$  = angle of internal friction, under short term conditions. UU = strength parameters that were determined from Unconsolidated-Undrained triaxial tests.  
(3)  $C'$  = effective cohesion,  $\phi'$  = effective friction angle, effective stress parameters that were determined from Consolidated-Undrained triaxial tests with pore water pressure measurements.  
(4)  $C_{cu}$  = cohesion,  $\phi_{cu}$  = friction angle, total stress parameters that were developed from Consolidated-Undrained triaxial tests.  
(5)  $C_r$  = cohesion for desiccated fat clay,  $\phi_r$  = friction angle for desiccated fat clay.  
(6) CL = Lean Clay, CH = Fat Clay, CL-ML = Silty Clay.

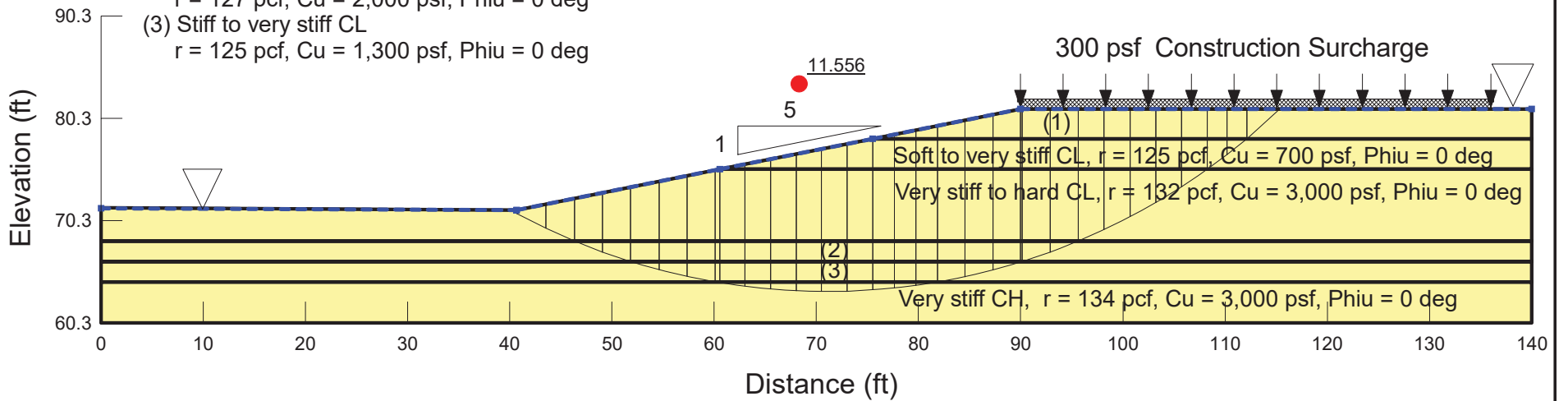
**DERIVATION OF REDUCED/RESIDUAL STRENGTH PARAMETERS FOR WEATHERED SOILS  
FOR SLOPE STABILITY ANALYSES**

		Boring Number					
		B-11					
<b>Elevation (ft)</b>		80.3 to 78.3	78.3 to 75.3	75.3 to 68.3	68.3 to 66.3	66.3 to 64.3	64.3 to 60.3
<b>Soil Type</b>		Silty Clay (CL-ML)	Lean Clay (CL)	Lean Clay (CL)	Fat Clay (CH)	Lean Clay (CL)	Fat Clay (CH)
<b>Reference Mohr's Circle</b>		-	B-11 (8'-10')	B-11 (8'-10')	-	B-11 (8'-10')	-
<b>PI</b>		-	23	32	35	20	35 (Assum.)
<b>Reduction factor</b>		-	0.94	0.62	0.57	1.00	0.57
<b>Effective Stress Parameters</b>	$C'_{(Mohr's\ Circle)}$ (psf)	-	350	350	-	350	-
	$C'_{(calculated)}$ (psf)	-	80	200	-	150	-
	$C'_{(selected)}$ (psf)	120	80	200	150 (Cr = 70)	150	180 (Cr = 70)
	$\phi'_{(Mohr's\ Circle)}$ (deg)	-	31.0	31.0	-	31.0	-
	$\phi'_{(Selected)}$ (deg)	21.0	25.0	25.0	19.0 ( $\phi_r = 16.0$ )	25.0	19.0 ( $\phi_r = 16.0$ )
<b>Total Stress Parameters</b>	$C_{(Mohr's\ Circle)}$ (psf)	-	570	570	-	570	-
	$C_{(calculated)}$ (psf)	-	130	310	-	250	-
	$C_{(selected)}$ (psf)	100	110	250	130 (Cr = 70)	200	160 (Cr = 70)
	$\phi_{(Mohr's\ Circle)}$ (deg)	-	13.6	13.6	-	13.6	-
	$\phi_{(selected)}$ (deg)	17.0	13.0	13.0	16.0 ( $\phi_r = 16.0$ )	13.0	16.0 ( $\phi_r = 16.0$ )

**G143-20 IAH KENSWICK DRIVE EXTENSION  
 STABILITY ANALYSIS FOR EAST BANK OF DETENTION POND BETWEEN STATIONS 8+80 AND 10+10  
 SHORT TERM CONDITION, GLOBAL SLIDE  
 BASED ON BORING B-11**

**Soil Types**

- (1) Fill: very stiff CL-ML  
 $r = 125$  pcf,  $C_u = 1,000$  psf,  $\text{Phi} = 0$  deg
- (2) Stiff to very stiff CH  
 $r = 127$  pcf,  $C_u = 2,000$  psf,  $\text{Phi} = 0$  deg
- (3) Stiff to very stiff CL  
 $r = 125$  pcf,  $C_u = 1,300$  psf,  $\text{Phi} = 0$  deg

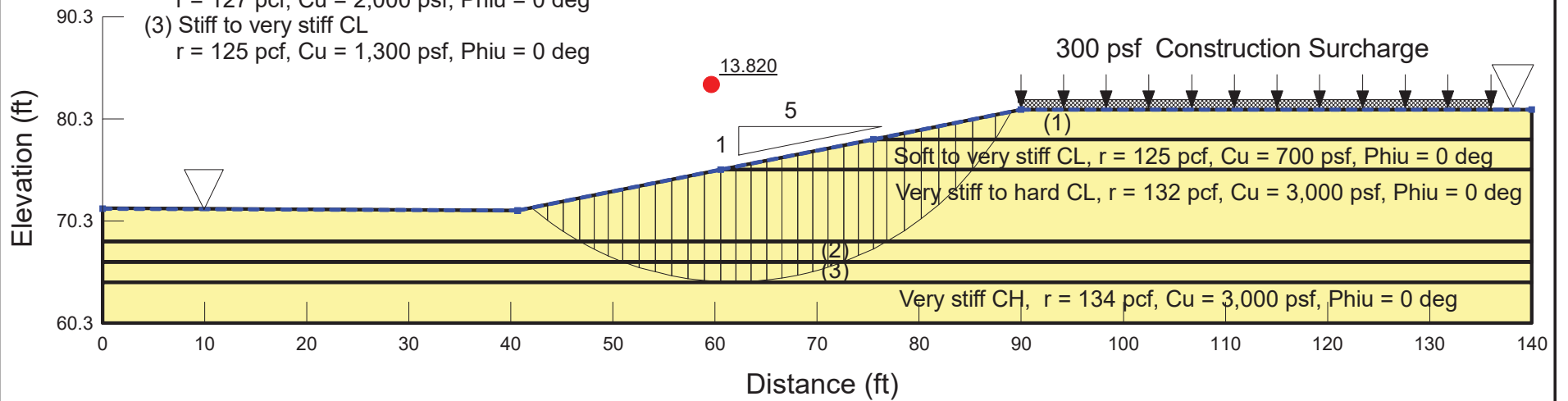




**G143-20 IAH KENSWICK DRIVE EXTENSION  
 STABILITY ANALYSIS FOR EAST BANK OF DETENTION POND BETWEEN STATIONS 8+80 AND 10+10  
 SHORT TERM CONDITION, LOCAL SLIDE  
 BASED ON BORING B-11**

**Soil Types**

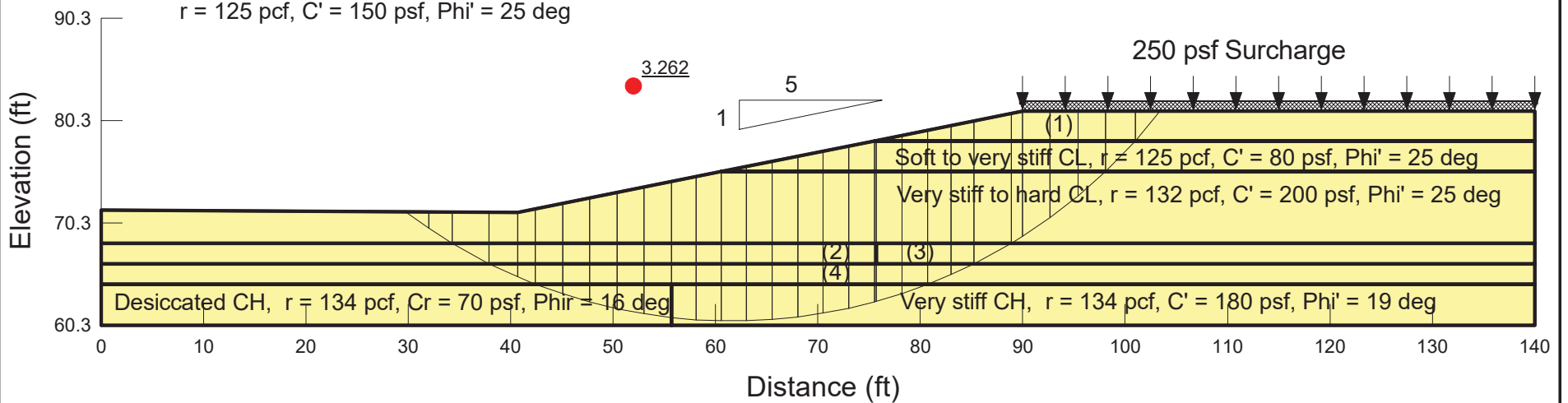
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- (2) Stiff to very stiff CH  
 $r = 127$  pcf,  $C_u = 2,000$  psf,  $\text{Phi} = 0$  deg
- (3) Stiff to very stiff CL  
 $r = 125$  pcf,  $C_u = 1,300$  psf,  $\text{Phi} = 0$  deg



**G143-20 IAH KENSWICK DRIVE EXTENSION  
 STABILITY ANALYSIS FOR EAST BANK OF DETENTION POND BETWEEN STATIONS 8+80 AND 10+10  
 LONG TERM CONDITION, GLOBAL SLIDE  
 BASED ON BORING B-11**

**Soil Types**

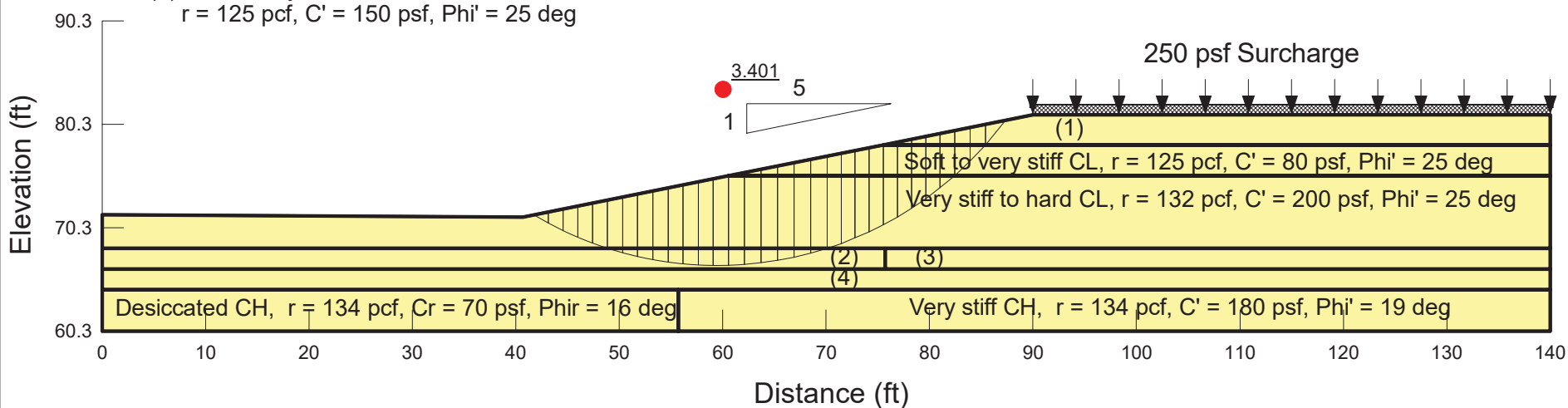
- (1) Fill: very stiff CL-ML  
 $r = 125 \text{ pcf}$ ,  $C' = 120 \text{ psf}$ ,  $\text{Phi}' = 21 \text{ deg}$
- (2) Desiccated CH  
 $r = 127 \text{ pcf}$ ,  $C_r = 70 \text{ psf}$ ,  $\text{Phi}_r = 16 \text{ deg}$
- (3) Stiff to very stiff CH  
 $r = 127 \text{ pcf}$ ,  $C' = 150 \text{ psf}$ ,  $\text{Phi}' = 19 \text{ deg}$
- (4) Stiff to very stiff CL  
 $r = 125 \text{ pcf}$ ,  $C' = 150 \text{ psf}$ ,  $\text{Phi}' = 25 \text{ deg}$



**G143-20 IAH KENSWICK DRIVE EXTENSION  
 STABILITY ANALYSIS FOR EAST BANK OF DETENTION POND BETWEEN STATIONS 8+80 AND 10+10  
 LONG TERM CONDITION, LOCAL SLIDE  
 BASED ON BORING B-11**

**Soil Types**

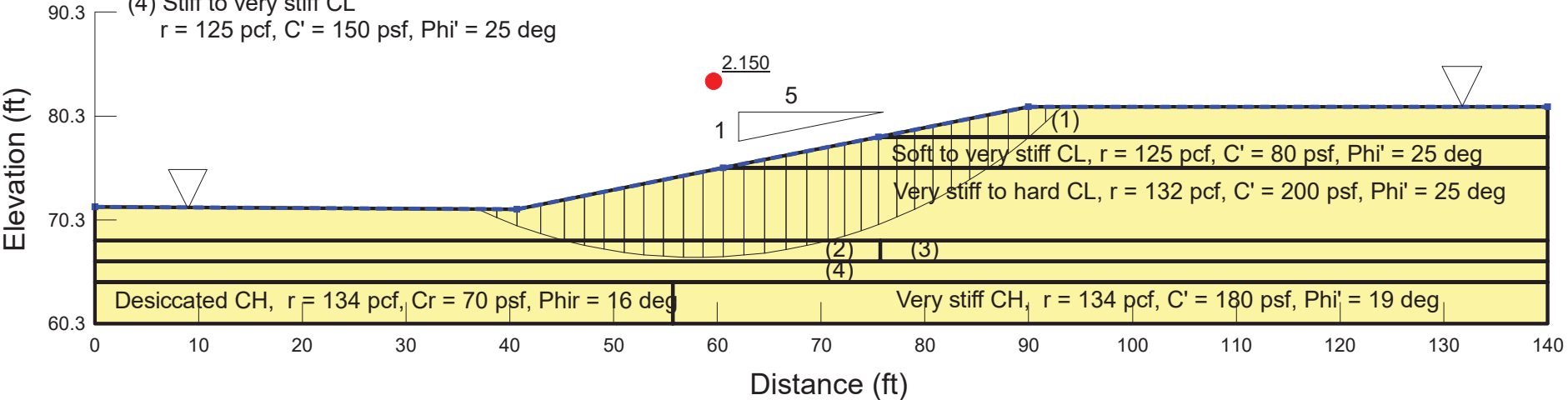
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- (2) Desiccated CH  
 $r = 127 \text{ pcf}$ ,  $C_r = 70 \text{ psf}$ ,  $\text{Phi}_r = 16 \text{ deg}$
- (3) Stiff to very stiff CH  
 $r = 127 \text{ pcf}$ ,  $C' = 150 \text{ psf}$ ,  $\text{Phi}' = 19 \text{ deg}$
- (4) Stiff to very stiff CL  
 $r = 125 \text{ pcf}$ ,  $C' = 150 \text{ psf}$ ,  $\text{Phi}' = 25 \text{ deg}$



**G143-20 IAH KENSWICK DRIVE EXTENSION  
 STABILITY ANALYSIS FOR EAST BANK OF DETENTION POND BETWEEN STATIONS 8+80 AND 10+10  
 RAPID DRAWDOWN CONDITION, GLOBAL SLIDE, USING EFFECTIVE STRESS PARAMETERS  
 BASED ON BORING B-11**

Soil Types

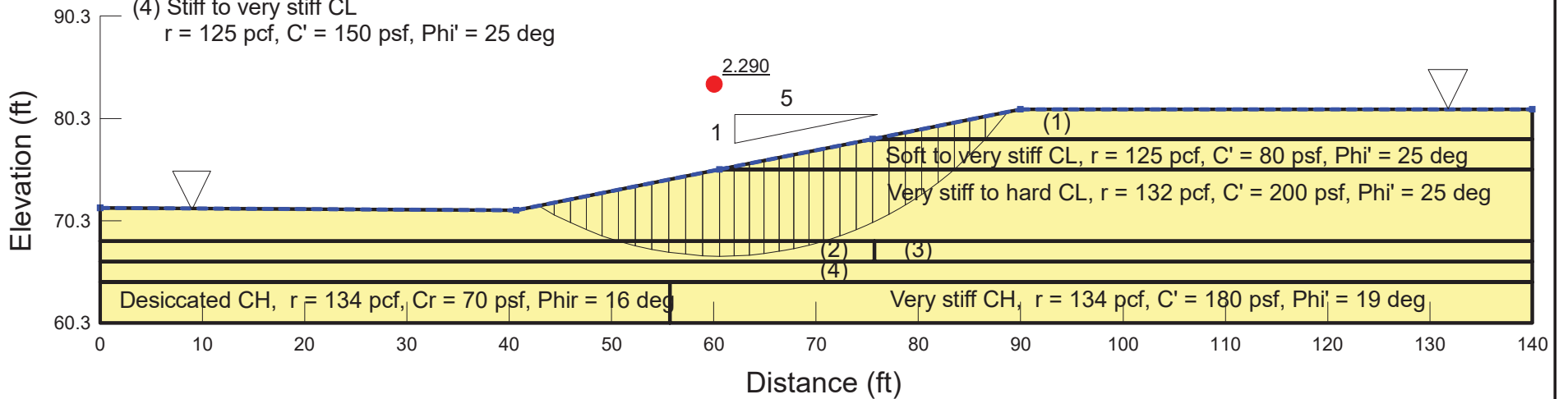
- (1) Fill: very stiff CL-ML  
 $r = 125 \text{ pcf}$ ,  $C' = 120 \text{ psf}$ ,  $\text{Phi}' = 21 \text{ deg}$
- (2) Desiccated CH  
 $r = 127 \text{ pcf}$ ,  $C_r = 70 \text{ psf}$ ,  $\text{Phi}_r = 16 \text{ deg}$
- (3) Stiff to very stiff CH  
 $r = 127 \text{ pcf}$ ,  $C' = 150 \text{ psf}$ ,  $\text{Phi}' = 19 \text{ deg}$
- (4) Stiff to very stiff CL  
 $r = 125 \text{ pcf}$ ,  $C' = 150 \text{ psf}$ ,  $\text{Phi}' = 25 \text{ deg}$



**G143-20 IAH KENSWICK DRIVE EXTENSION  
 STABILITY ANALYSIS FOR EAST BANK OF DETENTION POND BETWEEN STATIONS 8+80 AND 10+10  
 RAPID DRAWDOWN CONDITION, LOCAL SLIDE, USING EFFECTIVE STRESS PARAMETERS  
 BASED ON BORING B-11**

Soil Types

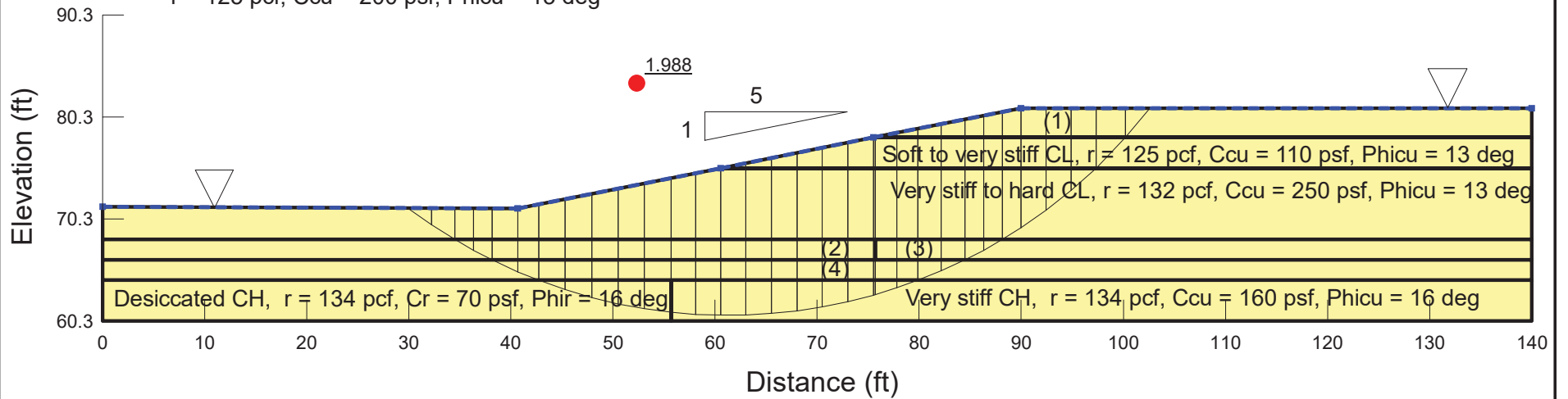
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 $r = 125 \text{ pcf}$ ,  $C' = 120 \text{ psf}$ ,  $\text{Phi}' = 21 \text{ deg}$
- (2) Desiccated CH  
 $r = 127 \text{ pcf}$ ,  $C_r = 70 \text{ psf}$ ,  $\text{Phi}_r = 16 \text{ deg}$
- (3) Stiff to very stiff CH  
 $r = 127 \text{ pcf}$ ,  $C' = 150 \text{ psf}$ ,  $\text{Phi}' = 19 \text{ deg}$
- (4) Stiff to very stiff CL  
 $r = 125 \text{ pcf}$ ,  $C' = 150 \text{ psf}$ ,  $\text{Phi}' = 25 \text{ deg}$



**G143-20 IAH KENSWICK DRIVE EXTENSION  
 STABILITY ANALYSIS FOR EAST BANK OF DETENTION POND BETWEEN STATIONS 8+80 AND 10+10  
 RAPID DRAWDOWN CONDITION, GLOBAL SLIDE, USING TOTAL STRESS PARAMETERS  
 BASED ON BORING B-11**

Soil Types

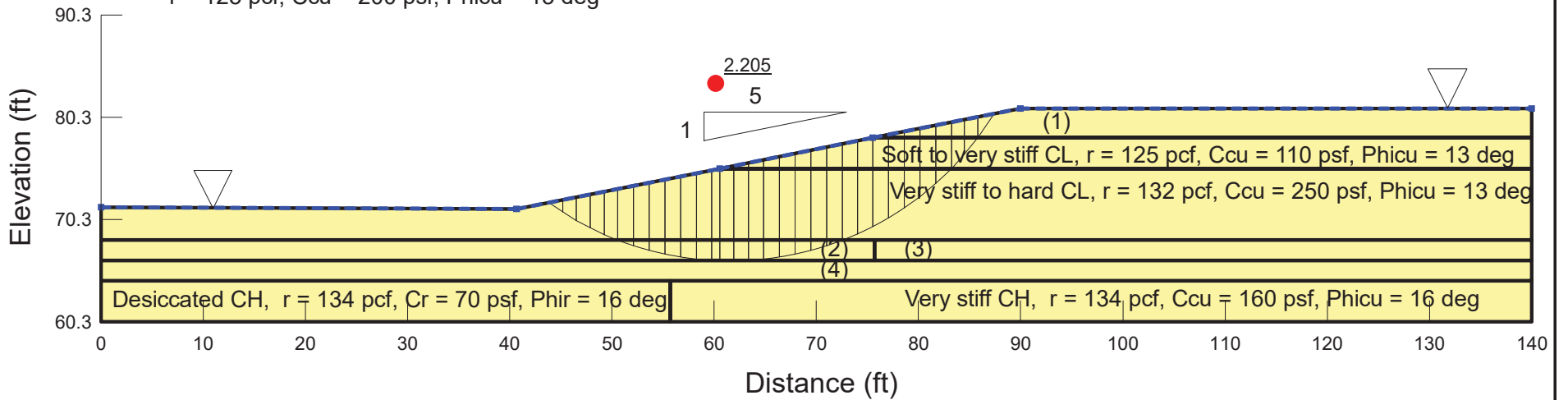
- (1) Fill: very stiff CL-ML  
 $r = 125$  pcf,  $C_{cu} = 100$  psf,  $Phicu = 17$  deg
- (2) Desiccated CH  
 $r = 127$  pcf,  $Cr = 70$  psf,  $Phir = 16$  deg
- (3) Stiff to very stiff CH  
 $r = 127$  pcf,  $C_{cu} = 130$  psf,  $Phicu = 16$  deg
- (4) Stiff to very stiff CL  
 $r = 125$  pcf,  $C_{cu} = 200$  psf,  $Phicu = 13$  deg



**G143-20 IAH KENSWICK DRIVE EXTENSION  
 STABILITY ANALYSIS FOR EAST BANK OF DETENTION POND BETWEEN STATIONS 8+80 AND 10+10  
 RAPID DRAWDOWN CONDITION, LOCAL SLIDE, USING TOTAL STRESS PARAMETERS  
 BASED ON BORING B-11**

Soil Types

- (1) Fill: very stiff CL-ML  
 $r = 125$  pcf,  $C_{cu} = 100$  psf,  $Phicu = 17$  deg
- (2) Desiccated CH  
 $r = 127$  pcf,  $Cr = 70$  psf,  $Phir = 16$  deg
- (3) Stiff to very stiff CH  
 $r = 127$  pcf,  $C_{cu} = 130$  psf,  $Phicu = 16$  deg
- (4) Stiff to very stiff CL  
 $r = 125$  pcf,  $C_{cu} = 200$  psf,  $Phicu = 13$  deg



# Slope Stability

---

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## File Information

File Version: 11.00

Title: B-11 SHORT TERM CONDITION, GLOBAL SLIDE

Revision Number: 842

Date: 02/26/2021

Time: 01:03:18 PM

Tool Version: 11.0.1.21429

File Name: B-11 UU GS.gsz

Directory: Z:\Engineering\Reports\2020\G143-20 IAH Kenswick and Lee Road Extension at Will Clayton Parkway - Atkins\Slope Stability Analysis\Slope Stability\B-11\

Last Solved Date: 02/26/2021

Last Solved Time: 01:03:31 PM

## Project Settings

Unit System: U.S. Customary Units

## Analysis Settings

### Slope Stability

Kind: SLOPE/W

Method: Bishop

Settings

PWP Conditions from: Piezometric Line

Apply Phreatic Correction: No

Use Staged Rapid Drawdown: No

Unit Weight of Water: 62.430189 pcf

Slip Surface

Direction of movement: Right to Left

Use Passive Mode: No

Slip Surface Option: Entry and Exit

Critical slip surfaces saved: 1

Optimize Critical Slip Surface Location: No

Tension Crack Option: (none)

Distribution

F of S Calculation Option: Constant

Advanced

Geometry Settings

Minimum Slip Surface Depth: 0.1 ft

Number of Slices: 30

Factor of Safety Convergence Settings

Maximum Number of Iterations: 100

Tolerable difference in F of S: 0.001



# Materials

## 1. Fill:very stiff CL-ML

Model: [Mohr-Coulomb](#)

Unit Weight: [125 pcf](#)

Effective Cohesion: [1,000 psf](#)

Effective Friction Angle: [0.001 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 2. Soft to very stiff CL

Model: [Mohr-Coulomb](#)

Unit Weight: [125 pcf](#)

Effective Cohesion: [700 psf](#)

Effective Friction Angle: [0.001 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 4. Stiff to very stiff CH

Model: [Mohr-Coulomb](#)

Unit Weight: [127 pcf](#)

Effective Cohesion: [2,000 psf](#)

Effective Friction Angle: [0.001 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 5. Stiff to very stiff CL

Model: [Mohr-Coulomb](#)

Unit Weight: [125 pcf](#)

Effective Cohesion: [1,300 psf](#)

Effective Friction Angle: [0.001 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 6. Very stiff CH

Model: [Mohr-Coulomb](#)

Unit Weight: [134 pcf](#)

Effective Cohesion: [3,000 psf](#)

Effective Friction Angle: [0.001 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 3. Very stiff to hard CL

Model: [Mohr-Coulomb](#)

Unit Weight: [132 pcf](#)

Effective Cohesion: [3,000 psf](#)

Effective Friction Angle: [0.001 °](#)

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

## Slip Surface Entry and Exit

Left Type: Range

Left-Zone Left Coordinate: (25.28768, 71.395736) ft

Left-Zone Right Coordinate: (40.04817, 71.323203) ft

Left-Zone Increment: 4

Right Type: Range

Right-Zone Left Coordinate: (90.71352, 81.18) ft

Right-Zone Right Coordinate: (140, 81.18) ft

Right-Zone Increment: 4

Radius Increments: 15

## Slip Surface Limits

Left Coordinate: (0, 71.52) ft

Right Coordinate: (140, 81.18) ft

## Piezometric Lines

### Piezometric Line 1

#### Coordinates

	X	Y
Coordinate 1	0 ft	71.51 ft
Coordinate 2	40.7 ft	71.32 ft
Coordinate 3	60.54033 ft	75.3 ft
Coordinate 4	75.50956 ft	78.3 ft
Coordinate 5	90 ft	81.18 ft
Coordinate 6	140 ft	81.18 ft

## Surcharge Loads

### Surcharge Load 1

Surcharge (Unit Weight): 300 pcf

Direction: Vertical

#### Coordinates

	X	Y
	90 ft	82.18 ft
	136 ft	82.18 ft

## Geometry

Name: Default Geometry

## Settings

View: 2D

Element Thickness: 1 ft

## Points

	X	Y
Point 1	0 ft	60.3 ft
Point 2	0 ft	64.3 ft
Point 3	0 ft	66.3 ft
Point 4	0 ft	68.3 ft
Point 5	140 ft	60.3 ft
Point 6	140 ft	64.3 ft
Point 7	140 ft	66.3 ft
Point 8	140 ft	68.3 ft
Point 9	140 ft	78.3 ft
Point 10	140 ft	81.18 ft
Point 11	90 ft	81.18 ft
Point 12	40.7 ft	71.32 ft
Point 13	0 ft	71.52 ft
Point 14	75.50956 ft	78.3 ft
Point 15	140 ft	75.3 ft
Point 16	60.54033 ft	75.3 ft

## Regions

	Material	Points	Area
Region 1	5. Stiff to very stiff CL	2,6,7,3	280 ft <sup>2</sup>
Region 2	3. Very stiff to hard CL	4,8,15,16,12,13	782.6 ft <sup>2</sup>
Region 3	2. Soft to very stiff CL	16,15,9,14	215.93 ft <sup>2</sup>
Region 4	1. Fill:very stiff CL-ML	9,10,11,14	164.87 ft <sup>2</sup>
Region 5	6. Very stiff CH	1,5,6,2	560 ft <sup>2</sup>
Region 6	4. Stiff to very stiff CH	3,7,8,4	280 ft <sup>2</sup>

## Slip Results

Slip Surfaces Analysed: 400 of 400 converged

## Current Slip Surface

Slip Surface: 353

Factor of Safety: 11.556

Volume: 764.50335 ft<sup>3</sup>

Weight: 98,559.338 lbf

Resisting Moment: 11,751,177 lbf·ft

Activating Moment: 1,016,920.1 lbf·ft

Slip Rank: 1 of 400 slip surfaces

Exit: (40.04817, 71.323203) ft

Entry: (115.35676, 81.18) ft

Radius: 64.18411 ft

Center: (70.987175, 127.55823) ft

**Slip Slices**

	X	Y	PWP	Frictional Strength	Cohesive Strength	Suction Strength	Base Material
Slice 1	40.048317 ft	71.323122 ft	-0.0049992469 psf	0.0024930635 psf	3,000 psf	0 psf	3. Very stiff to hard CL
Slice 2	40.374232 ft	71.146258 ft	10.941705 psf	0.0026718781 psf	3,000 psf	0 psf	3. Very stiff to hard CL
Slice 3	42.107063 ft	70.260267 ft	83.780841 psf	0.0039133102 psf	3,000 psf	0 psf	3. Very stiff to hard CL
Slice 4	44.921189 ft	68.92553 ft	202.35168 psf	0.0059499646 psf	3,000 psf	0 psf	3. Very stiff to hard CL
Slice 5	47.703479 ft	67.764486 ft	309.68008 psf	0.0071526021 psf	2,000 psf	0 psf	4. Stiff to very stiff CH
Slice 6	50.453932 ft	66.764486 ft	406.55582 psf	0.0087934854 psf	2,000 psf	0 psf	4. Stiff to very stiff CH
Slice 7	53.211724 ft	65.901411 ft	494.97521 psf	0.0099697507 psf	1,300 psf	0 psf	5. Stiff to very stiff CL
Slice 8	55.976853 ft	65.170183 ft	575.25529 psf	0.011348145 psf	1,300 psf	0 psf	5. Stiff to very stiff CL
Slice 9	58.741982 ft	64.568772 ft	647.43085 psf	0.012587727 psf	1,300 psf	0 psf	5. Stiff to very stiff CL
Slice 10	60.332439 ft	64.265004 ft	686.31335 psf	0.01369341 psf	3,000 psf	0 psf	6. Very stiff CH
Slice 11	61.787766 ft	64.049314 ft	717.99003 psf	0.014180062 psf	3,000 psf	0 psf	6. Very stiff CH
Slice 12	64.282637 ft	63.737573 ft	768.66714 psf	0.014935154 psf	3,000 psf	0 psf	6. Very stiff CH
Slice 13	66.777509 ft	63.524518 ft	813.18329 psf	0.015569187 psf	3,000 psf	0 psf	6. Very stiff CH
Slice 14	69.272381 ft	63.409164 ft	851.59995 psf	0.016082544 psf	3,000 psf	0 psf	6. Very stiff CH
Slice 15	71.767252 ft	63.390984 ft	883.95007 psf	0.016475071 psf	3,000 psf	0 psf	6. Very stiff CH
Slice 16	74.262124 ft	63.469893 ft	910.23882 psf	0.016746068 psf	3,000 psf	0 psf	6. Very stiff CH
Slice 17	76.566267 ft	63.625852 ft	929.22157 psf	0.016889755 psf	3,000 psf	0 psf	6. Very stiff CH

Slice 18	78.679682 ft	63.84565 ft	941.72298 psf	0.016922241 psf	3,000 psf	0 psf	6. Very stiff CH
Slice 19	80.793096 ft	64.136617 ft	949.78134 psf	0.016863994 psf	3,000 psf	0 psf	6. Very stiff CH
Slice 20	83.20817 ft	64.563523 ft	953.096 psf	0.01721597 psf	1,300 psf	0 psf	5. Stiff to very stiff CL
Slice 21	85.924902 ft	65.15219 ft	950.05493 psf	0.017073704 psf	1,300 psf	0 psf	5. Stiff to very stiff CL
Slice 22	88.641634 ft	65.866057 ft	939.19758 psf	0.016791879 psf	1,300 psf	0 psf	5. Stiff to very stiff CL
Slice 23	90.072596 ft	66.277391 ft	930.37272 psf	0.021823876 psf	1,300 psf	0 psf	5. Stiff to very stiff CL
Slice 24	91.520419 ft	66.764486 ft	899.96323 psf	0.020866977 psf	2,000 psf	0 psf	4. Stiff to very stiff CH
Slice 25	94.270872 ft	67.764486 ft	837.53304 psf	0.019584006 psf	2,000 psf	0 psf	4. Stiff to very stiff CH
Slice 26	96.906703 ft	68.856616 ft	769.35118 psf	0.017480229 psf	3,000 psf	0 psf	3. Very stiff to hard CL
Slice 27	99.427912 ft	70.036519 ft	695.68962 psf	0.015807925 psf	3,000 psf	0 psf	3. Very stiff to hard CL
Slice 28	101.94912 ft	71.354254 ft	613.42317 psf	0.013952119 psf	3,000 psf	0 psf	3. Very stiff to hard CL
Slice 29	104.47033 ft	72.819806 ft	521.92847 psf	0.011897084 psf	3,000 psf	0 psf	3. Very stiff to hard CL
Slice 30	106.99154 ft	74.445455 ft	420.43891 psf	0.0096232662 psf	3,000 psf	0 psf	3. Very stiff to hard CL
Slice 31	109.22311 ft	76.020361 ft	322.11721 psf	0.010086176 psf	700 psf	0 psf	2. Soft to very stiff CL
Slice 32	111.16505 ft	77.520361 ft	228.47193 psf	0.0083835587 psf	700 psf	0 psf	2. Soft to very stiff CL
Slice 33	113.74639 ft	79.74 ft	89.899472 psf	0.0054579552 psf	1,000 psf	0 psf	1. Fill:very stiff CL-ML

# Slope Stability

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## File Information

File Version: 11.00

Title: B-11 SHORT TERM CONDITION, LOCAL SLIDE

Revision Number: 847

Date: 02/26/2021

Time: 01:05:14 PM

Tool Version: 11.0.1.21429

File Name: B-11 UU LS.gsz

Directory: Z:\Engineering\Reports\2020\G143-20 IAH Kenswick and Lee Road Extension at Will Clayton Parkway - Atkins\Slope Stability Analysis\Slope Stability\B-11\

Last Solved Date: 02/26/2021

Last Solved Time: 01:05:22 PM

## Project Settings

Unit System: U.S. Customary Units

## Analysis Settings

### Slope Stability

Kind: SLOPE/W

Method: Bishop

Settings

PWP Conditions from: Piezometric Line

Apply Phreatic Correction: No

Use Staged Rapid Drawdown: No

Unit Weight of Water: 62.430189 pcf

Slip Surface

Direction of movement: Right to Left

Use Passive Mode: No

Slip Surface Option: Entry and Exit

Critical slip surfaces saved: 1

Optimize Critical Slip Surface Location: No

Tension Crack Option: (none)

Distribution

F of S Calculation Option: Constant

Advanced

Geometry Settings

Minimum Slip Surface Depth: 0.1 ft

Number of Slices: 30

Factor of Safety Convergence Settings

Maximum Number of Iterations: 100

Tolerable difference in F of S: 0.001

# Materials

## 1. Fill:very stiff CL-ML

Model: [Mohr-Coulomb](#)

Unit Weight: 125 pcf

Effective Cohesion: 1,000 psf

Effective Friction Angle: 0.001 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

## 2. Soft to very stiff CL

Model: [Mohr-Coulomb](#)

Unit Weight: 125 pcf

Effective Cohesion: 700 psf

Effective Friction Angle: 0.001 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

## 4. Stiff to very stiff CH

Model: [Mohr-Coulomb](#)

Unit Weight: 127 pcf

Effective Cohesion: 2,000 psf

Effective Friction Angle: 0.001 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

## 5. Stiff to very stiff CL

Model: [Mohr-Coulomb](#)

Unit Weight: 125 pcf

Effective Cohesion: 1,300 psf

Effective Friction Angle: 0.001 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

## 6. Very stiff CH

Model: [Mohr-Coulomb](#)

Unit Weight: 134 pcf

Effective Cohesion: 3,000 psf

Effective Friction Angle: 0.001 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

## 3. Very stiff to hard CL

Model: [Mohr-Coulomb](#)

Unit Weight: 132 pcf

Effective Cohesion: 3,000 psf

Effective Friction Angle: 0.001 °

Phi-B: 0 °  
Pore Water Pressure  
Piezometric Line: 1

## Slip Surface Entry and Exit

Left Type: Range  
Left-Zone Left Coordinate: (42.01841, 71.584475) ft  
Left-Zone Right Coordinate: (49.36674, 73.058561) ft  
Left-Zone Increment: 4  
Right Type: Range  
Right-Zone Left Coordinate: (80.91758, 79.374853) ft  
Right-Zone Right Coordinate: (89.01254, 80.983741) ft  
Right-Zone Increment: 4  
Radius Increments: 15

## Slip Surface Limits

Left Coordinate: (0, 71.52) ft  
Right Coordinate: (140, 81.18) ft

## Piezometric Lines

### Piezometric Line 1

#### Coordinates

	X	Y
Coordinate 1	0 ft	71.51 ft
Coordinate 2	40.7 ft	71.32 ft
Coordinate 3	60.54033 ft	75.3 ft
Coordinate 4	75.50956 ft	78.3 ft
Coordinate 5	90 ft	81.18 ft
Coordinate 6	140 ft	81.18 ft




# Slope Stability

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## File Information

File Version: 11.00

Title: B-11 LONG TERM CONDITION, GLOBAL SLIDE

Revision Number: 835

Date: 02/26/2021

Time: 12:38:49 PM

Tool Version: 11.0.1.21429

File Name: B-11 CD GS.gsz

Directory: Z:\Engineering\Reports\2020\G143-20 IAH Kenswick and Lee Road Extension at Will Clayton Parkway - Atkins\Slope Stability Analysis\Slope Stability\B-11\

Last Solved Date: 02/26/2021

Last Solved Time: 12:38:52 PM

## Project Settings

Unit System: U.S. Customary Units

## Analysis Settings

### Slope Stability

Kind: SLOPE/W

Method: Bishop

Settings

PWP Conditions from: (none)

Unit Weight of Water: 62.430189 pcf

Slip Surface

Direction of movement: Right to Left

Use Passive Mode: No

Slip Surface Option: Entry and Exit

Critical slip surfaces saved: 1

Optimize Critical Slip Surface Location: No

Tension Crack Option: (none)

Distribution

F of S Calculation Option: Constant

Advanced

Geometry Settings

Minimum Slip Surface Depth: 0.1 ft

Number of Slices: 30

Factor of Safety Convergence Settings

Maximum Number of Iterations: 100

Tolerable difference in F of S: 0.001

## Materials

### 1. Fill:very stiff CL-ML

Model: [Mohr-Coulomb](#)  
Unit Weight: [125 pcf](#)  
Effective Cohesion: [120 psf](#)  
Effective Friction Angle: [21 °](#)  
Phi-B: [0 °](#)

### 2. Soft to very stiff CL

Model: [Mohr-Coulomb](#)  
Unit Weight: [125 pcf](#)  
Effective Cohesion: [80 psf](#)  
Effective Friction Angle: [25 °](#)  
Phi-B: [0 °](#)

### 4. Stiff to very stiff CH

Model: [Mohr-Coulomb](#)  
Unit Weight: [127 pcf](#)  
Effective Cohesion: [150 psf](#)  
Effective Friction Angle: [19 °](#)  
Phi-B: [0 °](#)

### 5. Stiff to very stiff CL

Model: [Mohr-Coulomb](#)  
Unit Weight: [125 pcf](#)  
Effective Cohesion: [150 psf](#)  
Effective Friction Angle: [25 °](#)  
Phi-B: [0 °](#)

### 6. Very stiff CH

Model: [Mohr-Coulomb](#)  
Unit Weight: [134 pcf](#)  
Effective Cohesion: [180 psf](#)  
Effective Friction Angle: [19 °](#)  
Phi-B: [0 °](#)

### 7. Desiccated CH

Model: [Mohr-Coulomb](#)  
Unit Weight: [127 pcf](#)  
Effective Cohesion: [70 psf](#)  
Effective Friction Angle: [16 °](#)  
Phi-B: [0 °](#)

### 3. Very stiff to hard CL

Model: [Mohr-Coulomb](#)  
Unit Weight: [132 pcf](#)  
Effective Cohesion: [200 psf](#)  
Effective Friction Angle: [25 °](#)  
Phi-B: [0 °](#)

## Slip Surface Entry and Exit

Left Type: [Range](#)

Left-Zone Left Coordinate: (0, 71.52) ft  
 Left-Zone Right Coordinate: (39.64913, 71.325164) ft  
 Left-Zone Increment: 4  
 Right Type: Range  
 Right-Zone Left Coordinate: (91.63022, 81.18) ft  
 Right-Zone Right Coordinate: (138.64989, 81.18) ft  
 Right-Zone Increment: 4  
 Radius Increments: 15

## Slip Surface Limits

Left Coordinate: (0, 71.52) ft  
 Right Coordinate: (140, 81.18) ft

## Surcharge Loads

### Surcharge Load 1

Surcharge (Unit Weight): 250 pcf  
 Direction: Vertical

#### Coordinates

	X	Y
	90 ft	82.18 ft
	140 ft	82.18 ft

## Geometry

Name: Default Geometry

### Settings

View: 2D  
 Element Thickness: 1 ft

### Points

	X	Y
Point 1	0 ft	60.3 ft
Point 2	0 ft	64.3 ft
Point 3	0 ft	66.3 ft
Point 4	0 ft	68.3 ft
Point 5	140 ft	60.3 ft
Point 6	140 ft	64.3 ft
Point 7	140 ft	66.3 ft
Point 8	140 ft	68.3 ft
Point 9	140 ft	78.3 ft
Point 10	140 ft	81.18 ft
Point 11	90 ft	81.18 ft
Point 12	40.7 ft	71.32 ft
Point 13	0 ft	71.52 ft

Point 14	75.50956 ft	78.3 ft
Point 15	140 ft	75.3 ft
Point 16	60.54033 ft	75.3 ft
Point 17	55.7 ft	60.3 ft
Point 18	55.7 ft	64.3 ft
Point 19	75.7 ft	66.3 ft
Point 20	75.7 ft	68.3 ft

## Regions

	Material	Points	Area
Region 1	6. Very stiff CH	17,5,6,18	337.2 ft <sup>2</sup>
Region 2	5. Stiff to very stiff CL	2,18,6,7,19,3	280 ft <sup>2</sup>
Region 3	4. Stiff to very stiff CH	19,7,8,20	128.6 ft <sup>2</sup>
Region 4	3. Very stiff to hard CL	4,20,8,15,16,12,13	782.6 ft <sup>2</sup>
Region 5	2. Soft to very stiff CL	16,15,9,14	215.93 ft <sup>2</sup>
Region 6	1. Fill:very stiff CL-ML	9,10,11,14	164.87 ft <sup>2</sup>
Region 7	7. Desiccated CH	1,17,18,2	222.8 ft <sup>2</sup>
Region 8	7. Desiccated CH	3,19,20,4	151.4 ft <sup>2</sup>

## Slip Results

Slip Surfaces Analysed: 400 of 400 converged

## Current Slip Surface

Slip Surface: 271

Factor of Safety: 3.262

Volume: 789.30433 ft<sup>3</sup>

Weight: 102,028.71 lbf

Resisting Moment: 2,796,882.7 lbf·ft

Activating Moment: 857,358.48 lbf·ft

Slip Rank: 1 of 400 slip surfaces

Exit: (29.736847, 71.373873) ft

Entry: (103.38514, 81.18) ft

Radius: 52.893716 ft

Center: (61.591533, 113.59974) ft

## Slip Slices

	X	Y	PWP	Frictional Strength	Cohesive Strength	Suction Strength	Base Material
Slice 1	30.873741 ft	70.562418 ft	0 psf	77.961554 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 2	33.147528 ft	69.025481 ft	0 psf	177.99616 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 3	36.100754 ft	67.3 ft	0 psf	162.84842 psf	70 psf	0 psf	7. Desiccated CH
Slice 4	39.308543 ft	65.653324 ft	0 psf	377.48686 psf	150 psf	0 psf	5. Stiff to very stiff CL

Slice 5	41.563486 ft	64.653324 ft	0 psf	445.8238 psf	150 psf	0 psf	5.Stiff to very stiff CL
Slice 6	43.754274 ft	63.824354 ft	0 psf	311.35186 psf	70 psf	0 psf	7. Desiccated CH
Slice 7	46.40888 ft	62.950833 ft	0 psf	362.70774 psf	70 psf	0 psf	7. Desiccated CH
Slice 8	49.063486 ft	62.229259 ft	0 psf	407.98608 psf	70 psf	0 psf	7. Desiccated CH
Slice 9	51.718091 ft	61.653282 ft	0 psf	447.51709 psf	70 psf	0 psf	7. Desiccated CH
Slice 10	54.372697 ft	61.218083 ft	0 psf	481.55683 psf	70 psf	0 psf	7. Desiccated CH
Slice 11	56.910083 ft	60.927613 ft	0 psf	621.72327 psf	180 psf	0 psf	6. Very stiff CH
Slice 12	59.330247 ft	60.768269 ft	0 psf	647.35824 psf	180 psf	0 psf	6. Very stiff CH
Slice 13	61.787766 ft	60.721104 ft	0 psf	667.25811 psf	180 psf	0 psf	6. Very stiff CH
Slice 14	64.282637 ft	60.7893 ft	0 psf	681.33124 psf	180 psf	0 psf	6. Very stiff CH
Slice 15	66.777509 ft	60.975799 ft	0 psf	689.83178 psf	180 psf	0 psf	6. Very stiff CH
Slice 16	69.272381 ft	61.281868 ft	0 psf	692.75395 psf	180 psf	0 psf	6. Very stiff CH
Slice 17	71.767252 ft	61.70963 ft	0 psf	690.05299 psf	180 psf	0 psf	6. Very stiff CH
Slice 18	74.262124 ft	62.262132 ft	0 psf	681.64352 psf	180 psf	0 psf	6. Very stiff CH
Slice 19	75.60478 ft	62.596172 ft	0 psf	675.4444 psf	180 psf	0 psf	6. Very stiff CH
Slice 20	76.964024 ft	63.0064 ft	0 psf	665.82571 psf	180 psf	0 psf	6. Very stiff CH
Slice 21	79.492071 ft	63.845233 ft	0 psf	644.56215 psf	180 psf	0 psf	6. Very stiff CH
Slice 22	81.883566 ft	64.768526 ft	0 psf	829.1265 psf	150 psf	0 psf	5.Stiff to very stiff CL
Slice 23	84.138508 ft	65.768526 ft	0 psf	791.67118 psf	150 psf	0 psf	5.Stiff to very stiff CL
Slice 24	87.082312 ft	67.3 ft	0 psf	549.36924 psf	150 psf	0 psf	4. Stiff to very stiff CH
Slice 25	89.449323 ft	68.641218 ft	0 psf	669.23427 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 26	91.345448 ft	69.898482 ft	0 psf	703.83024 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 27	94.036345 ft	71.86037 ft	0 psf	583.9296 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 28	96.727241 ft	74.103106 ft	0 psf	450.29565 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 29	99.527753 ft	76.8 ft	0 psf	313.84593 psf	80 psf	0 psf	2. Soft to very stiff CL

Slice 30	102.18398 ft	79.74 ft	0 psf	129.82079 psf	120 psf	0 psf	1. Fill:very stiff CL-ML
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# Slope Stability

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## File Information

File Version: 11.00

Title: B-11 LONG TERM CONDITION, LOCAL SLIDE

Revision Number: 843

Date: 02/26/2021

Time: 12:40:58 PM

Tool Version: 11.0.1.21429

File Name: B-11 CD LS.gsz

Directory: Z:\Engineering\Reports\2020\G143-20 IAH Kenswick and Lee Road Extension at Will Clayton Parkway - Atkins\Slope Stability Analysis\Slope Stability\B-11\

Last Solved Date: 02/26/2021

Last Solved Time: 12:41:00 PM

## Project Settings

Unit System: U.S. Customary Units

## Analysis Settings

### Slope Stability

Kind: SLOPE/W

Method: Bishop

Settings

PWP Conditions from: (none)

Unit Weight of Water: 62.430189 pcf

Slip Surface

Direction of movement: Right to Left

Use Passive Mode: No

Slip Surface Option: Entry and Exit

Critical slip surfaces saved: 1

Optimize Critical Slip Surface Location: No

Tension Crack Option: (none)

Distribution

F of S Calculation Option: Constant

Advanced

Geometry Settings

Minimum Slip Surface Depth: 0.1 ft

Number of Slices: 30

Factor of Safety Convergence Settings

Maximum Number of Iterations: 100

Tolerable difference in F of S: 0.001

## Materials

**1. Fill:very stiff CL-ML**

Model: [Mohr-Coulomb](#)  
Unit Weight: [125 pcf](#)  
Effective Cohesion: [120 psf](#)  
Effective Friction Angle: [21 °](#)  
Phi-B: [0 °](#)

**2. Soft to very stiff CL**

Model: [Mohr-Coulomb](#)  
Unit Weight: [125 pcf](#)  
Effective Cohesion: [80 psf](#)  
Effective Friction Angle: [25 °](#)  
Phi-B: [0 °](#)

**4. Stiff to very stiff CH**

Model: [Mohr-Coulomb](#)  
Unit Weight: [127 pcf](#)  
Effective Cohesion: [150 psf](#)  
Effective Friction Angle: [19 °](#)  
Phi-B: [0 °](#)

**5. Stiff to very stiff CL**

Model: [Mohr-Coulomb](#)  
Unit Weight: [125 pcf](#)  
Effective Cohesion: [150 psf](#)  
Effective Friction Angle: [25 °](#)  
Phi-B: [0 °](#)

**6. Very stiff CH**

Model: [Mohr-Coulomb](#)  
Unit Weight: [134 pcf](#)  
Effective Cohesion: [180 psf](#)  
Effective Friction Angle: [19 °](#)  
Phi-B: [0 °](#)

**7. Desiccated CH**

Model: [Mohr-Coulomb](#)  
Unit Weight: [127 pcf](#)  
Effective Cohesion: [70 psf](#)  
Effective Friction Angle: [16 °](#)  
Phi-B: [0 °](#)

**3. Very stiff to hard CL**

Model: [Mohr-Coulomb](#)  
Unit Weight: [132 pcf](#)  
Effective Cohesion: [200 psf](#)  
Effective Friction Angle: [25 °](#)  
Phi-B: [0 °](#)

**Slip Surface Entry and Exit**

Left Type: [Range](#)



Left-Zone Left Coordinate: (41.74389, 71.529406) ft  
 Left-Zone Right Coordinate: (50.63485, 73.312946) ft  
 Left-Zone Increment: 4  
 Right Type: Range  
 Right-Zone Left Coordinate: (77.79701, 78.754635) ft  
 Right-Zone Right Coordinate: (90.52422, 81.18) ft  
 Right-Zone Increment: 4  
 Radius Increments: 15

## Slip Surface Limits

Left Coordinate: (0, 71.52) ft  
 Right Coordinate: (140, 81.18) ft

## Surcharge Loads

### Surcharge Load 1

Surcharge (Unit Weight): 250 pcf  
 Direction: Vertical

#### Coordinates

	X	Y
	90 ft	82.18 ft
	140 ft	82.18 ft

## Geometry

Name: Default Geometry

### Settings

View: 2D  
 Element Thickness: 1 ft

### Points

	X	Y
Point 1	0 ft	60.3 ft
Point 2	0 ft	64.3 ft
Point 3	0 ft	66.3 ft
Point 4	0 ft	68.3 ft
Point 5	140 ft	60.3 ft
Point 6	140 ft	64.3 ft
Point 7	140 ft	66.3 ft
Point 8	140 ft	68.3 ft
Point 9	140 ft	78.3 ft
Point 10	140 ft	81.18 ft
Point 11	90 ft	81.18 ft
Point 12	40.7 ft	71.32 ft
Point 13	0 ft	71.52 ft

Point 14	75.50956 ft	78.3 ft
Point 15	140 ft	75.3 ft
Point 16	60.54033 ft	75.3 ft
Point 17	55.7 ft	60.3 ft
Point 18	55.7 ft	64.3 ft
Point 19	75.7 ft	66.3 ft
Point 20	75.7 ft	68.3 ft

## Regions

	Material	Points	Area
Region 1	6. Very stiff CH	17,5,6,18	337.2 ft <sup>2</sup>
Region 2	5. Stiff to very stiff CL	2,18,6,7,19,3	280 ft <sup>2</sup>
Region 3	4. Stiff to very stiff CH	19,7,8,20	128.6 ft <sup>2</sup>
Region 4	3. Very stiff to hard CL	4,20,8,15,16,12,13	782.6 ft <sup>2</sup>
Region 5	2. Soft to very stiff CL	16,15,9,14	215.93 ft <sup>2</sup>
Region 6	1. Fill:very stiff CL-ML	9,10,11,14	164.87 ft <sup>2</sup>
Region 7	7. Desiccated CH	1,17,18,2	222.8 ft <sup>2</sup>
Region 8	7. Desiccated CH	3,19,20,4	151.4 ft <sup>2</sup>

## Slip Results

Slip Surfaces Analysed: 400 of 400 converged

## Current Slip Surface

Slip Surface: 56

Factor of Safety: 3.401

Volume: 285.71102 ft<sup>3</sup>

Weight: 37,179.529 lbf

Resisting Moment: 712,668.6 lbf·ft

Activating Moment: 209,572.05 lbf·ft

Slip Rank: 1 of 400 slip surfaces

Exit: (41.74389, 71.529406) ft

Entry: (87.334875, 80.650302) ft

Radius: 34.647199 ft

Center: (59.499648, 101.28107) ft

## Slip Slices

	X	Y	PWP	Frictional Strength	Cohesive Strength	Suction Strength	Base Material
Slice 1	42.457969 ft	71.125857 ft	0 psf	53.283716 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 2	43.886128 ft	70.361715 ft	0 psf	120.51916 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 3	45.314286 ft	69.680574 ft	0 psf	181.35964 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 4	46.742445 ft	69.077152 ft	0 psf	236.36505 psf	200 psf	0 psf	3. Very stiff to hard CL

Slice 5	48.170603 ft	68.547139 ft	0 psf	285.98341 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 6	49.613161 ft	68.083057 ft	0 psf	196.57866 psf	70 psf	0 psf	7. Desiccated CH
Slice 7	51.070116 ft	67.683341 ft	0 psf	221.67393 psf	70 psf	0 psf	7. Desiccated CH
Slice 8	52.527072 ft	67.350869 ft	0 psf	244.11628 psf	70 psf	0 psf	7. Desiccated CH
Slice 9	53.984028 ft	67.083673 ft	0 psf	264.00867 psf	70 psf	0 psf	7. Desiccated CH
Slice 10	55.440984 ft	66.880232 ft	0 psf	281.43348 psf	70 psf	0 psf	7. Desiccated CH
Slice 11	56.89794 ft	66.739415 ft	0 psf	296.45525 psf	70 psf	0 psf	7. Desiccated CH
Slice 12	58.354896 ft	66.660458 ft	0 psf	309.12273 psf	70 psf	0 psf	7. Desiccated CH
Slice 13	59.811852 ft	66.642937 ft	0 psf	319.47024 psf	70 psf	0 psf	7. Desiccated CH
Slice 14	61.338187 ft	66.691912 ft	0 psf	327.46389 psf	70 psf	0 psf	7. Desiccated CH
Slice 15	62.933901 ft	66.813818 ft	0 psf	332.88369 psf	70 psf	0 psf	7. Desiccated CH
Slice 16	64.529615 ft	67.010417 ft	0 psf	335.55259 psf	70 psf	0 psf	7. Desiccated CH
Slice 17	66.125329 ft	67.28301 ft	0 psf	335.44483 psf	70 psf	0 psf	7. Desiccated CH
Slice 18	67.721043 ft	67.633447 ft	0 psf	332.51541 psf	70 psf	0 psf	7. Desiccated CH
Slice 19	69.316757 ft	68.064197 ft	0 psf	326.69852 psf	70 psf	0 psf	7. Desiccated CH
Slice 20	70.788982 ft	68.532473 ft	0 psf	503.04795 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 21	72.137719 ft	69.029201 ft	0 psf	484.67262 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 22	73.486455 ft	69.591098 ft	0 psf	462.53378 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 23	74.835192 ft	70.221709 ft	0 psf	436.47849 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 24	76.200757 ft	70.935082 ft	0 psf	405.82654 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 25	77.58315 ft	71.738581 ft	0 psf	370.2403 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 26	78.965543 ft	72.631304 ft	0 psf	329.80842 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 27	80.347936 ft	73.621927 ft	0 psf	284.16649 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 28	81.730329 ft	74.721461 ft	0 psf	232.86327 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 29	83.173238 ft	76.004027 ft	0 psf	188.17283 psf	80 psf	0 psf	2. Soft to very stiff CL

Slice 30	84.676663 ft	77.504027 ft	0 psf	123.10665 psf	80 psf	0 psf	2. Soft to very stiff CL
Slice 31	86.381625 ft	79.475151 ft	0 psf	26.860442 psf	120 psf	0 psf	1. Fill:very stiff CL-ML

# Slope Stability

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## File Information

File Version: 11.00

Title: B-11 RAPID DRAWDOWN CONDITION, GLOBAL SLIDE, USING EFFECTIVE STRESS PARAMETERS

Revision Number: 848

Date: 02/26/2021

Time: 12:48:59 PM

Tool Version: 11.0.1.21429

File Name: B-11 CU GS (Effective Stress Parameters).gsz

Directory: Z:\Engineering\Reports\2020\G143-20 IAH Kenswick and Lee Road Extension at Will Clayton Parkway - Atkins\Slope Stability Analysis\Slope Stability\B-11\

Last Solved Date: 02/26/2021

Last Solved Time: 12:49:05 PM

## Project Settings

Unit System: U.S. Customary Units

## Analysis Settings

### Slope Stability

Kind: SLOPE/W

Method: Bishop

Settings

PWP Conditions from: Piezometric Line

Apply Phreatic Correction: No

Use Staged Rapid Drawdown: No

Unit Weight of Water: 62.430189 pcf

Slip Surface

Direction of movement: Right to Left

Use Passive Mode: No

Slip Surface Option: Entry and Exit

Critical slip surfaces saved: 1

Optimize Critical Slip Surface Location: No

Tension Crack Option: (none)

Distribution

F of S Calculation Option: Constant

Advanced

Geometry Settings

Minimum Slip Surface Depth: 0.1 ft

Number of Slices: 30

Factor of Safety Convergence Settings

Maximum Number of Iterations: 100

Tolerable difference in F of S: 0.001

# Materials

## 1. Fill:very stiff CL-ML

Model: [Mohr-Coulomb](#)

Unit Weight: [125 pcf](#)

Effective Cohesion: [120 psf](#)

Effective Friction Angle: [21 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 2. Soft to very stiff CL

Model: [Mohr-Coulomb](#)

Unit Weight: [125 pcf](#)

Effective Cohesion: [80 psf](#)

Effective Friction Angle: [25 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 4. Stiff to very stiff CH

Model: [Mohr-Coulomb](#)

Unit Weight: [127 pcf](#)

Effective Cohesion: [150 psf](#)

Effective Friction Angle: [19 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 5. Stiff to very stiff CL

Model: [Mohr-Coulomb](#)

Unit Weight: [125 pcf](#)

Effective Cohesion: [150 psf](#)

Effective Friction Angle: [25 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 6. Very stiff CH

Model: [Mohr-Coulomb](#)

Unit Weight: [134 pcf](#)

Effective Cohesion: [180 psf](#)

Effective Friction Angle: [19 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 7. Desiccated CH

Model: [Mohr-Coulomb](#)

Unit Weight: [127 pcf](#)

Effective Cohesion: [70 psf](#)

Effective Friction Angle: [16 °](#)

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 3. Very stiff to hard CL

Model: [Mohr-Coulomb](#)

Unit Weight: 132 pcf

Effective Cohesion: 200 psf

Effective Friction Angle: 25 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 8. Dessicated CH 2

Model: [Mohr-Coulomb](#)

Unit Weight: 134 pcf

Effective Cohesion: 70 psf

Effective Friction Angle: 16 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

## Slip Surface Entry and Exit

Left Type: [Range](#)

Left-Zone Left Coordinate: (12.23918, 71.459857) ft

Left-Zone Right Coordinate: (36.8238, 71.339048) ft

Left-Zone Increment: 4

Right Type: [Range](#)

Right-Zone Left Coordinate: (93.23648, 81.18) ft

Right-Zone Right Coordinate: (138.69856, 81.18) ft

Right-Zone Increment: 4

Radius Increments: 15

## Slip Surface Limits

Left Coordinate: (0, 71.52) ft

Right Coordinate: (140, 81.18) ft

## Piezometric Lines

### Piezometric Line 1

#### Coordinates

	X	Y
Coordinate 1	0 ft	71.51 ft
Coordinate 2	40.7 ft	71.32 ft
Coordinate 3	60.54033 ft	75.3 ft
Coordinate 4	75.50956 ft	78.3 ft

Coordinate 5	90 ft	81.18 ft
Coordinate 6	140 ft	81.18 ft

## Geometry

Name: Default Geometry

## Settings

View: 2D

Element Thickness: 1 ft

## Points

	X	Y
Point 1	0 ft	60.3 ft
Point 2	0 ft	64.3 ft
Point 3	0 ft	66.3 ft
Point 4	0 ft	68.3 ft
Point 5	140 ft	60.3 ft
Point 6	140 ft	64.3 ft
Point 7	140 ft	66.3 ft
Point 8	140 ft	68.3 ft
Point 9	140 ft	78.3 ft
Point 10	140 ft	81.18 ft
Point 11	90 ft	81.18 ft
Point 12	40.7 ft	71.32 ft
Point 13	0 ft	71.52 ft
Point 14	75.50956 ft	78.3 ft
Point 15	140 ft	75.3 ft
Point 16	60.54033 ft	75.3 ft
Point 17	55.7 ft	60.3 ft
Point 18	55.7 ft	64.3 ft
Point 19	75.7 ft	66.3 ft
Point 20	75.7 ft	68.3 ft

## Regions

	Material	Points	Area
Region 1	6. Very stiff CH	17,5,6,18	337.2 ft <sup>2</sup>
Region 2	5. Stiff to very stiff CL	2,18,6,7,19,3	280 ft <sup>2</sup>
Region 3	4. Stiff to very stiff CH	19,7,8,20	128.6 ft <sup>2</sup>
Region 4	3. Very stiff to hard CL	4,20,8,15,16,12,13	782.6 ft <sup>2</sup>
Region 5	2. Soft to very stiff CL	16,15,9,14	215.93 ft <sup>2</sup>
Region 6	1. Fill:very stiff CL-ML	9,10,11,14	164.87 ft <sup>2</sup>
Region 7	8. Desiccated CH 2	1,17,18,2	222.8 ft <sup>2</sup>
Region 8	7. Desiccated CH	3,19,20,4	151.4 ft <sup>2</sup>

## Slip Results

Slip Surfaces Analysed: 400 of 400 converged



## Current Slip Surface

Slip Surface: 327

Factor of Safety: 2.150

Volume: 345.8438 ft<sup>3</sup>

Weight: 44,911.462 lbf

Resisting Moment: 815,665.33 lbf·ft

Activating Moment: 379,459.86 lbf·ft

Slip Rank: 1 of 400 slip surfaces

Exit: (36.8238, 71.339048) ft

Entry: (93.23648, 81.18) ft

Radius: 50.138982 ft

Center: (57.956849, 116.80675) ft

## Slip Slices

	X	Y	PWP	Frictional Strength	Cohesive Strength	Suction Strength	Base Material
Slice 1	36.824835 ft	71.338567 ft	-0.029728734 psf	22.454699 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 2	37.794402 ft	70.912585 ft	26.281799 psf	36.209498 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 3	39.731467 ft	70.109081 ft	75.880146 psf	61.589196 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 4	41.84194 ft	69.343363 ft	137.70301 psf	93.143474 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 5	44.125821 ft	68.627824 ft	210.97663 psf	130.19117 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 6	46.222297 ft	68.070172 ft	272.04638 psf	91.795648 psf	70 psf	0 psf	7. Desiccated CH
Slice 7	48.131368 ft	67.649552 ft	322.21417 psf	106.73895 psf	70 psf	0 psf	7. Desiccated CH
Slice 8	50.040439 ft	67.306106 ft	367.56399 psf	120.08028 psf	70 psf	0 psf	7. Desiccated CH
Slice 9	51.94951 ft	67.038234 ft	408.19572 psf	131.87517 psf	70 psf	0 psf	7. Desiccated CH
Slice 10	53.858581 ft	66.844718 ft	444.18539 psf	142.16897 psf	70 psf	0 psf	7. Desiccated CH
Slice 11	55.767652 ft	66.724695 ft	475.58688 psf	150.99805 psf	70 psf	0 psf	7. Desiccated CH
Slice 12	57.676723 ft	66.677636 ft	502.4332 psf	158.39074 psf	70 psf	0 psf	7. Desiccated CH
Slice 13	59.585794 ft	66.703335 ft	524.73719 psf	164.36802 psf	70 psf	0 psf	7. Desiccated CH
Slice 14	61.550891 ft	66.807009 ft	542.86286 psf	168.63043 psf	70 psf	0 psf	7. Desiccated CH
Slice 15	63.572012 ft	66.993564 ft	556.50385 psf	171.10648 psf	70 psf	0 psf	7. Desiccated CH
Slice 16	65.593133 ft	67.26324 ft	564.95563 psf	172.03012 psf	70 psf	0 psf	7. Desiccated CH
Slice 17	67.614254 ft	67.617405 ft	568.1327 psf	171.39446 psf	70 psf	0 psf	7. Desiccated CH

Slice 18	69.635376 ft	68.057905 ft	565.91988 psf	169.18451 psf	70 psf	0 psf	7. Desiccated CH
Slice 19	71.45654 ft	68.526655 ft	559.44162 psf	255.91401 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 20	73.077748 ft	69.009749 ft	549.56601 psf	246.71904 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 21	74.698956 ft	69.55339 ft	535.91046 psf	235.73008 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 22	76.39072 ft	70.189025 ft	517.30322 psf	222.2306 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 23	78.15304 ft	70.92533 ft	493.20262 psf	206.01324 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 24	79.91536 ft	71.742566 ft	464.0495 psf	187.52772 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 25	81.67768 ft	72.645235 ft	429.56275 psf	166.69901 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 26	83.44 ft	73.63871 ft	389.40698 psf	143.43747 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 27	85.202321 ft	74.72944 ft	343.17954 psf	117.63651 psf	200 psf	0 psf	3. Very stiff to hard CL
Slice 28	87.06261 ft	75.998344 ft	287.04429 psf	105.45944 psf	80 psf	0 psf	2. Soft to very stiff CL
Slice 29	89.02087 ft	77.4699 ft	219.47307 psf	75.872054 psf	80 psf	0 psf	2. Soft to very stiff CL
Slice 30	90.826205 ft	78.960672 ft	138.55305 psf	30.037483 psf	120 psf	0 psf	1. Fill:very stiff CL-ML
Slice 31	92.444445 ft	80.429116 ft	46.877823 psf	-1.9484883 psf	120 psf	0 psf	1. Fill:very stiff CL-ML

# Slope Stability

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## File Information

File Version: 11.00

Title: B-11 RAPID DRAWDOWN CONDITION, LOCAL SLIDE, USING EFFECTIVE STRESS PARAMETERS

Revision Number: 856

Date: 02/26/2021

Time: 12:51:38 PM

Tool Version: 11.0.1.21429

File Name: B-11 CU LS (Effective Stress Parameters).gsz

Directory: Z:\Engineering\Reports\2020\G143-20 IAH Kenswick and Lee Road Extension at Will Clayton Parkway - Atkins\Slope Stability Analysis\Slope Stability\B-11\

Last Solved Date: 02/26/2021

Last Solved Time: 12:51:39 PM

## Project Settings

Unit System: U.S. Customary Units

## Analysis Settings

### Slope Stability

Kind: SLOPE/W

Method: Bishop

Settings

PWP Conditions from: Piezometric Line

Apply Phreatic Correction: No

Use Staged Rapid Drawdown: No

Unit Weight of Water: 62.430189 pcf

Slip Surface

Direction of movement: Right to Left

Use Passive Mode: No

Slip Surface Option: Entry and Exit

Critical slip surfaces saved: 1

Optimize Critical Slip Surface Location: No

Tension Crack Option: (none)

Distribution

F of S Calculation Option: Constant

Advanced

Geometry Settings

Minimum Slip Surface Depth: 0.1 ft

Number of Slices: 30

Factor of Safety Convergence Settings

Maximum Number of Iterations: 100

Tolerable difference in F of S: 0.001

## Materials

### 1. Fill:very stiff CL-ML

Model: [Mohr-Coulomb](#)

Unit Weight: 125 pcf

Effective Cohesion: 120 psf

Effective Friction Angle: 21 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 2. Soft to very stiff CL

Model: [Mohr-Coulomb](#)

Unit Weight: 125 pcf

Effective Cohesion: 80 psf

Effective Friction Angle: 25 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 4. Stiff to very stiff CH

Model: [Mohr-Coulomb](#)

Unit Weight: 127 pcf

Effective Cohesion: 150 psf

Effective Friction Angle: 19 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 5. Stiff to very stiff CL

Model: [Mohr-Coulomb](#)

Unit Weight: 125 pcf

Effective Cohesion: 150 psf

Effective Friction Angle: 25 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 6. Very stiff CH

Model: [Mohr-Coulomb](#)

Unit Weight: 134 pcf

Effective Cohesion: 180 psf

Effective Friction Angle: 19 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 7. Desiccated CH

Model: [Mohr-Coulomb](#)

Unit Weight: 127 pcf

Effective Cohesion: 70 psf

Effective Friction Angle: 16 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 3. Very stiff to hard CL

Model: [Mohr-Coulomb](#)

Unit Weight: 132 pcf

Effective Cohesion: 200 psf

Effective Friction Angle: 25 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 8. Dessicated CH 2

Model: [Mohr-Coulomb](#)

Unit Weight: 134 pcf

Effective Cohesion: 70 psf

Effective Friction Angle: 16 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

## Slip Surface Entry and Exit

Left Type: [Range](#)

Left-Zone Left Coordinate: (42.83809, 71.748904) ft

Left-Zone Right Coordinate: (61.57268, 75.506894) ft

Left-Zone Increment: 4

Right Type: [Range](#)

Right-Zone Left Coordinate: (62.75811, 75.744468) ft

Right-Zone Right Coordinate: (88.71495, 80.924594) ft

Right-Zone Increment: 4

Radius Increments: 15

## Slip Surface Limits

Left Coordinate: (0, 71.52) ft

Right Coordinate: (140, 81.18) ft

## Piezometric Lines

### Piezometric Line 1

#### Coordinates

	X	Y
Coordinate 1	0 ft	71.51 ft
Coordinate 2	40.7 ft	71.32 ft
Coordinate 3	60.54033 ft	75.3 ft
Coordinate 4	75.50956 ft	78.3 ft

Coordinate 5	90 ft	81.18 ft
Coordinate 6	140 ft	81.18 ft

## Geometry

Name: Default Geometry

### Settings

View: 2D

Element Thickness: 1 ft

### Points

	X	Y
Point 1	0 ft	60.3 ft
Point 2	0 ft	64.3 ft
Point 3	0 ft	66.3 ft
Point 4	0 ft	68.3 ft
Point 5	140 ft	60.3 ft
Point 6	140 ft	64.3 ft
Point 7	140 ft	66.3 ft
Point 8	140 ft	68.3 ft
Point 9	140 ft	78.3 ft
Point 10	140 ft	81.18 ft
Point 11	90 ft	81.18 ft
Point 12	40.7 ft	71.32 ft
Point 13	0 ft	71.52 ft
Point 14	75.50956 ft	78.3 ft
Point 15	140 ft	75.3 ft
Point 16	60.54033 ft	75.3 ft
Point 17	55.7 ft	60.3 ft
Point 18	55.7 ft	64.3 ft
Point 19	75.7 ft	66.3 ft
Point 20	75.7 ft	68.3 ft

### Regions

	Material	Points	Area
Region 1	6. Very stiff CH	17,5,6,18	337.2 ft <sup>2</sup>
Region 2	5. Stiff to very stiff CL	2,18,6,7,19,3	280 ft <sup>2</sup>
Region 3	4. Stiff to very stiff CH	19,7,8,20	128.6 ft <sup>2</sup>
Region 4	3. Very stiff to hard CL	4,20,8,15,16,12,13	782.6 ft <sup>2</sup>
Region 5	2. Soft to very stiff CL	16,15,9,14	215.93 ft <sup>2</sup>
Region 6	1. Fill:very stiff CL-ML	9,10,11,14	164.87 ft <sup>2</sup>
Region 7	8. Dessicated CH 2	1,17,18,2	222.8 ft <sup>2</sup>
Region 8	7. Desiccated CH	3,19,20,4	151.4 ft <sup>2</sup>

# Slope Stability

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## File Information

File Version: 11.00

Title: B-11 RAPID DRAWDOWN CONDITION, GLOBAL SLIDE, USING TOTAL STRESS PARAMETERS

Revision Number: 842

Date: 02/26/2021

Time: 12:58:18 PM

Tool Version: 11.0.1.21429

File Name: B-11 CU GS (Total Stress Parameters).gsz

Directory: Z:\Engineering\Reports\2020\G143-20 IAH Kenswick and Lee Road Extension at Will Clayton Parkway - Atkins\Slope Stability Analysis\Slope Stability\B-11\

Last Solved Date: 02/26/2021

Last Solved Time: 12:58:21 PM

## Project Settings

Unit System: U.S. Customary Units

## Analysis Settings

### Slope Stability

Kind: SLOPE/W

Method: Bishop

Settings

PWP Conditions from: Piezometric Line

Apply Phreatic Correction: No

Use Staged Rapid Drawdown: No

Unit Weight of Water: 62.430189 pcf

Slip Surface

Direction of movement: Right to Left

Use Passive Mode: No

Slip Surface Option: Entry and Exit

Critical slip surfaces saved: 1

Optimize Critical Slip Surface Location: No

Tension Crack Option: (none)

Distribution

F of S Calculation Option: Constant

Advanced

Geometry Settings

Minimum Slip Surface Depth: 0.1 ft

Number of Slices: 30

Factor of Safety Convergence Settings

Maximum Number of Iterations: 100

Tolerable difference in F of S: 0.001

## Materials

### 1. Fill:very stiff CL-ML

Model: [Mohr-Coulomb](#)

Unit Weight: [125 pcf](#)

Effective Cohesion: [100 psf](#)

Effective Friction Angle: [17 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

### 2. Soft to very stiff CL

Model: [Mohr-Coulomb](#)

Unit Weight: [125 pcf](#)

Effective Cohesion: [110 psf](#)

Effective Friction Angle: [13 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

### 4. Stiff to very stiff CH

Model: [Mohr-Coulomb](#)

Unit Weight: [127 pcf](#)

Effective Cohesion: [130 psf](#)

Effective Friction Angle: [16 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

### 5. Stiff to very stiff CL

Model: [Mohr-Coulomb](#)

Unit Weight: [125 pcf](#)

Effective Cohesion: [200 psf](#)

Effective Friction Angle: [13 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

### 6. Very stiff CH

Model: [Mohr-Coulomb](#)

Unit Weight: [134 pcf](#)

Effective Cohesion: [160 psf](#)

Effective Friction Angle: [16 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

### 7. Desiccated CH

Model: [Mohr-Coulomb](#)

Unit Weight: [127 pcf](#)

Effective Cohesion: [70 psf](#)

Effective Friction Angle: [16 °](#)



Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 3. Very stiff to hard CL

Model: [Mohr-Coulomb](#)

Unit Weight: 132 pcf

Effective Cohesion: 250 psf

Effective Friction Angle: 13 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 8. Dessicated CH 2

Model: [Mohr-Coulomb](#)

Unit Weight: 134 pcf

Effective Cohesion: 70 psf

Effective Friction Angle: 16 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

## Slip Surface Entry and Exit

Left Type: [Range](#)

Left-Zone Left Coordinate: (1.12577, 71.514468) ft

Left-Zone Right Coordinate: (39.53921, 71.325704) ft

Left-Zone Increment: 4

Right Type: [Range](#)

Right-Zone Left Coordinate: (90.91633, 81.18) ft

Right-Zone Right Coordinate: (137.68451, 81.18) ft

Right-Zone Increment: 4

Radius Increments: 15

## Slip Surface Limits

Left Coordinate: (0, 71.52) ft

Right Coordinate: (140, 81.18) ft

## Piezometric Lines

### Piezometric Line 1

#### Coordinates

	X	Y
Coordinate 1	0 ft	71.51 ft
Coordinate 2	40.7 ft	71.32 ft
Coordinate 3	60.54033 ft	75.3 ft
Coordinate 4	75.50956 ft	78.3 ft

Coordinate 5	90 ft	81.18 ft
Coordinate 6	140 ft	81.18 ft

## Geometry

Name: Default Geometry

## Settings

View: 2D

Element Thickness: 1 ft

## Points

	X	Y
Point 1	0 ft	60.3 ft
Point 2	0 ft	64.3 ft
Point 3	0 ft	66.3 ft
Point 4	0 ft	68.3 ft
Point 5	140 ft	60.3 ft
Point 6	140 ft	64.3 ft
Point 7	140 ft	66.3 ft
Point 8	140 ft	68.3 ft
Point 9	140 ft	78.3 ft
Point 10	140 ft	81.18 ft
Point 11	90 ft	81.18 ft
Point 12	40.7 ft	71.32 ft
Point 13	0 ft	71.52 ft
Point 14	75.50956 ft	78.3 ft
Point 15	140 ft	75.3 ft
Point 16	60.54033 ft	75.3 ft
Point 17	55.7 ft	60.3 ft
Point 18	55.7 ft	64.3 ft
Point 19	75.7 ft	66.3 ft
Point 20	75.7 ft	68.3 ft

## Regions

	Material	Points	Area
Region 1	6. Very stiff CH	17,5,6,18	337.2 ft <sup>2</sup>
Region 2	5. Stiff to very stiff CL	2,18,6,7,19,3	280 ft <sup>2</sup>
Region 3	4. Stiff to very stiff CH	19,7,8,20	128.6 ft <sup>2</sup>
Region 4	3. Very stiff to hard CL	4,20,8,15,16,12,13	782.6 ft <sup>2</sup>
Region 5	2. Soft to very stiff CL	16,15,9,14	215.93 ft <sup>2</sup>
Region 6	1. Fill:very stiff CL-ML	9,10,11,14	164.87 ft <sup>2</sup>
Region 7	8. Desiccated CH 2	1,17,18,2	222.8 ft <sup>2</sup>
Region 8	7. Desiccated CH	3,19,20,4	151.4 ft <sup>2</sup>

## Slip Results

Slip Surfaces Analysed: 370 of 400 converged

## Current Slip Surface

Slip Surface: 264

Factor of Safety: 1.988

Volume: 767.6595 ft<sup>3</sup>

Weight: 99,392.354 lbf

Resisting Moment: 1,420,403.4 lbf·ft

Activating Moment: 714,482.89 lbf·ft

Slip Rank: 1 of 400 slip surfaces

Exit: (29.93585, 71.372895) ft

Entry: (102.60837, 81.18) ft

Radius: 52.155147 ft

Center: (61.311586, 113.0349) ft

## Slip Slices

	X	Y	PWP	Frictional Strength	Cohesive Strength	Suction Strength	Base Material
Slice 1	29.937617 ft	71.371564 ft	-0.082556255 psf	24.001065 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 2	31.079132 ft	70.559012 ft	50.312585 psf	36.714072 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 3	33.358628 ft	69.023895 ft	145.48588 psf	60.376472 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 4	35.413714 ft	67.776227 ft	222.7791 psf	83.122265 psf	70 psf	0 psf	7. Desiccated CH
Slice 5	37.244389 ft	66.776227 ft	284.67575 psf	101.69646 psf	70 psf	0 psf	7. Desiccated CH
Slice 6	39.429863 ft	65.712691 ft	350.43556 psf	103.1888 psf	200 psf	0 psf	5. Stiff to very stiff CL
Slice 7	41.717776 ft	64.712691 ft	425.24179 psf	119.57639 psf	200 psf	0 psf	5. Stiff to very stiff CL
Slice 8	44.031997 ft	63.844584 ft	508.42017 psf	167.892 psf	70 psf	0 psf	8. Desiccated CH 2
Slice 9	46.624887 ft	63.00856 ft	593.08564 psf	194.57534 psf	70 psf	0 psf	8. Desiccated CH 2
Slice 10	49.217776 ft	62.318799 ft	668.61983 psf	217.80249 psf	70 psf	0 psf	8. Desiccated CH 2
Slice 11	51.810666 ft	61.76938 ft	735.39241 psf	237.78243 psf	70 psf	0 psf	8. Desiccated CH 2
Slice 12	54.403555 ft	61.355815 ft	793.68364 psf	254.67849 psf	70 psf	0 psf	8. Desiccated CH 2
Slice 13	56.910083 ft	61.080002 ft	842.29345 psf	269.35593 psf	160 psf	0 psf	6. Very stiff CH
Slice 14	59.330247 ft	60.93147 ft	881.87544 psf	279.25191 psf	160 psf	0 psf	6. Very stiff CH
Slice 15	61.787766 ft	60.896847 ft	914.79908 psf	286.29322 psf	160 psf	0 psf	6. Very stiff CH
Slice 16	64.282637 ft	60.979437 ft	940.85807 psf	290.44886 psf	160 psf	0 psf	6. Very stiff CH
Slice 17	66.777509 ft	61.18213 ft	959.41905 psf	292.09444 psf	160 psf	0 psf	6. Very stiff CH

Slice 18	69.272381 ft	61.506345 ft	970.39333 psf	291.23046 psf	160 psf	0 psf	6. Very stiff CH
Slice 19	71.767252 ft	61.954402 ft	973.63611 psf	287.83925 psf	160 psf	0 psf	6. Very stiff CH
Slice 20	74.262124 ft	62.529607 ft	968.94108 psf	281.88439 psf	160 psf	0 psf	6. Very stiff CH
Slice 21	75.60478 ft	62.876608 ft	964.0668 psf	277.93142 psf	160 psf	0 psf	6. Very stiff CH
Slice 22	76.746905 ft	63.228182 ft	956.28955 psf	273.4154 psf	160 psf	0 psf	6. Very stiff CH
Slice 23	78.840715 ft	63.926311 ft	938.68543 psf	264.09373 psf	160 psf	0 psf	6. Very stiff CH
Slice 24	81.031576 ft	64.76737 ft	913.36239 psf	204.38799 psf	200 psf	0 psf	5.Stiff to very stiff CL
Slice 25	83.319489 ft	65.76737 ft	879.32088 psf	194.37382 psf	200 psf	0 psf	5.Stiff to very stiff CL
Slice 26	85.378783 ft	66.776227 ft	841.88974 psf	229.86752 psf	130 psf	0 psf	4. Stiff to very stiff CH
Slice 27	87.209458 ft	67.776227 ft	802.17476 psf	216.30374 psf	130 psf	0 psf	4. Stiff to very stiff CH
Slice 28	89.062398 ft	68.889397 ft	755.6708 psf	155.60166 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 29	91.219146 ft	70.332652 ft	677.20196 psf	133.52839 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 30	93.657437 ft	72.151056 ft	563.67869 psf	103.07636 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 31	96.095729 ft	74.2078 ft	435.27573 psf	69.266268 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 32	98.766033 ft	76.8 ft	273.44423 psf	44.701137 psf	110 psf	0 psf	2. Soft to very stiff CL
Slice 33	101.41278 ft	79.74 ft	89.899472 psf	7.6141971 psf	100 psf	0 psf	1. Fill:very stiff CL-ML

# Slope Stability

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## File Information

File Version: 11.00

Title: B-11 RAPID DRAWDOWN CONDITION, LOCAL SLIDE, USING TOTAL STRESS PARAMETERS

Revision Number: 849

Date: 02/26/2021

Time: 01:00:18 PM

Tool Version: 11.0.1.21429

File Name: B-11 CU LS (Total Stress Parameters).gsz

Directory: Z:\Engineering\Reports\2020\G143-20 IAH Kenswick and Lee Road Extension at Will Clayton Parkway - Atkins\Slope Stability Analysis\Slope Stability\B-11\

Last Solved Date: 02/26/2021

Last Solved Time: 01:00:19 PM

## Project Settings

Unit System: U.S. Customary Units

## Analysis Settings

### Slope Stability

Kind: SLOPE/W

Method: Bishop

Settings

PWP Conditions from: Piezometric Line

Apply Phreatic Correction: No

Use Staged Rapid Drawdown: No

Unit Weight of Water: 62.430189 pcf

Slip Surface

Direction of movement: Right to Left

Use Passive Mode: No

Slip Surface Option: Entry and Exit

Critical slip surfaces saved: 1

Optimize Critical Slip Surface Location: No

Tension Crack Option: (none)

Distribution

F of S Calculation Option: Constant

Advanced

Geometry Settings

Minimum Slip Surface Depth: 0.1 ft

Number of Slices: 30

Factor of Safety Convergence Settings

Maximum Number of Iterations: 100

Tolerable difference in F of S: 0.001

# Materials

## 1. Fill:very stiff CL-ML

Model: [Mohr-Coulomb](#)

Unit Weight: [125 pcf](#)

Effective Cohesion: [100 psf](#)

Effective Friction Angle: [17 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 2. Soft to very stiff CL

Model: [Mohr-Coulomb](#)

Unit Weight: [125 pcf](#)

Effective Cohesion: [110 psf](#)

Effective Friction Angle: [13 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 4. Stiff to very stiff CH

Model: [Mohr-Coulomb](#)

Unit Weight: [127 pcf](#)

Effective Cohesion: [130 psf](#)

Effective Friction Angle: [16 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 5. Stiff to very stiff CL

Model: [Mohr-Coulomb](#)

Unit Weight: [125 pcf](#)

Effective Cohesion: [200 psf](#)

Effective Friction Angle: [13 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 6. Very stiff CH

Model: [Mohr-Coulomb](#)

Unit Weight: [134 pcf](#)

Effective Cohesion: [160 psf](#)

Effective Friction Angle: [16 °](#)

Phi-B: [0 °](#)

Pore Water Pressure

Piezometric Line: [1](#)

## 7. Desiccated CH

Model: [Mohr-Coulomb](#)

Unit Weight: [127 pcf](#)

Effective Cohesion: [70 psf](#)

Effective Friction Angle: [16 °](#)

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 3. Very stiff to hard CL

Model: [Mohr-Coulomb](#)

Unit Weight: 132 pcf

Effective Cohesion: 250 psf

Effective Friction Angle: 13 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

### 8. Dessicated CH 2

Model: [Mohr-Coulomb](#)

Unit Weight: 134 pcf

Effective Cohesion: 70 psf

Effective Friction Angle: 16 °

Phi-B: 0 °

Pore Water Pressure

Piezometric Line: 1

## Slip Surface Entry and Exit

Left Type: [Range](#)

Left-Zone Left Coordinate: (43.83544, 71.948974) ft

Left-Zone Right Coordinate: (64.80934, 76.155557) ft

Left-Zone Increment: 4

Right Type: [Range](#)

Right-Zone Left Coordinate: (65.79939, 76.353974) ft

Right-Zone Right Coordinate: (87.42726, 80.668663) ft

Right-Zone Increment: 4

Radius Increments: 15

## Slip Surface Limits

Left Coordinate: (0, 71.52) ft

Right Coordinate: (140, 81.18) ft

## Piezometric Lines

### Piezometric Line 1

#### Coordinates

	X	Y
Coordinate 1	0 ft	71.51 ft
Coordinate 2	40.7 ft	71.32 ft
Coordinate 3	60.54033 ft	75.3 ft
Coordinate 4	75.50956 ft	78.3 ft

Coordinate 5	90 ft	81.18 ft
Coordinate 6	140 ft	81.18 ft

## Geometry

Name: Default Geometry

## Settings

View: 2D

Element Thickness: 1 ft

## Points

	X	Y
Point 1	0 ft	60.3 ft
Point 2	0 ft	64.3 ft
Point 3	0 ft	66.3 ft
Point 4	0 ft	68.3 ft
Point 5	140 ft	60.3 ft
Point 6	140 ft	64.3 ft
Point 7	140 ft	66.3 ft
Point 8	140 ft	68.3 ft
Point 9	140 ft	78.3 ft
Point 10	140 ft	81.18 ft
Point 11	90 ft	81.18 ft
Point 12	40.7 ft	71.32 ft
Point 13	0 ft	71.52 ft
Point 14	75.50956 ft	78.3 ft
Point 15	140 ft	75.3 ft
Point 16	60.54033 ft	75.3 ft
Point 17	55.7 ft	60.3 ft
Point 18	55.7 ft	64.3 ft
Point 19	75.7 ft	66.3 ft
Point 20	75.7 ft	68.3 ft

## Regions

	Material	Points	Area
Region 1	6. Very stiff CH	17,5,6,18	337.2 ft <sup>2</sup>
Region 2	5. Stiff to very stiff CL	2,18,6,7,19,3	280 ft <sup>2</sup>
Region 3	4. Stiff to very stiff CH	19,7,8,20	128.6 ft <sup>2</sup>
Region 4	3. Very stiff to hard CL	4,20,8,15,16,12,13	782.6 ft <sup>2</sup>
Region 5	2. Soft to very stiff CL	16,15,9,14	215.93 ft <sup>2</sup>
Region 6	1. Fill:very stiff CL-ML	9,10,11,14	164.87 ft <sup>2</sup>
Region 7	8. Desiccated CH 2	1,17,18,2	222.8 ft <sup>2</sup>
Region 8	7. Desiccated CH	3,19,20,4	151.4 ft <sup>2</sup>

## Slip Results

Slip Surfaces Analysed: 387 of 400 converged



## Current Slip Surface

Slip Surface: 73

Factor of Safety: 2.205

Volume: 296.68276 ft<sup>3</sup>

Weight: 38,579.055 lbf

Resisting Moment: 402,793.04 lbf·ft

Activating Moment: 182,632.31 lbf·ft

Slip Rank: 1 of 400 slip surfaces

Exit: (43.83544, 71.948974) ft

Entry: (87.42726, 80.668663) ft

Radius: 30.408233 ft

Center: (61.561212, 96.656416) ft

## Slip Slices

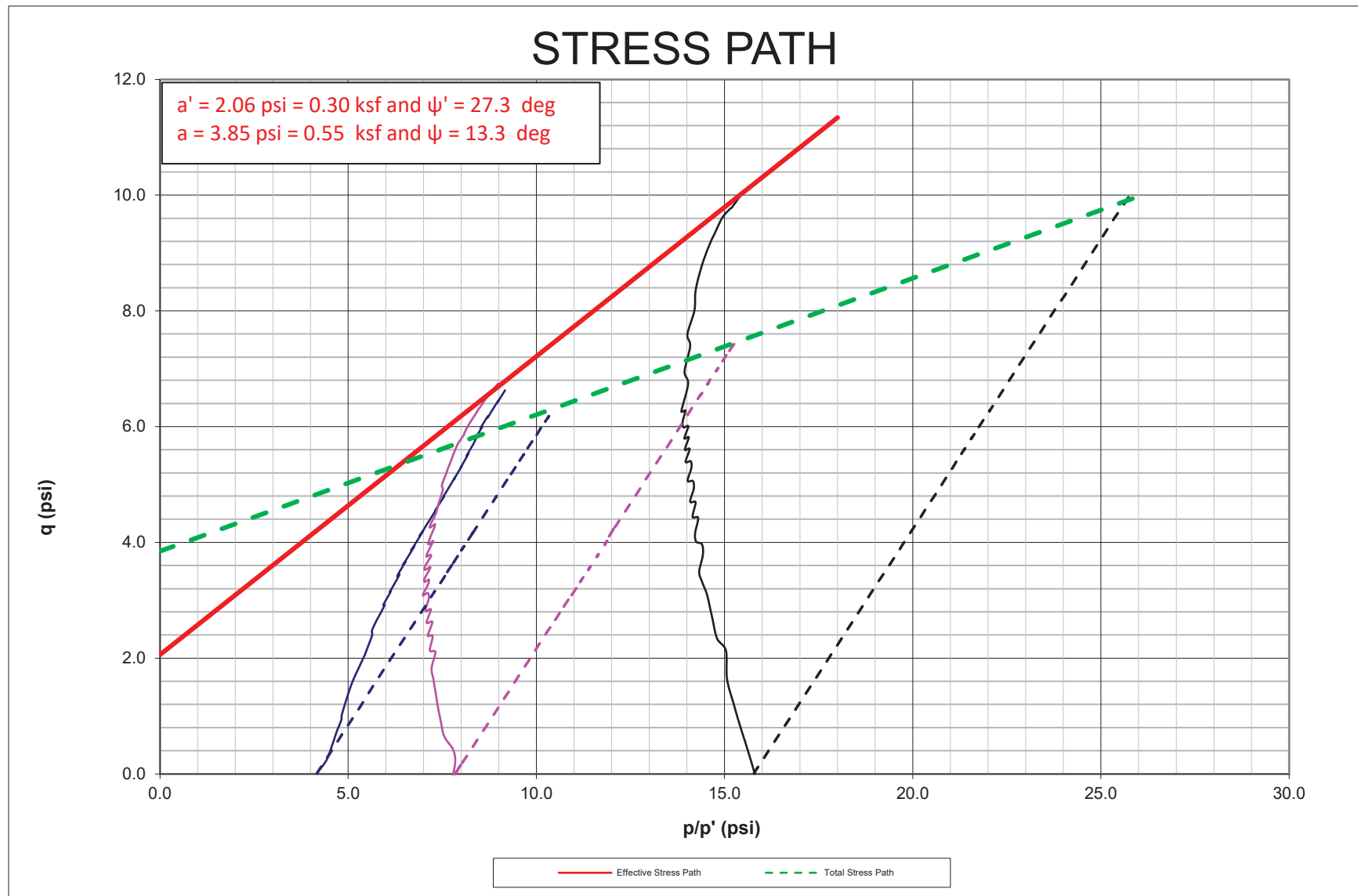
	X	Y	PWP	Frictional Strength	Cohesive Strength	Suction Strength	Base Material
Slice 1	44.509954 ft	71.491929 ft	36.980746 psf	29.325858 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 2	45.858981 ft	70.627969 ft	107.81261 psf	46.457638 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 3	47.208008 ft	69.859761 ft	172.66663 psf	61.910139 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 4	48.557036 ft	69.17924 ft	232.04634 psf	75.840841 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 5	49.906063 ft	68.580006 ft	286.35131 psf	88.373151 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 6	51.347758 ft	68.026317 ft	338.97341 psf	116.57583 psf	70 psf	0 psf	7. Desiccated CH
Slice 7	52.882121 ft	67.524075 ft	389.54418 psf	131.15289 psf	70 psf	0 psf	7. Desiccated CH
Slice 8	54.416485 ft	67.110002 ft	434.61059 psf	143.89291 psf	70 psf	0 psf	7. Desiccated CH
Slice 9	55.950848 ft	66.780419 ft	474.40224 psf	154.90175 psf	70 psf	0 psf	7. Desiccated CH
Slice 10	57.485212 ft	66.532546 ft	509.09278 psf	164.26146 psf	70 psf	0 psf	7. Desiccated CH
Slice 11	59.019575 ft	66.36437 ft	538.80776 psf	172.03464 psf	70 psf	0 psf	7. Desiccated CH
Slice 12	60.163543 ft	66.282662 ft	558.2354 psf	142.9327 psf	200 psf	0 psf	5. Stiff to very stiff CL
Slice 13	61.239164 ft	66.25792 ft	573.24235 psf	145.25829 psf	200 psf	0 psf	5. Stiff to very stiff CL
Slice 14	62.636833 ft	66.275258 ft	589.64715 psf	147.38385 psf	200 psf	0 psf	5. Stiff to very stiff CL
Slice 15	64.102849 ft	66.36437 ft	602.42625 psf	185.50274 psf	70 psf	0 psf	7. Desiccated CH
Slice 16	65.637212 ft	66.532546 ft	611.1245 psf	186.18651 psf	70 psf	0 psf	7. Desiccated CH
Slice 17	67.171576 ft	66.780419 ft	614.84721 psf	185.38581 psf	70 psf	0 psf	7. Desiccated CH

Slice 18	68.705939 ft	67.110002 ft	613.46879 psf	183.07938 psf	70 psf	0 psf	7. Desiccated CH
Slice 19	70.240302 ft	67.524075 ft	606.81561 psf	179.23282 psf	70 psf	0 psf	7. Desiccated CH
Slice 20	71.774666 ft	68.026317 ft	594.65808 psf	173.79709 psf	70 psf	0 psf	7. Desiccated CH
Slice 21	73.283775 ft	68.610105 ft	577.09362 psf	127.81214 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 22	74.767632 ft	69.278092 ft	553.95662 psf	119.26398 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 23	76.27936 ft	70.062005 ft	523.85136 psf	108.88568 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 24	77.818959 ft	70.975367 ft	485.93348 psf	96.467356 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 25	79.358558 ft	72.018775 ft	439.89684 psf	81.98539 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 26	80.898157 ft	73.209719 ft	384.64949 psf	65.171904 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 27	82.437756 ft	74.572294 ft	318.6872 psf	45.659349 psf	250 psf	0 psf	3. Very stiff to hard CL
Slice 28	83.856614 ft	76.000578 ft	247.12447 psf	40.209509 psf	110 psf	0 psf	2. Soft to very stiff CL
Slice 29	85.154732 ft	77.500578 ft	169.58638 psf	22.196301 psf	110 psf	0 psf	2. Soft to very stiff CL
Slice 30	86.615526 ft	79.484332 ft	63.865967 psf	-0.54489039 psf	100 psf	0 psf	1. Fill:very stiff CL-ML



## APPENDIX E-1

CU Test Results, Boring B-11, 8'-10'



## Notes:

1. Value of  $p$  and  $q$  at failure is determined considering maximum effective stress obliquity according to ASTM D6747 for each stage of CU test and plot them on the respective  $p$ - $q$  curves.
2. Then a best-fit straight line will be drawn to fit the data and the slope ( $\tan\psi$ ) and intercept ( $d$ ) will be determined according to US Army Corps of Engineers Engineering Manual, Appendix D, Section D-4.
3. Then  $\phi$  and  $c$  will be determined based on equation D-7 and D-8 (US Army Corps of Engineers Engineering Manual, Appendix D, Section D-4).

# Aviles Engineering Corp.

## Advanced Testing Assignment Form

Project Number: 6143-20 Kenswick

Boring: B-11

Depth (ft): 8-10

Date Assigned: 1/26/21

Results Deadline: \_\_\_\_\_

### Type(s) of Testing Required (check all that apply):



CU Triaxial

Desired Confining Pressures: 4, 8, 16 psi



Consolidation



Swell



Hydrometer

Any additional testing required for this sample:



P. I.



-200 Sieve



Sieve Analysis



Other

*> assigned separately*

Assigned By: Wilke

Proj. #  Boring:  Depth (ft):

**Initial Height Measurements (in.):**

Height 1:   
Height 2:   
Height 3:  Average Height (in.):

**Initial Diameter Measurements (in.):**

Diam 1:   
Diam 2:   
Diam 3:  Average Diameter (in.):

Initial Dial Gauge Reading (in):

End of Saturation Dial Gauge Reading (in.):

**First Consolidation:** *(if there is no first stage consolidation, enter '0' for initial and final pipette readings, copy DGs to DGc)*

Initial Pipette Reading (mL):   
Final Pipette Reading (mL):   
Final Dial Gauge Reading (in.):

**Beginning of First Shear:**

Height:   
Diameter:

**End of First Shear:**

Dial Gauge Reading at end of shearing (in.):   
Dial Gauge Reading after CV rebound (in):

**Second Stage Consolidation:**

Initial Pipette Reading (mL):   
Final Pipette Reading (mL):   
Final Dial Gauge Reading (in.):

**Beginning of Second Shear:**

Height:   
Diameter:

**End of Second Shear:**

Dial Gauge Reading at end of shearing (in.):   
Dial Gauge Reading after CV rebound (in):

**Third Stage Consolidation:**

Initial Pipette Reading (mL):   
Final Pipette Reading (mL):   
Final Dial Gauge Reading (in.):

**Beginning of Third Shear:**

Height:   
Diameter:

**Aviles Engineering Corporation**  
**CU PRETEST DATA**  
**ASTM D-4767**

Project: <b>G143-20</b>		Date: <b>1/27/21</b>	
Boring: <b>B-11</b>	Depth (ft): <b>8-10</b>	Cell #: <b>F</b>	
Soil Description: <b>GR &amp; TAN CL, w/ Fe Nods, STNS, CALC NODS, SA PKTS</b>			
Sample Mass (g): <b>1178.85</b>	Scale ID: <b>D765</b>	Sigma3: <b>4, 8, 16</b>	
<b>Sample Dimensions:</b>	Height measurements taken 120 degrees apart, Diameter measurements taken at the quarter points of height.		
Caliper ID: <b>693</b>			
<b>Height Measurements (in):</b>		<b>Diameter Measurements (in):</b>	
Height1:	<b>5.556</b>	Diameter1:	<b>2.815</b>
Height2:	<b>5.567</b>	Diameter2:	<b>2.803</b>
Height3:	<b>5.550</b>	Diameter3:	<b>2.777</b>
Average Height:	<b>5.558</b>	Average Diameter:	<b>2.798</b>
Sample Volume (cu. Ft.)			
<b>Initial Moisture Content:</b>			
Tare ID:	<b>NW</b>	Scale ID:	<b>615</b>
Tare Wt (g):	<b>13.78</b>	Oven ID:	<b>612</b>
Wet Soil + Tare (g):	<b>56.87</b>	Thermometer ID:	<b>614</b>
Dry Soil + Tare (g):	<b>51.16</b>		
Moisture Content (%):	<b>15.28</b>		
<b>Sample Density:</b>		<b>Dial Gauge Data:</b>	
Wet Density:		Dial Gauge ID:	<b>0.632</b>
Dry Density:	<b>1.1410</b>	Initial Reading (in):	<b>0.155</b>
Test Prep. Technician:			
Technician Signature: <b>[Signature]</b>			

**Aviles Engineering Corporation**  
**CU BACKPRESSURE SATURATION**  
**ASTM D-4767**

Project: <u>G143-20</u>		Date: <u>1/27/21</u>	Sigma3: <u>4.8, 16</u>
Boring: <u>B-11</u>		Depth (ft): <u>8-10</u>	Cell #: <u>F</u>
Date: <u>1/28/21</u>	Time: <u>7:38</u>	Cell Pressure (psi): <u>10.23</u>	
		Back Pressure (psi): <u>6.52</u>	
Pore Pressure Change (with backpressure valves closed, after 1 min): <u>0.20</u>			
B-value: <u>—</u>	Increase Pressures? <u>—</u>	Saturation Complete? <u>—</u>	
New Cell Pressure (psi): <u>10</u>		New Back Pressure (psi): <u>6</u>	
Date: <u>1/28/21</u>	Time: <u>16:20</u>	Cell Pressure (psi): <u>10.12</u>	
		Back Pressure (psi): <u>6.02</u>	
Pore Pressure Change (with backpressure valves closed, after 1 min): <u>-0.12</u>			
B-value: <u>0.33</u>	Increase Pressures? <u>Y</u>	Saturation Complete? <u>N</u>	
New Cell Pressure (psi): <u>20</u>		New Back Pressure (psi): <u>16</u>	
Date: <u>1/29/21</u>	Time: <u>6:33</u>	Cell Pressure (psi): <u>20.06</u>	
		Back Pressure (psi): <u>16.84</u>	
Pore Pressure Change (with backpressure valves closed, after 1 min): <u>-0.06</u>			
B-value: <u>0.69</u>	Increase Pressures? <u>Y</u>	Saturation Complete? <u>N</u>	
New Cell Pressure (psi): <u>30</u>		New Back Pressure (psi): <u>26</u>	
Date: <u>1/29/21</u>	Time: <u>16:44</u>	Cell Pressure (psi): <u>30.11</u>	
		Back Pressure (psi): <u>26.05</u>	
Pore Pressure Change (with backpressure valves closed, after 1 min): <u>-0.05</u>			
B-value: <u>0.73</u>	Increase Pressures? <u>Y</u>	Saturation Complete? <u>N</u>	
New Cell Pressure (psi): <u>40</u>		New Back Pressure (psi): <u>36</u>	
Technician Signature:			



**Aviles Engineering Corporation**  
**CU BACKPRESSURE SATURATION** ✓  
**ASTM D-4767**

Project: G1143-20		Date: 2/11/21	Sigma3: 4,8.16
Boring: B-11		Depth (ft): 8-10	Cell #: F
Date: 2/1/21	Time: 6:58	Cell Pressure (psi): 40.02	
		Back Pressure (psi): 35.96	
Pore Pressure Change (with backpressure valves closed, after 1 min): -0.06			
B-value: 0.89	Increase Pressures? Y	Saturation Complete? N	
New Cell Pressure (psi): 50		New Back Pressure (psi): 46	
Date: 2/1/21	Time: 4:58 PM	Cell Pressure (psi): 50.07	
		Back Pressure (psi): 45.82	
Pore Pressure Change (with backpressure valves closed, after 1 min): -0.01			
B-value: 0.90	Increase Pressures? Y	Saturation Complete? N	
New Cell Pressure (psi): 60		New Back Pressure (psi): 56	
Date: 2/2/21	Time: 7:20	Cell Pressure (psi): 60.08	
		Back Pressure (psi): 56.07	
Pore Pressure Change (with backpressure valves closed, after 1 min): -0.04			
B-value: 0.92	Increase Pressures? Y	Saturation Complete? N	
New Cell Pressure (psi): 70		New Back Pressure (psi): 66	
Date: 2/2/21	Time: 15:27	Cell Pressure (psi): 70.07	
		Back Pressure (psi): 65.87	
Pore Pressure Change (with backpressure valves closed, after 1 min): -0.02			
B-value: 0.93	Increase Pressures? Y	Saturation Complete? N	
New Cell Pressure (psi): 75		New Back Pressure (psi): 71	
Technician Signature:			

**Aviles Engineering Corporation**  
**CU BACKPRESSURE SATURATION**  
**ASTM D-4767**

Project: <u>G143-20</u>		Date: <u>1/27/21</u>	Sigma3: <u>4, 8, 16</u>
Boring: <u>B-11</u>		Depth (ft): <u>8-10</u>	Cell #: <u>F</u>
Date: <u>2/3/21</u>	Time: <u>12:28</u>	Cell Pressure (psi): <u>75.09</u>	
		Back Pressure (psi): <u>71.06</u>	
Pore Pressure Change (with backpressure valves closed, after 1 min): <u>-0.04</u>			
B-value: <u>0.97</u>	Increase Pressures? <u>N</u>	Saturation Complete? <u>Y</u>	
New Cell Pressure (psi):		New Back Pressure (psi):	
Date: <u>/</u>	Time: <u>/</u>	Cell Pressure (psi):	
		Back Pressure (psi):	
Pore Pressure Change (with backpressure valves closed, after 1 min): <u>/</u>			
B-value: <u>/</u>	Increase Pressures? <u>/</u>	Saturation Complete? <u>/</u>	
New Cell Pressure (psi): <u>/</u>		New Back Pressure (psi):	
Date: <u>/</u>	Time: <u>/</u>	Cell Pressure (psi):	
		Back Pressure (psi):	
Pore Pressure Change (with backpressure valves closed, after 1 min):			
B-value: <u>/</u>	Increase Pressures? <u>/</u>	Saturation Complete? <u>/</u>	
New Cell Pressure (psi):		New Back Pressure (psi):	
Date: <u>/</u>	Time: <u>/</u>	Cell Pressure (psi):	
		Back Pressure (psi):	
Pore Pressure Change (with backpressure valves closed, after 1 min):			
B-value: <u>/</u>	Increase Pressures? <u>/</u>	Saturation Complete? <u>/</u>	
New Cell Pressure (psi):		New Back Pressure (psi):	
Technician Signature: <u>[Signature]</u>			

H: 5.612  
D: 2.825

DG: 0.101

# CU Post-Test Datasheet

Project Name: \_\_\_\_\_

Project Number: G143-20

Boring Number: B-11

Boring Depth (ft): 8-10

Cell#: F

Date: 2/18/21

## Moisture Content:

Tare ID:	<u>AV-5</u>
Tare Weight (g):	<u>63.43</u>
Wet Soil + Tare (g):	<u>194.19</u>
Dry Soil + Tare (g):	<u>173.17</u>
% Moisture:	<u>19.15</u>

## Sample Sketch:



## Failure Types: (circle all that apply)

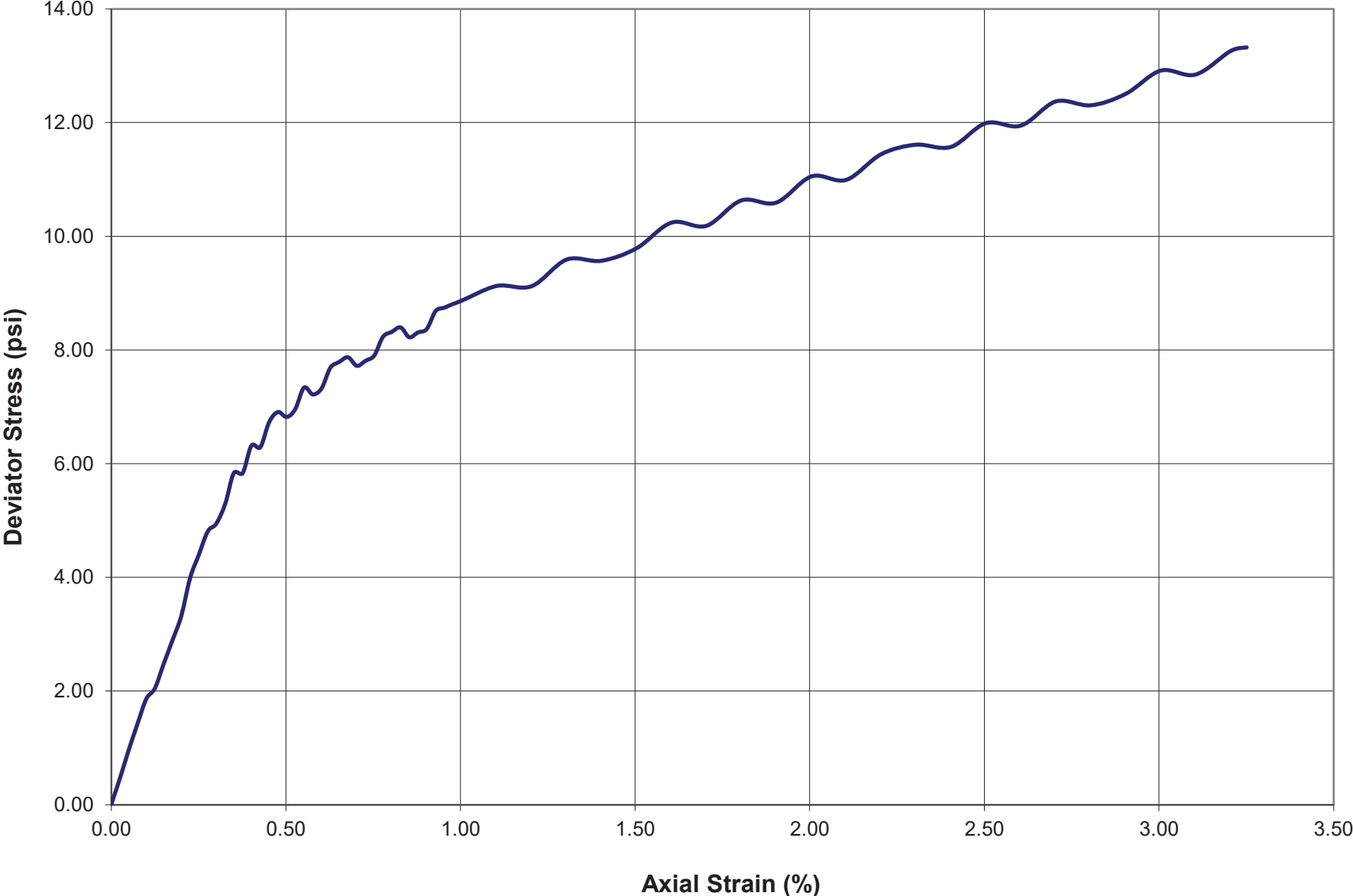
- Bulge     Single Shear     Multiple Shear     Vertical Fracture     SLS

Technician: FE

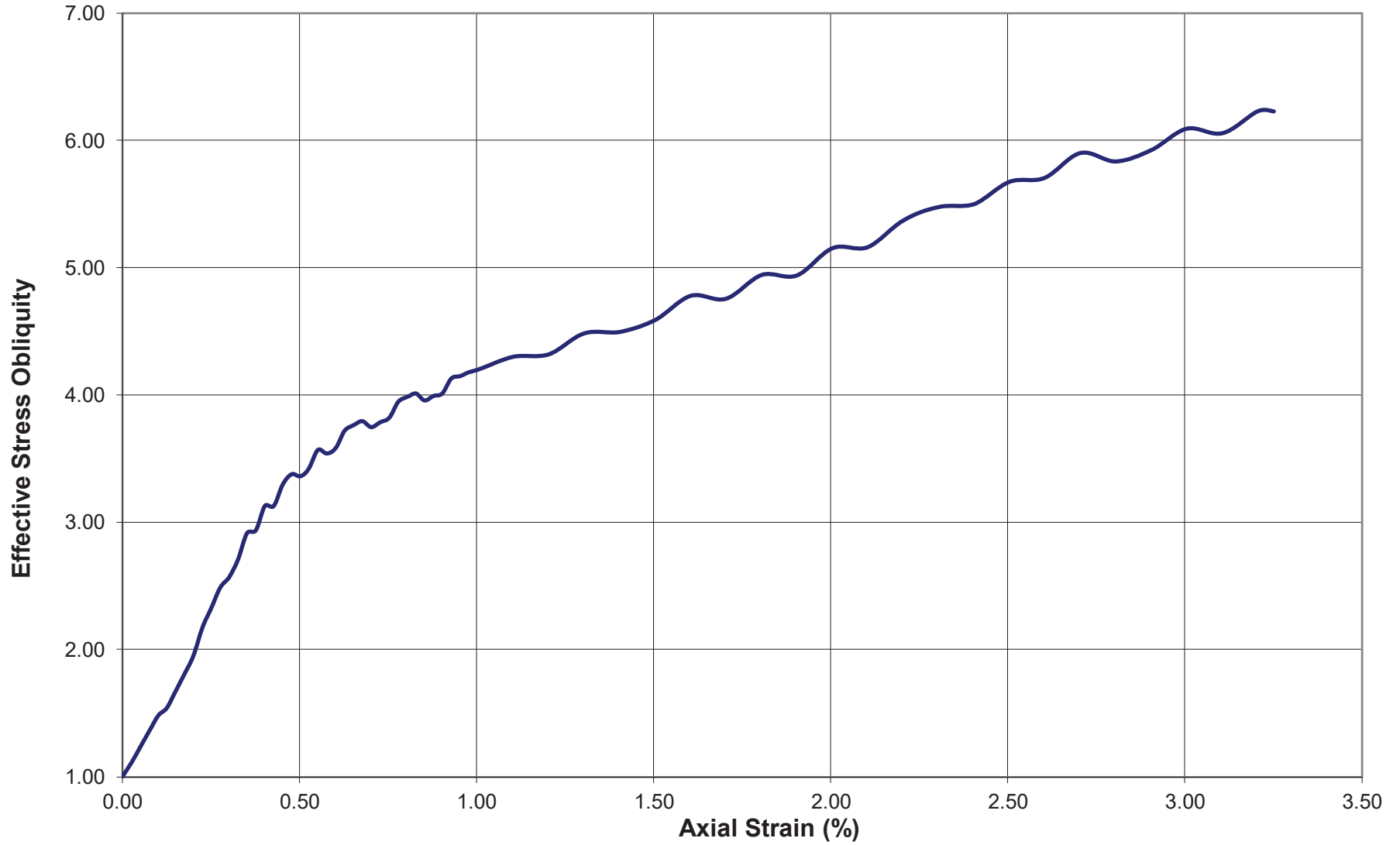
STAGE 1

B-11, 8'-10', at 4 psi confining pressures

G143-20 B-11-8-10 STAGE 1 SHEAR

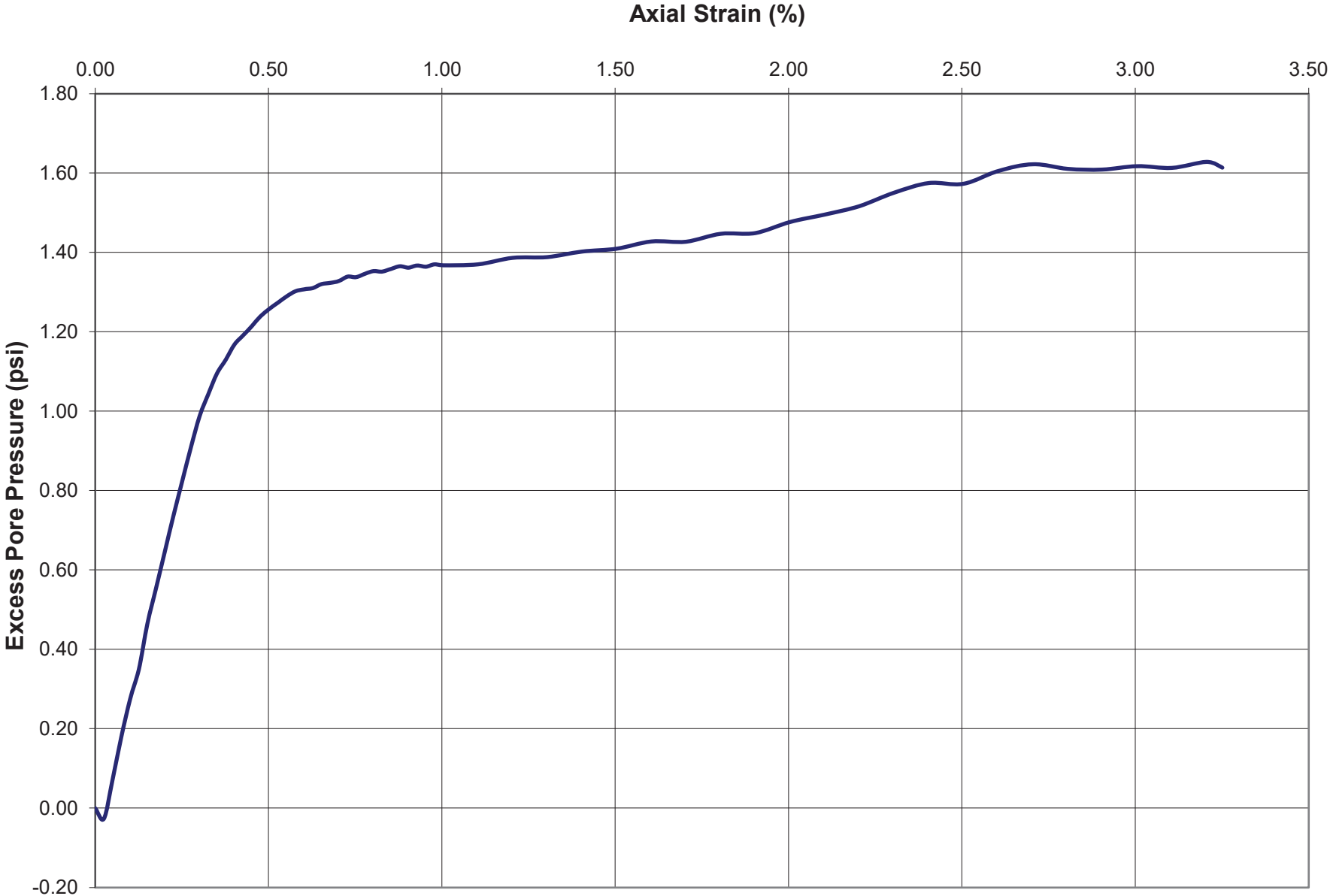


G143-20 B-11-8-10 STAGE 1 SHEAR

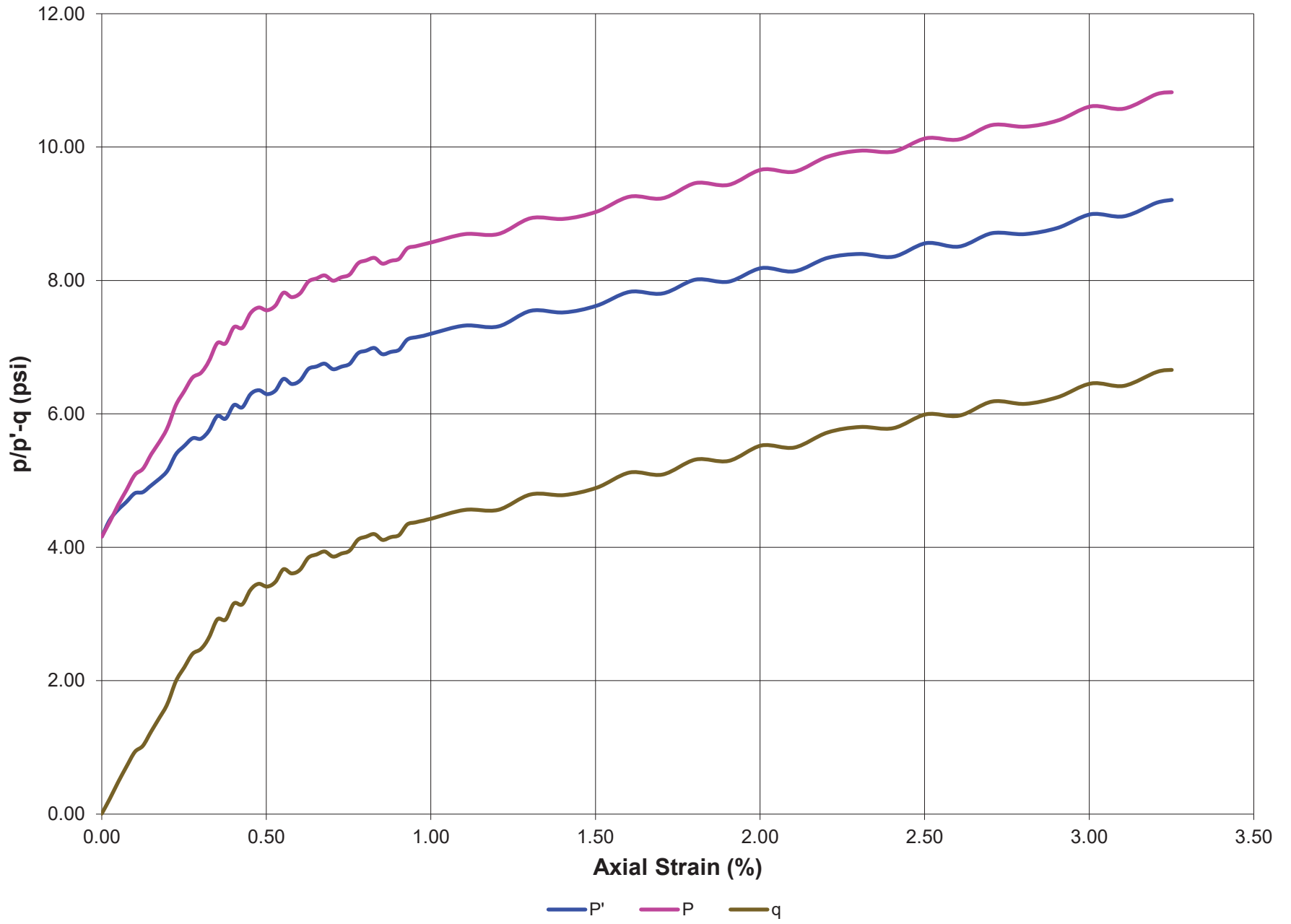


Failure is determined considering maximum effective stress obliquity according to ASTM D6747  
Axial Strain at Failure = 3.2%

G143-20 B-11-8-10 STAGE 1 SHEAR



G143-20 B-11-8-10 STAGE 1 SHEAR

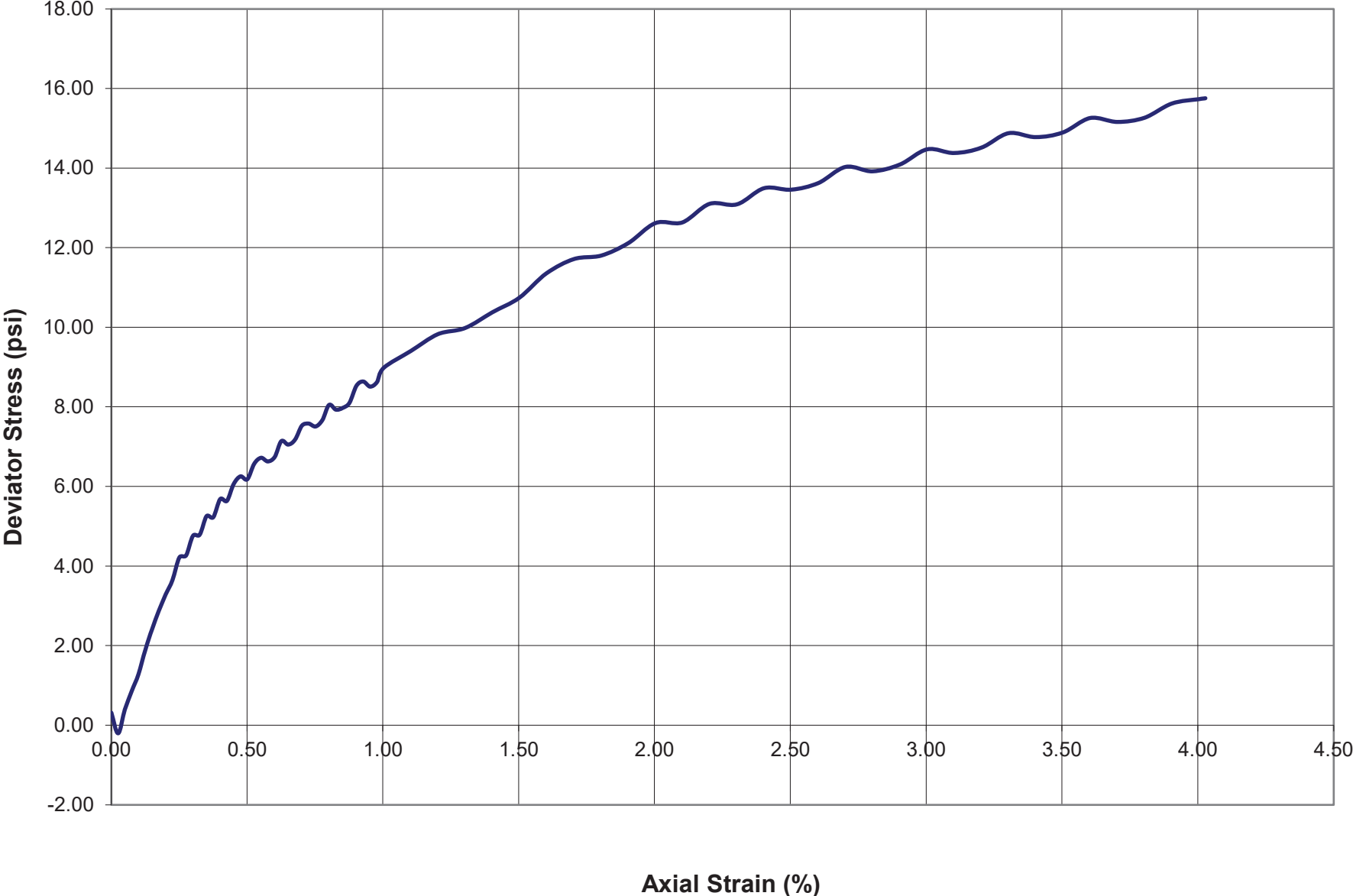




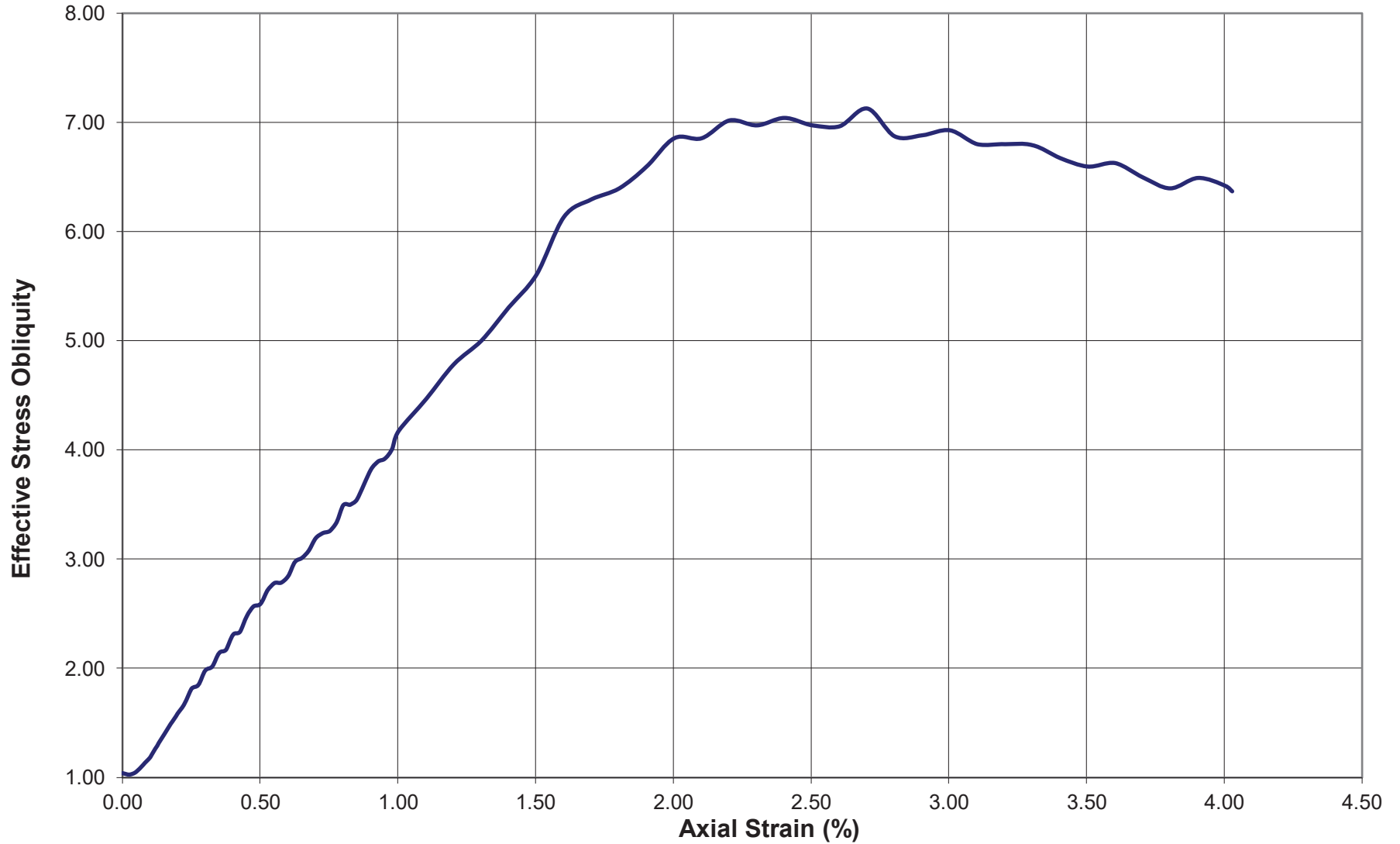
STAGE 2

B-11, 8'-10', at 8 psi confining pressures

G143-20 B-11-8-10 STAGE 2 SHEAR

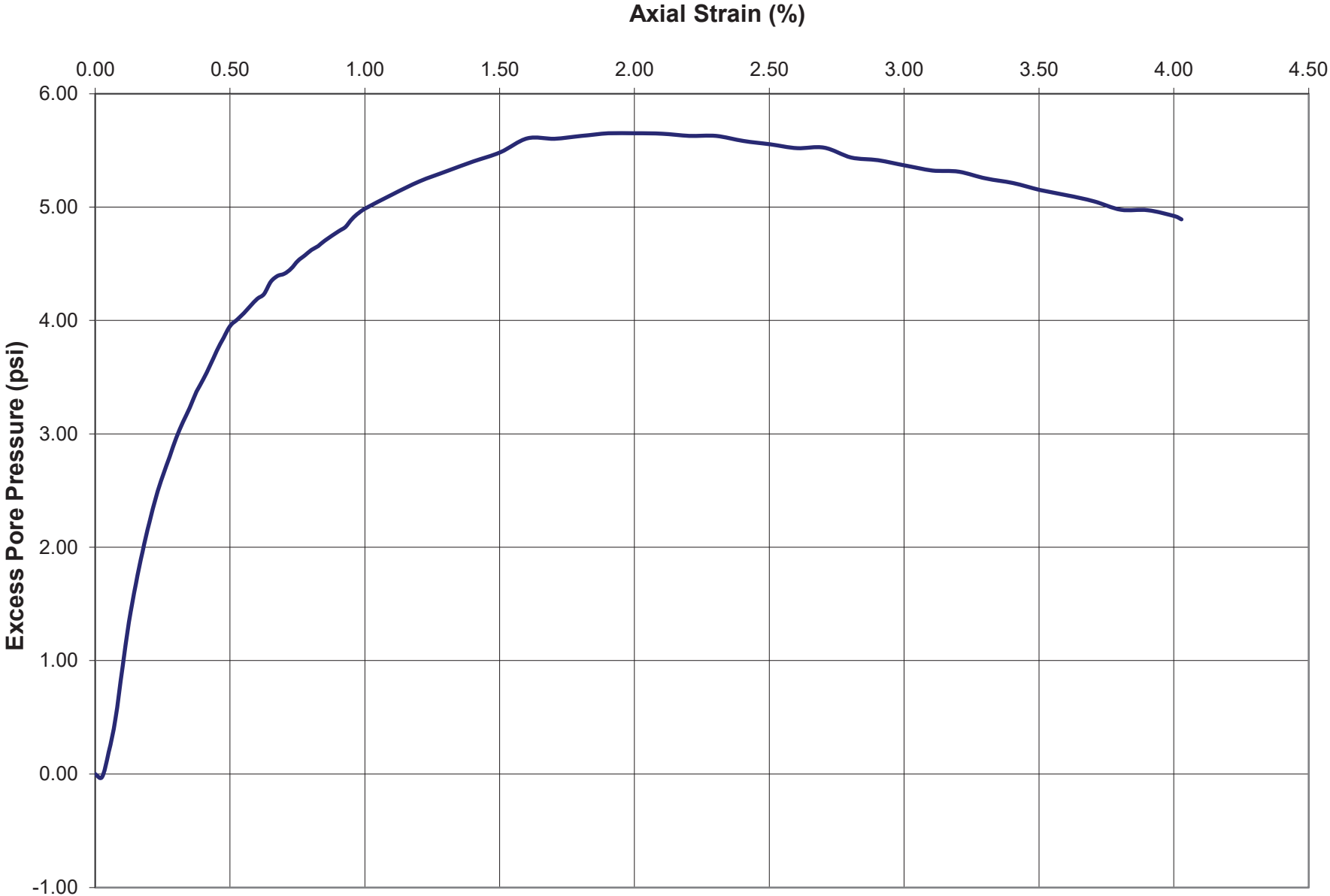


G143-20 B-11-8-10 STAGE 2 SHEAR

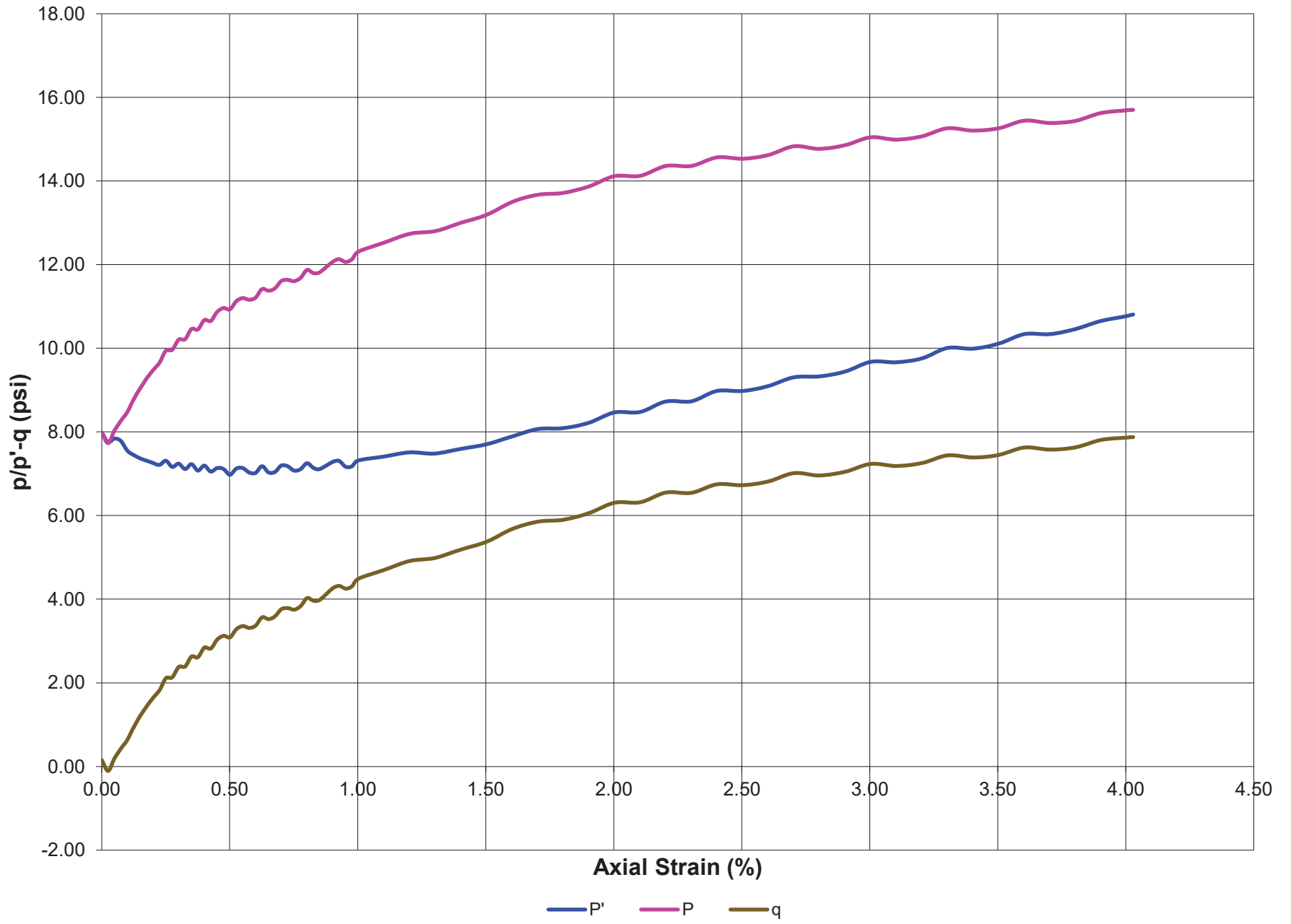


Failure is determined considering maximum effective stress obliquity according to ASTM D6747  
Axial Strain at Failure = 2.7%

G143-20 B-11-8-10 STAGE 2 SHEAR



G143-20 B-11-8-10 STAGE 2 SHEAR



### Triaxial Consolidation Datasheet

Stage: **2**  $\sigma_3 = 8$   
 Cell#: **F**  
 Job No.: **G143-20** Cell Pressure: **79.08**  
 Boring No: **B-11** Back Pressure: **71.05**  
 Depth: **8-10**

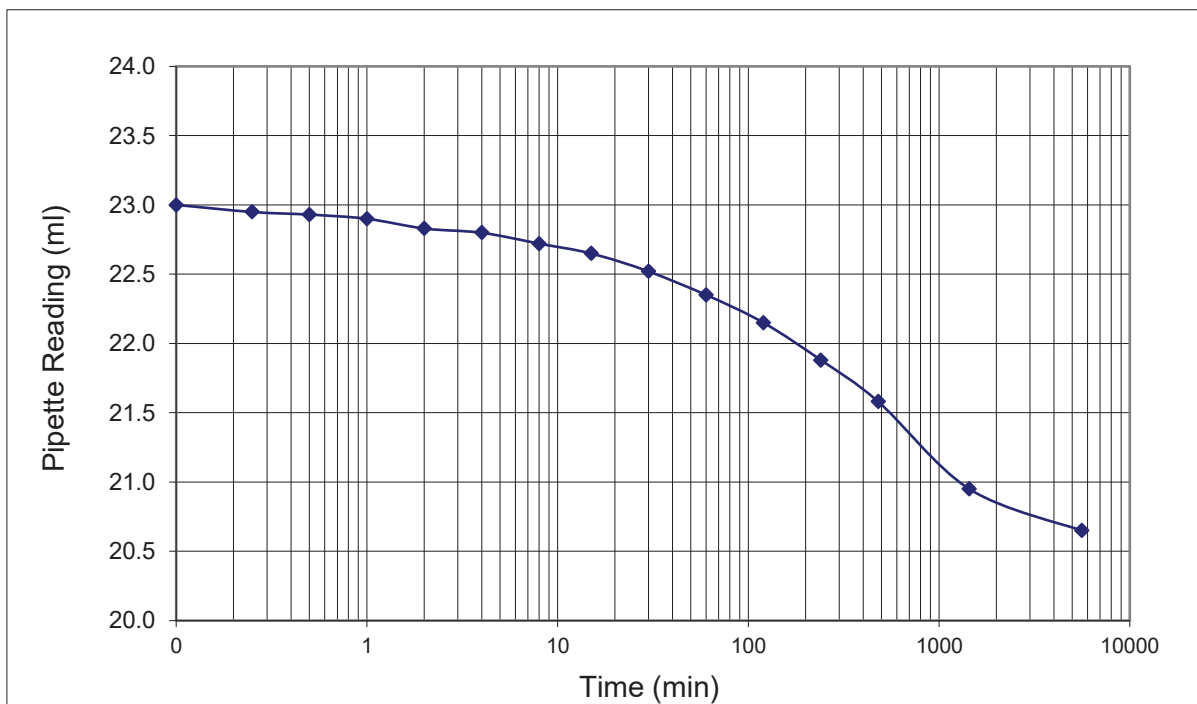
Date	Time	Elapsed Time (min)	Pipette Reading (ml)	Dial Gauge Reading (in.)
2/4/21	09:17	0	23.10	0.283 / 0.268
		0.1	23.00	
		0.25	22.95	
		0.5	22.93	
		1	22.90	
		2	22.83	
		4	22.80	
		8	22.72	
		15	22.65	
		30	22.52	
		60	22.35	
		120	22.15	
		240	21.88	
		480	21.58	
		1440	20.95	
2/8	6:49	5612	20.65	
				0.171

~~PP @~~  
 PP @  
 16:12 (2/4)  
 = 22.15  
  
 PP @ 8:30  
 (2/4)  
 = 25.60

Final Height (in): **5.542**

Final Diameter (in): **2.849**

Time (min)	Pipette Reading (ml)
0.00	23.10
0.10	23.00
0.25	22.95
0.50	22.93
1.00	22.90
2.00	22.83
4.00	22.80
8.00	22.72
15.00	22.65
30.00	22.52
60.00	22.35
120.00	22.15
240.00	21.88
480.00	21.58
1440.00	20.95
5612.00	20.65

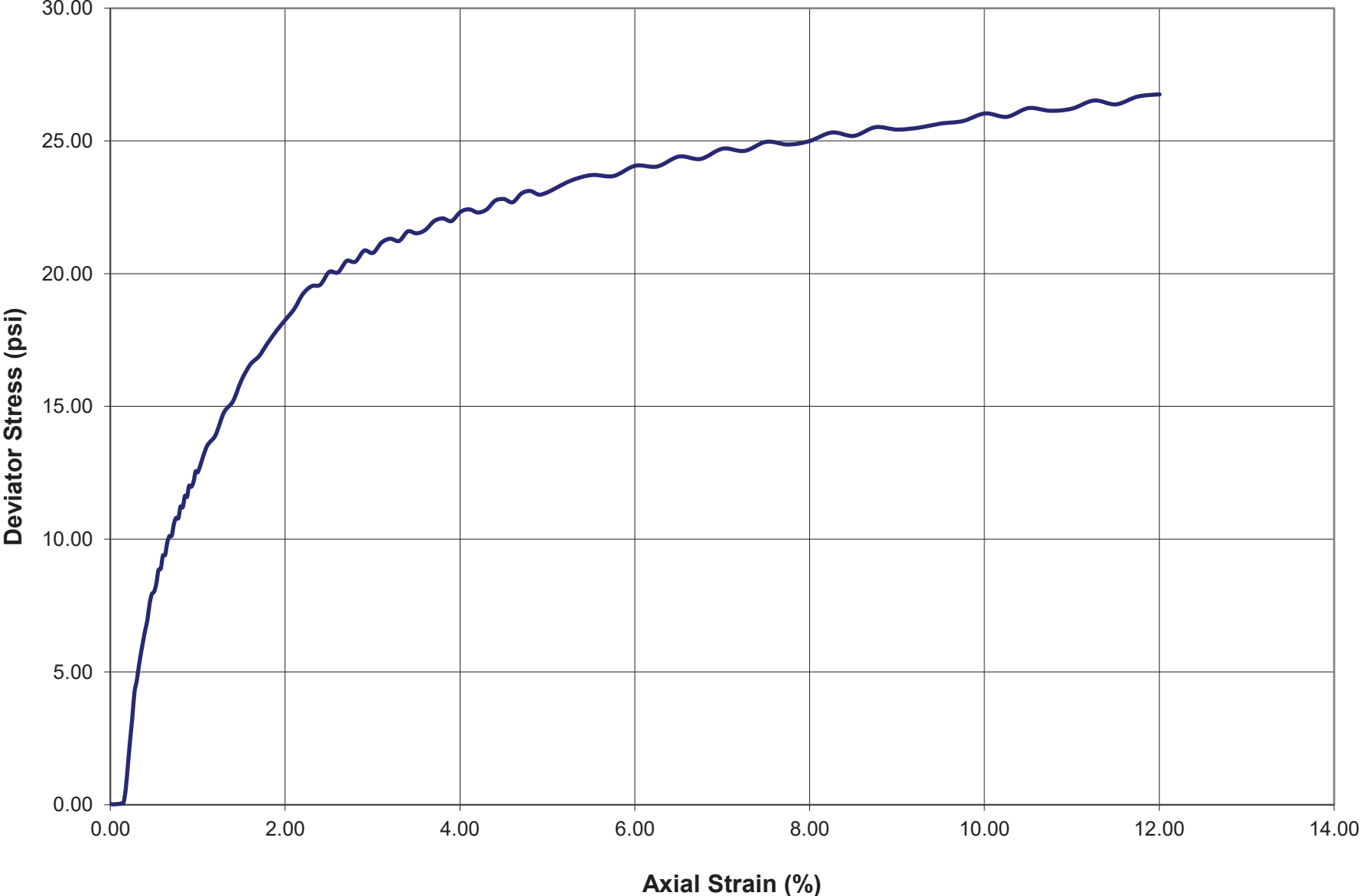


STAGE 3

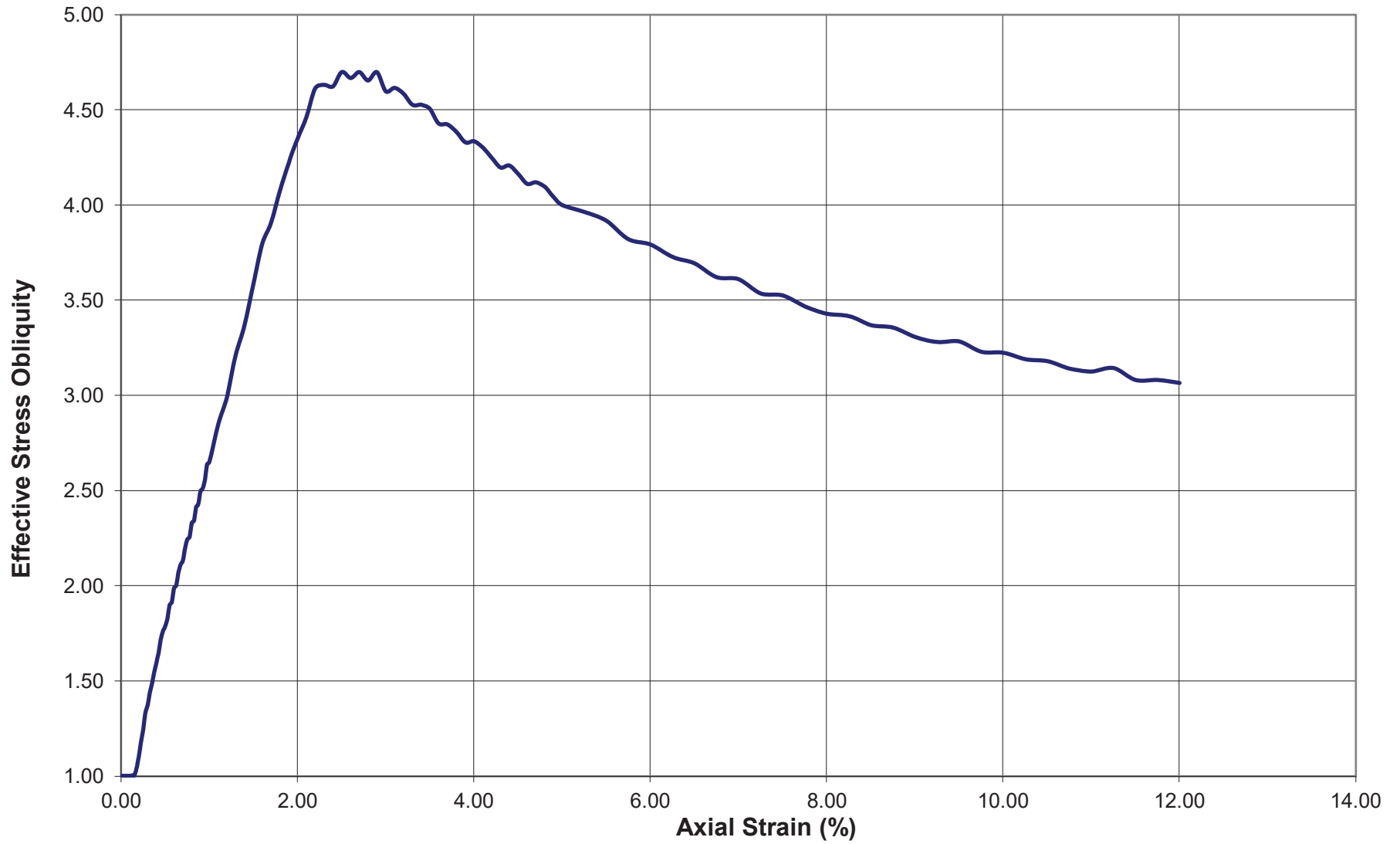
B-11, 8'-10', at 16 psi confining pressures



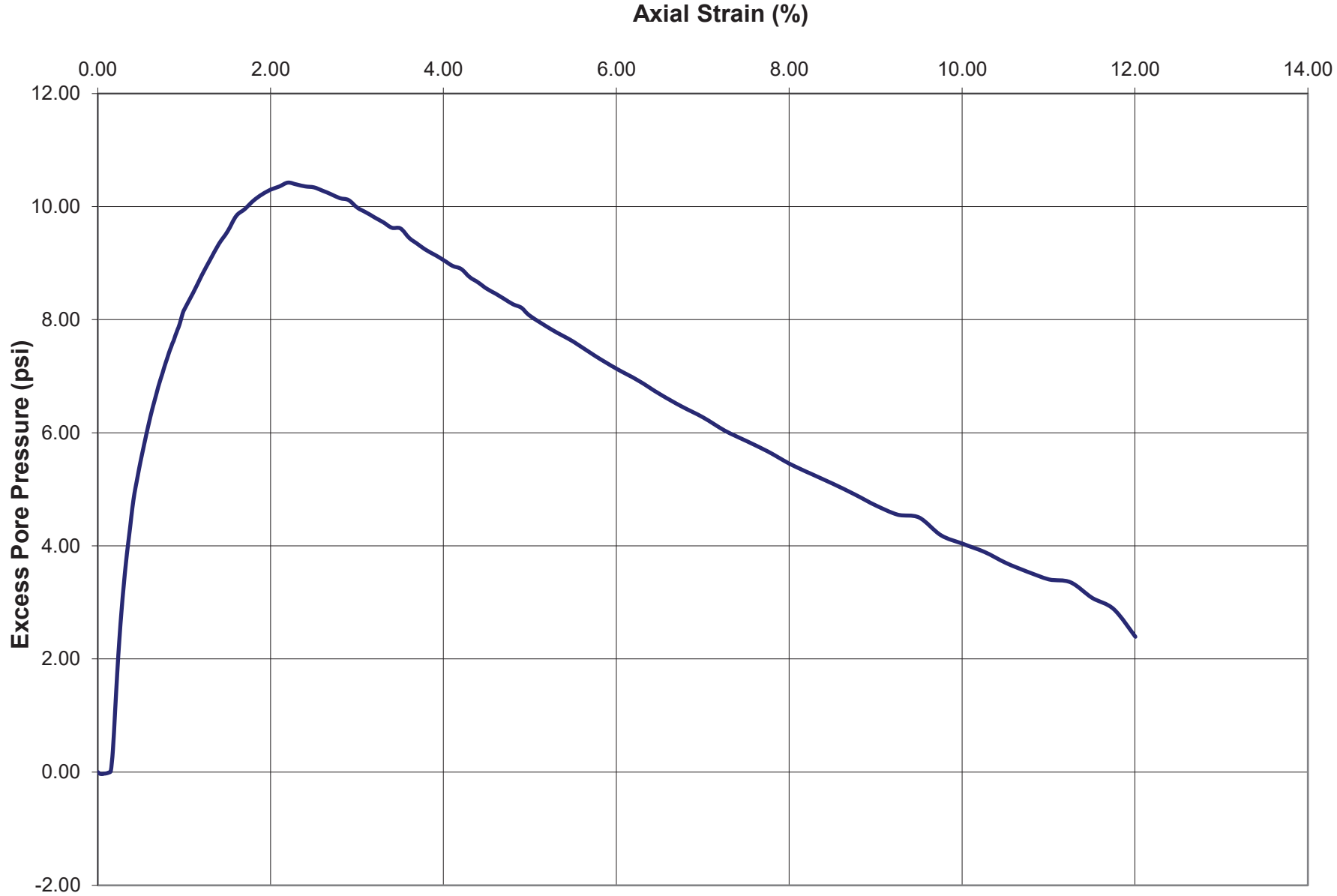
G143-20 B-11-8-10 STAGE 3 SHEAR



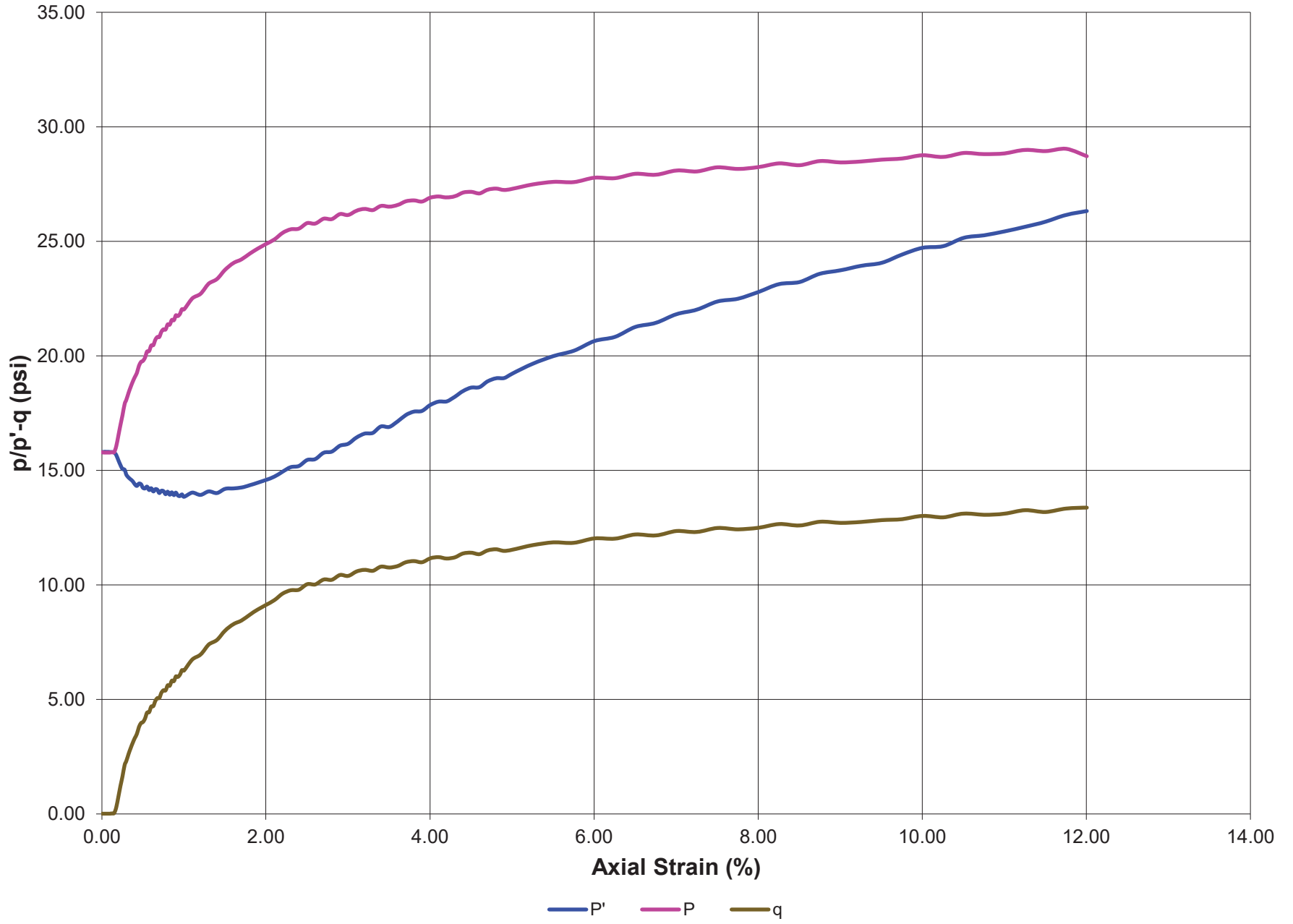
G143-20 B-11-8-10 STAGE 3 SHEAR



Failure is determined considering maximum effective stress obliquity according to ASTM D6747  
Axial Strain at Failure = 2.50%



G143-20 B-11-8-10 STAGE 3 SHEAR



### Triaxial Consolidation Datasheet

Stage: **3**  $\sigma_3 = 16$   
 Cell#: **F**  
 Job No.: **G143-20** Cell Pressure: **87.05**  
 Boring No: **B-11** Back Pressure: **71.05**  
 Depth: **8-10**

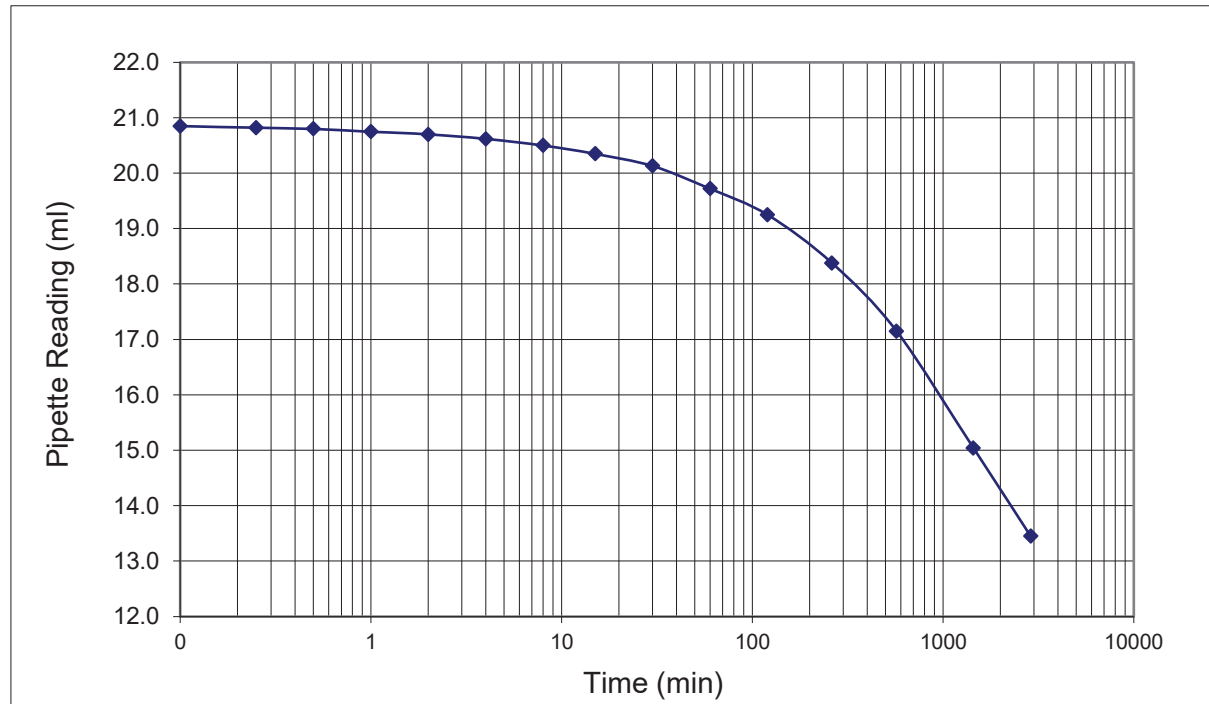
Date	Time	Elapsed Time (min)	Pipette Reading (ml)	Dial Gauge Reading (in.)
2/9/21	7:46	0	20.98	0.392 / 0.282
		0.1	20.85	
		0.25	20.82	
		0.5	20.80	
		1	20.75	
		2	20.70	
		4	20.62	
		8	20.50	
		15	20.35	
		30	20.13	
		60	19.72	
		120	19.25	
		261	18.38	
		570	17.15	
		1440	15.04	
		2880	13.45	
		4320	12.80	
2/14/21	13:57	7571	12.30	
				0.296

Pp@  
 11:33  
 2/8/21  
 = 20.67  
 Pp@ 7:33  
 2/9/21  
 = 20.98

Final Height (in): **5.417**

Final Diameter (in): **2.903**

Time (min)	Pipette Reading (ml)
0.00	20.98
0.10	20.85
0.25	20.82
0.50	20.80
1.00	20.75
2.00	20.70
4.00	20.62
8.00	20.50
15.00	20.35
30.00	20.13
60.00	19.72
120.00	19.25
261.00	18.38
570.00	17.15
1440.00	15.04
2880.00	13.45



## ENVIRONMENTAL INFORMATION

### 1.0 DOCUMENT INCLUDES

- A. Environmental Site Assessment, if applicable.
- B. Asbestos and Lead Surveys, if applicable.
- C. Bidder's responsibilities.

### 2.0 RELATED DOCUMENTS

- A. Document 00320 - Geotechnical Information

### 3.0 SITE INVESTIGATION REPORTS

- A. In the design and preparation of Contract documents for this Project, the City and Design Consultant have used information in environmental site assessment reports for the investigation and analysis of soils and subsurface conditions at the Project site.
- B. In the design and preparation of Contract documents for this Project, the City and Design Consultant have relied upon information in surveys taken for Asbestos-containing Materials (ACMs) and lead at the Project site.
- C. A copy of each report is available for examination at the City of Houston offices located at 611 Walker Street, Houston, Texas 77002.
- D. Neither the City nor Design Consultant is responsible for accuracy or completeness of any information or data.

### 4.0 REPORTS

- A. Environmental Assessment Surveys
  - 1. Report entitled Environmental Site Assessment, prepared by the firm of Atkins North America, dated January 2021, consisting of 271 pages.
  - 2. Report entitled Archeological Resources Letter, prepared by the firm of Atkins North America, dated January 26, 2021, consisting of 8 pages.
  - 3. Report entitled Wetland Delineation Report, prepared by the firm of Atkins North America, dated January 2021, consisting of 20 pages.

**ENVIRONMENTAL INFORMATION**

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5.0 BIDDER RESPONSIBILITIES

- A. Bidder shall take full responsibility for interpretation and use of information contained in above listed reports for bidding and construction purposes.
- B. Bidder may perform additional investigations as Bidder deems appropriate.

END OF DOCUMENT

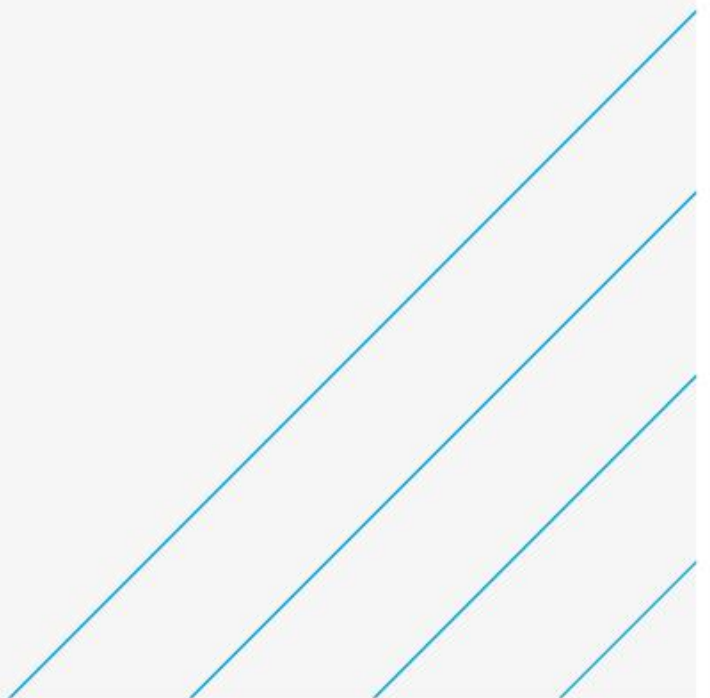


# Phase I Environmental Site Assessment

Kenswick Drive Extension

Prepared for: the Houston Airport System

January 2021



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- Appendix C. Regulatory Agency File Excerpts**
- Appendix D. Site Reconnaissance Photographs**

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## Acronyms and Abbreviations

ACM	Asbestos Containing Materials
AST	Above-ground Storage Tank
ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CREC	Controlled recognized environmental condition
ECHO	Enforcement and Compliance History
EPA	United States Environmental Protection Agency
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rating Map
HREC	Historical recognized environmental condition
HTRW	Hazardous, Toxic, and Radioactive Waste
LBP	Lead Based Paint
msl	mean sea level
NPDES	National Pollutant Discharge Elimination System
NWI	National Wetlands Inventory
REC	recognized environmental condition
ROW	right-of-way
SQG	Small Quantity Generator
Standard Practice	Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process
USDA	US Department of Agriculture
USGS	US Geological Service
UST	Underground Storage Tank

# Executive Summary

The Houston Airport System proposes the extension of Kenswick Drive across the intersection with Will Clayton Parkway to Lee Road at George Bush Intercontinental Airport in Houston, Harris County, Texas.

The objective of this project is to provide a typical TxDOT Turnaround Intersection at Kenswick Drive and Will Clayton Parkway to improve traffic flow and allow direct access to Will Clayton Parkway and Lee Road. Current geometry layout requires traffic to be routed to crossover support roads to access the opposing direction of Will Clayton Parkway. The turnaround layout will reduce congestion at the main intersection and improve traffic flow for the east and west bound lanes of Will Clayton. Additional services included traffic data collection and traffic analysis for maintenance of traffic and signalization parameters.

The general project location (subject property) is shown in Appendix A. The subject property, which will contain the Kenswick Drive Extension, is located at the intersection of Kenswick Drive and Will Clayton Parkway to the north and Lee Road and Will Clayton Parkway to the south. The parcel is currently used, and has most recently been used, as the roadway median between the east- and west-bound lanes of Will Clayton Parkway and north- and south-bound lanes of both Kenswick Drive and Lee Road.

Atkins conducted a Phase I Environmental Site Assessment (ESA) for the Houston Airport System (HAS) on a parcel of land (the subject property, referenced above) in Houston, Harris County, Texas. The ESA was conducted in accordance with the standards of American Society for Testing and Materials (ASTM) E1527-13 (The Standard Practice), and the findings of the ESA are presented in this report. This Phase I ESA identified the following Recognized Environmental Conditions (RECs) as a result of the study:

**6355 Will Clayton Parkway:** This facility is listed on the State LPST (Leaking Petroleum Storage Tank) database due to a leaking diesel tank that was reported on 12/18/2002. The facility's leak was given a priority code reflecting contaminated groundwater, and preassessment confirmed the release. According to available TCEQ correspondence data, proper sampling, determination, and potential remediation has not been conducted, and this case is not closed. Correspondence from the owner/operator appears to cease after 2004. Analysis shows the TCEQ is pursuing this matter.

The location of some reported facilities is known only as some form of "George Bush Intercontinental Airport" or "IAH", which encompasses quite a large area. As such, the specific facilities were not individually located and/or observed. However, due to nature of the database listing and the unknown precise location of some of these facilities, determination was made that certain facilities constitute a REC, despite not being located or observed.

**IAH, Load Rack Service Road:** This facility is listed in the ERNSTX (Emergency Response Notification System) database due to an incident on 3/14/2013 in which a tanker truck flipped over in transport, spilling jet fuel on the ground. According to records, a contractor was hired to excavate soil and a vac truck was used, but is unknown exactly where this event occurred at the airport.

**IAH, Air Service Pesticide Spill:** This facility is listed in the SEMS (Superfund Enterprise Management System) database but is not included on the NPL. As of 9/24/2007, this facility is classified as a site for removal only (no site assessment work needed). The start and completion of construction/removal at this non-federal facility are listed as 9/4/2007. No information is provided regarding contaminants or exact location, and an investigation into the facility using EPA's ECHO database also yielded no further information.

# 1. Introduction

## 1.1. Purpose

The purpose of this Phase I ESA is to identify RECs associated with the subject property with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and petroleum products. This Phase I ESA was conducted to evaluate environmental risks and other potential concerns that may adversely affect the future uses of the subject property, especially the planned Kensington Drive extension project.

The Phase I ESA was conducted in general accordance with the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Standard Practice), published by the ASTM under the designation E1527-13, and the United States Environmental Protection Agency (EPA), “All Appropriate Inquiries” (40 Code of Federal Regulation [CFR] 312). As stated in the ASTM Standard Practice, the goal of this assessment was to identify, to the extent feasible, RECs associated with the subject property.

### A REC is defined as:

*The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment (ASTM E1527-13, 2013).*

*The term includes hazardous substances or petroleum products even under conditions in compliance with laws, but is not intended to include a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies (ASTM E1527-13, 2013).*

In addition, Controlled Recognized Environmental Conditions (CRECs) and Historical Recognized Environmental Conditions (HRECs) are to be considered under the standard.

### Definition of CREC:

*A recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (ASTM E1527-13, 2013).*

### Definition of HREC:

*A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (ASTM E1527 -13, 2013).*

## 1.2. Scope of Work

Atkins was requested by the HAS to perform a Phase I ESA on the subject property, as defined in Section 1.0. Atkins personnel conducted a site visit of the subject property and vicinity on January 14, 2021. The site assessment was intended to provide information on how the subject property is currently used, used in the recent past (as discernible), and current conditions observed on the day of the site reconnaissance. Adjoining properties were also observed—to the extent possible from public right-of-way (ROW)—to discern the potential of the subject property to be impacted.

The findings and recommendations presented in this ESA report are based on the following scope of work:

- A. **Site Assessment.** A site assessment of the subject property was conducted to observe visual evidence of conditions of environmental concern, including underground and aboveground storage tanks, storage of chemicals, and irregularities of the subject property's soil or vegetation indicating the possible presence of hazardous materials or petroleum products. The site assessment was documented by taking photographs of the subject property. Adjacent properties were also observed via public ROW to identify potential RECs.
- B. **Setting.** Atkins reviewed existing available information to characterize the physical setting and geology of the subject property, including a description of surface elevation, surface drainage, surface run-off and run-on, and other identifying physical features.
- C. **Site History.** Atkins traced the history of the subject property, including an examination of historic aerial photographs and topographical maps, interviews with persons familiar with the subject property (if available), and examination of other historical documents, as available.
- D. **Regulatory Agency Review.** Atkins reviewed and evaluated available public information relating to the subject property, including standard Federal, State, local, and tribal databases, as provided by GeoSearch. These data are described herein and are included in Appendix B.

### 1.3. Assumptions

Atkins has prepared this Phase I ESA using reasonable efforts to identify RECs related to hazardous substances or petroleum products that may impact the subject property. Findings presented herein are based on information collected from observations made on the day of site reconnaissance, and from reasonably ascertainable information obtained from certain public agencies and other referenced sources.

This report is not definitive and should not be assumed to be a complete or specific definition of all conditions above or below grade. Current subsurface conditions may differ from the conditions implied by surface observations or historical sources and can be most reliably evaluated through intrusive techniques that were beyond the scope of this report. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, or other construction purposes.

### 1.4. Limitations and Exceptions

The ASTM Standard Practice E1527-13 recognizes inherent limitations for ESAs that apply to this report, including:

- **Uncertainty Not Eliminated.** No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with the subject property.
- **Not Exhaustive.** A Phase I ESA is not an exhaustive investigation.
- **Past Uses of the Property.** Review of standard historical sources at less than five-year intervals is not required by the ASTM standard.

Atkins makes no representation or warranty that the past or current operations at the subject property are, or have been, in compliance with all applicable Federal, State, and local laws, regulations, and codes. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Regardless of the findings stated in this report, Atkins is not responsible for consequences or conditions arising from facts that were not fully disclosed to Atkins during the assessment.

An independent data research company (GeoSearch) provided the government agency database referenced in this report. Information on surrounding area properties was requested for approximate minimum search distances and was assumed to be correct and complete unless obviously contradicted by Atkins' observations or other credible referenced sources reviewed during the assessment.

Reasonable efforts were made to identify evidence of aboveground and underground storage tanks and ancillary equipment within the subject property during the assessment. "Reasonable efforts" were limited to observation of accessible areas, review of referenced public records, and interviews. These methods may not identify subsurface equipment or evidence hidden from view by things such as, but not limited to, dense vegetation, paving, construction activities, stored materials, and landscaping.

Any estimates of costs or quantities in this report are approximations based on findings that are limited by the scope of the assessment, schedule demands, cost constraints, accessibility limitations, and other factors associated with performing an ESA. Subsequent determinations of costs or quantities may vary from the estimates in this report.

Users of this report may refer to ASTM Standard Practice E1527-13 for further information regarding these and other limitations.



## 2. Site Description

### 2.1. Location and Description

The HAS proposes the extension of Kenswick Drive across the intersection with Will Clayton Parkway to Lee Road at George Bush Intercontinental Airport (IAH) in Houston, Harris County, Texas, (Appendix A).

The objective of this project is to provide a typical TxDOT Turnaround Intersection at Kenswick Drive and Will Clayton Parkway to improve traffic flow and allow direct access to Will Clayton Parkway and Lee road. Current geometry layout requires traffic to be routed to crossover support roads to access the opposing direction of Will Clayton Parkway. The turnaround layout will reduce congestion at the main intersection and improve traffic flow for the east and west bound lanes of Will Clayton. Additional services included traffic data collection and traffic analysis for maintenance of traffic and signalization parameters.

Additional maps of the subject property and surrounding area are provided in Appendix B. The subject property comprises approximately 9.78 acres of land, located at the intersection of Kenswick Drive and Will Clayton Parkway to the north and Lee Road and Will Clayton Parkway to the south. The parcel is currently used, and has most recently been used, as the roadway median between the east- and west-bound lanes of Will Clayton Parkway and north- and south-bound lanes of both Kenswick Drive and Lee Road.

### 2.2. Site and Vicinity General Characteristics

The subject property is comprised of the following, from north to south: Kenswick Drive, a north/south-oriented roadway connecting aviation cargo areas from the north to Will Clayton Parkway to the south; Will Clayton Parkway (and associated roadway median), an east/west-oriented roadway connecting SH-59/I-10/Eastex Freeway to the east and IAH to the west; and Lee Road, a north/south-oriented roadway connecting the eastern airport areas of the south with Will Clayton Parkway to the north.

Kenswick Drive is a four-lane (two in each direction) road constructed of concrete with a small median of vegetation that is curbed. The road has occasional stormwater drainage inlets that presumably lead to underground stormwater management system. A hotel and gas station are located to the west of this portion of the subject property and an empty field is located to the east.

Will Clayton Parkway is a six-lane (three in each direction) road constructed with concrete. East-west traffic and west-east traffic are separated by an approximately 200-foot median. The median is comprised of grass, shrubs and trees, many of which are planted in rows. The perimeter of the road is curbed, as is the median. Transmission lines bisect the road and median near the eastern boundary of the subject property, and The Parking Sport is located to the north.

Lee Road is a two-lane (one in each direction) road constructed of asphalt with no curbing or median. Transmission lines bisect the road near the southern survey boundary. A lift station is located to the west of the southern boundary of the subject property with a forested area to the east.

### 2.3. Current Use of the Parcel

The subject property is currently used as a roadway with vegetated median.

### 2.4. Description of Site Improvements

During the site reconnaissance, the following site improvements were observed:

- Concrete streets of Kenswick Drive and Will Clayton Parkway, including curbing.
- Asphalt street of Lee Road with roadside drainage and culverts.
- A hotel and gas station west-adjacent to Kenswick Drive.

- Streetlights along Will Clayton Parkway, in both directions.
- Stormwater drainage structures along the sides of Kenswick Drive and in the median along Will Clayton Parkway.
- Transmission lines across Will Clayton Parkway and Lee Road.
- A lift station to the southwest of the subject property, west of Lee Road.
- Trees planted in rows in median of Will Clayton Parkway, with irrigation.

## 2.5. Current Uses of Adjoining Properties

Current uses of adjoining properties are rural and forested to the south of Will Clayton Parkway. The areas north-adjacent to Will Clayton Parkway and Kenswick Drive are developed with covered airport parking, a gas station, and hotels.

## 3. User Provided Information

The HAS is considered to be the *User* of this Phase I ESA.

### 3.1. Specialized Knowledge

No specialized knowledge was provided for this Phase I ESA.

### 3.2. Commonly Known of Reasonably Ascertainable Information

The subject property has been commonly known to be used in a transportation capacity (a roadway) and associated median. The southern portion of the subject property (area around Lee Road), has been owned by the City of Houston Airport Facilities for many years. The remaining portions of the subject property are owned by various municipal and commercial interests.

### 3.3. Owner, Property Manager, and Occupant Information

It is understood that the subject property is currently owned and managed by the City of Houston Airport Facilities and the City of Houston.

### 3.4. Other

Atkins is not aware of any other commonly known information regarding the subject property or surrounding area.

## 4. Records Review

### 4.1. Standard Environmental Records Source

The purpose of reviewing regulatory agency records is to determine evidence of past or present environmental conditions associated with the subject property, adjoining properties, and other properties within the vicinity of the search radius prescribed by the ASTM standard. To obtain the necessary information, Atkins subcontracted GeoSearch, who provided a regulatory agency database report, which is provided in pages 26-159 of the GeoSearch Report. A copy of the regulatory database report is also provided as Appendix B.

### 4.2. Agency Database Findings

According to the regulatory agency database report provided by GeoSearch, Federal and State database records were reviewed and evaluated for the subject property and within an applicable search radius specified by ASTM E1527-13. Information provided by GeoSearch about the records is provided (GeoSearch, 2021) and presented in Appendix B. The summary of the database search within the search radii is presented on pages 2-6 of the GeoSearch Report. The Radius Report shows five (5) listed sites within the search radius for the subject property. Although only five sites are shown, each site may include multiple facility listings. Radius Maps showing search radii are presented on pages 11-12 of the GeoSearch Report (GeoSearch, 2021) in Appendix B. The 5 sites identified in the Radius Report are summarized below in Table 5-1 and are discussed further in the sections below. The agency database findings identified 4 sites (GeoSearch Site ID #1-4) within ¼ mile of the subject property. The other site (GeoSearch Site ID #5) appears to be too distant (more than ¼ mile) from the subject property to have impacts at the subject property.

**Table 4-1 Environmental Records Search Locatable Database Findings**

Regulated Facility/Address	Distance (mi.) from Subject Property	Database(s) (acronym)/ ASTM	REC (yes/no)	GEOSEARCH Site #	GEOSEARCH Page #
Continental Airlines Intercontinental Airport Houston, TX 77032	0.00 mi	AIRSAFS- federal	no	1	26-30
Load Rack Service Road George Bush Intercontinental Airport Houston, TX	0.00 mi	ERNSTX- federal	YES- HREC	1	33-34
Delta Air Lines, Inc. IAH Airport Houston, TX 77032	0.00 mi	HMIRSR06- federal	no	1	54-55
American Airlines IAH Flight Station 5 Houston, TX 77205	0.00 mi	IHW- state	no	1	68-67
George Bush Intercontinental Airport 3800 N Terminal Rd Houston, TX 77032	0.00 mi	IHWCA- state	no	1	70
Delta Air Lines Houston Intercontinental Airport Houston, TX 77032	0.00 mi	PST- state	no	1	72-78
IAH Houston TX Vortac 0.5 mi West off Rankin Houston, TX 77032	0.00 mi	PST- state	no	1	79-80

Regulated Facility/Address	Distance (mi.) from Subject Property	Database(s) (acronym)/ ASTM	REC (yes/no)	GEOSEARCH Site #	GEOSEARCH Page #
IAH Houston TX ALS Runway 8 Intercontl Houston, TX 77032	0.00 mi	PST- state	no	1	81-82
IAH Houston TX Loc Intercontl Airport RW Houston, TX 77032	0.00 mi	PST- State	no	1	83-84
IAH Houston TX GS Intercontl Airport RW Houston, TX 77032	0.00 mi	PST- state	no	1	85-86
IAH Airport ASR9 IAH Airport ASR9 Houston, TX 77032	0.00 mi	PST- state	no	1	87-92
IAH RTR C RTRC Access Driveway Houston, TX 77205	0.00 mi	PST- state	no	1	93-94
IAH Houston TX RTR Transmitter Buch Inter Airport Houston, TX 77025	0.00 mi	PST- state	no	1	95-97
IAH HYV26 ALSF Airport Runway 26J-JYV Houston, TX 77032	0.00 mi	PST- State	no	1	98-103
IAH GH127 ALS Airport Runway 27-GHI Houston, TX 77032	0.00 mi	PST- state	no	1	104-108
IAH JYV IZER Airport Runway JYV Houston, TX 77032	0.00 mi	PST- state	no	1	109-113
IAH OND ALSF Airport Runway 26R-BZU Houston, TX 77032	0.00 mi	PST- state	no	1	114-118
IAH BZY ALSF Airport Runway 08L-BZU Houston, TX 77032	0.00 mi	PST- state	no	1	119-123
IAS Air Service Pesticide Spill George Bush Airport Houston, TX	0.00 mi	SEMS- federal	YES- REC	1	124
Allright Airport Parking 6655 Will Clayton Parkway Humble, TX 77338	0.018 mi	PST- state	no	2	138-140
Handi Stop 40 6355 Wil Clayton Parkway Humble, TX 77338	0.024 mi	LPST- state	YES- REC	3	141-144
Handi Stop 40 6355 Wil Clayton Parkway Humble, TX 77338	0.024 mi	PST- state	no	3	145-151

Regulated Facility/Address	Distance (mi.) from Subject Property	Database(s) (acronym)/ ASTM	REC (yes/no)	GEOSEARCH Site #	GEOSEARCH Page #
Gen Rent a Car Inc 6115 Will Clayton Parkway Humble, TX 77338	0.116 mi	LPST-state	no	4	152-154
Tejas Properties 6101 Will Clayton Parkway Humble, TX 77338	0.116 mi	PST-state	no	4	155-157
Hydrill USA Distribution 1800 Eastex Freeway Humble, TX 77396	0.948 mi	IHWCA-state	no	5	158

#### 4.2.1. Federal Environmental Records

One site (multiple facilities) was listed on the Federal Environmental Databases as being present within the search radii. Regulatory file excerpts for GeoSearch Site ID #1 is provided in Appendix C.

GeoSearch Site ID #1, Continental Airlines, IAH, Houston, TX, subject property. This facility is listed in the AIRSAFS (Aerometric Information Retrieval System/Air Facility Subsystem) database due to former air emissions from the manufacture of aircraft parts and auxiliary equipment. No violations were noted during facility inspections from 2007-2014, and the program status is listed as permanently closed. This site is not considered a REC.

GeoSearch Site ID #1, Load Rack Service Road, IAH, Houston, TX, subject property. This facility is listed in the ERNSTX (Emergency Response Notification System) database due to an incident on 3/14/2013 in which a tanker truck flipped over in transport, spilling jet fuel on the ground. According to records, a contractor was hired to excavate soil and a vac truck was used, but is unknown exactly where this event occurred at the airport. The release did not enter any waterbodies. There are no indications of additional or releases at this facility after 2013. This facility is considered an HREC.

GeoSearch Site ID #1, Delta Airlines, Inc. IAH, Houston, TX, subject property. This facility is listed in the HMIRSR096 (Hazardous Materials Incident Reporting System) database due to events that occurred on 1/3/2011 and 11/23/2013. The 2011 event was reported due to a small spill (0.11 pound) of cyproconazole, a solid agricultural fungicide, onto a warehouse floor. The 2013 event was reported due to the discovery of undeclared lithium ion batteries in a shipment of drills. Neither of these incidents are expected to have any impacts of the subject property, and this facility is not considered a REC.

GeoSearch Site ID #1, IAH Air Services Pesticide Spill, IAH, Houston, TX, subject property. This facility is listed in the SEMS (Superfund Enterprise Management System) database but is not included on the NPL. As of 9/24/2007, this facility is classified as a site for removal only (no site assessment work needed). The start and completion of construction/removal at this non-federal facility are listed as 9/4/2007. No information is provided regarding contaminants or exact location, and an investigation into the facility using EPA's ECHO database also yielded no further information. As such, this facility is considered a REC.

#### 4.2.2. State Environmental Databases

Four sites (multiple facilities) were listed primarily on the State Environmental Databases as being present within the search radii. Regulatory file excerpts s for GeoSearch Site IDs #3 and #4 are provided in Appendix C.

GeoSearch Site ID #1, 2, 3, 4, Various, IAH, Houston, TX. Many facilities located at and around the airport's address are included in the state's PST (Petroleum Storage Tank) database as facilities with registered PSTs. Based on the site investigation, these sites are not located at the subject property. None of the facilities listed *only* as PST facilities are considered a REC.

GeoSearch Site ID #1, American Airlines IAH, Flight Station 5, Houston, TX, subject property. This facility is listed on the State IHW (Industrial and Hazardous Waste) database as a conditionally-exempt, small-quantity generator

of non-industrial and/or municipal waste. The facility does not receive, transport, or transfer wastes, and all registered waste codes have a status of inactive. This facility is not considered a REC.

GeoSearch Site ID #1, George Bush Intercontinental Airport, 3800 N Terminal Road, Houston, TX, subject property. This facility is listed on the State IHWCA (Industrial and Hazardous Waste Corrective Action) database. No information is available regarding specific contamination or remediation efforts, but, per the TCEQ, the status is inactive, as workload was completed on 5/13/2013. This facility is not a REC.

GeoSearch Site ID #3, Handi Stop 40, 6355 Will Clayton Parkway, Humble, TX 77338, 0.024 mile. This facility is listed on the State LPST (Leaking Petroleum Storage Tank) database due to a leaking diesel tank that was reported on 12/18/2002. The facility's leak was given a priority code reflecting contaminated groundwater, and preassessment confirmed the release. According to available TCEQ correspondence data, proper sampling, determination, and potential remediation has not been conducted, and this case is not closed. Correspondence from the owner/operator appears to cease after 2004. Analysis shows the TCEQ is pursuing this matter. Regulatory file excerpts for GeoSearch Site ID #3 are provided in Appendix C. This facility is considered a REC.

GeoSearch Site ID #4, Gen Rent a Car Inc, 6115 Will Clayton Parkway, Humble, TX, 0.116 mile. This facility is listed on the State LPST (Leaking Petroleum Storage Tank) database due to a leaking tank that was reported on 8/14/1990. Soil was impacted, and cleanup and remediation was completed. On 3/12/1991, TCEQ issued concurrence and closed the case. Regulatory file excerpts for GeoSearch Site ID #4 are provided in Appendix C. This facility is not considered a REC.

GeoSearch Site ID #5 is State-listed facility on the IHWCA databases, but the facility is located 0.948 mile from the subject property. Therefore, this facility is not considered a concern for the subject property.

## 4.3. Physical Settings

### 4.3.1. Topography

The proposed project area is located within the East Coastal Plain of the Gulf Coastal Plain physiographic province of Texas, as described by the U.S. Geological Survey (USGS 1995). The project area is located near the east-central edge of the Gulf Coastal Plain of Texas and within the Houston Embayment structural feature. The physical setting is characterized by a generally flat topography in broad, shallow, river valleys, with rivers that discharge to the Gulf of Mexico. The site is located southwest of the Cypress and Spring Creek Watersheds, both of which discharge into Galveston Bay. The subject property elevation is at approximately 85 feet above mean sea level. A topographic map is provided on page 14 in Appendix B.

### 4.3.2. Geology

The stratigraphic units and correlated aquifer systems of the study area range in age from the Paleozoic Era to Recent/Holocene (USGS 1995). The shallowest geologic units, of interest to this Phase I ESA, are the Quaternary sediments found relatively near the surface (USGS 2020). In eastern Harris County, the surficial geologic units include Middle Pleistocene deposits of the Lissie Formation, which consists primarily of sand, silt, and clay. The Early Pleistocene and Pliocene sediments that are found immediately beneath the Middle Pleistocene deposits include sandy and clayey deposits within the Willis Formation.

The Chicot Aquifer in Harris County (USGS 2002), also referred to as the Water Table Aquifer, is found at shallow depths in the study area. The Water Table Aquifer is comprised of unconsolidated and partially-unconsolidated beds of primarily sand, silt, and clay. This aquifer is unconfined and is recharged by rain and leakage from surface water bodies that have water level elevations that are higher than the local water table. The Chicot Aquifer consists of the Pleistocene geologic units underlying the area, and it is underlain by the Evangeline Aquifer, which consists of Pliocene sandy deposits.

### 4.3.3. Soils

A soils map of the study area, provided by the U.S. Department of Agriculture – Soil Survey of Harris County, Texas (NRCS 2021), was reviewed by Atkins. The soil at the subject property consists of Clodine-Urban land complex, 0 to 1 percent slopes (Ce). This soil unit consists of a mixture of Clodine and similar soils, along with

Urban Land and other minor components The Clodine-Urban land complex is found on flats or coastal plains. The water table is usually at a depth of 0 to 30 inches.

#### 4.3.4. Hydrology

The climate in the vicinity of the subject property generally consists of hot summers and moderate winters, with frequent precipitation and the potential for hurricanes in the summer. The “wet season” is typically from June through October. No canals or named streams flow through the subject property. Shallow groundwater is expected to follow topography to the nearest drainage. Overall, shallow groundwater is expected to flow west to Garners Bayou. Depth to groundwater was estimated to be 0 to 30 inches based on available soil data (NRCS 2020).

#### 4.3.5. Federal Emergency Management Agency

Mapped floodplains encompass the majority of the southern and eastern portions of the subject property (FEMA 2021) and are included in Appendix A. The median of Will Clayton Parkway is mostly outside of the flood plain, while the northern, eastern, and southern boundaries are within the 0.2% or 500-year floodplain.

#### 4.3.6. National Wetlands Inventory

The National Wetlands Inventory (NWI) map is presented in Appendix A (USFWS 2021). Wetlands listed as “Freshwater Forested/Shrub” are shown as located adjacent to the subject property at the southwest intersection of Will Clayton Boulevard and Lee Road. No wetlands are shown within the subject property.

#### 4.3.7. Oil and Gas

The subject property is not located in an area of oil and gas exploration or production drilling (RRC 2021). Therefore, no mapped records regarding oil and gas wells were found.

#### 4.3.8. Water Well Survey

A survey for water supply wells within a 0.5-mile radius of the subject property was conducted and is presented in Appendix A (TWDB 2021). The water well survey found two records of wells within the project area of 0.5-mile radius. A well associated with Well Report Tracking Number 392117 is located approximately 0.23 mile west northwest of the subject property. The well, owned by Ramada Inn, is an active irrigation well which was completed on 12/24/2014. A well associated with Well Report Tracking Number 391396 is located approximately 0.01 mile from the subject property. The well, owned by Houston Intercontinental Trade Cent, LP is a monitoring well which was completed on 3/25/2015. Results from associated monitoring activities indicate injurious water quality. The location of the well indicates that it is may be associated with the ongoing LPST investigation at GeoSearch ID #3, although the association is not definite.

### 4.4. Historical Use Information

#### 4.4.1. Aerial Photographs

Atkins obtained 16 historical aerial photographs of the subject property and surrounding areas from GeoSearch (GeoSearch, 2021). The photographs depict the subject property as it appeared in 1930, 1944, 1953, 1962, 1969, 1979, 1989, 1995, 2004, 2005, 2006, 2010, 2012, 2014, 2016, and 2018. Review of the historical aerial photographs enabled Atkins to examine the historical usage of the subject property and surrounding areas. The GeoSearch Historical Aerial Photograph Report is presented as a part of Appendix B. The aerial photograph review is summarized as follows:

**1930-1962:** The subject property appears to be located in field with patchy tree clusters. A river or drainage feature is located north of the subject property and turns south to the west. There is evidence of possible wildlife or livestock trails throughout the general area.



**1969:** A wide road runs east-to-west through the subject property along present-day Will Clayton Parkway. Some additional roads are present north of the subject property. The majority of the area is still a field with scattered trees.

**1979:** Will Clayton Parkway is visible with the present-day Ramada Inn located northwest of the subject property. A golf course is present north of the Ramada. What appears to be a parking area has been constructed north of the western boundary of the subject property. Some scattered trees remain in the median of Will Clayton Parkway. A pond is located northeast of the subject property.

**1989-1995:** The parking area has been enlarged, and the area south of the subject property has been cleared. Runways and other airport features are visible to the south, including Lee Road. Scattered trees are still present in the median.

**2004:** Once again, the parking area has been enlarged. Kenswick Drive has been built and extends north from Will Clayton Boulevard. The current Handi Stop is visible on the northwest corner of these two roadways. The golf course north of the Ramada is no longer visible and has been replaced by vegetation. A lift station has been built west on Lee Road, near the southwestern boundary of the subject property. An additional pond is now located north of the subject property.

**2005-2006:** The present-day TNC lot is now located east-adjacent to the Ramada, and minimal changes to the southern airport area are of note. Buildings have been erected north of the project area, adjacent to the parking area.

**2010:** The present-day hotel is visible west-adjacent to the subject property and north-adjacent to the Handi Stop.

**2012-2014:** Trees appear to be planted in the median of Will Clayton Parkway, and the parking area has expanded.

**2016-2018:** A large building is visible on the north west of Kenswick Drive. However, the area adjacent to the subject property has not changed.

#### 4.4.2. Historical Topographic Maps

Atkins obtained 8 historical topographic maps of the subject property and surrounding areas from GeoSearch (GeoSearch, 2021). The topographic maps depict the subject property as it appeared in 1916, 1919, 1943, 1954, 1967, 1982, 1995, and 2013. Review of the historical topographic maps enabled Atkins to examine the historical usage of the subject property and surrounding areas. The historical aerial photographs provided by GeoSearch are presented as part of Appendix B. The historical topographic maps review is summarized as follows:

**1916:** The map shows the area around the subject property with various road and railroad lines. Historic Lee Road is visible west of the subject property, and future TX 59/I-69 is visible to the east.

**1919:** The map shows the addition of a small town northeast of the subject property and Higgs School located northwest.

**1943:** The map shows the school from 1943 is no longer present, and the small town is now labeled as Humble. Garners Bayou is also labeled. A small town labeled Bordersville is visible north of the subject property.

**1954:** The map shows the school from 1943 is no longer present, and the small town is now labeled as Humble. Garners Bayou is also labeled.

**1967:** The map shows Jetero Boulevard (present-day Will Clayton Parkway) connecting to an improved TX 59/I-69. A golf course is west, and a small neighborhood is visible to the south of the project area.

**1982:** The map shows present-day Ramada Inn west of the subject property along Jetero Boulevard. Another hotel is located south of Jetero Boulevard towards TX 59/I-69.

**1995:** The map shows many new neighborhood and development located both south of the project area and west of TX 59/I-69. Airport runways are located south of the project area. Lee Road has been moved to go around the runways and is now located in the southern project area.

**2013:** The map shows the subject property with Kenswick Road to the north and Lee Road to the south. Will Clayton Boulevard transects the subject property. This map shows the project and surround areas much like they are today.

#### 4.4.3. Historical City Directories

Atkins obtained the available historical ownership histories of the subject property and surrounding areas from Harris County Appraisal District (HCAD 2021). Review of the ownership histories enabled Atkins to examine the historical usage of the areas surrounding the subject property, as follows:

**0 Lee Road:** 1988, City of Houston/Airport Facilities

**0 Will Clayton Parkway (north of Will Clayton Parkway, east of Kenswick Drive):** 2001, New HSR Horizon, Inc. 2006; HSR Horizon Mgmt. LLC.

**0 Will Clayton Parkway (north of Will Clayton Parkway, west of Kenswick Drive):** 2001, Houston Intercontinental; 2011, HITC Partners LLC; 2012 Daic Drago; 2014, Houston Intercontinental Trade Center LP; 2015, Intercontinental Hospitality LLC.

**0 Will Clayton Parkway (south of Will Clayton Parkway):** 1988, Parcel E71-14A (Municipal Airport)/City of Houston/Will Clayton Parkway

**6355 Will Clayton Parkway:** 2001, Global New Millennium Ptnr; 2014, Allstate BK Real Estate Holdings LTD.

**6633 Will Clayton Parkway # 1620:** 2009, Urban Growth Prosperity/Limited Partnership; 2011, UGPLP 2 Preflight IAH Bush LLC; 2013, CP Greens IAH LLC.

**6655 Will Clayton Parkway #2450:** 2020, Houston WC Holdings, Inc.

**18201 Kenswick Drive #77:** 2007, Kenswick Hotel LLC.

## 5. Site Reconnaissance

### 5.1. Methodology and Limiting Conditions

Atkins' personnel conducted a site visit of the subject property on January 14, 2021. The site reconnaissance was intended to provide information on how the subject property is currently used, how it was used in the recent past (as discernible), and its current condition. Adjoining properties were also observed to the extent possible (from public right-of-way) to discern the potential for the subject property to be impacted by them.

Atkins' personnel traversed the vegetated areas of the subject property on foot and the roadway areas of the subject property in a vehicle. Adjacent properties and nearby sites up to 1/4 mile away were also observed from the roadway during the site reconnaissance. Photographs taken during the site reconnaissance are presented in Appendix D.

### 5.2. General Site Setting

The subject property consists of approximately 9.78 acres of land that are comprised of the following, from north to south: Kenswick Drive, a north/south-oriented roadway connecting aviation cargo areas from the north to Will Clayton Parkway to the south; Will Clayton Parkway (and associated roadway median), an east/west-oriented roadway connecting SH-59/I-10/Eastex Freeway to the east and IAH to the west; and Lee Road, a north/south-oriented roadway connecting the eastern airport areas of the south with Will Clayton Parkway to the north.

It is located in a generally urbanized area, except for the median of Will Clayton Parkway and the areas adjacent to Lee Road, which are forested. Land use of the subject property and adjoining areas is described in detail in Section 3.

### 5.3. Exterior Observations

During the site investigation, Atkins observed the subject property, including all three roadways and their adjacent parcels. The subject property was evaluated for the checklist of indicators listed in Table 5-1. Photographs of the observations are presented in Appendix D.

The exterior observations included the following:

**Kenswick Drive:** The northern portion of the property contained a concrete, four-lane road with a small vegetated median. To the west are located a gas station and a hotel. Stormwater inlets and roadway signage are located along the perimeter. No REC-related concerns were observed, other than the gas station previously mentioned.

**Will Clayton Parkway:** The central portion of the site is comprised of a six-lane road with a large, vegetated median. Parking facilities are located near the northeast corner of the subject property while a large, vegetated area is located to the south. The vegetated median is equipped with stormwater drains and is transected by transmission lines on the east. The vegetated median has irrigation line and is planted with trees. No REC-related concerns were observed along Will Clayton Parkway.

**Lee Road:** The southern boundary of the site is a two-lane asphalt road transected by transmission lines. A utility box is located on the southeastern boundary of the subject property. To the west, a lift station is located which is operated by the City of Houston. No REC-related concerns were observed.

Atkins also made observations at the regulatory agency-listed sites discussed in Section 4.2, which are located within ¼ mile of the subject site. The observations are summarized as follows:

**GeoSearch ID #1:** This site included many facilities. The location of these facilities is known only as some form of "George Bush Intercontinental Airport", which encompasses quite a large area. As such, the specific facilities were not individually located and/or observed. See Section 7 for a discussion of findings.

**GeoSearch ID #2:** This facility was observed as the modern-day FastPark, adjacent to Will Clayton Parkway. It provides travelers with a remote parking option for airline travel. No REC-related concerns were observed at FastPark.

**GeoSearch ID #3:** This location consisted of a gas station and convenience store located immediately north of the subject property at the northwest corner of Kenswick Drive and Will Clayton Parkway. See Section 7 for a discussion of findings

**Table 5-1 Checklist of Indicators of Potential RECs**

Indicator	Identified?	Description
Hazardous substances, petroleum products, or containers	No	NA
Storage tanks	No	NA
Odors	No	NA
Pools of liquid	No	NA.
Drums	No	NA
Unidentified substance containers	No	NA
Transformers	No	NA
Heating/cooling	No	NA
Stains or corrosion	No	NA
Drains and sumps	No	NA
Pits, ponds, or lagoons	No	NA
Stained soil or pavement	No	NA
Stressed vegetation	No	NA
Solid waste	Yes	Minor debris/trash along median of Will Clayton Parkway. Not considered a REC.
Wastewater (Municipal)	Yes	Sanitary sewer. Not a REC.
Wells	No	NA
Septic systems	No	NA
Stormwater management	Yes	Stormwater drains throughout site. Not a REC.
Utility supply	Yes	Utilities provided by the City and by private utilities. Not a REC.
Other indicators	No	NA

## 6. Interviews

### 6.1. Interviews with Owners and/or Property Managers and/or Occupants

The HAS is considered the Owner, Property Manager, or Occupant of the subject property. The owners did not provide any information indicating that they had knowledge of any environmental issues associated with the property.

## 7. Findings

Atkins identified two RECs and one HREC relative to the subject property during this Phase I ESA. Review of the regulatory files, physical setting information, historical aerial photographs and city directories, and the site reconnaissance identified the following RECs or Potential RECs at the subject property:

**GeoSearch ID #1:** This site included many facilities. The location of these facilities is known only as some form of “George Bush Intercontinental Airport”, which encompasses quite a large area. As such, the specific facilities were not individually located and/or observed. However, due to nature of the database listing and the unknown precise location of some of these facilities, determination was made that certain facilities constitute a REC, despite not being located or observed.

**Load Rack Service Road:** This facility is listed in the ERNSTX (Emergency Response Notification System) database due to an incident on 3/14/2013 in which a tanker truck flipped over in transport, spilling jet fuel on the ground. According to records, a contractor was hired to excavate soil and a vac truck was used, but is unknown exactly where this event occurred at the airport. This facility is considered an HREC, but it should not impact the proposed project.

**IAH Air Service Pesticide Spill:** This facility is listed in the SEMS (Superfund Enterprise Management System) database but is not included on the NPL. As of 9/24/2007, this facility is classified as a site for removal only (no site assessment work needed). The start and completion of construction/removal at this non-federal facility are listed as 9/4/2007. No information is provided regarding contaminants or exact location, and an investigation into the facility using EPA’s ECHO database also yielded no further information. This facility is considered a REC. However, no indications of any impacts from this facility, or evidence of a pesticide spill were observed on the subject property. Due to the age of the data (2007), it is unlikely that this spill incident would impact the proposed project.

### GeoSearch ID # 3:

**HandiStop 40:** This facility is listed on the State LPST (Leaking Petroleum Storage Tank) database due to a leaking diesel tank that was reported on 12/18/2002. The facility’s leak was given a priority code reflecting contaminated groundwater, and preassessment confirmed the release. According to available TCEQ correspondence data, proper sampling, determination, and potential remediation has not been conducted, and this case is not closed. Correspondence from the owner/operator appears to cease after 2004. Analysis shows the TCEQ is pursuing this matter. Regulatory file excerpts for GeoSearch Site ID #3 are provided in Appendix C.

Atkins recommends that the TCEQ be contacted to confirm the regulatory status of this site to determine what future investigations may be required. Based on HAS plans for the subject property, a Phase II ESA may be required to determine if contaminated groundwater could affect the proposed project.

### 7.1. Special Terms and Conditions

No special terms and conditions apply to this Phase I ESA. The scope of services is provided in Section 2.2.

## 8. User Reliance

This report is for the use and benefit of and may be relied upon by the HAS, its employees and affiliates, and its counsel. Third-party reliance on this report is not authorized without the express written consent of HAS and Atkins. The third party agrees by accepting this report that any use or reliance on this report will be limited by the noted exceptions and limitations, and with the acknowledgment that actual site conditions may change with time and hidden conditions may exist at the subject property that were not discovered within the authorized scope of the assessment. Atkins makes no other representation to any third party except that it has used the degree of care and skill ordinarily exercised by environmental consultants in the preparation of the report and in the assembling of data and information related thereto. No other warranties are made to any third party, either expressed or implied. The findings of this Phase I ESA will be valid for a period of one year from the date of publication with the exception of certain components (listed below). Within 180 days from the publication date of the Phase I ESA, the following aspects of the Phase I ESA must be updated:

1. Interviews with owners, operators, and occupants.
2. Searches for recorded environmental clean-up liens.
3. Reviews of Federal, Tribal, State, and local government records.
4. Visual observations made of the subject property and adjoining properties.
5. The declaration by the environmental professional responsible for the assessment or update.

## 9. Deviations

Atkins performed the Phase I ESA in general conformance with the scope and limitations of ASTM Practice E1527-13. No deviations from ASTM Practice E1527-13 were required in conducting this assessment.



## 10. Additional Services

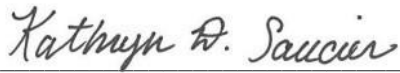
ASTM “Non-Scope” environmental concerns were not part of this scope of work, including asbestos containing materials (ACMs) and lead-based paint (LBP) assessments. No additional services were performed in conjunction with this ESA.

# 11. References

- Federal Emergency Management Agency (FEMA). 2021. *FEMA's National Flood Hazard Layer (NFHL) Viewer*. Available at: <https://www.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>. Accessed January 2021.
- GeoSearch 2021. *Radius Report for Kenswick, Humble, Harris County, Texas*. GeoSearch, LLC.
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- Natural Resource Conservation Service (NRCS). 2021. *Web Soil Survey*. Available at: <http://www.websoilsurvey.nrcs.usda.gov>. Accessed January 2021.
- Texas Railroad Commission (RRC). 2021. *Public GIS Viewer*. Available at: <https://gis.rrc.texas.gov/GISViewer/>. Accessed January 2021.
- Texas Water Development Board (TWDB). 2021. *Groundwater Data Viewer*. Available at: <https://www3.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer>. Accessed January 2021.
- U.S. Fish and Wildlife Service (USFWS). 2021. *National Wetlands Inventory Mapper*. Available at: [www.fws.gov/wetlands/data/Mapper.html](http://www.fws.gov/wetlands/data/Mapper.html). Accessed January 2021.
- U.S. Geological Survey (USGS). 2021. *Geologic Units in Harris county, Texas*. Available at: <https://mrddata.usgs.gov/geology/state/fips-unit.php?code=f48201>. Accessed January 2021.
- U.S. Geological Survey (USGS). 2002. *Hydrogeology and Simulation of Ground-Water Flow and Land-Surface Subsidence in the Chicot and Evangeline Aquifers, Houston Area, Texas*. USGS, by M.C. Kasmarek and E.W. Storm.
- U.S. Geological Survey (USGS). 1995. *Stratigraphic Nomenclature and Geologic Sections of the Gulf Coastal Plain of Texas*. USGS, by E.T. Baker, Jr..

## 12. Signature of Environmental Professional

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental professional as defined in Section 312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed all of the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



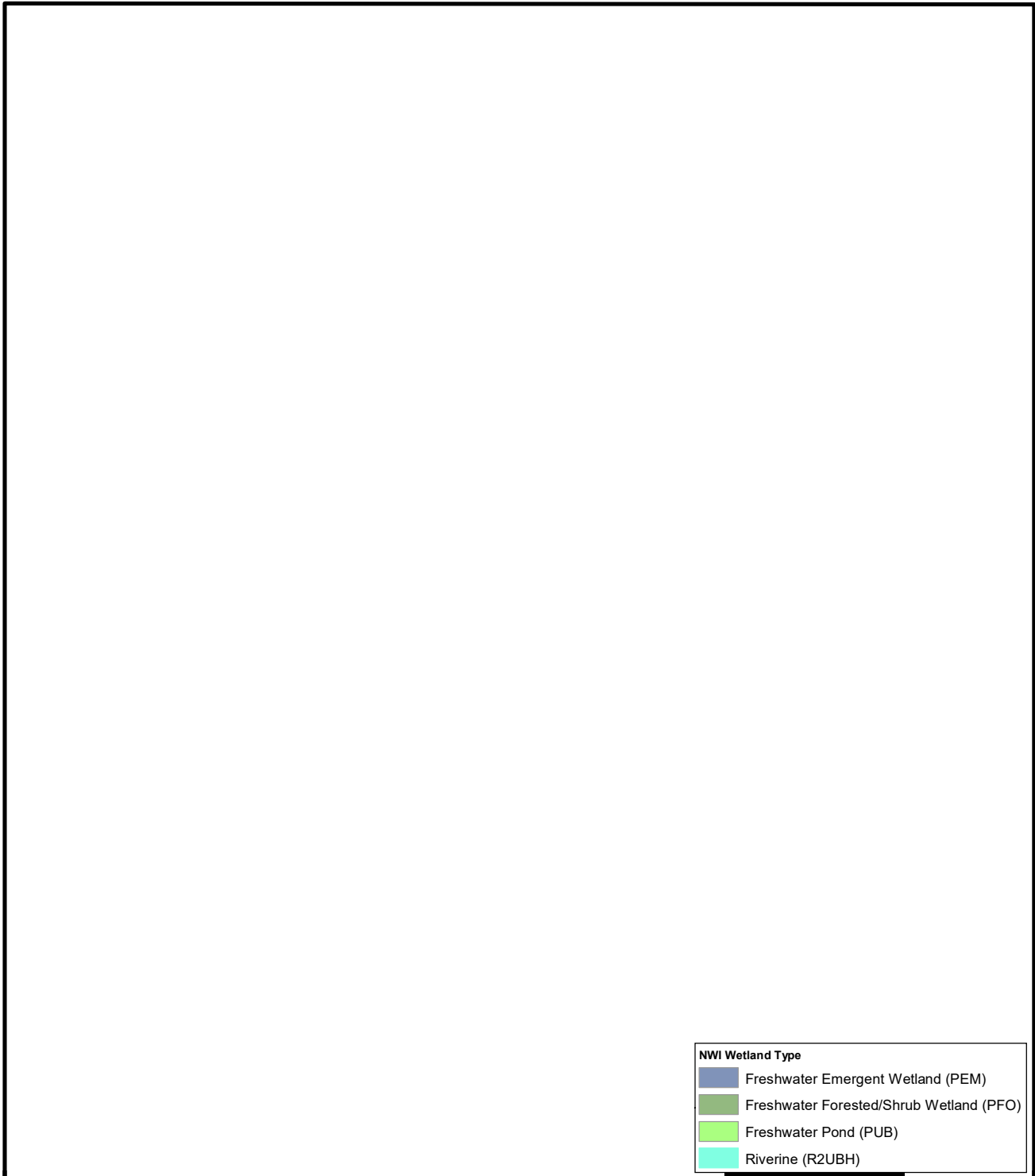
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Kathryn D. Saucier, Senior Scientist

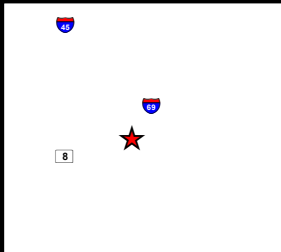
# Appendices












# Appendix A. Figures



NWI Wetland Type	
	Freshwater Emergent Wetland (PEM)
	Freshwater Forested/Shrub Wetland (PFO)
	Freshwater Pond (PUB)
	Riverine (R2UBH)



-  Study Area
-  Geosearch Map ID
-  Water Well Report
-  1/8 Mile Buffer
-  1/4 Mile Buffer
-  1/2 Mile Buffer
-  1 Mile Buffer
-  FEMA 1% Annual Chance
-  FEMA 0.2% Annual Chance

Datum: NAD 1983  
 Spatial Ref.: State Plane Texas  
 South Central  
 Units: Feet  
 Water Well Reports: TWDB 2021  
 NWI: USFWS 2020  
 Floodplain: FEMA 2020  
 Basemap: Bing Maps Aerial

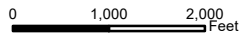


Figure 3-1  
 Kenswick Drive Extension  
 Environmental Site Assessment

**Houston Airport System**  
 Houston, Harris County, Texas

Job No.: 100072032	Scale: 1" = 2,000 feet
Prepared By: ATKINS/WHIT6392	Date: Jan 28, 2021

N:\Clients\G\_HHouston\_Airport\_System\100072032\geo\figs\phase\_1\phase1\_aerial\_v4.mxd

# Appendix B. Regulatory Database Report and Historic Visuals



On time. On target. In touch.™

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## ***E RecSearch Report***

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[GeoLens by GeoSearch](#)

*Target Property:*

***Kenswick***

***Humble, Harris County, Texas 77338***

*Prepared For:*

***Atkins Global-Houston***

***Order #: 159928***

***Job #: 392676***

***Project #: 100072032***

***Date: 01/12/2021***



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## Disclaimer

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*This report was designed by GeoSearch to meet or exceed the records search requirements of the All Appropriate Inquiries Rule (40 CFR § 312.26) and the current version of the ASTM International E1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process or, if applicable, the custom requirements requested by the entity that ordered this report. The records and databases of records used to compile this report were collected from various federal, state and local governmental entities. It is the goal of GeoSearch to meet or exceed the 40 CFR § 312.26 and E1527 requirements for updating records by using the best available technology. GeoSearch contacts the appropriate governmental entities on a recurring basis. Depending on the frequency with which a record source or database of records is updated by the governmental entity, the data used to prepare this report may be updated monthly, quarterly, semi-annually, or annually.*

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## Target Property Summary

### **Target Property Information**

*Kenswick*

*Humble, Texas 77338*

#### **Coordinates**

*Area centroid (-95.295106, 29.9830910)*

*83 feet above sea level*

#### **USGS Quadrangle**

*Humble, TX*

### **Geographic Coverage Information**

**County/Parish:** Harris (TX)

#### **ZipCode(s):**

Houston TX: 77032

Humble TX: 77338, 77396

# Database Summary

## **FEDERAL LISTING**

### **Standard Environmental Records**

<b>Database</b>	<b>Acronym</b>	<b>Locatable</b>	<b>Unlocatable</b>	<b>Search Radius (miles)</b>
EMERGENCY RESPONSE NOTIFICATION SYSTEM	<a href="#">ERNSTX</a>	1	0	TP/AP
FEDERAL ENGINEERING INSTITUTIONAL CONTROL SITES	<a href="#">EC</a>	0	0	TP/AP
LAND USE CONTROL INFORMATION SYSTEM	<a href="#">LUCIS</a>	0	0	TP/AP
RCRA SITES WITH CONTROLS	<a href="#">RCRASC</a>	0	0	TP/AP
RESOURCE CONSERVATION & RECOVERY ACT - GENERATOR	<a href="#">RCRAGR06</a>	0	0	0.1250
RESOURCE CONSERVATION & RECOVERY ACT - NON-GENERATOR	<a href="#">RCRANGR06</a>	0	0	0.1250
BROWNFIELDS MANAGEMENT SYSTEM	<a href="#">BF</a>	0	0	0.5000
DELISTED NATIONAL PRIORITIES LIST	<a href="#">DNPL</a>	0	0	0.5000
NO LONGER REGULATED RCRA NON-CORRACTS TSD FACILITIES	<a href="#">NLRRCRAT</a>	0	0	0.5000
RESOURCE CONSERVATION & RECOVERY ACT - NON-CORRACTS TREATMENT, STORAGE & DISPOSAL FACILITIES	<a href="#">RCRAT</a>	0	0	0.5000
SUPERFUND ENTERPRISE MANAGEMENT SYSTEM	<a href="#">SEMS</a>	1	0	0.5000
SUPERFUND ENTERPRISE MANAGEMENT SYSTEM ARCHIVED SITE INVENTORY	<a href="#">SEMSARCH</a>	0	0	0.5000
NATIONAL PRIORITIES LIST	<a href="#">NPL</a>	0	0	1.0000
NO LONGER REGULATED RCRA CORRECTIVE ACTION FACILITIES	<a href="#">NLRRCRAC</a>	0	0	1.0000
PROPOSED NATIONAL PRIORITIES LIST	<a href="#">PNPL</a>	0	0	1.0000
RESOURCE CONSERVATION & RECOVERY ACT - CORRECTIVE ACTION FACILITIES	<a href="#">RCRAC</a>	0	0	1.0000
RESOURCE CONSERVATION & RECOVERY ACT - SUBJECT TO CORRECTIVE ACTION FACILITIES	<a href="#">RCRASUBC</a>	0	0	1.0000
<b>SUB-TOTAL</b>		<b>2</b>	<b>0</b>	

### **Additional Environmental Records**

<b>Database</b>	<b>Acronym</b>	<b>Locatable</b>	<b>Unlocatable</b>	<b>Search Radius (miles)</b>
AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIR FACILITY SUBSYSTEM	<a href="#">AIRSAFS</a>	1	0	TP/AP
BIENNIAL REPORTING SYSTEM	<a href="#">BRS</a>	0	0	TP/AP
CERCLIS LIENS	<a href="#">SFLIENS</a>	0	0	TP/AP
CLANDESTINE DRUG LABORATORY LOCATIONS	<a href="#">CDL</a>	0	0	TP/AP
EPA DOCKET DATA	<a href="#">DOCKETS</a>	0	0	TP/AP
ENFORCEMENT AND COMPLIANCE HISTORY INFORMATION	<a href="#">ECHOR06</a>	4	0	TP/AP
FACILITY REGISTRY SYSTEM	<a href="#">FRSTX</a>	23	0	TP/AP

## Database Summary

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
HAZARDOUS MATERIALS INCIDENT REPORTING SYSTEM	<a href="#">HMIRSR06</a>	2	0	TP/AP
HAZARDOUS WASTE COMPLIANCE DOCKET FACILITIES	<a href="#">HWCD</a>	0	0	TP/AP
INTEGRATED COMPLIANCE INFORMATION SYSTEM (FORMERLY DOCKETS)	<a href="#">ICIS</a>	8	0	TP/AP
INTEGRATED COMPLIANCE INFORMATION SYSTEM NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	<a href="#">ICISNPDES</a>	3	0	TP/AP
MATERIAL LICENSING TRACKING SYSTEM	<a href="#">MLTS</a>	0	0	TP/AP
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	<a href="#">NPDESR06</a>	1	0	TP/AP
PCB ACTIVITY DATABASE SYSTEM	<a href="#">PADS</a>	0	0	TP/AP
PERMIT COMPLIANCE SYSTEM	<a href="#">PCSR06</a>	0	0	TP/AP
SEMS LIEN ON PROPERTY	<a href="#">SEMCLIENS</a>	0	0	TP/AP
SSEHRI PFAS CONTAMINATION SITES	<a href="#">SSEHRIPFAS</a>	0	0	TP/AP
SECTION SEVEN TRACKING SYSTEM	<a href="#">SSTS</a>	0	0	TP/AP
TOXIC SUBSTANCE CONTROL ACT INVENTORY	<a href="#">TSCA</a>	0	0	TP/AP
TOXICS RELEASE INVENTORY	<a href="#">TRI</a>	0	0	TP/AP
ALTERNATIVE FUELING STATIONS	<a href="#">ALTFUELS</a>	2	0	0.2500
FEMA OWNED STORAGE TANKS	<a href="#">FEMAUST</a>	0	0	0.2500
HISTORICAL GAS STATIONS	<a href="#">HISTPST</a>	0	0	0.2500
INTEGRATED COMPLIANCE INFORMATION SYSTEM DRYCLEANERS	<a href="#">ICISCLEANERS</a>	0	0	0.2500
MINE SAFETY AND HEALTH ADMINISTRATION MASTER INDEX FILE	<a href="#">MSHA</a>	0	0	0.2500
MINERAL RESOURCE DATA SYSTEM	<a href="#">MRDS</a>	0	0	0.2500
OPEN DUMP INVENTORY	<a href="#">ODI</a>	0	0	0.5000
SURFACE MINING CONTROL AND RECLAMATION ACT SITES	<a href="#">SMCRA</a>	0	0	0.5000
URANIUM MILL TAILINGS RADIATION CONTROL ACT SITES	<a href="#">USUMTRCA</a>	0	0	0.5000
DEPARTMENT OF DEFENSE SITES	<a href="#">DOD</a>	0	0	1.0000
FORMER MILITARY NIKE MISSILE SITES	<a href="#">NMS</a>	0	0	1.0000
FORMERLY USED DEFENSE SITES	<a href="#">FUDS</a>	0	0	1.0000
FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM	<a href="#">FUSRAP</a>	0	0	1.0000
RECORD OF DECISION SYSTEM	<a href="#">RODS</a>	0	0	1.0000
<b>SUB-TOTAL</b>		<b>44</b>	<b>0</b>	

## Database Summary

### STATE (TX) LISTING

#### Standard Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
STATE INSTITUTIONAL/ENGINEERING CONTROL SITES	<a href="#">SIEC01</a>	0	0	TP/AP
PETROLEUM STORAGE TANKS	<a href="#">PST</a>	16	0	0.2500
BROWNFIELDS SITE ASSESSMENTS	<a href="#">BSA</a>	0	0	0.5000
CLOSED & ABANDONED LANDFILL INVENTORY	<a href="#">CALF</a>	0	0	0.5000
COMMERCIAL MANAGEMENT FACILITIES FOR HAZARDOUS WASTE AND INDUSTRIAL SOLID WASTES	<a href="#">WSTMGMT</a>	0	0	0.5000
LEAKING PETROLEUM STORAGE TANKS	<a href="#">LPST</a>	2	0	0.5000
MUNICIPAL SOLID WASTE LANDFILL SITES	<a href="#">MSWLF</a>	0	0	0.5000
OPERATOR CLEANUP PROGRAM SITES	<a href="#">OCP</a>	0	0	0.5000
RAILROAD COMMISSION VCP AND BROWNFIELD SITES	<a href="#">RRCVCP</a>	0	0	0.5000
VOLUNTARY CLEANUP PROGRAM SITES	<a href="#">VCP</a>	0	0	0.5000
STATE SUPERFUND SITES	<a href="#">SF</a>	0	0	1.0000
<b>SUB-TOTAL</b>		<b>18</b>	<b>0</b>	

#### Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
GROUNDWATER CONTAMINATION CASES	<a href="#">GWCC</a>	0	0	TP/AP
HISTORIC GROUNDWATER CONTAMINATION CASES	<a href="#">HISTGWCC</a>	0	0	TP/AP
LAND APPLICATION PERMITS	<a href="#">LANDAPP</a>	0	0	TP/AP
MUNICIPAL SETTING DESIGNATIONS	<a href="#">MSD</a>	0	0	TP/AP
NOTICE OF VIOLATIONS	<a href="#">NOV</a>	0	0	TP/AP
SPILLS LISTING	<a href="#">SPILLS</a>	0	0	TP/AP
TCEQ LIENS	<a href="#">LIENS</a>	0	0	TP/AP
TIER I I CHEMICAL REPORTING PROGRAM FACILITIES	<a href="#">TIERII</a>	1	0	TP/AP
DRY CLEANER REGISTRATION DATABASE	<a href="#">DCR</a>	0	0	0.2500
INDUSTRIAL AND HAZARDOUS WASTE SITES	<a href="#">IHW</a>	1	0	0.2500
PERMITTED INDUSTRIAL HAZARDOUS WASTE SITES	<a href="#">PIHW</a>	0	0	0.2500
AFFECTED PROPERTY ASSESSMENT REPORTS	<a href="#">APAR</a>	0	0	0.5000
DRY CLEANER REMEDIATION PROGRAM SITES	<a href="#">DCRPS</a>	0	0	0.5000
INNOCENT OWNER / OPERATOR DATABASE	<a href="#">IOP</a>	0	0	0.5000
RADIOACTIVE WASTE SITES	<a href="#">RWS</a>	0	0	0.5000
RECYCLING FACILITIES	<a href="#">WMRF</a>	0	0	0.5000
SALT CAVERNS FOR PETROLEUM STORAGE	<a href="#">STCV</a>	0	0	0.5000

## Database Summary

<b>Database</b>	<b>Acronym</b>	<b>Locatable</b>	<b>Unlocatable</b>	<b>Search Radius (miles)</b>
INDUSTRIAL AND HAZARDOUS WASTE CORRECTIVE ACTION SITES	<a href="#">IHWCA</a>	2	0	1.0000
SUB-TOTAL		4	0	

## Database Summary

### **TRIBAL LISTING**

#### **Standard Environmental Records**

<b>Database</b>	<b>Acronym</b>	<b>Locatable</b>	<b>Unlocatable</b>	<b>Search Radius (miles)</b>
UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	<a href="#">USTR06</a>	0	0	0.2500
LEAKING UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	<a href="#">LUSTR06</a>	0	0	0.5000
OPEN DUMP INVENTORY ON TRIBAL LANDS	<a href="#">ODINDIAN</a>	0	0	0.5000
<b>SUB-TOTAL</b>		<b>0</b>	<b>0</b>	

#### **Additional Environmental Records**

<b>Database</b>	<b>Acronym</b>	<b>Locatable</b>	<b>Unlocatable</b>	<b>Search Radius (miles)</b>
INDIAN RESERVATIONS	<a href="#">INDIANRES</a>	0	0	1.0000
<b>SUB-TOTAL</b>		<b>0</b>	<b>0</b>	
<b>TOTAL</b>		<b>68</b>	<b>0</b>	



## Database Radius Summary

### FEDERAL LISTING

Standard environmental records are displayed in **bold**.

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
AIRSAFS	0.0200	1	NS	NS	NS	NS	NS	1
BRS	0.0200	0	NS	NS	NS	NS	NS	0
CDL	0.0200	0	NS	NS	NS	NS	NS	0
DOCKETS	0.0200	0	NS	NS	NS	NS	NS	0
<b>EC</b>	<b>0.0200</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
ECHOR06	0.0200	4	NS	NS	NS	NS	NS	4
<b>ERNSTX</b>	<b>0.0200</b>	<b>1</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>1</b>
FRSTX	0.0200	23	NS	NS	NS	NS	NS	23
HMIRSR06	0.0200	2	NS	NS	NS	NS	NS	2
HWCD	0.0200	0	NS	NS	NS	NS	NS	0
ICIS	0.0200	8	NS	NS	NS	NS	NS	8
ICISNPDES	0.0200	3	NS	NS	NS	NS	NS	3
<b>LUCIS</b>	<b>0.0200</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
MLTS	0.0200	0	NS	NS	NS	NS	NS	0
NPDES06	0.0200	1	NS	NS	NS	NS	NS	1
PADS	0.0200	0	NS	NS	NS	NS	NS	0
PCSR06	0.0200	0	NS	NS	NS	NS	NS	0
<b>RCRASC</b>	<b>0.0200</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
SEMSLIENS	0.0200	0	NS	NS	NS	NS	NS	0
SFLIENS	0.0200	0	NS	NS	NS	NS	NS	0
SSEHRIPFAS	0.0200	0	NS	NS	NS	NS	NS	0
SSTS	0.0200	0	NS	NS	NS	NS	NS	0
TRI	0.0200	0	NS	NS	NS	NS	NS	0
TSCA	0.0200	0	NS	NS	NS	NS	NS	0
<b>RCRAGR06</b>	<b>0.1250</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>RCRANGR06</b>	<b>0.1250</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
ALTFUELS	0.2500	2	0	0	NS	NS	NS	2
FEMAUST	0.2500	0	0	0	NS	NS	NS	0
HISTPST	0.2500	0	0	0	NS	NS	NS	0
ICISCLEANERS	0.2500	0	0	0	NS	NS	NS	0
MRDS	0.2500	0	0	0	NS	NS	NS	0
MSHA	0.2500	0	0	0	NS	NS	NS	0
<b>BF</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>DNPL</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>NLRRCRAT</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>

## Database Radius Summary

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
ODI	0.5000	0	0	0	0	NS	NS	0
<b>RCRAT</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>SEMS</b>	<b>0.5000</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>1</b>
<b>SEMSARCH</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
SMCRA	0.5000	0	0	0	0	NS	NS	0
USUMTRCA	0.5000	0	0	0	0	NS	NS	0
DOD	1.0000	0	0	0	0	0	NS	0
FUDS	1.0000	0	0	0	0	0	NS	0
FUSRAP	1.0000	0	0	0	0	0	NS	0
<b>NLRRCRAC</b>	<b>1.0000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>0</b>
NMS	1.0000	0	0	0	0	0	NS	0
<b>NPL</b>	<b>1.0000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>0</b>
<b>PNPL</b>	<b>1.0000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>0</b>
<b>RCRAC</b>	<b>1.0000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>0</b>
<b>RCRASUBC</b>	<b>1.0000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>0</b>
RODS	1.0000	0	0	0	0	0	NS	0
<b>SUB-TOTAL</b>		<b>46</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46</b>

## Database Radius Summary

### STATE (TX) LISTING

Standard environmental records are displayed in **bold**.

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
GWCC	0.0200	0	NS	NS	NS	NS	NS	0
HISTGWCC	0.0200	0	NS	NS	NS	NS	NS	0
LANDAPP	0.0200	0	NS	NS	NS	NS	NS	0
LIENS	0.0200	0	NS	NS	NS	NS	NS	0
MSD	0.0200	0	NS	NS	NS	NS	NS	0
NOV	0.0200	0	NS	NS	NS	NS	NS	0
<b>SIEC01</b>	<b>0.0200</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
SPILLS	0.0200	0	NS	NS	NS	NS	NS	0
TIERII	0.0200	1	NS	NS	NS	NS	NS	1
DCR	0.2500	0	0	0	NS	NS	NS	0
IHW	0.2500	1	0	0	NS	NS	NS	1
PIHW	0.2500	0	0	0	NS	NS	NS	0
<b>PST</b>	<b>0.2500</b>	<b>14</b>	<b>2</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>16</b>
APAR	0.5000	0	0	0	0	NS	NS	0
<b>BSA</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>CALF</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
DCRPS	0.5000	0	0	0	0	NS	NS	0
IOP	0.5000	0	0	0	0	NS	NS	0
<b>LPST</b>	<b>0.5000</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>2</b>
<b>MSWLF</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>OCP</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>RRCVCP</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
RWS	0.5000	0	0	0	0	NS	NS	0
STCV	0.5000	0	0	0	0	NS	NS	0
<b>VCP</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
WMRF	0.5000	0	0	0	0	NS	NS	0
<b>WSTMGMT</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
IHWCA	1.0000	1	0	0	0	1	NS	2
<b>SF</b>	<b>1.0000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>0</b>
<b>SUB-TOTAL</b>		<b>17</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>22</b>

## Database Radius Summary

### **TRIBAL LISTING**

Standard environmental records are displayed in **bold**.

<b>Acronym</b>	<b>Search Radius (miles)</b>	<b>TP/AP (0 - 0.02)</b>	<b>1/8 Mile (&gt; TP/AP)</b>	<b>1/4 Mile (&gt; 1/8)</b>	<b>1/2 Mile (&gt; 1/4)</b>	<b>1 Mile (&gt; 1/2)</b>	<b>&gt; 1 Mile</b>	<b>Total</b>
<b>USTR06</b>	<b>0.2500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>LUSTR06</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>ODINDIAN</b>	<b>0.5000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>NS</b>	<b>0</b>
<b>INDIANRES</b>	<b>1.0000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>NS</b>	<b>0</b>

<b>SUB-TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
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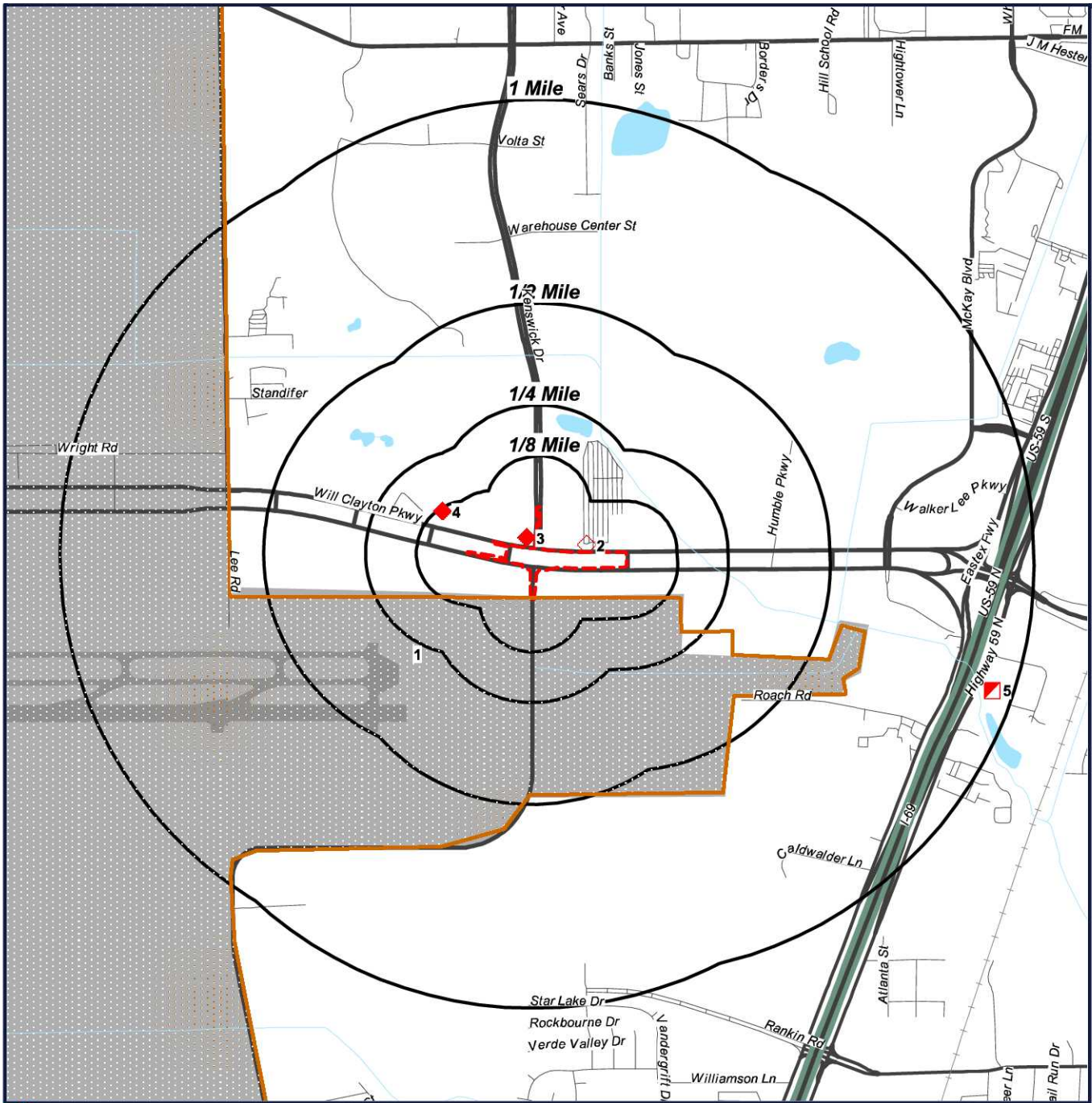
<b>TOTAL</b>		<b>63</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>68</b>
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**NOTES:**

**NS = NOT SEARCHED**

**TP/AP = TARGET PROPERTY/ADJACENT PROPERTY**

# Radius Map 1

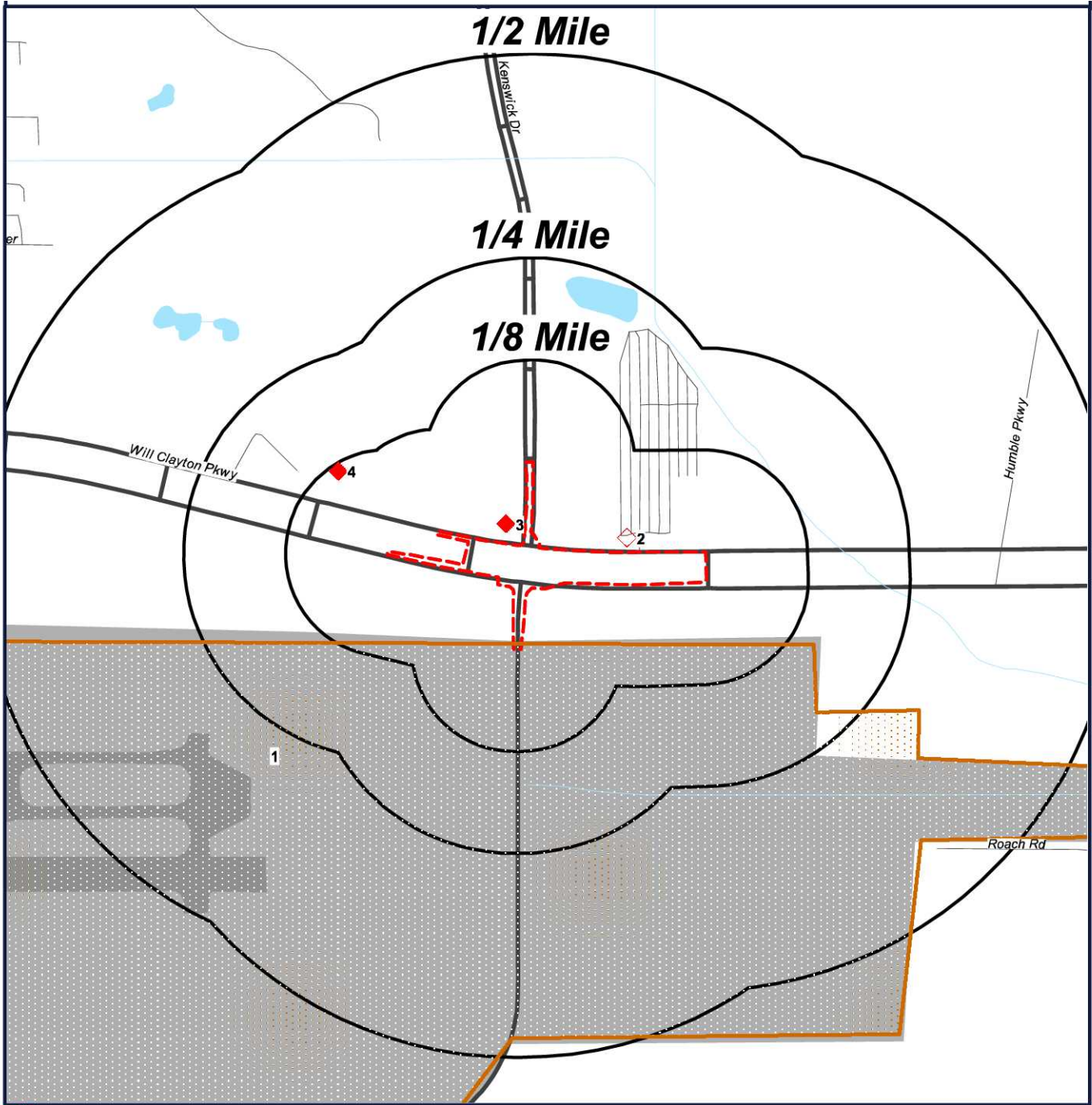


**Kenswick  
Humble, Texas  
77338**

- |                      |          |
|----------------------|----------|
| Target Property (TP) | HMIRSR06 |
| PST                  | NPDESR06 |
| IHW                  | IHWCA    |
| AIRSAFS              | SEMS     |
| ICIS                 | ECHOR06  |
| TIERII               | PST      |
| ICISNPDES            | LPST     |
| ERNSTX               | IHWCA    |
| FRSTX                |          |



# Radius Map 2

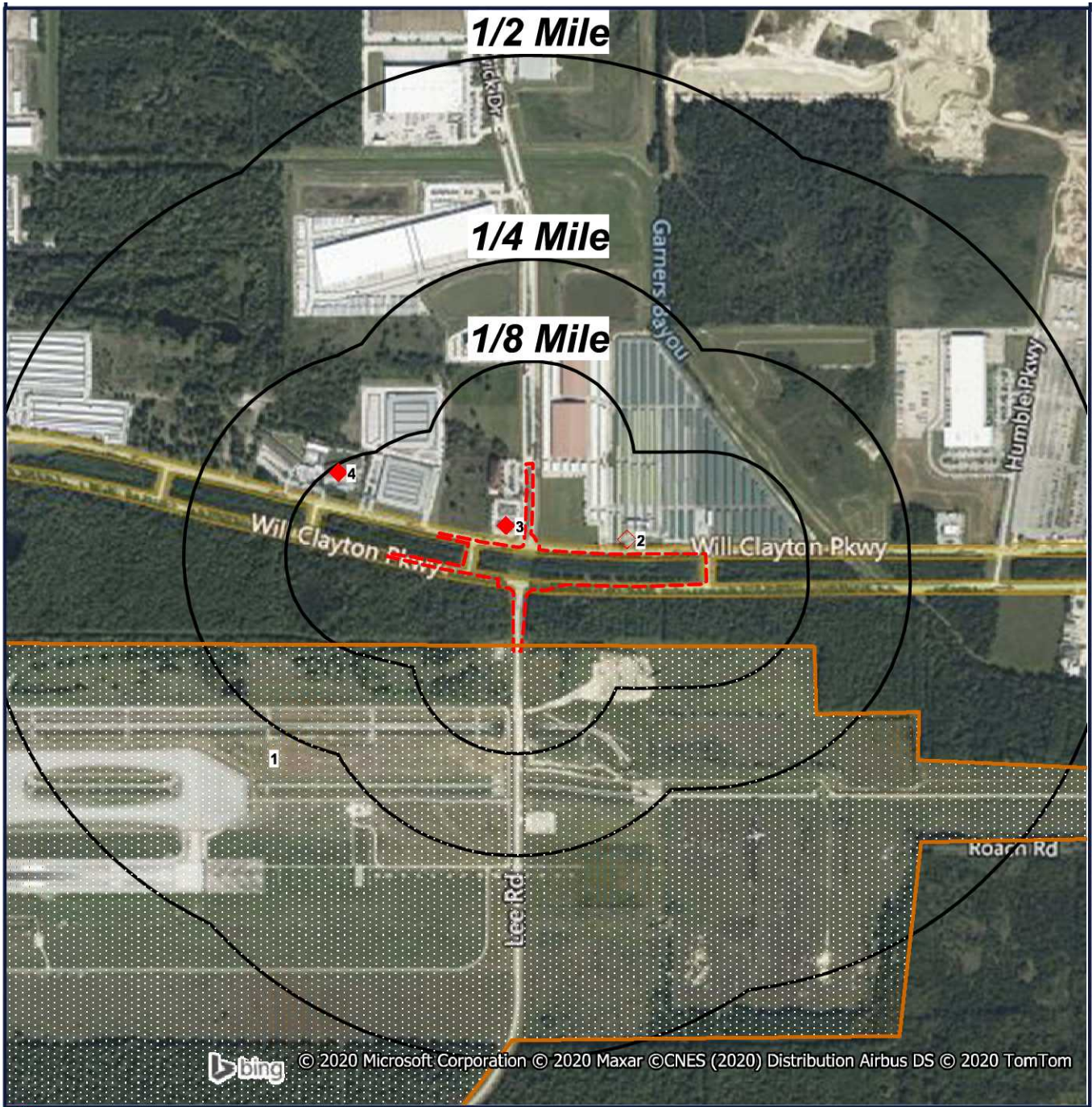


**Kenswick  
Humble, Texas  
77338**



- |                      |          |
|----------------------|----------|
| Target Property (TP) | HMIRSR06 |
| PST                  | NPDESR06 |
| IHW                  | IHWCA    |
| AIRSAFS              | SEMS     |
| ICIS                 | ECHOR06  |
| TIERII               | PST      |
| ICISNPDES            | LPST     |
| ERNSTX               | IHWCA    |
| FRSTX                |          |

# Ortho Map



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- |                      |          |
|----------------------|----------|
| Target Property (TP) | HMIRSR06 |
| PST                  | NPDESR06 |
| IHW                  | IHWCA    |
| AIRSAFS              | SEMS     |
| ICIS                 | ECHOR06  |
| TIERII               | PST      |
| ICISNPDES            | LPST     |
| ERNSTX               | IHWCA    |
| FRSTX                |          |

**Quadrangle(s): Humble  
Kenswick  
Humble, Texas  
77338**



# Topographic Map



 Target Property (TP)

Quadrangle(s): Humble  
Source: USGS,  
02/01/2013  
Kenswick  
Humble, Texas  
77338





## Located Sites Summary

NOTE: Standard environmental records are displayed in **bold**.

Map ID#	Database Name	Site ID#	Relative Elevation	Distance From Site	Site Name	Address	PAGE #
<a href="#">1</a>	AIRSAFS	918945	Higher (86 ft.)	TP	CONTINENTAL AIRLINES	(INTERCONTINENTAL AIRPORT) RAN, HOUSTON, TX 77032	<a href="#">26</a>
<a href="#">1</a>	ECHOR06	110033866234	Higher (86 ft.)	TP	GEORGE BUSH INTERCONTINENTAL AIRPORT	3800 N TERMINAL RD, HOUSTON, TX 77032	<a href="#">31</a>
<a href="#">1</a>	ECHOR06	110038781422	Higher (86 ft.)	TP	CONTINENTAL AIRLINES	(INTERCONTINENTAL AIRPORT) RAN, HOUSTON, TX 77032	<a href="#">32</a>
<a href="#">1</a>	<b>ERNSTX</b>	<b>1041130</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>LOAD RACK SERVICE RD</b>	<b>GEORGE BUSH HOUSTON INTERCONTINENTAL AIR, HOUSTON, TX</b>	<a href="#">33</a>
<a href="#">1</a>	FRSTX	110020502231	Higher (86 ft.)	TP	UNITED AIRLINES AIRCRAFT TAIL #5563	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">35</a>
<a href="#">1</a>	FRSTX	110020502240	Higher (86 ft.)	TP	COMAIR AIRCRAFT TAIL #10113	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">36</a>
<a href="#">1</a>	FRSTX	110020502259	Higher (86 ft.)	TP	US AIR AIRCRAFT TAIL #N589US	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">37</a>
<a href="#">1</a>	FRSTX	110020502268	Higher (86 ft.)	TP	AIR CANADA JAZZ AIRCRAFT TAIL #164	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">38</a>
<a href="#">1</a>	FRSTX	110020502277	Higher (86 ft.)	TP	AMERICA WEST AIRCRAFT TAIL #640	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">39</a>
<a href="#">1</a>	FRSTX	110020502286	Higher (86 ft.)	TP	DELTA AIRLINES AIRCRAFT TAIL #205	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">40</a>
<a href="#">1</a>	FRSTX	110020502295	Higher (86 ft.)	TP	AMERICAN AIRLINES AIRCRAFT TAIL #208	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">41</a>
<a href="#">1</a>	FRSTX	110020502302	Higher (86 ft.)	TP	CONTINENTAL AIRLINES AIRCRAFT TAIL #204	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">42</a>
<a href="#">1</a>	FRSTX	110020502311	Higher (86 ft.)	TP	CONTINENTAL AIRLINES AIRCRAFT TAIL #7002	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">43</a>
<a href="#">1</a>	FRSTX	110020502320	Higher (86 ft.)	TP	LUFTHANSA AIRLINES AIRCRAFT TAIL #DAIGV	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">44</a>
<a href="#">1</a>	FRSTX	110020502339	Higher (86 ft.)	TP	KLM AIRLINES AIRCRAFT TAIL #PHBFE	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">45</a>
<a href="#">1</a>	FRSTX	110033866234	Higher (86 ft.)	TP	GEORGE BUSH INTERCONTINENTAL AIRPORT	3800 N TERMINAL RD, HOUSTON, TX 77032	<a href="#">46</a>
<a href="#">1</a>	FRSTX	110034055091	Higher (86 ft.)	TP	IAH GH127 ALS	AIRPORT RUNWAY 27-GHI, HOUSTON, TX 77032	<a href="#">47</a>
<a href="#">1</a>	FRSTX	110037534512	Higher (86 ft.)	TP	IAH OND ALSF	AIRPORT RUNWAY 26R-BZU, HOUSTON, TX 77032	<a href="#">48</a>
<a href="#">1</a>	FRSTX	110037534521	Higher (86 ft.)	TP	IAH BZU ALSF	AIRPORT RUNWAY 08L-BZU, HOUSTON, TX 77032	<a href="#">49</a>
<a href="#">1</a>	FRSTX	110038101023	Higher (86 ft.)	TP	GEORGE BUSH INTERCONTIN	UNKNOWN, HOUSTON, TX	<a href="#">50</a>

## Located Sites Summary

NOTE: Standard environmental records are displayed in **bold**.

Map ID#	Database Name	Site ID#	Relative Elevation	Distance From Site	Site Name	Address	PAGE #
<a href="#">1</a>	FRSTX	110038781422	Higher (86 ft.)	TP	CONTINENTAL AIRLINES	(INTERCONTINENTAL AIRPORT) RAN, HOUSTON, TX 77032	<a href="#">51</a>
<a href="#">1</a>	FRSTX	110041385060	Higher (86 ft.)	TP	UNITED AIRLINES IAH AIRPORT	GEORGE BUSH INTERCONTINENTAL AIRPORT (IAH), HOUSTON, TX 77032	<a href="#">52</a>
<a href="#">1</a>	FRSTX	110070172511	Higher (86 ft.)	TP	REHABILITATION OF TAXIWAY SA & SB COH PROJECT 549	16930 JOHN F KENNEDY BLVD, HOUSTON, TX 77032	<a href="#">53</a>
<a href="#">1</a>	HMIRSR06	E-2011010377	Higher (86 ft.)	TP		IAH AIRPORT, HOUSTON, TX 77032	<a href="#">54</a>
<a href="#">1</a>	HMIRSR06	E-2013120313	Higher (86 ft.)	TP		IAH AIRPORT, HOUSTON, TX 77032	<a href="#">56</a>
<a href="#">1</a>	ICIS	110020502231	Higher (86 ft.)	TP	UNITED AIRLINES AIRCRAFT TAIL #5563	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">58</a>
<a href="#">1</a>	ICIS	110020502240	Higher (86 ft.)	TP	COMAIR AIRCRAFT TAIL #10113	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">59</a>
<a href="#">1</a>	ICIS	110020502259	Higher (86 ft.)	TP	US AIR AIRCRAFT TAIL #N589US	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">60</a>
<a href="#">1</a>	ICIS	110020502268	Higher (86 ft.)	TP	AIR CANADA JAZZ AIRCRAFT TAIL #164	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">61</a>
<a href="#">1</a>	ICIS	110020502277	Higher (86 ft.)	TP	AMERICA WEST AIRCRAFT TAIL #640	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">62</a>
<a href="#">1</a>	ICIS	110020502286	Higher (86 ft.)	TP	DELTA AIRLINES AIRCRAFT TAIL #205	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">63</a>
<a href="#">1</a>	ICIS	110020502295	Higher (86 ft.)	TP	AMERICAN AIRLINES AIRCRAFT TAIL #208	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">64</a>
<a href="#">1</a>	ICIS	110020502320	Higher (86 ft.)	TP	LUFTHANSA AIRLINES AIRCRAFT TAIL #DAIGV	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">65</a>
<a href="#">1</a>	ICISNPDES	TXR05DI27INPDES	Higher (86 ft.)	TP	GEORGE BUSH INTERCONTINENTAL AIRPORT	3800 N TERMINAL RD, HOUSTON, TX 77032	<a href="#">66</a>
<a href="#">1</a>	IHW	77979	Higher (86 ft.)	TP	AMERICAN AIRLINES IAH	FLIGHT STATION 5, HOUSTON, TX 77205	<a href="#">68</a>
<a href="#">1</a>	IHWCA	T2914	Higher (86 ft.)	TP	GEORGE BUSH INTERCONTINENTAL AIRPORT	3800 N TERMINAL RD, HOUSTON, TX 77032	<a href="#">70</a>
<a href="#">1</a>	NPDESR06	TX0079570	Higher (86 ft.)	TP	INTERNATIONAL AIRPORT SQUARE I	2000' SW INTX WILL CLAYTON PKW & USHWY 59, HARRIS COUNTY, HOUSTON, TX 77396	<a href="#">71</a>
<a href="#">1</a>	<b>PST</b>	<b>12914</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>DELTA AIR LINES</b>	<b>HOUSTON INTS AIRPORT, HOUSTON, TX 77205</b>	<a href="#">72</a>
<a href="#">1</a>	<b>PST</b>	<b>29121</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH HOUSTON TX VORTAC</b>	<b>0.5 MI WEST OFF RANKIN, HOUSTON, TX 77205</b>	<a href="#">79</a>
<a href="#">1</a>	<b>PST</b>	<b>29124</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH HOUSTON TX ALS</b>	<b>RUNWAW 08 INTERCONTNL, HOUSTON, TX 77205</b>	<a href="#">81</a>

## Located Sites Summary

NOTE: Standard environmental records are displayed in **bold**.

Map ID#	Database Name	Site ID#	Relative Elevation	Distance From Site	Site Name	Address	PAGE #
<a href="#">1</a>	PST	29128	Higher (86 ft.)	TP	IAH HOUSTON TX LOC	INTERCONTL AIRPORT RW, HOUSTON, TX 77205	<a href="#">83</a>
<a href="#">1</a>	PST	29129	Higher (86 ft.)	TP	IAH HOUSTON TX GS	INTERCONTL AIRPORT RW, HOUSTON, TX 77205	<a href="#">85</a>
<a href="#">1</a>	PST	29130	Higher (86 ft.)	TP	IAH ASR9	IAH AIRPORT ASR9, HOUSTON, TX 77032	<a href="#">87</a>
<a href="#">1</a>	PST	29133	Higher (86 ft.)	TP	IAH RTR C	RTRC ACCESS DRIVEWAY, HOUSTON, TX 77205	<a href="#">93</a>
<a href="#">1</a>	PST	29134	Higher (86 ft.)	TP	IAH HOUSTON TX RTR TRANSMTR	BUSH INTER AIRPORT, HOUSTON, TX 77025	<a href="#">95</a>
<a href="#">1</a>	PST	47037	Higher (86 ft.)	TP	IAH JYV26 ALSF	AIRPORT RUNWAY 26L-JYV, HOUSTON, TX 77032	<a href="#">98</a>
<a href="#">1</a>	PST	47038	Higher (86 ft.)	TP	IAH GH127 ALS	AIRPORT RUNWAY 27-GHI, HOUSTON, TX 77032	<a href="#">104</a>
<a href="#">1</a>	PST	47039	Higher (86 ft.)	TP	IAH JYV LOCALIZER	AIRPORT RUNWAY JYV, HOUSTON, TX 77032	<a href="#">109</a>
<a href="#">1</a>	PST	79001	Higher (86 ft.)	TP	IAH OND ALSF	AIRPORT RUNWAY 26R-BZU, HOUSTON, TX 77032	<a href="#">114</a>
<a href="#">1</a>	PST	79002	Higher (86 ft.)	TP	IAH BZU ALSF	AIRPORT RUNWAY 08L-BZU, HOUSTON, TX 77032	<a href="#">119</a>
<a href="#">1</a>	SEMS	TXN000606821	Higher (86 ft.)	TP	IAS AIR SERVICES PESTICIDE SPILL	GEORGE BUSH AIRPORT, HOUSTON, TX	<a href="#">124</a>
<a href="#">1</a>	TIERII	3K4VCB04U8W A	Higher (86 ft.)	TP	IAH - HOUSTON, BUSH INT'L, TX - AMERICAN AIRLINES, INC.	GEORGE BUSH INTERCONTINENTAL AIRPORT 3100 N. TERMINAL ROAD, HOUSTON, TX 77032	<a href="#">125</a>
<a href="#">2</a>	ALTFUELS	162752	Lower (81 ft.)	0.018 mi. N (95 ft.)	FASTPARK	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">126</a>
<a href="#">2</a>	ALTFUELS	60496	Lower (81 ft.)	0.018 mi. N (95 ft.)	FASTPARK	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">127</a>
<a href="#">2</a>	ECHOR06	110070366578	Lower (81 ft.)	0.018 mi. N (95 ft.)	FAST PARK BAYOU RELOCATION AND SITE IMPROVEMENT PLAN	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">128</a>
<a href="#">2</a>	ECHOR06	110070500099	Lower (81 ft.)	0.018 mi. N (95 ft.)	FASTPARK 2A 2B	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">129</a>
<a href="#">2</a>	FRSTX	110033395680	Lower (81 ft.)	0.018 mi. N (95 ft.)	ALLRIGHT AIRPORT PARKING	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">130</a>
<a href="#">2</a>	FRSTX	110070179570	Lower (81 ft.)	0.018 mi. N (95 ft.)	6655 WILL CLAYTON PARKWAY CLEARING PROJECT	6655 WILL CLAYTON PKWY, HOUSTON, TX 77032	<a href="#">131</a>
<a href="#">2</a>	FRSTX	110070366578	Lower (81 ft.)	0.018 mi. N (95 ft.)	FAST PARK BAYOU RELOCATION AND SITE IMPROVEMENT PLAN	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">132</a>
<a href="#">2</a>	FRSTX	110070500099	Lower (81 ft.)	0.018 mi. N (95 ft.)	FASTPARK 2A 2B	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">133</a>
<a href="#">2</a>	ICISNPDES	TXR15611UINP DES	Lower (81 ft.)	0.018 mi. N (95 ft.)	FASTPARK 2A 2B	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">134</a>

## Located Sites Summary

NOTE: Standard environmental records are displayed in **bold**.

Map ID#	Database Name	Site ID#	Relative Elevation	Distance From Site	Site Name	Address	PAGE #
<a href="#">2</a>	ICISNPDES	TXR15733KINP DES	Lower (81 ft.)	0.018 mi. N (95 ft.)	FAST PARK BAYOU RELOCATION AND SITE IMPROVEMENT PLAN	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">136</a>
<a href="#">2</a>	<b>PST</b>	<b>43649</b>	<b>Lower (81 ft.)</b>	<b>0.018 mi. N (95 ft.)</b>	<b>ALLRIGHT AIRPORT PARKING</b>	<b>6655 WILL CLAYTON PKWY, HUMBLE, TX 77338</b>	<a href="#">138</a>
<a href="#">3</a>	<b>LPST</b>	<b>116178</b>	<b>Lower (82 ft.)</b>	<b>0.024 mi. W (127 ft.)</b>	<b>HANDI STOP 40</b>	<b>6355 WILL CLAYTON PKWY, HUMBLE, TX 77338</b>	<a href="#">141</a>
<a href="#">3</a>	<b>PST</b>	<b>74865</b>	<b>Lower (82 ft.)</b>	<b>0.024 mi. W (127 ft.)</b>	<b>HANDI STOP 40</b>	<b>6355 WILL CLAYTON PKWY, HUMBLE, TX 77338</b>	<a href="#">145</a>
<a href="#">4</a>	<b>LPST</b>	<b>096464</b>	<b>Equal (83 ft.)</b>	<b>0.116 mi. NW (612 ft.)</b>	<b>GEN RENT A CAR INC</b>	<b>6115 WILL CLAYTON PKWY, HUMBLE, TX 77338</b>	<a href="#">152</a>
<a href="#">4</a>	<b>PST</b>	<b>24102</b>	<b>Equal (83 ft.)</b>	<b>0.116 mi. NW (612 ft.)</b>	<b>TEJAS PROPERTIES</b>	<b>6101 WILL CLAYTON PKWY, HUMBLE, TX 77338</b>	<a href="#">155</a>
<a href="#">5</a>	IHWCA	33785	Lower (75 ft.)	0.948 mi. ESE (5005 ft.)	HYDRILL USA DISTRIBUTION	18000 EASTEX FWY, HUMBLE, TX 77396	<a href="#">158</a>

## Site Summary By Database

NOTE: Standard environmental records are displayed in **bold**.

Map ID#	Database Name	Site ID#	Relative Elevation	Distance From Site	Site Name	Address
<a href="#">1</a>	AIRSAFS	918945	Higher (86 ft.)	TP	CONTINENTAL AIRLINES	(INTERCONTINENTAL AIRPORT) RAN, HOUSTON, TX 77032
<a href="#">2</a>	ALTFUELS	162752	Lower (81 ft.)	0.018 mi. N (95 ft.)	FASTPARK	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338
<a href="#">2</a>	ALTFUELS	60496	Lower (81 ft.)	0.018 mi. N (95 ft.)	FASTPARK	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338
<a href="#">1</a>	ECHOR06	110033866234	Higher (86 ft.)	TP	GEORGE BUSH INTERCONTINENTAL AIRPORT	3800 N TERMINAL RD, HOUSTON, TX 77032
<a href="#">1</a>	ECHOR06	110038781422	Higher (86 ft.)	TP	CONTINENTAL AIRLINES	(INTERCONTINENTAL AIRPORT) RAN, HOUSTON, TX 77032
<a href="#">2</a>	ECHOR06	110070366578	Lower (81 ft.)	0.018 mi. N (95 ft.)	FAST PARK BAYOU RELOCATION AND SITE IMPROVEMENT PLAN	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338
<a href="#">2</a>	ECHOR06	110070500099	Lower (81 ft.)	0.018 mi. N (95 ft.)	FASTPARK 2A 2B	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338
<a href="#">1</a>	<b>ERNSTX</b>	<b>1041130</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>LOAD RACK SERVICE RD</b>	<b>GEORGE BUSH HOUSTON INTERCONTINENTAL AIR, HOUSTON, TX</b>
<a href="#">1</a>	FRSTX	110020502231	Higher (86 ft.)	TP	UNITED AIRLINES AIRCRAFT TAIL #5563	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110020502240	Higher (86 ft.)	TP	COMAIR AIRCRAFT TAIL #10113	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110020502259	Higher (86 ft.)	TP	US AIR AIRCRAFT TAIL #N589US	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110020502268	Higher (86 ft.)	TP	AIR CANADA JAZZ AIRCRAFT TAIL #164	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110020502277	Higher (86 ft.)	TP	AMERICA WEST AIRCRAFT TAIL #640	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110020502286	Higher (86 ft.)	TP	DELTA AIRLINES AIRCRAFT TAIL #205	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110020502295	Higher (86 ft.)	TP	AMERICAN AIRLINES AIRCRAFT TAIL #208	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110020502302	Higher (86 ft.)	TP	CONTINENTAL AIRLINES AIRCRAFT TAIL #204	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110020502311	Higher (86 ft.)	TP	CONTINENTAL AIRLINES AIRCRAFT TAIL #7002	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110020502320	Higher (86 ft.)	TP	LUFTHANSA AIRLINES AIRCRAFT TAIL #DAIGV	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110020502339	Higher (86 ft.)	TP	KLM AIRLINES AIRCRAFT TAIL #PHBFE	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110033866234	Higher (86 ft.)	TP	GEORGE BUSH INTERCONTINENTAL AIRPORT	3800 N TERMINAL RD, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110034055091	Higher (86 ft.)	TP	IAH GH127 ALS	AIRPORT RUNWAY 27-GHI, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110037534512	Higher (86 ft.)	TP	IAH OND ALSF	AIRPORT RUNWAY 26R-BZU, HOUSTON, TX 77032

## Site Summary By Database

NOTE: Standard environmental records are displayed in **bold**.

Map ID#	Database Name	Site ID#	Relative Elevation	Distance From Site	Site Name	Address
<a href="#">1</a>	FRSTX	110037534521	Higher (86 ft.)	TP	IAH BZU ALSF	AIRPORT RUNWAY 08L-BZU, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110038101023	Higher (86 ft.)	TP	GEORGE BUSH INTERCONTIN	UNKNOWN, HOUSTON, TX
<a href="#">1</a>	FRSTX	110038781422	Higher (86 ft.)	TP	CONTINENTAL AIRLINES	(INTERCONTINENTAL AIRPORT) RAN, HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110041385060	Higher (86 ft.)	TP	UNITED AIRLINES IAH AIRPORT	GEORGE BUSH INTERCONTINENTAL AIRPORT (IAH), HOUSTON, TX 77032
<a href="#">1</a>	FRSTX	110070172511	Higher (86 ft.)	TP	REHABILITATION OF TAXIWAY SA & SB COH PROJECT 549	16930 JOHN F KENNEDY BLVD, HOUSTON, TX 77032
<a href="#">2</a>	FRSTX	110033395680	Lower (81 ft.)	0.018 mi. N (95 ft.)	ALLRIGHT AIRPORT PARKING	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338
<a href="#">2</a>	FRSTX	110070179570	Lower (81 ft.)	0.018 mi. N (95 ft.)	6655 WILL CLAYTON PARKWAY CLEARING PROJECT	6655 WILL CLAYTON PKWY, HOUSTON, TX 77032
<a href="#">2</a>	FRSTX	110070366578	Lower (81 ft.)	0.018 mi. N (95 ft.)	FAST PARK BAYOU RELOCATION AND SITE IMPROVEMENT PLAN	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338
<a href="#">2</a>	FRSTX	110070500099	Lower (81 ft.)	0.018 mi. N (95 ft.)	FASTPARK 2A 2B	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338
<a href="#">1</a>	HMIRSR06	E-2011010377	Higher (86 ft.)	TP		IAH AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	HMIRSR06	E-2013120313	Higher (86 ft.)	TP		IAH AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	ICIS	110020502231	Higher (86 ft.)	TP	UNITED AIRLINES AIRCRAFT TAIL #5563	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	ICIS	110020502240	Higher (86 ft.)	TP	COMAIR AIRCRAFT TAIL #10113	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	ICIS	110020502259	Higher (86 ft.)	TP	US AIR AIRCRAFT TAIL #N589US	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	ICIS	110020502268	Higher (86 ft.)	TP	AIR CANADA JAZZ AIRCRAFT TAIL #164	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	ICIS	110020502277	Higher (86 ft.)	TP	AMERICA WEST AIRCRAFT TAIL #640	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	ICIS	110020502286	Higher (86 ft.)	TP	DELTA AIRLINES AIRCRAFT TAIL #205	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	ICIS	110020502295	Higher (86 ft.)	TP	AMERICAN AIRLINES AIRCRAFT TAIL #208	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	ICIS	110020502320	Higher (86 ft.)	TP	LUFTHANSA AIRLINES AIRCRAFT TAIL #DAIGV	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032
<a href="#">1</a>	ICISNPDES	TXR05DI27INP DES	Higher (86 ft.)	TP	GEORGE BUSH INTERCONTINENTAL AIRPORT	3800 N TERMINAL RD, HOUSTON, TX 77032
<a href="#">2</a>	ICISNPDES	TXR15611UINP DES	Lower (81 ft.)	0.018 mi. N (95 ft.)	FASTPARK 2A 2B	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338
<a href="#">2</a>	ICISNPDES	TXR15733KINP DES	Lower (81 ft.)	0.018 mi. N (95 ft.)	FAST PARK BAYOU RELOCATION AND SITE IMPROVEMENT PLAN	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338

## Site Summary By Database

NOTE: Standard environmental records are displayed in **bold**.

Map ID#	Database Name	Site ID#	Relative Elevation	Distance From Site	Site Name	Address
<a href="#">1</a>	IHW	77979	Higher (86 ft.)	TP	AMERICAN AIRLINES IAH	FLIGHT STATION 5, HOUSTON, TX 77205
<a href="#">1</a>	IHWCA	T2914	Higher (86 ft.)	TP	GEORGE BUSH INTERCONTINENTAL AIRPORT	3800 N TERMINAL RD, HOUSTON, TX 77032
<a href="#">5</a>	IHWCA	33785	Lower (75 ft.)	0.948 mi. ESE (5005 ft.)	HYDRILL USA DISTRIBUTION	18000 EASTEX FWY, HUMBLE, TX 77396
<a href="#">3</a>	<b>LPST</b>	<b>116178</b>	<b>Lower (82 ft.)</b>	<b>0.024 mi. W (127 ft.)</b>	<b>HANDI STOP 40</b>	<b>6355 WILL CLAYTON PKWY, HUMBLE, TX 77338</b>
<a href="#">4</a>	<b>LPST</b>	<b>096464</b>	<b>Equal (83 ft.)</b>	<b>0.116 mi. NW (612 ft.)</b>	<b>GEN RENT A CAR INC</b>	<b>6115 WILL CLAYTON PKWY, HUMBLE, TX 77338</b>
<a href="#">1</a>	NPDESR06	TX0079570	Higher (86 ft.)	TP	INTERNATIONAL AIRPORT SQUARE I	2000' SW INTX WILL CLAYTON PKW & USHWY 59, HARRIS COUNTY, HOUSTON, TX 77396
<a href="#">1</a>	<b>PST</b>	<b>12914</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>DELTA AIR LINES</b>	<b>HOUSTON INTS AIRPORT, HOUSTON, TX 77205</b>
<a href="#">1</a>	<b>PST</b>	<b>29121</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH HOUSTON TX VORTAC</b>	<b>0.5 MI WEST OFF RANKIN, HOUSTON, TX 77205</b>
<a href="#">1</a>	<b>PST</b>	<b>29124</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH HOUSTON TX ALS</b>	<b>RUNWAW 08 INTERCONTL, HOUSTON, TX 77205</b>
<a href="#">1</a>	<b>PST</b>	<b>29128</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH HOUSTON TX LOC</b>	<b>INTERCONTL AIRPORT RW, HOUSTON, TX 77205</b>
<a href="#">1</a>	<b>PST</b>	<b>29129</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH HOUSTON TX GS</b>	<b>INTERCONTL AIRPORT RW, HOUSTON, TX 77205</b>
<a href="#">1</a>	<b>PST</b>	<b>29130</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH ASR9</b>	<b>IAH AIRPORT ASR9, HOUSTON, TX 77032</b>
<a href="#">1</a>	<b>PST</b>	<b>29133</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH RTR C</b>	<b>RTRC ACCESS DRIVEWAY, HOUSTON, TX 77205</b>
<a href="#">1</a>	<b>PST</b>	<b>29134</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH HOUSTON TX RTR TRANSMTR</b>	<b>BUSH INTER AIRPORT, HOUSTON, TX 77025</b>
<a href="#">1</a>	<b>PST</b>	<b>47037</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH JYV26 ALSF</b>	<b>AIRPORT RUNWAY 26L-JYV, HOUSTON, TX 77032</b>
<a href="#">1</a>	<b>PST</b>	<b>47038</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH GH127 ALS</b>	<b>AIRPORT RUNWAY 27-GHI, HOUSTON, TX 77032</b>
<a href="#">1</a>	<b>PST</b>	<b>47039</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH JYV LOCALIZER</b>	<b>AIRPORT RUNWAY JYV, HOUSTON, TX 77032</b>
<a href="#">1</a>	<b>PST</b>	<b>79001</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH OND ALSF</b>	<b>AIRPORT RUNWAY 26R-BZU, HOUSTON, TX 77032</b>
<a href="#">1</a>	<b>PST</b>	<b>79002</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAH BZU ALSF</b>	<b>AIRPORT RUNWAY 08L-BZU, HOUSTON, TX 77032</b>
<a href="#">2</a>	<b>PST</b>	<b>43649</b>	<b>Lower (81 ft.)</b>	<b>0.018 mi. N (95 ft.)</b>	<b>ALLRIGHT AIRPORT PARKING</b>	<b>6655 WILL CLAYTON PKWY, HUMBLE, TX 77338</b>
<a href="#">3</a>	<b>PST</b>	<b>74865</b>	<b>Lower (82 ft.)</b>	<b>0.024 mi. W (127 ft.)</b>	<b>HANDI STOP 40</b>	<b>6355 WILL CLAYTON PKWY, HUMBLE, TX 77338</b>
<a href="#">4</a>	<b>PST</b>	<b>24102</b>	<b>Equal (83 ft.)</b>	<b>0.116 mi. NW (612 ft.)</b>	<b>TEJAS PROPERTIES</b>	<b>6101 WILL CLAYTON PKWY, HUMBLE, TX 77338</b>
<a href="#">1</a>	<b>SEMS</b>	<b>TXN000606821</b>	<b>Higher (86 ft.)</b>	<b>TP</b>	<b>IAS AIR SERVICES PESTICIDE SPILL</b>	<b>GEORGE BUSH AIRPORT, HOUSTON, TX</b>

## Site Summary By Database

NOTE: Standard environmental records are displayed in **bold**.

Map ID#	Database Name	Site ID#	Relative Elevation	Distance From Site	Site Name	Address
1	TIERII	3K4VCB04U8W A	Higher (86 ft.)	TP	IAH - HOUSTON, BUSH INT'L, TX - AMERICAN AIRLINES, INC.	GEORGE BUSH INTERCONTINENTAL AIRPORT 3100 N. TERMINAL ROAD, HOUSTON, TX 77032



# Elevation Summary

Elevations are collected from the USGS 3D Elevation Program 1/3 arc-second (approximately 10 meters) layer hosted at the NGTOC. .

**Target Property Elevation: 83 ft.**

NOTE: Standard environmental records are displayed in **bold**.

## EQUAL/HIGHER ELEVATION

Map ID#	Database Name	Elevation	Site Name	Address	Page #
<a href="#">1</a>	AIRSAFS	86 ft.	CONTINENTAL AIRLINES	(INTERCONTINENTAL AIRPORT) RAN, HOUSTON, TX 77032	<a href="#">26</a>
<a href="#">1</a>	ECHOR06	86 ft.	GEORGE BUSH INTERCONTINENTAL AIRPORT	3800 N TERMINAL RD, HOUSTON, TX 77032	<a href="#">31</a>
<a href="#">1</a>	ECHOR06	86 ft.	CONTINENTAL AIRLINES	(INTERCONTINENTAL AIRPORT) RAN, HOUSTON, TX 77032	<a href="#">32</a>
<a href="#">1</a>	<b>ERNSTX</b>	<b>86 ft.</b>	<b>LOAD RACK SERVICE RD</b>	<b>GEORGE BUSH HOUSTON INTERCONTINENTAL AIR, HOUSTON, TX</b>	<a href="#">33</a>
<a href="#">1</a>	FRSTX	86 ft.	UNITED AIRLINES AIRCRAFT TAIL #5563	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">35</a>
<a href="#">1</a>	FRSTX	86 ft.	COMAIR AIRCRAFT TAIL #10113	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">36</a>
<a href="#">1</a>	FRSTX	86 ft.	US AIR AIRCRAFT TAIL #N589US	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">37</a>
<a href="#">1</a>	FRSTX	86 ft.	AIR CANADA JAZZ AIRCRAFT TAIL #164	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">38</a>
<a href="#">1</a>	FRSTX	86 ft.	AMERICA WEST AIRCRAFT TAIL #640	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">39</a>
<a href="#">1</a>	FRSTX	86 ft.	DELTA AIRLINES AIRCRAFT TAIL #205	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">40</a>
<a href="#">1</a>	FRSTX	86 ft.	AMERICAN AIRLINES AIRCRAFT TAIL #208	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">41</a>
<a href="#">1</a>	FRSTX	86 ft.	CONTINENTAL AIRLINES AIRCRAFT TAIL #204	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">42</a>
<a href="#">1</a>	FRSTX	86 ft.	CONTINENTAL AIRLINES AIRCRAFT TAIL #7002	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">43</a>
<a href="#">1</a>	FRSTX	86 ft.	LUFTHANSA AIRLINES AIRCRAFT TAIL #DAIGV	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">44</a>
<a href="#">1</a>	FRSTX	86 ft.	KLM AIRLINES AIRCRAFT TAIL #PHBFE	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">45</a>
<a href="#">1</a>	FRSTX	86 ft.	GEORGE BUSH INTERCONTINENTAL AIRPORT	3800 N TERMINAL RD, HOUSTON, TX 77032	<a href="#">46</a>
<a href="#">1</a>	FRSTX	86 ft.	IAH GH127 ALS	AIRPORT RUNWAY 27-GHI, HOUSTON, TX 77032	<a href="#">47</a>
<a href="#">1</a>	FRSTX	86 ft.	IAH OND ALSF	AIRPORT RUNWAY 26R-BZU, HOUSTON, TX 77032	<a href="#">48</a>
<a href="#">1</a>	FRSTX	86 ft.	IAH BZU ALSF	AIRPORT RUNWAY 08L-BZU, HOUSTON, TX 77032	<a href="#">49</a>
<a href="#">1</a>	FRSTX	86 ft.	GEORGE BUSH INTERCONTIN	UNKNOWN, HOUSTON, TX	<a href="#">50</a>
<a href="#">1</a>	FRSTX	86 ft.	CONTINENTAL AIRLINES	(INTERCONTINENTAL AIRPORT) RAN, HOUSTON, TX 77032	<a href="#">51</a>
<a href="#">1</a>	FRSTX	86 ft.	UNITED AIRLINES IAH AIRPORT	GEORGE BUSH INTERCONTINENTAL AIRPORT (IAH), HOUSTON, TX 77032	<a href="#">52</a>

## Elevation Summary

Map ID#	Database Name	Elevation	Site Name	Address	Page #
<a href="#">1</a>	FRSTX	86 ft.	REHABILITATION OF TAXIWAY SA & SB COH PROJECT 549	16930 JOHN F KENNEDY BLVD, HOUSTON, TX 77032	<a href="#">53</a>
<a href="#">1</a>	HMIRSR06	86 ft.		IAH AIRPORT, HOUSTON, TX 77032	<a href="#">54</a>
<a href="#">1</a>	HMIRSR06	86 ft.		IAH AIRPORT, HOUSTON, TX 77032	<a href="#">56</a>
<a href="#">1</a>	ICIS	86 ft.	UNITED AIRLINES AIRCRAFT TAIL #5563	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">58</a>
<a href="#">1</a>	ICIS	86 ft.	COMAIR AIRCRAFT TAIL #10113	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">59</a>
<a href="#">1</a>	ICIS	86 ft.	US AIR AIRCRAFT TAIL #N589US	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">60</a>
<a href="#">1</a>	ICIS	86 ft.	AIR CANADA JAZZ AIRCRAFT TAIL #164	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">61</a>
<a href="#">1</a>	ICIS	86 ft.	AMERICA WEST AIRCRAFT TAIL #640	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">62</a>
<a href="#">1</a>	ICIS	86 ft.	DELTA AIRLINES AIRCRAFT TAIL #205	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">63</a>
<a href="#">1</a>	ICIS	86 ft.	AMERICAN AIRLINES AIRCRAFT TAIL #208	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">64</a>
<a href="#">1</a>	ICIS	86 ft.	LUFTHANSA AIRLINES AIRCRAFT TAIL #DAIGV	GEORGE BUSH - INTERCONTINENTAL AIRPORT, HOUSTON, TX 77032	<a href="#">65</a>
<a href="#">1</a>	ICISNPDES	86 ft.	GEORGE BUSH INTERCONTINENTAL AIRPORT	3800 N TERMINAL RD, HOUSTON, TX 77032	<a href="#">66</a>
<a href="#">1</a>	IHW	86 ft.	AMERICAN AIRLINES IAH	FLIGHT STATION 5, HOUSTON, TX 77205	<a href="#">68</a>
<a href="#">1</a>	IHWCA	86 ft.	GEORGE BUSH INTERCONTINENTAL AIRPORT	3800 N TERMINAL RD, HOUSTON, TX 77032	<a href="#">70</a>
<a href="#">1</a>	NPDESR06	86 ft.	INTERNATIONAL AIRPORT SQUARE I	2000' SW INTX WILL CLAYTON PKW & USHWY 59, HARRIS COUNTY, HOUSTON, TX 77396	<a href="#">71</a>
<a href="#">1</a>	<b>PST</b>	<b>86 ft.</b>	<b>DELTA AIR LINES</b>	<b>HOUSTON INTS AIRPORT, HOUSTON, TX 77205</b>	<a href="#">72</a>
<a href="#">1</a>	<b>PST</b>	<b>86 ft.</b>	<b>IAH HOUSTON TX VORTAC</b>	<b>0.5 MI WEST OFF RANKIN, HOUSTON, TX 77205</b>	<a href="#">79</a>
<a href="#">1</a>	<b>PST</b>	<b>86 ft.</b>	<b>IAH HOUSTON TX ALS</b>	<b>RUNWAU 08 INTERCONTL, HOUSTON, TX 77205</b>	<a href="#">81</a>
<a href="#">1</a>	<b>PST</b>	<b>86 ft.</b>	<b>IAH HOUSTON TX LOC</b>	<b>INTERCONTL AIRPORT RW, HOUSTON, TX 77205</b>	<a href="#">83</a>
<a href="#">1</a>	<b>PST</b>	<b>86 ft.</b>	<b>IAH HOUSTON TX GS</b>	<b>INTERCONTL AIRPORT RW, HOUSTON, TX 77205</b>	<a href="#">85</a>
<a href="#">1</a>	<b>PST</b>	<b>86 ft.</b>	<b>IAH ASR9</b>	<b>IAH AIRPORT ASR9, HOUSTON, TX 77032</b>	<a href="#">87</a>
<a href="#">1</a>	<b>PST</b>	<b>86 ft.</b>	<b>IAH RTR C</b>	<b>RTRC ACCESS DRIVEWAY, HOUSTON, TX 77205</b>	<a href="#">93</a>
<a href="#">1</a>	<b>PST</b>	<b>86 ft.</b>	<b>IAH HOUSTON TX RTR TRANSMTR</b>	<b>BUSH INTER AIRPORT, HOUSTON, TX 77025</b>	<a href="#">95</a>
<a href="#">1</a>	<b>PST</b>	<b>86 ft.</b>	<b>IAH JYV26 ALSF</b>	<b>AIRPORT RUNWAY 26L-JYV, HOUSTON, TX 77032</b>	<a href="#">98</a>
<a href="#">1</a>	<b>PST</b>	<b>86 ft.</b>	<b>IAH GH127 ALS</b>	<b>AIRPORT RUNWAY 27-GHI, HOUSTON, TX 77032</b>	<a href="#">104</a>
<a href="#">1</a>	<b>PST</b>	<b>86 ft.</b>	<b>IAH JYV LOCALIZER</b>	<b>AIRPORT RUNWAY JYV, HOUSTON, TX 77032</b>	<a href="#">109</a>

## Elevation Summary

Map ID#	Database Name	Elevation	Site Name	Address	Page #
<a href="#">1</a>	<i>PST</i>	86 ft.	<i>IAH OND ALSF</i>	<i>AIRPORT RUNWAY 26R-BZU, HOUSTON, TX 77032</i>	<a href="#">114</a>
<a href="#">1</a>	<i>PST</i>	86 ft.	<i>IAH BZU ALSF</i>	<i>AIRPORT RUNWAY 08L-BZU, HOUSTON, TX 77032</i>	<a href="#">119</a>
<a href="#">1</a>	<i>SEMS</i>	86 ft.	<i>IAS AIR SERVICES PESTICIDE SPILL</i>	<i>GEORGE BUSH AIRPORT, HOUSTON, TX</i>	<a href="#">124</a>
<a href="#">1</a>	TIERII	86 ft.	IAH - HOUSTON, BUSH INT'L, TX - AMERICAN AIRLINES, INC.	GEORGE BUSH INTERCONTINENTAL AIRPORT 3100 N. TERMINAL ROAD, HOUSTON, TX 77032	<a href="#">125</a>
<a href="#">4</a>	<i>LPST</i>	83 ft.	<i>GEN RENT A CAR INC</i>	<i>6115 WILL CLAYTON PKWY, HUMBLE, TX 77338</i>	<a href="#">152</a>
<a href="#">4</a>	<i>PST</i>	83 ft.	<i>TEJAS PROPERTIES</i>	<i>6101 WILL CLAYTON PKWY, HUMBLE, TX 77338</i>	<a href="#">155</a>

### LOWER ELEVATION

Map ID#	Database Name	Elevation	Site Name	Address	Page #
<a href="#">2</a>	ALTFUELS	81 ft.	FASTPARK	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">126</a>
<a href="#">2</a>	ALTFUELS	81 ft.	FASTPARK	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">127</a>
<a href="#">2</a>	ECHOR06	81 ft.	FAST PARK BAYOU RELOCATION AND SITE IMPROVEMENT PLAN	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">128</a>
<a href="#">2</a>	ECHOR06	81 ft.	FASTPARK 2A 2B	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">129</a>
<a href="#">2</a>	FRSTX	81 ft.	ALLRIGHT AIRPORT PARKING	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">130</a>
<a href="#">2</a>	FRSTX	81 ft.	6655 WILL CLAYTON PARKWAY CLEARING PROJECT	6655 WILL CLAYTON PKWY, HOUSTON, TX 77032	<a href="#">131</a>
<a href="#">2</a>	FRSTX	81 ft.	FAST PARK BAYOU RELOCATION AND SITE IMPROVEMENT PLAN	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">132</a>
<a href="#">2</a>	FRSTX	81 ft.	FASTPARK 2A 2B	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">133</a>
<a href="#">2</a>	ICISNPDES	81 ft.	FASTPARK 2A 2B	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">134</a>
<a href="#">2</a>	ICISNPDES	81 ft.	FAST PARK BAYOU RELOCATION AND SITE IMPROVEMENT PLAN	6655 WILL CLAYTON PKWY, HUMBLE, TX 77338	<a href="#">136</a>
<a href="#">2</a>	<i>PST</i>	81 ft.	<i>ALLRIGHT AIRPORT PARKING</i>	<i>6655 WILL CLAYTON PKWY, HUMBLE, TX 77338</i>	<a href="#">138</a>
<a href="#">3</a>	<i>LPST</i>	82 ft.	<i>HANDI STOP 40</i>	<i>6355 WILL CLAYTON PKWY, HUMBLE, TX 77338</i>	<a href="#">141</a>
<a href="#">3</a>	<i>PST</i>	82 ft.	<i>HANDI STOP 40</i>	<i>6355 WILL CLAYTON PKWY, HUMBLE, TX 77338</i>	<a href="#">145</a>
<a href="#">5</a>	IHWCA	75 ft.	HYDRILL USA DISTRIBUTION	18000 EASTEX FWY, HUMBLE, TX 77396	<a href="#">158</a>

# Aerometric Information Retrieval System / Air Facility Subsystem (AIRSAFS)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## **SITE INFORMATION**

UNIQUE ID: 918945

PLANT ID: 918945

NAME: CONTINENTAL AIRLINES

ADDRESS: (INTERCONTINENTAL AIRPORT) RAN  
HOUSTON, TX 77032

CLASSIFICATION: ACTUAL OR POTENTIAL EMISSIONS ARE ABOVE THE APPLICABLE MAJOR SOURCE THRESHOLDS.

OPERATION STATUS: PERMANENTLY CLOSED

STATE COMPLIANCE STATUS: IN COMPLIANCE - INSPECTION

FACILITY TYPE: PRIVATELY OWNED/OPERATED

CURRENT HIGH PRIORITY VIOLATOR: NOT REPORTED

SIC DESCRIPTION: ESTABLISHMENTS PRIMARILY ENGAGED IN MANUFACTURING AIRCRAFT PARTS AND AUXILIARY EQUIPMENT, NOT ELSEWHERE CLASSIFIED.

**ENFORCEMENT ACTIONS** NO ENFORCEMENT ACTIONS REPORTED

## **AIR PROGRAM**

AIR PROGRAM STATUS: PERMANENTLY CLOSED

EPA COMPLIANCE STATUS: IN COMPLIANCE - INSPECTION

POLLUTANT COMPLIANCE STATUS: IN COMPLIANCE - INSPECTION

POLLUTANT: NOT REPORTED

AIR PROGRAM STATUS: PERMANENTLY CLOSED

EPA COMPLIANCE STATUS: IN COMPLIANCE - INSPECTION

POLLUTANT COMPLIANCE STATUS: IN COMPLIANCE - INSPECTION

POLLUTANT: NOT REPORTED

AIR PROGRAM STATUS: PERMANENTLY CLOSED

EPA COMPLIANCE STATUS: IN COMPLIANCE - INSPECTION

POLLUTANT COMPLIANCE STATUS: IN COMPLIANCE - INSPECTION

POLLUTANT: CARBON MONOXIDE

AIR PROGRAM STATUS: PERMANENTLY CLOSED

EPA COMPLIANCE STATUS: IN COMPLIANCE - INSPECTION

POLLUTANT COMPLIANCE STATUS: PRESENT, SEE OTHER PROGRAM(S)

POLLUTANT: FACILITY-WIDE PERMIT REQUIREMENTS

AIR PROGRAM STATUS: PERMANENTLY CLOSED

EPA COMPLIANCE STATUS: IN COMPLIANCE - INSPECTION

POLLUTANT COMPLIANCE STATUS: IN COMPLIANCE - INSPECTION

POLLUTANT: NITROGEN DIOXIDE

AIR PROGRAM STATUS: PERMANENTLY CLOSED

EPA COMPLIANCE STATUS: IN COMPLIANCE - INSPECTION

# **Aerometric Information Retrieval System / Air Facility Subsystem (AIRSAFS)**

POLLUTANT COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**  
POLLUTANT: **TOTAL PARTICULATE MATTER**

AIR PROGRAM STATUS: **PERMANENTLY CLOSED**  
EPA COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**  
POLLUTANT COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**  
POLLUTANT: **SULFUR DIOXIDE**

AIR PROGRAM STATUS: **PERMANENTLY CLOSED**  
EPA COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**  
POLLUTANT COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**  
POLLUTANT: **TOTAL HAP POLLUTANT**

AIR PROGRAM STATUS: **PERMANENTLY CLOSED**  
EPA COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**  
POLLUTANT COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**  
POLLUTANT: **VOLATILE ORGANIC COMPOUNDS**

## **HISTORICAL COMPLIANCE AIR PROGRAM LEVEL**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **1002**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **0802**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **0803**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **1401**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **1304**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **1302**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **0701**

# **Aerometric Information Retrieval System / Air Facility Subsystem (AIRSAFS)**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **1001**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **1203**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **1201**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **0903**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **0902**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **1102**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **0801**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **1403**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **1303**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **1202**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **1103**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

# **Aerometric Information Retrieval System / Air Facility Subsystem (AIRSAFS)**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **1301**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **0702**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **1004**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **0704**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **0904**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **0804**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **1104**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **1204**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **0703**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **1003**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**  
COMPLIANCE DATE (YYYQ): **1101**  
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

## **Aerometric Information Retrieval System / Air Facility Subsystem (AIRSAFS)**

COMPLIANCE DATE (YYYQ): **0604**

HISTORICAL COMPLIANCE STATUS: **UNKNOWN BY EVALUATION CALCULATION (GENERATED VALUE-NOT AVAILABLE FOR INPUT)**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **0901**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **1402**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

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## Enforcement and Compliance History Information (ECHOR06)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### FACILITY INFORMATION

UNIQUE ID: 110033866234

REGISTRY ID: 110033866234

NAME: GEORGE BUSH INTERCONTINENTAL AIRPORT

ADDRESS: 3800 N TERMINAL RD  
HOUSTON, TX 77032

COUNTY: HARRIS

FACILITY LINK: [Facility Detail Report](#)

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## Enforcement and Compliance History Information (ECHOR06)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### FACILITY INFORMATION

UNIQUE ID: 110038781422

REGISTRY ID: 110038781422

NAME: CONTINENTAL AIRLINES

ADDRESS: (INTERCONTINENTAL AIRPORT) RAN  
HOUSTON, TX 77032

COUNTY: HARRIS

FACILITY LINK: [Facility Detail Report](#)

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# Emergency Response Notification System (ERNSTX)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

GSID#: 1041130  
NRC REPORT #: 1041130  
INCIDENT LOCATION: LOAD RACK SERVICE RD  
INCIDENT ADDRESS: GEORGE BUSH HOUSTON INTERCONTINENTAL AIR  
HOUSTON, TX  
INCIDENT COUNTY: HARRIS

## **INCIDENT INFORMATION**

NRC REPORT #: 1041130  
DESCRIPTION OF INCIDENT: CALLER REPORTED A TANKER TRUCK THAT FLIPPED OVER IN TRANSPORT SPILLING JET  
FUEL ONTO THE GROUND.  
TYPE OF INCIDENT: MOBILE  
CAUSE: UNKNOWN  
DATE/TIME: 3/14/2013 9:45:00 PM  
DISCOVERED/OCCURED/PLANNED: OCCURRED  
POTENTIAL FLAG: NO

## **REPORT RECEIPT AND SUSPECTED RESPONSIBLE PARTY INFORMATION**

NRC REPORT #: 1041130  
DATE/TIME RECEIVED: 3/15/2013  
DATE/TIME COMPLETE: 3/15/2013  
CALL TYPE: INCIDENT  
SOURCE: TELEPHONE  
RESPONSIBLE COMPANY: ALLIED AVIATION FUELING COMPANY OF HOUST  
ADDRESS: ADDRESS NOT REPORTED  
HOUSTON TX 77073  
RESPONSIBLE COMPANY ORGANIZATION TYPE: PRIVATE ENTERPRISE

## **INCIDENT DETAILS**

NRC REPORT #: 1041130  
FIRE INVOLVED: NO  
EVACUATION RADIUS: NOT REPORTED  
ANY INJURIES: NO  
ANY EVACUATIONS: NO  
ANY FATALITIES: NO  
ANY DAMAGES: NO  
DAMAGE AMOUNT: NOT REPORTED  
MEDIUM DESCRIPTION: LAND  
ADDITIONAL MEDIUM INFO: NOT REPORTED  
BODY OF WATER: NOT REPORTED  
TRIBUTARY OF: NOT REPORTED  
RELEASE SECURED: UNKNOWN  
ESTIMATED DURATION OF RELEASE: NOT REPORTED  
RELEASE RATE: NOT REPORTED  
REMEDIAL ACTION: VAC TRUCK USED, EXCAVATED SOIL, CONTRACTOR HAS BEEN HIRED  
STATE AGENCY ON SCENE: NOT REPORTED

## Emergency Response Notification System (ERNSTX)

STATE AGENCY REPORT #: 20130856  
OTHER AGENCY NOTIFIED: NOT REPORTED  
WATER SUPPLY CONTAMINATED: UNKNOWN  
COMMUNITY IMPACT: NOT REPORTED  
ADDITIONAL INFO: NOT REPORTED  
STATE AGENCY NOTIFIED: TXCEQ  
FEDERAL AGENCY NOTIFIED: NOT REPORTED  
OFFSHORE: NO

### **INFORMATION SPECIFIC TO EACH TYPE OF INCIDENT**

- NO INFORMATION REPORTED -

### **MATERIALS INVOLVED**

NRC REPORT #: 1041130  
CHRIS CODE: JPO  
CAS #: NOT REPORTED  
MATERIAL RELEASED/AMOUNT: JET FUEL: JP-1 (KEROSENE) / 4200 GALLON(S)  
IF REACHED WATER: NO  
AMOUNT IN WATER: NOT REPORTED

### **OTHER MATERIALS INVOLVED**

- NO OTHER MATERIALS INVOLVED -

### **TRAINS DETAILS**

- NO TRAIN DETAILS REPORTED -

### **TRAIN DERAILED UNITS**

- NO TRAIN DERAILED UNITS REPORTED -

### **VESSEL DETAILS**

- NO VESSEL DETAILS REPORTED -

### **MOBILE DETAILS**

- NO MOBILE DETAILS REPORTED -

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110020502231

NAME: UNITED AIRLINES AIRCRAFT TAIL #5563

LOCATION ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

UNITED AIRLINES AIRCRAFT TAIL #5563

PROGRAM/S LISTED FOR THIS FACILITY

ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

4512 - AIR TRANSPORTATION, SCHEDULED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110020502240

NAME: COMAIR AIRCRAFT TAIL #10113

LOCATION ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

COMAIR AIRCRAFT TAIL #10113

PROGRAM/S LISTED FOR THIS FACILITY

ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

4512 - AIR TRANSPORTATION, SCHEDULED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110020502259

NAME: US AIR AIRCRAFT TAIL #N589US

LOCATION ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

US AIR AIRCRAFT TAIL #N589US

PROGRAM/S LISTED FOR THIS FACILITY

ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

4512 - AIR TRANSPORTATION, SCHEDULED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110020502268

NAME: AIR CANADA JAZZ AIRCRAFT TAIL #164

LOCATION ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

AIR CANADA JAZZ AIRCRAFT TAIL #164

PROGRAM/S LISTED FOR THIS FACILITY

ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

4512 - AIR TRANSPORTATION, SCHEDULED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### FACILITY INFORMATION

REGISTRY ID: 110020502277

NAME: AMERICA WEST AIRCRAFT TAIL #640

LOCATION ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

AMERICA WEST AIRCRAFT TAIL #640

PROGRAM/S LISTED FOR THIS FACILITY

ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

4512 - AIR TRANSPORTATION, SCHEDULED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

---

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110020502286

NAME: DELTA AIRLINES AIRCRAFT TAIL #205

LOCATION ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

DELTA AIRLINES AIRCRAFT TAIL #205

PROGRAM/S LISTED FOR THIS FACILITY

ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

4512 - AIR TRANSPORTATION, SCHEDULED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110020502295

NAME: AMERICAN AIRLINES AIRCRAFT TAIL #208

LOCATION ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

AMERICAN AIRLINES AIRCRAFT TAIL #208

PROGRAM/S LISTED FOR THIS FACILITY

ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

4512 - AIR TRANSPORTATION, SCHEDULED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

---

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110020502302

NAME: CONTINENTAL AIRLINES AIRCRAFT TAIL #204

LOCATION ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

CONTINENTAL AIRLINES AIRCRAFT TAIL #204

PROGRAM/S LISTED FOR THIS FACILITY

ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

4512 - AIR TRANSPORTATION, SCHEDULED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110020502311

NAME: CONTINENTAL AIRLINES AIRCRAFT TAIL #7002

LOCATION ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

CONTINENTAL AIRLINES AIRCRAFT TAIL #7002

PROGRAM/S LISTED FOR THIS FACILITY

ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

4512 - AIR TRANSPORTATION, SCHEDULED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110020502320

NAME: LUFTHANSA AIRLINES AIRCRAFT TAIL #DAIGV

LOCATION ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

LUFTHANSA AIRLINES AIRCRAFT TAIL #DAIGV

PROGRAM/S LISTED FOR THIS FACILITY

ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

4512 - AIR TRANSPORTATION, SCHEDULED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110020502339

NAME: KLM AIRLINES AIRCRAFT TAIL #PHBFE

LOCATION ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

KLM AIRLINES AIRCRAFT TAIL #PHBFE

PROGRAM/S LISTED FOR THIS FACILITY

ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

4512 - AIR TRANSPORTATION, SCHEDULED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110033866234

NAME: **GEORGE BUSH INTERCONTINENTAL AIRPORT**

LOCATION ADDRESS: **3800 N TERMINAL RD  
HOUSTON, TX 77032**

COUNTY: **HARRIS**

EPA REGION: **06**

FEDERAL FACILITY: **NOT REPORTED**

TRIBAL LAND: **NOT REPORTED**

ALTERNATIVE NAME/S:

**GEORGE BUSH INTERCONTINENTAL AIRPORT**

PROGRAM/S LISTED FOR THIS FACILITY

**NPDES - NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

**TX-TCEQ ACR - TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY**

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

**4581 - AIRPORTS, FLYING FIELDS, AND AIRPORT TERMINAL SERVICES**

**3694 - ELECTRICAL EQUIPMENT FOR INTERNAL COMBUSTION ENGINES**

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

**488119 - OTHER AIRPORT OPERATIONS.**

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110034055091

NAME: IAH GH127 ALS

LOCATION ADDRESS: AIRPORT RUNWAY 27-GHI  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

HOUSTON INTERCONTINENTAL IAH

PROGRAM/S LISTED FOR THIS FACILITY

TX-TCEQ ACR - TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

NO SIC DATA REPORTED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110037534512

NAME: IAH OND ALSF

LOCATION ADDRESS: AIRPORT RUNWAY 26R-BZU  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

IAH OND ALSF

PROGRAM/S LISTED FOR THIS FACILITY

TX-TCEQ ACR - TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

NO SIC DATA REPORTED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110037534521

NAME: IAH BZU ALSF

LOCATION ADDRESS: AIRPORT RUNWAY 08L-BZU  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

IAH BZU ALSF

PROGRAM/S LISTED FOR THIS FACILITY

TX-TCEQ ACR - TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

NO SIC DATA REPORTED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110038101023

NAME: **GEORGE BUSH INTERCONTIN**

LOCATION ADDRESS: **UNKNOWN**  
**HOUSTON, TX**

COUNTY: **HARRIS**

EPA REGION: **06**

FEDERAL FACILITY: **NOT REPORTED**

TRIBAL LAND: **NOT REPORTED**

ALTERNATIVE NAME/S:

**GEORGE BUSH INTERCONTIN**

PROGRAM/S LISTED FOR THIS FACILITY

**EIS - EIS**

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

**4581 - AIRPORTS, FLYING FIELDS, AND AIRPORT TERMINAL SERVICES**

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

**48811 - AIRPORT OPERATIONS**

**48811 - AIRPORT OPERATIONS**

**48811 - AIRPORT OPERATIONS**

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110038781422

NAME: CONTINENTAL AIRLINES

LOCATION ADDRESS: (INTERCONTINENTAL AIRPORT) RAN  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

CONTINENTAL AIRLINES

PROGRAM/S LISTED FOR THIS FACILITY

AIRS/AFS - AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIRS FACILITY SYSTEM

AIR - AIR

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

3728 - AIRCRAFT PARTS AND AUXILIARY EQUIPMENT, NOT ELSEWHERE CLASSIFIED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110041385060

NAME: UNITED AIRLINES IAH AIRPORT

LOCATION ADDRESS: GEORGE BUSH INTERCONTINENTAL AIRPORT (IAH)  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

**CONTINENTAL AIRLINES IAH AIRPORT**

PROGRAM/S LISTED FOR THIS FACILITY

**EIS - EIS**

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

**NO SIC DATA REPORTED**

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

**488111 - AIR TRAFFIC CONTROL.**

**488111 - AIR TRAFFIC CONTROL.**

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## Facility Registry System (FRSTX)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110070172511

NAME: REHABILITATION OF TAXIWAY SA & SB COH PROJECT 549

LOCATION ADDRESS: 16930 JOHN F KENNEDY BLVD  
HOUSTON, TX 77032-6020

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

NO ALTERNATIVE NAME(S) LISTED FOR THIS FACILITY

PROGRAM/S LISTED FOR THIS FACILITY

TX-TCEQ ACR - TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

NO SIC DATA REPORTED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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# Hazardous Materials Incident Reporting System (HMIRSR06)

MAP ID# 1

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## INCIDENT INFORMATION

REPORT #: E-2011010377  
REPORT SUBMISSION SOURCE: NOT REPORTED  
REPORT TYPE: A HAZARDOUS MATERIAL INCIDENT  
NRC REPORT NUMBER: NOT REPORTED  
FEDERAL DOT REPORT NUMBER: NOT REPORTED  
FEDERAL AGENCY NAME: NOT REPORTED  
DATE: 1/3/2011  
INCIDENT LOCATION:  
IAH AIRPORT  
HOUSTON, TX 77032  
HARRIS

## CARRIER INFORMATION

NAME: DELTA AIR LINES INC.  
ADDRESS: 1030 DELTA BLVD  
ATLANTA, GA 30354-1989  
MODE OF TRANSPORTATION: HIGHWAY  
TRANSPORTATION PHASE: UNLOADING

## COMMODITY DETAILS

IDENTIFICATION NUMBER: UN3077  
COMMODITY SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCES SOLID N.O.S.  
TRADE NAME: CYPROCONAZOLE  
QUANTITY RELEASED: 0.110231 SOLID - POUND  
PACKAGING: NON-BULK  
HAZARDOUS CLASS: MISCELLANEOUS HAZARDOUS MATERIAL

## FAILURE DESCRIPTION

WHAT FAILED: 104 BODY  
HOW FAILED: 309 - PUNCTURED  
FAILURE CAUSE DESCRIPTION:  
501 - ABRASION  
DESCRIPTION OF EVENTS:  
TWO BAGS FROM ADJOINING PALLETS RUBBED WHILE TRUCK WAS ENROUTE FROM DELTA CARGO IN ATL TO DELTA CARGO IN IAH. A SMALL AMOUNT OF THIS SOLID LEAKED ON TRUCK FLOOR AND WAREHOUSE FLOOR.  
RECOMMENDATIONS/ACTIONS TAKEN:  
STRONGER PACKAGING WOULD HELP DAMAGE OCCURING DURING ROUTINE TRANSIT.

## INCIDENT DETAILS

SPILLAGE RESULT IDENTIFIED: NOT REPORTED  
FIRE RESULT IDENTIFIED: NOT REPORTED  
EXPLOSION RESULT IDENTIFIED: NOT REPORTED  
WATER SEWER RESULT IDENTIFIED: NOT REPORTED



## ***Hazardous Materials Incident Reporting System (HMIRSR06)***

GAS DISPERSION RESULT IDENTIFIED: **NOT REPORTED**

ENVIRONMENTAL DAMAGE RESULT IDENTIFIED: **NOT REPORTED**

NO RELEASE RESULT IDENTIFIED: **NOT REPORTED**

OTHER CLEANUP IDENTIFIED: **NOT REPORTED**

FIRE EMS REPORT IDENTIFIED: **NOT REPORTED**

FIRE EMS EMS REPORT NUMBER: **NOT REPORTED**

POLICE REPORT NUMBER: **NOT REPORTED**

POLICE REPORT IDENTIFIED: **NOT REPORTED**

IN HOUSE CLEANUP IDENTIFIED: **NOT REPORTED**

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# Hazardous Materials Incident Reporting System (HMIRSR06)

MAP ID# 1

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## **INCIDENT INFORMATION**

REPORT #: E-2013120313  
REPORT SUBMISSION SOURCE: NOT REPORTED  
REPORT TYPE: UNDECLARED SHIPMENT WITH NO RELEASE  
NRC REPORT NUMBER: NOT REPORTED  
FEDERAL DOT REPORT NUMBER: NOT REPORTED  
FEDERAL AGENCY NAME: NOT REPORTED  
DATE: 11/29/2013  
INCIDENT LOCATION:  
IAH AIRPORT  
HOUSTON, TX 77032  
HARRIS

## **CARRIER INFORMATION**

NAME: DELTA AIR LINES INC.  
ADDRESS: 1030 DELTA BLVD  
ATLANTA, GA 30354-1989  
MODE OF TRANSPORTATION: AIR  
TRANSPORTATION PHASE: IN TRANSIT STORAGE

## **COMMODITY DETAILS**

IDENTIFICATION NUMBER: UN3091  
COMMODITY SHIPPING NAME: LITHIUM BATTERIES PACKED WITH EQUIPMENT  
TRADE NAME: NOT REPORTED  
QUANTITY RELEASED: 0  
PACKAGING: NON-BULK  
HAZARDOUS CLASS: MISCELLANEOUS HAZARDOUS MATERIAL

## **FAILURE DESCRIPTION**

WHAT FAILED: NOT REPORTED  
HOW FAILED: NOT REPORTED -  
FAILURE CAUSE DESCRIPTION:  
NOT REPORTED -  
DESCRIPTION OF EVENTS:  
WHILE INSEPECTING SHIPMENT ON HOUSE AWB GSS9002AE 20 DEWALT DRILLS WERE DICOVERED IN THEIR CASES WITH TWO (2) LITHIUM ION BATTERIES AT 30 WH EACH IN EACH CASE. NO DECLARATION OF BATTERIES WERE NOTED ON HOUSE AWB OR MASTER AWB. SHIPMENT WAS REJECTED AND SENT BACK TO SHIPPER.  
RECOMMENDATIONS/ACTIONS TAKEN:  
BETTER AWARENESS ON LITHIUM BATTERY SHIPPING REQUIREMENTS FOR SMALL SHIPPERS.

## **INCIDENT DETAILS**

SPILLAGE RESULT IDENTIFIED: NOT REPORTED  
FIRE RESULT IDENTIFIED: NOT REPORTED  
EXPLOSION RESULT IDENTIFIED: NOT REPORTED

## ***Hazardous Materials Incident Reporting System (HMIRSR06)***

WATER SEWER RESULT IDENTIFIED: **NOT REPORTED**  
GAS DISPERSION RESULT IDENTIFIED: **NOT REPORTED**  
ENVIRONMENTAL DAMAGE RESULT IDENTIFIED: **NOT REPORTED**  
NO RELEASE RESULT IDENTIFIED: **NOT REPORTED**  
OTHER CLEANUP IDENTIFIED: **NOT REPORTED**  
FIRE EMS REPORT IDENTIFIED: **NOT REPORTED**  
FIRE EMS REPORT NUMBER: **NOT REPORTED**  
POLICE REPORT NUMBER: **NOT REPORTED**  
POLICE REPORT IDENTIFIED: **NOT REPORTED**  
IN HOUSE CLEANUP IDENTIFIED: **NOT REPORTED**

---

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# Integrated Compliance Information System (formerly DOCKETS) (ICIS)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## **SITE INFORMATION**

GEOSEARCH ID: 110020502231

REGISTRY ID: 110020502231

NAME: **UNITED AIRLINES AIRCRAFT TAIL #5563**

ADDRESS: **GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON TX 77032**

STANDARD INDUSTRIAL CLASSIFICATION: **NOT REPORTED**

## REGIONAL DOCKETS

**- NO REGIONAL DOCKETS REPORTED**

## RELATED ACTIVITIES

CASE NUMBER: **06-100021211**

ACTIVITY TYPE: **CASE FILE**

ACTIVITY STATUS DATE: **11/30/2004**

## VIOLATIONS

**- NO VIOLATIONS REPORTED**

## CASE IDENTIFIER

CASE NUMBER: **06-100021211**

FISCAL YEAR: **NOT REPORTED**

CASE NAME: **AIRLINE SAMPLING INITIATIVE**

ACTIVITY TYPE: **ADMINISTRATIVE - INFORMAL**

ACTIVITY STATUS: **ACHIEVED**

ACTIVITY STATUS DATE: **12/10/2004**

LEAD: **EPA**

CASE STATUS DATE: **12/10/2004**

DOJ DOCKET NUMBER: **NOT REPORTED**

ENFORCEMENT OUTCOME: **NOT REPORTED**

MULTIMEDIA FLAG: **NOT REPORTED**

ENFORCEMENT SUMMARY:

**NOT REPORTED**

## CASE PROGRAMS

**- NO CASE PROGRAMS REPORTED**

## ENFORCEMENT TYPE

ENFORCEMENT TYPE: **ORAL NOTIFICATION OF VIOLATION**

## POLLUTANTS CITED

**- NO POLLUTION CITED REPORTED**

---

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# Integrated Compliance Information System (formerly DOCKETS) (ICIS)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## **SITE INFORMATION**

GEOSEARCH ID: 110020502240

REGISTRY ID: 110020502240

NAME: COMAIR AIRCRAFT TAIL #10113

ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON TX 77032

STANDARD INDUSTRIAL CLASSIFICATION: NOT REPORTED

## REGIONAL DOCKETS

- NO REGIONAL DOCKETS REPORTED

## RELATED ACTIVITIES

CASE NUMBER: 06-100021214

ACTIVITY TYPE: CASE FILE

ACTIVITY STATUS DATE: 11/30/2004

## VIOLATIONS

- NO VIOLATIONS REPORTED

## CASE IDENTIFIER

CASE NUMBER: 06-100021214

FISCAL YEAR: NOT REPORTED

CASE NAME: AIRLINE SAMPLING INITIATIVE

ACTIVITY TYPE: ADMINISTRATIVE - INFORMAL

ACTIVITY STATUS: ACHIEVED

ACTIVITY STATUS DATE: 12/10/2004

LEAD: EPA

CASE STATUS DATE: 12/10/2004

DOJ DOCKET NUMBER: NOT REPORTED

ENFORCEMENT OUTCOME: NOT REPORTED

MULTIMEDIA FLAG: NOT REPORTED

ENFORCEMENT SUMMARY:

**NOT REPORTED**

## CASE PROGRAMS

- NO CASE PROGRAMS REPORTED

## ENFORCEMENT TYPE

ENFORCEMENT TYPE: ORAL NOTIFICATION OF VIOLATION

## POLLUTANTS CITED

- NO POLLUTION CITED REPORTED

---

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# Integrated Compliance Information System (formerly DOCKETS) (ICIS)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## **SITE INFORMATION**

GEOSEARCH ID: 110020502259

REGISTRY ID: 110020502259

NAME: US AIR AIRCRAFT TAIL #N589US

ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON TX 77032

STANDARD INDUSTRIAL CLASSIFICATION: NOT REPORTED

## REGIONAL DOCKETS

- NO REGIONAL DOCKETS REPORTED

## RELATED ACTIVITIES

CASE NUMBER: 06-100021209

ACTIVITY TYPE: CASE FILE

ACTIVITY STATUS DATE: 11/30/2004

## VIOLATIONS

- NO VIOLATIONS REPORTED

## CASE IDENTIFIER

CASE NUMBER: 06-100021209

FISCAL YEAR: NOT REPORTED

CASE NAME: AIRLINE SAMPLING INITIATIVE

ACTIVITY TYPE: ADMINISTRATIVE - INFORMAL

ACTIVITY STATUS: ACHIEVED

ACTIVITY STATUS DATE: 12/10/2004

LEAD: EPA

CASE STATUS DATE: 12/10/2004

DOJ DOCKET NUMBER: NOT REPORTED

ENFORCEMENT OUTCOME: NOT REPORTED

MULTIMEDIA FLAG: NOT REPORTED

ENFORCEMENT SUMMARY:

**NOT REPORTED**

## CASE PROGRAMS

- NO CASE PROGRAMS REPORTED

## ENFORCEMENT TYPE

ENFORCEMENT TYPE: ORAL NOTIFICATION OF VIOLATION

## POLLUTANTS CITED

- NO POLLUTION CITED REPORTED

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# Integrated Compliance Information System (formerly DOCKETS) (ICIS)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## **SITE INFORMATION**

GEOSEARCH ID: 110020502268

REGISTRY ID: 110020502268

NAME: AIR CANADA JAZZ AIRCRAFT TAIL #164

ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON TX 77032

STANDARD INDUSTRIAL CLASSIFICATION: NOT REPORTED

## REGIONAL DOCKETS

- NO REGIONAL DOCKETS REPORTED

## RELATED ACTIVITIES

CASE NUMBER: 06-100021210

ACTIVITY TYPE: CASE FILE

ACTIVITY STATUS DATE: 11/30/2004

## VIOLATIONS

- NO VIOLATIONS REPORTED

## CASE IDENTIFIER

CASE NUMBER: 06-100021210

FISCAL YEAR: NOT REPORTED

CASE NAME: AIRLINE SAMPLING INITIATIVE

ACTIVITY TYPE: ADMINISTRATIVE - INFORMAL

ACTIVITY STATUS: ACHIEVED

ACTIVITY STATUS DATE: 12/10/2004

LEAD: EPA

CASE STATUS DATE: 12/10/2004

DOJ DOCKET NUMBER: NOT REPORTED

ENFORCEMENT OUTCOME: NOT REPORTED

MULTIMEDIA FLAG: NOT REPORTED

ENFORCEMENT SUMMARY:

**NOT REPORTED**

## CASE PROGRAMS

- NO CASE PROGRAMS REPORTED

## ENFORCEMENT TYPE

ENFORCEMENT TYPE: ORAL NOTIFICATION OF VIOLATION

## POLLUTANTS CITED

- NO POLLUTION CITED REPORTED

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# Integrated Compliance Information System (formerly DOCKETS) (ICIS)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## **SITE INFORMATION**

GEOSEARCH ID: 110020502277

REGISTRY ID: 110020502277

NAME: **AMERICA WEST AIRCRAFT TAIL #640**

ADDRESS: **GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON TX 77032**

STANDARD INDUSTRIAL CLASSIFICATION: **NOT REPORTED**

## REGIONAL DOCKETS

**- NO REGIONAL DOCKETS REPORTED**

## RELATED ACTIVITIES

CASE NUMBER: **06-100021212**

ACTIVITY TYPE: **CASE FILE**

ACTIVITY STATUS DATE: **11/30/2004**

## VIOLATIONS

**- NO VIOLATIONS REPORTED**

## CASE IDENTIFIER

CASE NUMBER: **06-100021212**

FISCAL YEAR: **NOT REPORTED**

CASE NAME: **AIRLINE SAMPLING INITIATIVE**

ACTIVITY TYPE: **ADMINISTRATIVE - INFORMAL**

ACTIVITY STATUS: **ACHIEVED**

ACTIVITY STATUS DATE: **12/10/2004**

LEAD: **EPA**

CASE STATUS DATE: **12/10/2004**

DOJ DOCKET NUMBER: **NOT REPORTED**

ENFORCEMENT OUTCOME: **NOT REPORTED**

MULTIMEDIA FLAG: **NOT REPORTED**

ENFORCEMENT SUMMARY:

**NOT REPORTED**

## CASE PROGRAMS

**- NO CASE PROGRAMS REPORTED**

## ENFORCEMENT TYPE

ENFORCEMENT TYPE: **ORAL NOTIFICATION OF VIOLATION**

## POLLUTANTS CITED

**- NO POLLUTION CITED REPORTED**

---

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# Integrated Compliance Information System (formerly DOCKETS) (ICIS)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## **SITE INFORMATION**

GEOSEARCH ID: 110020502286

REGISTRY ID: 110020502286

NAME: DELTA AIRLINES AIRCRAFT TAIL #205

ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON TX 77032

STANDARD INDUSTRIAL CLASSIFICATION: NOT REPORTED

## REGIONAL DOCKETS

- NO REGIONAL DOCKETS REPORTED

## RELATED ACTIVITIES

CASE NUMBER: 06-100021213

ACTIVITY TYPE: CASE FILE

ACTIVITY STATUS DATE: 11/30/2004

## VIOLATIONS

- NO VIOLATIONS REPORTED

## CASE IDENTIFIER

CASE NUMBER: 06-100021213

FISCAL YEAR: NOT REPORTED

CASE NAME: AIRLINE SAMPLING INITIATIVE

ACTIVITY TYPE: ADMINISTRATIVE - INFORMAL

ACTIVITY STATUS: ACHIEVED

ACTIVITY STATUS DATE: 12/10/2004

LEAD: EPA

CASE STATUS DATE: 12/10/2004

DOJ DOCKET NUMBER: NOT REPORTED

ENFORCEMENT OUTCOME: NOT REPORTED

MULTIMEDIA FLAG: NOT REPORTED

ENFORCEMENT SUMMARY:

**NOT REPORTED**

## CASE PROGRAMS

- NO CASE PROGRAMS REPORTED

## ENFORCEMENT TYPE

ENFORCEMENT TYPE: ORAL NOTIFICATION OF VIOLATION

## POLLUTANTS CITED

- NO POLLUTION CITED REPORTED

---

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# Integrated Compliance Information System (formerly DOCKETS) (ICIS)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## **SITE INFORMATION**

GEOSEARCH ID: 110020502295

REGISTRY ID: 110020502295

NAME: **AMERICAN AIRLINES AIRCRAFT TAIL #208**

ADDRESS: **GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON TX 77032**

STANDARD INDUSTRIAL CLASSIFICATION: **NOT REPORTED**

## REGIONAL DOCKETS

**- NO REGIONAL DOCKETS REPORTED**

## RELATED ACTIVITIES

CASE NUMBER: **06-100021215**

ACTIVITY TYPE: **CASE FILE**

ACTIVITY STATUS DATE: **11/30/2004**

## VIOLATIONS

**- NO VIOLATIONS REPORTED**

## CASE IDENTIFIER

CASE NUMBER: **06-100021215**

FISCAL YEAR: **NOT REPORTED**

CASE NAME: **AIRLINE SAMPLING INITIATIVE**

ACTIVITY TYPE: **ADMINISTRATIVE - INFORMAL**

ACTIVITY STATUS: **ACHIEVED**

ACTIVITY STATUS DATE: **12/10/2004**

LEAD: **EPA**

CASE STATUS DATE: **12/10/2004**

DOJ DOCKET NUMBER: **NOT REPORTED**

ENFORCEMENT OUTCOME: **NOT REPORTED**

MULTIMEDIA FLAG: **NOT REPORTED**

ENFORCEMENT SUMMARY:

**NOT REPORTED**

## CASE PROGRAMS

**- NO CASE PROGRAMS REPORTED**

## ENFORCEMENT TYPE

ENFORCEMENT TYPE: **ORAL NOTIFICATION OF VIOLATION**

## POLLUTANTS CITED

**- NO POLLUTION CITED REPORTED**

---

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# Integrated Compliance Information System (formerly DOCKETS) (ICIS)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## **SITE INFORMATION**

GEOSEARCH ID: 110020502320

REGISTRY ID: 110020502320

NAME: LUFTHANSA AIRLINES AIRCRAFT TAIL #DAIGV

ADDRESS: GEORGE BUSH - INTERCONTINENTAL AIRPORT  
HOUSTON TX 77032

STANDARD INDUSTRIAL CLASSIFICATION: NOT REPORTED

## REGIONAL DOCKETS

- NO REGIONAL DOCKETS REPORTED

## RELATED ACTIVITIES

CASE NUMBER: 06-100021216

ACTIVITY TYPE: CASE FILE

ACTIVITY STATUS DATE: 12/1/2004

## VIOLATIONS

- NO VIOLATIONS REPORTED

## CASE IDENTIFIER

CASE NUMBER: 06-100021216

FISCAL YEAR: NOT REPORTED

CASE NAME: AIRLINE SAMPLING INITIATIVE

ACTIVITY TYPE: ADMINISTRATIVE - INFORMAL

ACTIVITY STATUS: ACHIEVED

ACTIVITY STATUS DATE: 12/10/2004

LEAD: EPA

CASE STATUS DATE: 12/10/2004

DOJ DOCKET NUMBER: NOT REPORTED

ENFORCEMENT OUTCOME: NOT REPORTED

MULTIMEDIA FLAG: NOT REPORTED

ENFORCEMENT SUMMARY:

**NOT REPORTED**

## CASE PROGRAMS

- NO CASE PROGRAMS REPORTED

## ENFORCEMENT TYPE

ENFORCEMENT TYPE: ORAL NOTIFICATION OF VIOLATION

## POLLUTANTS CITED

- NO POLLUTION CITED REPORTED

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# Integrated Compliance Information System National Pollutant Discharge Elimination System (ICISNPDES)

MAP ID# 1

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## **FACILITY INFORMATION**

GEOSEARCH ID: TXR05DI27INPDES  
NPDES ID: TXR05DI27 FACILITY #: 110033866234  
NAME: GEORGE BUSH INTERCONTINENTAL AIRPORT  
PHYSICAL ADDRESS: 3800 N TERMINAL RD  
HOUSTON TX 77032  
COUNTY: HARRIS  
FACILITY TYPE: MUNICIPALITY  
IMPAIRED WATERS: NOT REPORTED

## **STANDARD INDUSTRIAL CLASSIFICATION**

4581-AIRPORTS, FLYING FIELDS, & SERVICES

## **PERMITS**

FACILITY TYPE INDICATOR: NON-POTABLE WATER  
PERMIT TYPE: GENERAL PERMIT COVERED FACILITY  
MAJOR MINOR FACILITY: MINOR DISCHARGER  
PERMIT STATUS: EFFECTIVE  
WATER BODY: NOT REPORTED  
PERMIT NAME: CITY OF HOUSTON  
AGENCY TYPE: STATE  
ORIGINAL ISSUE DATE: 5/15/2017  
ISSUE DATE: 5/15/2017  
ISSUING AGENCY: NOT REPORTED  
EFFECTIVE DATE: 6/1/2017  
EXPIRATION DATE: 8/13/2021  
RETIREMENT DATE: NOT REPORTED  
TERMINATION DATE: NOT REPORTED  
PERMIT COMPLIANCE STATUS: YES  
PERMIT SUBJECT TO DMR RUN: NOT REPORTED  
REPORTABLE NONCOMPLIANCE TRACKING IS ON: YES

## **INSPECTIONS**

- NO INSPECTIONS REPORTED -

## **HISTORIC COMPLIANCE**

- NO HISTORIC COMPLIANCE REPORTED -

## **SINGLE EVENT VIOLATIONS**

- NO SINGLE EVENT VIOLATIONS REPORTED -

## **FORMAL ENFORCEMENT ACTIONS**

- NO FORMAL ENFORCEMENT ACTIONS REPORTED -

## **EFFLUENT VIOLATIONS**

- NOT REPORTED -

## **EFFLUENT VIOLATIONS contd..**

- NOT REPORTED -

**Integrated Compliance Information System National Pollutant Discharge  
Elimination System (ICISNPDES)**

**EFFLUENT VIOLATIONS contd..**

**- NOT REPORTED -**

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## Industrial and Hazardous Waste Sites (IHW)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### FACILITY INFORMATION

SWR#: 77979 EPA ID: TXD988080552

TCEQ#: 32203

NAME: AMERICAN AIRLINES IAH

ADDRESS: FLIGHT STATION 5  
HOUSTON, TX 77205

CONTACT: JEFFREY C MONKS

PHONE: 281-2301720

BUSINESS DESCRIPTION: AIRLINE

INDUSTRIAL WASTE PERMIT #: NOT REPORTED

MUNICIPAL WASTE PERMIT #: NOT REPORTED

SIC CODE: NOT REPORTED

WASTE GENERATOR: YES

WASTE RECEIVER: NO

WASTE TRANSPORTER: NO

TRANSFER FACILITY: NO

MAQUILADORA (MEXICAN FACILITY): NO

STATUS: INACTIVE

AMOUNT OF WASTE GENERATED: CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR

GENERATOR TYPE: NON-INDUSTRIAL AND/OR MUNICIPAL

THIS FACILITY IS A NOTIFIER

THIS FACILITY IS NOT A STEERS REPORTER - (STATE OF TEXAS ENVIRONMENTAL ELECTRONIC REPORTING SYSTEM)

THIS FACILITY IS NOT REQUIRED TO SUBMIT AN ANNUAL WASTE SUMMARY REPORT

THIS FACILITY IS NOT INVOLVED IN RECYCLING ACTIVITIES

LAST UPDATE TO TRACS (TCEQ REGULATORY ACTIVITIES AND COMPLIANCE SYSTEM): 04/22/2003

### ACTIVITIES

ACTIVITY TYPE: UNKNOWN

ACTIVITY DESCRIPTION: NOT REPORTED

### WASTE

WASTE ID: 150584

WASTE CODE STATUS: INACTIVE

WASTE IS RADIOACTIVE: NO

WASTE IS TREATED OFF SITE: YES

GENERATOR'S DESCRIPTION OF WASTE: SPENT SOLVENT

WASTE ID: 69238

WASTE CODE STATUS: INACTIVE

WASTE IS RADIOACTIVE: NO

WASTE IS TREATED OFF SITE: NO

GENERATOR'S DESCRIPTION OF WASTE: WASTE OIL, MAINTENANCE

WASTE ID: 76955

WASTE CODE STATUS: INACTIVE

WASTE IS RADIOACTIVE: NO

WASTE IS TREATED OFF SITE: YES

## **Industrial and Hazardous Waste Sites (IHW)**

GENERATOR'S DESCRIPTION OF WASTE: **DIPROPYLENE GLYCOL ETHER, DISCARDED NON PRODUCT, 11-93**

WASTE ID: **267982**

WASTE CODE STATUS: **NOT REPORTED**

WASTE IS RADIOACTIVE: **NO**

WASTE IS TREATED OFF SITE: **NO**

GENERATOR'S DESCRIPTION OF WASTE: **NOT REPORTED**

WASTE ID: **61531**

WASTE CODE STATUS: **INACTIVE**

WASTE IS RADIOACTIVE: **NO**

WASTE IS TREATED OFF SITE: **NO**

GENERATOR'S DESCRIPTION OF WASTE: **NOT REPORTED**

WASTE ID: **69236**

WASTE CODE STATUS: **INACTIVE**

WASTE IS RADIOACTIVE: **NO**

WASTE IS TREATED OFF SITE: **NO**

GENERATOR'S DESCRIPTION OF WASTE: **WASTE MINERAL SPIRITS**

WASTE ID: **69237**

WASTE CODE STATUS: **INACTIVE**

WASTE IS RADIOACTIVE: **NO**

WASTE IS TREATED OFF SITE: **NO**

GENERATOR'S DESCRIPTION OF WASTE: **WASTE FLOOR ABSORBENT**

WASTE ID: **69239**

WASTE CODE STATUS: **INACTIVE**

WASTE IS RADIOACTIVE: **NO**

WASTE IS TREATED OFF SITE: **NO**

GENERATOR'S DESCRIPTION OF WASTE: **WASTE OIL**

WASTE ID: **69240**

WASTE CODE STATUS: **INACTIVE**

WASTE IS RADIOACTIVE: **NO**

WASTE IS TREATED OFF SITE: **NO**

GENERATOR'S DESCRIPTION OF WASTE: **USED OIL FILTERS**

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## Industrial and Hazardous Waste Corrective Action Sites (IHWCA)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

PROGRAM ID: T2914

RN NUMBER: RN105291504

NAME: GEORGE BUSH INTERCONTINENTAL AIRPORT

ADDRESS: 3800 N TERMINAL RD  
HOUSTON, TX 77032

STATUS: INACTIVE

STATUS DATE: 05/13/2013

PHASE: COMPLETED WORKLOAD

LOCATION DESCRIPTION: NOT REPORTED

PHASE STATUS DATE: 05/13/2013

SOIL CHEMICAL OF CONCERN CLASS: NOT REPORTED

SOIL REMEDIATION: NOT REPORTED

GROUNDWATER CHEMICAL OF CONCERN CLASS: NOT REPORTED

GROUNDWATER REMEDIATION: NOT REPORTED

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## National Pollutant Discharge Elimination System (NPDES06)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

NPDES ID#: TX0079570

NAME: INTERNATIONAL AIRPORT SQUARE I

PHYSICAL ADDRESS: 2000' SW INTX WILL CLAYTON PKW & USHWY 59, HARRIS COUNTY  
HOUSTON, TX 77396

PERMITTYPE / ISSUE DATE: NOT REPORTED / 10/12/95

FACILITY TYPE: INDUSTRIAL

STANDARD INDUSTRIAL CLASSIFICATION: SEWERAGE SYSTEMS

RECEIVING WATER: SEG NO 1006 SAN JACINTO RIVER BASIN

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# Petroleum Storage Tanks (PST)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 12914  
NAME: DELTA AIR LINES  
ADDRESS: HOUSTON INTS AIRPORT  
HOUSTON, TX 77205  
COUNTY: HARRIS  
REGION: 12  
TYPE: FLEET REFUELING  
BEGIN DATE: 01/05/1986  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: NO  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: WW TURNER  
TITLE: STATION MGR  
ORGANIZATION: DELTA AIR LINES  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (713) 2301464 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 05/08/1986  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 04/21/1986  
SIGNATURE NAME & TITLE: R L DURRETT, VP  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600127815  
NAME: DELTA AIR LINES INC  
CONTACT ADDRESS: PO BOX 613138  
DALLAS TX 75261  
TYPE: CORPORATION/COMPANY  
BEGIN DATE: 08/01/2003  
CONTACT ROLE: OWNCON  
CONTACT NAME: NOT REPORTED  
CONTACT TITLE: NOT REPORTED  
ORGANIZATION: DELTA AIRLINES INC  
PHONE: (972) 5745656 0  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED

## OPERATOR

OPERATOR NUMBER: CN600127815  
NAME: DELTA AIR LINES INC  
CONTACT ADDRESS: PO BOX 45852  
ATLANTA GA 30320  
TYPE: CORPORATION/COMPANY  
BEGIN DATE: 08/01/2003  
CONTACT ROLE: OPRCON  
CONTACT NAME: NOT REPORTED

## Petroleum Storage Tanks (PST)

CONTACT TITLE: **NOT REPORTED**  
ORGANIZATION: **DELTA AIR LINES INC**  
PHONE: **(404) 7143988 0**  
FAX: **NOT REPORTED**  
EMAIL: **NOT REPORTED**

### SELF-CERTIFICATION

**-NO SELF-CERTIFICATION INFORMATION REPORTED-**

### CONSTRUCTION NOTIFICATION

**NO CONSTRUCTION NOTIFICATION DATA REPORTED FOR THIS FACILITY**

### UNDERGROUND STORAGE TANK

TANK ID: <b>1</b>	NUMBER OF COMPARTMENTS: <b>1</b>
INSTALLATION DATE: <b>01/01/1969</b>	REGISTRATION DATE: <b>05/08/1986</b>
TANK CAPACITY (GAL): <b>5000</b>	EMPTY TANK: <b>NOT EMPTY</b>
STATUS: <b>REMOVED FROM GROUND</b>	STATUS BEGIN DATE: <b>08/26/1989</b>
INTERNAL PROTECTION DATE: <b>NOT REPORTED</b>	REGULATORY STATUS: <b>FULLY REGULATED</b>
TANK DESIGN SINGLE WALL: <b>NO</b>	TANK DESIGN DOUBLE WALL: <b>NO</b>
PIPE DESIGN SINGLE WALL: <b>NO</b>	PIPE DESIGN DOUBLE WALL: <b>NO</b>

### TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **43747**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **KEROSENE**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **5000**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### PIPING SYSTEMS

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

## Petroleum Storage Tanks (PST)

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: <b>2</b>	NUMBER OF COMPARTMENTS: <b>1</b>
INSTALLATION DATE: <b>01/01/1969</b>	REGISTRATION DATE: <b>05/08/1986</b>
TANK CAPACITY (GAL): <b>10000</b>	EMPTY TANK: <b>NOT EMPTY</b>
STATUS: <b>REMOVED FROM GROUND</b>	STATUS BEGIN DATE: <b>08/26/1989</b>
INTERNAL PROTECTION DATE: <b>NOT REPORTED</b>	REGULATORY STATUS: <b>FULLY REGULATED</b>
TANK DESIGN SINGLE WALL: <b>NO</b>	TANK DESIGN DOUBLE WALL: <b>NO</b>
PIPE DESIGN SINGLE WALL: <b>NO</b>	PIPE DESIGN DOUBLE WALL: <b>NO</b>

### TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **43746**

TANK ID: **2**

COMPARTMENT LETTER: **A**

SUBSTANCES: **GASOLINE**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **10000**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### PIPING SYSTEMS

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: <b>3</b>	NUMBER OF COMPARTMENTS: <b>1</b>
INSTALLATION DATE: <b>01/01/1969</b>	REGISTRATION DATE: <b>05/08/1986</b>
TANK CAPACITY (GAL): <b>5000</b>	EMPTY TANK: <b>NOT EMPTY</b>
STATUS: <b>REMOVED FROM GROUND</b>	STATUS BEGIN DATE: <b>08/26/1989</b>
INTERNAL PROTECTION DATE: <b>NOT REPORTED</b>	REGULATORY STATUS: <b>FULLY REGULATED</b>
TANK DESIGN SINGLE WALL: <b>NO</b>	TANK DESIGN DOUBLE WALL: <b>NO</b>
PIPE DESIGN SINGLE WALL: <b>NO</b>	PIPE DESIGN DOUBLE WALL: <b>NO</b>

### TANK DETAILS

## Petroleum Storage Tanks (PST)

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

COMPARTMENT DETAILS

UST COMPARTMENT ID: **43750**

TANK ID: **3**

COMPARTMENT LETTER: **A**

SUBSTANCES: **USED OIL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **5000**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

PIPING SYSTEMS

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **4**

NUMBER OF COMPARTMENTS: **1**

INSTALLATION DATE: **01/01/1969**

REGISTRATION DATE: **05/08/1986**

TANK CAPACITY (GAL): **5000**

EMPTY TANK: **NOT EMPTY**

STATUS: **REMOVED FROM GROUND**

STATUS BEGIN DATE: **08/26/1989**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **FULLY REGULATED**

TANK DESIGN SINGLE WALL: **NO**

TANK DESIGN DOUBLE WALL: **NO**

PIPE DESIGN SINGLE WALL: **NO**

PIPE DESIGN DOUBLE WALL: **NO**

TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

## Petroleum Storage Tanks (PST)

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **43749**

TANK ID: **4**

COMPARTMENT LETTER: **A**

SUBSTANCES: **ETHYLENE GLYCOL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **5000**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### PIPING SYSTEMS

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

### CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

### PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **5**

NUMBER OF COMPARTMENTS: **1**

INSTALLATION DATE: **01/01/1969**

REGISTRATION DATE: **05/08/1986**

TANK CAPACITY (GAL): **2000**

EMPTY TANK: **NOT EMPTY**

STATUS: **REMOVED FROM GROUND**

STATUS BEGIN DATE: **08/26/1989**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **FULLY REGULATED**

TANK DESIGN SINGLE WALL: **NO**

TANK DESIGN DOUBLE WALL: **NO**

PIPE DESIGN SINGLE WALL: **NO**

PIPE DESIGN DOUBLE WALL: **NO**

### TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

### TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **43748**

TANK ID: **5**

COMPARTMENT LETTER: **A**

SUBSTANCES: **1,1,1-TRICHLOROETHANE**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **2000**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

## Petroleum Storage Tanks (PST)

### PIPING SYSTEMS

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **6**

NUMBER OF COMPARTMENTS: **1**

INSTALLATION DATE: **01/01/1969**

REGISTRATION DATE: **05/08/1986**

TANK CAPACITY (GAL): **5000**

EMPTY TANK: **NOT EMPTY**

STATUS: **REMOVED FROM GROUND**

STATUS BEGIN DATE: **08/26/1989**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **FULLY REGULATED**

TANK DESIGN SINGLE WALL: **NO**

TANK DESIGN DOUBLE WALL: **NO**

PIPE DESIGN SINGLE WALL: **NO**

PIPE DESIGN DOUBLE WALL: **NO**

### TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **43751**

TANK ID: **6**

COMPARTMENT LETTER: **A**

SUBSTANCES: **EMPTY**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **5000**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### PIPING SYSTEMS

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

## ***Petroleum Storage Tanks (PST)***

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

MAP ID# 1

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 29121  
NAME: IAH HOUSTON TX VORTAC  
ADDRESS: 0.5 MI WEST OFF RANKIN  
HOUSTON, TX 77205  
COUNTY: HARRIS  
REGION: 12  
TYPE: NOT REPORTED  
BEGIN DATE: 10/27/1986  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: NO  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: NOT REPORTED  
TITLE: NOT REPORTED  
ORGANIZATION: IAH HOUSTON TX VORTAC  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (713) 4432140 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 05/08/1986  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 05/05/1986  
SIGNATURE NAME & TITLE: M SILVA, SIGNATURE TITLE NOT REPORTED  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: OWNER ADDRESS NOT REPORTED  
CITY NOT REPORTED  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 10/27/1986  
CONTACT ROLE: NOT REPORTED  
CONTACT NAME: NOT REPORTED  
CONTACT TITLE: NOT REPORTED  
ORGANIZATION: NOT REPORTED  
PHONE: NOT REPORTED  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED

## OPERATOR

NO OPERATOR INFORMATION REPORTED

## SELF-CERTIFICATION

-NO SELF-CERTIFICATION INFORMATION REPORTED-

## CONSTRUCTION NOTIFICATION

NO CONSTRUCTION NOTIFICATION DATA REPORTED FOR THIS FACILITY

## UNDERGROUND STORAGE TANK

TANK ID: 1  
INSTALLATION DATE: 01/01/1970  
NUMBER OF COMPARTMENTS: 1  
REGISTRATION DATE: 05/08/1986

## Petroleum Storage Tanks (PST)

TANK CAPACITY (GAL): **1000**                      EMPTY TANK: **NOT EMPTY**  
STATUS: **REMOVED FROM GROUND**                      STATUS BEGIN DATE: **11/01/1995**  
INTERNAL PROTECTION DATE: **NOT REPORTED**                      REGULATORY STATUS: **FULLY REGULATED**  
TANK DESIGN SINGLE WALL: **NO**                      TANK DESIGN DOUBLE WALL: **NO**  
PIPE DESIGN SINGLE WALL: **NO**                      PIPE DESIGN DOUBLE WALL: **NO**

### TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **79799**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **1000**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### PIPING SYSTEMS

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### ABOVEGROUND STORAGE TANK INFORMATION

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

MAP ID# 1

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 29124  
NAME: IAH HOUSTON TX ALS  
ADDRESS: RUNWAU 08 INTERCONTL  
HOUSTON, TX 77205  
COUNTY: HARRIS  
REGION: 12  
TYPE: NOT REPORTED  
BEGIN DATE: 09/01/1987  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: NO  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: NOT REPORTED  
TITLE: NOT REPORTED  
ORGANIZATION: IAH HOUSTON TX ALS  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (713) 4432140 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 05/08/1986  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 05/05/1986  
SIGNATURE NAME & TITLE: M SILVA, SIGNATURE TITLE NOT REPORTED  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: OWNER ADDRESS NOT REPORTED  
CITY NOT REPORTED  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 09/01/1987  
CONTACT ROLE: NOT REPORTED  
CONTACT NAME: NOT REPORTED  
CONTACT TITLE: NOT REPORTED  
ORGANIZATION: NOT REPORTED  
PHONE: NOT REPORTED  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED

## OPERATOR

NO OPERATOR INFORMATION REPORTED

## SELF-CERTIFICATION

-NO SELF-CERTIFICATION INFORMATION REPORTED-

## CONSTRUCTION NOTIFICATION

NO CONSTRUCTION NOTIFICATION DATA REPORTED FOR THIS FACILITY

## UNDERGROUND STORAGE TANK

TANK ID: 1  
INSTALLATION DATE: 01/01/1970  
NUMBER OF COMPARTMENTS: 1  
REGISTRATION DATE: 05/08/1986

## Petroleum Storage Tanks (PST)

TANK CAPACITY (GAL): **2000**                      EMPTY TANK: **NOT EMPTY**  
STATUS: **REMOVED FROM GROUND**                      STATUS BEGIN DATE: **09/01/1987**  
INTERNAL PROTECTION DATE: **NOT REPORTED**                      REGULATORY STATUS: **FULLY REGULATED**  
TANK DESIGN SINGLE WALL: **NO**                      TANK DESIGN DOUBLE WALL: **NO**  
PIPE DESIGN SINGLE WALL: **NO**                      PIPE DESIGN DOUBLE WALL: **NO**

### TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **79802**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **2000**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### PIPING SYSTEMS

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### ABOVEGROUND STORAGE TANK INFORMATION

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

MAP ID# 1

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 29128  
NAME: IAH HOUSTON TX LOC  
ADDRESS: INTERCONTL AIRPORT RW  
HOUSTON, TX 77205  
COUNTY: HARRIS  
REGION: 12  
TYPE: NOT REPORTED  
BEGIN DATE: 09/01/1987  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: NO  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: NOT REPORTED  
TITLE: NOT REPORTED  
ORGANIZATION: IAH HOUSTON TX LOC  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (713) 4432140 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 05/08/1986  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 05/05/1986  
SIGNATURE NAME & TITLE: M SILVA, SIGNATURE TITLE NOT REPORTED  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: OWNER ADDRESS NOT REPORTED  
CITY NOT REPORTED  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 09/01/1987  
CONTACT ROLE: NOT REPORTED  
CONTACT NAME: NOT REPORTED  
CONTACT TITLE: NOT REPORTED  
ORGANIZATION: NOT REPORTED  
PHONE: NOT REPORTED  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED

## OPERATOR

NO OPERATOR INFORMATION REPORTED

## SELF-CERTIFICATION

-NO SELF-CERTIFICATION INFORMATION REPORTED-

## CONSTRUCTION NOTIFICATION

NO CONSTRUCTION NOTIFICATION DATA REPORTED FOR THIS FACILITY

## UNDERGROUND STORAGE TANK

TANK ID: 1  
INSTALLATION DATE: 01/01/1980  
NUMBER OF COMPARTMENTS: 1  
REGISTRATION DATE: 05/08/1986

## Petroleum Storage Tanks (PST)

TANK CAPACITY (GAL): **550**                      EMPTY TANK: **NOT EMPTY**  
STATUS: **REMOVED FROM GROUND**                      STATUS BEGIN DATE: **09/01/1987**  
INTERNAL PROTECTION DATE: **NOT REPORTED**                      REGULATORY STATUS: **FULLY REGULATED**  
TANK DESIGN SINGLE WALL: **NO**                      TANK DESIGN DOUBLE WALL: **NO**  
PIPE DESIGN SINGLE WALL: **NO**                      PIPE DESIGN DOUBLE WALL: **NO**

### **TANK DETAILS**

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **79806**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **550**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### **PIPING SYSTEMS**

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

MAP ID# 1

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 29129  
NAME: IAH HOUSTON TX GS  
ADDRESS: INTERCONTL AIRPORT RW  
HOUSTON, TX 77205  
COUNTY: HARRIS  
REGION: 12  
TYPE: NOT REPORTED  
BEGIN DATE: 09/01/1987  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: NO  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: NOT REPORTED  
TITLE: NOT REPORTED  
ORGANIZATION: IAH HOUSTON TX GS  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (713) 4432140 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 05/08/1986  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 05/05/1986  
SIGNATURE NAME & TITLE: M SILVA, SIGNATURE TITLE NOT REPORTED  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: OWNER ADDRESS NOT REPORTED  
CITY NOT REPORTED  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 09/01/1987  
CONTACT ROLE: NOT REPORTED  
CONTACT NAME: NOT REPORTED  
CONTACT TITLE: NOT REPORTED  
ORGANIZATION: NOT REPORTED  
PHONE: NOT REPORTED  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED

## OPERATOR

NO OPERATOR INFORMATION REPORTED

## SELF-CERTIFICATION

-NO SELF-CERTIFICATION INFORMATION REPORTED-

## CONSTRUCTION NOTIFICATION

NO CONSTRUCTION NOTIFICATION DATA REPORTED FOR THIS FACILITY

## UNDERGROUND STORAGE TANK

TANK ID: 1  
INSTALLATION DATE: 01/01/1974  
NUMBER OF COMPARTMENTS: 1  
REGISTRATION DATE: 05/08/1986

## Petroleum Storage Tanks (PST)

TANK CAPACITY (GAL): **1000**                      EMPTY TANK: **NOT EMPTY**  
STATUS: **REMOVED FROM GROUND**                      STATUS BEGIN DATE: **09/01/1987**  
INTERNAL PROTECTION DATE: **NOT REPORTED**                      REGULATORY STATUS: **FULLY REGULATED**  
TANK DESIGN SINGLE WALL: **NO**                      TANK DESIGN DOUBLE WALL: **NO**  
PIPE DESIGN SINGLE WALL: **NO**                      PIPE DESIGN DOUBLE WALL: **NO**

### **TANK DETAILS**

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **79807**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **1000**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### **PIPING SYSTEMS**

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 29130  
NAME: IAH ASR9  
ADDRESS: IAH AIRPORT ASR9  
HOUSTON, TX 77032  
COUNTY: HARRIS  
REGION: 12  
TYPE: EMERGENCY GENERATOR  
BEGIN DATE: 10/28/1986  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: YES  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: NOT REPORTED  
TITLE: NOT REPORTED  
ORGANIZATION: IAH ASR9  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (281) 2536463 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 08/03/2015  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 08/03/2015  
SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: PO BOX 610368  
DALLAS TX 75261  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 01/01/1994  
CONTACT ROLE: OWNCON  
CONTACT NAME: STACY HOWARD  
CONTACT TITLE: SECM  
ORGANIZATION: FEDERAL AVIATION ADMINISTRATION  
PHONE: (972) 6152347 0  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED  
OWNER NUMBER: CN603560525  
NAME: FEDERAL AVIATION ADMINISTRATION HOUSTON TRACON DISTRICT 190  
CONTACT ADDRESS: 2700 W TERMINAL RD STE 200  
HOUSTON TX 77032  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 01/01/1994  
CONTACT ROLE: OWNCON  
CONTACT NAME: SHEILA GRIFFITH  
CONTACT TITLE: 190 DISTRICT MGR

## Petroleum Storage Tanks (PST)

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: 2812308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **OPERATOR**

OPERATOR NUMBER: CN600436885

NAME: FEDERAL AVIATION ADMINISTRATION

CONTACT ADDRESS: 4005 GREENS RD  
HOUSTON TX 77032

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 01/01/1994

CONTACT ROLE: OWNOPRCON

CONTACT NAME: SHEILA GRIFFITH

CONTACT TITLE: 190 DISTRICT MGR

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: (281) 2308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

OPERATOR NUMBER: CN603560525

NAME: FEDERAL AVIATION ADMINISTRATION HOUSTON TRACON DISTRICT 190

CONTACT ADDRESS: 2700 W TERMINAL RD STE 200  
HOUSTON TX 77032

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 01/01/1994

CONTACT ROLE: OPRCON

CONTACT NAME: SHEILA GRIFFITH

CONTACT TITLE: 190 DISTRICT MGR

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: (281) 2308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **SELF-CERTIFICATION**

SELF-CERTIFICATION ID: 255990

SIGNATURE DATE: 08/03/2015

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR

FILING STATUS: RENEWAL

REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 238842

SIGNATURE DATE: 07/14/2014

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR

FILING STATUS: RENEWAL

REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 221669

SIGNATURE DATE: 07/01/2013

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR

## Petroleum Storage Tanks (PST)

FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72321**  
SIGNATURE DATE: **06/27/2012**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFTH, MGR**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72320**  
SIGNATURE DATE: **09/16/2010**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR HOUSTON TRACON**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72319**  
SIGNATURE DATE: **02/11/2009**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR HOUSTON DIST**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72318**  
SIGNATURE DATE: **02/05/2008**  
SIGNATURE NAME & TITLE: **SHEILA GRIFFITH, MGR HOU DISTRICT**  
FILING STATUS: **INITIAL**  
REGISTRATION FLAG: **YES**

### **CONSTRUCTION NOTIFICATION**

NOTIFICATION CONSTRUCTION ID: **30391**  
APPLICATION RECEIVED DATE: **10/26/2016**  
SCHEDULE CONSTRUCTION DATE: **11/14/2016**  
GENERAL DESCRIPTION OF PROPOSED CONSTRUCTION:  
**REMOVAL OF (1) 1000 GAL DIESEL UST.**

### **UNDERGROUND STORAGE TANK**

TANK ID: <b>1</b>	NUMBER OF COMPARTMENTS: <b>1</b>
INSTALLATION DATE: <b>01/01/1994</b>	REGISTRATION DATE: <b>02/15/2008</b>
TANK CAPACITY (GAL): <b>1000</b>	EMPTY TANK: <b>NOT EMPTY</b>
STATUS: <b>REMOVED FROM GROUND</b>	STATUS BEGIN DATE: <b>12/01/2016</b>
INTERNAL PROTECTION DATE: <b>NOT REPORTED</b>	REGULATORY STATUS: <b>FULLY REGULATED</b>
TANK DESIGN SINGLE WALL: <b>NO</b>	TANK DESIGN DOUBLE WALL: <b>YES</b>
PIPE DESIGN SINGLE WALL: <b>YES</b>	PIPE DESIGN DOUBLE WALL: <b>NO</b>

### **TANK DETAILS**

MATERIAL:  
**NOT REPORTED**  
CORROSION PROTECTION:  
**FRP TANK OR PIPING (NONCORRODIBLE)**  
EXTERNAL CONTAINMENT:

## Petroleum Storage Tanks (PST)

### NOT REPORTED

#### TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

#### COMPARTMENT DETAILS

UST COMPARTMENT ID: **79809**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **NOT REPORTED**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **1000**

COMPARTMENT RELEASE DETECTION: **WEEKLY MANUAL TANK GAUGING (TANKS <= 1000 GAL),MONTHLY TANK GAUGING (FOR EMER. GENERATOR TANKS)**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,ALARM (SET@<=90%) W3A OR 3B**

#### PIPING SYSTEMS

MATERIAL: **JACKETED**

CORROSION PROTECTION: **FRP TANK OR PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

#### CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**TRIENNIAL TIGHTNESS TEST (FOR SUCTION/GRAVITY PIPING)**

#### PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **1**

INSTALLATION DATE: **01/01/1994**

TANK CAPACITY (GAL): **1000**

STATUS: **IN USE**

INTERNAL PROTECTION DATE: **NOT REPORTED**

TANK DESIGN SINGLE WALL: **NO**

PIPE DESIGN SINGLE WALL: **YES**

NUMBER OF COMPARTMENTS: **1**

REGISTRATION DATE: **02/15/2008**

EMPTY TANK: **NOT EMPTY**

STATUS BEGIN DATE: **01/01/1994**

REGULATORY STATUS: **FULLY REGULATED**

TANK DESIGN DOUBLE WALL: **YES**

PIPE DESIGN DOUBLE WALL: **NO**

#### TANK DETAILS

MATERIAL:

**NOT REPORTED**

CORROSION PROTECTION:

**FRP TANK OR PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

#### TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

#### COMPARTMENT DETAILS

UST COMPARTMENT ID: **79809**

TANK ID: **1**

## Petroleum Storage Tanks (PST)

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **1000**

COMPARTMENT RELEASE DETECTION: **WEEKLY MANUAL TANK GAUGING (TANKS <= 1000 GAL),MONTHLY TANK GAUGING (FOR EMER. GENERATOR TANKS)**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,ALARM (SET@<=90%) W3A OR 3B**

### PIPING SYSTEMS

MATERIAL: **JACKETED**

CORROSION PROTECTION: **FRP TANK OR PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**TRIENNIAL TIGHTNESS TEST (FOR SUCTION/GRAVITY PIPING)**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **1A**

NUMBER OF COMPARTMENTS: **1**

INSTALLATION DATE: **01/01/1983**

REGISTRATION DATE: **05/08/1986**

TANK CAPACITY (GAL): **1000**

EMPTY TANK: **NOT EMPTY**

STATUS: **REMOVED FROM GROUND**

STATUS BEGIN DATE: **01/12/1994**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **FULLY REGULATED**

TANK DESIGN SINGLE WALL: **NO**

TANK DESIGN DOUBLE WALL: **NO**

PIPE DESIGN SINGLE WALL: **NO**

PIPE DESIGN DOUBLE WALL: **NO**

### TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **79808**

TANK ID: **1A**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **1000**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### PIPING SYSTEMS

## Petroleum Storage Tanks (PST)

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

MAP ID# 1

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 29133  
NAME: IAH RTR C  
ADDRESS: RTRC ACCESS DRIVEWAY  
HOUSTON, TX 77205  
COUNTY: HARRIS  
REGION: 12  
TYPE: NOT REPORTED  
BEGIN DATE: 10/28/1986  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: NO  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: JESSE LOPEZ  
TITLE: NOT REPORTED  
ORGANIZATION: IAH RTR C  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (281) 8765681 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 05/08/1986  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 05/05/1986  
SIGNATURE NAME & TITLE: M SILVA, SIGNATURE TITLE NOT REPORTED  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: OWNER ADDRESS NOT REPORTED  
CITY NOT REPORTED  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 10/28/1986  
CONTACT ROLE: NOT REPORTED  
CONTACT NAME: NOT REPORTED  
CONTACT TITLE: NOT REPORTED  
ORGANIZATION: NOT REPORTED  
PHONE: NOT REPORTED  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED

## OPERATOR

NO OPERATOR INFORMATION REPORTED

## SELF-CERTIFICATION

-NO SELF-CERTIFICATION INFORMATION REPORTED-

## CONSTRUCTION NOTIFICATION

NO CONSTRUCTION NOTIFICATION DATA REPORTED FOR THIS FACILITY

## UNDERGROUND STORAGE TANK

TANK ID: 1  
INSTALLATION DATE: 01/01/1984  
NUMBER OF COMPARTMENTS: 1  
REGISTRATION DATE: 05/08/1986

## Petroleum Storage Tanks (PST)

TANK CAPACITY (GAL): 515  
STATUS: **REMOVED FROM GROUND**  
INTERNAL PROTECTION DATE: **NOT REPORTED**  
TANK DESIGN SINGLE WALL: **YES**  
PIPE DESIGN SINGLE WALL: **YES**

EMPTY TANK: **NOT EMPTY**  
STATUS BEGIN DATE: **09/03/1997**  
REGULATORY STATUS: **FULLY REGULATED**  
TANK DESIGN DOUBLE WALL: **NO**  
PIPE DESIGN DOUBLE WALL: **NO**

### **TANK DETAILS**

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **79813**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **515**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### **PIPING SYSTEMS**

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 29134  
NAME: IAH HOUSTON TX RTR TRANSMTR  
ADDRESS: BUSH INTER AIRPORT  
HOUSTON, TX 77025  
COUNTY: HARRIS  
REGION: 12  
TYPE: NOT REPORTED  
BEGIN DATE: 10/28/1986  
STATUS: ACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: YES  
NUMBER OF ACTIVE UNDERGROUND TANKS: 1  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: NOT REPORTED  
TITLE: NOT REPORTED  
ORGANIZATION: IAH HOUSTON TX RTR TRANSMTR  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (281) 8765600 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 05/08/1986  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 05/05/1986  
SIGNATURE NAME & TITLE: M SILVA, SIGNATURE TITLE NOT REPORTED  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: PO BOX 610368  
DALLAS TX 75261  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 10/28/1986  
CONTACT ROLE: OWNCON  
CONTACT NAME: STACY HOWARD  
CONTACT TITLE: SECM  
ORGANIZATION: FEDERAL AVIATION ADMINISTRATION  
PHONE: (972) 6152347 0  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED

## OPERATOR

OPERATOR NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: 4005 GREENS RD  
HOUSTON TX 77032  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 10/28/1986  
CONTACT ROLE: OWNOPRCON  
CONTACT NAME: SHEILA GRIFFITH

## Petroleum Storage Tanks (PST)

CONTACT TITLE: **190 DISTRICT MGR**  
ORGANIZATION: **FAA HOUSTON TRACON DISTRICT 190**  
PHONE: **(281) 2308475 0**  
FAX: **NOT REPORTED**  
EMAIL: **NOT REPORTED**

### **SELF-CERTIFICATION**

SELF-CERTIFICATION ID: **72324**  
SIGNATURE DATE: **03/10/2003**  
SIGNATURE NAME & TITLE: **LEE TRAWEEK, MPS**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72323**  
SIGNATURE DATE: **01/25/2002**  
SIGNATURE NAME & TITLE: **SUSAN KINDER, MPS**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72322**  
SIGNATURE DATE: **01/19/2001**  
SIGNATURE NAME & TITLE: **FELIPE VILLARREAL, MPS**  
FILING STATUS: **INITIAL**  
REGISTRATION FLAG: **YES**

### **CONSTRUCTION NOTIFICATION**

**NO CONSTRUCTION NOTIFICATION DATA REPORTED FOR THIS FACILITY**

### **UNDERGROUND STORAGE TANK**

TANK ID: <b>1</b>	NUMBER OF COMPARTMENTS: <b>1</b>
INSTALLATION DATE: <b>01/01/1982</b>	REGISTRATION DATE: <b>05/08/1986</b>
TANK CAPACITY (GAL): <b>500</b>	EMPTY TANK: <b>NOT EMPTY</b>
STATUS: <b>IN USE</b>	STATUS BEGIN DATE: <b>01/01/1982</b>
INTERNAL PROTECTION DATE: <b>NOT REPORTED</b>	REGULATORY STATUS: <b>FULLY REGULATED</b>
TANK DESIGN SINGLE WALL: <b>YES</b>	TANK DESIGN DOUBLE WALL: <b>NO</b>
PIPE DESIGN SINGLE WALL: <b>YES</b>	PIPE DESIGN DOUBLE WALL: <b>NO</b>

### **TANK DETAILS**

MATERIAL:

#### **COMPOSITE**

CORROSION PROTECTION:

**COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **79814**

## Petroleum Storage Tanks (PST)

TANK ID: 1

COMPARTMENT LETTER: A

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **500**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP**

### **PIPING SYSTEMS**

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

MAP ID# 1

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 47037  
NAME: IAH JYV26 ALSF  
ADDRESS: AIRPORT RUNWAY 26L-JYV  
HOUSTON, TX 77032  
COUNTY: HARRIS  
REGION: 12  
TYPE: EMERGENCY GENERATOR  
BEGIN DATE: 01/01/1987  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: YES  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: NOT REPORTED  
TITLE: NOT REPORTED  
ORGANIZATION: IAH JYV26 ALSF  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (281) 2536463 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 02/22/2019  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 05/04/2017  
SIGNATURE NAME & TITLE: BRAIN HOLDER, REPRESENTATIVE  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: 6001 INDIAN SCHOOL RD NE  
ALBUQUERQUE NM 87110  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 02/01/2008  
CONTACT ROLE: OWNCON  
CONTACT NAME: MICHAEL GONZALES  
CONTACT TITLE: NOT REPORTED  
ORGANIZATION: FEDERAL AVIATION ADMINISTRATION  
PHONE: 5058564700 0  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED  
OWNER NUMBER: CN603560525  
NAME: FEDERAL AVIATION ADMINISTRATION HOUSTON TRACON DISTRICT 190  
CONTACT ADDRESS: 2700 W TERMINAL RD STE 200  
HOUSTON TX 77032  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 02/01/2008  
CONTACT ROLE: OWNCON  
CONTACT NAME: SHEILA GRIFFITH  
CONTACT TITLE: 190 DISTRICT MGR

## Petroleum Storage Tanks (PST)

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: 2812308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

OWNER NUMBER: CN600436885

NAME: FEDERAL AVIATION ADMINISTRATION

CONTACT ADDRESS: PO BOX 610368

DALLAS TX 75261

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 09/01/1988

CONTACT ROLE: OWNCON

CONTACT NAME: STACY HOWARD

CONTACT TITLE: SECM

ORGANIZATION: FEDERAL AVIATION ADMINISTRATION

PHONE: (972) 6152347 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **OPERATOR**

OPERATOR NUMBER: CN600436885

NAME: FEDERAL AVIATION ADMINISTRATION

CONTACT ADDRESS: 16600 JOHN F KENNEDY BLVD

HOUSTON TX 77032

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 02/01/2008

CONTACT ROLE: OPRCON

CONTACT NAME: TRACY MITHCELL

CONTACT TITLE: NOT REPORTED

ORGANIZATION: FEDERAL AVIATION ADMINISTRATION

PHONE: (218) 2305409 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

OPERATOR NUMBER: CN603560525

NAME: FEDERAL AVIATION ADMINISTRATION HOUSTON TRACON DISTRICT 190

CONTACT ADDRESS: 2700 W TERMINAL RD STE 200

HOUSTON TX 77032

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 02/01/2008

CONTACT ROLE: OPRCON

CONTACT NAME: SHEILA GRIFFITH

CONTACT TITLE: 190 DISTRICT MGR

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: (281) 2308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

OPERATOR NUMBER: CN600436885

NAME: FEDERAL AVIATION ADMINISTRATION

CONTACT ADDRESS: 4005 GREENS RD

## Petroleum Storage Tanks (PST)

HOUSTON TX 77032

TYPE: **FEDERAL GOVERNMENT**

BEGIN DATE: **09/01/1988**

CONTACT ROLE: **OWNOPRCON**

CONTACT NAME: **SHEILA GRIFFITH**

CONTACT TITLE: **190 DISTRICT MGR**

ORGANIZATION: **FAA HOUSTON TRACON DISTRICT 190**

PHONE: **(281) 2308475 0**

FAX: **NOT REPORTED**

EMAIL: **NOT REPORTED**

### **SELF-CERTIFICATION**

SELF-CERTIFICATION ID: **255997**

SIGNATURE DATE: **08/03/2015**

SIGNATURE NAME & TITLE: **SHEILA GRIFFITH, DIST MGR**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **238843**

SIGNATURE DATE: **07/14/2014**

SIGNATURE NAME & TITLE: **SHEILA GRIFFITH, DM**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72566**

SIGNATURE DATE: **06/28/2012**

SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72565**

SIGNATURE DATE: **09/16/2010**

SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR HOUSTON TRACON**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72564**

SIGNATURE DATE: **02/11/2009**

SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR HOUSTON DIST**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72563**

SIGNATURE DATE: **02/05/2008**

SIGNATURE NAME & TITLE: **SHEILA GRIFFITH, MGR HOU DISTRICT**

FILING STATUS: **INITIAL**

REGISTRATION FLAG: **YES**

## Petroleum Storage Tanks (PST)

SELF-CERTIFICATION ID: 72562  
SIGNATURE DATE: 03/10/2003  
SIGNATURE NAME & TITLE: LEE TRAWEEK, MPS  
FILING STATUS: RENEWAL  
REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 72326  
SIGNATURE DATE: 01/25/2002  
SIGNATURE NAME & TITLE: SUSAN KINDER, MPS  
FILING STATUS: RENEWAL  
REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 72325  
SIGNATURE DATE: 01/19/2001  
SIGNATURE NAME & TITLE: FELIPE VILLARREAL, MPS  
FILING STATUS: INITIAL  
REGISTRATION FLAG: YES

### **CONSTRUCTION NOTIFICATION**

NOTIFICATION CONSTRUCTION ID: 34227  
APPLICATION RECEIVED DATE: 02/21/2019  
SCHEDULE CONSTRUCTION DATE: 01/10/2017  
GENERAL DESCRIPTION OF PROPOSED CONSTRUCTION:  
**REMOVE 2,000 GALLON UST.**

### **UNDERGROUND STORAGE TANK**

TANK ID: 1	NUMBER OF COMPARTMENTS: 1
INSTALLATION DATE: 01/01/1987	REGISTRATION DATE: 01/30/1989
TANK CAPACITY (GAL): 2000	EMPTY TANK: NOT EMPTY
STATUS: REMOVED FROM GROUND	STATUS BEGIN DATE: 01/11/2017
INTERNAL PROTECTION DATE: NOT REPORTED	REGULATORY STATUS: EMERG POWER GENERATOR
TANK DESIGN SINGLE WALL: NO	TANK DESIGN DOUBLE WALL: YES
PIPE DESIGN SINGLE WALL: YES	PIPE DESIGN DOUBLE WALL: NO

### **TANK DETAILS**

MATERIAL:  
**NOT REPORTED**  
CORROSION PROTECTION:  
**FRP TANK OR PIPING (NONCORRODIBLE)**  
EXTERNAL CONTAINMENT:  
**NOT REPORTED**

**TANK COMPLIANCE FLAG**  
CORROSION PROTECTION COMPLIANCE FLAG: YES  
CORROSION PROTECTION VARIANCE: NO VARIANCE

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: 79830  
TANK ID: 1  
COMPARTMENT LETTER: A  
SUBSTANCES: NOT REPORTED

## Petroleum Storage Tanks (PST)

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **2000**

COMPARTMENT RELEASE DETECTION: **MONTHLY TANK GAUGING (FOR EMER. GENERATOR TANKS),SIR (STAT.**

**INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,ALARM (SET @ <=90%)**

**W3A OR 3B**

### **PIPING SYSTEMS**

MATERIAL: **JACKETED**

CORROSION PROTECTION: **FRP TANK OR PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**TRIENNIAL TIGHTNESS TEST (FOR SUCTION/GRAVITY PIPING)**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **1**

NUMBER OF COMPARTMENTS: **1**

INSTALLATION DATE: **01/01/1987**

REGISTRATION DATE: **01/30/1989**

TANK CAPACITY (GAL): **2000**

EMPTY TANK: **NOT EMPTY**

STATUS: **IN USE**

STATUS BEGIN DATE: **01/01/1987**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **EMERG POWER GENERATOR**

TANK DESIGN SINGLE WALL: **NO**

TANK DESIGN DOUBLE WALL: **YES**

PIPE DESIGN SINGLE WALL: **YES**

PIPE DESIGN DOUBLE WALL: **NO**

### **TANK DETAILS**

MATERIAL:

**NOT REPORTED**

CORROSION PROTECTION:

**FRP TANK OR PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **79830**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **2000**

COMPARTMENT RELEASE DETECTION: **MONTHLY TANK GAUGING (FOR EMER. GENERATOR TANKS),SIR (STAT.**

**INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,ALARM (SET @ <=90%)**

**W3A OR 3B**

### **PIPING SYSTEMS**



## **Petroleum Storage Tanks (PST)**

MATERIAL: **JACKETED**

CORROSION PROTECTION: **FRP TANK OR PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**TRIENNIAL TIGHTNESS TEST (FOR SUCTION/GRAVITY PIPING)**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 47038  
NAME: IAH GH127 ALS  
ADDRESS: AIRPORT RUNWAY 27-GHI  
HOUSTON, TX 77032  
COUNTY: HARRIS  
REGION: 12  
TYPE: EMERGENCY GENERATOR  
BEGIN DATE: 01/01/1987  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: YES  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: NOT REPORTED  
TITLE: NOT REPORTED  
ORGANIZATION: IAH GH127 ALS  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (281) 2536463 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 02/14/2019  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 06/13/2017  
SIGNATURE NAME & TITLE: BRAIN HOLDER, REPRESENTATIVE  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: PO BOX 610368  
DALLAS TX 75261  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 02/01/2008  
CONTACT ROLE: OWNCON  
CONTACT NAME: STACY HOWARD  
CONTACT TITLE: SECM  
ORGANIZATION: FEDERAL AVIATION ADMINISTRATION  
PHONE: (972) 6152347 0  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED  
OWNER NUMBER: CN603560525  
NAME: FEDERAL AVIATION ADMINISTRATION HOUSTON TRACON DISTRICT 190  
CONTACT ADDRESS: 2700 W TERMINAL RD STE 200  
HOUSTON TX 77032  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 02/01/2008  
CONTACT ROLE: OWNCON  
CONTACT NAME: SHEILA GRIFFITH  
CONTACT TITLE: 190 DISTRICT MGR

## Petroleum Storage Tanks (PST)

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: 2812308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **OPERATOR**

OPERATOR NUMBER: CN600436885

NAME: FEDERAL AVIATION ADMINISTRATION

CONTACT ADDRESS: 4005 GREENS RD  
HOUSTON TX 77032

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 02/01/2008

CONTACT ROLE: OWNOPRCON

CONTACT NAME: SHEILA GRIFFITH

CONTACT TITLE: 190 DISTRICT MGR

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: (281) 2308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

OPERATOR NUMBER: CN603560525

NAME: FEDERAL AVIATION ADMINISTRATION HOUSTON TRACON DISTRICT 190

CONTACT ADDRESS: 2700 W TERMINAL RD STE 200  
HOUSTON TX 77032

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 02/01/2008

CONTACT ROLE: OPRCON

CONTACT NAME: SHEILA GRIFFITH

CONTACT TITLE: 190 DISTRICT MGR

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: (281) 2308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **SELF-CERTIFICATION**

SELF-CERTIFICATION ID: 255995

SIGNATURE DATE: 08/03/2015

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR

FILING STATUS: RENEWAL

REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 238844

SIGNATURE DATE: 07/14/2014

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DM

FILING STATUS: RENEWAL

REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 221674

SIGNATURE DATE: 07/01/2013

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR

## Petroleum Storage Tanks (PST)

FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72573**  
SIGNATURE DATE: **06/28/2012**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72572**  
SIGNATURE DATE: **09/16/2010**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR HOUSTON TRACON**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72571**  
SIGNATURE DATE: **02/11/2009**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR HOUSTON DIST**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72570**  
SIGNATURE DATE: **02/05/2008**  
SIGNATURE NAME & TITLE: **SHEILA GRIFFITH, MGR HOU DISTRICT**  
FILING STATUS: **INITIAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72569**  
SIGNATURE DATE: **03/10/2003**  
SIGNATURE NAME & TITLE: **LEE TRAWEEK, MPS**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72568**  
SIGNATURE DATE: **01/25/2002**  
SIGNATURE NAME & TITLE: **SUSAN KINDER, MPS**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72567**  
SIGNATURE DATE: **01/19/2001**  
SIGNATURE NAME & TITLE: **FELIPE VILLARREAL, MPS**  
FILING STATUS: **INITIAL**  
REGISTRATION FLAG: **YES**

### **CONSTRUCTION NOTIFICATION**

NOTIFICATION CONSTRUCTION ID: **31136**

# Petroleum Storage Tanks (PST)

APPLICATION RECEIVED DATE: 03/23/2017

SCHEDULE CONSTRUCTION DATE: 04/12/2017

GENERAL DESCRIPTION OF PROPOSED CONSTRUCTION:

**REMOVAL OF (1) 2000 GAL UST.**

## **UNDERGROUND STORAGE TANK**

TANK ID: 1

NUMBER OF COMPARTMENTS: 1

INSTALLATION DATE: 01/01/1987

REGISTRATION DATE: 01/30/1989

TANK CAPACITY (GAL): 2000

EMPTY TANK: **NOT EMPTY**

STATUS: **REMOVED FROM GROUND**

STATUS BEGIN DATE: 04/12/2017

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **EMERG POWER GENERATOR**

TANK DESIGN SINGLE WALL: **NO**

TANK DESIGN DOUBLE WALL: **YES**

PIPE DESIGN SINGLE WALL: **YES**

PIPE DESIGN DOUBLE WALL: **NO**

## **TANK DETAILS**

MATERIAL:

**NOT REPORTED**

CORROSION PROTECTION:

**FRP TANK OR PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

## **COMPARTMENT DETAILS**

UST COMPARTMENT ID: 79831

TANK ID: 1

COMPARTMENT LETTER: **A**

SUBSTANCES: **NOT REPORTED**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **2000**

COMPARTMENT RELEASE DETECTION: **AUTOMATIC TANK GAUGE TEST & INVENTORY CONTROL, MONTHLY TANK GAUGING (FOR EMER. GENERATOR TANKS), SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP, ALARM (SET @ <=90%) W3A OR 3B**

## **PIPING SYSTEMS**

MATERIAL: **JACKETED**

CORROSION PROTECTION: **FRP TANK OR PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**TRIENNIAL TIGHTNESS TEST (FOR SUCTION/GRAVITY PIPING)**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: 1

NUMBER OF COMPARTMENTS: 1

INSTALLATION DATE: 01/01/1987

REGISTRATION DATE: 01/30/1989

## Petroleum Storage Tanks (PST)

TANK CAPACITY (GAL): **2000**                      EMPTY TANK: **NOT EMPTY**  
STATUS: **IN USE**                                      STATUS BEGIN DATE: **01/01/1987**  
INTERNAL PROTECTION DATE: **NOT REPORTED**      REGULATORY STATUS: **EMERG POWER GENERATOR**  
TANK DESIGN SINGLE WALL: **NO**                      TANK DESIGN DOUBLE WALL: **YES**  
PIPE DESIGN SINGLE WALL: **YES**                      PIPE DESIGN DOUBLE WALL: **NO**

### TANK DETAILS

MATERIAL:

**NOT REPORTED**

CORROSION PROTECTION:

**FRP TANK OR PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **79831**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **2000**

COMPARTMENT RELEASE DETECTION: **AUTOMATIC TANK GAUGE TEST & INVENTORY CONTROL, MONTHLY TANK GAUGING (FOR EMER. GENERATOR TANKS), SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP, ALARM (SET @ <=90%) W3A OR 3B**

### PIPING SYSTEMS

MATERIAL: **JACKETED**

CORROSION PROTECTION: **FRP TANK OR PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**TRIENNIAL TIGHTNESS TEST (FOR SUCTION/GRAVITY PIPING)**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### ABOVEGROUND STORAGE TANK INFORMATION

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 47039  
NAME: IAH JYV LOCALIZER  
ADDRESS: AIRPORT RUNWAY JYV  
HOUSTON, TX 77032  
COUNTY: HARRIS  
REGION: 12  
TYPE: EMERGENCY GENERATOR  
BEGIN DATE: 01/01/1987  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: YES  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: NOT REPORTED  
TITLE: NOT REPORTED  
ORGANIZATION: IAH JYV LOCALIZER  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (281) 2536463 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 01/10/2019  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 01/02/2019  
SIGNATURE NAME & TITLE: NICOLAS GARCIA, REP  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: PO BOX 610368  
DALLAS TX 75261  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 02/01/2008  
CONTACT ROLE: OWNCON  
CONTACT NAME: STACY HOWARD  
CONTACT TITLE: SECM  
ORGANIZATION: FEDERAL AVIATION ADMINISTRATION  
PHONE: (972) 6152347 0  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED  
OWNER NUMBER: CN603560525  
NAME: FEDERAL AVIATION ADMINISTRATION HOUSTON TRACON DISTRICT 190  
CONTACT ADDRESS: 2700 W TERMINAL RD STE 200  
HOUSTON TX 77032  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 02/01/2008  
CONTACT ROLE: OWNCON  
CONTACT NAME: SHEILA GRIFFITH  
CONTACT TITLE: 190 DISTRICT MGR

## Petroleum Storage Tanks (PST)

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: 2812308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **OPERATOR**

OPERATOR NUMBER: CN600436885

NAME: FEDERAL AVIATION ADMINISTRATION

CONTACT ADDRESS: 4005 GREENS RD  
HOUSTON TX 77032

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 02/01/2008

CONTACT ROLE: OWNOPRCON

CONTACT NAME: SHEILA GRIFFITH

CONTACT TITLE: 190 DISTRICT MGR

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: (281) 2308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

OPERATOR NUMBER: CN603560525

NAME: FEDERAL AVIATION ADMINISTRATION HOUSTON TRACON DISTRICT 190

CONTACT ADDRESS: 2700 W TERMINAL RD STE 200  
HOUSTON TX 77032

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 02/01/2008

CONTACT ROLE: OPRCON

CONTACT NAME: SHEILA GRIFFITH

CONTACT TITLE: 190 DISTRICT MGR

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: (281) 2308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **SELF-CERTIFICATION**

SELF-CERTIFICATION ID: 286253

SIGNATURE DATE: 05/03/2017

SIGNATURE NAME & TITLE: JESSE LOPEZ, REP OF DIST MGR

FILING STATUS: RENEWAL

REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 255994

SIGNATURE DATE: 08/03/2015

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR

FILING STATUS: RENEWAL

REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 238845

SIGNATURE DATE: 07/14/2014

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DM



## Petroleum Storage Tanks (PST)

FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **221675**  
SIGNATURE DATE: **07/01/2013**  
SIGNATURE NAME & TITLE: **SHEILA GRIFFITH, DIST MGR**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72580**  
SIGNATURE DATE: **06/28/2012**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72579**  
SIGNATURE DATE: **09/16/2010**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR HOUSTON TRACON**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72578**  
SIGNATURE DATE: **02/11/2009**  
SIGNATURE NAME & TITLE: **SHIELA F GRIFFITH, MGR HOUSTON DIST**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72577**  
SIGNATURE DATE: **02/05/2008**  
SIGNATURE NAME & TITLE: **SHEILA GRIFFITH, MGR HOU DISTRICT**  
FILING STATUS: **INITIAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72576**  
SIGNATURE DATE: **03/10/2003**  
SIGNATURE NAME & TITLE: **LEE TRAWEEK, MPS**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72575**  
SIGNATURE DATE: **01/25/2002**  
SIGNATURE NAME & TITLE: **SUSAN KINDER, MPS**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **72574**  
SIGNATURE DATE: **01/19/2001**

# Petroleum Storage Tanks (PST)

SIGNATURE NAME & TITLE: FELIPE VILLARREAL, MPS

FILING STATUS: INITIAL

REGISTRATION FLAG: YES

## **CONSTRUCTION NOTIFICATION**

**NO CONSTRUCTION NOTIFICATION DATA REPORTED FOR THIS FACILITY**

## **UNDERGROUND STORAGE TANK**

TANK ID: 1

NUMBER OF COMPARTMENTS: 1

INSTALLATION DATE: 01/01/1987

REGISTRATION DATE: 01/30/1989

TANK CAPACITY (GAL): 500

EMPTY TANK: NOT EMPTY

STATUS: REMOVED FROM GROUND

STATUS BEGIN DATE: 12/11/2018

INTERNAL PROTECTION DATE: NOT REPORTED

REGULATORY STATUS: EMERG POWER GENERATOR

TANK DESIGN SINGLE WALL: YES

TANK DESIGN DOUBLE WALL: NO

PIPE DESIGN SINGLE WALL: YES

PIPE DESIGN DOUBLE WALL: NO

## **TANK DETAILS**

MATERIAL:

**COMPOSITE**

CORROSION PROTECTION:

**CATHODIC PROTECTION - FACTORY INSTALLATION, COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: YES

CORROSION PROTECTION VARIANCE: NO VARIANCE

## **COMPARTMENT DETAILS**

UST COMPARTMENT ID: 79832

TANK ID: 1

COMPARTMENT LETTER: A

SUBSTANCES: NOT REPORTED

OTHER SUBSTANCES: NOT REPORTED

CAPACITY (GAL): 500

COMPARTMENT RELEASE DETECTION: MONTHLY TANK GAUGING (FOR EMER. GENERATOR TANKS)

SPILL CONTAINMENT AND OVERFILL PREVENTION: TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP, ALARM (SET @ <=90%)

**W3A OR 3B**

## **PIPING SYSTEMS**

MATERIAL: STEEL

CORROSION PROTECTION: CATHODIC PROTECTION - FACTORY INSTALLATION

EXTERNAL CONTAINMENT: NOT REPORTED

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**TRIENNIAL TIGHTNESS TEST (FOR SUCTION/GRAVITY PIPING)**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: YES

CORROSION PROTECTION VARIANCE: NO VARIANCE

TANK ID: 1

NUMBER OF COMPARTMENTS: 1

## Petroleum Storage Tanks (PST)

INSTALLATION DATE: **01/01/1987**

REGISTRATION DATE: **01/30/1989**

TANK CAPACITY (GAL): **500**

EMPTY TANK: **NOT EMPTY**

STATUS: **IN USE**

STATUS BEGIN DATE: **01/01/1987**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **EMERG POWER GENERATOR**

TANK DESIGN SINGLE WALL: **YES**

TANK DESIGN DOUBLE WALL: **NO**

PIPE DESIGN SINGLE WALL: **YES**

PIPE DESIGN DOUBLE WALL: **NO**

### **TANK DETAILS**

MATERIAL:

**COMPOSITE**

CORROSION PROTECTION:

**CATHODIC PROTECTION - FACTORY INSTALLATION, COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **79832**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **500**

COMPARTMENT RELEASE DETECTION: **MONTHLY TANK GAUGING (FOR EMER. GENERATOR TANKS)**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP, ALARM (SET @ <=90%)**

**W3A OR 3B**

### **PIPING SYSTEMS**

MATERIAL: **STEEL**

CORROSION PROTECTION: **CATHODIC PROTECTION - FACTORY INSTALLATION**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**TRIENNIAL TIGHTNESS TEST (FOR SUCTION/GRAVITY PIPING)**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 79001  
NAME: IAH OND ALSF  
ADDRESS: AIRPORT RUNWAY 26R-BZU  
HOUSTON, TX 77032  
COUNTY: HARRIS  
REGION: 12  
TYPE: EMERGENCY GENERATOR  
BEGIN DATE: 07/14/2003  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: YES  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: NOT REPORTED  
TITLE: NOT REPORTED  
ORGANIZATION: IAH OND ALSF  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (281) 2536463 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 08/03/2015  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 08/03/2015  
SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: PO BOX 610368  
DALLAS TX 75261  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 07/14/2003  
CONTACT ROLE: OWNCON  
CONTACT NAME: STACY HOWARD  
CONTACT TITLE: SECM  
ORGANIZATION: FEDERAL AVIATION ADMINISTRATION  
PHONE: (972) 6152347 0  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED  
OWNER NUMBER: CN603560525  
NAME: FEDERAL AVIATION ADMINISTRATION HOUSTON TRACON DISTRICT 190  
CONTACT ADDRESS: 2700 W TERMINAL RD STE 200  
HOUSTON TX 77032  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 07/14/2003  
CONTACT ROLE: OWNCON  
CONTACT NAME: SHEILA GRIFFITH  
CONTACT TITLE: 190 DISTRICT MGR

## Petroleum Storage Tanks (PST)

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: 2812308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **OPERATOR**

OPERATOR NUMBER: CN600436885

NAME: FEDERAL AVIATION ADMINISTRATION

CONTACT ADDRESS: 4005 GREENS RD  
HOUSTON TX 77032

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 07/14/2003

CONTACT ROLE: OWNOPRCON

CONTACT NAME: SHEILA GRIFFITH

CONTACT TITLE: 190 DISTRICT MGR

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: (281) 2308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

OPERATOR NUMBER: CN603560525

NAME: FEDERAL AVIATION ADMINISTRATION HOUSTON TRACON DISTRICT 190

CONTACT ADDRESS: 2700 W TERMINAL RD STE 200  
HOUSTON TX 77032

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 07/14/2003

CONTACT ROLE: OPRCON

CONTACT NAME: SHEILA GRIFFITH

CONTACT TITLE: 190 DISTRICT MGR

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: (281) 2308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **SELF-CERTIFICATION**

SELF-CERTIFICATION ID: 255992

SIGNATURE DATE: 08/03/2015

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR

FILING STATUS: RENEWAL

REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 238846

SIGNATURE DATE: 07/14/2014

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DM

FILING STATUS: RENEWAL

REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 221673

SIGNATURE DATE: 07/01/2013

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR

## Petroleum Storage Tanks (PST)

FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **216474**  
SIGNATURE DATE: **06/28/2012**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **216473**  
SIGNATURE DATE: **09/16/2010**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR HOUSTON TRACON**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **216472**  
SIGNATURE DATE: **02/11/2009**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR HOUSTON DIST**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **216471**  
SIGNATURE DATE: **02/05/2008**  
SIGNATURE NAME & TITLE: **SHEILA GRIFFITH, MGR HOU DISTRICT**  
FILING STATUS: **INITIAL**  
REGISTRATION FLAG: **YES**

### **CONSTRUCTION NOTIFICATION**

**NO CONSTRUCTION NOTIFICATION DATA REPORTED FOR THIS FACILITY**

### **UNDERGROUND STORAGE TANK**

TANK ID: <b>1</b>	NUMBER OF COMPARTMENTS: <b>1</b>
INSTALLATION DATE: <b>07/14/2003</b>	REGISTRATION DATE: <b>02/15/2008</b>
TANK CAPACITY (GAL): <b>2000</b>	EMPTY TANK: <b>NOT EMPTY</b>
STATUS: <b>REMOVED FROM GROUND</b>	STATUS BEGIN DATE: <b>10/31/2018</b>
INTERNAL PROTECTION DATE: <b>NOT REPORTED</b>	REGULATORY STATUS: <b>EMERG POWER GENERATOR</b>
TANK DESIGN SINGLE WALL: <b>NO</b>	TANK DESIGN DOUBLE WALL: <b>YES</b>
PIPE DESIGN SINGLE WALL: <b>NO</b>	PIPE DESIGN DOUBLE WALL: <b>YES</b>

### **TANK DETAILS**

MATERIAL:

#### **COMPOSITE**

CORROSION PROTECTION:

**EXTERNAL DIELECTRIC COATING/LAMINATE/TAPE/WRAP,CATHODIC PROTECTION - FACTORY INSTALLATION,CATHODIC PROTECTION - FIELD INSTALLATION,COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

## Petroleum Storage Tanks (PST)

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **182974**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **NOT REPORTED**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **2000**

COMPARTMENT RELEASE DETECTION: **AUTOMATIC TANK GAUGE TEST & INVENTORY CONTROL,MONTHLY TANK GAUGING (FOR EMER. GENERATOR TANKS),SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,FACTORY - BUILT SPILL CONTAINER/BUCKET/SUMP,DELIVERY SHUT-OFF VALVE,FLOW RESTRICTOR VALVE**

### **PIPING SYSTEMS**

MATERIAL: **NONMETALLIC FLEXIBLE PIPING**

CORROSION PROTECTION: **EXTERNAL DIELECTRIC COATING/LAMINATE/TAPE/WRAP,ISOLATED IN OPEN AREA/2ND**

### **CONTAINMENT**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**TRIENNIAL TIGHTNESS TEST (FOR SUCTION/GRAVITY PIPING)**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **1**

NUMBER OF COMPARTMENTS: **1**

INSTALLATION DATE: **07/14/2003**

REGISTRATION DATE: **02/15/2008**

TANK CAPACITY (GAL): **2000**

EMPTY TANK: **NOT EMPTY**

STATUS: **IN USE**

STATUS BEGIN DATE: **07/14/2003**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **EMERG POWER GENERATOR**

TANK DESIGN SINGLE WALL: **NO**

TANK DESIGN DOUBLE WALL: **YES**

PIPE DESIGN SINGLE WALL: **NO**

PIPE DESIGN DOUBLE WALL: **YES**

### **TANK DETAILS**

MATERIAL:

**COMPOSITE**

CORROSION PROTECTION:

**EXTERNAL DIELECTRIC COATING/LAMINATE/TAPE/WRAP,CATHODIC PROTECTION - FACTORY INSTALLATION,CATHODIC PROTECTION - FIELD INSTALLATION,COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **182974**

TANK ID: **1**

COMPARTMENT LETTER: **A**

## Petroleum Storage Tanks (PST)

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **2000**

COMPARTMENT RELEASE DETECTION: **AUTOMATIC TANK GAUGE TEST & INVENTORY CONTROL, MONTHLY TANK GAUGING (FOR EMER. GENERATOR TANKS), SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP, FACTORY - BUILT SPILL CONTAINER/BUCKET/SUMP, DELIVERY SHUT-OFF VALVE, FLOW RESTRICTOR VALVE**

### **PIPING SYSTEMS**

MATERIAL: **NONMETALLIC FLEXIBLE PIPING**

CORROSION PROTECTION: **EXTERNAL DIELECTRIC COATING/LAMINATE/TAPE/WRAP, ISOLATED IN OPEN AREA/2ND**

### **CONTAINMENT**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**TRIENNIAL TIGHTNESS TEST (FOR SUCTION/GRAVITY PIPING)**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

---

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# Petroleum Storage Tanks (PST)

**MAP ID# 1**

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

## FACILITY INFORMATION

ID#: 79002  
NAME: IAH BZU ALSF  
ADDRESS: AIRPORT RUNWAY 08L-BZU  
HOUSTON, TX 77032  
COUNTY: HARRIS  
REGION: 12  
TYPE: EMERGENCY GENERATOR  
BEGIN DATE: 07/14/2003  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: YES  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: NOT REPORTED  
TITLE: NOT REPORTED  
ORGANIZATION: IAH BZU ALSF  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (281) 2536463 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 08/03/2015  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 08/03/2015  
SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600436885  
NAME: FEDERAL AVIATION ADMINISTRATION  
CONTACT ADDRESS: PO BOX 610368  
DALLAS TX 75261  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 07/14/2003  
CONTACT ROLE: OWNCON  
CONTACT NAME: STACY HOWARD  
CONTACT TITLE: SECM  
ORGANIZATION: FEDERAL AVIATION ADMINISTRATION  
PHONE: (972) 6152347 0  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED  
OWNER NUMBER: CN603560525  
NAME: FEDERAL AVIATION ADMINISTRATION HOUSTON TRACON DISTRICT 190  
CONTACT ADDRESS: 2700 W TERMINAL RD STE 200  
HOUSTON TX 77032  
TYPE: FEDERAL GOVERNMENT  
BEGIN DATE: 07/14/2003  
CONTACT ROLE: OWNCON  
CONTACT NAME: SHEILA GRIFFITH  
CONTACT TITLE: 190 DISTRICT MGR

## Petroleum Storage Tanks (PST)

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: 2812308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **OPERATOR**

OPERATOR NUMBER: CN600436885

NAME: FEDERAL AVIATION ADMINISTRATION

CONTACT ADDRESS: 4005 GREENS RD  
HOUSTON TX 77032

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 07/14/2003

CONTACT ROLE: OWNOPRCON

CONTACT NAME: SHEILA GRIFFITH

CONTACT TITLE: 190 DISTRICT MGR

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: (281) 2308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

OPERATOR NUMBER: CN603560525

NAME: FEDERAL AVIATION ADMINISTRATION HOUSTON TRACON DISTRICT 190

CONTACT ADDRESS: 2700 W TERMINAL RD STE 200  
HOUSTON TX 77032

TYPE: FEDERAL GOVERNMENT

BEGIN DATE: 07/14/2003

CONTACT ROLE: OPRCON

CONTACT NAME: SHEILA GRIFFITH

CONTACT TITLE: 190 DISTRICT MGR

ORGANIZATION: FAA HOUSTON TRACON DISTRICT 190

PHONE: (281) 2308475 0

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **SELF-CERTIFICATION**

SELF-CERTIFICATION ID: 255991

SIGNATURE DATE: 08/03/2015

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR

FILING STATUS: RENEWAL

REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 238847

SIGNATURE DATE: 07/14/2014

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DM

FILING STATUS: RENEWAL

REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 221676

SIGNATURE DATE: 07/01/2013

SIGNATURE NAME & TITLE: SHEILA GRIFFITH, DIST MGR

## Petroleum Storage Tanks (PST)

FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **216477**  
SIGNATURE DATE: **06/28/2012**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **216476**  
SIGNATURE DATE: **09/16/2010**  
SIGNATURE NAME & TITLE: **SHEILA F GRIFFITH, MGR HOUSTON TRACON**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **216475**  
SIGNATURE DATE: **02/05/2008**  
SIGNATURE NAME & TITLE: **SHEILA GRIFFITH, MGR HOU DISTRICT**  
FILING STATUS: **INITIAL**  
REGISTRATION FLAG: **YES**

### **CONSTRUCTION NOTIFICATION**

NOTIFICATION CONSTRUCTION ID: **30895**  
APPLICATION RECEIVED DATE: **02/09/2017**  
SCHEDULE CONSTRUCTION DATE: **02/27/2017**  
GENERAL DESCRIPTION OF PROPOSED CONSTRUCTION:

#### **REMOVAL OF ONE (1) 2,000 GALLON UNDERGROUND STORAGE TANK**

NOTIFICATION CONSTRUCTION ID: **20668**  
APPLICATION RECEIVED DATE: **05/27/2003**  
SCHEDULE CONSTRUCTION DATE: **06/26/2003**  
GENERAL DESCRIPTION OF PROPOSED CONSTRUCTION:

**NOT REPORTED**

### **UNDERGROUND STORAGE TANK**

TANK ID: <b>1</b>	NUMBER OF COMPARTMENTS: <b>1</b>
INSTALLATION DATE: <b>07/14/2003</b>	REGISTRATION DATE: <b>02/15/2008</b>
TANK CAPACITY (GAL): <b>2000</b>	EMPTY TANK: <b>NOT EMPTY</b>
STATUS: <b>REMOVED FROM GROUND</b>	STATUS BEGIN DATE: <b>03/03/2017</b>
INTERNAL PROTECTION DATE: <b>NOT REPORTED</b>	REGULATORY STATUS: <b>EMERG POWER GENERATOR</b>
TANK DESIGN SINGLE WALL: <b>NO</b>	TANK DESIGN DOUBLE WALL: <b>YES</b>
PIPE DESIGN SINGLE WALL: <b>NO</b>	PIPE DESIGN DOUBLE WALL: <b>YES</b>

### **TANK DETAILS**

MATERIAL:

**COMPOSITE**

CORROSION PROTECTION:

**EXTERNAL DIELECTRIC COATING/LAMINATE/TAPE/WRAP,CATHODIC PROTECTION - FACTORY INSTALLATION,CATHODIC PROTECTION - FIELD INSTALLATION,COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**

EXTERNAL CONTAINMENT:

## Petroleum Storage Tanks (PST)

### NOT REPORTED

#### TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

#### COMPARTMENT DETAILS

UST COMPARTMENT ID: **182975**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **NOT REPORTED**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **2000**

COMPARTMENT RELEASE DETECTION: **MONITORING OF SECONDARY CONTAINMENT BARRIER,AUTOMATIC TANK GAUGE TEST & INVENTORY CONTROL,MONTHLY TANK GAUGING (FOR EMER. GENERATOR TANKS),SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,FACTORY - BUILT SPILL CONTAINER/BUCKET/SUMP,DELIVERY SHUT-OFF VALVE,FLOW RESTRICTOR VALVE**

#### PIPING SYSTEMS

MATERIAL: **NONMETALLIC FLEXIBLE PIPING**

CORROSION PROTECTION: **NONMETALLIC FLEXIBLE PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

#### CONNECTORS & VALVES:

### NOT REPORTED

PIPING RELEASE DETECTION:

**TRIENNIAL TIGHTNESS TEST (FOR SUCTION/GRAVITY PIPING)**

#### PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **1**

NUMBER OF COMPARTMENTS: **1**

INSTALLATION DATE: **07/14/2003**

REGISTRATION DATE: **02/15/2008**

TANK CAPACITY (GAL): **2000**

EMPTY TANK: **NOT EMPTY**

STATUS: **IN USE**

STATUS BEGIN DATE: **07/14/2003**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **EMERG POWER GENERATOR**

TANK DESIGN SINGLE WALL: **NO**

TANK DESIGN DOUBLE WALL: **YES**

PIPE DESIGN SINGLE WALL: **NO**

PIPE DESIGN DOUBLE WALL: **YES**

#### TANK DETAILS

MATERIAL:

### COMPOSITE

CORROSION PROTECTION:

**EXTERNAL DIELECTRIC COATING/LAMINATE/TAPE/WRAP,CATHODIC PROTECTION - FACTORY INSTALLATION,CATHODIC PROTECTION - FIELD INSTALLATION,COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**

EXTERNAL CONTAINMENT:

### NOT REPORTED

#### TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

#### COMPARTMENT DETAILS

## Petroleum Storage Tanks (PST)

UST COMPARTMENT ID: **182975**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **2000**

COMPARTMENT RELEASE DETECTION: **MONITORING OF SECONDARY CONTAINMENT BARRIER,AUTOMATIC TANK GAUGE TEST & INVENTORY CONTROL,MONTHLY TANK GAUGING (FOR EMER. GENERATOR TANKS),SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,FACTORY - BUILT SPILL CONTAINER/BUCKET/SUMP,DELIVERY SHUT-OFF VALVE,FLOW RESTRICTOR VALVE**

### **PIPING SYSTEMS**

MATERIAL: **NONMETALLIC FLEXIBLE PIPING**

CORROSION PROTECTION: **NONMETALLIC FLEXIBLE PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**TRIENNIAL TIGHTNESS TEST (FOR SUCTION/GRAVITY PIPING)**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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## Superfund Enterprise Management System (SEMS)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **FACILITY INFORMATION**

EPA ID#: TXN000606821

SITE ID#: 0606821

NAME: IAS AIR SERVICES PESTICIDE SPILL

ADDRESS: GEORGE BUSH AIRPORT  
HOUSTON, TX NOT REPORTED

COUNTY: HARRIS

FEDERAL FACILITY: NO - NOT A FEDERAL FACILITY

SUPERFUND ALTERNATIVE AGREEMENT IN PLACE?: NO

NPL: NOT ON THE NPL

NON NPL STATUS: REMOVAL ONLY SITE (NO SITE ASSESSMENT WORK NEEDED)

Below information was gathered from the prior CERCLIS update completed in 10/2013 update:

NON-NPL STATUS DATE: 09/24/07

PHYSICAL CLASSIFICATION OF SITE / INCIDENT: NO INFORMATION AVAILABLE

SUPERFUND SITE INFORMATION: [CLICK HERE](#)

SITE DESCRIPTION - NO SITE DESCRIPTION INFORMATION AVAILABLE -

SITE HISTORY - NO SITE HISTORY INFORMATION AVAILABLE -

### ACTIONS

TYPE: PJ - POTENTIALLY RESPONSIBLE PARTY EMERGENCY REMOVAL - EMERGENCY

START DATE: 09/04/2007

COMPLETION DATE: 09/04/2007

ACTION TYPE DEFINITION:

THE PRP OR THEIR CONTRACTORS HAVE BEGUN CONSTRUCTION WORK ON-SITE IN RESPONSE TO AN EMERGENCY INCIDENT, AND EPA PROVIDES ON-SITE TECHNICAL OVERSIGHT AND/OR IS PART OF AN INCIDENT COMMAND SYSTEM/UNIFIED COMMAND. THE DATE OF CONSTRUCTION IS REPORTED IN WASTELAN AS THE PRP EMERGENCY REMOVAL ACTUAL START DATE.

CONTAMINANTS - NO CONTAMINATION INFORMATION AVAILABLE -

LISTING OF PUBLISHED INSTITUTIONAL CONTROL SITE REPORT - NOT AN INSTITUTIONAL CONTROL SITE -

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## Tier II Chemical Reporting Program Facilities (TIERII)

[MAP ID# 1](#)

Distance from Property: 0.000 mi. (0 ft.) X  
Elevation: 86 ft. (Higher than TP)

### **SITE INFORMATION**

UNIQUE ID: 3K4VCB04U8WA

SITE ID: FATR20073K4VCB04U8WA

NAME: IAH - HOUSTON, BUSH INT'L, TX - AMERICAN AIRLINES, INC.

ADDRESS: GEORGE BUSH INTERCONTINENTAL AIRPORT 3100 N. TERMINAL ROAD  
HOUSTON, TX 77032

SIGNED DATE: 1/4/2008

VALIDATION REPORT: THIS FACILITY PASSED ALL VALIDATION CHECKS.

MAILING ADDRESS: 4333 AMON CARTER BLVD., MD 5285  
FT. WORTH, TX 76155

### **SITE DETAILS**

CHEMICAL LOCATION:

#### **AUTO SHOP**

CHEMICAL AMOUNT: 11400 POUNDS

CHEMICAL NAME: ETHYLENE GLYCOL (DEICING FLUID)

MAXIMUM AMOUNT: 11400 POUNDS

FIRE: NOT REPORTED      GAS: NOT REPORTED      LIQUID: YES      SOLID: NOT REPORTED

PURE: NOT REPORTED      MIXTURE: YES

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## Alternative Fueling Stations (ALTFUELS)

**MAP ID# 2**

Distance from Property: 0.018 mi. (95 ft.) N  
Elevation: 81 ft. (Lower than TP)

### FACILITY INFORMATION

GEOSEARCH ID: **162752**

UNIQUE IDENTIFIER FOR THIS SPECIFIC STATION: **162752**

STATION NAME: **FASTPARK**

ADDRESS: **6655 WILL CLAYTON PKWY  
HUMBLE, TX 77338**

INTERSECTION DIRECTIONS: **IAH 1; -**

**IAH 2; -**

**IAH 3; -**

**IAH 4; -**

STATION PHONE: **888-758-4389**

STATION CURRENT STATUS: **OPEN: THE STATION IS OPEN.**

TYPE OF ALTERNATIVE FUEL THE STATION PROVIDES: **ELECTRIC**

OWNER TYPE: **NOT REPORTED**

FEDERAL AGENCY ID: **NOT REPORTED**

FEDERAL AGENCY NAME: **NOT REPORTED**

DATE THAT THE STATION BEGAN OFFERING THE FUEL: **NOT REPORTED**

DATE THE STATION'S DETAILS WERE LAST CONFIRMED: **10/28/2020**

TIME THE STATION'S DETAILS WERE LAST UPDATED (ISO 8601 FORMAT): **2020-10-28 09:27:48 UTC**

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## Alternative Fueling Stations (ALTFUELS)

**MAP ID# 2**

Distance from Property: 0.018 mi. (95 ft.) N  
Elevation: 81 ft. (Lower than TP)

### **FACILITY INFORMATION**

GEOSEARCH ID: **60496**

UNIQUE IDENTIFIER FOR THIS SPECIFIC STATION: **60496**

STATION NAME: **FASTPARK**

ADDRESS: **6655 WILL CLAYTON PKWY  
HUMBLE, TX 77338**

INTERSECTION DIRECTIONS: **IAH 1; -**

**IAH 2; -**

**IAH 3; -**

**IAH 4; -**

STATION PHONE: **888-758-4389**

STATION CURRENT STATUS: **OPEN: THE STATION IS OPEN.**

TYPE OF ALTERNATIVE FUEL THE STATION PROVIDES: **ELECTRIC**

OWNER TYPE: **NOT REPORTED**

FEDERAL AGENCY ID: **NOT REPORTED**

FEDERAL AGENCY NAME: **NOT REPORTED**

DATE THAT THE STATION BEGAN OFFERING THE FUEL: **NOT REPORTED**

DATE THE STATION'S DETAILS WERE LAST CONFIRMED: **5/5/2020**

TIME THE STATION'S DETAILS WERE LAST UPDATED (ISO 8601 FORMAT): **2020-05-05 09:19:59 UTC**

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## Enforcement and Compliance History Information (ECHOR06)

**MAP ID# 2**

Distance from Property: 0.018 mi. (95 ft.) N  
Elevation: 81 ft. (Lower than TP)

### **FACILITY INFORMATION**

UNIQUE ID: 110070366578

REGISTRY ID: 110070366578

NAME: FAST PARK BAYOU RELOCATION AND SITE IMPROVEMENT PLAN

ADDRESS: 6655 WILL CLAYTON PKWY  
HUMBLE, TX 77338

COUNTY: HARRIS COUNTY

FACILITY LINK: [Facility Detail Report](#)

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## Enforcement and Compliance History Information (ECHOR06)

**MAP ID# 2**

Distance from Property: 0.018 mi. (95 ft.) N  
Elevation: 81 ft. (Lower than TP)

### **FACILITY INFORMATION**

UNIQUE ID: 110070500099

REGISTRY ID: 110070500099

NAME: FASTPARK 2A 2B

ADDRESS: 6655 WILL CLAYTON PKWY  
HUMBLE, TX 77338

COUNTY: NOT REPORTED

FACILITY LINK: [Facility Detail Report](#)

---

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## Facility Registry System (FRSTX)

**MAP ID# 2**

Distance from Property: 0.018 mi. (95 ft.) N  
Elevation: 81 ft. (Lower than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110033395680

NAME: ALLRIGHT AIRPORT PARKING

LOCATION ADDRESS: 6655 WILL CLAYTON PKWY  
HUMBLE, TX 77338-8137

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

**ALLRIGHT AIRPORT PARKING**

PROGRAM/S LISTED FOR THIS FACILITY

**TX-TCEQ ACR - TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY**

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

**NO SIC DATA REPORTED**

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

**NO NAICS DATA REPORTED**

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## Facility Registry System (FRSTX)

[MAP ID# 2](#)

Distance from Property: 0.018 mi. (95 ft.) N  
Elevation: 81 ft. (Lower than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110070179570

NAME: 6655 WILL CLAYTON PARKWAY CLEARING PROJECT

LOCATION ADDRESS: 6655 WILL CLAYTON PKWY  
HOUSTON, TX 77032

COUNTY: HARRIS

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

NO ALTERNATIVE NAME(S) LISTED FOR THIS FACILITY

PROGRAM/S LISTED FOR THIS FACILITY

TX-TCEQ ACR - TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

NO SIC DATA REPORTED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

**MAP ID# 2**

Distance from Property: 0.018 mi. (95 ft.) N  
Elevation: 81 ft. (Lower than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110070366578

NAME: FAST PARK BAYOU RELOCATION AND SITE IMPROVEMENT PLAN

LOCATION ADDRESS: 6655 WILL CLAYTON PKWY  
HUMBLE, TX 77338-8137

COUNTY: HARRIS COUNTY

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

NO ALTERNATIVE NAME(S) LISTED FOR THIS FACILITY

PROGRAM/S LISTED FOR THIS FACILITY

NPDES - NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

NO SIC DATA REPORTED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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## Facility Registry System (FRSTX)

**MAP ID# 2**

Distance from Property: 0.018 mi. (95 ft.) N  
Elevation: 81 ft. (Lower than TP)

### **FACILITY INFORMATION**

REGISTRY ID: 110070500099

NAME: FASTPARK 2A 2B

LOCATION ADDRESS: 6655 WILL CLAYTON PKWY  
HUMBLE, TX 77338

COUNTY: NOT REPORTED

EPA REGION: 06

FEDERAL FACILITY: NOT REPORTED

TRIBAL LAND: NOT REPORTED

ALTERNATIVE NAME/S:

NO ALTERNATIVE NAME(S) LISTED FOR THIS FACILITY

PROGRAM/S LISTED FOR THIS FACILITY

NPDES - NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

NO SIC DATA REPORTED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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# Integrated Compliance Information System National Pollutant Discharge Elimination System (ICISNPDES)

MAP ID# 2

Distance from Property: 0.018 mi. (95 ft.) N  
Elevation: 81 ft. (Lower than TP)

## **FACILITY INFORMATION**

GEOSEARCH ID: TXR15611UINPDES  
NPDES ID: TXR15611U FACILITY #: 110070500099  
NAME: FASTPARK 2A 2B  
PHYSICAL ADDRESS: 6655 WILL CLAYTON PKWY  
HUMBLE TX 77338  
COUNTY: NOT REPORTED  
FACILITY TYPE: CORPORATION  
IMPAIRED WATERS: NOT REPORTED

## **STANDARD INDUSTRIAL CLASSIFICATION**

- NOT REPORTED -

## **PERMITS**

FACILITY TYPE INDICATOR: NON-POTABLE WATER  
PERMIT TYPE: GENERAL PERMIT COVERED FACILITY  
MAJOR MINOR FACILITY: MINOR DISCHARGER  
PERMIT STATUS: TERMINATED  
WATER BODY: GARNERS BAYOU  
PERMIT NAME: ENTERPRISE COMMERCIAL PAVING, INC.  
AGENCY TYPE: STATE  
ORIGINAL ISSUE DATE: 1/16/2019  
ISSUE DATE: 1/16/2019  
ISSUING AGENCY: NOT REPORTED  
EFFECTIVE DATE: 2/1/2019  
EXPIRATION DATE: 3/4/2023  
RETIREMENT DATE: NOT REPORTED  
TERMINATION DATE: 9/26/2019  
PERMIT COMPLIANCE STATUS: YES  
PERMIT SUBJECT TO DMR RUN: NOT REPORTED  
REPORTABLE NONCOMPLIANCE TRACKING IS ON: YES

## **INSPECTIONS**

- NO INSPECTIONS REPORTED -

## **HISTORIC COMPLIANCE**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): 20201  
HISTORIC NON-COMPLIANCE: UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING  
NUMBER OF E90 VIOLATIONS: 0  
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: 0  
NUMBER OF SINGLE EVENT VIOLATIONS: 0  
NUMBER OF PERMIT SCHEDULE VIOLATIONS: 0

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): 20194  
HISTORIC NON-COMPLIANCE: UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING



# **Integrated Compliance Information System National Pollutant Discharge Elimination System (ICISNPDES)**

NUMBER OF E90 VIOLATIONS: 0

NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: 0

NUMBER OF SINGLE EVENT VIOLATIONS: 0

NUMBER OF PERMIT SCHEDULE VIOLATIONS: 0

## **SINGLE EVENT VIOLATIONS**

- NO SINGLE EVENT VIOLATIONS REPORTED -

## **FORMAL ENFORCEMENT ACTIONS**

- NO FORMAL ENFORCEMENT ACTIONS REPORTED -

## **EFFLUENT VIOLATIONS**

- NOT REPORTED -

## **EFFLUENT VIOLATIONS contd..**

- NOT REPORTED -

## **EFFLUENT VIOLATIONS contd..**

- NOT REPORTED -

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# Integrated Compliance Information System National Pollutant Discharge Elimination System (ICISNPDES)

**MAP ID# 2**

Distance from Property: 0.018 mi. (95 ft.) N  
Elevation: 81 ft. (Lower than TP)

## **FACILITY INFORMATION**

GEOSEARCH ID: TXR15733KINPDES  
NPDES ID: TXR15733K FACILITY #: 110070366578  
NAME: FAST PARK BAYOU RELOCATION AND SITE IMPROVEMENT PLAN  
PHYSICAL ADDRESS: 6655 WILL CLAYTON PKWY  
HUMBLE TX 77338-8137  
COUNTY: NOT REPORTED  
FACILITY TYPE: CORPORATION  
IMPAIRED WATERS: NOT REPORTED

## **STANDARD INDUSTRIAL CLASSIFICATION**

- NOT REPORTED -

## **PERMITS**

FACILITY TYPE INDICATOR: NON-POTABLE WATER  
PERMIT TYPE: GENERAL PERMIT COVERED FACILITY  
MAJOR MINOR FACILITY: MINOR DISCHARGER  
PERMIT STATUS: TERMINATED  
WATER BODY: GARNERS BAYOU  
PERMIT NAME: ENTERPRISE COMMERCIAL PAVING, INC.  
AGENCY TYPE: STATE  
ORIGINAL ISSUE DATE: 4/2/2018  
ISSUE DATE: 4/2/2018  
ISSUING AGENCY: NOT REPORTED  
EFFECTIVE DATE: 5/1/2018  
EXPIRATION DATE: 3/5/2023  
RETIREMENT DATE: NOT REPORTED  
TERMINATION DATE: 9/26/2019  
PERMIT COMPLIANCE STATUS: YES  
PERMIT SUBJECT TO DMR RUN: NOT REPORTED  
REPORTABLE NONCOMPLIANCE TRACKING IS ON: YES

## **INSPECTIONS**

- NO INSPECTIONS REPORTED -

## **HISTORIC COMPLIANCE**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): 20201  
HISTORIC NON-COMPLIANCE: UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING  
NUMBER OF E90 VIOLATIONS: 0  
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: 0  
NUMBER OF SINGLE EVENT VIOLATIONS: 0  
NUMBER OF PERMIT SCHEDULE VIOLATIONS: 0

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): 20194  
HISTORIC NON-COMPLIANCE: UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING

# **Integrated Compliance Information System National Pollutant Discharge Elimination System (ICISNPDES)**

NUMBER OF E90 VIOLATIONS: 0  
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: 0  
NUMBER OF SINGLE EVENT VIOLATIONS: 0  
NUMBER OF PERMIT SCHEDULE VIOLATIONS: 0

## **SINGLE EVENT VIOLATIONS**

- NO SINGLE EVENT VIOLATIONS REPORTED -

## **FORMAL ENFORCEMENT ACTIONS**

- NO FORMAL ENFORCEMENT ACTIONS REPORTED -

## **EFFLUENT VIOLATIONS**

- NOT REPORTED -

## **EFFLUENT VIOLATIONS contd..**

- NOT REPORTED -

## **EFFLUENT VIOLATIONS contd..**

- NOT REPORTED -

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# Petroleum Storage Tanks (PST)

MAP ID# 2

Distance from Property: 0.018 mi. (95 ft.) N  
Elevation: 81 ft. (Lower than TP)

## FACILITY INFORMATION

ID#: 43649  
NAME: ALLRIGHT AIRPORT PARKING  
ADDRESS: 6655 WILL CLAYTON PKWY  
HUMBLE, TX 77338  
COUNTY: HARRIS  
REGION: 12  
TYPE: FLEET REFUELING  
BEGIN DATE: 02/05/1987  
STATUS: ACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: NO  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 1

## CONTACT INFORMATION

NAME: STEVE HOWARD  
TITLE: AIRPORT MGR  
ORGANIZATION: ALLRIGHT AIRPORT PARKING  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (713) 2371665 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 05/30/1986  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 05/22/1986  
SIGNATURE NAME & TITLE: STEVE HOWARD, AIRPORT MGR.  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN600933618  
NAME: ALLRIGHT PARKING TEXAS INC  
CONTACT ADDRESS: OWNER ADDRESS NOT REPORTED  
CITY NOT REPORTED

TYPE: ORGANIZATION  
BEGIN DATE: 02/05/1987  
CONTACT ROLE: NOT REPORTED  
CONTACT NAME: NOT REPORTED  
CONTACT TITLE: NOT REPORTED  
ORGANIZATION: NOT REPORTED  
PHONE: NOT REPORTED  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED

## OPERATOR

NO OPERATOR INFORMATION REPORTED

## SELF-CERTIFICATION

-NO SELF-CERTIFICATION INFORMATION REPORTED-

## CONSTRUCTION NOTIFICATION

NO CONSTRUCTION NOTIFICATION DATA REPORTED FOR THIS FACILITY

## UNDERGROUND STORAGE TANK

TANK ID: 1  
INSTALLATION DATE: 08/31/1987  
NUMBER OF COMPARTMENTS: 1  
REGISTRATION DATE: 05/30/1986

## Petroleum Storage Tanks (PST)

TANK CAPACITY (GAL): **NOT REPORTED**      EMPTY TANK: **NOT EMPTY**  
STATUS: **REMOVED FROM GROUND**      STATUS BEGIN DATE: **07/15/1991**  
INTERNAL PROTECTION DATE: **NOT REPORTED**      REGULATORY STATUS: **FULLY REGULATED**  
TANK DESIGN SINGLE WALL: **NO**      TANK DESIGN DOUBLE WALL: **NO**  
PIPE DESIGN SINGLE WALL: **NO**      PIPE DESIGN DOUBLE WALL: **NO**

### TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **101226**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **0**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### PIPING SYSTEMS

MATERIAL: **NOT REPORTED**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **2**

INSTALLATION DATE: **08/31/1987**

TANK CAPACITY (GAL): **NOT REPORTED**

STATUS: **REMOVED FROM GROUND**

INTERNAL PROTECTION DATE: **NOT REPORTED**

TANK DESIGN SINGLE WALL: **NO**

PIPE DESIGN SINGLE WALL: **NO**

NUMBER OF COMPARTMENTS: **1**

REGISTRATION DATE: **05/30/1986**

EMPTY TANK: **NOT EMPTY**

STATUS BEGIN DATE: **07/15/1991**

REGULATORY STATUS: **FULLY REGULATED**

TANK DESIGN DOUBLE WALL: **NO**

PIPE DESIGN DOUBLE WALL: **NO**

### TANK DETAILS

MATERIAL:

**STEEL**

## Petroleum Storage Tanks (PST)

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **101227**

TANK ID: **2**

COMPARTMENT LETTER: **A**

SUBSTANCES: **EMPTY**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **0**

COMPARTMENT RELEASE DETECTION: **NOT REPORTED**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### **PIPING SYSTEMS**

MATERIAL: **NOT REPORTED**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

AST ID #: **154500**      MULTIPLE COMPARTMENT FLAG: **NO**

TANK ID: **1**      REGISTRATION DATE: **05/30/1986**

INSTALLATION DATE: **01/01/1991**      STATUS BEGIN DATE: **01/01/1991**

TANK CAPACITY (GAL): **10000**      REGULATORY STATUS: **FULLY REGULATED**

STATUS: **IN USE**      SUBSTANCES: **DIESEL**

### **MATERIAL OF CONSTRUCTION**

STEEL: **YES**      CORRUGATED METAL: **NO**

FIBERGLASS: **NO**      CONCRETE: **NO**

ALUMINIUM: **NO**

### **CONTAINMENT**

EARTHEN DIKE: **NO**      CONCRETE: **YES**

CONTAINMENT LINER: **NO**      NONE: **NO**

STAGE I VAPOR RECOVERY: **NOT REPORTED**

STAGE I INSTALLATION DATE: **NOT REPORTED**

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# Leaking Petroleum Storage Tanks (LPST)

MAP ID# 3

Distance from Property: 0.024 mi. (127 ft.) W  
Elevation: 82 ft. (Lower than TP)

## FACILITY INFORMATION

GEOSEARCH ID: 116178  
LPST ID: 116178  
FACILITY ID: 74865  
NAME: **HANDI STOP 40**  
ADDRESS: **6355 WILL CLAYTON PKWY**  
**HUMBLE, TX 77338**

## LEAKING TANK DETAILS

LPST ID: 116178  
NAME: **HANDI STOP 40**  
FACILITY LOCATION: **NOT REPORTED**  
PRIORITY CODE: **4.1 - GW IMPACTED NO APPARENT THREATS OR IMPACTS TO RECEPTORS**  
CORRECTIVE ACTION STATUS CODE: **1 - RELEASE DETERMINATION**  
CORRECTIVE ACTION START DATE: **NOT REPORTED**  
DISCOVERED DATE: **12/18/2002**  
REPORTED DATE: **12/18/2002**  
ENTERED DATE: **10/07/2004**  
CLOSURE DATE: **12/31/3000**

4.1. groundwater affected  
1 preassessment.confirmed release

## PRP INFORMATION

NAME: **NOT REPORTED**  
ADDRESS: **ADDRESS NOT REPORTED**  
**HOUSTON TX 77074**  
CONTACT: **NOT REPORTED**  
PHONE: **NOT REPORTED**

## UNDERGROUND STORAGE TANK

TANK ID: 1	NUMBER OF COMPARTMENTS: 1
INSTALLATION DATE: 11/01/2001	REGISTRATION DATE: 01/10/2002
TANK CAPACITY (GAL): 12000	EMPTY TANK: <b>NOT EMPTY</b>
STATUS: <b>IN USE</b>	STATUS BEGIN DATE: 11/01/2001
INTERNAL PROTECTION DATE: <b>NOT REPORTED</b>	REGULATORY STATUS: <b>FULLY REGULATED</b>
TANK DESIGN SINGLE WALL: <b>YES</b>	TANK DESIGN DOUBLE WALL: <b>NO</b>
PIPE DESIGN SINGLE WALL: <b>YES</b>	PIPE DESIGN DOUBLE WALL: <b>NO</b>

## TANK DETAILS

MATERIAL:  
**STEEL**  
CORROSION PROTECTION:  
**COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**  
EXTERNAL CONTAINMENT:  
**NOT REPORTED**  
TANK COMPLIANCE FLAG  
CORROSION PROTECTION COMPLIANCE FLAG: **YES**

## Leaking Petroleum Storage Tanks (LPST)

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **167771**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **GASOLINE**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **12000**

COMPARTMENT RELEASE DETECTION: **AUTOMATIC TANK GAUGE TEST & INVENTORY CONTROL,SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,FACTORY - BUILT SPILL CONTAINER/BUCKET/SUMP,FLOW RESTRICTOR VALUE**

### **PIPING SYSTEMS**

MATERIAL: **NONMETALLIC FLEXIBLE PIPING**

CORROSION PROTECTION: **NONMETALLIC FLEXIBLE PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

CORROSION PROTECTION: **NONMETALLIC FLEXIBLE PIPING (NONCORRODIBLE)**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **2**

NUMBER OF COMPARTMENTS: **1**

INSTALLATION DATE: **11/01/2001**

REGISTRATION DATE: **01/10/2002**

TANK CAPACITY (GAL): **12000**

EMPTY TANK: **NOT EMPTY**

STATUS: **IN USE**

STATUS BEGIN DATE: **11/01/2001**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **FULLY REGULATED**

TANK DESIGN SINGLE WALL: **YES**

TANK DESIGN DOUBLE WALL: **NO**

PIPE DESIGN SINGLE WALL: **YES**

PIPE DESIGN DOUBLE WALL: **NO**

### **TANK DETAILS**

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **167772**

TANK ID: **2**

COMPARTMENT LETTER: **A**

SUBSTANCES: **GASOLINE**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **12000**



## Leaking Petroleum Storage Tanks (LPST)

COMPARTMENT RELEASE DETECTION: **AUTOMATIC TANK GAUGE TEST & INVENTORY CONTROL,SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,FACTORY - BUILT SPILL CONTAINER/BUCKET/SUMP,FLOW RESTRICTOR VALUE**

### PIPING SYSTEMS

MATERIAL: **NONMETALLIC FLEXIBLE PIPING**

CORROSION PROTECTION: **NONMETALLIC FLEXIBLE PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

CORROSION PROTECTION: **NONMETALLIC FLEXIBLE PIPING (NONCORRODIBLE)**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **3**

NUMBER OF COMPARTMENTS: **1**

INSTALLATION DATE: **11/01/2001**

REGISTRATION DATE: **01/10/2002**

TANK CAPACITY (GAL): **12000**

EMPTY TANK: **NOT EMPTY**

STATUS: **IN USE**

STATUS BEGIN DATE: **11/01/2001**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **FULLY REGULATED**

TANK DESIGN SINGLE WALL: **YES**

TANK DESIGN DOUBLE WALL: **NO**

PIPE DESIGN SINGLE WALL: **YES**

PIPE DESIGN DOUBLE WALL: **NO**

### TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **167773**

TANK ID: **3**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **12000**

COMPARTMENT RELEASE DETECTION: **AUTOMATIC TANK GAUGE TEST & INVENTORY CONTROL,SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,FACTORY - BUILT SPILL CONTAINER/BUCKET/SUMP,FLOW RESTRICTOR VALUE**

### PIPING SYSTEMS

MATERIAL: **NONMETALLIC FLEXIBLE PIPING**

CORROSION PROTECTION: **NONMETALLIC FLEXIBLE PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

## **Leaking Petroleum Storage Tanks (LPST)**

### CONNECTORS & VALVES:

**NOT REPORTED**

CORROSION PROTECTION: **NONMETALLIC FLEXIBLE PIPING (NONCORRODIBLE)**

### PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

**MAP ID# 3**

Distance from Property: 0.024 mi. (127 ft.) W  
Elevation: 82 ft. (Lower than TP)

## FACILITY INFORMATION

ID#: 74865  
NAME: **HANDI STOP 40**  
ADDRESS: **6355 WILL CLAYTON PKWY**  
**HUMBLE, TX 77338**  
COUNTY: **HARRIS**  
REGION: **12**  
TYPE: **RETAIL**  
BEGIN DATE: **11/01/2001**  
STATUS: **ACTIVE**  
EXEMPT STATUS: **NO**  
RECORDS OFF-SITE: **NO**  
NUMBER OF ACTIVE UNDERGROUND TANKS: **3**  
NUMBER OF ACTIVE ABOVEGROUND TANKS: **0**

## CONTACT INFORMATION

NAME: **FAISAL M QAZI**  
TITLE: **MARKETING MGR**  
ORGANIZATION: **HANDI STOP 40**  
MAIL ADDRESS: **MAILING ADDRESS NOT REPORTED**  
**CITY NOT REPORTED**  
PHONE: **(832) 2838786 0**

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: **07/24/2020**  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: **07/23/2020**  
SIGNATURE NAME & TITLE: **FAISAL M QAZI, MARKETING MANAGER**  
ENFORCEMENT ACTION DATE: **NOT REPORTED**

## OWNER

OWNER NUMBER: **CN601259161**  
NAME: **D & D INTERNATIONAL INC**  
CONTACT ADDRESS: **4415 HIGHWAY 6**  
**SUGAR LAND TX 77478**  
TYPE: **CORPORATION/COMPANY**  
BEGIN DATE: **07/01/2015**  
CONTACT ROLE: **OWNOPRCON**  
CONTACT NAME: **DANNY DHANANI**  
CONTACT TITLE: **G M**  
ORGANIZATION: **D & D INTERNATIONAL INC**  
PHONE: **(281) 2012700 0**  
FAX: **NOT REPORTED**  
EMAIL: **FQAZI@GULSHANINC.COM**  
OWNER NUMBER: **CN601259161**  
NAME: **D & D INTERNATIONAL INC**  
CONTACT ADDRESS: **OWNER ADDRESS NOT REPORTED**  
**CITY NOT REPORTED**  
TYPE: **CORPORATION/COMPANY**  
BEGIN DATE: **11/01/2001**  
CONTACT ROLE: **NOT REPORTED**  
CONTACT NAME: **NOT REPORTED**  
CONTACT TITLE: **NOT REPORTED**

## Petroleum Storage Tanks (PST)

ORGANIZATION: NOT REPORTED

PHONE: NOT REPORTED

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **OPERATOR**

OPERATOR NUMBER: CN601259161

NAME: D & D INTERNATIONAL INC

CONTACT ADDRESS: 4415 HIGHWAY 6  
SUGAR LAND TX 77478

TYPE: CORPORATION/COMPANY

BEGIN DATE: 07/01/2015

CONTACT ROLE: OWNOPRCON

CONTACT NAME: DANNY DHANANI

CONTACT TITLE: G M

ORGANIZATION: D & D INTERNATIONAL INC

PHONE: (281) 2012700 0

FAX: NOT REPORTED

EMAIL: FQAZI@GULSHANINC.COM

OPERATOR NUMBER: CN601280969

NAME: HANDI STOP 40

CONTACT ADDRESS: OPERATOR ADDRESS NOT REPORTED  
CITY NOT REPORTED

TYPE: CORPORATION/COMPANY

BEGIN DATE: 01/10/2002

CONTACT ROLE: NOT REPORTED

CONTACT NAME: NOT REPORTED

CONTACT TITLE: NOT REPORTED

ORGANIZATION: NOT REPORTED

PHONE: NOT REPORTED

FAX: NOT REPORTED

EMAIL: NOT REPORTED

### **SELF-CERTIFICATION**

SELF-CERTIFICATION ID: 340554

SIGNATURE DATE: 07/23/2020

SIGNATURE NAME & TITLE: FAISAL M QAZI, MARKETING MANAGER

FILING STATUS: RENEWAL

REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 323496

SIGNATURE DATE: 07/17/2019

SIGNATURE NAME & TITLE: FAISAL M QAZI, MARKETING MANAGER

FILING STATUS: RENEWAL

REGISTRATION FLAG: YES

SELF-CERTIFICATION ID: 305892

SIGNATURE DATE: 06/26/2018

SIGNATURE NAME & TITLE: FAISAL M QAZI, MARKETING MGR

## Petroleum Storage Tanks (PST)

FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **289083**  
SIGNATURE DATE: **07/01/2017**  
SIGNATURE NAME & TITLE: **FAISAL QAZI, MARKETING MGR**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **272661**  
SIGNATURE DATE: **06/22/2016**  
SIGNATURE NAME & TITLE: **FAISAL QAZI, MARKETING MGR**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **255778**  
SIGNATURE DATE: **07/09/2015**  
SIGNATURE NAME & TITLE: **FAISAL QAZI, MKTG MGR**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **239782**  
SIGNATURE DATE: **07/17/2014**  
SIGNATURE NAME & TITLE: **FAISAL M QAZI, MKT MGR**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **223029**  
SIGNATURE DATE: **08/02/2013**  
SIGNATURE NAME & TITLE: **ZAFAR TAHIR, MANAGER**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **203679**  
SIGNATURE DATE: **08/01/2012**  
SIGNATURE NAME & TITLE: **ZAFAR TAHIR, MANAGER**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **203678**  
SIGNATURE DATE: **07/19/2011**  
SIGNATURE NAME & TITLE: **ZAFAR TAHIR, MANAGER**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **203677**  
SIGNATURE DATE: **07/20/2010**

## Petroleum Storage Tanks (PST)

SIGNATURE NAME & TITLE: **ZAFAR TAHIR, MANAGER**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **203676**

SIGNATURE DATE: **07/07/2009**

SIGNATURE NAME & TITLE: **ADAM HUDSON, GAS MKT MGR**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **203675**

SIGNATURE DATE: **07/08/2008**

SIGNATURE NAME & TITLE: **SHOUKAT DHANANI, PRES**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **203674**

SIGNATURE DATE: **07/23/2007**

SIGNATURE NAME & TITLE: **SHOUKAT DHANANI, PRES**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **203673**

SIGNATURE DATE: **07/25/2006**

SIGNATURE NAME & TITLE: **SHOUKAT DHANANI, PRES**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **203672**

SIGNATURE DATE: **07/15/2005**

SIGNATURE NAME & TITLE: **SHOUKAT DHANANI, PRESIDENT**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **203671**

SIGNATURE DATE: **07/28/2004**

SIGNATURE NAME & TITLE: **SHOUKAT DHANANI, NOT REPORTED**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **203670**

SIGNATURE DATE: **08/18/2003**

SIGNATURE NAME & TITLE: **SHOUKAT DHANANI, PRESIDENT**

FILING STATUS: **RENEWAL**

REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **203669**

# Petroleum Storage Tanks (PST)

SIGNATURE DATE: **08/06/2002**  
SIGNATURE NAME & TITLE: **SHOUKAT DHAHANI, PRESIDENT**  
FILING STATUS: **RENEWAL**  
REGISTRATION FLAG: **YES**

SELF-CERTIFICATION ID: **203668**  
SIGNATURE DATE: **12/01/2001**  
SIGNATURE NAME & TITLE: **SHOUKAT DHANANI, NOT REPORTED**  
FILING STATUS: **INITIAL**  
REGISTRATION FLAG: **YES**

## **CONSTRUCTION NOTIFICATION**

**NO CONSTRUCTION NOTIFICATION DATA REPORTED FOR THIS FACILITY**

## **UNDERGROUND STORAGE TANK**

TANK ID: <b>1</b>	NUMBER OF COMPARTMENTS: <b>1</b>
INSTALLATION DATE: <b>11/01/2001</b>	REGISTRATION DATE: <b>01/10/2002</b>
TANK CAPACITY (GAL): <b>12000</b>	EMPTY TANK: <b>NOT EMPTY</b>
STATUS: <b>IN USE</b>	STATUS BEGIN DATE: <b>11/01/2001</b>
INTERNAL PROTECTION DATE: <b>NOT REPORTED</b>	REGULATORY STATUS: <b>FULLY REGULATED</b>
TANK DESIGN SINGLE WALL: <b>YES</b>	TANK DESIGN DOUBLE WALL: <b>NO</b>
PIPE DESIGN SINGLE WALL: <b>YES</b>	PIPE DESIGN DOUBLE WALL: <b>NO</b>

## **TANK DETAILS**

MATERIAL: **STEEL**  
CORROSION PROTECTION: **COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**  
EXTERNAL CONTAINMENT: **NOT REPORTED**

## **TANK COMPLIANCE FLAG**

CORROSION PROTECTION COMPLIANCE FLAG: **YES**  
CORROSION PROTECTION VARIANCE: **NO VARIANCE**

## **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **167771**  
TANK ID: **1**  
COMPARTMENT LETTER: **A**  
SUBSTANCES: **GASOLINE**  
OTHER SUBSTANCES: **NOT REPORTED**  
CAPACITY (GAL): **12000**  
COMPARTMENT RELEASE DETECTION: **AUTOMATIC TANK GAUGE TEST & INVENTORY CONTROL,SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**  
SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,FACTORY - BUILT SPILL CONTAINER/BUCKET/SUMP,FLOW RESTRICTOR VALUE**

## **PIPING SYSTEMS**

MATERIAL: **NONMETALLIC FLEXIBLE PIPING**  
CORROSION PROTECTION: **NONMETALLIC FLEXIBLE PIPING (NONCORRODIBLE)**  
EXTERNAL CONTAINMENT: **NOT REPORTED**  
CONNECTORS & VALVES:

## Petroleum Storage Tanks (PST)

### NOT REPORTED

PIPING RELEASE DETECTION:

**AUTO. LINE LEAK DETECTOR (3.0 GPH FOR PRESSURE PIPING),SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **2**

NUMBER OF COMPARTMENTS: **1**

INSTALLATION DATE: **11/01/2001**

REGISTRATION DATE: **01/10/2002**

TANK CAPACITY (GAL): **12000**

EMPTY TANK: **NOT EMPTY**

STATUS: **IN USE**

STATUS BEGIN DATE: **11/01/2001**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **FULLY REGULATED**

TANK DESIGN SINGLE WALL: **YES**

TANK DESIGN DOUBLE WALL: **NO**

PIPE DESIGN SINGLE WALL: **YES**

PIPE DESIGN DOUBLE WALL: **NO**

### TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **167772**

TANK ID: **2**

COMPARTMENT LETTER: **A**

SUBSTANCES: **GASOLINE**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **12000**

COMPARTMENT RELEASE DETECTION: **AUTOMATIC TANK GAUGE TEST & INVENTORY CONTROL,SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,FACTORY - BUILT SPILL CONTAINER/BUCKET/SUMP,FLOW RESTRICTOR VALUE**

### PIPING SYSTEMS

MATERIAL: **NONMETALLIC FLEXIBLE PIPING**

CORROSION PROTECTION: **NONMETALLIC FLEXIBLE PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**AUTO. LINE LEAK DETECTOR (3.0 GPH FOR PRESSURE PIPING),SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**



## Petroleum Storage Tanks (PST)

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: <b>3</b>	NUMBER OF COMPARTMENTS: <b>1</b>
INSTALLATION DATE: <b>11/01/2001</b>	REGISTRATION DATE: <b>01/10/2002</b>
TANK CAPACITY (GAL): <b>12000</b>	EMPTY TANK: <b>NOT EMPTY</b>
STATUS: <b>IN USE</b>	STATUS BEGIN DATE: <b>11/01/2001</b>
INTERNAL PROTECTION DATE: <b>NOT REPORTED</b>	REGULATORY STATUS: <b>FULLY REGULATED</b>
TANK DESIGN SINGLE WALL: <b>YES</b>	TANK DESIGN DOUBLE WALL: <b>NO</b>
PIPE DESIGN SINGLE WALL: <b>YES</b>	PIPE DESIGN DOUBLE WALL: <b>NO</b>

### TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**COMPOSITE TANK (STEEL W/FRP EXTERNAL LAMINATE)**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **167773**

TANK ID: **3**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **12000**

COMPARTMENT RELEASE DETECTION: **AUTOMATIC TANK GAUGE TEST & INVENTORY CONTROL,SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **TIGHT-FILL FITTING CONTAINER/BUCKET/SUMP,FACTORY - BUILT SPILL CONTAINER/BUCKET/SUMP,FLOW RESTRICTOR VALUE**

### PIPING SYSTEMS

MATERIAL: **NONMETALLIC FLEXIBLE PIPING**

CORROSION PROTECTION: **NONMETALLIC FLEXIBLE PIPING (NONCORRODIBLE)**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**AUTO. LINE LEAK DETECTOR (3.0 GPH FOR PRESSURE PIPING),SIR (STAT. INVENTORY RECONCILIATION) & INVENTORY CONTROL**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **YES**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### ABOVEGROUND STORAGE TANK INFORMATION

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Leaking Petroleum Storage Tanks (LPST)

**MAP ID# 4**

Distance from Property: 0.116 mi. (612 ft.) NW  
Elevation: 83 ft. (Equal to TP)

## FACILITY INFORMATION

GEOSEARCH ID: **096464**  
LPST ID: **096464**  
FACILITY ID: **24102**  
NAME: **GEN RENT A CAR INC**  
ADDRESS: **6115 WILL CLAYTON PKWY**  
**HUMBLE, TX 77338**

## LEAKING TANK DETAILS

LPST ID: **096464**  
NAME: **GEN RENT A CAR INC**  
FACILITY LOCATION: **NOT REPORTED**  
PRIORITY CODE: **4A - SOIL CONTAMINATION ONLY REQUIRES FULL SITE ASSESSMENT RAP**  
CORRECTIVE ACTION STATUS CODE: **6A - FINAL CONCURRENCE ISSUED**  
CORRECTIVE ACTION START DATE: **NOT REPORTED**  
DISCOVERED DATE: **06/13/1990**  
REPORTED DATE: **06/14/1990**  
ENTERED DATE: **08/14/1990**  
CLOSURE DATE: **03/12/1991**

4a.soil impacts  
6a.al concur. issued. case closed.

## PRP INFORMATION

NAME: **NOT REPORTED**  
ADDRESS: **ADDRESS NOT REPORTED**  
**HOLLYWOOD FL 33020**  
CONTACT: **NOT REPORTED**  
PHONE: **NOT REPORTED**

## UNDERGROUND STORAGE TANK

TANK ID: <b>1</b>	NUMBER OF COMPARTMENTS: <b>1</b>
INSTALLATION DATE: <b>05/01/1982</b>	REGISTRATION DATE: <b>05/08/1986</b>
TANK CAPACITY (GAL): <b>10000</b>	EMPTY TANK: <b>NOT EMPTY</b>
STATUS: <b>REMOVED FROM GROUND</b>	STATUS BEGIN DATE: <b>08/05/1993</b>
INTERNAL PROTECTION DATE: <b>NOT REPORTED</b>	REGULATORY STATUS: <b>FULLY REGULATED</b>
TANK DESIGN SINGLE WALL: <b>YES</b>	TANK DESIGN DOUBLE WALL: <b>NO</b>
PIPE DESIGN SINGLE WALL: <b>YES</b>	PIPE DESIGN DOUBLE WALL: <b>NO</b>

## TANK DETAILS

MATERIAL:  
**STEEL**  
CORROSION PROTECTION:  
**NOT REPORTED**  
EXTERNAL CONTAINMENT:  
**NOT REPORTED**  
TANK COMPLIANCE FLAG  
CORROSION PROTECTION COMPLIANCE FLAG: **NO**

## Leaking Petroleum Storage Tanks (LPST)

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **65485**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **GASOLINE**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **10000**

COMPARTMENT RELEASE DETECTION: **GROUNDWATER MONITORING**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### **PIPING SYSTEMS**

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

### **CONNECTORS & VALVES:**

**NOT REPORTED**

CORROSION PROTECTION: **NOT REPORTED**

### **PIPE COMPLIANCE FLAG**

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **2**

NUMBER OF COMPARTMENTS: **1**

INSTALLATION DATE: **05/01/1982**

REGISTRATION DATE: **05/08/1986**

TANK CAPACITY (GAL): **3000**

EMPTY TANK: **NOT EMPTY**

STATUS: **REMOVED FROM GROUND**

STATUS BEGIN DATE: **08/05/1993**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **FULLY REGULATED**

TANK DESIGN SINGLE WALL: **YES**

TANK DESIGN DOUBLE WALL: **NO**

PIPE DESIGN SINGLE WALL: **YES**

PIPE DESIGN DOUBLE WALL: **NO**

### **TANK DETAILS**

MATERIAL:

**FRP**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

### **TANK COMPLIANCE FLAG**

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **65486**

TANK ID: **2**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **3000**

COMPARTMENT RELEASE DETECTION: **GROUNDWATER MONITORING**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

## **Leaking Petroleum Storage Tanks (LPST)**

### **PIPING SYSTEMS**

MATERIAL: **FRP**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

CORROSION PROTECTION: **NOT REPORTED**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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# Petroleum Storage Tanks (PST)

MAP ID# 4

Distance from Property: 0.116 mi. (612 ft.) NW  
Elevation: 83 ft. (Equal to TP)

## FACILITY INFORMATION

ID#: 24102  
NAME: TEJAS PROPERTIES  
ADDRESS: 6101 WILL CLAYTON PKWY  
HUMBLE, TX 77338  
COUNTY: HARRIS  
REGION: 12  
TYPE: UNKNOWN  
BEGIN DATE: 09/01/1988  
STATUS: INACTIVE  
EXEMPT STATUS: NO  
RECORDS OFF-SITE: NO  
NUMBER OF ACTIVE UNDERGROUND TANKS: 0  
NUMBER OF ACTIVE ABOVEGROUND TANKS: 0

## CONTACT INFORMATION

NAME: MAGALIE BEAUSEJOUR  
TITLE: NOT REPORTED  
ORGANIZATION: TEJAS PROPERTIES  
MAIL ADDRESS: MAILING ADDRESS NOT REPORTED  
CITY NOT REPORTED  
PHONE: (305) 9261700 0

## APPLICATION INFORMATION:

RECEIVED DATE ON EARLIEST REGISTRATION FORM: 05/08/1986  
SIGNATURE DATE ON EARLIEST REGISTRATION FORM: 05/02/1986  
SIGNATURE NAME & TITLE: DONALD HUTELIN, MNT MGR  
ENFORCEMENT ACTION DATE: NOT REPORTED

## OWNER

OWNER NUMBER: CN602285678  
NAME: TEJAS PROPERTIES  
CONTACT ADDRESS: OWNER ADDRESS NOT REPORTED  
CITY NOT REPORTED

TYPE: ORGANIZATION  
BEGIN DATE: 09/01/1988  
CONTACT ROLE: NOT REPORTED  
CONTACT NAME: NOT REPORTED  
CONTACT TITLE: NOT REPORTED  
ORGANIZATION: NOT REPORTED  
PHONE: NOT REPORTED  
FAX: NOT REPORTED  
EMAIL: NOT REPORTED

## OPERATOR

NO OPERATOR INFORMATION REPORTED

## SELF-CERTIFICATION

-NO SELF-CERTIFICATION INFORMATION REPORTED-

## CONSTRUCTION NOTIFICATION

NO CONSTRUCTION NOTIFICATION DATA REPORTED FOR THIS FACILITY

## UNDERGROUND STORAGE TANK

TANK ID: 1  
INSTALLATION DATE: 05/01/1982  
NUMBER OF COMPARTMENTS: 1  
REGISTRATION DATE: 05/08/1986

## Petroleum Storage Tanks (PST)

TANK CAPACITY (GAL): **10000**                      EMPTY TANK: **NOT EMPTY**  
STATUS: **REMOVED FROM GROUND**                      STATUS BEGIN DATE: **08/05/1993**  
INTERNAL PROTECTION DATE: **NOT REPORTED**                      REGULATORY STATUS: **FULLY REGULATED**  
TANK DESIGN SINGLE WALL: **YES**                      TANK DESIGN DOUBLE WALL: **NO**  
PIPE DESIGN SINGLE WALL: **YES**                      PIPE DESIGN DOUBLE WALL: **NO**

### TANK DETAILS

MATERIAL:

**STEEL**

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### COMPARTMENT DETAILS

UST COMPARTMENT ID: **65485**

TANK ID: **1**

COMPARTMENT LETTER: **A**

SUBSTANCES: **GASOLINE**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **10000**

COMPARTMENT RELEASE DETECTION: **GROUNDWATER MONITORING**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### PIPING SYSTEMS

MATERIAL: **STEEL**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**GROUNDWATER MONITORING**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

TANK ID: **2**

NUMBER OF COMPARTMENTS: **1**

INSTALLATION DATE: **05/01/1982**

REGISTRATION DATE: **05/08/1986**

TANK CAPACITY (GAL): **3000**

EMPTY TANK: **NOT EMPTY**

STATUS: **REMOVED FROM GROUND**

STATUS BEGIN DATE: **08/05/1993**

INTERNAL PROTECTION DATE: **NOT REPORTED**

REGULATORY STATUS: **FULLY REGULATED**

TANK DESIGN SINGLE WALL: **YES**

TANK DESIGN DOUBLE WALL: **NO**

PIPE DESIGN SINGLE WALL: **YES**

PIPE DESIGN DOUBLE WALL: **NO**

### TANK DETAILS

MATERIAL:

**FRP**

## Petroleum Storage Tanks (PST)

CORROSION PROTECTION:

**NOT REPORTED**

EXTERNAL CONTAINMENT:

**NOT REPORTED**

TANK COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **COMPARTMENT DETAILS**

UST COMPARTMENT ID: **65486**

TANK ID: **2**

COMPARTMENT LETTER: **A**

SUBSTANCES: **DIESEL**

OTHER SUBSTANCES: **NOT REPORTED**

CAPACITY (GAL): **3000**

COMPARTMENT RELEASE DETECTION: **GROUNDWATER MONITORING**

SPILL CONTAINMENT AND OVERFILL PREVENTION: **NOT REPORTED**

### **PIPING SYSTEMS**

MATERIAL: **FRP**

CORROSION PROTECTION: **NOT REPORTED**

EXTERNAL CONTAINMENT: **NOT REPORTED**

CONNECTORS & VALVES:

**NOT REPORTED**

PIPING RELEASE DETECTION:

**GROUNDWATER MONITORING**

PIPE COMPLIANCE FLAG

CORROSION PROTECTION COMPLIANCE FLAG: **NO**

CORROSION PROTECTION VARIANCE: **NO VARIANCE**

### **ABOVEGROUND STORAGE TANK INFORMATION**

**NO ABOVEGROUND STORAGE TANK DATA REPORTED FOR THIS FACILITY**

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## Industrial and Hazardous Waste Corrective Action Sites (IHWCA)

**MAP ID# 5**

Distance from Property: 0.948 mi. (5,005 ft.) ESE  
Elevation: 75 ft. (Lower than TP)

PROGRAM ID: 33785

RN NUMBER: RN100582493

NAME: HYDRILL USA DISTRIBUTION

ADDRESS: 18000 EASTEX FWY  
HUMBLE, TX 77396

STATUS: ACTIVE

STATUS DATE: 09/20/2019

PHASE: ONGOING WORKLOAD

LOCATION DESCRIPTION: 18000 EASTEX FWY, HUMBLE, TX

PHASE STATUS DATE: 09/20/2019

SOIL CHEMICAL OF CONCERN CLASS: NOT REPORTED

SOIL REMEDIATION: NOT REPORTED

GROUNDWATER CHEMICAL OF CONCERN CLASS: CHLORINATED SOLVENTS

GROUNDWATER REMEDIATION: NOT REPORTED

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## **Unlocated Sites Summary**

*This list contains sites that could not be mapped due to limited or incomplete address information.*

*No Records Found*

## ***Environmental Records Definitions - FEDERAL***

**AIRSAFS** Aerometric Information Retrieval System / Air Facility Subsystem

VERSION DATE: 10/20/14

The United States Environmental Protection Agency (EPA) modified the Aerometric Information Retrieval System (AIRS) to a database that exclusively tracks the compliance of stationary sources of air pollution with EPA regulations: the Air Facility Subsystem (AFS). Since this change in 2001, the management of the AIRS/AFS database was assigned to EPA's Office of Enforcement and Compliance Assurance. Enforcement and Compliance History Online (ECHO) Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014, the EPA retired this system for Clean Air Act stationary sources.

**ALTFUELS** Alternative Fueling Stations

VERSION DATE: 10/28/20

Nationwide list of alternative fueling stations made available by the U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Bio-diesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE).

**BF** Brownfields Management System

VERSION DATE: 10/08/20

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. The United States Environmental Protection Agency maintains this database to track activities in the various brown field grant programs including grantee assessment, site cleanup and site redevelopment. This database included tribal brownfield sites.

**BRS** Biennial Reporting System

VERSION DATE: 12/31/17

The United States Environmental Protection Agency (EPA), in cooperation with the States, biennially collects information regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. The Biennial Report captures detailed data on the generation of hazardous waste from large quantity generators and data on waste management practices from treatment, storage and disposal facilities. Currently, the EPA states that data collected between 1991 and 1997 was originally a part of the defunct Biennial Reporting System and is now incorporated into the RCRAInfo data system.

**CDL** Clandestine Drug Laboratory Locations

VERSION DATE: 06/17/20

## ***Environmental Records Definitions - FEDERAL***

The U.S. Department of Justice ("the Department") provides this information as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments. The Department does not establish, implement, enforce, or certify compliance with clean-up or remediation standards for contaminated sites; the public should contact a state or local health department or environmental protection agency for that information.

**DNPL** Delisted National Priorities List

VERSION DATE: 11/20/20

This database includes sites from the United States Environmental Protection Agency's Final National Priorities List (NPL) where remedies have proven to be satisfactory or sites where the original analyses were inaccurate, and the site is no longer appropriate for inclusion on the NPL, and final publication in the Federal Register has occurred.

**DOCKETS** EPA Docket Data

VERSION DATE: 12/22/05

The United States Environmental Protection Agency Docket data lists Civil Case Defendants, filing dates as far back as 1971, laws broken including section, violations that occurred, pollutants involved, penalties assessed and superfund awards by facility and location. Please refer to ICIS database as source of current data.

**DOD** Department of Defense Sites

VERSION DATE: 12/01/14

This information originates from the National Atlas of the United States Federal Lands data, which includes lands owned or administered by the Federal government. Army DOD, Army Corps of Engineers DOD, Air Force DOD, Navy DOD and Marine DOD areas of 640 acres or more are included.

**EC** Federal Engineering Institutional Control Sites

VERSION DATE: 11/23/20

This database includes site locations where Engineering and/or Institutional Controls have been identified as part of a selected remedy for the site as defined by United States Environmental Protection Agency official remedy decision documents. The data displays remedy component information for Superfund decision documents issued in fiscal years 1982-2017, and it includes final and deleted NPL sites as well as sites with a Superfund Alternative Approach (SAA) agreement in place. The only sites included that are not on the NPL, proposed for NPL, or removed from proposed NPL, are those with an SAA Agreement in place. A site listing does not indicate that the institutional and engineering controls are currently in place nor will be in place once the remedy is complete; it only indicates that the decision to include either of them in the remedy is documented as of the completed date of the document. Institutional controls are actions, such as legal controls, that help minimize the

## ***Environmental Records Definitions - FEDERAL***

potential for human exposure to contamination by ensuring appropriate land or resource use. Engineering controls include caps, barriers, or other device engineering to prevent access, exposure, or continued migration of contamination.

**ECHOR06** Enforcement and Compliance History Information

VERSION DATE: 11/28/20

The U.S. Environmental Protection Agency's Enforcement and Compliance History Online (ECHO) database, provides compliance and enforcement information for facilities nationwide. This database includes facilities regulated as Clean Air Act stationary sources, Clean Water Act direct dischargers, Resource Conservation and Recovery Act hazardous waste handlers, Safe Drinking Water Act public water systems along with other data, such as Toxics Release Inventory releases.

**ERNSTX** Emergency Response Notification System

VERSION DATE: 09/27/20

This National Response Center database contains data on reported releases of oil, chemical, radiological, biological, and/or etiological discharges into the environment anywhere in the United States and its territories. The data comes from spill reports made to the U.S. Environmental Protection Agency, U.S. Coast Guard, the National Response Center and/or the U.S. Department of Transportation.

**FEMAUST** FEMA Owned Storage Tanks

VERSION DATE: 12/01/16

This is a listing of FEMA owned underground and aboveground storage tank sites. For security reasons, address information is not released to the public according to the U.S. Department of Homeland Security.

**FRSTX** Facility Registry System

VERSION DATE: 10/02/20

The United States Environmental Protection Agency's Office of Environmental Information (OEI) developed the Facility Registry System (FRS) as the centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest. The Facility Registry System replaced the Facility Index System or FINDS database.

**FUDS** Formerly Used Defense Sites

VERSION DATE: 12/31/18

The Formerly Used Defense Sites (FUDS) inventory includes properties previously owned by or leased to the United States and under Secretary of Defense Jurisdiction, as well as Munitions Response Areas (MRAs). The remediation of these properties is the responsibility of the Department of Defense. This data is provided by the U.S. Army Corps of Engineers (USACE), the boundaries/polygon data are based on preliminary findings and not

## ***Environmental Records Definitions - FEDERAL***

all properties currently have polygon data available. **DISCLAIMER:** This data represents the results of data collection/processing for a specific USACE activity and is in no way to be considered comprehensive or to be used in any legal or official capacity as presented on this site. While the USACE has made a reasonable effort to insure the accuracy of the maps and associated data, it should be explicitly noted that USACE makes no warranty, representation or guaranty, either expressed or implied, as to the content, sequence, accuracy, timeliness or completeness of any of the data provided herein. For additional information on Formerly Used Defense Sites please contact the USACE Public Affairs Office at (202) 528-4285.

**FUSRAP** Formerly Utilized Sites Remedial Action Program

VERSION DATE: 03/04/17

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

**HISTPST** Historical Gas Stations

VERSION DATE: NR

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

**HMIRSR06** Hazardous Materials Incident Reporting System

VERSION DATE: 10/27/20

The HMIRS database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation located in EPA Region 6. This region includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

**HWCD** Hazardous Waste Compliance Docket Facilities

VERSION DATE: 10/29/20

This list of the Federal Agency Hazardous Waste Compliance Docket Facilities is maintained by the United States Environmental Protection Agency (EPA). According to the EPA, Section 120(c) of CERCLA requires EPA to establish a listing, known as the Federal Facility Hazardous Waste Compliance Docket (Docket), of Federal facilities which are managing or have managed hazardous waste; or have had a release of hazardous waste. Thus, the Docket identifies all Federal facilities that must be evaluated to determine whether they pose a risk to human health and the environment and it makes this information available to the public. In order for the Docket to remain current and accurate it requires periodic updating.

## ***Environmental Records Definitions - FEDERAL***

**ICIS** Integrated Compliance Information System (formerly DOCKETS)

VERSION DATE: 09/19/20

ICIS is a case activity tracking and management system for civil, judicial, and administrative federal Environmental Protection Agency enforcement cases. ICIS contains information on federal administrative and federal judicial cases under the following environmental statutes: the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, the Emergency Planning and Community Right-to-Know Act - Section 313, the Toxic Substances Control Act, the Federal Insecticide, Fungicide, and Rodenticide Act, the Comprehensive Environmental Response, Compensation, and Liability Act, the Safe Drinking Water Act, and the Marine Protection, Research, and Sanctuaries Act.

**ICISCLEANERS** Integrated Compliance Information System Drycleaners

VERSION DATE: 09/19/20

This is a listing of drycleaner facilities from the Integrated Compliance Information System (ICIS). The U.S. Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments. The following Primary SIC Codes are included in this data: 7211, 7212, 7213, 7215, 7216, 7217, 7218, and/or 7219; the following Primary NAICS Codes are included in this data: 812320, 812331, and/or 812332.

**ICISNPDES** Integrated Compliance Information System National Pollutant Discharge Elimination System

VERSION DATE: 04/26/20

Authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. This database is provided by the U.S. Environmental Protection Agency.

**LUCIS** Land Use Control Information System

VERSION DATE: 09/01/06

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

**MLTS** Material Licensing Tracking System

VERSION DATE: 06/29/17

MLTS is a list of approximately 8,100 sites which have or use radioactive materials subject to the United States Nuclear Regulatory Commission (NRC) licensing requirements. Disclaimer: Due to agency regulations and policies, this database contains applicant/licensee location information which may or may not be related to the physical location per MLTS site.

## Environmental Records Definitions - FEDERAL

**MRDS** Mineral Resource Data System

VERSION DATE: 03/15/16

MRDS (Mineral Resource Data System) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps. A few updates last occurred 2015 and early 2016 for select mine site area/s.

**MSHA** Mine Safety and Health Administration Master Index File

VERSION DATE: 08/07/20

The Mine dataset lists all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970. It includes such information as the current status of each mine (Active, Abandoned, NonProducing, etc.), the current owner and operating company, commodity codes and physical attributes of the mine. Mine ID is the unique key for this data. This information is provided by the United States Department of Labor - Mine Safety and Health Administration (MSHA).

**NLRRCRAC** No Longer Regulated RCRA Corrective Action Facilities

VERSION DATE: 12/14/20

This database includes RCRA Corrective Action facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements.

**NLRRCRAT** No Longer Regulated RCRA Non-CORRACTS TSD Facilities

VERSION DATE: 12/14/20

This database includes RCRA Non-Corrective Action TSD facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements. This listing includes facilities that formerly treated, stored or disposed of hazardous waste.

**NMS** Former Military Nike Missile Sites

VERSION DATE: 12/01/84

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline,

## **Environmental Records Definitions - FEDERAL**

heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

**NPDES06** National Pollutant Discharge Elimination System

VERSION DATE: 04/01/07

Authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. The NPDES database was collected from the U.S. Environmental Protection Agency (EPA) from December 2002 through April 2007. Refer to the ICIS and/or ICIS-NPDES database as source of current data. This database includes permitted facilities located in EPA Region 6. This region includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

**NPL** National Priorities List

VERSION DATE: 11/20/20

This database includes United States Environmental Protection Agency (EPA) National Priorities List sites that fall under the EPA's Superfund program, established to fund the cleanup of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action.

**ODI** Open Dump Inventory

VERSION DATE: 06/01/85

The open dump inventory was published by the United States Environmental Protection Agency. An "open dump" is defined as a facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 4004 of the Solid Waste Disposal Act (42 U.S.C. 6944) and which is not a facility for disposal of hazardous waste. This inventory has not been updated since June 1985.

**PADS** PCB Activity Database System

VERSION DATE: 11/19/20

PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of Polychlorinated Biphenyls (PCB) who are required to notify the U.S. Environmental Protection Agency of such activities.

**PCSR06** Permit Compliance System

VERSION DATE: 08/01/12

The historic Permit Compliance System tracked enforcement status and permit compliance of facilities controlled



## ***Environmental Records Definitions - FEDERAL***

by the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act. This database includes permitted facilities located in EPA Region 6 states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. This system has since been modernized by United States Environmental Protection Agency and is now integrated into the Integrated Compliance Information System (ICIS). Please refer to the ICIS database as the current source for this data.

**PNPL** Proposed National Priorities List

VERSION DATE: 11/20/20

This database contains sites proposed to be included on the National Priorities List (NPL) in the Federal Register. The United States Environmental Protection Agency investigates these sites to determine if they may present long-term threats to public health or the environment.

**RCRAC** Resource Conservation & Recovery Act - Corrective Action Facilities

VERSION DATE: 12/14/20

The Resource Conservation and Recovery Act (RCRA) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities with corrective action activity.

**RCRAGR06** Resource Conservation & Recovery Act - Generator

VERSION DATE: 12/14/20

The Resource Conservation and Recovery Act (RCRA) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities currently generating hazardous waste. EPA region 6 includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

**RCRANGR06** Resource Conservation & Recovery Act - Non-Generator

VERSION DATE: 12/14/20

The Resource Conservation and Recovery Act (RCRA) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities classified as non-generators. Non-Generators do not presently generate hazardous waste. EPA

## ***Environmental Records Definitions - FEDERAL***

Region 6 includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

**RCRASC** RCRA Sites with Controls

VERSION DATE: 11/17/20

The Resource Conservation and Recovery Act (RCRA) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities with institutional controls in place.

**RCRASUBC** Resource Conservation & Recovery Act - Subject to Corrective Action Facilities

VERSION DATE: 12/14/20

The Resource Conservation and Recovery Act (RCRA) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities subject to corrective actions.

**RCRAT** Resource Conservation & Recovery Act - Non-CORRACTS Treatment, Storage & Disposal Facilities

VERSION DATE: 12/14/20

The Resource Conservation and Recovery Act (RCRA) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities recognized as hazardous waste treatment, storage, and disposal sites (TSD).

**RODS** Record of Decision System

VERSION DATE: 09/21/20

These decision documents maintained by the United States Environmental Protection Agency describe the chosen remedy for NPL (Superfund) site remediation. They also include site history, site description, site characteristics, community participation, enforcement activities, past and present activities, contaminated media, the contaminants present, and scope and role of response action.

**SEMS** Superfund Enterprise Management System

VERSION DATE: 11/20/20

## ***Environmental Records Definitions - FEDERAL***

The U.S. Environmental Protection Agency's (EPA) Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation (OSRTI), has implemented The Superfund Enterprise Management System (SEMS), formerly known as CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) to track and report on clean-up and enforcement activities taking place at Superfund sites. SEMS represents a joint development and ongoing collaboration between Superfund's Remedial, Removal, Federal Facilities, Enforcement and Emergency Response programs.

**SEMSARCH** Superfund Enterprise Management System Archived Site Inventory

VERSION DATE: 11/20/20

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System Archived Site Inventory (List 8R Archived) replaced the CERCLIS NFRAP reporting system in 2015. This listing reflects sites at which the EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program.

**SEMSLIENS** SEMS Lien on Property

VERSION DATE: 06/22/20

The U.S. Environmental Protection Agency's (EPA) Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation (OSRTI), has implemented The Superfund Enterprise Management System (SEMS), formerly known as CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) to track and report on clean-up and enforcement activities taking place at Superfund sites. SEMS represents a joint development and ongoing collaboration between Superfund's Remedial, Removal, Federal Facilities, Enforcement and Emergency Response programs. This is a listing of SEMS sites with a lien on the property.

**SFLIENS** CERCLIS Liens

VERSION DATE: 06/08/12

A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which United States Environmental Protection Agency has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties. This database contains those CERCLIS sites where the Lien on Property action is complete. Please refer to the SEMSLIENS database as source of current data.

**SMCRA** Surface Mining Control and Reclamation Act Sites

VERSION DATE: 12/18/20

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those

## ***Environmental Records Definitions - FEDERAL***

problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

### **SSEHRIPFAS**

SSEHRI PFAS Contamination Sites

VERSION DATE: 12/12/19

This PFAS Contamination Site Tracker database is compiled by the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents, and this is cited in the tracker. Disclaimer: The source conveys this database undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Limited location details are available with this data. Please access the following source link for the most current information:  
<https://pfasproject.com/pfas-contamination-site-tracker/>

### **SSTS**

Section Seven Tracking System

VERSION DATE: 08/04/20

The United States Environmental Protection Agency tracks information on pesticide establishments through the Section Seven Tracking System (SSTS). SSTS records the registration of new establishments and records pesticide production at each establishment. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) requires that production of pesticides or devices be conducted in a registered pesticide-producing or device-producing establishment. "Production" includes formulation, packaging, repackaging, and relabeling. For this database, the Product Information is only available for establishments up through 2014 or prior years, product details are no longer released by the EPA within the current SSTS non-Confidential Business Information data.

### **TRI**

Toxics Release Inventory

VERSION DATE: 12/31/18

The Toxics Release Inventory, provided by the United States Environmental Protection Agency, includes data on toxic chemical releases and waste management activities from certain industries as well as federal and tribal facilities. This inventory contains information about the types and amounts of toxic chemicals that are released each year to the air, water, and land as well as information on the quantities of toxic chemicals sent to other facilities for further waste management.

### **TSCA**

Toxic Substance Control Act Inventory

VERSION DATE: 12/31/16

The Toxic Substances Control Act (TSCA) was enacted in 1976 to ensure that chemicals manufactured,

## ***Environmental Records Definitions - FEDERAL***

imported, processed, or distributed in commerce, or used or disposed of in the United States do not pose any unreasonable risks to human health or the environment. TSCA section 8(b) provides the United States Environmental Protection Agency (EPA) authority to "compile, keep current, and publish a list of each chemical substance that is manufactured or processed in the United States." This TSCA Chemical Substance Inventory contains non-confidential information on the production amount of toxic chemicals from each manufacturer and importer site. The EPA has collected Chemical Data Reporting (CDR) data since in 1986 (as Inventory Update Reporting). Collections occur approximately every four years and reporting requirements changed from collection to collection.

### **USUMTRCA**

Uranium Mill Tailings Radiation Control Act Sites

VERSION DATE: 03/04/17

The Legacy Management Office of the Department of Energy (DOE) manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The L.M. Office manages this database of sites registered under the Uranium Mill Tailings Control Act (UMTRCA).

## ***Environmental Records Definitions - STATE (TX)***

**APAR** Affected Property Assessment Reports

VERSION DATE: 11/18/20

As regulated by the Texas Commission on Environmental Quality, an Affected Property Assessment Report is required when a person is addressing a release of chemical of concern (COC) under 30 TAC Chapter 350, the Texas Risk Reduction Program (TRRP). The purpose of the APAR is to document all relevant affected property information to identify all release sources and COCs, determine the extent of all COCs, identify all transport/exposure pathways, and to determine if any response actions are necessary. The Texas Administrative Code Title 30 §350.4(a)(1) defines affected property as the entire area (i.e. on-site and off-site; including all environmental media) which contains releases of chemicals of concern at concentrations equal to or greater than the assessment level applicable for residential land use and groundwater classification.

**BSA** Brownfields Site Assessments

VERSION DATE: 11/07/20

The Brownfields Site Assessments database is maintained by the Texas Commission on Environmental Quality (TCEQ). The TCEQ, in close partnership with the U.S. Environmental Protection Agency (EPA) and other federal, state, and local redevelopment agencies, and stakeholders, is facilitating cleanup, transferability, and revitalization of brownfields through the development of regulatory, tax, and technical assistance tools.

**CALF** Closed & Abandoned Landfill Inventory

VERSION DATE: 11/01/05

The Texas Commission on Environmental Quality, under a contract with Texas State University, and in cooperation with the 24 regional Council of Governments (COGs) in the State, has located over 4,000 closed and abandoned municipal solid waste landfills throughout Texas. This listing contains "unauthorized sites". Unauthorized sites have no permit and are considered abandoned. The information available for each site varies in detail and this historical information is not updated. Please refer to the specific regional COG for the most current information.

**DCR** Dry Cleaner Registration Database

VERSION DATE: 05/12/20

The database includes dry cleaning drop stations and facilities registered with the Texas Commission on Environmental Quality.

**DCRPS** Dry Cleaner Remediation Program Sites

VERSION DATE: 09/01/20

This list of DCRP sites is provided by the Texas Commission on Environmental Quality (TCEQ). According to the TCEQ, the Dry Cleaner Remediation Program (DCRP) establishes a prioritization list of dry cleaner sites and administers the Dry Cleaning Remediation fund to assist with remediation of contamination caused by dry

## **Environmental Records Definitions - STATE (TX)**

cleaning solvents.

**GWCC** Groundwater Contamination Cases

VERSION DATE: 12/31/19

This is a Joint Groundwater Monitoring and Contamination Report provided by the Texas Commission on Environmental Quality (TCEQ) with the Railroad Commission of Texas (RRC). The annual report describes the status of groundwater monitoring activities conducted or required by each agency at regulated facilities or associated with regulated activities. The report provides a general overview of groundwater monitoring by participating members on a program by program basis. Groundwater contamination is broadly defined in the report as any detrimental alteration of the naturally occurring quality of groundwater.

**HISTGWCC** Historic Groundwater Contamination Cases

VERSION DATE: 12/31/18

This is a Joint Groundwater Monitoring and Contamination Report provided by the Texas Commission on Environmental Quality (TCEQ) that includes historic groundwater contamination cases reported since 1994. These cases have been closed by a program area or agency, such as the TCEQ, the Railroad Commission of Texas, and/or the Texas Alliance of Groundwater Districts. According to the TCEQ report, although enforcement actions may be closed on these cases, the Activity Status Code descriptions allow that groundwater contamination may still be present at the site and may therefore be of interest to regulatory agencies and the general public.

**IHW** Industrial and Hazardous Waste Sites

VERSION DATE: 10/09/20

Owner and facility information is included in this database of permitted and non-permitted industrial and hazardous waste sites (this database excludes information for one time shipment requests). Industrial waste is waste that results from or is incidental to operations of industry, manufacturing, mining, or agriculture. Hazardous waste is defined as any solid waste listed as hazardous or possesses one or more hazardous characteristics as defined in federal waste regulations. The IHW database is maintained by the Texas Commission on Environmental Quality.

**IHWCA** Industrial and Hazardous Waste Corrective Action Sites

VERSION DATE: 07/23/20

This database is provided by the Texas Commission on Environmental Quality (TCEQ). According to the TCEQ, the mission of the industrial and hazardous waste corrective action program is to oversee the cleanup of sites contaminated from industrial and municipal hazardous and industrial nonhazardous wastes. The goals of this program are to: Ensure that sites are assessed and remediated to levels that protect human health and the environment; Verify that waste management units or facilities are taken out of service and closed properly; and to Facilitate revitalization of contaminated properties.

## ***Environmental Records Definitions - STATE (TX)***

**IOP** Innocent Owner / Operator Database

VERSION DATE: 11/16/20

Texas Innocent Owner / Operator (IOP), created by House Bill 2776 of the 75th Legislature, provides a certificate to an innocent owner or operator if their property is contaminated as a result of a release or migration of contaminants from a source or sources not located on the property, and they did not cause or contribute to the source or sources of contamination. The IOP database is maintained by the Texas Commission on Environmental Quality.

**LANDAPP** Land Application Permits

VERSION DATE: 06/18/20

Texas Land Application Permits are a requirement from the Texas Commission on Environmental Quality for any domestic facility that disposes of treated effluent by land application such as surface irrigation, evaporation, drainfields or subsurface land application.

**LIENS** TCEQ Liens

VERSION DATE: 05/05/20

Liens filed upon State and/or Federal Superfund Sites by the Texas Commission on Environmental Quality.

**LPST** Leaking Petroleum Storage Tanks

VERSION DATE: 09/04/20

The Leaking Petroleum Storage Tank listing is derived from the Petroleum Storage Tank (PST) database and is maintained by the Texas Commission on Environmental Quality. This listing includes aboveground and underground storage tank facilities with reported leaks.

**MSD** Municipal Setting Designations

VERSION DATE: 07/09/20

The Texas Commission on Environmental Quality (TCEQ) defines an MSD as an official state designation given to property within a municipality or its extraterritorial jurisdiction that certifies that designated groundwater at the property is not used as potable water, and is prohibited from future use as potable water because that groundwater is contaminated in excess of the applicable potable-water protective concentration level. The prohibition must be in the form of a city ordinance, or a restrictive covenant that is enforceable by the city and filed in the property records. The MSD property can be a single property, multi-property, or a portion of property.

TCEQ Disclaimer: This data is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.



## **Environmental Records Definitions - STATE (TX)**

**MSWLF** Municipal Solid Waste Landfill Sites

VERSION DATE: 12/04/20

The municipal solid waste landfill database is provided by the Texas Commission on Environmental Quality. This database includes active landfills and inactive landfills, where solid waste is treated or stored.

**NOV** Notice of Violations

VERSION DATE: 02/24/16

This database containing Notice of Violations (NOV) is maintained by the Texas Commission on Environmental Quality. An NOV is a written notification that documents and communicates violations observed during an inspection to the business or individual inspected.

**OCP** Operator Cleanup Program Sites

VERSION DATE: 10/09/20

The Operator Cleanup Program oversees Operator-led cleanups to ensure compliance with RRC rules. The Sites in the Operator Cleanup Program enter the program on a case by-case basis through referral from the RRC District Offices or other RRC sections (e.g. Technical Permitting or Legal Enforcement) when groundwater has been impacted or has the potential to be impacted, risk-based site assessment is needed, or when the release consists of a unique or unusual contaminant. Operators can also choose to voluntarily enter their cleanup sites into the RRC's Operator Cleanup Program. Database is provided and maintained by the Railroad Commission of Texas (RRC) and location information is limited to what is available via the agency.

**PIHW** Permitted Industrial Hazardous Waste Sites

VERSION DATE: 10/09/20

Owner and facility information is included in this database of all permitted industrial and hazardous waste sites. Industrial waste is waste that results from or is incidental to operations of industry, manufacturing, mining, or agriculture. Hazardous waste is defined as any solid waste listed as hazardous or possesses one or more hazardous characteristics as defined in federal waste regulations. Permitted IHW facilities are regulated under 30 Texas Administrative Code Chapter 335 in addition to federal regulations. The IHW database is maintained by the Texas Commission on Environmental Quality.

**PST** Petroleum Storage Tanks

VERSION DATE: 10/09/20

The Petroleum Storage Tank database is administered by the Texas Commission on Environmental Quality (TCEQ). Both Underground storage tanks (USTs) and Aboveground storage tanks (ASTs) are included in this report. Petroleum Storage Tank registration has been a requirement with the TCEQ since 1986.

## **Environmental Records Definitions - STATE (TX)**

**RRCVCP** Railroad Commission VCP and Brownfield Sites

VERSION DATE: 09/29/20

According to the Railroad Commission of Texas, their Voluntary Cleanup Program (RRC-VCP) provides an incentive to remediate Oil & Gas related pollution by participants as long as they did not cause or contribute to the contamination. Applicants to the program receive a release of liability to the state in exchange for a successful cleanup.

**RWS** Radioactive Waste Sites

VERSION DATE: 07/11/06

This Texas Commission on Environmental Quality (TCEQ) database contains all sites in the State of Texas designated as Radioactive Waste sites as of 2006. The TCEQ no longer maintains this site listing.

**SF** State Superfund Sites

VERSION DATE: 10/23/20

The state Superfund program mission is to remediate abandoned or inactive sites within the state that pose an unacceptable risk to public health and safety or the environment, but which do not qualify for action under the federal Superfund program (NPL - National Priority Listing). As required by the Texas Solid Waste Disposal Act, Texas Health and Safety Code, Chapter 361, the Texas Commission on Environmental Quality identifies and evaluates these facilities for inclusion on the state Superfund registry. This listing includes any recent developments and the anticipated action for these sites as documented in the annual state Superfund registry publication of the Texas Register as well as the Superfund Webpage on the TCEQ website.

**SIEC01** State Institutional/Engineering Control Sites

VERSION DATE: 11/07/20

The Texas Risk Reduction Program (TRRP) requires the placement of institutional controls (e.g., deed notices or restrictive covenants) on affected property in different circumstances as part of completing a response action. In its simplest form, an institutional control (IC) is a legal document that is recorded in the county deed records. In certain circumstances, local zoning or ordinances can serve as an IC. This listing may also include locations where Engineering Controls are in effect, such as a cap, barrier, or other engineering device to prevent access, exposure, or continued migration of contamination. The sites included on this list are regulated by various programs of the Texas Commission on Environmental Quality (TCEQ).

**SPILLS** Spills Listing

VERSION DATE: 10/26/20

This Texas Commission on Environmental Quality database includes releases of hazardous or potentially hazardous materials into the environment.

## ***Environmental Records Definitions - STATE (TX)***

**STCV** Salt Caverns for Petroleum Storage

VERSION DATE: 09/01/06

The salt caverns for petroleum storage database is provided by the Railroad Commission of Texas.

**TIERII** Tier II Chemical Reporting Program Facilities

VERSION DATE: 12/31/12

The Texas Tier II Chemical Reporting Program in the Department of State Health Services (DSHS) is the state repository for EPCRA-required Emergency Planning Letters (EPLs), which are one-time notifications to the state from facilities that have certain extremely hazardous chemicals in specified amounts. The Program is also the state repository for EPCRA/state-required hazardous chemical inventory reports called Texas Tier Two Reports. This data contains those facility reports for the 2005 through the 2012 calendar years. Please contact the Texas Commission on Environmental Quality Tier II Chemical Reporting Division as the current source for this data, due to confidentiality and safety reasons details such as the location and capacity of on-site hazardous chemicals is only available to local emergency planning agencies, fire departments, and/or owners.

**VCP** Voluntary Cleanup Program Sites

VERSION DATE: 11/16/20

The Texas Voluntary Cleanup Program (VCP) provides administrative, technical, and legal incentives to encourage the cleanup of contaminated sites in Texas. Since all non-responsible parties, including future lenders and landowners, receive protection from liability to the state of Texas for cleanup of sites under the VCP, most of the constraints for completing real estate transactions at those sites are eliminated. As a result, many unused or underused properties may be restored to economically productive or community beneficial uses. The VCP database is maintained by the Texas Commission on Environmental Quality.

**WMRF** Recycling Facilities

VERSION DATE: 11/01/12

This listing of recycling facilities is provided by the Texas Commission on Environmental Quality's Recycle Texas Online service. The company information provided in this database is self-reported. Since recyclers post their own information, a facility or company appearing on the list does not imply that it is in compliance with TCEQ regulations or other applicable laws. This database is no longer maintained and includes the last compilation of the program participants before the Recycle Texas Online program was closed.

**WSTMGMT** Commercial Management Facilities for Hazardous Waste and Industrial Solid Wastes

VERSION DATE: 10/01/19

This publication lists facilities that have permits or authorizations from the Texas Commission on Environmental Quality (TCEQ) to receive, on a commercial basis, and manage hazardous waste, industrial nonhazardous waste, or both.

***Environmental Records Definitions - STATE (TX)***

## ***Environmental Records Definitions - TRIBAL***

### **INDIANRES**

Indian Reservations

VERSION DATE: 09/27/17

This database is extracted from select geographic and cartographic information from the U.S. Census Bureau. The Bureau of Indian Affairs (BIA) within the U.S. Department of the Interior (DOI) provides the list of federally recognized tribes. The American Indian/Alaska Native/Native Hawaiian (AIANNH) Areas includes the following legal entities: federally recognized American Indian reservations and off-reservation trust land areas, state-recognized American Indian reservations, and Hawaiian home lands (HHLs). The boundaries for federally recognized American Indian reservations and off-reservation trust lands are as of January 2017. The boundaries for state-recognized American Indian reservations and for state designated tribal statistical areas were delineated by state governor-appointed liaisons for the 2010 Census through the State American Indian Reservation Program and Tribal Statistical Areas Program respectively.

### **LUSTR06**

Leaking Underground Storage Tanks On Tribal Lands

VERSION DATE: 04/01/20

This database, provided by the United States Environmental Protection Agency (EPA), contains leaking underground storage tanks on Tribal lands located in EPA Region 6. This region includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

### **ODINDIAN**

Open Dump Inventory on Tribal Lands

VERSION DATE: 11/08/06

This Indian Health Service database contains information about facilities and sites on tribal lands where solid waste is disposed of, which are not sanitary landfills or hazardous waste disposal facilities, and which meet the criteria promulgated under section 4004 of the Solid Waste Disposal Act (42 U.S.C. 6944).

### **USTR06**

Underground Storage Tanks On Tribal Lands

VERSION DATE: 04/01/20

This database, provided by the United States Environmental Protection Agency (EPA), contains underground storage tanks on Tribal lands located in EPA Region 6. This region includes the following states: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.



On time. On target. In touch.™

---

## ***Historical Aerial Photographs***

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[NEW: GeoLens by Geosearch](#)

*Target Property:*

***Kenswick***

***Humble, Harris, Texas 77338***

*Prepared For:*

***Atkins Global-Houston***

**Order #: 159928**

**Job #: 392674**

**Project #: 100072032**

**Date: 1/14/2021**

## Target Property Summary

**Kenswick**

**Humble, Harris, Texas 77338**

USGS Quadrangle: **HUMBLE**

Target Property Geometry: **Area**

Target Property Longitude(s)/Latitude(s):

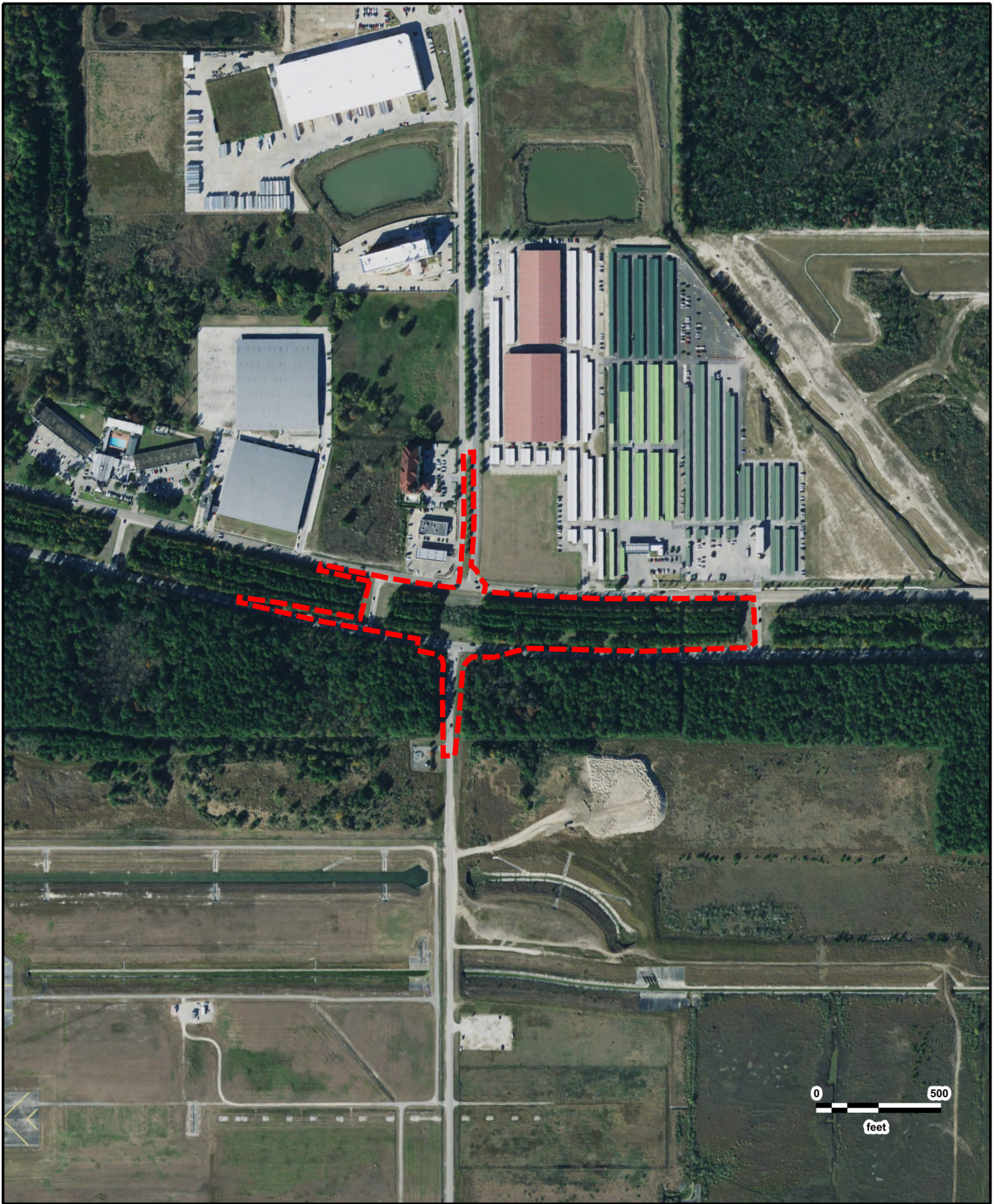
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## Aerial Research Summary

<u>Date</u>	<u>Source</u>	<u>Scale</u>	<u>Frame</u>
2018	USDA	1" = 500'	N/A
2016	USDA	1" = 500'	N/A
2014	USDA	1" = 500'	N/A
2012	USDA	1" = 500'	N/A
2010	USDA	1" = 500'	N/A
2006	USDA	1" = 500'	N/A
2005	USDA	1" = 500'	N/A
2004	USDA	1" = 500'	N/A
01/19/1995	USGS	1" = 500'	N/A
10/09/1989	TXDOT	1" = 500'	256
03/26/1979	TXDOT	1" = 500'	385
02/21/1969	WALLACE	1" = 500'	71
10/04/1962	USGS	1" = 500'	2-27
01/03/1953	AMS	1" = 500'	5257
04/03/1944	ASCS	1" = 500'	5-32
04/08/1930	TOBIN	1" = 500'	721-4-81

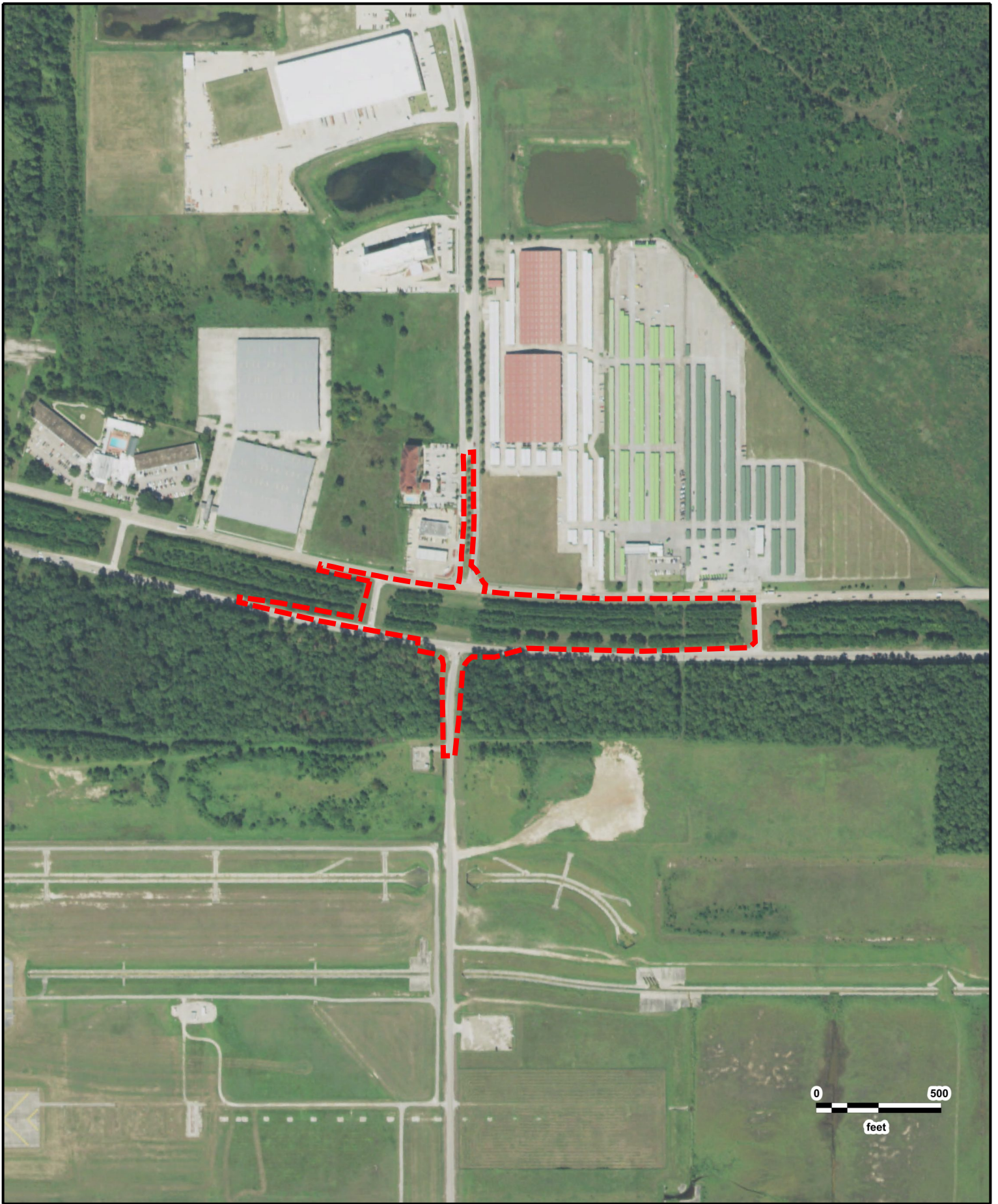
Disclaimer - The information provided in this report was obtained from a variety of public sources. GeoSearch cannot ensure and makes no warranty or representation as to the accuracy, reliability, quality, errors occurring from data conversion or the customer's interpretation of this report. This report was made by GeoSearch for exclusive use by its clients only. Therefore, this report may not contain sufficient information for other purposes or parties. GeoSearch and its partners, employees, officers and independent contractors cannot be held liable for actual, incidental, consequential, special or exemplary damages suffered by a customer resulting directly or indirectly from any information provided by GeoSearch.





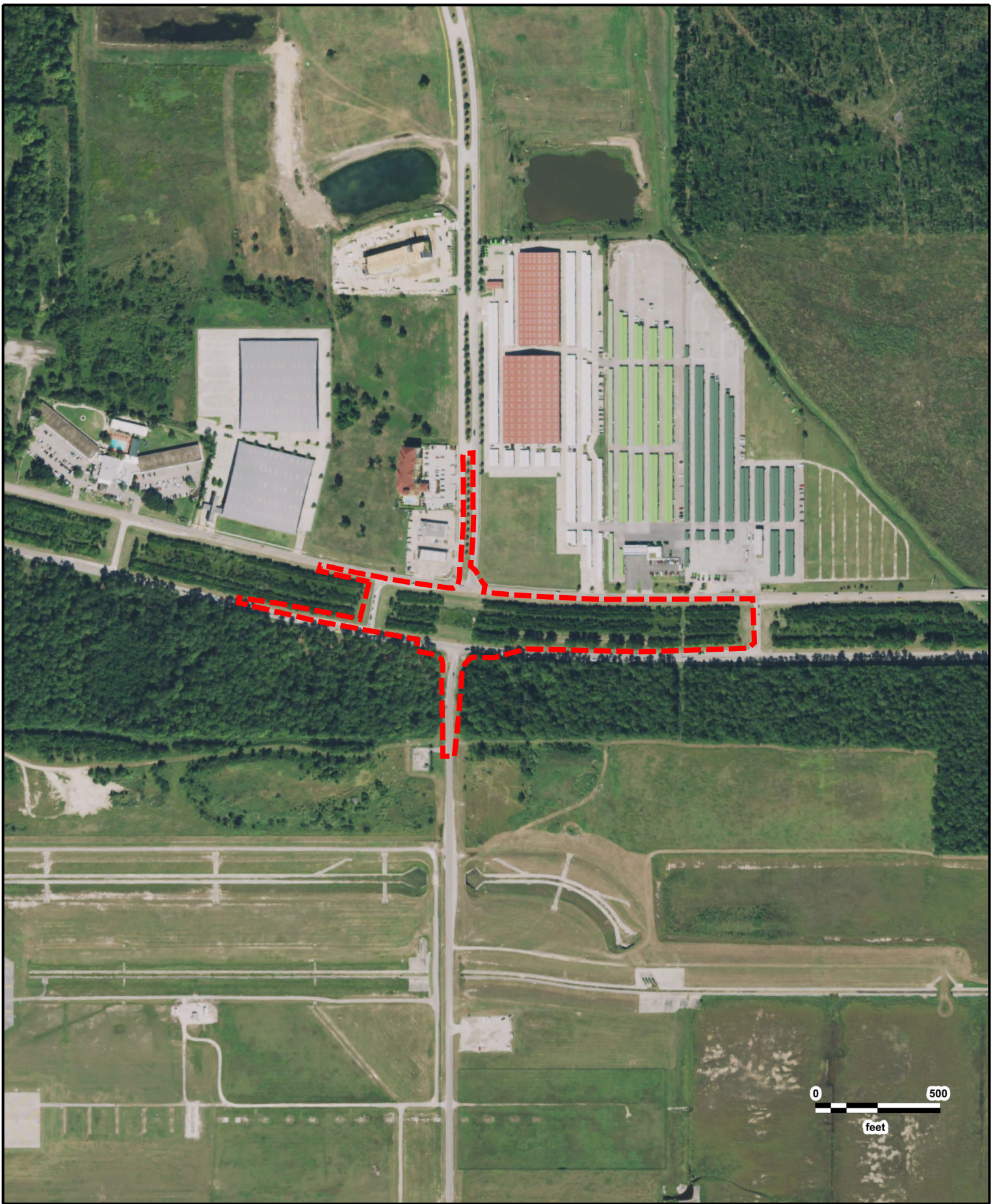
Kenswick  
USDA  
2018

GeoSearch



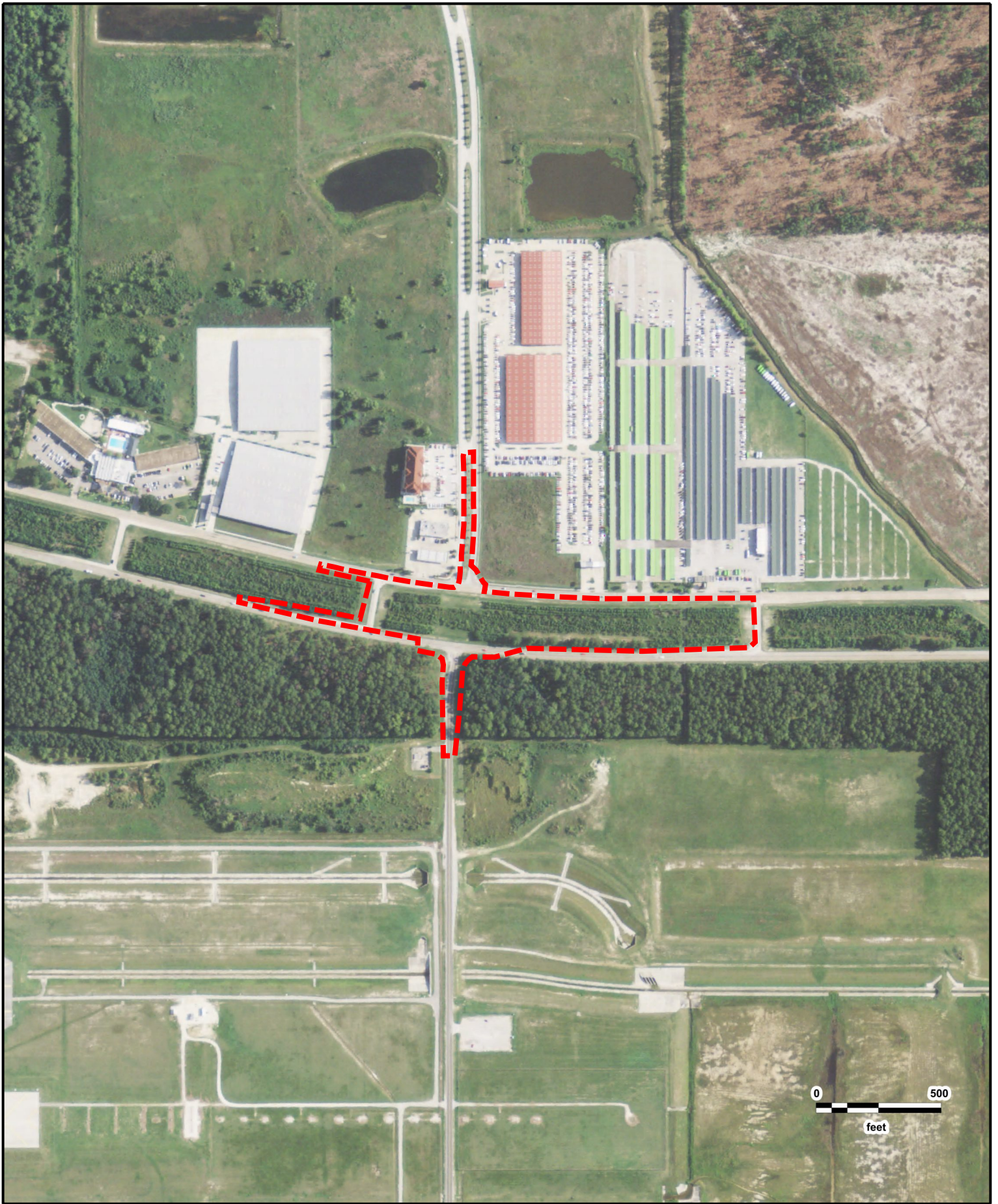
Kenswick  
USDA  
2016

GeoSearch



Kenswick  
USDA  
2014

GeoSearch



0 500  
feet



Kenswick  
USDA  
2012

GeoSearch



Kenswick  
USA  
2010

GeoSearch



Kenswick  
USDA  
2006





0 500  
feet



Kenswick  
USDA  
2005

GeoSearch



Kenswick  
USDA  
2004

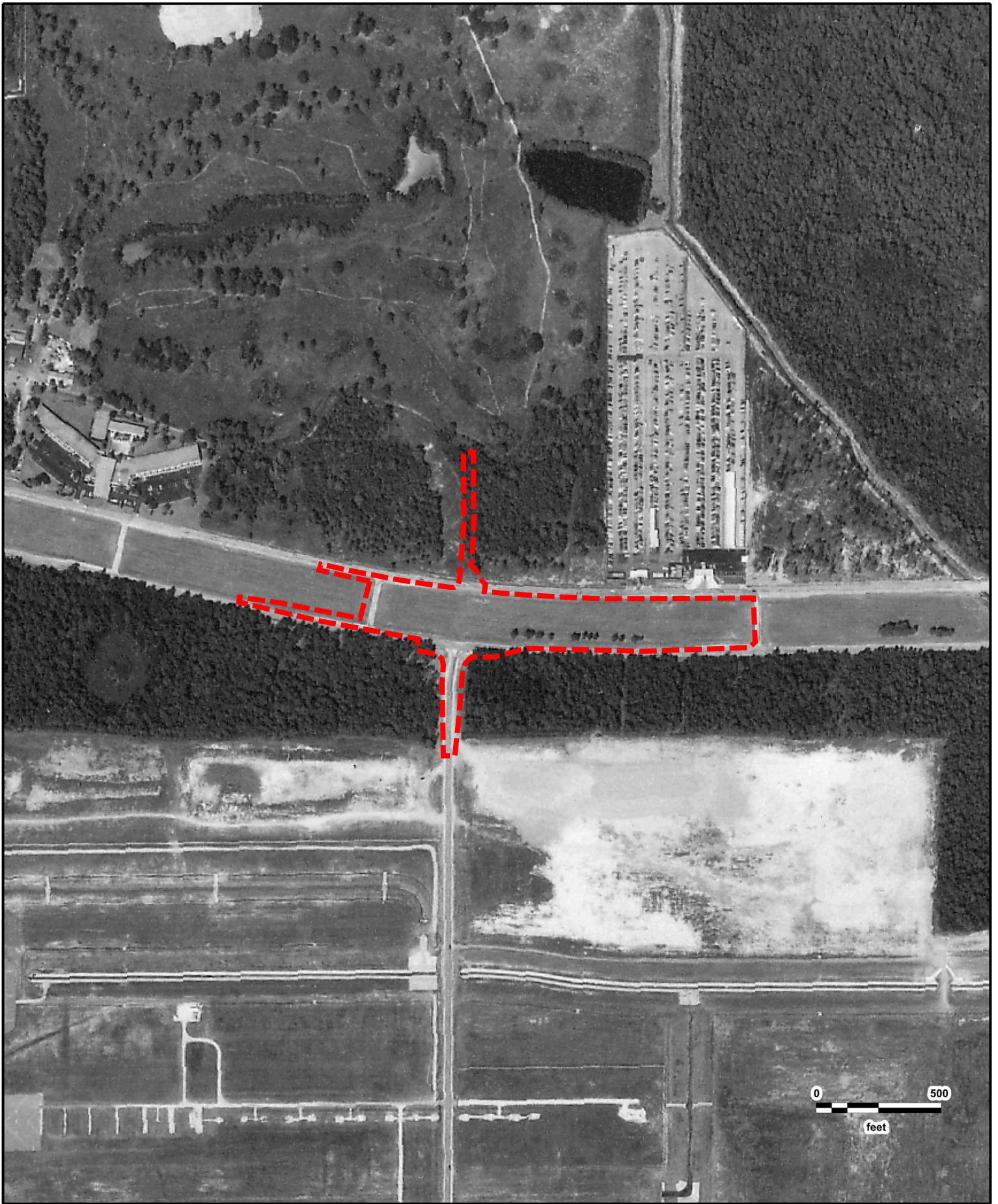
GeoSearch





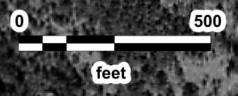
Kenswick  
USGS  
01/19/1995

GeoSearch



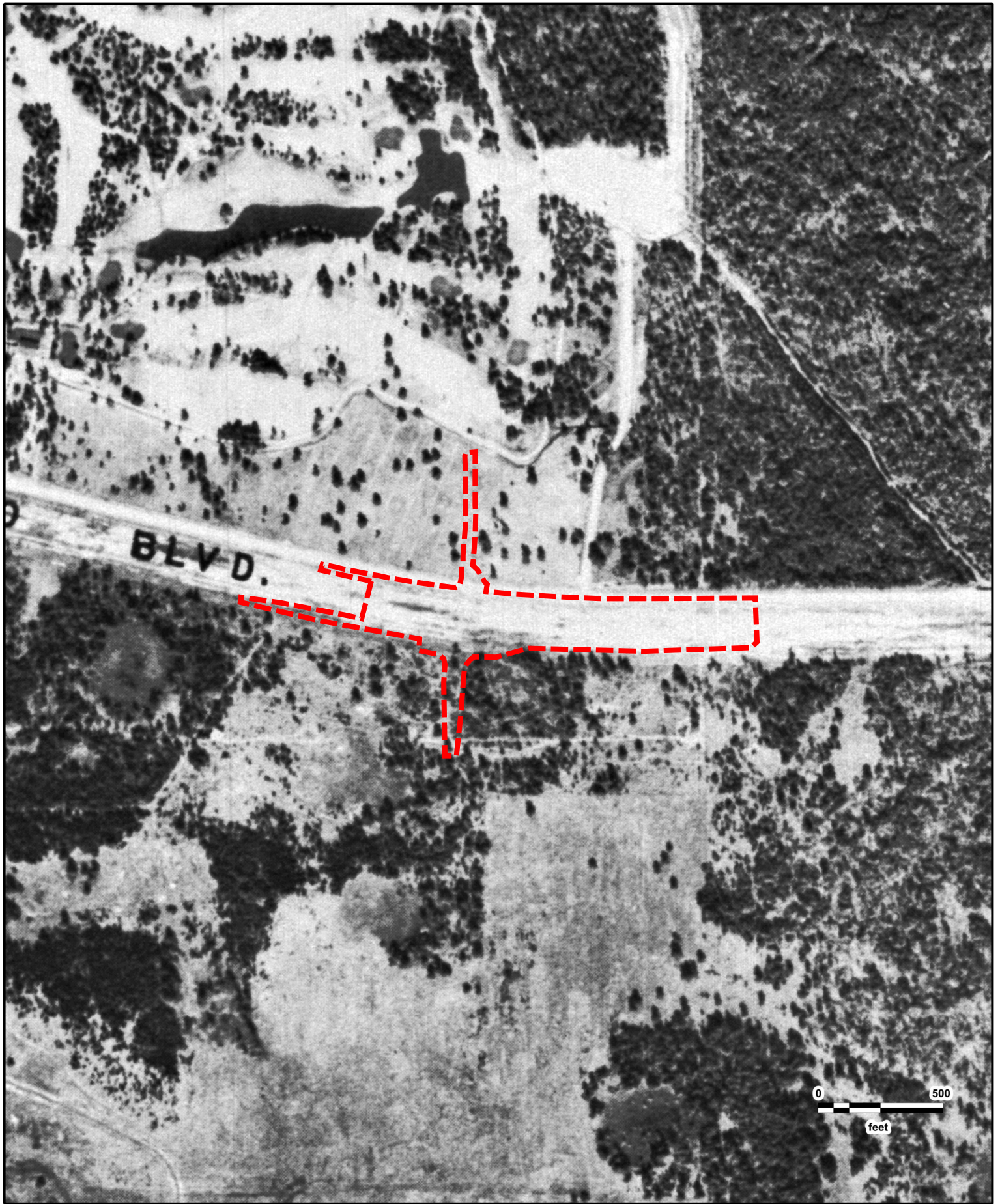
Kenswick  
TXDOT  
10/09/1989

GeoSearch

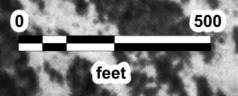


Kenswick  
TXDOT  
03/26/1979

GeoSearch

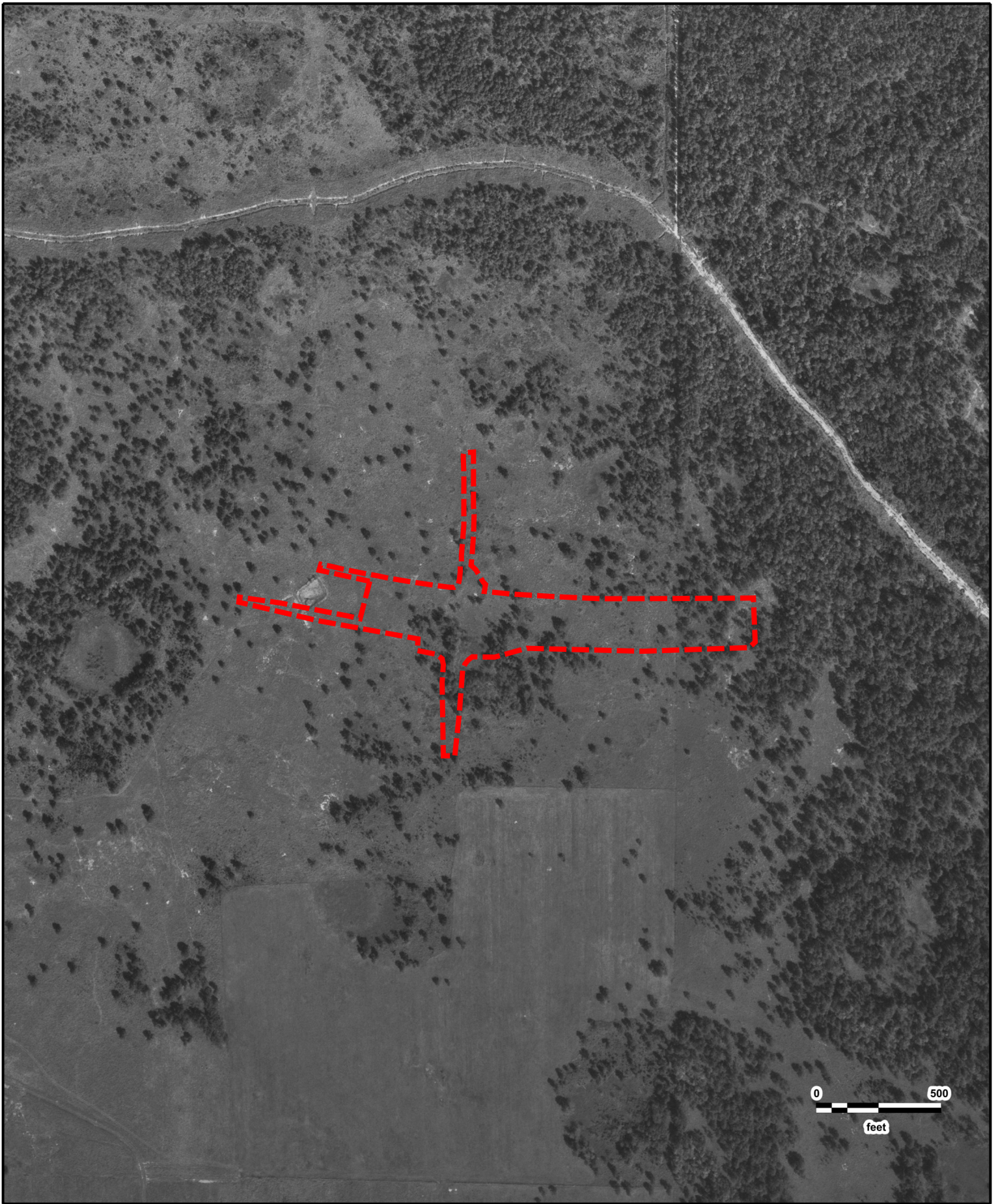


BLVD.



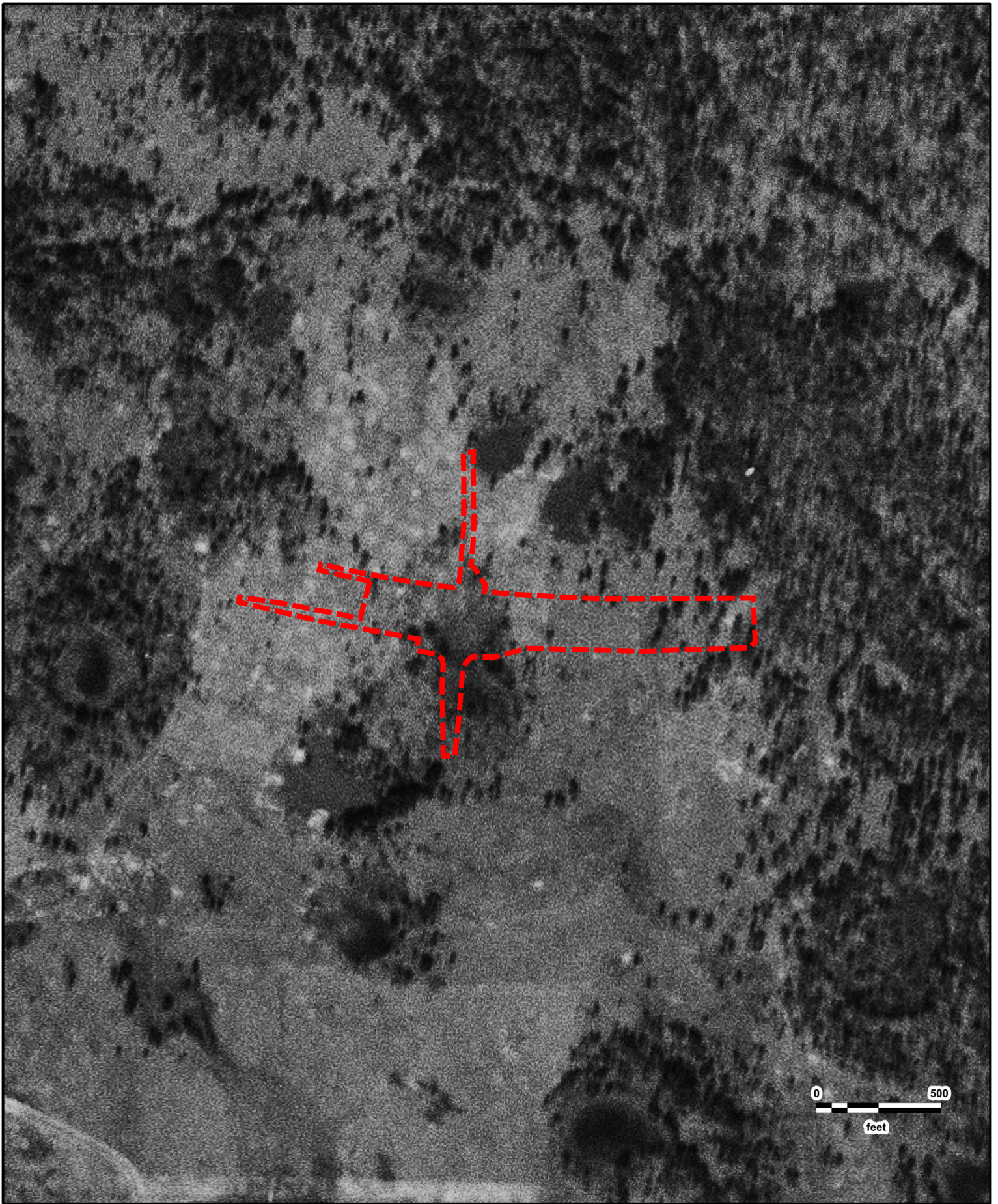
*Kenswick  
WALLACE  
02/21/1969*

**GeoSearch**



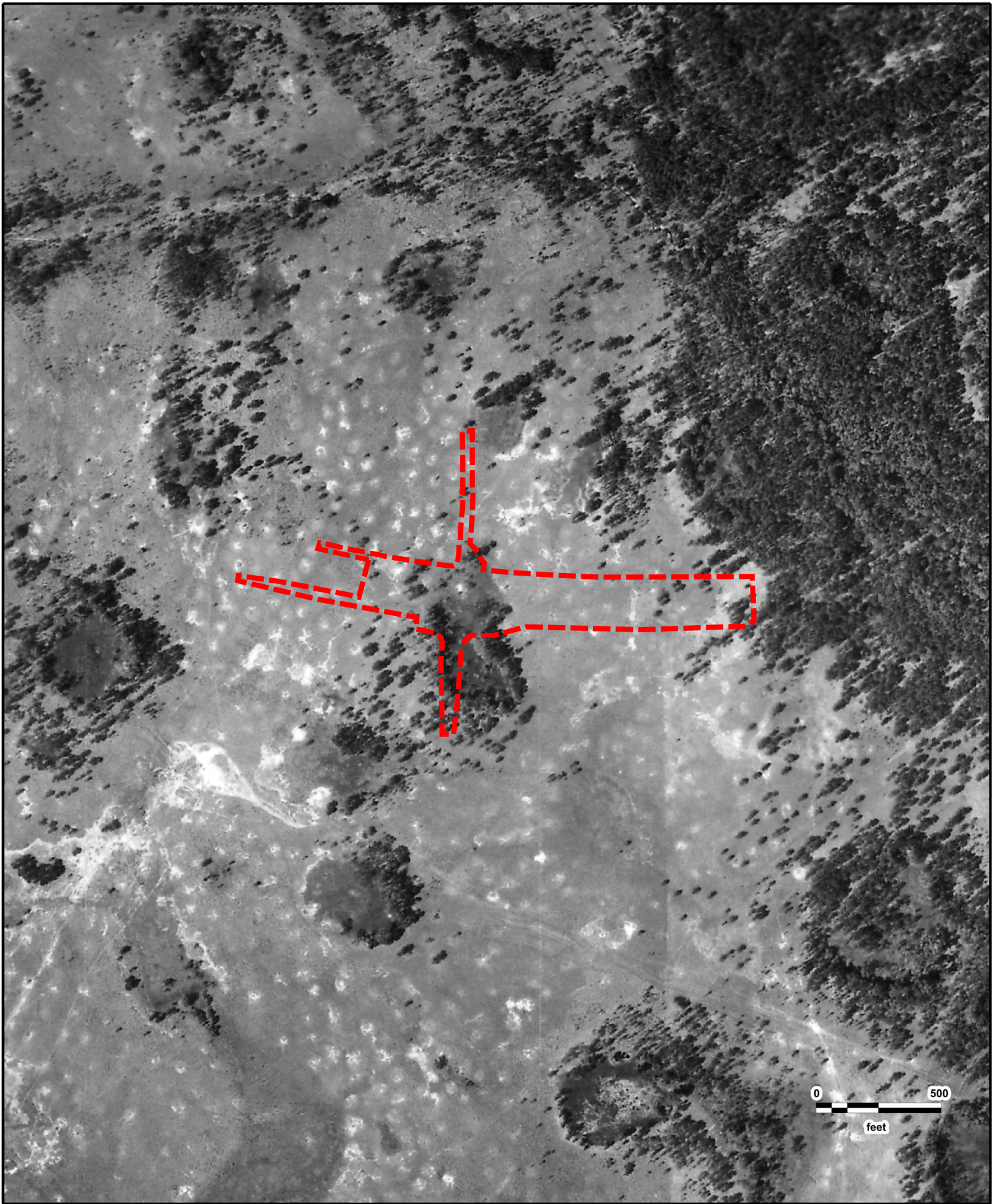
Kenswick  
USGS  
10/04/1962

GeoSearch



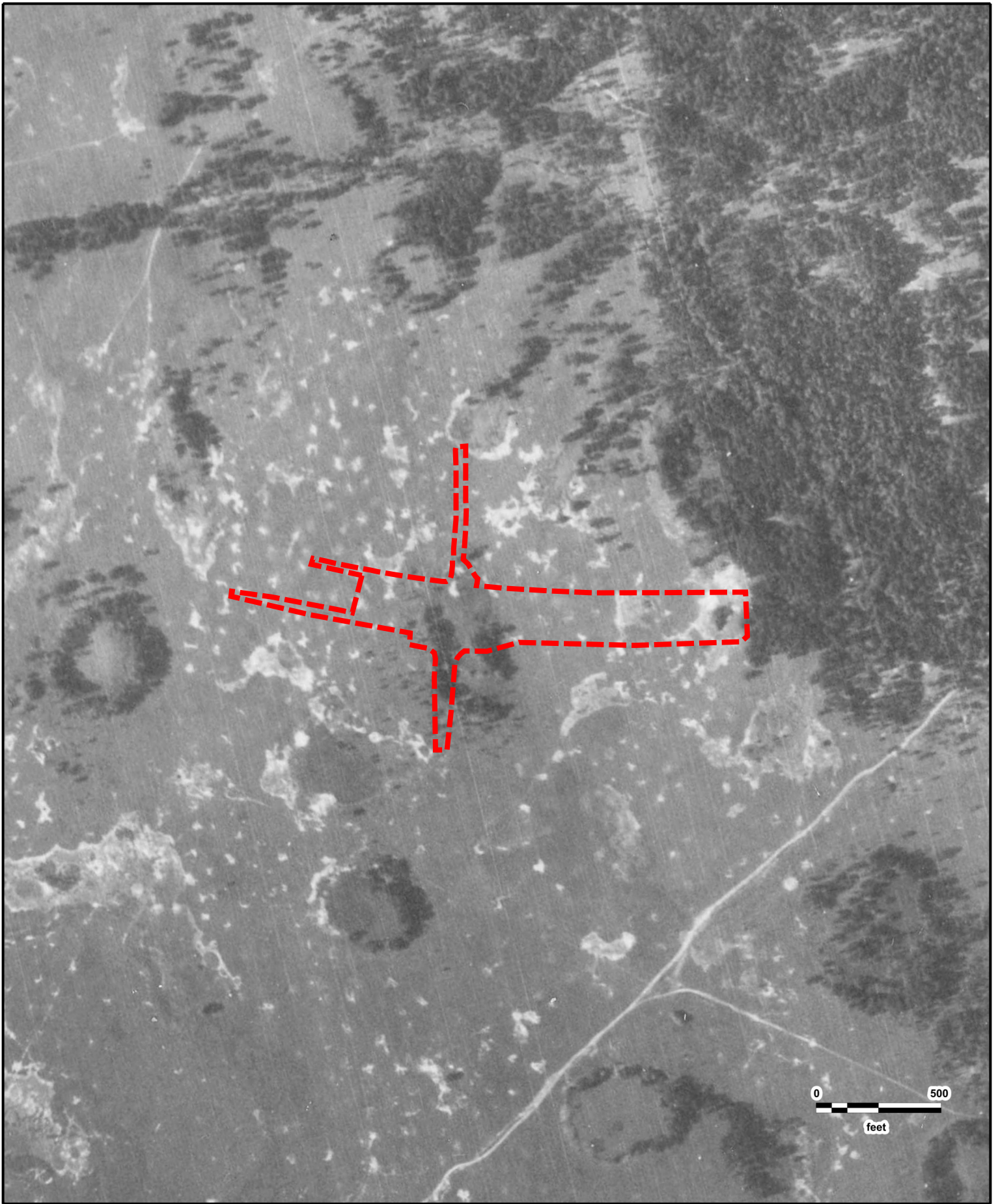
*Kenswick  
AMS  
01/03/1953*

**GeoSearch**



Kenswick  
ASCS  
04/03/1944

GeoSearch



**Kenswick  
TOBIN  
04/08/1930**







On time. On target. In touch.™

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## ***Historical Topographic Maps***

---

[NEW: GeoLens by Geosearch](#)

*Target Property:*

***Kenswick***

***Humble, Harris, Texas 77338***

*Prepared For:*

***Atkins Global-Houston***

**Order #: 159928**

**Job #: 392673**

**Project #: 100072032**

**Date: 1/13/2021**

## Target Property Summary

**Kenswick**

**Humble, Harris, Texas 77338**

USGS Quadrangle: **HUMBLE**

Target Property Geometry: **Area**

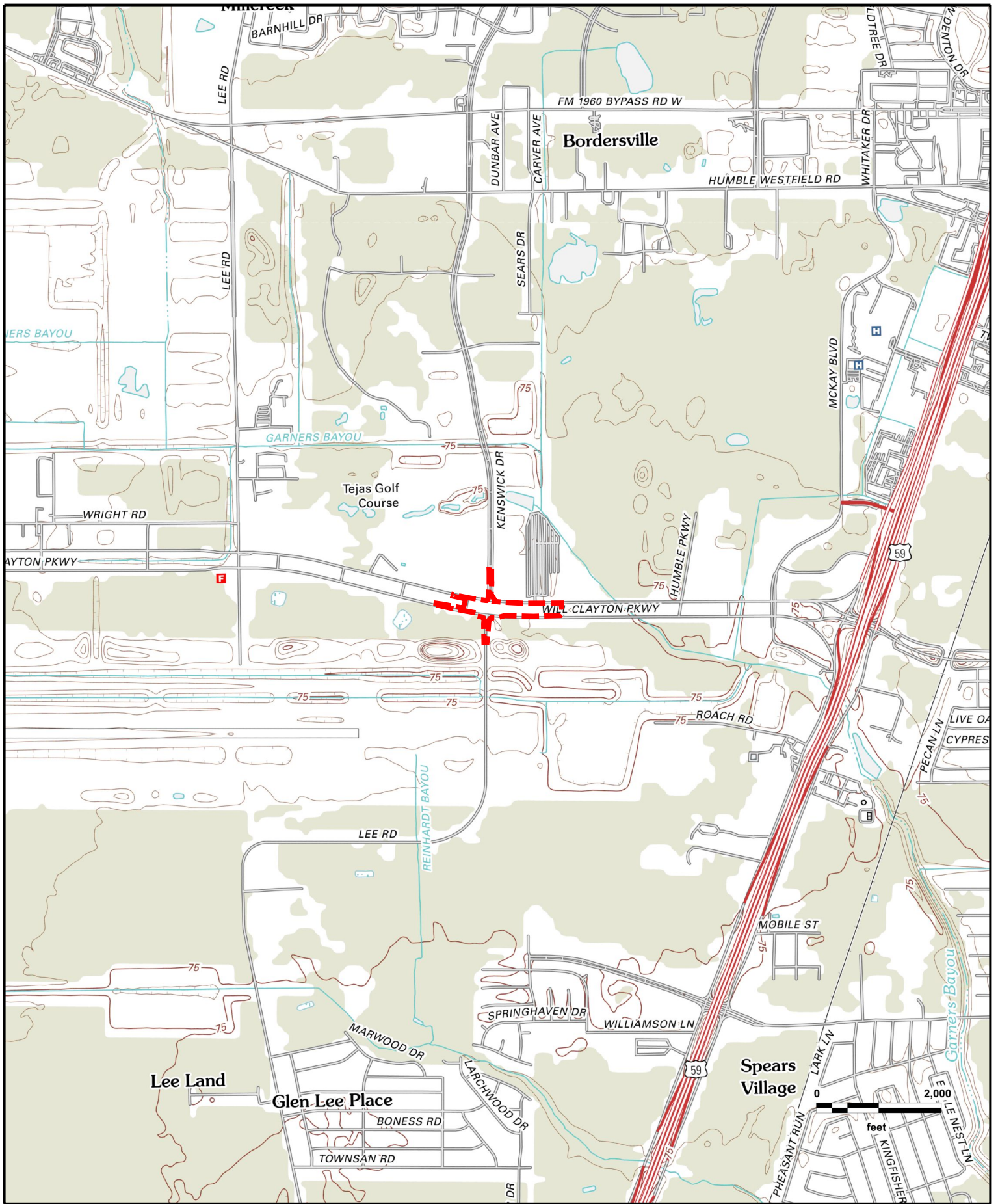
Target Property Longitude(s)/Latitude(s):

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## Topographic Map Summary

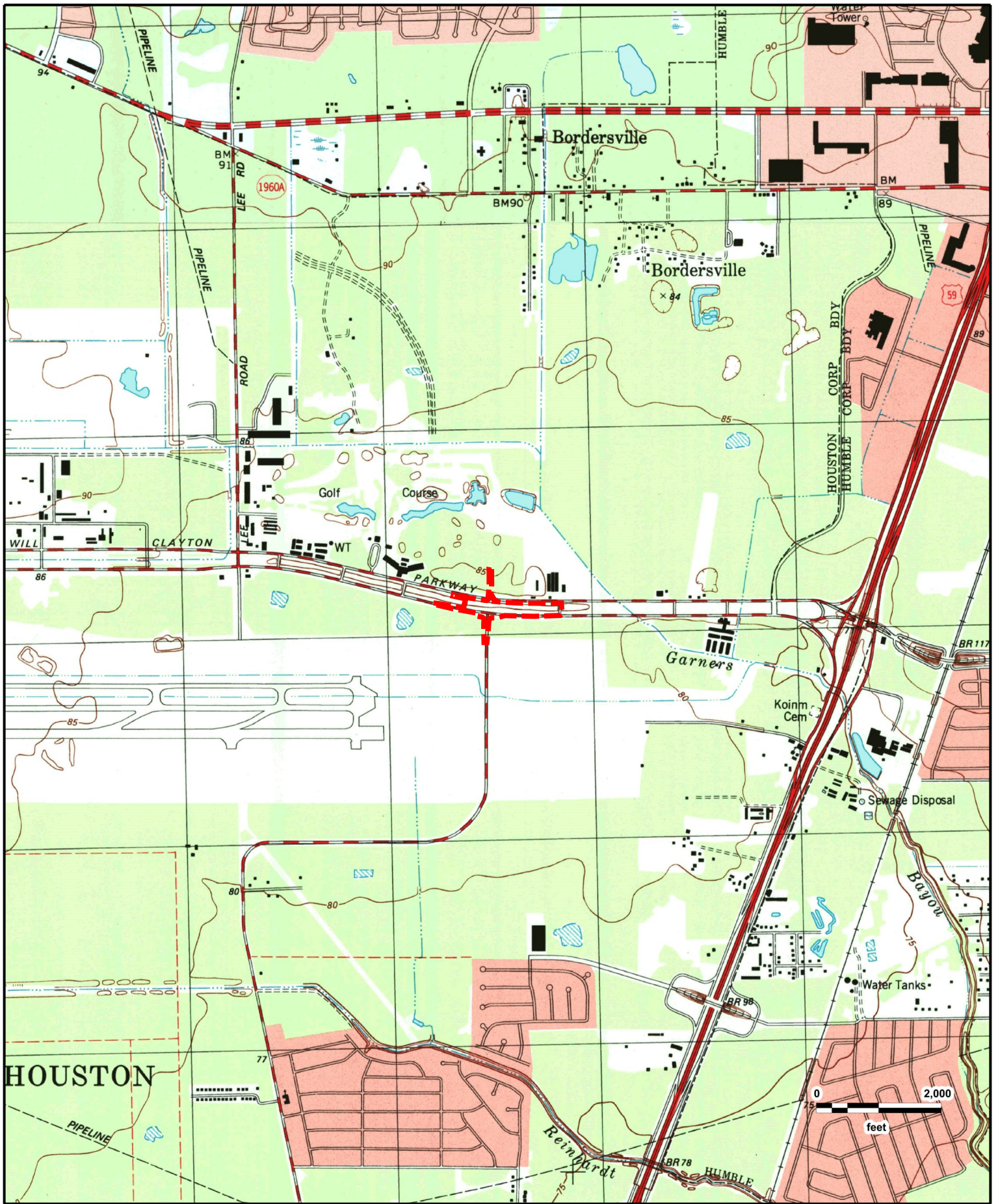
<u>Date</u>	<u>Quadrangle</u>	<u>Scale</u>
2013	MAEDAN, TX (2013) HUMBLE, TX (2013)	1" = 2000'
1995	MAEDAN, TX (1995) HUMBLE, TX (1995)	1" = 2000'
1982	MAEDAN, TX (1982) HUMBLE, TX (1982)	1" = 2000'
1967	MAEDAN, TX (1961) HUMBLE, TX (1967)	1" = 2000'
1954	MAEDAN, TX (1961) HUMBLE, TX (1954)	1" = 2000'
1943	HUMBLE, TX	1" = 2640'
1919	WEEDEN, TX (1919) HUMBLE, TX (1919)	1" = 2640'
1916	HUMBLE, TX	1" = 2000'

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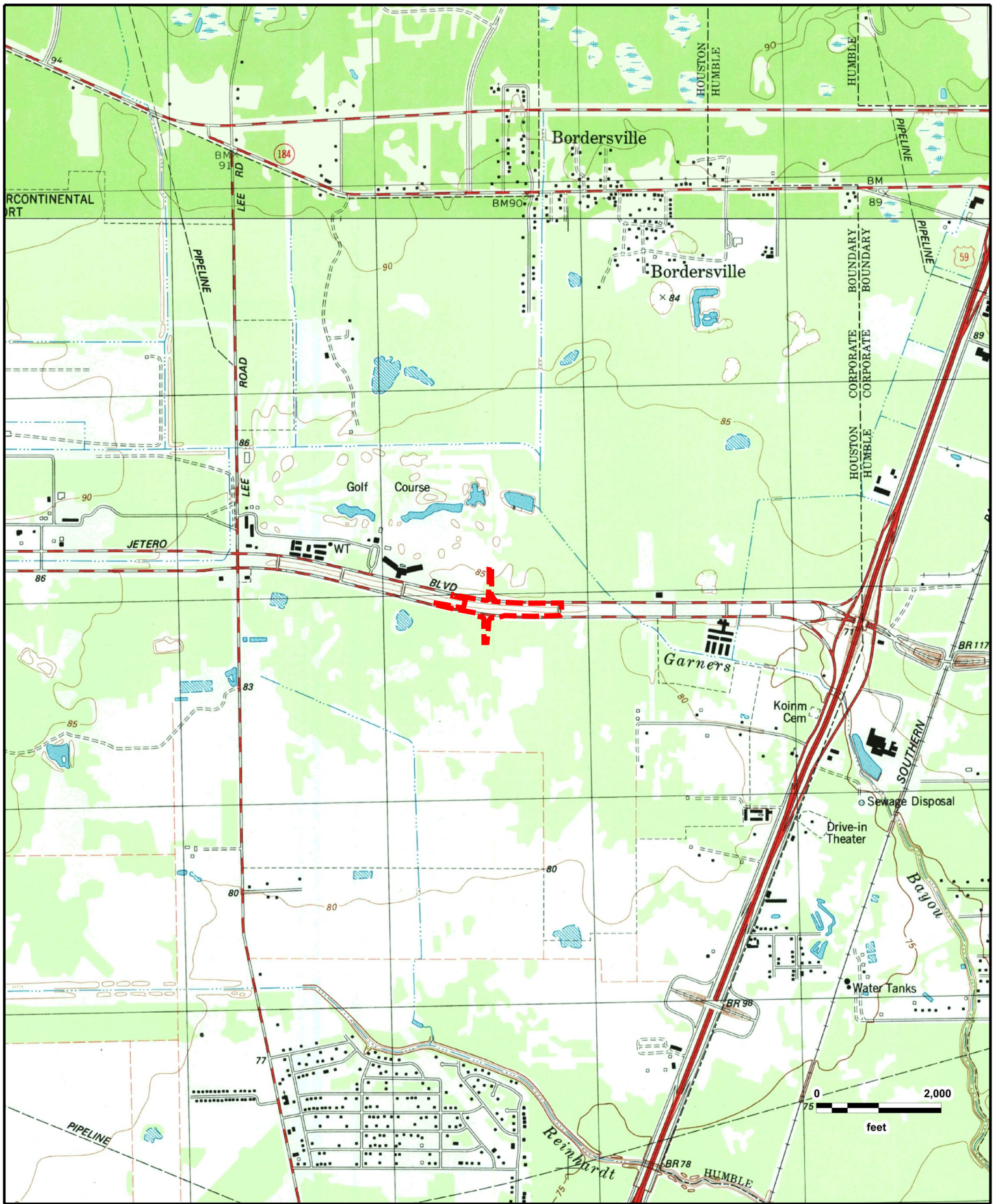
**Kenswick**  
**MAEDAN, TX (2013), HUMBLE, TX (2013)**

**GeoSearch**



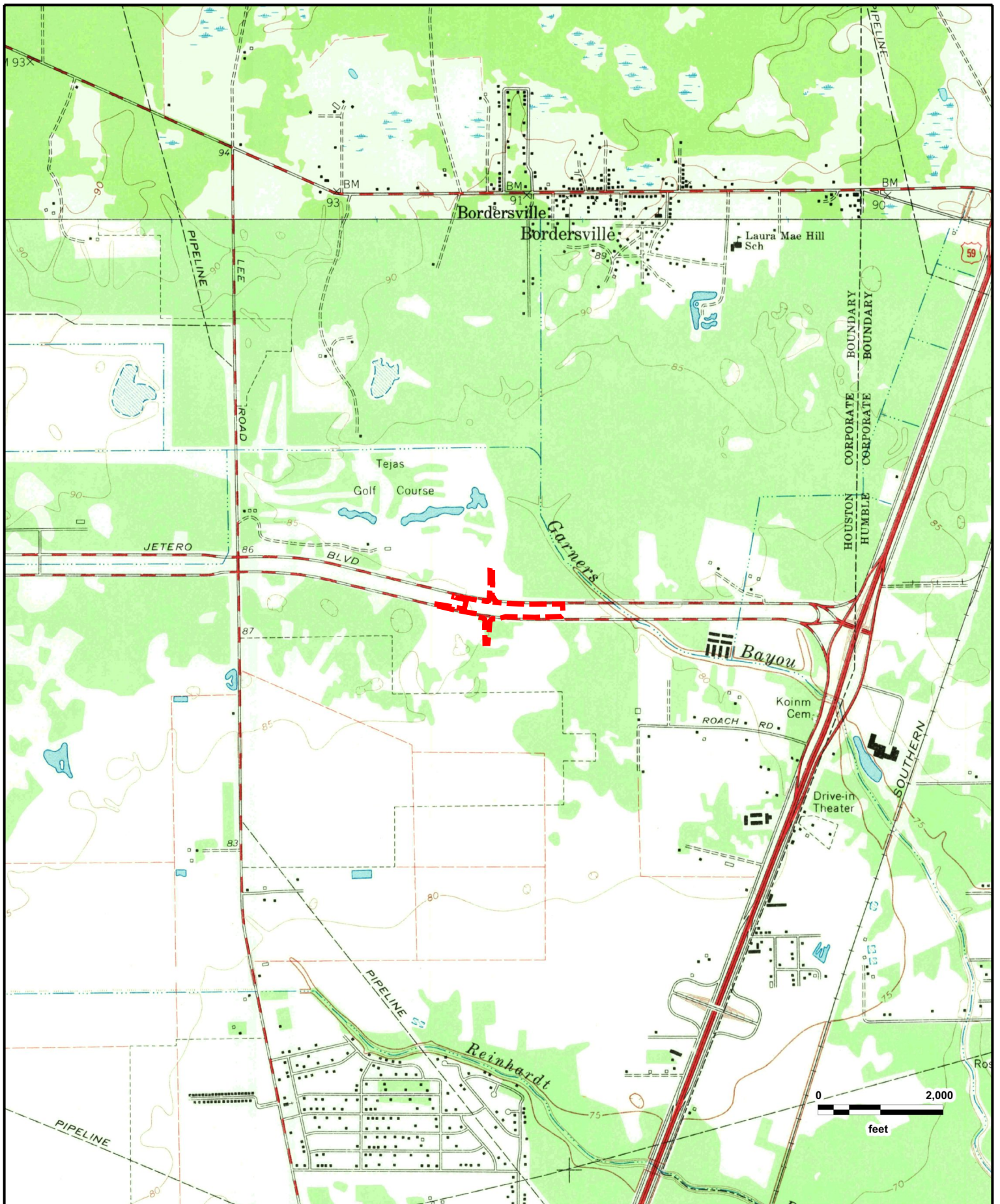
**Kenswick**  
**MAEDAN, TX (1995), HUMBLE, TX (1995)**





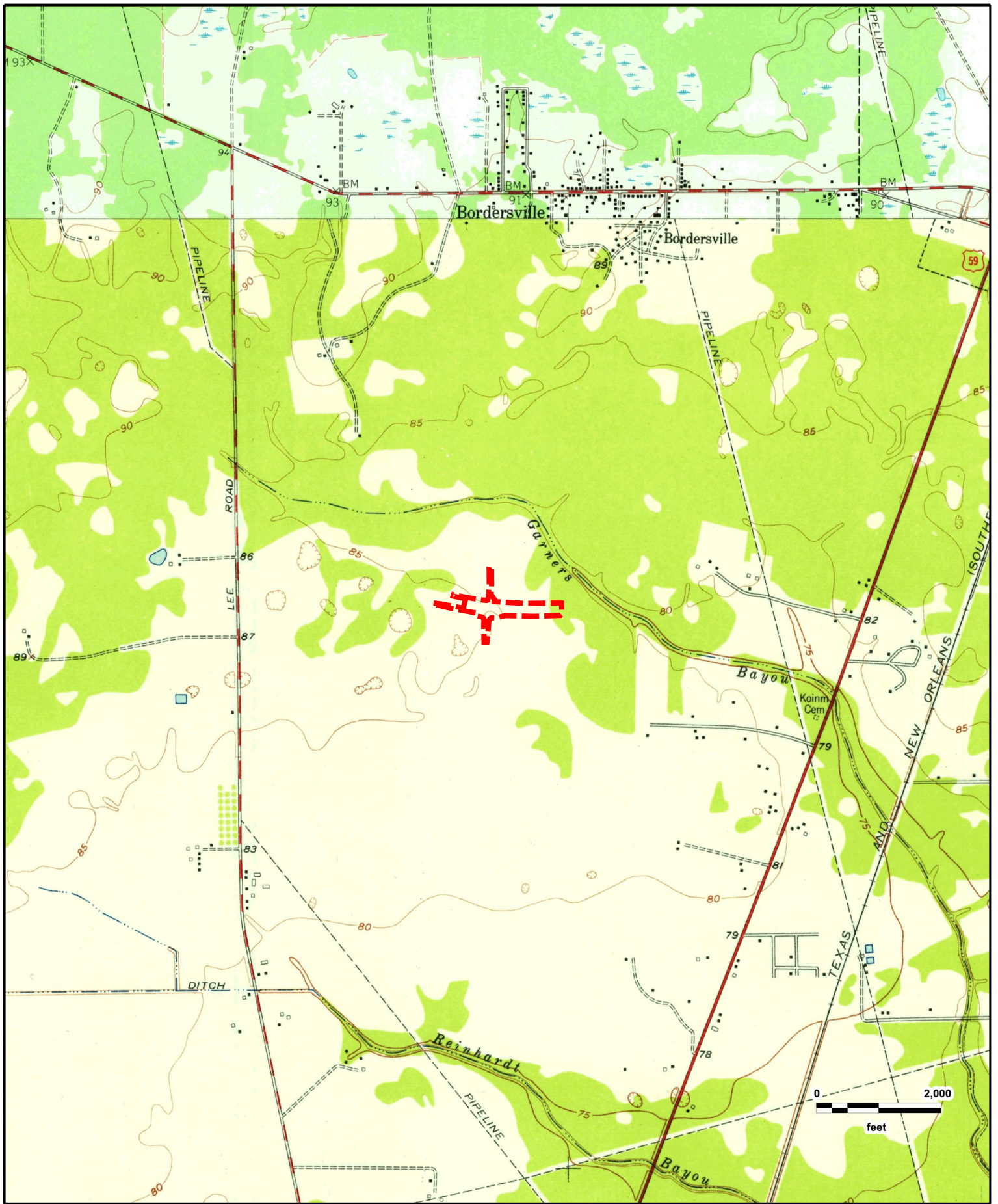
Kenswick  
 MAEDAN, TX (1982), HUMBLE, TX (1982)

GeoSearch



**Kenswick**  
**MAEDAN, TX (1961), HUMBLE, TX (1967)**

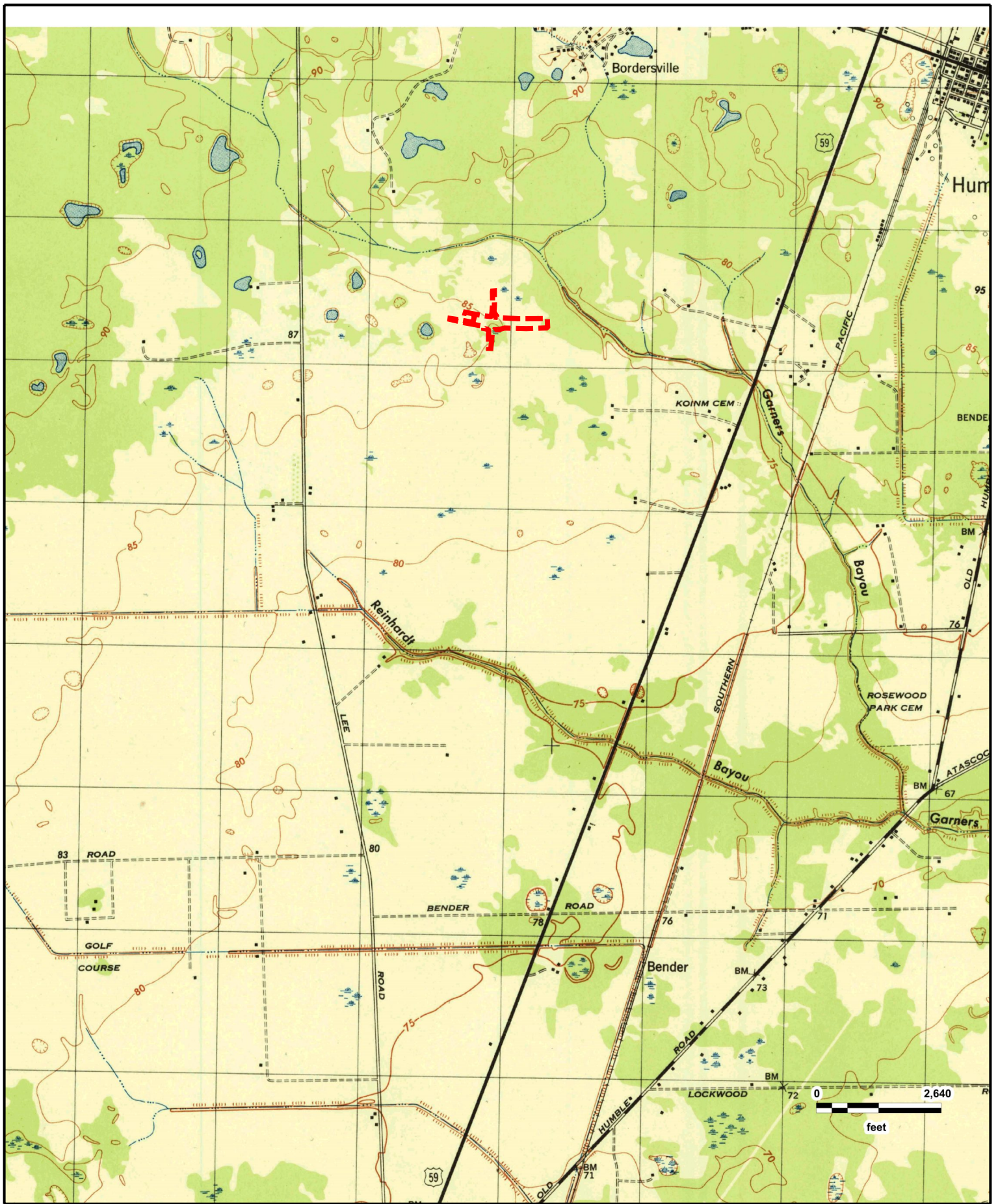
**GeoSearch**



Kenswick  
MAEDAN, TX (1961), HUMBLE, TX (1954)

GeoSearch





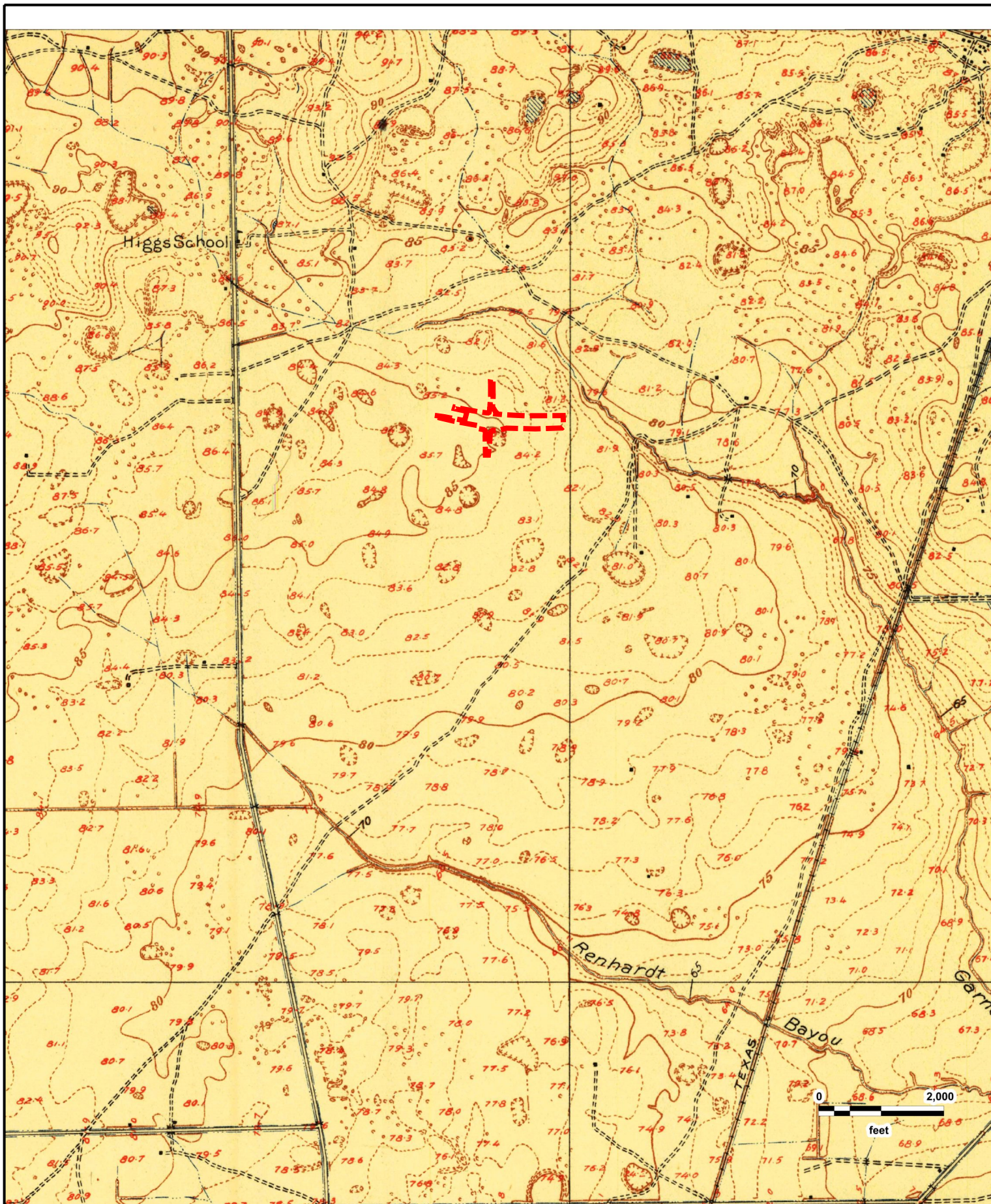
Kenswick  
HUMBLE, TX (1943)

GeoSearch



Kenswick  
WEEDEN, TX (1919), HUMBLE, TX (1919)

GeoSearch



Higgs School

Renhardt

Bayou

TEXAS



Kenswick  
HUMBLE, TX (1916)

GeoSearch

# Appendix C. Regulatory Agency File Excerpts

## Detailed Facility Report

### Facility Summary

**IAS AIR SERVICES PESTICIDE SPILL  
GEORGE BUSH AIRPORT, HOUSTON, TX  
77099**

FRS (Facility Registry Service) ID: 110031457475  
EPA Region: 06  
Latitude:  
Longitude:  
Locational Data Source:  
Industry: No description found  
Indian Country: N

### **Enforcement and Compliance Summary**

Statute	No data records returned
---------	--------------------------

### **Regulatory Information**

Clean Air Act (CAA): No Information  
Clean Water Act (CWA): No Information  
Resource Conservation and Recovery Act (RCRA): No Information  
Safe Drinking Water Act (SDWA): No Information

### **Other Regulatory Reports**

Air Emissions Inventory (EIS): No Information  
Greenhouse Gas Emissions (eGGRT): No Information  
Toxic Releases (TRI): No Information  
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

### Known Data Problems

# Facility/System Characteristics

## Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110031457475					N		
SEMS	CERCLA	TXN000606821		NOT ON THE NPL			N		

## Facility Address

System	Statute	Identifier	Facility Name	Facility Address
FRS		110031457475	IAS AIR SERVICES PESTICIDE SPILL	GEORGE BUSH AIRPORT, HOUSTON, TX 77099
SEMS	CERCLA	TXN000606821	IAS AIR SERVICES PESTICIDE SPILL	GEORGE BUSH AIRPORT, HOUSTON, TX

## Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
No data records returned			

## Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
No data records returned			

## Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

# Enforcement and Compliance

## Compliance Monitoring History (5 years)

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

*Entries in italics are not counted in EPA compliance monitoring strategies or annual results.*

## Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
No data records returned					

## Three-Year Compliance History by Quarter

No compliance records found.					
------------------------------	--	--	--	--	--

## Informal Enforcement Actions (5 Years)

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

*Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.*

**Search Parameters: Site EPA ID:** Equal To: TXN000606821

Results are based on data extracted on NOV-25-2019

**Note:** Click on the "View Facility Information" link to view EPA Facility information for the facility.

[Go To Bottom Of The Page](#)

<b><u>SITE EPA ID:</u></b>	TXN000606821	<b><u>SITE NAME:</u></b>	IAS AIR SERVICES PESTICIDE SPILL
<b><u>STREET ADDRESS:</u></b>	GEORGE BUSH AIRPORT	<b><u>FACILITY INFORMATION</u></b>	<a href="#">View facility information</a>
<b><u>CITY NAME:</u></b>	HOUSTON		
<b><u>STATE ABBR:</u></b>	TX	<b><u>FEDERAL FACILITY:</u></b>	N
<b><u>ZIP CODE:</u></b>		<b><u>NPL STATUS:</u></b>	Not on the NPL
<b><u>COUNTY NAME:</u></b>	HARRIS	<b><u>NPL STATUS:</u></b>	Removal Only Site (No Site Assessment Work Needed)
<b><u>LATITUDE:</u></b>		<b><u>LONGITUDE:</u></b>	

**Below is additional information for SEMS sites:**

[Query Home](#)[Customer Search](#)[RE Search](#)[ID Search](#)[Search Results](#)[ID Number Detail](#)[TCEQ Home](#)

## Central Registry

The Customer Name displayed may be different than the Customer Name associated to the Additional IDs related to the customer. This name may be different due to ownership changes, legal name changes, or other administrative changes.

Detail of: **Leaking Petroleum Storage Tanks Remediation ID Number 116178**

For: **HANDI STOP 40 (RN102493707 ...)**

6355 WILL CLAYTON PKWY, HUMBLE

ID Number Status: **ACTIVE**

Responsible Parties: **D & D International, Inc. (CN601259161 ...)** Since 11/01/2001 [View Compliance History ...](#)

Mailing Address: 6671 SOUTHWEST FWY STE 440 HOUSTON, TX 77074 -2212

## Correspondence Tracking

Tracking No.	Received/Sent	Direction	Type	Subject	Due Date	End Date	Document Date	Method
24919729	01/21/2020	OUTGOING	OVERDUE2			01/21/2020		
24519447	09/06/2019	OUTGOING	OVERDUE1			09/06/2019		
4139761	07/11/2012	OUTGOING	REF - RPR			07/11/2012	07/11/2012	
4139760	03/01/2010	OUTGOING	OD			03/01/2010	03/01/2010	
4139759	01/06/2005	OUTGOING	NLR			01/06/2005	01/06/2005	
4083827	12/09/2004	INCOMING	NTO			01/06/2005	12/09/2004	
4139758	10/15/2004	OUTGOING	LAD			10/15/2004	10/15/2004	
4139757	10/07/2004	OUTGOING	REF - PRIV			10/07/2004	10/07/2004	
4083826	07/01/2003	INCOMING	REL DET			10/15/2004	05/01/2003	





Questions or Comments >>

- Query Home
- Customer Search
- RE Search
- ID Search
- Search Results
- ID Number Detail
- TCEQ Home

## Central Registry

*The Customer Name displayed may be different than the Customer Name associated to the Additional IDs related to the customer. This name may be different due to ownership changes, legal name changes, or other administrative changes.*

Detail of: **Leaking Petroleum Storage Tanks Remediation ID Number 116178**

For: **HANDI STOP 40 (RN102493707 ...)**

6355 WILL CLAYTON PKWY, HUMBLE

ID Number Status: **ACTIVE**

Responsible Parties: **D & D International, Inc. (CN601259161 ...)** Since 11/01/2001 [View Compliance History ...](#)

Mailing Address: 6671 SOUTHWEST FWY STE 440 HOUSTON, TX 77074 -2212

Legal	Description	Start Date	End Date	Type	Status	Status Date
116178	LEAKING PETROLEUM STORAGE TANK	10/07/2004		CLEANUP	ACTIVE	10/07/2004

**Site Help | Disclaimer | Web Policies | Accessibility | Our Compact with Texans | TCEQ Homeland Security**

**Contact Us | Central Registry | Search Hints | Report Data Errors**

Statewide Links: **Texas.gov | Texas Homeland Security | TRAIL Statewide Archive | Texas Veterans Portal**

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116178-00

Bryan W. Shaw, Ph.D., *Chairman*  
Buddy Garcia, *Commissioner*  
Carlos Rubinstein, *Commissioner*  
Mark R. Vickery, P.G., *Executive Director*



# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

March 01, 2010

## CERTIFIED MAIL

91 7108 2133 3935 2304 7182

Mr. Shoukat Dhanani  
D&D International, Inc.  
6671 Southwest Freeway, Suite 440  
Houston, Texas 77074

Re: Handi-Stop #40, 6355 Will Clayton Parkway, Humble (Harris County), Texas  
LPST ID No. 116178; Priority 4.0; Facility ID No. 74865; R-12

Dear Mr. Dhanani:

Our records indicate that you are the responsible party for the above-referenced leaking petroleum storage tank (LPST) site and that additional corrective actions are necessary at this site. On October 15, 2004, this Office issued a letter to you requesting the completion of a Plan A Risk-Based Assessment. To date, no report documenting the results of the assessment has been received. Please contact your Corrective Action Specialist and submit a work plan **within 30 days** from the receipt of this letter. Your response should also include current tankhold observation well gauging data.

**Your failure to respond within the requested time frame is a violation of Title 30 Texas Administrative Code (TAC) Chapter 334.** The LPST and Facility ID Number should be included on all correspondence and should be mailed to the TCEQ Central office in Austin.

**If you can demonstrate that you are not the responsible party or the primary point of contact for this site, please include the correct responsible party name and phone number in your response to this Office. However, if you believe that you are financially unable to proceed with corrective actions, you may request a PST State Lead Remediation Financial Ability Determination Information packet by contacting the PST Remediation Division at the number below.**

Should you have any questions, please contact Trudy Hasan of Darcy Environmental Group (TCEQ Privatization Contractor) at 512/342-8585, extension 204. **Please reference the LPST ID Number when making inquiries.** Your cooperation in this matter is appreciated.


**RECEIVED**

**FEB 22 2010**

**TCEQ  
CENTRAL FILE ROOM**

Mr. Shoukat Dhanani  
March 01, 2010  
page 2  
LPST ID No. 116178

Sincerely,



Prasanthi Bollineni or Susan Longbine  
PST Privatization Contract Manager  
PST/DCRP Section  
Remediation Division  
Texas Commission on Environmental Quality

PVB/SNL/th2  
116178.od1.wpd

Texas Commission on Environmental Quality  

---

INTEROFFICE MEMORANDUM

TO : FILE DATE: June 25, 2004  
Updated September 28, 2004  
Updated November 30, 2009 *JA*

THRU : *Prasanthi Bollineni or Susan Longbine*, TCEQ On Site Supervisor  
David Bratberg, Project Manager, Darcy Environmental Group

FROM : Trudy S. Hasan, Case Coordinator, Darcy Environmental Group  
David Bratberg, Case Coordinator, Darcy Environmental Group

SUBJECT : File Review of Handi-Stop #40, 6355 Will Clayton Parkway, Humble (Harris County), Texas  
LPST ID No. 116178; *Priority 4.0*; Facility ID No. 74865; R-12

**Release Determination** (RDR ID 12516)

- December 2002 - Suspected Release. Diesel line leak repaired and tested tight. NAPL detected in obs wells. Line repaired, fluids vac'd out of obs wells.
- Three SBs installed around tankhold and near repair point. SBs to 15' bgs; no GW encountered. Soil samples only analyzed for TPH & one PAH analysis (no BTEX analyses). Results for TPH/PAH were bdl.
- A return letter was issued 7/9/04 - need more info on line repair, any excavation, and soil sampling; native soil samples not analyzed for BTEX; don't know current status of NAPL in obs wells.
- *Received response 9/13/04: no excavation was necessary to repair the leak; BTEX analysis was not performed because it was diesel; currently 0.13' to 0.18' of NAPL in tankhold.*
- *Issued LAD 10/15/04 for LPST 116178 based on the continued presence of diesel product in the tankhold.*

**Submittals**

**RDR Return** (rec'd 9/13/04)

- No excavation was necessary to repair the leaking diesel line - bolts were tightened. BTEX analysis was not performed because the product in question is diesel. However, BTEX/TPH/PAH analysis is required for diesel releases (RG-14, page 3). Current product thicknesses (9/9/04) in the two tankhold observation wells are approximately 0.18' and 0.13'.
- A LPST number and LAD letter will be issued. *LAD issued 10/15/04.*

**NTO** (rec'd 12/9/04)

- *In response to the LAD, a NTO was received indicating Quantum is the RCAS for this site. NLR.*

**None - Inactive Review** (11/3/09)

- *Received phone call regarding the status of this case. No reports or other correspondence have been received to indicate that the 2002 diesel release at this site has been further assessed. Site appears to still be operating. No additional RDRs have been received. Issue overdue letter.*

116178.wpd

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116178



# PST Registration Database Query Results

Facility Information	
Facility ID:	74865
Facility name:	HANDI STOP 40
Address:	6355 WILL CLAYTON PKWY HUMBLE TX 77338-
Date registered:	09/10/01
TCEQ region:	12, Houston
County:	Harris
Facility type:	Retail
Non-attainment area:	Yes
Number of In Use/Removed USTs:	0003
Number of In Use and Out-of-Use ASTs:	0000
Manager/Title:	DANNY DHANANI, G M
Phone:	713-777-1244
Signature/Title:	SHOUKAT DHANANI, R
Date signed:	12/01/01
Owner Effective Begin Date:	11/01/01

Owner Information	
Owner ID:	38308
Name:	D & D INTERNATIONAL INC
Address:	6671 SOUTHWEST FWY STE 440 HOUSTON TX 77074-2220
Owner Type:	Corporation
Contact:	DANNY DHANANI
Phone:	713-776-1515
Mail Undeliverable?:	No
Bankruptcy:	No
Total Number of Registered Facilities:	0014

Operator Information	
Operator ID:	121238
Name:	HANDI STOP 40
Address:	6355 WILL CLAYTON PKWY HUMBLE TX 77338-
Operator Phone:	
Contact Name/Title:	DHANANI,
Contact Phone:	713-776-1515

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**FEB 22 2012**  
 TCEQ  
 CENTRAL FILE ROOM

Operator Type:	Corporation
Effective Date:	01/10/02

**Self-Certification Information**

Signature/Title:	ADAM HUDSON, GAS MKT MGR
Signature Type:	Legally-Authorized Rep of Owner
Date:	07/07/09
Registration:	Yes
Fees:	Yes
Financial Assurance:	Yes
Technical Standards:	Yes
UST Delivery Certificate Expires:	08/2010

Our records indicate that a UST Delivery Certificate with an expiration date of 08/2010 has been or will be mailed (within three business days) to you . If you have not received your Delivery Certificate please contact the PST Registration Team at 512-239-2160 for assistance.

**UST Compartment Self-certification Information**

Tank ID/Compartment Letter:	1 A	
Self-certification Date:		07/07/09
Tank ID/Compartment Letter:	1 A	
Self-certification Date:		07/08/08
Tank ID/Compartment Letter:	1 A	
Self-certification Date:		07/23/07
Tank ID/Compartment Letter:	1 A	
Self-certification Date:		07/25/06
Tank ID/Compartment Letter:	1 A	
Self-certification Date:		07/15/05
Tank ID/Compartment Letter:	1 A	
Self-certification Date:		07/28/04
Tank ID/Compartment Letter:	1 A	
Self-certification Date:		08/18/03
Tank ID/Compartment Letter:	1 A	
Self-certification Date:		08/06/02
Tank ID/Compartment Letter:	1 A	
Self-certification Date:		12/01/01
Tank ID/Compartment Letter:	2 A	
Self-certification Date:		07/07/09
Tank ID/Compartment Letter:	2 A	
Self-certification Date:		07/08/08
Tank ID/Compartment Letter:	2 A	
Self-certification Date:		07/23/07
Tank ID/Compartment Letter:	2 A	
Self-certification Date:		07/25/06
Tank ID/Compartment Letter:	2 A	
Self-certification Date:		07/15/05
Tank ID/Compartment Letter:	2 A	
Self-certification Date:		07/28/04
Tank ID/Compartment Letter:	2 A	
Self-certification Date:		08/18/03
Tank ID/Compartment Letter:	2 A	
Self-certification Date:		08/06/02
Tank ID/Compartment Letter:	2 A	

Self-certification Date:		12/01/01
Tank ID/Compartment Letter:	3 A	
Self-certification Date:		07/07/09
Tank ID/Compartment Letter:	3 A	
Self-certification Date:		07/08/08
Tank ID/Compartment Letter:	3 A	
Self-certification Date:		07/23/07
Tank ID/Compartment Letter:	3 A	
Self-certification Date:		07/25/06
Tank ID/Compartment Letter:	3 A	
Self-certification Date:		07/15/05
Tank ID/Compartment Letter:	3 A	
Self-certification Date:		07/28/04
Tank ID/Compartment Letter:	3 A	
Self-certification Date:		08/18/03
Tank ID/Compartment Letter:	3 A	
Self-certification Date:		08/06/02
Tank ID/Compartment Letter:	3 A	
Self-certification Date:		12/01/01

<b>Underground Storage Tanks</b>	
Tank ID: 1	
Status/Status Date:	In Use / //
Installed/Registered:	11/01/2001 / 01/10/2002
Capacity/Empty:	0012000 / No Tank
Material:	Steel
Other Material:	
<b>Design and External Containment</b>	
I:	Single wall
II:	
III:	
IV:	
Internal Protection Date:	00/00/0000
<b>Corrosion Protection</b>	
I:	Composite Tank (steel w/FRP external laminate)
II:	
III:	
Other:	
Variance :	No variance(2) Piping
Type of Piping:	Pressurized
Piping Material:	Nonmetallic flexible piping
Other Piping Material:	
<b>Design and External Containment</b>	
I:	Single wall
II:	
III:	
IV:	

<b>Connectors and Valves</b>	
I:	Sheer/Impact valves (under dispenser)
II:	
III:	
<b>Corrosion Protection</b>	
I:	Nonmetallic flexible piping
II:	
III:	
Other:	
Variance:	No variance Vapor Recovery
Stage 1 Equipment Status:	Two-point system or coaxial system type
Installed:	11/01/2001
Stage 2 Equipment Status:	Balance system or assist system type
Installed:	11/01/2001
	Installer Information
Installer Company:	
Contractor Registration Number:	
Installer Name:	
Installer License #:	
Tank Tested:	No Compartments
Compartment Letter:	A
Capacity:	0000000
Substance Stored:	Gasoline
Other Substance Stored:	
<b>Tank Release Detection</b>	
I:	SIR (statistical inventory reconciliation) and inventory control
II:	
III:	
Other:	Auto Tank Gauging & inv. contr
Variance:	No variance
<b>Pipe Release Detection</b>	
I:	SIR (statistical inventory reconciliation) and inventory control
II:	Automatic line leak detector (3.0 gph for pressure piping)
III:	
Other:	
Variance:	No variance
<b>Spill and Overfill Prevention</b>	
I:	Auto flow restrictor valve
II:	Factory-built spill container/bucket/sump
III:	Tight-fill fitting
Variance:	No variance

Tank ID:	2
Status/Status Date:	In Use / //
Installed/Registered:	11/01/2001 / 01/10/2002
Capacity/Empty:	0012000 / No Tank
Material:	Steel



Other Material:	
<b>Design and External Containment</b>	
I:	Single wall
II:	
III:	
IV:	
Internal Protection Date:	00/00/0000
<b>Corrosion Protection</b>	
I:	Composite Tank (steel w/FRP external laminate)
II:	
III:	
Other:	
Variance :	No variance(2) Piping
Type of Piping:	Pressurized
Piping Material:	Nonmetallic flexible piping
Other Piping Material:	
<b>Design and External Containment</b>	
I:	Single wall
II:	
III:	
IV:	
<b>Connectors and Valves</b>	
I:	Sheer/Impact valves (under dispenser)
II:	
III:	
<b>Corrosion Protection</b>	
I:	Nonmetallic flexible piping
II:	
III:	
Other:	
Variance:	No variance Vapor Recovery
Stage 1 Equipment Status:	Two-point system or coaxial system type
Installed:	11/01/2001
Stage 2 Equipment Status:	Balance system or assist system type
Installed:	11/01/2001
	Installer Information
Installer Company:	
Contractor Registration Number:	
Installer Name:	
Installer License #:	
Tank Tested:	No Compartments
Compartment Letter:	A
Capacity:	0000000
Substance Stored:	Gasoline
Other Substance Stored:	
<b>Tank Release Detection</b>	
I:	SIR (statistical inventory reconciliation) and inventory control
II:	

III:	
Other:	<b>Auto Tank Gauging &amp; Inv. contr</b>
Variance:	<b>No variance</b>
<b>Pipe Release Detection</b>	
I:	<b>SIR (statistical inventory reconciliation) and inventory control</b>
II:	<b>Automatic line leak detector (3.0 gph for pressure piping)</b>
III:	
Other:	
Variance:	<b>No variance</b>
<b>Spill and Overfill Prevention</b>	
I:	<b>Auto flow restrictor valve</b>
II:	<b>Factory-built spill container/bucket/sump</b>
III:	<b>Tight-fill fitting</b>
Variance:	<b>No variance</b>

Tank ID:	<b>3</b>
Status/Status Date:	<b>In Use / //</b>
Installed/Registered:	<b>11/01/2001 / 01/10/2002</b>
Capacity/Empty:	<b>0012000 / No</b>
	<b>Tank</b>
Material:	<b>Steel</b>
Other Material:	
<b>Design and External Containment</b>	
I:	<b>Single wall</b>
II:	
III:	
IV:	
Internal Protection Date:	<b>00/00/0000</b>
<b>Corrosion Protection</b>	
I:	<b>Composite Tank (steel w/FRP external laminate)</b>
II:	
III:	
Other:	
Variance :	<b>No variance(2)</b>
	<b>Piping</b>
Type of Piping:	<b>Pressurized</b>
Piping Material:	<b>Nonmetallic flexible piping</b>
Other Piping Material:	
<b>Design and External Containment</b>	
I:	<b>Single wall</b>
II:	
III:	
IV:	
<b>Connectors and Valves</b>	
I:	<b>Sheer/Impact valves (under dispenser)</b>
II:	
III:	
<b>Corrosion Protection</b>	
I:	<b>Nonmetallic flexible piping</b>
II:	

III:	
Other:	
Variance:	<b>No variance</b>
	<b>Vapor Recovery</b>
Stage 1 Equipment Status:	<b>Not Reported</b>
Installed:	//
Stage 2 Equipment Status:	
Installed:	//
	<b>Installer Information</b>
Installer Company:	
Contractor Registration Number:	
Installer Name:	
Installer License #:	
Tank Tested:	<b>No</b>
	<b>Compartments</b>
Compartment Letter:	<b>A</b>
Capacity:	<b>0000000</b>
Substance Stored:	<b>Diesel</b>
Other Substance Stored:	
<b>Tank Release Detection</b>	
I:	<b>SIR (statistical inventory reconciliation) and inventory control</b>
II:	
III:	
Other:	<b>Auto Tank Gauging &amp; inv. contr</b>
Variance:	<b>No variance</b>
<b>Pipe Release Detection</b>	
I:	<b>SIR (statistical inventory reconciliation) and inventory control</b>
II:	<b>Automatic line leak detector (3.0 gph for pressure piping)</b>
III:	
Other:	
Variance:	<b>No variance</b>
<b>Spill and Overfill Prevention</b>	
I:	<b>Auto flow restrictor valve</b>
II:	<b>Factory-built spill container/bucket/sump</b>
III:	<b>Tight-fill fitting</b>
Variance:	<b>No variance</b>

Contact us if you have any questions.

Last Modified: July 2, 2009

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
TELEPHONE MEMO TO THE FILE

Please complete with typewriter or black pen.

Call to: TH2

Call from: Consultant

Date of call: 11/3/09

File no.: 116178

Phone no.: (      )     

Subject: status

FAC # 74865

Information for file: \_\_\_\_\_

Rec'd call from consultant doing work at adjacent site. Wanted status/info on 116178.

This is an inactive site - nothing since early 2005. Under 334 already. Send OD letter

Signed Judy Hasan

116178-00

Bryan W. Shaw, Ph.D., *Chairman*  
Buddy Garcia, *Commissioner*  
Carlos Rubinstein, *Commissioner*  
Mark R. Vickery, P.G., *Executive Director*



# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

March 01, 2010

## CERTIFIED MAIL

91 7108 2133 3935 2304 7182

Mr. Shoukat Dhanani  
D&D International, Inc.  
6671 Southwest Freeway, Suite 440  
Houston, Texas 77074

Re: Handi-Stop #40, 6355 Will Clayton Parkway, Humble (Harris County), Texas  
LPST ID No. 116178; Priority 4.0; Facility ID No. 74865; R-12

Dear Mr. Dhanani:

Our records indicate that you are the responsible party for the above-referenced leaking petroleum storage tank (LPST) site and that additional corrective actions are necessary at this site. On October 15, 2004, this Office issued a letter to you requesting the completion of a Plan A Risk-Based Assessment. To date, no report documenting the results of the assessment has been received. Please contact your Corrective Action Specialist and submit a work plan **within 30 days** from the receipt of this letter. Your response should also include current tankhold observation well gauging data.

**Your failure to respond within the requested time frame is a violation of Title 30 Texas Administrative Code (TAC) Chapter 334.** The LPST and Facility ID Number should be included on all correspondence and should be mailed to the TCEQ Central office in Austin.

**If you can demonstrate that you are not the responsible party or the primary point of contact for this site, please include the correct responsible party name and phone number in your response to this Office. However, if you believe that you are financially unable to proceed with corrective actions, you may request a PST State Lead Remediation Financial Ability Determination Information packet by contacting the PST Remediation Division at the number below.**

Should you have any questions, please contact Trudy Hasan of Darcy Environmental Group (TCEQ Privatization Contractor) at 512/342-8585, extension 204. **Please reference the LPST ID Number when making inquiries.** Your cooperation in this matter is appreciated.


**RECEIVED**

**FEB 22 2010**

**TCEQ  
CENTRAL FILE ROOM**

Mr. Shoukat Dhanani  
March 01, 2010  
page 2  
LPST ID No. 116178

Sincerely,



Prasanthi Bollineni or Susan Longbine  
PST Privatization Contract Manager  
PST/DCRP Section  
Remediation Division  
Texas Commission on Environmental Quality

PVB/SNL/th2  
116178.od1.wpd

## Central Registry

*The Customer Name displayed may be different than the Customer Name associated to the Additional IDs related to the customer. This name may be different due to ownership changes, legal name changes, or other administrative changes.*

Detail of: **Leaking Petroleum Storage Tanks Remediation ID Number 96464**

For: **GEN RENT A CAR (RN103766879 ...)**

6115 WILL CLAYTON PKWY, HUMBLE

ID Number Status: **INACTIVE**

Responsible Parties: **DYNATSTY EXPRESS CORP (CN604420901 ...)** [View Compliance History ...](#)

Mailing Address: Not on file

Legal	Description	Start Date	End Date	Type	Status	Status Date
96464	LEAKING PETROLEUM STORAGE TANK	08/14/1990	03/12/1991	CLEANUP	INACTIVE	03/12/1991

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Statewide Links: [Texas.gov](#) | [Texas Homeland Security](#) | [TRAIL Statewide Archive](#) | [Texas Veterans Portal](#)

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# Appendix D. Site Reconnaissance Photographs





1. Facing east. Will Clayton Boulevard (westbound lanes and median) from western subject property boundary.



2. Facing east. Will Clayton Boulevard (median and eastbound lanes) from western subject property boundary.

### Representative Site Photographs

Kenswick Drive Extension  
Environmental Site Assessment  
Houston Airport System  
100072032

# ATKINS

Member of the SNC-Lavalin Group



3. Facing southeast. Typical representation of irrigation network and tree rows observed within the median areas of Will Clayton Boulevard.



4. Facing south. Transmission lines observed transecting the median area of Will Clayton Boulevard.

<p><b>Representative Site Photographs</b></p> <p>Kenswick Drive Extension          Environmental Site Assessment          Houston Airport System          100072032</p>	<p><b>ATKINS</b></p> <p>Member of the SNC-Lavalin Group</p>
---	---



5. Facing north. Intersection of Will Clayton Boulevard (east-west) and Kenswick Drive (north-south).



6. Facing north. West-adjacent to Kenswick Drive. GeoSearch # 3: LPST, Handi Stop 40 at 6355 Will Clayton Parkway.

**Representative Site Photographs**

Kenswick Drive Extension  
Environmental Site Assessment  
Houston Airport System  
100072032

**ATKINS**

Member of the SNC-Lavalin Group



7. Facing southwest. West-adjacent to Kenswick Drive. Hotel located adjacent to northwestern boundary of the subject property.



8. Facing north-northeast. Intersection of Lee Road and Will Clayton Parkway.

### Representative Site Photographs

Kenswick Drive Extension  
Environmental Site Assessment  
Houston Airport System  
100072032

# ATKINS

Member of the SNC-Lavalin Group



9. Facing north-northwest. Lee Road (facing Will Clayton Parkway) from the southeastern boundary of the subject property.



10. Facing north. Lee Road (facing Will Clayton Parkway) from the southwestern boundary of the subject property. Lift station entrance seen on the left of the picture.

**Representative Site Photographs**

Kenswick Drive Extension  
Environmental Site Assessment  
Houston Airport System  
100072032

**ATKINS**

Member of the SNC-Lavalin Group



11. Facing west. Lift station on Lee Road, west-adjacent to southwestern boundary of the subject property.

**Representative Site Photographs**

Kenswick Drive Extension  
Environmental Site Assessment  
Houston Airport System  
100072032

**ATKINS**

Member of the SNC-Lavalin Group

Kathryn D. Saucier

**Atkins North America, Inc.**

200 Westlake Park Blvd, Suite 1100  
Houston, TX 77079

Tel: +1 713 576 8500

Fax: +1 713 576 8501

kathryn.saucier@atkinsglobal.com

© Atkins North America, Inc. except where stated otherwise

January 26, 2021

Mr. Bill Martin  
Texas Historical Commission  
P.O. Box 12276  
Austin, Texas 78711

Re: Kenswick Drive Extension, Harris County, Texas

Dear Mr. Martin,

The Houston Airport System (HAS) has requested Atkins to provide engineering design and construction documents for the extension of Kenswick Drive across the intersection with Will Clayton Parkway to Lee Road within George Bush Intercontinental Airport, Harris County, Texas. The objective of the project is to provide a typical TxDOT Turnaround Intersection at Kenswick Drive and Will Clayton Parkway to improve traffic flow and allow direct access to Will Clayton Parkway and Lee Road. Currently, Kenswick Drive connects to Will Clayton Parkway from the north to the westbound lanes of Will Clayton Parkway while Lee Road connects to the eastbound lanes of Will Clayton Parkway with no cross over connection at these intersections. The purpose of the project is to connect Kenswick Drive across the intersection to the eastbound lanes of Will Clayton Drive. The connection to Lee Road will be closed to public access by signage, but the roadway will still connect to Will Clayton. In addition to the extension of Kenswick Drive, it is anticipated the project will also include the installation of a detention pond as well as appropriate turn lanes along Will Clayton Parkway as needed, use of a temporary lay-down area, drainage improvements, and areas of ingress and egress if access is not available utilizing the existing roads.

This portion of Kenswick Drive has been determined to be under the jurisdiction of the City of Houston's Houston Airport System. Therefore, the proposed project is subject to the Antiquities Code of Texas of 1969, as amended. At this time, Section 106 of the National Historic Preservation Act of 1966, as amended coordination is not anticipated.

Because the project is currently at 60% design plans (Figure 1), for the purposes of this memo, Atkins has chosen to review a study area believed to be sufficient in size to cover the area of potential effects (APE) for direct effects. Atkins anticipates refining the APE as design plans progress. Atkins assumes the APE for direct effects will include all areas of ground disturbing activities including but not limited areas of new road construction, lay-down areas, areas of ingress and egress (if applicable), areas of drainage improvement, and the detention pond.

### **Archaeological Resources**

As part of the proposed project, Atkins conducted a cultural resources background review of the area within 1 kilometer (km) of the study area. Research of available records was conducted using the Texas Historical Commission's (THC) on-line *Restricted Texas Archeological Sites Atlas* (Atlas) files with the purpose of determining the location of previously recorded archaeological sites (sites issued a trinomial/recorded at TARL), as well as identifying National Register of Historic Places (NRHP) listed and eligible properties and sites, NRHP-listed districts, cemeteries (including Historic Texas Cemeteries), Official Texas Historical Markers (OTHM) (including Recorded Texas Historic Landmarks), State Antiquities Landmarks (SALs), and any other potential cultural resources such as National Historic Landmarks (NHLs), National Monuments, National Memorials, National Historic Sites, and National Historical Parks to ensure the completeness of the study. As a secondary source of NRHP properties and NHLs, the National Park Service's (NPS) NRHP database and GIS Spatial Data as well as the NHL Program were consulted. The NPS Geographic Resources Program National Historic Trails Map Viewer was used to identify National Historic Trails (NHT). Additionally, Texas Department of Transportation's (TxDOT) *NRHP Listed and Eligible Bridges of Texas* map and *Historic Districts & Properties of Texas* map were reviewed.

Reports of previous archaeological investigations and previously recorded cultural resources in the study area or vicinity were also reviewed along with sources like the Bureau of Economic Geology's *Geologic*



*Atlas of Texas*, the United States Department of Agriculture's Natural Resources Conservation Service's soil surveys and TxDOT's Houston District *Potential Archeological Liability Map* (PALM) to assess the project area's potential for containing previously unrecorded archaeological sites.

The results of the cultural resources background review did not identify any previously recorded archaeological sites within 1 km of the study area (Figure 2).

While two cultural resource investigations have occurred within 1 km of the proposed project, the study area does not appear to have been previously surveyed. In 2012, Raba Kistner Environmental, Inc. undertook an intensive cultural resources survey of the proposed fast park bayou relocation project adjacent to a portion of the current study area. The survey consisted of a visual inspection of the ground surface for cultural materials supplemented with shovel testing of the 32-acre project site. Due to the extensive subsurface disturbance to the project site, a total of three shovel were excavated which did not result in the identification of cultural materials. Other than two isolated, surface finds (historic pottery) in the northeast quadrant of the project, no additional cultural materials, artifacts, or features were identified on the ground surface or in any subsurface context (Clark and Murray 2012). In 2015, Moore Archeological Consulting, Inc. conducted a cultural resources survey of the proposed George Bush Intercontinental Airport hardstands, fleet maintenance building, and concrete batch plant. The intensive pedestrian field survey of the project area included both surface and subsurface (shovel test) examination. A total of 63 shovel tests were excavated with no evidence of archaeological or cultural resources identified (Stoddart and Magnum 2015).

## Geology and Soils

Geologically, the study area is mapped as Quaternary-age Lissie Formation with Holocene and Pleistocene epochs and soil series. Shown on the Beaumont sheet, the Lissie Formation consists, in the upper part, of clay, silt, sand, and very minor siliceous gravels. The lower portion of the formation is noncalcareous with iron oxide concentrations. Locally it is calcareous with concentrations of calcium carbonate, iron oxide, and iron manganese oxides. It is a fairly flat and featureless formation apart from shallow depositions and round pimple mounds (USGS 2021).

The soils in the project area are Holocene and Pleistocene fluvial deposits, mapped as Clodine-Urban land complex, 0 to 1 percent slopes (BEG 1982; USDA, NRCS 2021). Clodine soils consist of poorly drained loams located on flat, ancient flood plains. They are derived from igneous, metamorphic and sedimentary rocks and extend more than 80 inches in depth. A typical profile is: A - 0 to 9 inches: fine sandy loam; Bt1 - 9 to 23 inches: loam; Bt2 - 23 to 57 inches: loam; and Bt3 - 57 to 80 inches: loam. Urban land is land that was altered by human activity in modern times and may, or may not, resemble the original soils. In the project area, the Urban land soils extend up to 40 inches in depth (USDA, NRCS 2021).

The TxDOT Houston District PALM recommends a surface survey with no deep reconnaissance recommended (Map Unit 2). Map Unit 2 is characteristic of Holocene-age, alluvial, eolian or colluvial veneer deposits that exhibit low to moderate evidence of disturbance and rest on Pleistocene landforms (Abbott 2001).

## Above-Ground Resources

According to a review of the sources listed above, there are no previously recorded above-ground resources within the study area. A review of historic and modern aerials (1953, 1957, 1962, 1964, 1966, 1973 and 1981), topographic maps (1916, 1919, 1933, 1946, 1949, 1956, 1967, 1969 and 1982) and a cursory review of the Harris County Appraisal District (HCAD), indicates there are no historic-age structures (pre-1977) within the study area or on parcels adjacent to the study area. While a few roads north of the study area emerge by 1966, the general area appears to remain rural and undeveloped apart from the construction of the Will Clayton Parkway around 1973. Also, in 1973 a few structures are apparent adjacent to the northside of the Will Clayton Parkway outside of the eastern boundary of the study area associated with the construction of the, now, Ramada by Wyndam Houston Intercontinental Airport East Hotel (constructed in 1969 and remodelled in 2009 per HCAD). By 1981, what appears to be a parking lot is apparent within the

Raba Kistner study area discussed earlier. However, according the HCAD, the current parking lot in that area was constructed in 1994 with retail facilities in 2013 (HCAD 2021; NETRO 2021).

## Conclusion

Based upon the information provided, Atkins respectfully requests the THC's guidance on the required level of effort (if any) for the proposed project to achieve cultural resources clearance and compliance under the Antiquities Code of Texas of 1969, as amended. If the THC determines an archaeological investigation is required, Atkins will obtain a Texas Antiquities Code permit which will include a research design for conducting investigations.

Sincerely,  
Atkins



Krista McClanahan

Attachments

## References Cited

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2021 *Pocket Texas Geology.* Bureau of Economic Geology, United States Geological Society. Electronic Source: <https://txpub.usgs.gov/txgeology/>. Accessed January 14<sup>th</sup>, 2021

REVISIONS		
NO.	DESCRIPTION	DATE BY

GEORGE BUSH INTERCONTINENTAL AIRPORT (IAH)  
**KENSWICK DRIVE EXTENSION  
 DISTURBED AREA EXHIBIT**  
 Figure 1

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DRAWN BY:	ALR
CHECK BY:	PMW
SCALE:	
DATE:	12/04/2020

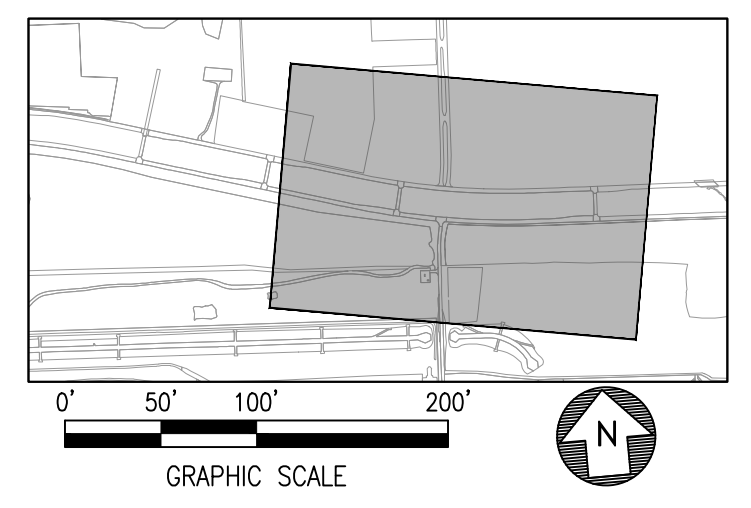
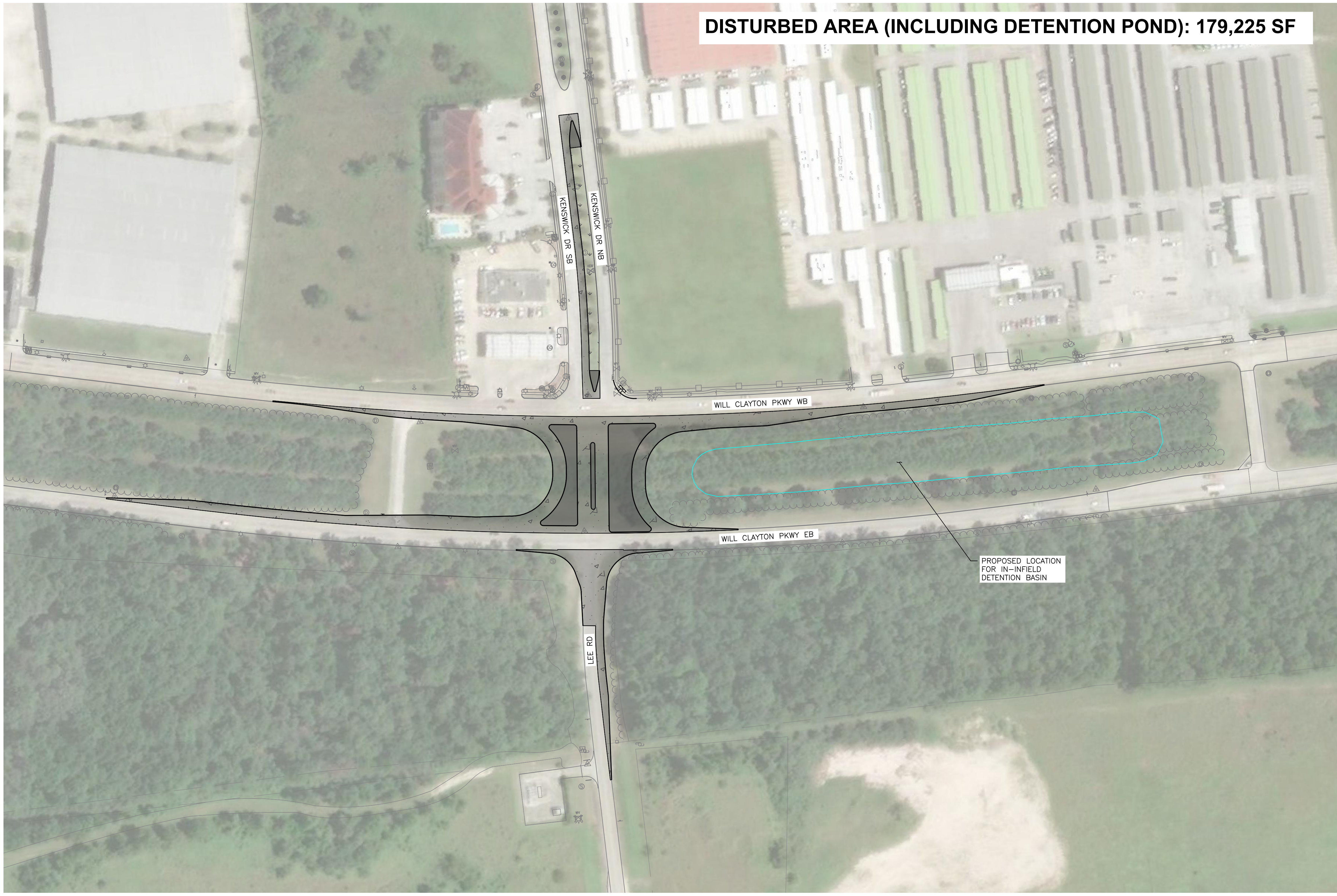
JOHN L. VERBURG, JR.  
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 HERE IN ARE INCOMPLETE AND  
 MAY NOT BE USED FOR  
 REGULATORY APPROVAL, PERMIT  
 OR CONSTRUCTION.  
 12/04/2020

APPROVED BY: \_\_\_\_\_

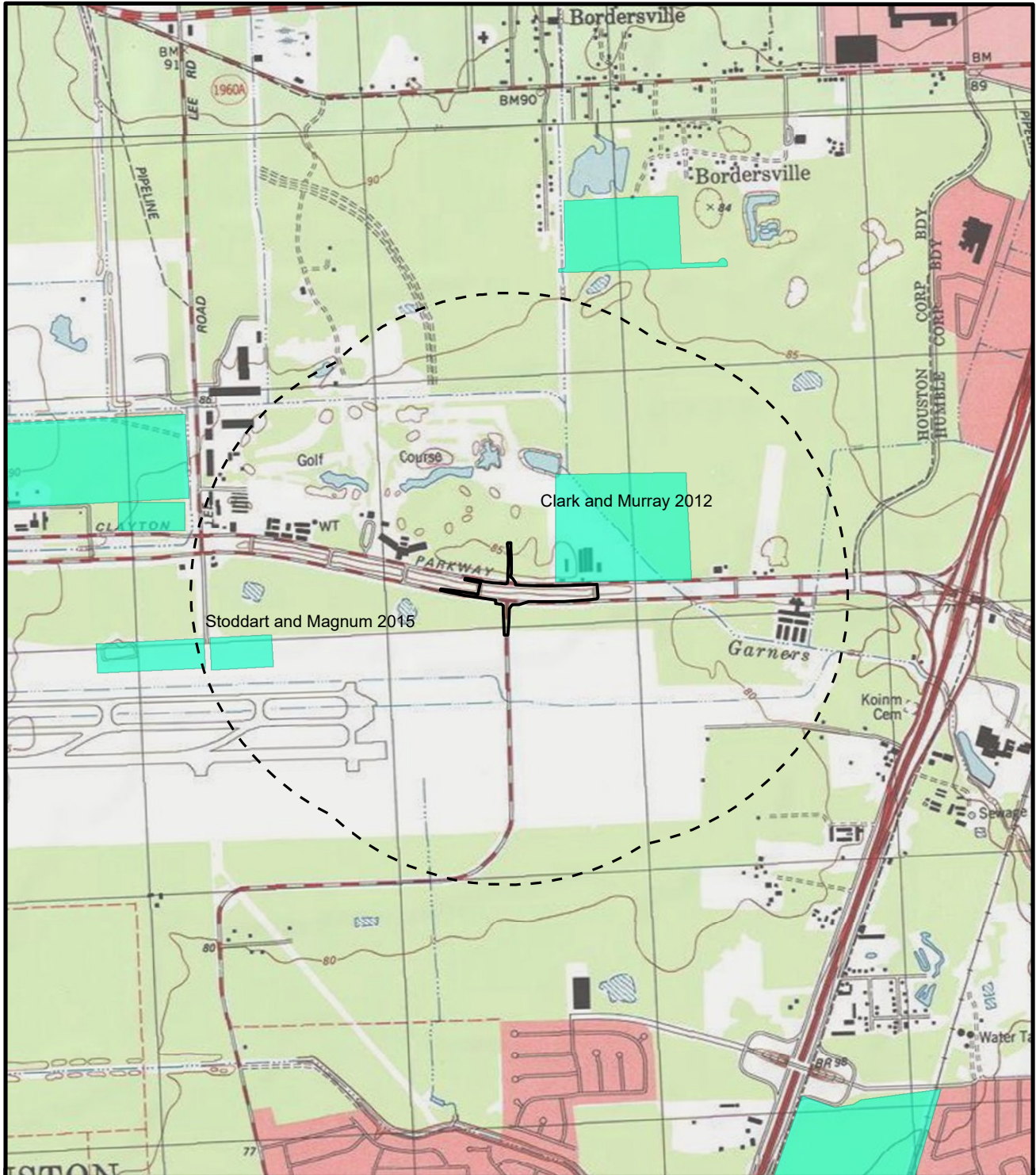
DIRECTOR  
 HOUSTON AIRPORT SYSTEM

PROJECT NO.	100072032
A.I.P. NO.	
C.I.P. NO.	
H.A.S. NO.	935
SHEET NO.	

**X**



LEGEND	
	CONTINUALLY REINFORCED CONCRETE PAVEMENT (CRCP)
	CONCRETE MEDIAN
	GRASS MEDIAN



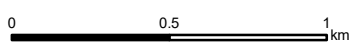
- Previous Archaeological Investigations
- Study Area 1 km Buffer
- Study Area

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Figure 2  
Previously Recorded Cultural Resources

Kenswick Drive Extension  
Houston Airport System  
Houston, Harris County, Texas

Datum: NAD 1983  
Spatial Ref.: State Plane Texas  
South Central  
Units: Feet  
Basemap: ESRI USA Topo



Job No.: 100072032	Scale: 1" = 1 km
Prepared By: ATKINS/WHIT6392	Date: Jan 11, 2021

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USGS, National Geographic, i-cubed, USA Topo Maps, March 2019, 1:24,000; generated by Atkins; using ArcMap.  
<http://services.arcgisonline.com/ArcGIS/rest/services/USA\_Topo\_Maps/MapServer> (11 January 2021)

Attachment – Representative Photos of the Study Area



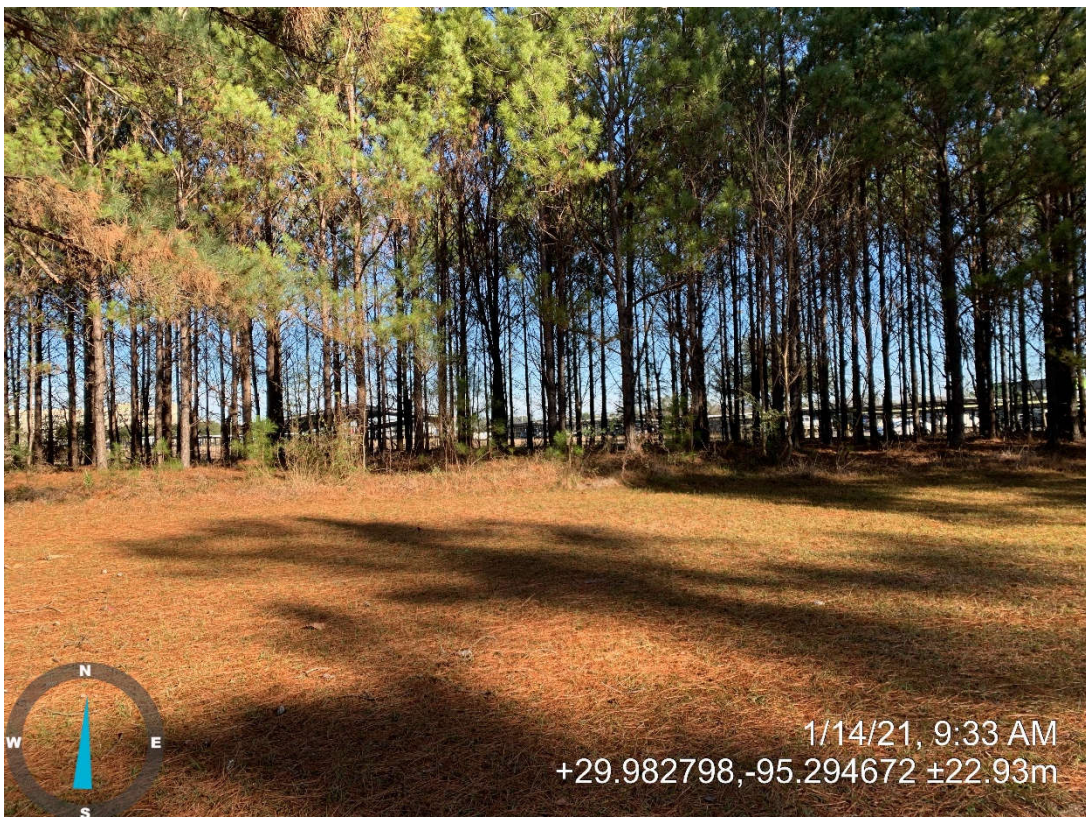
Will Clayton Parkway median towards Kenswick Drive, facing north



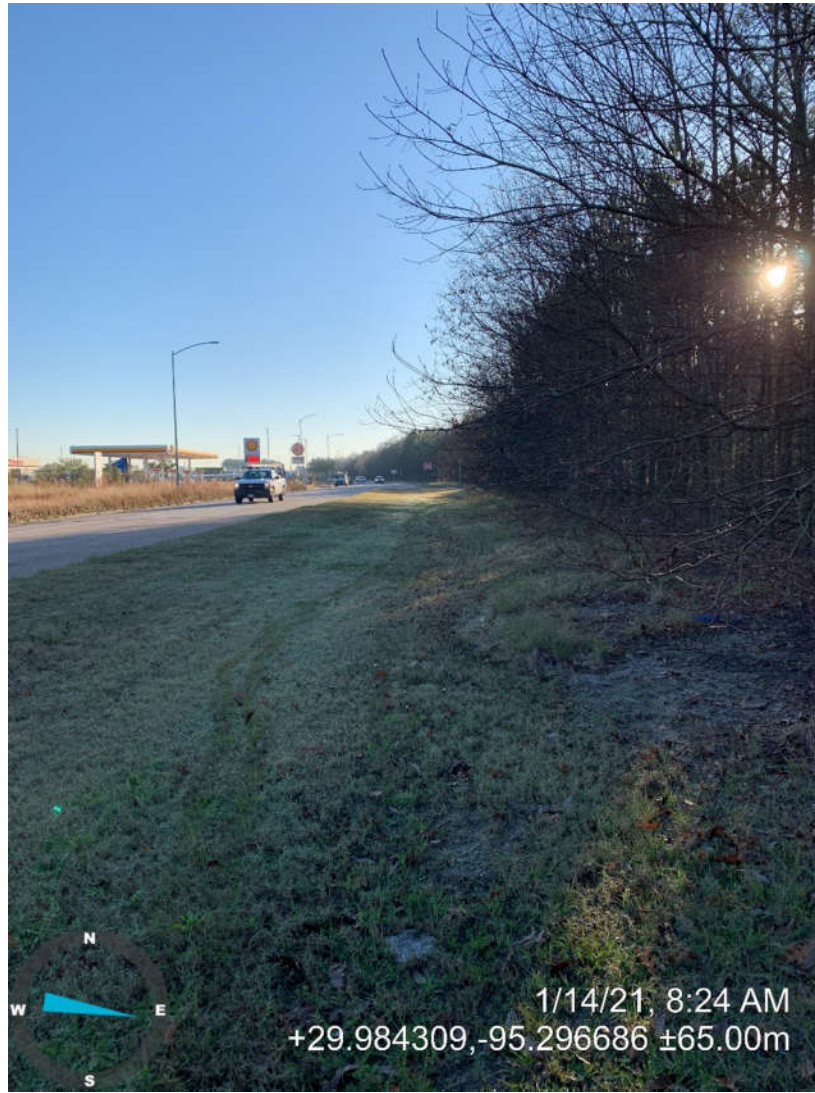
Will Clayton Parkway median within possible lay-down area, facing east



Will Clayton Parkway median towards Lee Road at proposed crossover, facing south



Will Clayton Parkway median proposed detention pond vicinity, facing north



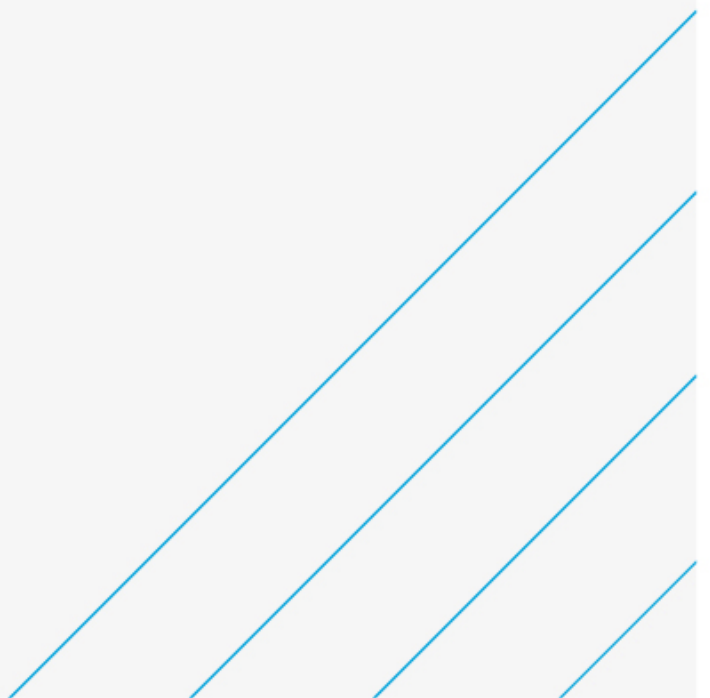
Representative photo of Will Clayton Parkway approximate ROW, facing east

## Wetland Delineation Report

### Kenswick Drive Expansion

Prepared for: The Houston Airport System

January 2021





# Contents

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## Appendices

- Appendix A. Figures
- Appendix B. Representative Photographs

## Acronyms and Abbreviations

Atkins	Atkins North America, Inc.
CFR	Code of Federal Regulations
CWA	Clean Water Act
FEMA	Federal Emergency Management Agency
GPS	global positioning system
HAS	Houston Airport System
HUC	Hydrologic Unit Code
IAH	George Bush Intercontinental Airport
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WOUS	waters of the U.S.

# Executive Summary

On behalf of the Houston Airport System (HAS), Atkins North America, Inc. (Atkins) completed a waters of the U.S. (WOUS) survey of an approximate 9.8-acre area in support of the proposed Kenswick Drive Extension Project (the Project). The Project area is within Houston, Texas in Harris County. The survey area is located primarily in the median of Will Clayton Parkway near the intersections of Kenswick Drive and Lee Road. Portions of the survey area extend to the east of the turnaround near these intersections, as well as along both Kenswick Drive and Lee Road. The survey area encompasses the entire Project area; however, impacted areas may be smaller subsections of the entire survey area.

Per Section 404 of the Clean Water Act (CWA), a delineation of potential jurisdictional wetlands and other WOUS (as defined by 33 Code of Federal Regulations [CFR] 328) was conducted within the survey area. The delineation was conducted in accordance with the U.S. Army Corps of Engineers (USACE) *Wetlands Delineation Manual* (Environmental Laboratory, 1987), as amended by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0* (USACE, 2010). At sample areas where hydrophytic vegetation, soil, and hydrology indicator criteria were met, the area was identified as a wetland.

Atkins performed the delineation of wetlands and other WOUS within the survey area on January 14, 2021. No wetlands or waterbodies were observed within the survey area at the time of the field survey. Atkins' potential jurisdictional status is based on best professional judgment; only the USACE can make the final decision on jurisdictional determination.

# 1. Introduction

On behalf of the Houston Airport System (HAS), Atkins North America, Inc. (Atkins) completed a waters of the U.S. (WOUS) survey of an approximate 9.8-acre area in support of the proposed Kenswick Drive Extension Project (the Project). The Project area is within Houston, Harris County, Texas, to the east of the George Bush Intercontinental Airport (IAH) along Will Clayton Parkway (Figure 1, Appendix A). The survey area encompasses the entire Project area; however, impacted areas may be smaller subsections of the entire survey area.

The purpose of this investigation was to determine the location and extent of any WOUS, including wetlands, within the survey area. As part of this investigation, determinations were made as to the identified wetlands being considered potential WOUS, as defined by Section 404 of the Clean Water Act, and therefore subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) Galveston District. The information for this delineation was obtained through both desktop and field investigations.

# 2. General Description of Survey Area

The survey area is located primarily in the median of Will Clayton Parkway at the intersections of Kenswick Drive and Lee Road (Figure 2, Appendix A). Portions of the survey area extend to the east of the turnarounds near these intersections, as well as along both Kenswick Drive and Lee Road. The land use in the vicinity of the survey area is urban development and landscaping, commercial structures, and sporadic forest.

The survey area falls within the Western Gulf Coastal Plain, Northern Humid Gulf Coastal Prairies (34a) Level IV Ecoregion (Griffith, et al., 2004). The topography in this region is gently sloping coastal plain with original vegetation of grasslands with a few clusters of oaks. Almost all of the coastal prairies have been converted to crop land, rangeland pasture, or urban uses, and exotic Chinese tallow tree (*Triadica sebifera*) and Chinese privet (*Ligustrum sinense*) have invaded (Griffith, et al., 2004). The survey area is within the Buffalo-San Jacinto watershed near Garners Bayou (Hydrologic Unit Code [HUC] 120401040602) (USGS, 2021).

According to the U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI) maps and the U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) maps, there are no surface waters or wetlands within the project area (USFWS, 2021; USGS, 2021) (Figure 3, Appendix A). As represented on the Humble Quadrangle, Texas -Harris County USGS 7.5-minute topographic quadrangle, the survey area exhibits a generally flat contour with an elevation of approximately 80 feet above mean sea level (USGS, 2019) (Figure 3, Appendix A). Portions of the survey area along the eastern boundaries, part of the Lee Road area, and the northern section of Kenswick Drive are located within Federal Emergency Management Agency (FEMA) floodplains Zone X, designated 500-year flood hazard (FEMA, 2014) (Figure 4, Appendix A).

Soils in the survey area consist of one unit, considered hydric in Harris County, Texas (USDA/NRCS, 2021a) (Figure 4, Appendix A). This unit is: Clodine-Urban land complex, 0 to 1 percent slope (Ce) which is considered not prime farmland, fine sandy loam or loam, and somewhat poorly drained.

## 3. Waters of the U.S. Delineation

The following sections describe background information used, methods implemented, and resources accessed while completing the survey. Per Section 404 of the CWA, a delineation of potential jurisdictional WOUS and wetlands (as defined by 33 CFR 328 and revised on June 22, 2020) was conducted within the survey area.

### 3.1. Methods

#### 3.1.1. Desktop Assessment

Prior to conducting the field investigation, an initial desktop review of current and historical aerial photography, USFWS NWI maps, USGS topographic and NHD maps, and the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) soil survey data were evaluated. The objective of the desktop assessment was to identify areas known or assumed to be wetlands or WOUS, as well as areas exhibiting indicative wetland features that would need to be investigated further in the field. The results of the desktop assessment facilitated planning and preparation for the field delineation of wetlands and other WOUS.

#### 3.1.2. Field Investigation

The delineation of WOUS and wetlands within the approximate 9.8-acre survey area was completed by Atkins ecologists on January 14, 2021. The delineation was conducted in accordance with the USACE *Wetlands Delineation Manual* (Environmental Laboratory, 1987), as amended by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0* (USACE, 2010). The median area consists of three transects, as stated in the guidelines for survey areas greater than 5 acres. A Trimble GeoXH 7000 differentially corrected global positioning system (GPS) unit with submeter accuracy was used to map each feature identified.

Wetlands were evaluated based on the presence or absence of hydrophytic vegetation, hydrology, and hydric soils at each data point. The plant species in each vegetation layer (i.e., tree, sapling/shrub, herbaceous, and vine) were recorded. The 2018 National Wetland Plant List, Version 3.4 (USACE, 2018), was used to determine the indicator status of plant species. Taxonomy of plant species follows the 2018 list and the USDA NRCS Plant Database (USDA/NRCS, 2021b). Field indicators of wetland hydrology were evaluated and recorded. Soils were inspected for indicators of hydric conditions (USDA/NRCS, 2010; Environmental Laboratory, 1987; USACE, 2010). *The Munsell Soil Color Charts* (Munsell, 2009) was used to evaluate soil pits. At sample areas where hydrophytic vegetation, soil, and hydrology indicator criteria are met, the area is identified as a wetland and categorized following the classification system of Cowardin et al. (1979).

### 3.2. Results

At the time of the field survey, no wetlands or waterbodies were observed within the survey area. Potential wetland areas were evaluated, but lacked the necessary indicators per the USACE delineation manual and supplement. The Will Clayton Parkway median was constructed in such a way to promote water drainage. The center of the median is elevated, with the slope going down to the road edges. The edge of the landscaped median is noticeably planted, with rows of trees along a maintained grass edge near the roadway on both sides of the median. The grass edges are slightly depressed, not excavated in a way to be a channelized ditch or trench, with periodic stormwater drains throughout the entire median. Therefore, these areas drain the survey area in a way that prevents wetland formation or waterbodies. The other areas along Kenswick Drive and Lee Road consist of maintained grass, sidewalks, roads, and/or other urbanization. Representative photographs of the survey area are available in Appendix B.

## 4. Summary and Recommendations

Atkins completed a delineation of wetlands and other WOUS within an approximate 9.8-acre survey area within Houston, Texas, in Harris County on January 14, 2021. The survey area is located east of IAH, along Will Clayton Parkway near the intersections with Lee Road and Kenswick Drive. No wetlands or waterbodies were observed within the survey area at the time of the field survey. Atkins' potential jurisdictional status is based on best professional judgment; only the USACE can make the final decision on jurisdictional determination.

## 5. References

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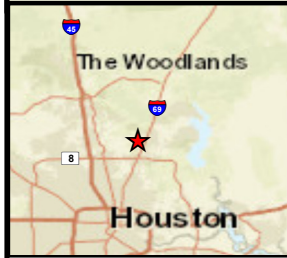
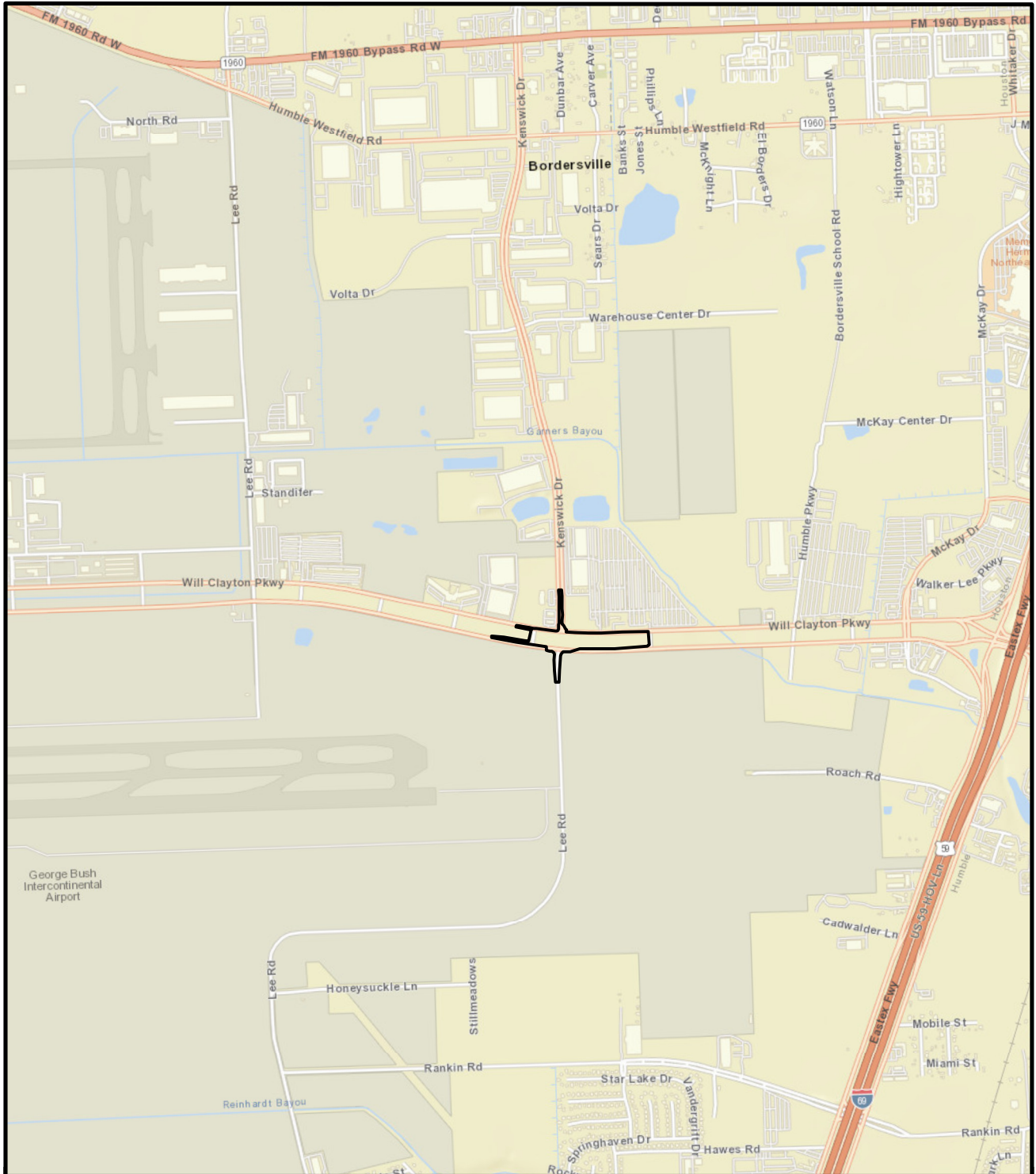
# Appendices






# Appendix A:

## Figures



 Survey Area

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Figure 1  
Vicinity Map

Wetland Delineation Report  
Houston Airport System  
Houston, Harris County, Texas

Job No.: 100072032

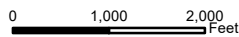
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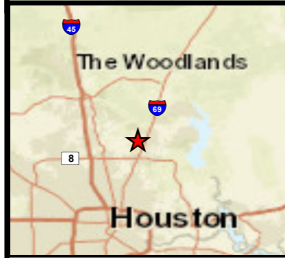
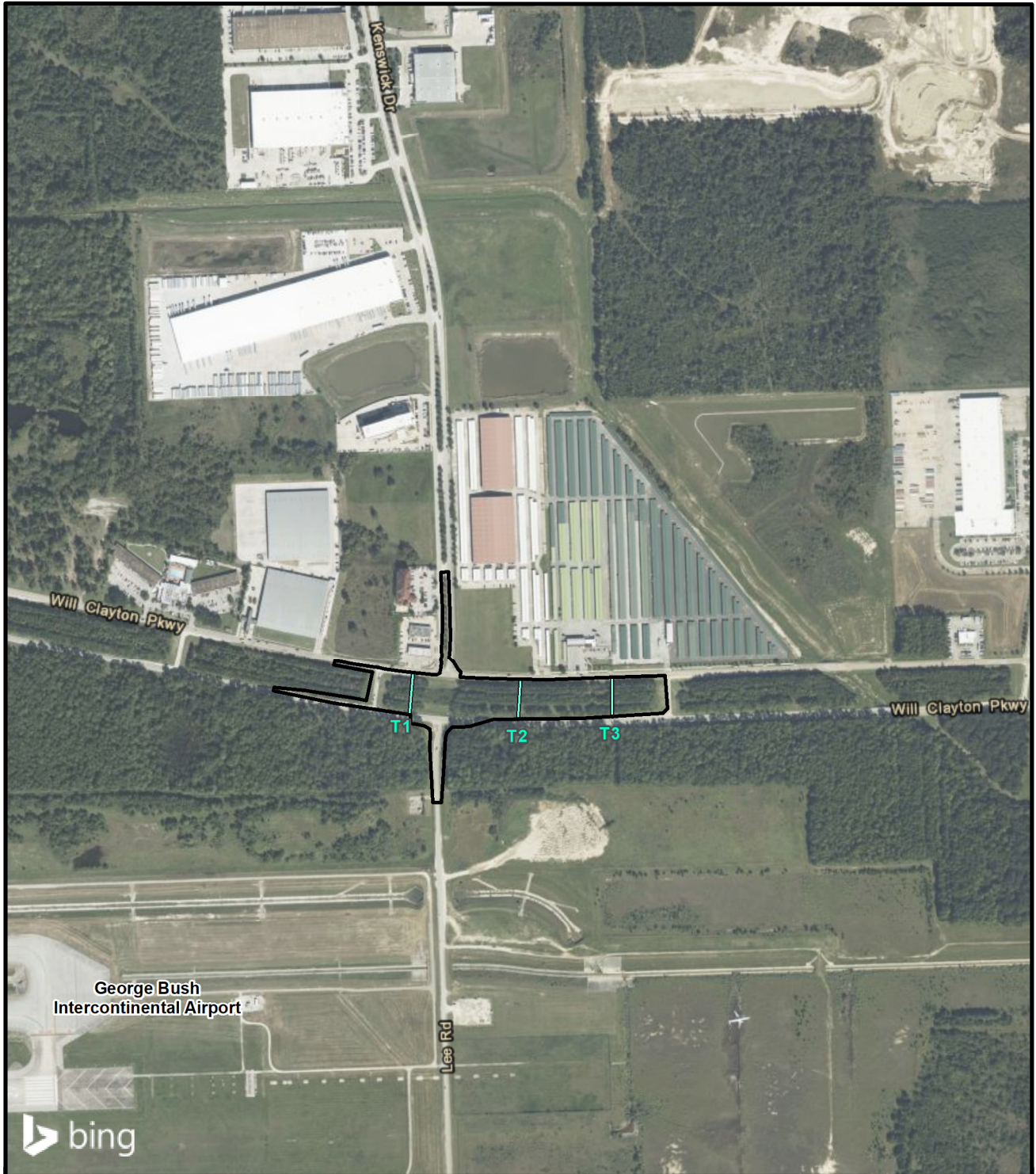
Prepared By: ATKINS/WHIT6392

Date: Jan 27, 2021

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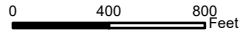
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South Central  
Units: Feet  
Basemap: ESRI Streets





- Survey Area
- Transect

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 South Central  
 Units: Feet  
 Basemap: Bing Maps Aerial



# ATKINS

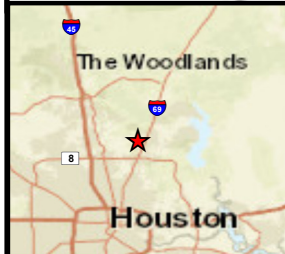
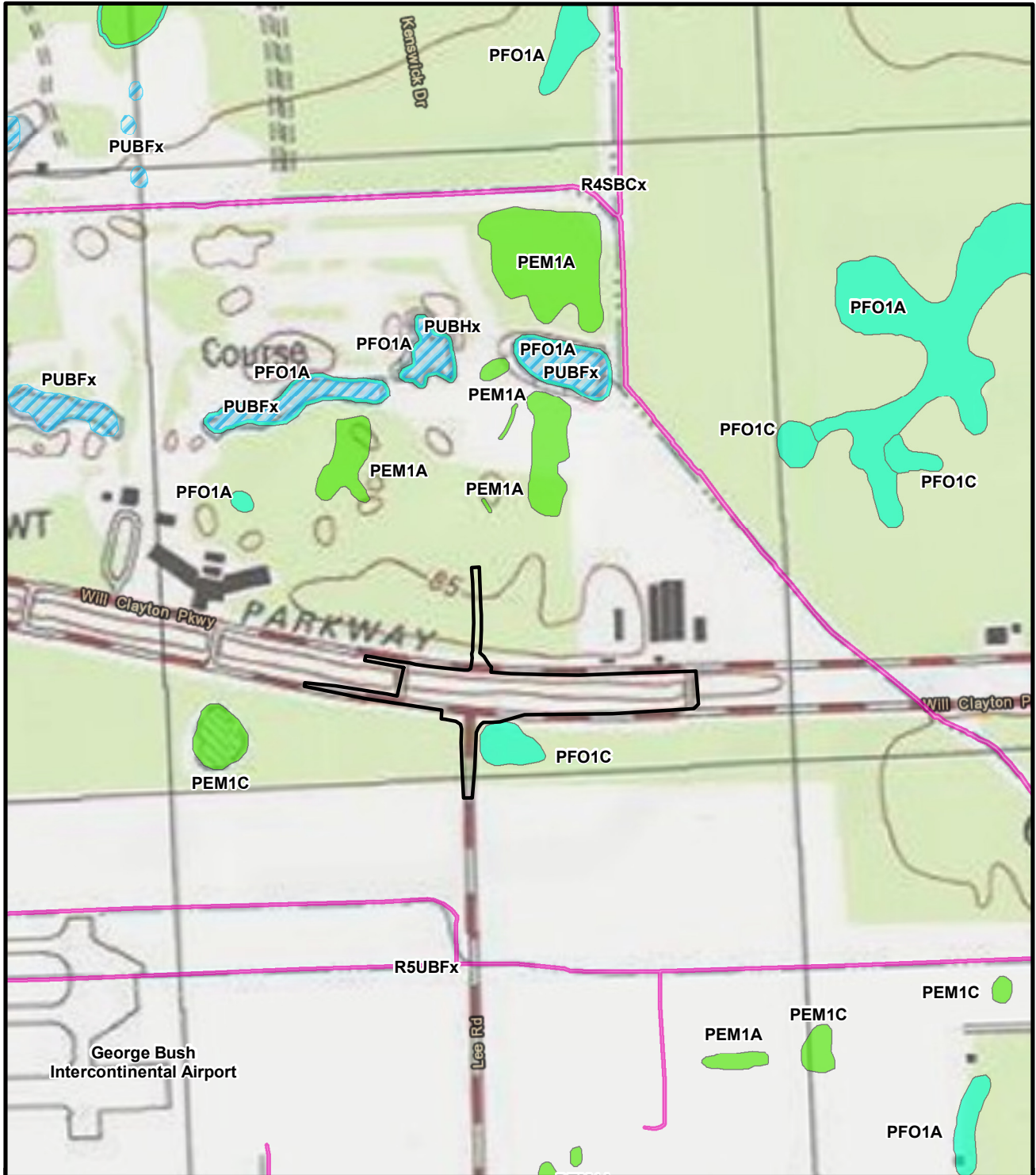
Member of the SNC-Lavalin Group






Figure 2  
 Survey Area Map

Wetland Delineation Report  
**Houston Airport System**  
 Houston, Harris County, Texas

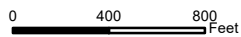
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Prepared By: ATKINS/WHIT6392	Date: Jan 27, 2021

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-  Survey Area
- NWI General Wetland Type**
-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland
-  Freshwater Pond
-  Riverine

Datum: NAD 1983  
 Spatial Ref.: State Plane Texas  
 South Central  
 Units: Feet  
 NWI: USFWS 2020  
 Basemap: ESRI USA Topo Maps



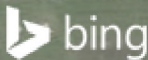
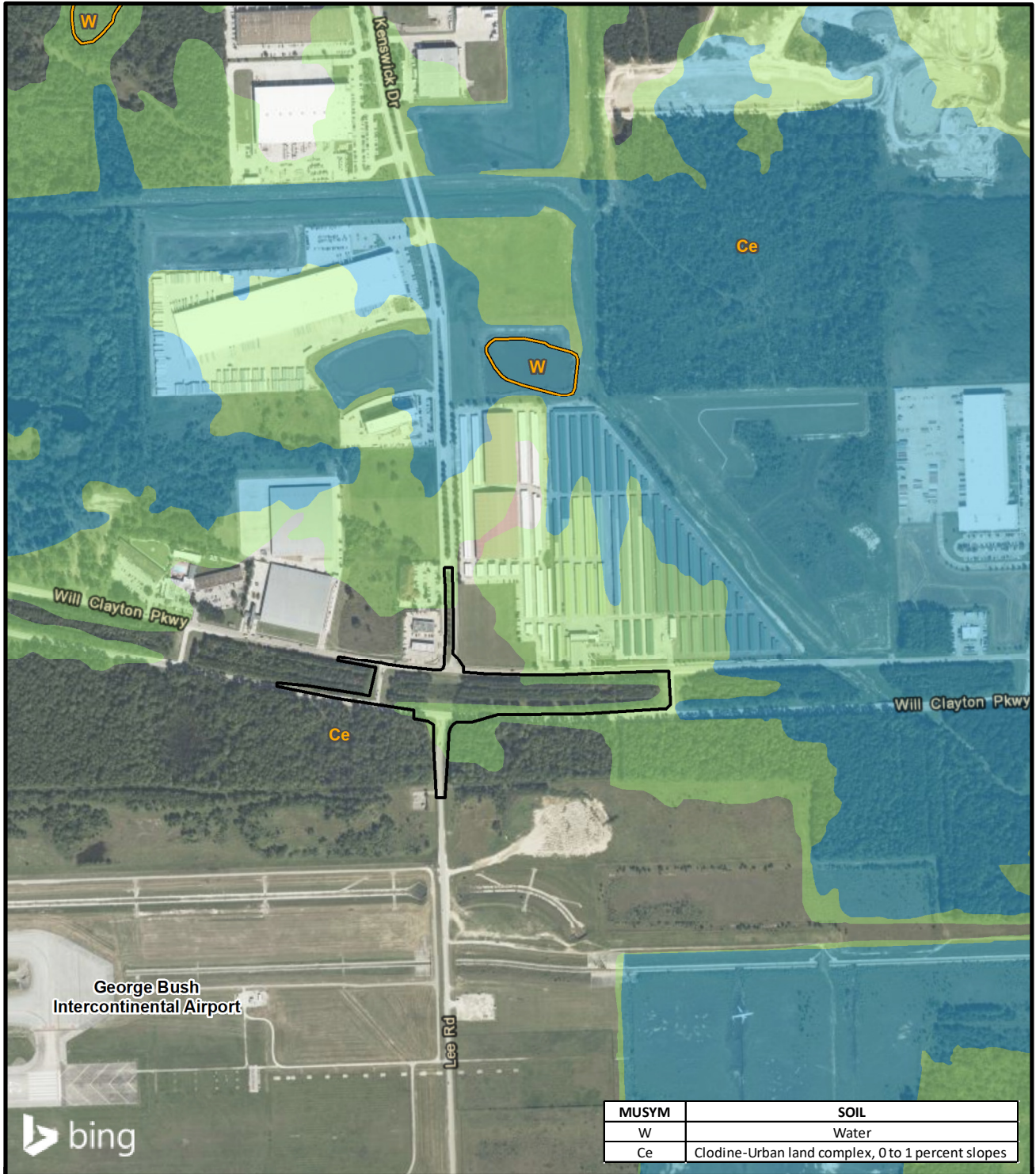
**ATKINS**

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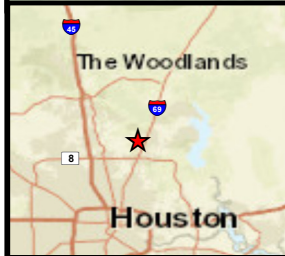
Figure 3  
 Topographic NWI Map  
 Wetland Delineation Report  
 Houston Airport System  
 Houston, Harris County, Texas

Job No.: 100072032	Scale: 1" = 800 feet
Prepared By: ATKINS/WHIT6392	Date: Jan 27, 2021

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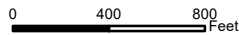


MUSYM	SOIL
W	Water
Ce	Clodine-Urban land complex, 0 to 1 percent slopes



- Survey Area
- Soils
- FEMA 1% Annual Chance
- FEMA 0.2% Annual Chance

Datum: NAD 1983  
 Spatial Ref.: State Plane Texas  
 South Central  
 Units: Feet  
 Soils: NRCS 2020  
 Floodplain: FEMA 2020  
 Basemap: Bing Maps Aerial



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Figure 4  
 Soils and Floodplain Map  
 Wetland Delineation Report  
**Houston Airport System**  
 Houston, Harris County, Texas

Job No.: 100072032	Scale: 1" = 800 feet
Prepared By: ATKINS/WHIT6392	Date: Jan 27, 2021

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# Appendix B:

## Representative Photographs



1. Typical representation of the western portion of the survey area along the southern (or east bound) lane of Will Clayton Parkway from the turnaround lane.



2. Typical representation of the center of the median along Transect 1 in the western portion of the survey area.

<p><b>Representative Site Photographs</b></p> <p>Kenswick Drive Extension Wetland Delineation Report Houston Airport System 100072032</p>	<p><b>ATKINS</b></p> <p>Member of the SNC-Lavalin Group</p>
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3. Typical representation of the maintained grass roadside along the northern (or west bound) lane of Will Clayton Parkway and the urbanized area of Kenswick Drive from east of Transect 1.



4. Typical representation of the drains in the maintained grass along both sides of the median adjacent to Will Clayton Parkway.

<p><b>Representative Site Photographs</b></p> <p>Kenswick Drive Extension          Wetland Delineation Report          Houston Airport System          100072032</p>	<p><b>ATKINS</b></p> <p>Member of the SNC-Lavalin Group</p>
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5. Typical representation of the planted rows of trees at the edge of the median from Transect 2.



6. Typical representation of the maintained grass edge adjacent to the southern (east bound) lane of Will Clayton Parkway from Transect 2.

### Representative Site Photographs

Kenswick Drive Extension  
Wetland Delineation Report  
Houston Airport System  
100072032

# ATKINS

Member of the SNC-Lavalin Group



1/14/21, 9:46 AM  
+29.983047, -95.293126 ±14.28m

7. Typical representation of the median with the transmission corridor from Transect 3.



1/14/21, 10:01 AM  
+29.981818, -95.296000 ±6.40m

8. Typical representation of maintained grass edge alongside Lee Road from the southern most boundary of the survey area.

### Representative Site Photographs

Kenswick Drive Extension  
Wetland Delineation Report  
Houston Airport System  
100072032

# ATKINS

Member of the SNC-Lavalin Group

Christina Powell  
Scientist  
**Atkins North America, Inc.**  
200 Westlake Park Boulevard, Suite 1100  
Houston, Texas 77079

Tel: +1 713 576 8500  
Christina.Powell@atkinsglobal.com

Document 00410A

BID FORM – PART A

To: **The Honorable Mayor and City Council of the City of Houston  
City Hall Annex  
900 Bagby Street  
Houston, Texas 77002**

Project: KENSWICK DRIVE EXTENSION

Project No.: PN: 935

Bidder: \_\_\_\_\_

(Print or type full name of business entity, such as corporation, LLC, etc)

**1.0 OFFER**

- A. Total Bid Price:** Having examined the Project location and all matters referred to in Bid Documents for the Project, we, the undersigned, offer to enter into a Contract to perform the Work for the Total Bid Price shown on the signature page of this Document
- B. Security Deposit:** Included with the Bid is a Security Deposit in the amount of 10 percent of the Total Bid Price subject to terms described in Document 00200 – Instructions to Bidders.
- C. Period for Bid Acceptance:** This offer is open to acceptance and is irrevocable for 180 days from Bid Date. That period may be extended by mutual written agreement of the City and Bidder.
- D. Addenda:** All Addenda have been received. Modifications to Bid Documents have been considered and all related costs are included in the Total Bid Price.
- E. Bid Supplements:** The following documents are attached:
- Security Deposit (*as defined in Document 00200 – Instructions to Bidders*)
  - Document 00450 - Bidder's Statement of MWSBE Status
  - Document 00454 - Affidavit of Non-interest
  - Document 00455 - Ownership Information Form
  - Document 00456 - Bidder's Certificate of Compliance with Buy American Program (*required for AIP funded project*)
  - Document 00457 – Conflicts of Interest Questionnaire (CIQ)
  - Document 00458 - Bidder's Certificate Regarding Foreign Trade Restriction (*required for AIP funded project*)
  - Document 00459 - Contractor's Statement Regarding Previous Contracts Subject
  - Document 00460 – Pay or Play Acknowledgement Form (POP 1-A)
  - Document 00461 – Hire Houston First Affidavit
  - Document 00470 – Bidder's MWSBE Participation Plan (*required unless no MWSBE participation goal is provided in Document 00800 (the "Goal")*).
  - Document 00470D - Bidder's DBE Participation Plan (*required for AIP funded project*)

- Document 00471 – Bidder’s Record of Good Faith Efforts (*required if the goal in Bidder’s Participation Plan–Document 00470 is lower than the Goal*).
- Document 00472 – Bidder’s Goal Deviation Request (*required if the goal in Bidder’s Participation Plan–Document 00470 is lower than the Goal*).
- Document 00480 – Form SCM-1 Reference Verification
- Document 00481 – Non-Collusion Statement
- Document 00842 – Letter of Intent
- Others as listed: \_\_\_\_\_  
\_\_\_\_\_

**2.0 CONTRACT TIME**

- A.** If offer is accepted, Contractor shall achieve Date of Substantial Completion within 211 days after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.









Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
33	2915-300	REMOVE, TEMPORARY STORE, AND REPLANT TREE	EA	13		
34	1570-101	FILTER FABRIC BARRIER	LF	2448		
35	1570-109	INLET PROTECTION BARRIER	LF	600		
36	2086-100	ADJUST EXISTING MANHOLE FRAME AND COVER TO NEW GRADE	EA	3		
37	2221-200	REMOVE AND DISPOSE OF EXISTING MANHOLES	EA	4		
38	2221-201	REMOVE AND DISPOSE OF EXISTING INLETS	EA	4		
39	2221-500	REMOVE AND DISPOSE OF 15-INCH AND SMALLER STORM CULVERTS	LF	8		
40	2221-520	REMOVE AND DISPOSE OF STORM SEWERS AND LEADS LESS THAN 24-INCH	LF	109		
41	2221-521	REMOVE AND DISPOSE 24-INCH TO 36-INCH STORM SEWERS AND LEADS	LF	8		
42	2221-522	REMOVE AND DISPOSE 42-INCH TO 54-INCH STORM SEWERS AND LEADS	LF	24		
43	2221-523	REMOVE AND DISPOSE OF STORM SEWERS AND LEADS LARGER THAN 60-INCH	LF	8		
44	2631-105	24-INCH DIAMETER RCP STORM SEWER BY OPEN CUT	LF	844		

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
45	2631-109	42-INCH DIAMETER RCP STORM SEWER BY OPEN CUT	LF	8		
46	2631-110	48-INCH DIAMETER RCP STORM SEWER BY OPEN CUT	LF	16		
47	2631-112	60-INCH DIAMETER RCP STORM SEWER BY OPEN CUT	LF	8		
48	2633-300	TYPE C-1 INLET (PRECAST)	EA	7		
49	2633-600	TYPE E INLET (PRECAST)	EA	2		
50	2633-900	JUNCTION BOX WITH LID OR GRATE FOR STORM SEWER (PRECAST)	EA	3		
51	2633-801	HEADWALL INCLUDING PARALLEL WINGWALLS (PRECAST)	EA	2		
52	2921-100	HYDRO MULCH SEEDING	SY	11396		
53	2582-203	35-FOOT GALVANIZED MAST ARM POLE WITH FOUNDATION	EA	1		
54	2582-204	40-FOOT GALVANIZED MAST ARM POLE WITH FOUNDATION	EA	1		
55	2582-205	45-FOOT GALVANIZED MAST ARM POLE WITH FOUNDATION	EA	2		
56	2582-206	50-FOOT MAST ARM POLE ASSEMBLY AND FOUNDATION	EA	1		

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
57	2582-207	55-FOOT GALVANIZED MAST ARM POLE WITH FOUNDATION	EA	1		
58	2893-01	REMOVE HIGH MAST ILLUMINATION	EA	2		
59	2893-07	15 FT PEDESTRIAN PUSH BUTTON POLE WITH FOUNDATION	EA	5		
60	2893-08	METERED PEDESTAL SERVICE UL TYPE 3R	EA	1		
61	2893-11	STREET NAME SIGNS	EA	6		
62	2893-13	ALUMINUM SIGN "RIGHT LANE MUST TURN RIGHT" SIGN R3-7R (30"X30")	EA	1		
63	2893-14	ALUMINUM SIGN R3-5L (30"X36")	EA	5		
64	16710-100	TYPE A PULL BOX WITH GRAVEL AND GROUND ROD	EA	14		
65	16710-200	TYPE B PULL BOX WITH GRAVEL AND GROUND ROD	EA	9		
66	16710-300	TYPE C PULL BOX WITH GRAVEL AND GROUND ROD	EA	1		
67	16711-105	1-INCH PVC SCH.80 UNDERGROUND, EARTH	LF	80		
68	16711-205	2-INCH PVC SCH.80 UNDERGROUND, EARTH	LF	2440		

Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
69	16711 -305	3-INCH PVC SCH.80 UNDERGROUND, EARTH	LF	345		
70	16711 -405	4-INCH PVC SCH.80 UNDER PAVEMENT, BORE	LF	1475		
71	16711 -406	4-INCH PVC SCH.80 UNDERGROUND, EARTH	LF	385		
72	16713 -105	VEHICLE PRE-FORMED LOOP DETECTOR, 6-FOOT BY 6-FOOT	EA	44		
73	16715 -300	3-SECTION VEHICLE SIGNAL HEAD ASSEMBLY 12" (HORIZONTAL) (RYG) WITH BACKPLATE	EA	17		
74	16715 -300	3-SECTION VEHICLE SIGNAL HEAD ASSEMBLY 12" (HORIZONTAL) (R<Y<G), ARROW WITH BACKPLATE	EA	3		
75	16715 -300	3-SECTION VEHICLE SIGNAL HEAD ASSEMBLY 12" (VERTICAL)(R<Y<G), ARROW WITH BACKPLATE	EA	2		
76	16719 -100	COUNTDOWN PEDESTRIAN SIGNAL MODULE	EA	6		
77	16720	1/C #4 XHHW (POWER)	LF	0		
78	16720	1/C #8 AWG BARE COPPER	LF	4715		
79	16720	LOOP DETECTOR WIRE	LF	1345		
80	16720 -300	3/C-#14 AWG SOLID CABLE	LF	1660		



Item No.	Spec Ref.	Base Unit Short Title	Unit of Measure	Estimated Quantity	Unit Price (this column controls)	Total in figures
92	16750	POLARA NAVIGATOR ACCESSIBLE PEDESTRIAN PUSH BUTTON STATION ON TRAFFIC (L) & PEDESTRIAN SIGNAL POLES	EA	2		
93	16750-100	ACCESSIBLE PEDESTRIAN PUSH BUTTON STATION	EA	1		
<b><u>TOTAL BASE UNIT PRICES</u></b>						\$ _____

**C. EXTRA UNIT PRICE TABLE: NOT USED**

REST OF PAGE INTENTIONALLY LEFT BLANK

**D. CASH ALLOWANCE TABLE:**

Item No.	Spec Ref.	Cash Allowance Short Title	Cash Allowance in figures (1)
[1]	01210	Building Permit	\$14,900.00
<b><u>TOTAL CASH ALLOWANCES</u></b>			<b>\$ <u>14,900.00</u></b>

REST OF PAGE INTENTIONALLY LEFT BLANK

**E. ALTERNATES TABLE: NOT USED**

REST OF PAGE INTENTIONALLY LEFT BLANK



**F. TOTAL BID PRICE (HOU) + (IAH):** \$ \_\_\_\_\_  
(Add Totals for Stipulated Price (A + A1), Base Unit Price, Extra Unit Price, Cash Allowance, and All Alternates, if any)

**2.0 SIGNATURES:** By signing this Document, I agree that I have received and reviewed all Addenda and considered all costs associated with the Addenda in calculating the Total Bid Price.

Bidder: \_\_\_\_\_  
(Print or type full name of your proprietorship, partnership, corporation, or joint venture.\*)

\*\* By: \_\_\_\_\_  
Signature Date

Name: \_\_\_\_\_  
(Print or type name) Title

Address: \_\_\_\_\_  
(Mailing)

\_\_\_\_\_  
(Street, if different)

Telephone and Fax Number: \_\_\_\_\_  
(Print or type numbers)

- \* If Bid is a joint venture, add additional Bid Form signature sheets for each member of the joint venture.
- \*\* Bidder certifies that the only person or parties interested in this offer as principals are those named above. Bidder has not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding.

Note: This document constitutes a government record, as defined by § 37.01 of the Texas Penal Code. Submission of a false government record is punishable as provided in § 37.10 of the Texas Penal Code.

Document 00430

**BIDDER'S BOND**

THAT WE, \_\_\_\_\_, as Principal,  
(Bidder)  
("Bidder"), and the other subscriber hereto, \_\_\_\_\_, as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Houston, a municipal corporation, in the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_) (an amount equal to 10 percent of the Total Bid Price, including Cash Allowances and Alternates, if any), for the payment of which sum, well and truly to be made to the City of Houston and its successors, the Bidder and Surety do bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally.

**THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:**

**WHEREAS**, the Bidder has submitted on or about this day a proposal offering to perform the following:

\_\_\_\_\_

(Project Name, Location and Number)

in accordance with the Drawings, Specifications, and terms and conditions related thereto to which reference is hereby made.

**NOW, THEREFORE**, if the Bidder's offer as stated in the Document 00410 – Bid Form is accepted by the City, and the Bidder executes and returns to the City Document 00520 – Agreement, required by the City, on the forms prepared by the City, for the Work and also executes and returns the same number of the Performance, Payment and Maintenance Bonds (such bonds to be executed by a Corporate Surety authorized by the State Board of Insurance to conduct insurance business in the State of Texas, and having an underwriting limitation in at least the amount of the bond) and other submittals as required by Document 00495 - Post-Bid Procedures, in connection with the Work, within the Contract Time, then this obligation shall become null and void; otherwise it is to remain in full force and effect.

If Bidder is unable to or fails to perform the obligations undertaken herein, the undersigned Bidder and Surety shall be liable to the City for the full amount of this obligation which is hereby acknowledged as the amount of damages which will be suffered by the City on account of the failure of such Bidder to perform such obligations, the actual amount of such damages being difficult to ascertain.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other Party at the address prescribed in the Contract documents, or at such other address as the receiving Party may hereafter prescribe by written notice to the sending Party.

**IN WITNESS THEREOF**, the Bidder and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)

WITNESS: (if not a corporation)

\_\_\_\_\_  
(Name of Bidder)

By: \_\_\_\_\_

Name:  
Title:

By: \_\_\_\_\_

Name:  
Title:  
Date:

ATTEST/SURETY WITNESS: (SEAL)

\_\_\_\_\_  
(Full Name of Surety)

\_\_\_\_\_  
(Address of Surety for Notice)

\_\_\_\_\_  
(Telephone Number of Surety)

By: \_\_\_\_\_

Name:  
Title:  
Date:

By: \_\_\_\_\_

Name:  
Title:  
Date:

Document 00450

**BIDDER'S STATEMENT OF MBE/WBE/PDBE/DBE/SBE STATUS**

This certifies that the status of the Bidder, \_\_\_\_\_, in  
(Bidder's Name)

regard to the City of Houston Code of Ordinances, Chapter 15, Article V, relating to City-wide percentage goals for contracting with Minority and Women-owned Business Enterprises (MWBE) and Disadvantaged Business Enterprises (DBE), Chapter 15, Article VI, relating to City-wide percentage goals for contracting with Persons with Disabilities Business Enterprises (PDBE) and Chapter 15, Article IX, relating to City-wide percentage goals for contracting with a Small Business Enterprise (SBE) is as follows:

1. Bidder (individual, partnership, corporation) is  is not  a Minority Business Enterprise as certified by the Affirmative Action and Contract Compliance Division.
2. Bidder (individual, partnership, corporation) is  is not  a Women-owned Business Enterprise as certified by the Affirmative Action and Contract Compliance Division.
3. Bidder (individual, partnership, corporation) does  does not  declare itself to be a Persons with Disabilities Business Enterprise as defined above.
4. Bidder (individual, partnership, corporation) does  does not  declare itself to be a Disadvantaged Business Enterprise as defined above.
5. Bidder (individual, partnership, corporation) does  does not  declare itself to be a Small Business Enterprise as defined above.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

END OF DOCUMENT

Document 00454

**AFFIDAVIT OF NON-INTEREST**

**BEFORE ME**, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared \_\_\_\_\_, who  
Affiant  
being by me duly sworn on his oath stated that he is \_\_\_\_\_, of  
Title  
\_\_\_\_\_  
Name of Firm

the firm named and referred to and in the foregoing; and that he knows of no officer, agent, or employee of the City of Houston being in any manner interested either directly or indirectly in such Contract.

\_\_\_\_\_  
Affiant's Signature

SWORN AND SUBSCRIBED before me on \_\_\_\_\_.  
Date

\_\_\_\_\_  
Notary Public in and for the State of TEXAS

\_\_\_\_\_  
Print or type name

My Commission Expires: \_\_\_\_\_  
Expiration Date

END OF DOCUMENT

Document 00455

OWNERSHIP INFORMATION FORM

The City of Houston Ownership Information Form is used to gather information to comply with:

- a. The City of Houston Contractor Ownership Disclosure Ordinance ([Chapter 15 of the Code of Ordinances, Article VIII. City Contracts; Indebtedness to City](#));
- b. The City of Houston Fair Campaign Ordinance ([Chapter 18 of the Code of Ordinances](#)); and,
- c. The State of Texas Statement of Residency Requirements ([Tex. Govt. Code Chapter 2252](#)).

**Please complete the form, in its entirety, and submit it with the Official Bid or Proposal Form. Except as noted below regarding the Statement of Residency, failure to provide this information may be just cause for rejection of your bid or proposal.**

NOTICE OF AFFIRMATIVE ACCEPTANCE OF THE CITY OF HOUSTON FAIR CAMPAIGN ORDINANCE

By submitting a bid or proposal to the City of Houston for a Contract in excess of \$50,000 or for which a request is presented to City Council for approval, all respondents agree to comply with the Chapter 18 of the Code of Ordinances.

Further, pursuant to Section 18-36 of the Code of Ordinances, it shall be unlawful either for any person who submits a bid or proposal to contribute or offer any contribution to a candidate or for any candidate to solicit or accept any contribution from such person for a period commencing at the time of posting of the City Council Meeting Agenda including an item for the award of the Contract and ending upon the 30th day after the award of the Contract by City Council.

INSTRUCTIONS

1. Please **type** or **legibly print in dark ink** responses. Individuals and entities should disclose their full, legal names (not initials) and all required corporate letters ("Inc", "LLP", etc.).
  - a. If a firm is operating under an assumed name, the following format is recommended:  
*Corporate/Legal Name DBA Assumed Name.*
2. Full addresses are required, including street types ("St", "Rd", etc.) and unit number.
3. Individuals or entities with 10% or more ownership of the corporation, partnership, or joint venture (including persons who own 100%) are required to be disclosed with their full name and full address. All officers and directors are also required to be disclosed with their full name and full address.

PROJECT AND BID/PROPOSAL PREPARER INFORMATION

**Project or Matter Being Bid:** \_\_\_\_\_

**Bidder's complete firm/company business information**

Name: \_\_\_\_\_

Business Address [No./Street] \_\_\_\_\_

City / State / Zip Code \_\_\_\_\_

Telephone Number \_\_\_\_\_

**Bidder's email address**

Email Address: \_\_\_\_\_

STATEMENT OF RESIDENCY

(THE STATEMENT OF RESIDENCY PORTION OF THIS DOCUMENT IS **NOT APPLICABLE** IF THE SOLICITATION INDICATES FEDERAL FUNDS WILL BE USED)

**TEX. GOV'T CODE §2252.001(4)** defines a "**Resident bidder**" as a bidder whose principal place of business\* is in this state, and includes a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

**TEX. GOV'T CODE §2252.001(3)** defines a "**Nonresident bidder**" as a bidder who is not a resident in this state.

\* Principal Place of Business in Texas means that the business entity:

- has at least one permanent office located within the **State of Texas**, from which business activities other than submitting bids to governmental agencies are conducted and from which the bid is submitted; and
- has at least one employee who works in the Texas office.

Based on the definitions above, your business is a:

- TEXAS RESIDENT BIDDER  
 NONRESIDENT BIDDER

If you are a Nonresident Bidder, does your home state have a statute giving preference to resident bidders? If so, you must attach a copy of the statute to this Document.

A copy of the State of \_\_\_\_\_ statute is attached.

**NOTE:** The State of residency of a bidder is not used in the decision-making criteria for the award of contracts for projects receiving federal funding, whether in whole or in part.

CONTRACTING ENTITY ORGANIZATIONAL ENTITY TYPE

**FOR PROFIT ENTITY:**

**NON-PROFIT ENTITY:**

- SOLE PROPRIETORSHIP
- CORPORATION
- PARTNERSHIP
- LIMITED PARTNERSHIP
- JOINT VENTURE
- LIMITED LIABILITY COMPANY
- OTHER (*specify in space below*)

- NON-PROFIT CORPORATION
- UNINCORPORATED ASSOCIATION

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LISTING OF ADDRESSES

List all current and prior addresses where the bidder does/has done business or owns property (real estate and/or business personal property) in the city of Houston ("Houston") in the past 3 years from the date of submittal of this form. If within the past 3 years from the date of submitting this form, the bidder does not and has not done business and has not or does not own property (real estate and/or business personal property) in Houston, please state "None" on the first line below.

---

Address

---

Address

---

Address

**ATTACH ADDITIONAL SHEETS AS NEEDED.**

LISTING OF OFFICERS

LIST ALL OFFICERS OF THE ENTITY, REGARDLESS OF THE AMOUNT OF OWNERSHIP (IF NONE STATE "NONE")

Name _____ Officer	_____
Name _____ Officer	_____
Name _____ Officer	_____
Name _____ Officer	_____
Name _____ Officer	_____
Name _____ Officer	_____

LISTING OF DIRECTORS OR MEMBERS

LIST ALL DIRECTORS OF THE ENTITY, REGARDLESS OF THE AMOUNT OF OWNERSHIP (IF NONE STATE "NONE")

Name _____ Director or Member	_____
Name _____ Director or Member	_____
Name _____ Director or Member	_____
Name _____ Director or Member	_____
Name _____ Director or Member	_____



DISCLOSURE OF OWNERSHIP (OR NON-PROFIT OFFICERS)

Bidders are required to disclose all owners of 10% or more of the Contracting Entity. For non-profit entities, please provide the complete information for the President, Vice-President, Secretary, and Treasurer.

**IN ALL CASES, USE FULL NAMES, LOCAL BUSINESS AND RESIDENCE ADDRESSES AND TELEPHONE NUMBERS. DO NOT USE POST OFFICE BOXES FOR ANY ADDRESS. INCLUSION OF E-MAIL ADDRESSES IS OPTIONAL, BUT RECOMMENDED.**

**ATTACH ADDITIONAL SHEETS AS NEEDED.**

**Contracting Entity:**

Name: \_\_\_\_\_  
Business Address [No./Street] \_\_\_\_\_  
City / State / Zip Code \_\_\_\_\_  
Telephone Number \_\_\_\_\_  
Email Address: \_\_\_\_\_

DISCLOSURE OF OWNERSHIP (OR NON-PROFIT OFFICERS) continued.

**Owner(s) of 10% or More (IF NONE, STATE "NONE."):**

Name: \_\_\_\_\_  
Business Address [No./Street] \_\_\_\_\_  
City / State / Zip Code \_\_\_\_\_  
Telephone Number \_\_\_\_\_  
Email Address: \_\_\_\_\_  
Residence Address [No./Street] \_\_\_\_\_  
City / State / Zip Code \_\_\_\_\_

**Owner(s) of 10% or More (IF NONE, STATE "NONE."):**

Name: \_\_\_\_\_  
Business Address [No./Street] \_\_\_\_\_  
City / State / Zip Code \_\_\_\_\_  
Telephone Number \_\_\_\_\_  
Email Address: \_\_\_\_\_  
Residence Address [No./Street] \_\_\_\_\_  
City / State / Zip Code \_\_\_\_\_

**ATTACH ADDITIONAL SHEETS AS NEEDED.**

OPTIONAL: TAX APPEAL INFORMATION

If the firm/company or an owner/officer is actively protesting, challenging, or appealing the accuracy and/or amount of taxes levied with a tax appraisal district, please provide the following information:

Debtor (Firm or Owner Name):	
Tax Account Nos.:	
Case or File Nos.:	
Attorney/Agent Name:	
Attorney/Agent Phone No.:	
Tax Years:	

Status of Appeal [**DESCRIBE**]:

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**If an appeal of taxes has been filed on behalf of your company, please include a copy of the official form received by the appropriate agency.**

REQUIRED: UNSWORN DECLARATION

I certify that I am duly authorized to submit this form on behalf of the firm, that I am associated with the firm in the capacity noted below, and that I have personal knowledge of the accuracy of the information provided herein. I affirm that all the information contained herein is true and correct to the best of my knowledge. I understand that failure to submit accurate information with my submission may result in my submission being considered non-responsive and non-responsible.

---

**Preparer's Signature**

**Date**

---

**Printed name**

---

**Title**

**NOTE:** This form constitutes a **governmental record**, as defined by Section 37.01 of the Texas Penal Code. Submission of a false government record and falsification of a governmental record are crimes, punishable as provided in Section 37.10 of the Texas Penal Code.

Document 00457

Conflict of Interest Questionnaire

Local Government Code Chapter 176 requires Bidders with the City of Houston ("City") to file a Conflict of Interest Questionnaire with the City Secretary of the City of Houston.

The Conflict of Interest Questionnaire is available for downloading on the Texas Ethics Commission's website at: <http://www.ethics.state.tx.us>

The completed Conflict of Interest Questionnaire will be posted on the City Secretary's website. Also you will find a list of the City Local Government Officers on the City Secretary's website.

For your convenience the CIQ form is attached as part of this document. Although the City has provided this document for the Bidders convenience, it is the Bidders responsibility to submit the latest version of the CIQ form as promulgated by the Texas Ethics Commission.

The Failure of any Bidder to comply with this law is a Class C misdemeanor.

END OF DOCUMENT

**CONFLICT OF INTEREST QUESTIONNAIRE**  
For vendor doing business with local governmental entity

**FORM CIQ**

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

**OFFICE USE ONLY**

Date Received

**1 Name of vendor who has a business relationship with local governmental entity.**

**2**  **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

**3 Name of local government officer about whom the information is being disclosed.**

\_\_\_\_\_  
Name of Officer

**4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

Yes       No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

Yes       No

**5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

**6**  Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

**7**

\_\_\_\_\_  
Signature of vendor doing business with the governmental entity

\_\_\_\_\_  
Date

## **CONFLICT OF INTEREST QUESTIONNAIRE**

### **For vendor doing business with local governmental entity**

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

**Local Government Code § 176.001(1-a):** "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

**Local Government Code § 176.003(a)(2)(A) and (B):**

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

\*\*\*

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed;  
or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor.

**Local Government Code § 176.006(a) and (a-1)**

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.



# City of Houston Pay or Play Program Acknowledgement Form



It has been determined that the project currently open for bidding meets the criteria of the City of Houston Pay or Play program. This form acknowledges your awareness of the Pay or Play program which is authorized by Ordinance 2007-534. Your signature below affirms that you will comply with the requirements of the program upon contract award and ensure the same on behalf of your subcontractors that may be subject to the Pay or Play Program.

I declare under penalty of perjury under the laws of the State of Texas that if awarded this contract which meets the criteria for the City of Houston's Pay or Play Program, I will comply with all requirements of the Pay or Play Program in accordance with Executive Order 1-7.

**Fill out all information below and submit this form with your bid/proposal packet.**

\_\_\_\_\_  
Solicitation Number

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
City Vendor ID

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Phone Number

\_\_\_\_\_  
Email Address

For more information about the Pay or Play program please visit  
<http://www.houstontx.gov/obo/popforms.html>.

Questions about the Pay or Play Program should be referred to the Department POP Liaison; an updated contact list is available on the Office of Business Opportunity website or call the POP Contract Administrator at 832-393-0633.



# Hire Houston First Application and Affidavit



Thank you for your interest in the Hire Houston First initiative. It is the policy of the City of Houston as defined in Chapter 15, Article XI, to use the City's spending powers in a manner that promotes fiscal responsibility and maximizes the effectiveness of local tax dollars by ensuring a portion of citizens' tax dollars remain in the local economy for economic benefit of the citizens by utilizing all available legal opportunities to contract with city and/or local businesses.

Businesses interested in becoming eligible to participate in the Hire Houston First initiative must complete this application and sign the attached affidavit. Only businesses that meet the requirements will be eligible to participate in the Hire Houston First initiative. **A completed HHF application is NOT evidence of designation under the Hire Houston First initiative. An applicant's eligibility must be confirmed in writing by the Office of Business Opportunity.**

## Definitions:

- A. **City Business** means a business with a principal place of business within city limits.
- B. **Local Area** means eight counties in and surrounding Houston city limits. The counties are Harris, Fort Bend, Montgomery, Brazoria, Galveston, Chambers, Waller, and Liberty.
- C. **Local Business** means a business with a principal place of business in the local area.
- D. **Principal place of business** means the business must be headquartered or have an established place or places of business in the incorporated limits of the city or the local area as applicable, from which 20% or more of the entity's workforce are regularly based, and from which a substantial role in the entity's performance of a commercially useful function or a substantial part of its operations is conducted. A location utilized solely as a post office box, mail drop or telephone message center or any combination thereof, with no other substantial work function, shall not be construed as a principal place of business.
- E. **Headquartered** means the location where an entity's leadership directs, controls, and coordinates the entity's activities.

## Application

Please complete the following form/affidavit and submit it to the Office of Business Opportunity, Houston Business Solutions Center located at 611 Walker, Lobby Level, Houston, TX 77002 (832) 393-0954. Applications may be submitted via e-mail to houstonBSC@houstontx.gov or faxed to 832.393.0650. Incomplete applications and affidavits will not be processed. Please answer all questions.

1. **Application Date:** \_\_\_\_\_

2. **Company is applying as (please check at least one box):**

- City Business (CB) with a principal place of business within the city limits from which a substantial role in the entity's performance of a commercially useful function or a substantial part of its operations is conducted as defined in Chapter 15, Article XI.
- Local Business (LB) with a principal place of business in the local area from which a substantial role in the entity's performance of a commercially useful function or a substantial part of its operations is conducted as defined in Chapter 15, Article XI.

3. **Name of Owner or CEO:** \_\_\_\_\_ **Name of Company:** \_\_\_\_\_

FOR OFFICE USE ONLY:





Business Address	Primary Activities	Number of Employees
Business Name: Street Address: City, State: Zip Code: Main Phone Number:		

13. List all company locations OUTSIDE the eight (8) county local area, including headquarters locations, as well as addresses, primary activities and number of employees at each location.

Business Address	Corporate Headquarters?	Primary Activities	Number of Employees
Business Name: Street Address: City, State: Zip Code: Main Phone Number:	YES/NO		
Business Name: Street Address: City, State: Zip Code: Main Phone Number:	YES/NO		
Business Name: Street Address: City, State: Zip Code: Main Phone Number:	YES/NO		
Business Name: Street Address: City, State: Zip Code: Main Phone Number:	YES/NO		
Business Name: Street Address: City, State: Zip Code: Main Phone Number:	YES/NO		

14. What is the total number of employees in the entire company? \_\_\_\_\_

15. Is the company represented on this application an independent or dependent subsidiary of a company with headquarters located outside the eight county local area? (Check One)

- NOT** a subsidiary of any company
- YES** – An independent subsidiary. Please submit Federal corporate tax returns and any other documentation necessary to show independence from the parent company.
- YES** – A dependent subsidiary. Please answer the following questions:

(a). What is the total number of employees within the (8) county local area inclusive of the company represented on this application and the parent company? \_\_\_\_\_

(b). What is the total number of all employees inclusive of the company represented on this application and the parent company? \_\_\_\_\_

# Hire Houston First Affidavit

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I \_\_\_\_\_ certify and affirm that my business \_\_\_\_\_ is not  
Name of Company Owner Name of Company  
a location utilized solely as a post office box, mail drop or telephone message center or any combination thereof, with  
no other substantial work function.

The undersigned swear/affirm that the foregoing information and statements are true and correct with regard to the  
employee breakdown of the company's work force, location, and principal place of business. In addition, the  
undersigned gives permission to the City of Houston to conduct random audits to ensure compliance with the Hire  
Houston First Initiative under Chapter 15, Article XI.

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Name of Company Owner

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Name of Company

On this day before me appeared (name) \_\_\_\_\_ with \_\_\_\_\_ proper  
identification, who being duly sworn, did execute the foregoing affidavit and did aver that he or she was properly  
authorized to execute this affidavit and did so as his or her free act/deed.

---

Signature (Owner /Applicant)

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Title

---

Name (Print)

---

Date

(Seal)

Notary Attest:

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Notary Public

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Commission Expiration

Document 00470

**BIDDER'S MWSBE PARTICIPATION PLAN**

The Bidder or Proposer shall submit this completed form with the bid to demonstrate the Bidder/Proposer's plan to meet the M/WBE contract goal(s) ("contract goal(s)"). If the Bidder/Proposer cannot meet the contract goal(s), the Bidder/Proposer has the burden to demonstrate "Good Faith Efforts," which shall include correctly and accurately preparing and submitting this form, a Record of Good Faith Efforts (Document 00471), a Request for Deviation from the Goal (Document 00472), and supporting documentation evidencing their "Good Faith Efforts," as required by the City of Houston's Good Faith Efforts Policy (Document 00808). The City will review the Participation Plan and Good Faith Efforts at the time of bid opening. Visit <http://www.houstontx.gov/obo> for more information.

<b>City Advertised Contract Goal</b>	<b>MBE</b>	<b>WBE</b>	<ul style="list-style-type: none"> <li>• MBE and WBE Goals are two separate Contract Goals, to be met individually.</li> <li>• Any excess of one Goal cannot be applied to meet another Goal.</li> <li>• An SBE can be applied to the MBE and/or WBE Goal, but not to exceed 4%.</li> <li>• Up to 50% of the Bidder's Participation plan may be met using Suppliers.</li> <li>• Up to 50% of the advertised goal may be met at the Prime level if the Prime is a City-certified firm. Bidder must select one (1) certification type for Prime level credit. Prime level participation percentage must not exceed the individual MBE or WBE advertised goal. Prime level credit does not apply to SBE-certified firms.</li> </ul>
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NAICS Code (6 digit)	Description of Work (Plan Sheet #, Unit Price #, Scope of Work #, as applicable)	% of Total Bid Price (2 decimal places; for example: 5.00%)	Services or Supplier	Cert. Type for Goal: MBE, WBE, or SBE	Certified Firm Name Firm Address Contact Name Phone No. and E-Mail
				MBE <input type="checkbox"/> WBE <input type="checkbox"/>	<b>USE THIS LINE FOR PRIME LEVEL CREDIT ONLY. CREDIT MUST NOT EXCEED 50% OF THE ADVERTISED GOAL</b>
				MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
				MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
				MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	

**By submitting this form, your firm agrees to enter into formal subcontracting agreement(s) with the MWBE subcontractors/subconsultants listed on this participation plan upon award of a contract from the City.**

<b>Bidder's Participation Plan Total</b>	<b>MBE</b>	<b>WBE</b>	<b>SBE</b>

Authorized Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Company Name: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

DOCUMENT 00470

**BIDDER'S MWSBE PARTICIPATION PLAN  
 CONTINUATION PAGE**

NAICS Code (6 digit)	Description of Work (Plan Sheet #, Unit Price #, Scope of Work #, as applicable)	% of Total Bid Price (2 decimal places; for example: 5.00%)	Services or Supplier	Cert. Type for Goal: MBE, WBE, or SBE	Certified Firm Name Firm Address Contact Name Phone No. and E-Mail
				MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
				MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
				MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
				MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
				MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
				MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
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				MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
				MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
				MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	

\*I understand that supplying inaccurate information may violate Texas Penal Code Section 37.10 and lead to City sanctions.

Document 00471  
**PRE-BID GOOD FAITH EFFORTS**

**Bidder Name:** \_\_\_\_\_ **Project Name** \_\_\_\_\_

A Bidder or Proposer that may be unable to complete or follow a Participation Plan (Document 00470) to meet the Contract Goal in the Supplemental Conditions (Document 00800), must submit this completed form, Goal Deviation Request Form (Document 00472), providing supporting documentation evidencing their "Good Faith Efforts", as required by the City of Houston's Good Faith Efforts Policy (see Document 00808).

The Bidder or Prime Contractor has the burden to demonstrate "Good Faith Efforts" to meet the MWSBE goal, which includes correctly and accurately preparing and submitting this form and other efforts described in the City's Good Faith Efforts Policy (Document 00808). The Office of Business Opportunity will review Good Faith Efforts and Participation Plan after selection of an apparent low bidder.

*UNLESS THE BIDDER'S/PROPOSER'S PARTICIPATION PLAN MEETS THE CONTRACT GOAL, FAILURE TO SUBMIT THIS FORM MAY RESULT IN THE BID BEING FOUND NON-RESPONSIVE.*

NAICS Code	Plan Item No.	MWSBE Type for Goal	Certified Firm Name Address, Phone No., and E-Mail	Certified Firm Contact Person	Methods of Contact	Prime Contact Dates	Certified Firm Response	Results of Contact (why suitable or not suitable for work)
		MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>			Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
		MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>			Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
		MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>			Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
		MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>			Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			

Authorized Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Print Name: \_\_\_\_\_

Email Address: \_\_\_\_\_

Company Name: \_\_\_\_\_

CONTINUATION PAGE

NAICS Code	Plan Item No.	MWSBE Type for Goal	Certified Firm Name Address, Phone No., and E-Mail	Certified Firm Contact Person	Method of Contact	Prime Contact Dates	Certified Firm Response	Results of Contact (why suitable or not suitable for work)
		MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>			Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
		MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>			Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
		MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>			Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
		MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>			Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
		MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>			Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
		MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>			Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
		MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>			Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			

Authorized Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Print Name: \_\_\_\_\_

Email Address: \_\_\_\_\_

Company Name: \_\_\_\_\_

Document 00472  
BIDDER'S MWSBE GOAL DEVIATION REQUEST

Company Name: \_\_\_\_\_

Project Name: \_\_\_\_\_

<b>Department Approved Contract Goals</b>	<b>MBE</b>	<b>WBE</b>	<b>Total</b>
	%	%	%

<b>Bidder's Proposed Participation Plan</b>	<b>MBE</b>	<b>WBE</b>	<b>SBE (Max 4% for Credit)</b>	<b>Total</b>
	%	%	%	%

Justification: Please provide the reason the Bidder is unable to meet the Contract Goal in Document 00800.

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Good Faith Efforts: Please list any efforts not listed in the Bidder's Pre-Bid Good Faith Effort (Document 00471) and provide supporting documentation evidencing "Good Faith Efforts", as required by the City of Houston's Good Faith Efforts Policy (Document 808).

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Date: \_\_\_\_\_

Company Name: \_\_\_\_\_

Email: \_\_\_\_\_

Company Representative: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Title: \_\_\_\_\_

**FOR OFFICIAL USE ONLY:**    Approved [ ]                      Not Approved [ ]

OBO Representative \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

Title: \_\_\_\_\_

**DOCUMENT 00480**  
**FORM SCM-1 REFERENCE**  
**VERIFICATION**

**1.0 REFERENCES**

- 1.1** Contractor must be able to demonstrate that they have sufficient expertise, qualified personnel experienced and that their company has done or currently providing the services of similar size as specified in the statement of work. Contractor must have been actively engaged as an actual business entity in the activities described in the bid document for at least the five (5) years immediately prior to the submission of their bid.
- 1.2** The reference(s) must be included in the space provided below. Additional pages may be added if necessary. References must be included at the time of bid submittal.

**LIST OF CURRENT/PREVIOUS CUSTOMERS**

Company Name: \_\_\_\_\_  
Contact Person/Title: \_\_\_\_\_ Phone No.: \_\_\_\_\_  
E-mail Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Contract Award Date: \_\_\_\_\_ Contract Completion Date: \_\_\_\_\_  
Contract Name/Title: \_\_\_\_\_  
Project Description: \_\_\_\_\_  
\_\_\_\_\_

Company Name: \_\_\_\_\_  
Contact Person/Title: \_\_\_\_\_ Phone No.: \_\_\_\_\_  
E-mail Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Contract Award Date: \_\_\_\_\_  
Contract Completion Date: \_\_\_\_\_  
Contract Name/Title: \_\_\_\_\_  
Project Description: \_\_\_\_\_  
\_\_\_\_\_



Kenswick Drive Extension:

Project No. 935

**REFERENCE VERIFICATION**

Company Name: \_\_\_\_\_

Contact Person/Title: \_\_\_\_\_

Phone No.: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Address: \_\_\_\_\_

Contract Award Date: \_\_\_\_\_

Contract Completion Date: \_\_\_\_\_

Contract Name/Title: \_\_\_\_\_

Project Description: \_\_\_\_\_

Form SCM-1 Reference Verification

**Telephone Interview Reference  
Verification For  
[Title of Solicitation]**

Respondent Name:	
Company to be contacted as a Reference:	
Name and Title of Designated Reference:	
Contact Number for Designated Reference:	
Point of Contact Information for Individual Responding to Reference Check if Different than Point of Contact Designated in the Response:	

**Introduction:** Hello, my name is [caller's name] with [agency name] We are currently evaluating vendor [proposals/bids/qualifications] for [solicitation title] and checking vendor references Your name and number were provided to us as a reference for [vendor name] Do you have a few minutes to answer some questions?

**Questions:**

1. Has the vendor provided [description of products/services] to your organization in the past 3 years? Yes  No

2. How long has the vendor provided [description of products/services] to your organization?

\_\_\_\_\_

3. What is the approximate annual value of the vendor's contract?

\_\_\_\_\_

4. Did the vendor stay within budget? Yes  No

5. On a rating scale of 0 to 3 – where (0) Unsatisfactory, (1) Marginally Satisfactory, (2) Satisfactory, (3) Exceeds Expectations, and (N/A) Not Applicable – please provide answers to the following questions:

a. How satisfied was your organization with the timeliness of the vendor's delivery of products or performance of services under the contract?

0 , 1 , 2 , 3 , N/A , Declined to Respond

b. How satisfied was your organization with the skill, knowledge, cooperativeness, and professional manner of the personnel assigned by the vendor?

0 , 1 , 2 , 3 , N/A , Declined to Respond

c. How satisfied was your organization with the vendor's ability to resolve problems?

0 , 1 , 2 , 3 , N/A , Declined to Respond

d. How satisfied was your organization with the vendor's customer service?

0 , 1 , 2 , 3 , N/A , Declined to Respond

e. Overall, how satisfied was your organization with the vendor's performance?

0 , 1 , 2 , 3 , N/A , Declined to Respond

Do you have any comments? Yes  No

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**Reference Check Conducted By:**

Printed Name:	
Date & Time:	
Signature:	

**Reference check activities were unsuccessful for the following reason(s):**

- Designated point of contact declined to answer any questions.
- Designated point of contact information provided in response was incorrect.
- Designated point of contact was determined to be "unavailable" after \_\_\_\_\_ unsuccessful attempts on the following dates and times: \_\_\_\_\_

Other:

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**Anti-Collusion Statement**

The undersigned, as Proposer, certifies that the only person or parties interested in this Proposal as principals are those named herein; that the Proposer has not, either directly or indirectly entered into any Agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the award of this Contract.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Proposer Signature

Document 00495

POST-BID PROCEDURES

1.0 DOCUMENT ADDRESSES

- A. Notice of Intent to Award.
- B. Monitoring Authority
- C. Requirements of Bidder.
- D. Failure of Bidder to comply with requirements.
- E. Notice to Proceed.

2.0 NOTICE OF INTENT TO AWARD

- A. The City will provide written Notice of Intent to Award to Low Bidder.

3.0 DEFINITIONS

- A. The "Monitoring Authority" for this Project is:

Houston Airport System  
Office of Business Opportunity  
Contract Compliance Section  
111 Standifer Drive  
Humble, Texas 77338

4.0 REQUIREMENTS OF BIDDER

- A. Within 10 workdays of receipt of Notice of Intent to Award, Low Bidder shall execute and deliver to «PrjMgrName», Senior Procurement Specialist (Supply Chain Management) and Monitoring Authority, for the City's approval, documents indicated by an "X" below:

- Document 00501 - Resolution of Contractor
- Document 00520 – Agreement
- Document 00570 – Revised MWSBE Participation Plan *(Only submit if you have changed your MWBE participation plan from the original 00470)*
- Document 00571 – Post-Bid Good Faith Efforts *(Only submit if you could not meet MWBE participation goals from the 00570)*

- [ ] Document 00572 – Contractor’s Goal Deviation Request (*Only submit if you could not meet MWBE participation goals from the 00570*)
- [ X ] Document 00600 - List of Proposed Subcontractors and Suppliers
- [ X ] Document 00601 - Drug Policy Compliance Agreement
- [ ] Document 00602 - Contractor's Drug-free Workplace Policy (*Contractor creates this document.*)
- [ X ] Document 00604 - History of OSHA Actions and List of On-the-job Injuries
- [ X ] Document 00605 - List of Safety Impact Positions (*Contractor completes this list. Do not submit if submitting Document 00606.*)
- [ ] Document 00606 - Contractor's Certification of No Safety Impact Positions (*Do not submit if submitting Document 00605.*)
- [ ] Document 00607 - Certification Regarding Debarment, Suspension, and Other Responsibility Matters (For AIP Grant only)
- [ ] Document 00608 - Contractor's Certification Regarding Non-segregated Facilities for Project Funded by AIP Grant (For AIP Grant only)
- [ X ] Document 00609 – List of Nonroad Diesel Equipment (Do not need to submit if not participating in Clean Air Incentive under Document 00800 Section 9.13.2)
- [ X ] Document 00610 - Performance Bond (100% of total amount of bid)
- [ X ] Document 00611 - Statutory Payment Bond (100% of total amount of bid)
- [ X ] Document 00612 - One-year Maintenance Bond (100% of total amount of bid)
- [ X ] Document 00613 - One-year Surface Correction Bond (4% of total amount of bid)
- [ X ] Document 00620 - Affidavit of Insurance
- [ X ] Document 00621 – City of Houston *Certificate of Insurance (for guidance, see Document 00800, Article 11)*
- [ ] Document 00622 - Name and Qualifications of Proposed Superintendent (*Contractor creates this document.*)
- [ ] Document 00628 - Affidavit of Compliance with DBE Program (For AIP Grant only)
- [ X ] Document 00629 - Affidavit for FAA Form 7460-1
- [ X ] Document 00630 – Agreement to comply with POP Program
- [ X ] Document 00631 - City of Houston Pay or Play Program – List of Participating Subcontractors
- [ X ] Document 00632 – EEO Certification by Material Suppliers, Professional Service Providers
- [ X ] Document 00636 – Certificate of Interested Parties FORM 1295
- [ ] Document 00810 – Wage Scale for Engineering Construction; Exhibit B, Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees; Exhibit C, Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees (For AIP Grant only)

- Document 00811 – Wage Scale for Building Construction; Exhibit B, Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees; Exhibit C, Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees (For AIP Grant only)
  - Document 00812 – Wage Scale for Engineering Heavy Construction [For Water and Sewer]; Exhibit B, Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees; Exhibit C, Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees
  - Document 00814 – Wage Scale for Engineering Heavy Construction [For Flood Control]; Exhibit B, Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees; Exhibit C, Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees
  - Document 00820 – Wage Scale for Civil Engineering Construction [For CIP Funded Project]; Exhibit B, Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees; Exhibit C, Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees
  - Document 00821 – Wage Scale for Building Construction [For CIP Funded Project]; Exhibit B, Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees; Exhibit C, Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees
- B. Original forms contained in Document 00805 - Equal Employment Opportunity Program Requirements:
1. Original forms contained in Document 00805 - Equal Employment Opportunity Program Requirements:
    - EEO-3, Certification by Bidder Regarding Equal Employment Opportunity
    - EEO-6, Total Work Force Composition of the Company *or in lieu thereof, a copy of the latest Equal Employment Opportunity Commission's EEO-1 form (This information is required only if the Contractor has a work force of 50 or more people and the Contract is \$50,000 or more.)*
    - EEO-7, Company's Equal Employment Opportunity Compliance Program
    - EEO-26, Certification by Proposed Subcontractor Regarding Equal Employment Opportunity

- C. Designations of Subcontractors and Suppliers, who have been selected by Bidder in Part B - Schedule of Non-MWBE/PDBE/DBE/SBE Subcontractors and Suppliers of Document 00600 - List of Proposed Subcontractors and Suppliers, and accepted by the City, may be changed only with prior notice and acceptance by Project Manager as provided in Conditions of the Contract.
- D. On Bidder's written request, Gabriel Carey, Senior Procurement Specialist may grant an extension of time, not to exceed 5 days, to furnish documents specified in Paragraphs 4.0.A and 4.0.B. If Bidder is required to resubmit documents specified in Paragraph 4.0.A or 4.0.B, Bidder shall do so within time limits provided in the request for resubmission.
- E. Designations of Subcontractors and Suppliers, who have been selected by Bidder in its Participation Plan, and accepted by the City, may be changed only with prior notice and acceptance by the Monitoring Authority as provided in Document 00808 - Minority and Women-owned Business Enterprise (MWBE), Persons with Disabilities Business Enterprise (PDBE) and Small Business Enterprise (SBE) Program.

5.0 FAILURE OF BIDDER TO COMPLY WITH REQUIREMENTS

- A. Should Bidder, on receipt of Notice of Intent to Award, fail to comply with requirements of this Document 00495 within stated time, the City may declare award in default and require forfeiture of the Security Deposit.
- B. After the City's written notice of default to Low Bidder, the City may award the Contract to Bidder whose offer is the next lowest bid, and Security Deposit of Bidder in default shall be forfeited to the City in accordance with provisions of Document 00200 - Instructions to Bidders.
- C. Please provide your City of Houston Vendors ID #\_\_\_\_\_. If you don't have a City of Houston Vendor ID #, you need to obtain one at: [Guide to Doing Business with the City \(houstontx.gov\)](http://houstontx.gov)  
New City of Houston Vendor ID #\_\_\_\_\_.

6.0 NOTICE TO PROCEED



- A. Upon the City's execution of the Agreement and delivery to Contractor, the Business Unit, i.e., Infrastructure will issue a - Notice to Proceed to Contractor, which establishes Date of Commencement of the Work.

END OF DOCUMENT

Document 00501

**RESOLUTION OF CONTRACTOR**

\_\_\_\_\_ (“Contractor”),  
(Name of Contractor, e.g., “Biz. Inc.”, “Biz LLP”)  
is a \_\_\_\_\_,  
(Type of Organization, e.g.: Corporation, Limited Partnership, Limited Liability Partnership, Limited Liability Company, etc.)  
which is bound by acts of \_\_\_\_\_,  
(Name and Form of Governing Entity, e.g., “Biz Inc. Board of Directors”, “Bill Smith, GP”,  
etc.)  
 (“Governing Entity”).

On the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the Governing Entity resolved, in  
accordance with all documents, rules, and laws applicable to the Contractor, that  
\_\_\_\_\_, is authorized to act as the  
(Contractor’s Representative)

Contractor’s Representative in all business transactions (initial one) \_\_\_\_ conducted in  
the State of Texas OR \_\_\_\_ related to this Contract; and

The Governing Entity warrants that the above resolution (a) was entered into  
without dissent or reservation by the Governing Entity, (b) has not been rescinded or  
amended, and (c) is now in full force and effect; and

In authentication of the adoption of this resolution, I subscribe my name on this \_\_\_\_  
\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

\_\_\_\_\_  
(Authorized Signature for Governing Entity)

\_\_\_\_\_  
(Print or Type Name and Title of Authorized Signatory)

**SWORN AND SUBSCRIBED** before me on \_\_\_\_\_  
Date

\_\_\_\_\_  
Notary Public in and for the State of Texas

My Commission Expires: \_\_\_\_\_  
Expiration Date

\_\_\_\_\_  
Print or Type Name of Notary Public

**INSTRUCTIONS:** Contractor must execute a Resolution of Contractor for each  
individual authorized to sign Contract Documents related to this Contract. Contractor  
may rescind Resolutions of Contractor through a written document in similar form.

END OF DOCUMENT

AGREEMENT

**Project:** Kenswick Drive Extension

**Project Location:** Intersection of Kenswick Drive, Will Clayton Parkway, and Lee Road  
at George Bush Intercontinental Airport (IAH)

**Project No:** 935

**The City:** THE CITY OF HOUSTON, 900 Bagby Street, Houston, Texas 77002 (the "City")  
and

**Contractor:** \_\_\_\_\_  
(Address for Written Notice) \_\_\_\_\_

**Phone Number:** \_\_\_\_\_ **Fax #:** N/A

**E-mail Address:** \_\_\_\_\_

**City Engineer, with respect to Section 4.1.9 and 4.3 thru 4.5 of the General Conditions, is:**  
Eren Selcen, P.E., – HAS City Engineer, City of Houston, Aviation Department, Infrastructure  
Division (or his or her successor)

Address for Written Notice: 111 Standifer Drive, Humble, TX 77338

Phone Number: 281-233-1605 Fax #: N/A

Email Address: eren.selcen@houstontx.gov

**City Engineer, City Employee designated by the Director of Department of Aviation to represent the City Engineer, with respect to all other terms of the General Conditions, is:**

**Christopher Bunn (or his or her successor)**

Phone Number: 281-233-1965

E-mail Address: Chris.Bunn@houstontx.gov

**THE CITY AND CONTRACTOR AGREE AS FOLLOWS:**

**ARTICLE 1**

**THE WORK OF THE CONTRACT**

1.1 Contractor shall perform the Work in accordance with the Contract.

**ARTICLE 2**  
**CONTRACT TIME**

2.1 Contractor shall achieve Date of Substantial Completion within 211 days after Date of Commencement of the Work, subject to adjustments of Contract Time as provided in the Contract.

2.2 The Parties recognize that time is of the essence for this Agreement and that the City will suffer financial loss if the Work is not completed within the Contract Time. Parties also recognize delays, expense, and difficulties involved in proving in a legal or arbitration proceeding actual loss suffered by the City if the Work is not completed on time. Accordingly, instead of requiring any such proof, the Parties agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay the City the amount stipulated in Document 00800 – Supplementary Conditions, for each day beyond Contract Time.

**ARTICLE 3**  
**CONTRACT PRICE**

3.1 Subject to terms of the Contract, the City will pay Contractor in current funds for Contractor's performance of the Contract, Contract Price of \$ [Original Contract Price], which includes Alternates, if any, accepted below.

3.2 The City accepts Alternates as follows:

Alternate No. 1 Not Applicable

**ARTICLE 4**  
**PAYMENTS**

4.1 The City will make progress payments to Contractor as provided below and in Conditions of the Contract.

4.2 The Period covered by each progress payment is one calendar month ending on the 25th day of the month.

4.3 The City will issue Certificates for Payment and will make progress payments on the basis of such Certificates as provided in Conditions of the Contract.

4.4 Final payment, constituting entire unpaid balance of Contract Price, will be made by the City to Contractor as provided in Conditions of the Contract.

**ARTICLE 5**  
**CONTRACTOR REPRESENTATIONS**

5.1 Contractor represents:

5.1.1 Contractor has examined and carefully studied Contract documents and other related data identified in Bid Documents.

5.1.2 Contractor has visited the site and become familiar with and is satisfied as to general, local, and site conditions that may affect cost, progress, and performance of the Work.

5.1.3 Contractor is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.

5.1.4 Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in Contract documents and (2) reports and drawings of a hazardous environmental condition, if any, at the site which has been identified in Contract documents.

5.1.5 Contractor has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including applying specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract to be employed by Contractor, and safety precautions and programs incident thereto

5.1.6 Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for performance of the Work at Contract Price, within Contract Time, and in accordance with the Contract.

5.1.7 Contractor is aware of general nature of work to be performed by the City and others at the site that relates to the Work as indicated in Contract documents.

5.1.8 Contractor has correlated information known to Contractor, information and observations obtained from visits to the site, reports and drawings identified in the Contract, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract.

5.1.9 Contractor has given City Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract, and written resolution thereof by City Engineer is acceptable to Contractor.

5.1.10 Contract documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

## **ARTICLE 6**

### **MISCELLANEOUS PROVISIONS**

6.1 The Contract may be terminated by either Party as provided in Conditions of the Contract.

6.2 The Work may be suspended by the City as provided in Conditions of the Contract.

## **ARTICLE 7**

### **ENUMERATION OF CONTRACT DOCUMENTS**

7.1 The following documents are incorporated into this Agreement:

7.1.1 Document 00700 - General Conditions.

7.1.2 Document 00800 - Supplementary Conditions.

7.1.3 General Requirements Division 01.

7.1.4 Technical Specs: Divisions 02 through 17 of Specifications (Division 17 – Telecommunications - may be substituted by the Division 27 under the CSI Masterformat 04 numbering system.)

7.1.5 Drawings listed in Document 00015 - List of Drawings and bound separately.

7.1.6 Addenda and Riders which apply to the Contract, are as follows:

Not Applicable

7.1.7 Other documents:

<u>Document No.</u>	<u>Title</u>
[ X ] 00410B	Bid Form – Part B
[ X ] 00470	Pre-bid MWSBE Participation Plan
[ ] 00470D	Pre-bid DBE Participation Plan for Project Funded by AIP Grant
[ X ] 00471	Pre-bid Good Faith Efforts
[ X ] 00472	Pre-bid Goal Deviation Request
[ X ] 00501	Resolution of Corporation (if a corporation)
[ X ] 00570	Post-bid MWSBE Participation Plan
[ X ] 00571	Post-bid Good Faith Efforts
[ X ] 00572	Post-bid Goal Deviation Request
[ ] 00607	Contractor's Certification Regarding Debarment, Suspension for Project Funded by AIP Grant
[ ] 00608	Contractor's Certification Regarding Non-Segregated Facilities for Project Funded by AIP Grant
[ X ] 00610	Performance Bond
[ X ] 00611	Statutory Payment Bond
[ X ] 00612	One-year Maintenance Bond
[ X ] 00613	One-year Surface Correction Bond
[ X ] 00620	Affidavit of Insurance
[ X ] 00621	City of Houston Certificate of Insurance
[ ] 00628	Affidavit of Compliance with Disadvantaged Business Enterprise (DBE) Program for Project Funded By AIP Grant
[ X ] 00630	Agreement to Comply with Pay or Play Program
[ X ] 00631	List of Participating Subcontractors (POP-3)
[ ] 00801	FAA Supplementary Conditions (for AIP Only)
[ ] 00804	ARRA requirements (for ARRA grants Only)
[ X ] 00805	EEO Program Requirements
[ ] 00806	Disadvantaged Business Enterprise (DBE) Program (For AIP Only)
[ ] 00807	Bidder/Contractor Requirements For Disadvantaged Business Enterprise (DBE) Program (For AIP Only)
[ X ] 00808	Bidder Requirements for MWSBE Program

- 00810 Federal Wage Rate - Highway
- 00811 Federal Wage Rate - Building
- 00812 Wage Rate for Engineering Heavy – Water & Sewer Line
- 00814 Wage Rate for Engineering Heavy – Flood Control
- 00820 Wage Rate for Engineering Construction
- 00821 Wage Rate for Building Construction
- 00840 Pay or Play Program
- 00842 Letter of Intent
  
- 00912 Rider (Contractor Initials: \_\_\_\_\_)

**ARTICLE 8  
SIGNATURES**

8.1 This Agreement is executed in two original copies and is effective as of the date of countersignature by City Controller.

**CONTRACTOR:**

(If Joint Venture)

By: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Tax Identification Number: \_\_\_\_\_

By: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Tax Identification Number: \_\_\_\_\_

**CITY OF HOUSTON, TEXAS**

APPROVED:

SIGNED:

By: \_\_\_\_\_  
 Director, Department of Aviation

By: \_\_\_\_\_  
 Mayor

COUNTERSIGNED:

By: \_\_\_\_\_  
 City Controller

ATTEST/SEAL:

Date Countersigned:

By: \_\_\_\_\_  
 City Secretary

\_\_\_\_\_

8.2 This Contract and Ordinance have been reviewed as to form by the undersigned legal assistant and have been found to meet established Legal Department criteria. Legal Department has not reviewed the content of these documents.



---

Legal Assistant

Date

END OF DOCUMENT

00520-6  
7-29-2021

Document 00570

**CONTRACTORS REVISED MWSBE PARTICIPATION PLAN**

As soon as the Contractor becomes aware that the Contractor may not abide by the most current approved Plan, the Contractor shall submit this completed form with a Record of Post-Bid Good Faith Efforts (Document 00571), a Request for Plan Deviation (Document 00572), and any other document evidencing "Good Faith Efforts," as required by the Good Faith Efforts Policy (Document 00808). The City will review this Revised Participation Plan and may approve this Revised Plan if the Contractor has made Good Faith Efforts. For more information, visit <http://www.houstontx.gov/obo>.

Original Participation Plan Percentage		MBE	WBE	SBE	Revised Participation Plan Percentage		MBE	WBE	SBE
NAICS Code (6 digit)	Description of Work (Plan Sheet #, Unit Price #, Scope of Work #, as applicable)	% of Total Bid Price (2 decimal places; for example: 5.00%)			Cert. Type for Goal: MBE, WBE, or SBE	Certified Firm Name Firm Address Contact Name Phone No. and E-Mail (if available)			
					MBE <input type="checkbox"/> WBE <input type="checkbox"/>	<b>USE THIS LINE FOR PRIME LEVEL CREDIT ONLY.                      CREDIT MUST NOT EXCEED 50% OF THE ADVERTISED GOAL</b>			
					MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>				
					MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>				
					MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>				
					MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>				
					MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>				

Authorized Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Print Name: \_\_\_\_\_ Company Name: \_\_\_\_\_  
Email: \_\_\_\_\_ Phone: \_\_\_\_\_

\*I understand that supplying inaccurate information may violate Texas Penal Code Section 37.10 and lead to City sanctions.

DOCUMENT 00570

**CONTRACTORS REVISED MWSBE PARTICIPATION PLAN  
CONTINUATION PAGE**

NAICS Code (6 digit)	Plan Item Number (if applicable) / Description of Work	% of Total Bid Price (2 decimal places; for example: 5.00%)	Cert. Type for Goal: MBE, WBE, or SBE	Certified Firm Name Firm Address Contact Name Phone No. and E-Mail (if available)
			MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
			MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
			MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
			MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
			MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
			MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
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			MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
			MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
			MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	
			MBE <input type="checkbox"/> WBE <input type="checkbox"/> SBE <input type="checkbox"/>	

\*I understand that supplying inaccurate information may violate Texas Penal Code Section 37.10 and lead to City sanctions.

Document 00571

**RECORD OF POST-AWARD GOOD FAITH EFFORTS**

**Contractor Name:** \_\_\_\_\_ **Project Name:** \_\_\_\_\_

A Contractor that may be unable to follow an agreed Participation Plan (Document 00470 or 00570) must submit this completed form, a Plan Deviation Request Form (Document 00572), and any other documentation of “Good Faith Efforts” (see Document 00808) that the OBO Representative may require. The Contractor shall submit one completed Document 00571 (Part A) for each Certified Firm that is no longer performing part or all of its work duties under the Approved Plan. The Contractor has the burden to demonstrate “Good Faith Efforts” to meet the MWSBE goal, which includes correctly and accurately preparing and submitting this form and other efforts described in the Good Faith Efforts Policy (Document 00808). The Office of Business Opportunity may review Participation Plan and Good Faith Efforts from time to time and may request that the Contractor submit this form and other information.

*UNLESS THE CONTRACTOR MEETS THE GOALS IN THE AGREED PARTICIPATION PLAN, FAILURE TO SUBMIT THIS FORM MAY RESULT IN A DEFAULT OF THE CONTRACT.*

**PART A (REASON FOR NON-USE OF CERTIFIED FIRM IN AGREED PLAN)**

NAICS Code	Plan Item No.	MWSBE Type for Goal	Certified Firm Name, Address, Phone No. and E-mail	Plan Goal & Actual Use (in % of total)	Method of Contact	Reason for Non-Use (why the Contractor was not able to use the Certified Firm in accordance with the Agreed Plan)
				Plan %: _____ Actual %: _____	Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>	

**PART B (REASON FOR NONUSE OF REPLACEMENT CERTIFIED FIRMS—IF APPLICABLE)**

NAICS Code	Plan Item No.	MWSBE Type for Goal	Certified Firm Name Address, Phone No. and E-Mail	Certified Firm Contact Person	Method of Contact	Prime Contact Date	Certified Firm Response	Results of Contact (why Certified Firm was unsuitable or unusable)
					Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
					Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			

Authorized Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Print Name: \_\_\_\_\_

Email Address: \_\_\_\_\_

Document 00571

**PART B CONTINUATION (REASON FOR NONUSE OF REPLACEMENT CERTIFIED FIRMS)**

NAICS Code	Plan Item No.	MWSB E Type for Goal	Certified Firm Name Address, Phone No. and E-Mail	Certified Firm Contact Person	Method of Contact	Prime Contact Date	Certified Firm Response	Results of Contact (why Certified Firm was unsuitable or unusable)
					Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
					Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
					Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
					Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
					Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
					Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			
					Phone <input type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/>			

**RECORD OF POST-AWARD  
GOOD FAITH EFFORTS**

					Phone <input type="checkbox"/>			
					E-mail <input type="checkbox"/>			
					Fax <input type="checkbox"/>			

Authorized Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Print Name: \_\_\_\_\_

Email Address: \_\_\_\_\_

Document 00572

**CONTRACTOR'S REQUEST FOR PLAN DEVIATION**

**Contractor Name:** \_\_\_\_\_

**Project Name:** \_\_\_\_\_

<b>Approved Participation Plan Percentages</b>	<b>MBE</b> %	<b>WBE</b> %	<b>SBE</b> %	<b>Total</b> %
--	-----------------	-----------------	-----------------	-------------------

<b>Contractor's Requested Participation Plan</b>	<b>MBE</b> %	<b>WBE</b> %	<b>SBE</b> %	<b>Total</b> %
--	-----------------	-----------------	-----------------	-------------------

**Justification:** Please provide the reason the Contractor is unable to meet the MWSBE goal in the Approved Plan.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Good Faith Efforts:** Please list any efforts not listed in Contractor's Record of Good Faith Effort (Document 00571).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please attach additional pages if the space for Justification or Good Faith Efforts is insufficient.

Date: \_\_\_\_\_ \*Contractor: \_\_\_\_\_

E-mail: \_\_\_\_\_ \*By: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Title: \_\_\_\_\_

\*I understand that the approval of this deviation request does not constitute a final decision by OBO that Contractor has used Good Faith Efforts in meeting the Contracting Goal.

<b>FOR OFFICIAL USE ONLY:</b> Approved <input type="checkbox"/>	Not Approved <input type="checkbox"/>
OBO Representative _____	Date: _____ Title: _____







Document 00601

**DRUG POLICY COMPLIANCE AGREEMENT**

I, \_\_\_\_\_, \_\_\_\_\_,  
Name Title

of \_\_\_\_\_  
Contractor

have authority to bind Contractor with respect to its Bid, Proposal, or performance of any and all contracts it may enter into with the City of Houston; and that by making this Agreement, I affirm that Contractor is aware of and by the time the Contract is awarded will be bound by and agree to designate appropriate safety impact positions for company employee positions, and to comply with the following requirements before the City issues a Notice to Proceed:

1. Develop and implement a written Drug Free Workplace Policy and related drug testing procedures for Contractor that meet the criteria and requirements established by the Mayor's Amended Policy on Drug Detection and Deterrence (Mayor's Drug Policy) and the Mayor's Drug Detection and Deterrence Procedures for Contractors (Executive Order No. 1-31).
2. Obtain a facility to collect urine samples consistent with Health and Human Services (HHS) guidelines and an HHS-certified drug-testing laboratory to perform drug tests.
3. Monitor and keep records of drug tests given and results; and upon request from the City of Houston, provide confirmation of such testing and results.
4. Submit semi-annual Drug Policy Compliance Declarations.

I affirm on behalf of Contractor that full compliance with the Mayor's Drug Policy and Executive Order No. 1-31 is a material condition of the Contract with the City of Houston,

I further acknowledge that falsification, failure to comply with or failure to timely submit declarations or documentation in compliance with the Mayor's Drug Policy or Executive Order No. 1-31 will be considered a breach of the Contract with the City and may result in non-award or termination of the Contract by the City.

\_\_\_\_\_  
Contractor Title

\_\_\_\_\_  
Signature Date

END OF DOCUMENT

Document 00604

HISTORY OF OSHA ACTIONS AND LIST OF ON-THE-JOB INJURIES

Prior to award of the Contract, Low Bidder will be required to file the following with the City:

1. A history of all OSHA actions, advisories, etc., Contractor has received on all jobs worked in any capacity, prime or subcontractor. The history shall be for the two-year period preceding the Bid Date of the Project.
2. A list of all on-the-job injuries, accidents, and fatalities suffered by any present or former employees of Contractor during the same two-year period.
3. If less than the two-year period, give the date Contractor started doing business.

This information must be submitted to the City within the time period stated in Document 00498 - Notice of Intent to Award. An officer of the company must certify in a notarized statement that the information submitted is true and correct.

END OF DOCUMENT

Document 00605

LIST OF SAFETY IMPACT POSITIONS

\*\*\*\*\*

*Contractor is to provide a complete List of Employee Classifications that are considered in a "Safety Impact Position" and the number of employees in each of those classifications.*

\*\*\*\*\*

**Employee Classification**

**Number of Employees**

END OF DOCUMENT

00605-1  
02-01-2004

Document 00609

List of Nonroad Diesel Equipment

Provide a list of nonroad diesel equipment that will be used in the performance of work on this Project as defined under this Contract or on a project-specific location that supports only the Project and is within one mile of the Project ("Project Site").

This list shall include the following information:

- An assigned Contractor-unique identification number, which shall be prominently placed on the exterior of individual pieces of Equipment;
- The dates each piece of Equipment is anticipated to arrive and depart the Project Site, and an indication of whether the Equipment will be used in performance of Project work;
- For each piece of Equipment: the make, description, model number, identification number, and model year;
- For each engine: the make, model, identification number, model year, horsepower rating, test group (family code); and
- Certification by either EPA, CARB or TCEQ, and the Tier 1, 2 or 3 emission standard claimed.

END OF DOCUMENT

Document 00610

**PERFORMANCE BOND**

**THAT WE**, \_\_\_\_\_, as Principal, (the "Contractor"), and the other subscriber hereto, \_\_\_\_\_, as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Houston (the "City"), a municipal corporation, in the penal sum of \$\_\_\_\_\_ for the payment of which sum, well and truly to be made to the City, its successors and assigns, Contractor and Surety do bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

**THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:**

**WHEREAS**, the Contractor has on or about this day executed a Contract in writing with the City for \_\_\_\_\_, \_\_\_\_\_, all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein.

**NOW THEREFORE**, if the said Contractor shall faithfully and strictly perform the Contract in all its terms, provisions, and stipulations in accordance with its true meaning and effect, and in accordance with the Contract documents referred to therein and shall comply strictly with each and every provision of the Contract and with this Bond, then this obligation shall become null and void and shall have no further force and effect; otherwise the same is to remain in full force and effect. Should the Contractor fail to faithfully and strictly perform the Contract in all its terms, including but not limited to the indemnifications thereunder, the Surety shall be liable for all damages, losses, expenses and liabilities that the City may suffer in consequence thereof, as more fully set forth herein.

It is further understood and agreed that the Surety does hereby relieve the City or its representatives from the exercise of any diligence whatever in securing compliance on the part of the Contractor with the terms of the Contract, and the Surety agrees that it shall be bound to take notice of and shall be held to have knowledge of all acts or omissions of the Contractor in all matters pertaining to the Contract. The Surety understands and agrees that the provision in the Contract that the City will retain certain amounts due the Contractor until the expiration of 30 days from the acceptance of the Work is intended for the City's benefit, and the City will have the right to pay or withhold such retained amounts or any other amount owing under the Contract without changing or affecting the liability of the Surety hereon in any degree.

It is further expressly agreed by Surety that the City or its representatives are at liberty at any time, without notice to the Surety, to make any change in the Contract documents and in the Work to be done thereunder, as provided in the Contract, and in

the terms and conditions thereof, or to make any change in, addition to, or deduction from the Work to be done thereunder; and that such changes, if made, shall not in any way vitiate the obligation in this Bond and undertaking or release the Surety therefrom.

It is further expressly agreed and understood that the Contractor and Surety will fully indemnify and save harmless the City from any liability, loss, cost, expense, or damage arising out of Contractor's performance of the Contract.

If the City gives Surety notice of Contractor's default, Surety shall, within 45 days, take one of the following actions:

1. Arrange for Contractor, with consent of the City, to perform and complete the Contract; or
2. Take over and assume completion of the Contract itself, through its agents or through independent contractors, and become entitled to the payment of the balance of the Contract Price.

If the Surety fails to take either of the actions set out above, it shall be deemed to have waived its right to perform and complete the Contract and receive payment of the balance of the Contract Price and the City shall be entitled to enforce any remedies available at law, including but not limited to completing the Contract itself and recovering any cost in excess of the Original Contract Price from the Surety.

This Bond and all obligations created hereunder shall be performable in Harris County, Texas. This Bond is given in compliance with the provisions of Chapter 2253, Texas Government Code, as amended, which is incorporated herein by this reference.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other Party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

Any party wishing to file a claim may call the Texas Department of Insurance at 1-800-252-3439 to obtain Surety's address for claims processing.

**IN WITNESS THEREOF**, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)  
WITNESS: (if not a corporation)

\_\_\_\_\_  
Name of Contractor

By: \_\_\_\_\_  
Name:  
Title:

By: \_\_\_\_\_  
Name:  
Title:  
Date:

ATTEST/SURETY WITNESS:  
(SEAL)

\_\_\_\_\_  
Full Name of Surety

\_\_\_\_\_  
Address of Surety for Notice

\_\_\_\_\_  
Telephone Number of Surety

By: \_\_\_\_\_  
Name:  
Title:  
Date:

By: \_\_\_\_\_  
Name:  
Title: Attorney-in-Fact  
Date:

This Ordinance or Contract has been reviewed as to form by the undersigned legal assistant and have been found to meet established Legal Department criteria. The Legal Department has not reviewed the content of these documents.

\_\_\_\_\_  
Legal Assistant

\_\_\_\_\_  
Date

END OF DOCUMENT



Document 00611

**STATUTORY PAYMENT BOND**

**THAT WE**, \_\_\_\_\_, as Principal, hereinafter called Contractor and the other subscriber hereto, \_\_\_\_\_, as Surety, do hereby acknowledge ourselves to be held and firmly bound unto the City of Houston, a municipal corporation, in the sum of \$ \_\_\_\_\_ for the payment of which sum, well and truly to be made to the City of Houston, and its successors, the said Contractor and Surety do bind themselves, their heirs, executors, administrators, successors, jointly and severally.

**THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:**

**WHEREAS**, the Contractor has on or about this day executed a contract in writing with the City of Houston for \_\_\_\_\_, all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein;

**NOW, THEREFORE**, if the said Contractor shall pay all claimants supplying labor and materials to him or a Subcontractor in the prosecution of the Work provided for in the Contract, then, this obligation shall be void; otherwise the same is to remain in full force and effect;

**PROVIDED HOWEVER**, that this Bond is executed pursuant to the provisions of Chapter 2253, Texas Government Code, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said Article to the same extent as if it were copied at length herein.

**IN WITNESS THEREOF**, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

Any party wishing to file a claim may obtain Surety's address for claims processing on file with the Texas Department of Insurance by calling 1-800-252-3439.

ATTEST, SEAL: (if a corporation)  
WITNESS: (if not a corporation)

\_\_\_\_\_  
Name of Contractor

By: \_\_\_\_\_  
Name:  
Title:

By: \_\_\_\_\_  
Name:  
Title:  
Date:

ATTEST/SURETY WITNESS:  
(SEAL)

\_\_\_\_\_  
Full Name of Surety

\_\_\_\_\_  
Address of Surety for Notice  
\_\_\_\_\_

\_\_\_\_\_  
Telephone Number of Surety

By: \_\_\_\_\_  
Name:  
Title:  
Date:

By: \_\_\_\_\_  
Name:  
Title: Attorney-in-Fact  
Date:

This Ordinance or Contract has been reviewed as to form by the undersigned legal assistant and have been found to meet established Legal Department criteria. The Legal Department has not reviewed the content of these documents.

\_\_\_\_\_  
Legal Assistant

\_\_\_\_\_  
Date

END OF DOCUMENT

Document 00612

**ONE-YEAR MAINTENANCE BOND**

**THAT WE,** \_\_\_\_\_, as Principal, hereinafter called Contractor, and the other subscriber hereto, \_\_\_\_\_, as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Houston, a municipal corporation, in the sum of \$\_\_\_\_\_, for the payment of which sum well and truly to be made to the City of Houston and its successors, the said Contractor and Surety do bind themselves, their heirs, executors, administrators, successors, jointly and severally.

**THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:**

**WHEREAS,** the Contractor has on or about this day executed a Contract in writing with the City of Houston for \_\_\_\_\_, \_\_\_\_\_, all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein.

**NOW THEREFORE,** if the said Contractor shall comply with the provisions of Paragraph 11.5.1 of the General Conditions, and correct work not in accordance with the Contract documents discovered within the established one-year period, then this obligation shall become null and void, and shall be of no further force and effect; otherwise, the same is to remain in full force and effect.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

**IN WITNESS THEREOF,** the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)  
WITNESS: (if not a corporation)

\_\_\_\_\_  
Name of Contractor

By: \_\_\_\_\_  
Name:  
Title:

By: \_\_\_\_\_  
Name:  
Title:  
Date:

ATTEST/SURETY WITNESS:

(SEAL)

\_\_\_\_\_  
Full Name of Surety

\_\_\_\_\_  
Address of Surety for Notice

\_\_\_\_\_  
Telephone Number of Surety

By: \_\_\_\_\_

Name:

Title:

Date:

By: \_\_\_\_\_

Name:

Title: Attorney-in-Fact

Date:

This Ordinance or Contract has been reviewed as to form by the undersigned legal assistant and have been found to meet established Legal Department criteria. The Legal Department has not reviewed the content of these documents.

\_\_\_\_\_  
Legal Assistant

\_\_\_\_\_  
Date

END OF DOCUMENT

Document 00613

**ONE-YEAR SURFACE CORRECTION BOND**

**THAT WE,** \_\_\_\_\_, as Principal, hereinafter called Contractor, and the other subscriber hereto, \_\_\_\_\_, as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Houston, a municipal corporation, in the sum of \$\_\_\_\_\_, such sum being equal to four percent of the Original Contract Price, for the payment of which sum to be made to the City of Houston and its successors, Contractor and Surety do bind themselves, their successors, jointly and severally.

**THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:**

**WHEREAS,** the Contractor has entered into a Contract in writing with the City of Houston, Texas, dated of even date herewith, for \_\_\_\_\_, all of such work to be done in accordance with the Contract documents therein referred to, and adopted by the City Council of the City of Houston.

**NOW THEREFORE,** if the Contractor shall comply with the provisions of Paragraph 11.5.1 of the General Conditions, and repair, replace, restore, and correct surface work associated with backfill operations of subsurface work not in accordance with the Contract documents discovered within one year from the date that the One-year Maintenance Bond has expired, then this obligation shall become null and void, and shall be of no further force and effect; otherwise, the same is to remain in full force and effect.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

**IN WITNESS THEREOF,** the said Principal and Surety have signed and sealed this instrument on the respective dates written below their signatures.

ATTEST, SEAL: (if a corporation)  
WITNESS: (if not a corporation)

\_\_\_\_\_  
Name of Contractor

By: \_\_\_\_\_  
Name:  
Title:

By: \_\_\_\_\_  
Name:  
Title:  
Date:

ATTEST/SURETY WITNESS:

(SEAL)

\_\_\_\_\_  
Full Name of Surety

\_\_\_\_\_  
Address of Surety for Notice

\_\_\_\_\_  
Telephone Number of Surety

By: \_\_\_\_\_

Name:

Title:

Date:

By: \_\_\_\_\_

Name:

Title: Attorney-in-Fact

Date:

This Ordinance or Contract has been reviewed as to form by the undersigned legal assistant and have been found to meet established Legal Department criteria. The Legal Department has not reviewed the content of these documents.

\_\_\_\_\_  
Legal Assistant

\_\_\_\_\_  
Date

END OF DOCUMENT

Document 00620

AFFIDAVIT OF INSURANCE

**BEFORE ME**, the undersigned authority, on this day personally appeared

\_\_\_\_\_ ,  
who

Affiant

being by me duly sworn on his oath stated that he is \_\_\_\_\_ ,  
of

Title

\_\_\_\_\_  
Contractor's Company Name

the Contractor named and referred to within the Contract documents; that he is fully competent and authorized to give this affidavit and that the attached original insurance certificate truly and accurately reflects the insurance coverage that is now available and will be available during the term of the Contract.

\_\_\_\_\_  
Affiant's Signature

SWORN AND SUBSCRIBED before me on \_\_\_\_\_ .  
Date

\_\_\_\_\_  
Notary Public in and for the State of TEXAS

\_\_\_\_\_  
Print or type Notary Public name

My Commission Expires: \_\_\_\_\_  
Expiration Date

END OF DOCUMENT





Document 00629

AFFIDAVIT FOR FAA FORM 7460-1

**BEFORE ME**, the undersigned authority, on this day personally appeared

\_\_\_\_\_, who  
Affiant

being by me duly sworn on his oath stated that he is \_\_\_\_\_,  
Title

of \_\_\_\_\_,  
Contractor

the Contractor named and referred to within the Contract documents; that he is fully competent and authorized to give this affidavit and that Affiant affirms **the maximum height\*** of construction equipment used for the Work shall not exceed \_\_\_\_\_ feet in height during use within the contract limits from \_\_\_\_\_, 20\_\_ through \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Affiant's Signature

SWORN AND SUBSCRIBED before me on this day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public in and for the State of TEXAS

\_\_\_\_\_  
Print or Type Notary Public Name

My Commission Expires: \_\_\_\_\_  
Expiration Date

**\*\*Notes:** The Contractor must contact PDC Planning Division (Contact: Juan Pedracova @ Tel: 281-230-8915, or Email: [Juan.Pedracova@houstontx.gov](mailto:Juan.Pedracova@houstontx.gov)) to initiate process of securing approval of the maximum construction equipment height from the FAA.

END OF DOCUMENT



# City of Houston Pay or Play Program Certification of Compliance



Prime Contractor: \_\_\_\_\_ Subcontractor: \_\_\_\_\_

Address: \_\_\_\_\_

Outline Number: \_\_\_\_\_ Contract Amount: \$ \_\_\_\_\_

Project Name: [Legal Project Name] \_\_\_\_\_

Contracting Department: \_\_\_\_\_

In accordance with the City of Houston Pay or Play Program authorized by Ordinance 2007-534 and Executive Order 1-7, Prime/Subcontractor agrees to abide by the terms of this Program. This certification is required of all contractors for contracts subject to the program. You must agree either to PAY, PLAY or BOTH for all covered employees. If selecting BOTH, the Contractor/Subcontractor may Pay on behalf of some covered employees and Play on behalf of the remaining covered employees.

The Prime/Subcontractor will comply with all provisions of the Pay or Play Program Requirements and will furnish all information and reports requested to determine compliance of the Pay or Play Program (See Executive Order 1-7 for the terms of the Pay or Play program).

The Prime/Subcontractor may agree to **“Pay”** \$1.00 per hour for work performed by covered employees under the contract with the City. If independent contract labor is utilized the Contractor/Subcontractor agrees to report hours worked by the independent contract laborer and pay \$1.00 per hour for work performed.

The Prime/Subcontractor may agree to **“Play”** by providing health benefits to each covered employee. The health benefits must meet the following criteria:

- The employer contributes no less than 75% of the total premium costs per covered employee per month toward the total premium cost.
- The covered employee contributes, if any amount, no greater than 25% of the total monthly premium costs.

<b>Please select whether you choose to:</b>	<b>Pay</b>	<b>Play</b>	<b>Both</b>

The Prime/Subcontractor will file compliance reports with the City, which will include activity for covered employees subject to the program, in the form and to the extent requested by the administering department. Compliance reports shall contain information including, but not limited to, documentation showing employee health coverage and employee work records.

**Note: The contractor is responsible to the City for compliance of covered employees of covered subcontractors.**

Please indicate the estimated number of:	PRIME	SUB
Total Employees on City Job		
Covered Employees		
Non-Covered Employees		
Exempt Employees		

I hereby certify that the above information is true and correct.

\_\_\_\_\_  
**Please Sign**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Please Print Name & Title**



# City of Houston Pay or Play Program Participating Subcontractors



Prime Contractor: \_\_\_\_\_  
 Project Number/Description: \_\_\_\_\_  
 \_\_\_\_\_

POP Contact Person: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Note: Include ALL subcontractors (use additional form if necessary)

Subcontractor Name	Supplier Y/N?	Amount of Subcontract	Check One				Contact Person	Phone	Email Address	Mailing Address
			Pay	Play	Both (Pay and Play)	N/A				

\*If the above information is found to be submitted fraudulently with the intent to bypass or deceive the purpose of the Pay or Play Program the contractor will be held liable for all compliance requirements from the inception of the contract. All subcontracts that surpass the \$200,000.00 threshold will be responsible for Pay or Play compliance from the inception of the contract.

### Affidavit

I hereby solemnly affirm, certify and confirm that the total sub-contract value stated above is the final value of the contract (\*) including all material costs, fuel, payroll, taxes, fees, profit sharing, labor or any payments in relation to the contracted work and no separate payment or contract has been made for the sub-contract under contract no. \_\_\_\_\_. The above sub-contract value includes all the costs related to work under the contract. The contractor and sub-contractor(s) agree to inform the Office of Business Opportunity of any related cost(s) added to the contracted work and re-submit POP-3 with the current value of the sub-contract. I understand that compliance with "Pay or Play" program is mandatory and nothing has been hidden to circumvent the program requirements.

\_\_\_\_\_  
 Contractor Authorized Representative & Title  
 Name & Signature

\_\_\_\_\_  
 Date

**Kenswick Drive Extension  
STANDARD SPECIFICATION**

**OFFICE OF BUSINESS OPPORTUNITY  
CERTIFICATION BY MATERIAL SUPPLIERS**

Document 00632

**CERTIFICATION BY PROPOSED MATERIAL SUPPLIERS,  
LESSORS, AND PROFESSIONAL SERVICE PROVIDERS  
REGARDING EQUAL EMPLOYMENT OPPORTUNITY**

Company Name: \_\_\_\_\_ \$ \_\_\_\_\_  
(Supplier, Lessor, Professional Service Provider) (Amount of Contract)

Company Address: \_\_\_\_\_

Company Telephone Number: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Web Page/URL Address: \_\_\_\_\_

Company Tax Identification Number: \_\_\_\_\_

Project Name & No.: \_\_\_\_\_

Materials/Services Provided: \_\_\_\_\_

In accordance with Chapter 15 of the City of Houston's Code of Ordinances, Supplier/Lessor/Professional Service Provider represents to be an equal opportunity employer and agrees to abide by the terms of the Ordinance. This certification is required of all Suppliers/Lessors/Professional Service Providers providing goods or service to this project with agreements \$50,000 or more.

Yes  No Supplier agrees not to discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, or age.

Yes  No Supplier agrees that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, national origin, or age.

Yes  No Supplier will comply with all provisions of **Executive Order No. 11246** and rules, regulations and applicable orders of the Department of Labor or other Federal Agency responsible for enforcement of applicable equal opportunity and affirmative action provisions and will likewise furnish all information and reports required by the Mayor or Contract Compliance Officers for the purpose of investigation to ascertain and effect compliance with the City of Houston's Office of Business of Opportunity.

Yes  No The Supplier shall file and cause their sub-tier contractors to file compliance reports with the City in the form and to the extent as may be prescribed by the Mayor or Contract Compliance Officers. Compliance reports filed at such times as directed shall contain information including, but not limited to, the practices, policies, programs, and employment policies.

I hereby certify that the above information is true and correct.

\_\_\_\_\_  
COMPANY OFFICER (Signature)

\_\_\_\_\_  
DATE

\_\_\_\_\_  
NAME AND TITLE (Print or type)

END OF DOCUMENT

Document 00636

Certificate of Interested Parties

In accordance with Texas Gov't Code §2252.908, the successful bidder must complete Form 1295, Certificate of Interested Parties. Form 1295 is available for downloading on the Texas Ethics Commission's (TEC) website: <https://www.ethics.state.tx.us/forms/1295.pdf>.

The successful bidder must use the application to enter the required information on Form 1295 and print a copy of the completed form, which will include a certification of filing that will contain a unique certification number.

No later than 30 days after the contract's effective date, the City will upload the successful bidder's completed Form 1295. The TEC will post the Contractor's completed Form 1295 within seven business days of receipt.

For your reference, Form 1295 is attached as part of this document.

END OF DOCUMENT

**CERTIFICATE OF INTERESTED PARTIES**

**FORM 1295**

Complete Nos. 1 - 4 and 6 if there are interested parties.  
 Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

**OFFICE USE ONLY**

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the goods or services to be provided under the contract.

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO interested Party.

6 **AFFIDAVIT** I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

\_\_\_\_\_  
 Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said \_\_\_\_\_, this the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_, to certify which, witness my hand and seal of office.

\_\_\_\_\_  
 Signature of officer administering oath      Printed name of officer administering oath      Title of officer administering oath

**ADD ADDITIONAL PAGES AS NECESSARY**

Document 00700

## **GENERAL CONDITIONS**

AUGUST 7, 2023 EDITION

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**ARTICLE 1**  
**GENERAL PROVISIONS**

**1.1 DEFINITIONS.**

- 1.1.1 Agreement:** Document signed by the Parties and binding the Parties, containing the name of Contractor, title and location of the Project, Original Contract Time, Original Contract Price, enumeration of documents included in the Contract, and other provisions.
- 1.1.2 Bonds:** Performance Bond, Payment Bond, Maintenance Bond, and other Surety instruments executed by Surety. When in singular form, refers to individual instrument.
- 1.1.3 Business Enterprise:** Any business entity registered in a program authorized by 49 C.F.R. § 26 (where applicable) or City Code of Ordinances, Chapter 15, Article II, relating to Equal Opportunity Employment and taking affirmative action to ensure that applicants are employed and employees are treated without regard to race, religion, color, sex, national origin, or age. The term "Business Enterprise" may include any Disadvantaged Business Enterprise ("DBE"), Minority Business Enterprise ("MBE"), Woman Business Enterprise ("WBE"), Small Business Enterprise ("SBE"), Person with Disability Enterprise ("PDBE"), and any Historically Underutilized Business ("HUB").
- 1.1.4 Business Enterprise Policy:** Contract documents and applicable policies relating to Business Enterprises and authorized under 49 C.F.R. § 26 or City Code of Ordinances, Chapter 15, Article V.
- 1.1.5 Cash Allowance:** An estimated sum of money to be used only for a limited class of expenditures such as utility relocation costs, fees for special licenses or permits, or other "pass-through" costs that would be the same for any contractor. Cash Allowances may not be used to purchase goods or services that are not specified in the Contract. The unspecified items must be purchased according to the terms of Article 7.
- 1.1.6 Change Order:** Written instrument prepared by the City and signed by City Engineer and Contractor, specifying the following:
- 1.1.6.1 a change in the Work;
  - 1.1.6.2 a change in Contract Price, if any; and
  - 1.1.6.3 a change in Contract Time, if any.
- The value of a Change Order is the net amount after offsetting all deductions against all additions effected by the Change Order.
- 1.1.7 City:** The City of Houston, a home rule municipality located principally within Harris County, Texas, including its successors and its authorized representatives.
- 1.1.8 City Engineer:** The City Engineer, or the City employee representing the City Engineer, designated in the Agreement and authorized to represent the City, or successors.
- 1.1.9 Claim:** Written demand or written assertion by one Party seeking adjustment of the Contract, payment of money, extension of time, or other relief under the Contract and includes, but is not limited to, claims for materials, labor, equipment, delay, changes, adjustments, substitutions, fees and third party claims. The Party making the Claim has the responsibility to substantiate the Claim.
- 1.1.10 Conditions of the Contract:** General Conditions and Supplementary Conditions.

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- 1.1.11 *Construction Manager:* Person or firm under contract with the City as its authorized representative to oversee and administer construction of the Work, and who may perform the role of Project Manager and Inspector, as designated by City Engineer in writing.
- 1.1.12 *Contract:* The Agreement; documents enumerated in and incorporated into the Agreement, Modifications, and amendments.
- 1.1.13 *Contract Price:* The monetary amount stated in the Agreement adjusted by Change Order, and increases or decreases in Unit Price Quantities, if any.
- 1.1.14 *Contract Time:* The number of days stated in the Agreement to substantially complete the Work, plus days authorized by Change Order.
- 1.1.15 *Contractor:* Person or firm identified as such in the Agreement including its successors and its authorized representatives.
- 1.1.16 *Date of Commencement of the Work:* Date established in Notice to Proceed on which Contract Time will commence. This date will not be changed by failure of Contractor, or persons or entities for whom Contractor is responsible, to act.
- 1.1.17 *Date of Substantial Completion:* Date that construction, or portion thereof designated by City Engineer, is certified by City Engineer to be substantially complete.
- 1.1.18 *Design Consultant:* Person or firm, under contract with the City, to provide professional services during construction and its authorized representatives. If a Design Consultant is not employed for services during construction, Project Manager will perform duties of Design Consultant designated in the Contract in addition to usual duties of Project Manager.
- 1.1.19 *Drawings:* Graphic and pictorial portions of the Contract that define the character and scope of the Work.
- 1.1.20 *Extra Unit Price:* Unit Prices, which may be required for completion of the Work. These Unit Prices and Unit Price Quantities are in the Contract and are included in Original Contract Price.
- 1.1.21 *Furnish:* To supply, pay for, deliver to the site, and unload.
- 1.1.22 *General Requirements:* The sections of Division 01 Specifications that specify administrative and procedural requirements and temporary facilities required for the Work.
- 1.1.23 *Inspector:* City's employee or agent authorized to assist with inspection of the Work.
- 1.1.24 *Install:* Unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, clean, protect, and similar operations.
- 1.1.25 *Legal Holiday:* Day established by the City Council as a holiday.
- 1.1.26 *Major Unit Price Work:* An individual Unit Price item,  
1.1.26.1 whose value is greater than five percent of Original Contract Price,  
1.1.26.2 whose value becomes greater than five percent of Original Contract Price  
as the result of an increase in quantity, or  
1.1.26.3 whose value is \$100,000, whichever is least.

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- 1.1.27 *Mayor's Office of Business Opportunity*: any reference to, or use of, the "Office of Affirmative Action" shall mean the Mayor's Office of Business Opportunity, or any such future name to which it is changed.
- 1.1.28 *Minor Change in the Work*: A written change in the Work, ordered by City Engineer, that does not change Contract Price or Contract Time, and that is consistent with the general scope of the Contract.
- 1.1.29 *Modification*: Change Order, Work Change Directive, or Minor Change in the Work.
- 1.1.30 *Notice of Noncompliance*: A written notice by City Engineer to Contractor regarding defective or nonconforming work that does not meet the Contract requirements, and that establishes a time by which Contractor shall correct the defective or nonconforming work.
- 1.1.31 *Notice to Proceed*: A written notice by City Engineer to Contractor establishing Date of Commencement of the Work.
- 1.1.32 *Original Contract Price*: The monetary amount originally stated in the Agreement.
- 1.1.33 *Parties*: Contractor and the City. When in singular form, refers to Contractor or the City.
- 1.1.34 *Pollutant*: Any materials subject to the Texas Solid Waste Disposal Act.
- 1.1.35 *Pollutant Facility*: Any facility regulated by the State of Texas to protect the health and environment from contamination by Pollutants, including without limitation, landfills, oil and gas production and storage facilities, wastewater facilities, waste injection wells, and storage tanks (including drums).
- 1.1.36 *Product*: Materials, equipment, or systems incorporated into the Work or to be incorporated into the Work.
- 1.1.37 *Product Data*: Illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by Contractor to illustrate a Product.
- 1.1.38 *Project*: Total construction, of which the Work performed under the Contract may be the whole or a part, and which may include construction by the City or by separate contractors.
- 1.1.39 *Project Manager*: City Engineer's authorized representative for administration of the Work. Titles used within the City's departments may be different than those used in this definition.
- 1.1.40 *Provide*: Furnish and Install, complete, ready for intended use.
- 1.1.41 *Samples*: Physical examples that illustrate Products, or workmanship, and establish standards by which the Work is judged.
- 1.1.42 *Shop Drawings*: Drawings, diagrams, schedules, and other data specially prepared for the Work by Contractor, Subcontractor or Supplier, to illustrate a portion of the Work.
- 1.1.43 *Specifications*: Divisions 01 through 16 of the documents that are incorporated into the Agreement, consisting of written General Requirements and requirements for Products, standards, and workmanship for the Work, and performance of related services.

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- 1.1.44 *Stipulated Price:* Single lump sum amount stated in the Contract for completion of the Work, or for designated portion of the Work.
- 1.1.45 *Subcontractor:* Person or firm that has direct or indirect contract with Contractor or with another Subcontractor to perform a portion of the Work and its authorized representatives.
- 1.1.46 *Superintendent:* Employee of Contractor having authority and responsibility to act for and represent Contractor.
- 1.1.47 *Supplementary Conditions:* Part of Conditions of the Contract that amends or supplements General Conditions.
- 1.1.48 *Supplier:* Manufacturer, distributor, materialman, or vendor having a direct agreement with Contractor or Subcontractor for Products, or services and its authorized representatives.
- 1.1.49 *Surety:* Corporate entity that is bound by one or more Bonds, and is responsible for completion of the Work, including the correction period, and for payment of debts incurred in fulfilling the Contract. Surety shall include co-surety or reinsurer, as applicable.
- 1.1.50 *Underground Facilities:* Pipes, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments and encasements containing such facilities that exist below ground level.
- 1.1.51 *Unit Price:* An amount stated in the Contract for an individual, measurable item of work, which, when multiplied by actual quantity incorporated into the Work, amounts to full compensation for completion of the item, including work incidental to it.
- 1.1.52 *Unit Price Quantities:* Quantities indicated in the Contract that are approximations made by the City for contracting purposes.
- 1.1.53 *Work:* Entire construction required by the Contract, including all labor, Products, and services provided by Contractor to fulfill Contractor's obligations. The Work may constitute the whole or a portion of the Project.
- 1.1.54 *Work Change Directive:* A written change in the Work, ordered by City Engineer, that is within the general scope of the Contract and consisting of additions, deletions, or other revisions. A Work Change Directive will state proposed basis for adjustment, if any, in Contract Price or Contract Time, or both.
- 1.2 **EXECUTION, CORRELATION, AND INTENT.**
- 1.2.1 Execution of the Contract by Contractor is conclusive that Contractor has visited the Work site, become familiar with local conditions under which the Work will be performed, and fully informed itself as to conditions and matters which can affect the Work or costs. Contractor further agrees that it has carefully correlated personal observations with requirements of the Contract.
- 1.2.2 The Contract and Modifications have been read and carefully considered by Contractor, who understands and agrees to their sufficiency for the Work. The Contract may not be more strongly construed against the City than against Contractor and Surety.
- 1.2.3 Contractor shall include all items necessary for proper execution and completion of the Work.

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- 1.2.4 Reference to standard specifications, manuals, or codes of a technical society, organization, or association, or to laws or regulations of a governmental authority, whether specific or implied, mean the latest edition in effect as of date of receipt of bids, except as may be otherwise specifically stated in the Contract.
- 1.2.5 No provision of any referenced standard, specification, or manual changes the duties and responsibilities of the City, City Engineer, Contractor, or Design Consultant from those set forth in the Contract. Nor do these provisions assign to Design Consultant any duty or authority to supervise or direct performance of the Work or any duty or authority to undertake any actions contrary to provisions of the Contract.
- 1.2.6 Organization of Specifications into divisions, sections, and articles and arrangement of Drawings does not control Contractor in dividing the Work among Subcontractors or in establishing the extent of work to be performed by any trade.
- 1.2.7 Unless otherwise defined in the Contract, words which have well-known construction industry technical meanings are used in the Contract in accordance with these recognized meanings.
- 1.3 **OWNERSHIP AND USE OF DOCUMENTS.**
- 1.3.1 Drawings, Specifications, and other documents prepared by the City or by Design Consultant are instruments of service through which the Work to be executed by Contractor is described. Contractor may retain one Contract record set.
- 1.3.2 Neither Contractor, Subcontractor, nor Supplier will own or claim a copyright to documents contained in the Contract or any part of the Contract.
- 1.3.3 Documents contained in the Contract, prepared by the City or by Design Consultant, and copies furnished to Contractor, are for use solely with respect to the Work. They may not be used by Contractor, Subcontractor or Supplier on other projects or for additions to the Work, outside the scope of the Work, without the specific written consent of City Engineer, and Design Consultant, when applicable.
- 1.3.4 Contractor, Subcontractors, and Suppliers are granted a limited license to use and reproduce applicable portions of the Contract appropriate to and for use in execution of their work under the Contract.
- 1.4 **INTERPRETATION.**
- 1.4.1 Specifications are written in an imperative streamlined form and are directed to Contractor, unless noted otherwise. When written in this form, words "shall be" are included by inference where a colon (:) is used within sentences or phrases.
- 1.4.2 In the interest of brevity, the Contract frequently omits modifying words such as "all" and "any" and articles such as "the" and "an", but an absent modifier or article is not intended to affect interpretation of a statement.

## **ARTICLE 2**

### **THE CITY**

- 2.1 **LIMITATIONS OF THE CITY'S OFFICERS AND EMPLOYEES.** No officer or employee of the City may authorize Contractor to perform an act or work contrary to the Contract, except as otherwise provided in the Contract.
- 2.2 **DUTIES OF THE CITY.**

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- 2.2.1 If a building permit is required, the City will process an application for, and Contractor shall purchase the building permit before Date of Commencement of the Work.
- 2.2.2 The City will make available to Contractor a reproducible set of Drawings. Additional copies will be furnished, on Contractor's request, at the cost of reproduction.
- 2.2.3 When necessary for performance of the Work, the City will provide surveys describing physical characteristics, legal limitations, legal description of site, and horizontal and vertical control adequate to lay out the Work.
- 2.2.4 Information or services that the City is required to provide under the Contract will be provided by the City with reasonable promptness to avoid delay in orderly progress of the Work.
- 2.2.5 The Contract imposes no implied duty on the City. The City does not warrant any plans or specifications associated with the Contract.
- 2.2.6 Except as expressly stated in this Article, the City owes no duty to the Contractor or any subcontractor.
- 2.3 **AVAILABILITY OF LAND AND USE OF SITE.**
- 2.3.1 The City will furnish, as indicated in the Contract, rights-of-way, land on which the Work is to be performed, and other land designated in the Contract for use by Contractor unless otherwise provided in the Contract.
- 2.3.2 Contractor shall confine operations at site to those areas permitted by law, ordinances, permits, and the Contract, and may not unreasonably encumber site with materials or equipment.
- 2.3.3 In addition to land provided by the City under Section 2.3, Contractor shall provide all land and access to land that may be required for use by Contractor for temporary construction facilities or for storage of materials and equipment, and shall indemnify the City during its use of the land as stated in Section 3.25.
- 2.4 **THE CITY'S RIGHT TO STOP THE WORK.** If Contractor fails to carry out the Work in accordance with the Contract, or fails to correct work which is not in accordance with requirements of the Contract as required in Sections 12.1 and 12.2, the City may, by Notice of Noncompliance, order Contractor to stop the Work or any portion of the Work until the cause for the order has been eliminated. However, the right of the City to stop the Work will not give rise to a Claim for delay or to a duty on the part of the City to exercise this right for the benefit of Contractor or any other person or entity, except to the extent required by Section 6.2. If Contractor corrects the defective or nonconforming work within the time established in Notice of Noncompliance, City Engineer will give written notice to Contractor to resume performance of the Work.
- 2.5 **THE CITY'S RIGHT TO CARRY OUT WORK.**
- 2.5.1 If Contractor fails to carry out work in accordance with the Contract, and fails within the period established in a Notice of Noncompliance to correct the nonconforming work, the City may, after expiration of the required period, correct the deficiencies without prejudice to other remedies the City may have, including rights of the City under Section 14.1.
- 2.5.1.1 When the City corrects deficiencies, City Engineer will issue an appropriate Change Order and deduct from payments then or thereafter due Contractor the cost of correcting the deficiencies, including compensation for Design Consultant's and Construction Manager's additional services and expenses made necessary by such default, neglect, or failure. This action by the City and amounts charged to

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Contractor are both subject to prior approval of City Engineer. If payments, then or thereafter due Contractor, are not sufficient to cover these amounts, Contractor shall pay the difference to the City.

- 2.5.2 Notwithstanding the City's right to carry out work, maintenance and protection of the Work remains Contractor's responsibility, as provided in the Contract.

### **ARTICLE 3**

#### **CONTRACTOR**

3.1 ***RESPONSIBILITIES.***

3.1.1 Contractor shall maintain office with agent in the greater City of Houston area during the Contractor's performance under the Contract. Contractor shall file its street address with City Engineer.

3.1.2 Contractor and Contractor's employees shall not give or lend money or anything of value to an officer or employee of the City. Should this Paragraph 3.1.2 be violated, City Engineer may terminate the Contract under Section 14.1.

3.2 ***REVIEW OF CONTRACT AND FIELD CONDITIONS BY CONTRACTOR.***

3.2.1 Contractor shall carefully study and compare documents contained in the Contract with each other and with information furnished by the City pursuant to Section 2.2 and shall immediately report, in writing, any errors, inconsistencies, or omissions to City Engineer. If work is affected, Contractor shall obtain a written interpretation or clarification from City Engineer before proceeding with the affected work. However, Contractor will not be liable to the City for failure to report an error, inconsistency, or omission in the Contract unless Contractor had actual knowledge or should have had knowledge of the error, inconsistency, or omission.

3.2.2 Contractor shall take field measurements and verify field conditions, and shall carefully compare the conditions and other information known to Contractor with the Contract, before commencing activities. Contractor shall immediately report, in writing, to City Engineer for interpretation or clarification of discrepancies, inconsistencies, or omissions discovered during this process.

3.2.3 Contractor shall make a reasonable attempt to understand the Contract before requesting interpretation from City Engineer.

3.3 ***SUPERVISION AND CONSTRUCTION PROCEDURES.***

3.3.1 Contractor shall supervise, direct, and inspect the Work competently and efficiently, devoting the attention and applying the skills and expertise as necessary to perform the Work in accordance with the Contract. Contractor is solely responsible and has control over construction means, methods, techniques, sequences, and procedures of construction; for safety precautions and programs in connection with the Work; and for coordinating all work under the Contract.

3.3.2 Regardless of observations or inspections by the City or City's consultants, Contractor shall perform and complete the Work in accordance with the Contract and submittals approved pursuant to Section 3.18. The City is not liable or responsible to Contractor or Surety for work performed by Contractor that is not in accordance with the Contract regardless of whether discovered during construction or after acceptance of the Work.

3.4 ***SUPERINTENDENT.***



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- 3.4.1 Contractor shall employ a competent Superintendent and necessary assistants who shall be present at the site during performance of the Work. Communications given to Superintendent are binding on the Contractor.
- 3.4.2 Contractor shall notify City Engineer in writing of its intent to replace the Superintendent. Contractor may not replace the Superintendent if City Engineer makes a reasonable objection in writing.
- 3.5 **LABOR; MINORITY AND WOMEN BUSINESS ENTERPRISE COMPLIANCE.**
- 3.5.1 Contractor shall provide competent, qualified personnel to survey and lay out the Work and perform construction as required by the Contract. The City may, by written notice, require Contractor to remove from the Work any employee of Contractor or Subcontractors to whom City Engineer makes reasonable objection.
- 3.5.2 Contractor shall comply with the City's Minority and Women Business Enterprise ("MWBE") programs set out in this Agreement and in the Supplementary Conditions, and as set out in Chapter 15, Article V of the City of Houston Code of Ordinances, and the applicable Office of Business Opportunity's ("OBO") Policies and Procedures. When Original Contract Price is greater than \$1,000,000, Contractor shall make Good Faith Efforts to award subcontracts or supply agreements in at least the percentages set out in the Supplementary Conditions for Business Enterprise Policy ("Stated MWBE goal(s)"). If the Contractor is a certified MBE or WBE, Contractor may count toward goals the work that it commits to perform with its own work force, capped at 50% of the total advertised goal. Contractor acknowledges that it has reviewed the requirements for good faith efforts on file with OBO and will comply with them.
- 3.5.2.1 Contractor shall require written subcontracts with Business Enterprises and shall submit all disputes with Business Enterprises to voluntary mediation. Business Enterprise subcontracts complying with City Code of Ordinances Chapter 15, Article II must contain the terms set out in Subparagraph 3.5.3.2. If Contractor is an individual person, as distinguished from a corporation, partnership, or other legal entity, and the amount of the subcontract is \$50,000 or less, the subcontract must also be signed by the attorneys of the respective parties.
- 3.5.3 For purposes of this paragraph, "Contract Year" means a 12-month period during the term of the contract commencing on the Countersignature Date of this Agreement and each anniversary thereof. If the term of this Agreement exceeds one Contract Year and Contractor's MWBE participation level in a Contract Year is less than the Stated MWBE goal(s), then within 30 calendar days of the end of each Contract Year Contractor must provide a written explanation to both the Director and Office of Business Opportunity Director ("OBO Director") of the following: (1) the discrepancy between Contractor's MWBE participation level and the Stated MWBE goal(s); (2) the reason for the discrepancy; and (3) Contractor's good faith efforts (in accordance with the City's policy) towards achieving the Stated MWBE goal(s). As part of the good faith efforts assessment, the OBO Director may consider Contractor's failure to timely submit the notice or explanation required by this provision and the OBO Director may impose sanctions or other penalties on Contractor for said failures in accordance with this Section of this Agreement and Chapter 15 of the Code of Ordinances, OBO's policies and procedures, and the City's good faith efforts policy.
- 3.5.4 The OBO Director, in consultation with the Director may review, at any time during the Term of this Agreement, Contractor's progress toward attainment of the Stated MWBE goal(s), by reviewing the percentage of work to MWBE subcontractors and the payments Contractor has made to such MWBE subcontractors. If the OBO Director determines that Contractor is not in compliance with this Section of this Agreement, Chapter 15 of the Code of Ordinances, OBO's policies and procedures, and the City's good faith efforts

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policy, the OBO Director may:

- 3.5.4.1 After consultation with the Director and the Chief Procurement Officer, determine whether any of the following actions should be taken and notify Contractor of such determination:
  - 3.5.4.1.1 Enter a written agreement with Contractor allowing Contractor to cure the noncompliance matter;
  - 3.5.4.1.2 Suspend Contractor from engaging in any contract with the City for a period up to, but not to exceed, five years, pursuant to Section 15-86 of the City's Code of Ordinances, as may be amended from time to time; or
  - 3.5.4.1.3 Take any other appropriate remedy.
- 3.5.4.2 Make a recommendation to the Director and the Chief Procurement Officer, to:
  - 3.5.4.2.1 Withhold payment or reimbursement under this Agreement;
  - 3.5.4.2.2 Make a finding that Contractor is in default or has breached this Agreement;
  - 3.5.4.2.3 Determine not to renew this Agreement;
  - 3.5.4.2.4 Terminate for cause this Agreement; or
  - 3.5.4.2.5 Take any other appropriate remedy.
- 3.5.5 Contractor shall maintain records showing:
  - 3.5.5.1 Subcontracts and supply agreements with Minority Business Enterprises;
  - 3.5.5.2 Subcontracts and supply agreements with Women Business Enterprises;
  - 3.5.5.3 Subcontracts and supply agreements with Small Business Enterprises (if any);
  - 3.5.5.4 Written confirmation from MWBE subcontractors and suppliers that they are participants on the contract; and
  - 3.5.5.5 Specific efforts to identify and award subcontracts and supply agreements to MWBEs. Contractor shall submit periodic reports of its efforts under this Section to the OBO Director in the form and at the times he or she prescribes.
- 3.5.6 Contractor shall ensure that all subcontracts with MWBE subcontractors and suppliers contain the following terms:

[Name of MWBE subcontractor] shall permit representatives of the City of Houston, at all reasonable times, to perform (1) audits of the books and records of the subcontractor, and (2) inspections of all places where work is to be undertaken in connection with this subcontract. Subcontractor shall keep such books and records available for such purpose for at least four years after the end of its performance under this subcontract. Nothing in this provision shall affect the time for bringing a cause of action nor the applicable statute of limitations.

Within five business days of execution of this subcontract, Contractor [prime contractor] and Subcontractor shall designate, in writing, to the City of Houston's OBO Director ("the OBO Director") an agent for receiving any notice required or permitted to be given pursuant to Chapter 15 of the Houston City Code of Ordinances, along with the street, mailing address, phone number, and email address of such agent.

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After reasonable attempt(s) to resolve disputes between the parties involving the terms, covenants, or conditions of this subcontract, a request for dispute resolution may be submitted to the OBO Director. The OBO Director may prescribe procedures to provide dispute resolution services in accordance with the requirements of Chapter 15 of the Houston City Code of Ordinances.

- 3.5.7 The requirements and terms of the City of Houston Pay or Play Program, as set out in Executive Order 1-7, as revised from time to time, are incorporated into the Contract for all purposes. Contractor has reviewed Executive Order 1-7 and shall comply with its terms and conditions. IF CONTRACTOR DOES NOT PAY IN ACCORDANCE WITH THE PAY OR PLAY PROGRAM WITHIN 30 DAYS OF THE DATE CITY ENGINEER SENDS CONTRACTOR WRITTEN NOTIFICATION, CITY CONTROLLER MAY DEDUCT FUNDS UP TO THE AMOUNT OWED FROM ANY PAYMENTS OWED TO CONTRACTOR UNDER THIS CONTRACT, AND CONTRACTOR WAIVES ANY RECOURSE.
- 3.6 **PREVAILING WAGE RATES.**
- 3.6.1 Contractor shall comply with governing statutes providing for labor classification of wage scales for each craft or type of laborer, worker, or mechanic.
- 3.6.2 Prevailing wage rates applicable to the Work may be one or a combination of the following wage rates identified in Division 00:
- 3.6.2.1 Federal Wage Rate General Decisions
    - 3.6.2.1.1 Highway Rates
    - 3.6.2.1.2 Building Rates
    - 3.6.2.1.3 Heavy Construction Rates
    - 3.6.2.1.4 Residential Rates
  - 3.6.2.2 City Prevailing Wage Rates
    - 3.6.2.2.1 Building Construction Rates
    - 3.6.2.2.2 Engineering Construction Rates
    - 3.6.2.2.3 Asbestos Worker Rates
- 3.6.3 Each week Contractor shall submit to the City's Mayor's Office of Business Opportunity certified copies of payrolls showing classifications and wages paid by Contractor, Subcontractors, and Suppliers for each employee under the Contract, for any day included in the Contract.
- 3.7 **LABOR CONDITIONS.**
- 3.7.1 In the event of labor disputes affecting Contractor or Contractor's employees, Contractor shall utilize all possible means to resolve disputes in order that the Work not be delayed to any extent. These means will include seeking injunctive relief and filing unfair labor practice charges, and any other action available to Contractor.
- 3.7.2 When Contractor has knowledge that any actual or potential labor dispute is delaying or is threatening to delay timely performance of the Work, Contractor shall immediately notify City Engineer in writing. No Claims will be accepted by City Engineer for costs incurred as a result of jurisdictional or labor disputes.
- 3.8 **DRUG DETECTION AND DETERRENCE.**
- 3.8.1 It is the policy of the City to achieve a drug-free work force and to provide a workplace that is free from the use of illegal drugs and alcohol. It is also the policy of the City that manufacture, distribution, dispensation, possession, sale, or use of illegal drugs or alcohol by contractors while on the City's premises is prohibited. By executing the

Contract, Contractor represents and certifies that it meets and will comply with all requirements and procedures set forth in the Mayor's Policy on Drug Detection and Deterrence, City Council Motion No. 92-1971 ("Mayor's Policy") and the Mayor's Drug Detection and Deterrence Procedures for Contractors, Executive Order No. 1-31, (Revised) ("Executive Order"). Mayor's Policy is on file in the office of the City Secretary. Copies of Executive Order may be obtained at the location specified in the Advertisement for Bids.

3.8.1.1 The Executive Order applies to the City's contracts for labor or services except the following:

3.8.1.1.1 contracts authorized by Emergency Purchase Orders,

3.8.1.1.2 contracts in which imposition of requirements of the Executive Order would exclude all potential bidders or proposers, or would eliminate meaningful competition for the Contract,

3.8.1.1.3 contracts with companies that have fewer than 15 employees during any 20-week period during a calendar year and no safety impact positions,

3.8.1.1.4 contracts with non-profit organizations providing services at no cost or reduced cost to the public, and

3.8.1.1.5 contracts with federal, state, or local governmental entities.

3.8.1.2 Prior to execution of the Contract, Contractor shall have filed with the City:

3.8.1.2.1 a Drug Policy Compliance Agreement form (Attachment "A" to the Executive Order), and

3.8.1.2.2 a copy of Contractor's drug free workplace policy, and

3.8.1.2.3 a written designation of all safety impact positions, if applicable, or a Contractor's Certification of a No Safety Impact Positions form (Attachment "C" to the Executive Order).

3.8.1.3 Every six months during performance of the Contract and upon completion of the Contract, Contractor shall file a Drug Policy Compliance Declaration form (Attachment "B" to the Executive Order). The Contractor shall submit the Drug Policy Compliance Declaration within 30 days of expiration of each six-month period of performance and within 30 days of completion of the Contract. The first six-month period shall begin on Date of Commencement of the Work.

3.8.1.4 Contractor shall have a continuing obligation to file updated designation of safety impact positions when additional safety impact positions are added to Contractor's employee workforce during performance of the Work.

3.8.1.5 Contractor shall require its Subcontractors and Suppliers to comply with the Mayor's Policy and Executive Order. Contractor is responsible for securing and maintaining required documents from Subcontractors and Suppliers for the City inspection throughout the term of the Contract.

3.8.1.6 Failure of Contractor to comply with requirements will be a material breach of the Contract entitling the City to terminate in accordance with Section 14.1.

### 3.9 **MATERIALS & EQUIPMENT.**

3.9.1 Unless otherwise provided in the Contract, Contractor shall provide and assume full responsibility for Products, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, transportation, temporary facilities, supplies, and other facilities and incidentals necessary for Furnishing, performing, testing, starting-up, and completing the Work.

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- 3.9.1.1 Contractor, Subcontractors, and Suppliers shall use Ultra Low Sulfur Diesel Fuel in all diesel operating vehicles and motorized equipment utilized in performing the Work. Ultra Low Sulfur Diesel Fuel is defined as diesel fuel having 15 ppm or the applicable standard set by state or federal law or rules and regulations of the Texas Commission on Environmental Quality, or the Environmental Protection Agency, whichever is less in sulfur content. Off-road Ultra Low Sulfur Diesel Fuel may be used in lieu of on-road Ultra Low Sulfur Diesel Fuel. Contractor shall provide, upon request by City Engineer, proof that Contractor, Subcontractors, and Suppliers are using Ultra Low Sulfur Diesel Fuel.
- 3.9.2 Contractor shall provide Products that are:
- 3.9.2.1 new, unless otherwise required or permitted by the Contract, and
- 3.9.2.2 of specified quality.
- If required by City Engineer, Contractor shall furnish satisfactory evidence, including reports of required tests, as to kind and quality of Products.
- 3.9.3 Contractor shall store Products in a safe, neat, compact, and protected manner. Contractor shall also store Products delivered during the work, along the right-of-way:
- 3.9.3.1 so as to cause the least inconvenience to property owners, tenants, and general public; and
- 3.9.3.2 so as not to block access to, or be closer than, three feet to any fire hydrant. Contractor shall protect trees, lawns, walks, drives, streets, and other improvements that are to remain, from damage. If private or public property is damaged by Contractor, Contractor shall, at its sole expense, restore the damaged property to at least its original condition.
- 3.9.3.3 Contractor shall obtain City Engineer's approval for storage areas used for Products for which payment has been requested under Paragraph 9.6.1. Contractor shall provide the City access to the storage areas for inspection purposes. Products, once paid for by the City, become the property of the City and may not be removed from place of storage, without City Engineer's written permission except for a movement to the site. Contractor's Installation Floater, required under Section 11.2, shall cover all perils, including loss or damage to Products during storage, loading, unloading, and transit to the site.
- 3.10 **PRODUCT OPTIONS AND SUBSTITUTIONS.**
- 3.10.1 For Products specified by reference standards or by description only, Contractor may provide any Product meeting those standards or description.
- 3.10.2 For Products specified by naming one or more manufacturers with provision for substitutions or equal, Contractor may submit a request for substitution for any manufacturer not named.
- 3.10.3 City Engineer will consider requests for substitutions only within the first 15 percent of Contract Time, or first 90 days after date of Notice to Proceed, whichever is less.
- 3.10.4 Contractor shall document each request for substitution with complete data substantiating compliance of proposed substitution with the Contract.
- 3.10.5 A request for substitution constitutes a representation that Contractor:
- 3.10.5.1 has investigated the proposed Product and determined that it meets or exceeds the quality level of the specified Product;
- 3.10.5.2 shall provide the same warranty for the substitution as for the specified Product;

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- 3.10.5.3 shall coordinate installation of the proposed substitution and make changes to other work which may be required for the Work to be completed, with no additional cost or increase in time to the City;
  - 3.10.5.4 confirms that cost data is complete and includes all related costs under the Contract;
  - 3.10.5.5 waives Claim for additional costs or time extensions that may subsequently become apparent; and
  - 3.10.5.6 shall provide review or redesign services by a design consultant with appropriate professional license and shall obtain re-approval and permits from authorities.
- 3.10.6 City Engineer will not consider and will not approve substitutions when:
- 3.10.6.1 they are indicated or implied on Shop Drawing or Product Data submittals without separate written request; or
  - 3.10.6.2 acceptance will require revision to the Contract.
- 3.10.7 City Engineer may reject requests for substitution, and his decision will be final and binding on the Parties.
- 3.11 **CASH ALLOWANCES.**
- 3.11.1 Contract Price includes Cash Allowances as identified in the Contract.
- 3.11.2 The City will pay the actual costs of Cash Allowance item exclusive of profit, overhead or administrative costs. If actual costs exceed the Cash Allowance, City Engineer must approve a Change Order for the additional costs.
- 3.12 **WARRANTY.**
- 3.12.1 Contractor warrants to the City that Products furnished under the Contract are:
- 3.12.1.1 free of defects in title;
  - 3.12.1.2 of good quality; and
  - 3.12.1.3 new, unless otherwise required or permitted by the Contract.
- If required by the City Engineer, Contractor shall furnish satisfactory evidence as to kind, quality and title of Products, and that Products conform to requirements of the Contract.
- 3.12.2 In the event of a defect in a Product, either during construction or warranty period, Contractor shall take appropriate action with manufacturer of Product to assure correction or replacement of defective Product with minimum delay.
- 3.12.3 Contractor warrants that the Work is free of defects not inherent in the quality required or permitted, and that the Work does conform with the requirements of the Contract. Contractor further warrants that the Work has been performed in a thorough and workmanlike manner.
- 3.12.4 Contractor warrants that the Work is free of concentrations on polychlorinated biphenyl (PCB) and other substances defined as hazardous by the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) or any other applicable law or regulation.
- 3.12.5 Work not conforming to requirements of Section 3.12, including substitutions not properly approved and authorized, may be considered nonconforming work.
- 3.12.6 Contractor's warranty excludes remedy for damage or defect caused by:
- 3.12.6.1 improper or insufficient maintenance by the City;
  - 3.12.6.2 normal wear and tear under normal usage; or
  - 3.12.6.3 claim that hazardous material was incorporated into the Work, if that material was specified in the Contract.

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- 3.12.7 Contractor warrants that title to all work covered by Contractor's request for payment passes to the City upon incorporation into the Work or upon Contractor's receipt of payment, whichever occurs first. The Contractor further warrants that the title is free of all liens, claims, security interests or other interests ("Encumbrances"). If not, upon written demand from City Engineer, Contractor shall immediately take legal action necessary to remove Encumbrances.
- 3.13 **TAXES.**
- 3.13.1 Contractor shall pay all sales, consumer, use, and similar taxes, which are in effect or scheduled to go into effect on or before bids are received, related to work provided by Contractor.
- 3.13.2 Contractor shall obtain, and require Subcontractors and Suppliers to obtain, necessary permits from the state and local taxing authorities to perform contractual obligations under the Contract, including sales tax permits.
- 3.13.3 The City is exempt from the Federal Transportation and Excise Tax. Contractor shall comply with federal regulations governing the exemptions.
- 3.13.4 Products incorporated into the Work are exempt from state sales tax according to provisions of the TEX. TAX CODE ANN. CH. 151, Subsection H.
- 3.14 **PERMITS, FEES, AND NOTICES.** Unless otherwise provided in the Contract, Contractor shall secure and pay for all construction permits, licenses, and inspections:
- 3.14.1 necessary for proper execution and completion of the Work; and
- 3.14.2 legally required at time bids are received.
- 3.15 **CONSTRUCTION SCHEDULES.**
- 3.15.1 On receipt of Notice to Proceed, Contractor shall promptly prepare and submit construction schedule for the Work for City Engineer's review. The schedule must reflect the minimum time required to complete the Work not to exceed Contract Time.
- 3.15.2 Contractor shall give 24-hour written notice to City Engineer before commencing work or resuming work where work has been stopped. Contractor shall also give the same notice to inspectors.
- 3.15.3 Contractor shall incorporate milestones specified in Summary of Work Specification into the construction schedule. Contractor's failure to meet a milestone, as determined by City Engineer, may be considered a material breach of the Contract.
- 3.15.4 Each month, Contractor shall submit to City Engineer a copy of an updated construction schedule indicating actual progress, incorporating applicable changes, and indicating courses of action required to assure completion of the Work within Contract Time.
- 3.15.5 Contractor shall keep a current schedule of submittals that coordinates with the construction schedule, and shall submit the initial schedule of submittals to City Engineer for approval.
- 3.16 **DOCUMENTS AND SAMPLES AT THE SITE.**
- 3.16.1 Contractor shall maintain at the site, and make available to City Engineer, one record copy of Drawings, Specifications, and Modifications. Contractor shall maintain the documents in good order and marked currently to record changes and selections made during construction. In addition, Contractor shall maintain at the site, approved Shop Drawings, Product Data, Samples, and similar submittals, which will be delivered to City Engineer prior to final inspection as required in Paragraph 9.11.4.

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- 3.16.2 Contractor shall maintain all books, documents, papers, accounting records, and other relevant documentation pursuant to the Work and shall make the books, documents, papers, and accounting records available to representatives of the City for review and audits during the Contract term and for the greater of three years following Date of Substantial Completion or until all litigation or audits are fully resolved.
- 3.16.3 Contractor shall provide to City Attorney all documents and records that City Attorney deems necessary to assist in determining Contractor's compliance with the Contract, with the exception of those documents made confidential by federal or state law or regulation.
- 3.17 **MANUFACTURER'S SPECIFICATIONS.**
- 3.17.1 Contractor shall handle, store, and Install Products and perform all work in the manner required by Product manufacturer. Should the Contract and manufacturer's instructions conflict, Contractor shall report conflict to City Engineer for resolution prior to proceeding with the affected work.
- 3.17.1 References in the Contract to the manufacturer's specifications, directions, or recommendations, mean manufacturer's current published documents in effect as of date of receipt of bids, or in the case of a Modification, as of date of Modification.
- 3.18 **SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.**
- 3.18.1 Shop Drawings, Product Data, and Samples are not part of the Contract. The purpose of Contractor submittals is to demonstrate, for those portions of the Work for which submittals are required, the way Contractor proposes to conform to information given and design concept expressed in the Contract.
- 3.18.2 Contractor shall submit to Project Manager for review the Shop Drawings, Product Data, and Samples, which are required by the Contract. Review by Project Manager is subject to limitations of Paragraph 4.1.4. Contractor shall transmit the submittals to the Project Manager with reasonable promptness and in a sequence, so as to cause no delay in the Work or in activities of the City or of separate contractors. Contractor shall transmit submittals in time to allow a minimum of 30 days for Project Manager's review prior to date Contractor needs reviewed submittals returned. This time may be shortened for a particular job requirement if approved by Project Manager in advance of submittal.
- 3.18.3 Contractor shall certify that the content of submittals conforms to the Contract without exception by affixing Contractor's approval stamp and signature. By certifying and submitting Shop Drawings, Product Data, and Samples, Contractor represents, and Contractor's stamp of approval shall state, that Contractor has determined and verified materials, quantities, field measurements, and field construction criteria related to the submittal, and has checked and coordinated information contained within the submittals with requirements of the Contract.
- 3.18.4 Contractor may not perform any work requiring submittal and review of Shop Drawings, Product Data, or Samples until the submittal has been returned with appropriate review decision by the Project Manager. Contractor shall perform work in accordance with the review.
- 3.18.5 If Contractor performs any work requiring submittals prior to review and acceptance of the submittals by Project Manager, such work is at Contractor's risk and the City is not obligated to accept work if the submittals are later found to be unacceptable.
- 3.18.6 If, in the opinion of Project Manager, the submittals are incomplete, or demonstrate an inadequate understanding of the Work or lack of review by the Contractor, then submittals may be returned to the Contractor for correction and resubmittal.



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- 3.18.7 Contractor shall direct specific attention in writing and on the resubmitted Shop Drawings, Product Data, or Samples to any additional proposed revisions, other than those revisions requested by Project Manager on previous submittals.
- 3.18.8 Contractor is not relieved of responsibility for deviations from requirements of the Contract by Project Manager's review of Shop Drawings, Product Data, or Samples unless Contractor has specifically informed Project Manager in writing of the deviation at the time of the submittal, and Project Manager has given written approval of the deviation.
- 3.18.9 When professional certification of performance criteria of Products is required by the Contract, the City may rely upon accuracy and completeness of the calculations and certifications.
- 3.18.10 For Product colors or textures to be selected by the City, Contractor shall submit all samples together to allow preparation of a complete selection schedule.
- 3.18.11 Contractor shall submit informational submittals, on which Project Manager is not expected to take responsive action, as required by the Contract.
- 3.18.12 Submittals made by Contractor which are not required by the Contract may be returned to Contractor without action.
- 3.19 *CULTURAL RESOURCES AND ENDANGERED SPECIES.*
- 3.19.1 Contractor may not remove or disturb, or cause to be removed or disturbed, any historical, archaeological, architectural, or other cultural artifacts, relics, vestiges, remains, or objects of antiquity. If Contractor discovers one of these items, Contractor shall immediately notify City Engineer and further comply with the requirements of 13 Tex. Admin. Code Chs. 25 and 26 (2002), or successor regulation. Contractor shall protect site and cultural resources from further disturbance until professional examination can be made or until clearance to proceed is authorized in writing by City Engineer.
- 3.19.2 Should either threatened or endangered plant or animal species be encountered, Contractor shall cease work immediately in the area of encounter and notify City Engineer.
- 3.20 *CUTTING AND PATCHING.*
- 3.20.1 Contractor is responsible for necessary cutting, fitting, and patching to accomplish the Work and shall suitably support, anchor, attach, match, and trim or seal materials to work of other contractors. Contractor shall coordinate the Work with work of other contractors to minimize conflicts, as provided in Article 6.
- 3.20.2 Contractor may not endanger work by cutting, digging, or other action, and may not cut or alter work of other contractors except by written consent of City Engineer and affected contractor.
- 3.21 *CLEANING.*
- 3.21.1 Contractor shall perform daily cleanup of all dirt, debris, scrap materials and other disposable items resulting from Contractor's operations, whether on-site or off-site. Unless otherwise authorized in writing by City Engineer, Contractor shall keep all streets, access streets, driveways, areas of public access, walkways, and other designated areas clean and open at all times.
- 3.21.2 Failure of Contractor to maintain a clean site, including access streets, is the basis for City Engineer to issue a Notice of Noncompliance. Should compliance not be attained

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within the time period in the Notice of Noncompliance, City Engineer may authorize necessary cleanup to be performed by others and the cost of the cleanup will be deducted from monies due Contractor.

Contractor shall legally dispose off-site, all waste materials and other excess materials resulting from Contractor's operations.

3.22 **SANITATION.** Contractor shall provide and maintain sanitary facilities at site for use of all construction forces under the Contract. Newly-constructed or existing sanitary facilities may not be used by Contractor.

3.23 **ACCESS TO WORK AND TO INFORMATION.**

3.23.1 Contractor shall provide the City, Design Consultant, testing laboratories, and governmental agencies which have jurisdictional interests, access to the Work in preparation and in progress wherever located. Contractor shall provide proper and safe conditions for the access.

3.23.2 If required by City Engineer, Contractor shall furnish information concerning character of Products and progress and manner of the Work, including information necessary to determine cost of the Work, such as number of employees, pay of employees, and time employees worked on various classes of the Work.

3.24 **TRADE SECRETS.** Contractor will not make any claim of ownership of trade secrets as to products used in the Work, or preparation of any mixture for the Work. City Engineer will at all times have the right to demand and Contractor shall furnish information concerning materials or samples of ingredients of any materials used, or proposed to be used, in preparation of concrete placed or other work to be done. Mixtures, once agreed on, shall not be changed in any manner without knowledge and consent of City Engineer. The City will make its best efforts to protect confidentiality of proprietary information.

3.25 **INDEMNIFICATION.**

3.25.1 CONTRACTOR AGREES TO AND SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") HARMLESS FOR ALL CLAIMS, CAUSES OF ACTION, LIABILITIES, FINES, AND EXPENSES (INCLUDING, WITHOUT LIMITATION, ATTORNEYS' FEES, COURT COSTS, AND ALL OTHER DEFENSE COSTS AND INTEREST) FOR INJURY, DEATH, DAMAGE, OR LOSS TO PERSONS OR PROPERTY SUSTAINED IN CONNECTION WITH OR INCIDENTAL TO PERFORMANCE UNDER THE CONTRACT INCLUDING, WITHOUT LIMITATION, THOSE CAUSED BY:

3.25.1.1 CONTRACTOR'S AND/OR ITS AGENTS', EMPLOYEES', OFFICERS', DIRECTORS', CONTRACTORS', OR SUBCONTRACTORS' (COLLECTIVELY IN NUMBERED SUBPARAGRAPHS .1 through .3, "CONTRACTOR") ACTUAL OR ALLEGED NEGLIGENCE OR INTENTIONAL ACTS OR OMISSIONS;

3.25.1.2 THE CITY'S AND CONTRACTOR'S ACTUAL OR ALLEGED CONCURRENT NEGLIGENCE, WHETHER CONTRACTOR IS IMMUNE FROM LIABILITY OR NOT;

3.25.1.3 THE CITY'S AND CONTRACTOR'S ACTUAL OR ALLEGED STRICT PRODUCTS LIABILITY OR STRICT STATUTORY LIABILITY, WHETHER CONTRACTOR IS IMMUNE FROM LIABILITY OR NOT.

CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY HARMLESS DURING THE TERM OF THE CONTRACT AND FOR FOUR YEARS AFTER THE CONTRACT TERMINATES. CONTRACTOR SHALL NOT INDEMNIFY THE CITY FOR THE CITY'S SOLE NEGLIGENCE.

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- 3.25.2 NOTWITHSTANDING ANYTHING TO THE CONTRARY, THE LIABILITY OF CONTRACTOR FOR THE CITY'S CONCURRENT NEGLIGENCE SHALL NOT EXCEED \$1,000,000.
- 3.26 **RELEASE AND INDEMNIFICATION – PATENT, COPYRIGHT, TRADEMARK, AND TRADE SECRET INFRINGEMENT.**
- 3.26.1 UNLESS OTHERWISE SPECIFICALLY REQUIRED BY THE CONTRACT, CONTRACTOR AGREES TO AND SHALL RELEASE AND DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") FROM ALL CLAIMS OR CAUSES OF ACTION BROUGHT AGAINST THE CITY BY ANY PARTY, INCLUDING CONTRACTOR, ALLEGING THAT THE CITY'S USE OF ANY EQUIPMENT, SOFTWARE, PROCESS, OR DOCUMENTS CONTRACTOR FURNISHES DURING THE TERM OF THE CONTRACT INFRINGES ON A PATENT, COPYRIGHT, OR TRADEMARK, OR MISAPPROPRIATES A TRADE SECRET. CONTRACTOR SHALL PAY ALL COSTS (INCLUDING, WITHOUT LIMITATION, ATTORNEYS' FEES, COURT COSTS, AND ALL OTHER DEFENSE COSTS, AND INTEREST) AND DAMAGES AWARDED.
- 3.26.2 CONTRACTOR SHALL NOT SETTLE ANY CLAIM ON TERMS WHICH PREVENT THE CITY FROM USING THE EQUIPMENT, SOFTWARE, PROCESS, OR PRODUCT WITHOUT THE CITY ENGINEER'S PRIOR WRITTEN CONSENT.
- 3.26.3 UNLESS OTHERWISE SPECIFICALLY REQUIRED BY THE CONTRACT, WITHIN 60 DAYS AFTER BEING NOTIFIED OF THE CLAIM, CONTRACTOR SHALL, AT ITS OWN EXPENSE, EITHER:
- 3.26.3.1 OBTAIN FOR THE CITY THE RIGHT TO CONTINUE USING THE EQUIPMENT, SOFTWARE, PROCESS, OR PRODUCT, OR
- 3.26.3.2 IF BOTH PARTIES AGREE, REPLACE OR MODIFY THEM WITH COMPATIBLE AND FUNCTIONALLY EQUIVALENT PRODUCTS.
- IF NONE OF THESE ALTERNATIVES IS REASONABLY AVAILABLE, THE CITY MAY RETURN THE EQUIPMENT, SOFTWARE, OR PRODUCT, OR DISCONTINUE THE PROCESS, AND CONTRACTOR SHALL REFUND THE PURCHASE PRICE.
- 3.27 **INDEMNIFICATION PROCEDURES.**
- 3.27.1 *Notice of Indemnification Claims:* If the City or Contractor receives notice of any claim or circumstances which could give rise to an indemnified loss, the receiving party shall give written notice to the other Party within 10 days. The notice must include the following:
- 3.27.1.1 a description of the indemnification event in reasonable detail,
- 3.27.1.2 the basis on which indemnification may be due, and
- 3.27.1.3 the anticipated amount of the indemnified loss.
- This notice does not estop or prevent the City from later asserting a different basis for indemnification or a different amount of indemnified loss than that indicated in the initial notice. If the City does not provide this notice within the 10-day period, it does not waive any right to indemnification except to the extent that Contractor is prejudiced, suffers loss, or incurs expense because of the delay.
- 3.27.2 *Defense of Indemnification Claims:*
- 3.27.2.1 *Assumption of Defense:* Contractor may assume the defense of the claim at its own expense with counsel chosen by it that is reasonably satisfactory to the City. Contractor shall then control the defense and any negotiations to settle the claim. Within 10 days after receiving written notice of the indemnification request, Contractor must advise the City as to whether or not it will defend the claim. If Contractor does not assume the defense, the City shall assume and control the defense, and all defense expenses constitute an indemnified loss.

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- 3.27.2.2 *Continued Participation:* If Contractor elects to defend the claim, the City may retain separate counsel to participate in, but not control, the defense and to participate in, but not control, any settlement negotiations. Contractor may settle the claim without the consent or agreement of the City, unless it:
- 3.27.2.2.1 would result in injunctive relief or other equitable remedies or otherwise require the City to comply with restrictions or limitations that adversely affect the City;
  - 3.27.2.2.2 would require the City to pay amounts that Contractor does not fund in full; or
  - 3.27.2.2.3 would not result in the City's full and complete release from all liability to the plaintiffs or claimants who are parties to or otherwise bound by the settlement.

**3.28 CONTRACTOR DEBT. IF CONTRACTOR, AT ANY TIME DURING THE TERM OF THIS AGREEMENT, INCURS A DEBT, AS THE WORD IS DEFINED IN SECTION 15-122 OF THE HOUSTON CITY CODE OF ORDINANCES, IT SHALL IMMEDIATELY NOTIFY CITY CONTROLLER IN WRITING. IF CITY CONTROLLER BECOMES AWARE THAT CONTRACTOR HAS INCURRED A DEBT, IT SHALL IMMEDIATELY NOTIFY CONTRACTOR IN WRITING. IF CONTRACTOR DOES NOT PAY THE DEBT WITHIN 30 DAYS OF EITHER SUCH NOTIFICATION, CITY CONTROLLER MAY DEDUCT FUNDS IN AN AMOUNT EQUAL TO THE DEBT FROM ANY PAYMENTS OWED TO CONTRACTOR UNDER THIS AGREEMENT, AND CONTRACTOR WAIVES ANY RECOURSE THEREFOR. CONTRACTOR SHALL FILE A NEW AFFIDAVIT OF OWNERSHIP, USING THE FORM DESIGNATED BY CITY, BETWEEN FEBRUARY 1 AND MARCH 1 OF EVERY YEAR DURING THE TERM OF THE CONTRACT.**

**3.29 PRESERVATION OF CONTRACTING INFORMATION.**

3.29.1 The requirements of Subchapter J, Chapter 552, Texas Government Code, may apply to this Agreement and the Contractor agrees that this Agreement can be terminated if the Contractor knowingly or intentionally fails to comply with a requirement of that subchapter. If the requirements of Subchapter J, Chapter 552, Texas Government Code, apply to this Agreement, then for the duration of this Agreement (including the initial term, any renewal terms, and any extensions), Contractor shall preserve all Contracting Information, as defined by Section 552.003 of the Texas Government Code, related to this Agreement as provided by the records retention requirements applicable to the City pursuant to federal or state law or regulation, city ordinance or city policy, which record retention requirements include but are not limited to those set forth in Chapters 201 and 205 of the Texas Local Government Code and Texas Administrative Code Title 13, Chapter 7. Within five business days after receiving a request from the Director, Contractor shall provide any Contracting Information related to this Agreement that is in the custody or possession of Contractor. Upon the expiration or termination of this Agreement, Contractor shall, at the Director's election, either (a) provide, at no cost to the City, all Contracting Information related to this Agreement that is in the custody or possession of Contractor, or (b) preserve the Contracting Information related to this Agreement as provided by the records retention requirements applicable to the City pursuant to federal or state law or regulation, city ordinance or city policy.

3.29.2 If Contractor fails to comply with any one or more of the requirements of this Section, *PRESERVATION OF CONTRACTING INFORMATION*, or Subchapter J, Chapter 552, Texas Government Code, then, in accordance with and pursuant to the processes and procedures set forth in Sections 552.373 and 552.374 of the Texas Government Code, the Director shall provide notice to the Contractor and may terminate this Agreement. To effect final termination, the Director must notify Contractor in writing with a copy of the notice to the CPO. After receiving the notice, Contractor shall, unless the notice directs

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otherwise, immediately discontinue all services under this Agreement, and promptly cancel all orders or subcontracts chargeable to this Agreement.

#### **ARTICLE 4**

##### **ADMINISTRATION OF THE CONTRACT**

#### 4.1 **CONTRACT ADMINISTRATION.**

4.1.1 City Engineer will provide administration of the Contract and City Engineer is authorized to issue Change Orders, Work Change Directives, and Minor Changes in the Work.

4.1.2 City Engineer may act through Project Manager, Design Consultant, or Inspector. When the term "City Engineer" is used in the Contract, action by City Engineer is required unless City Engineer delegates his authority in writing. The City Engineer may not delegate authority to render decisions under Section 4.4.

The City does not have control over or charge of, and is not responsible for, supervision, construction, and safety procedures enumerated in Section 3.3. The City does not have control over or charge of and is not responsible for acts or omissions of Contractor, Subcontractors, or Suppliers.

4.1.3 The City and Design Consultant may attend project meetings and visit the site to observe progress and quality of the Work. The City and Design Consultant are not required to make exhaustive or continuous on-site inspections to check quality or quantity of the Work.

4.1.4 Project Manager will review and approve or take other appropriate action on Contractor's submittals, but only for limited purpose of checking for conformance with information given and design concept expressed in the Contract.

4.1.5 Project Manager's review of the submittals is not conducted for purpose of determining accuracy and completeness of other details, such as dimensions and quantities, or for substantiating instructions for installation or performance of Products, all of which remain the responsibility of Contractor.

4.1.6 Project Manager's review of submittals does not relieve Contractor of its obligations under Sections 3.3, 3.12, and 3.18. Review does not constitute approval of safety precautions or, unless otherwise specifically stated by Project Manager in writing, of construction means, methods, techniques, sequences, or procedures. Project Manager's review of a specific item does not indicate approval of an assembly of which the item is a component.

4.1.7 Based on field observations and evaluations, Project Manager will process Contractor's progress payments, certify amounts due Contractor, and issue Certificates for Payment in the amount certified.

4.1.8 Project Manager will receive and forward to City Engineer for his review and records, written warranties and related documents required by the Contract and assembled by Contractor.

4.1.9 Upon written request by Contractor or Project Manager, City Engineer will resolve matters of interpretation of or performance of the Contract, which are not Claims. City Engineer's decisions are final and binding on the Parties.

4.1.10 City Engineer may reject work which does not conform to the Contract.

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- 4.1.11 When City Engineer considers it necessary to implement the intent of the Contract, City Engineer may require additional inspection or testing of work in accordance with Paragraphs 13.6.3 and 13.6.4, whether such work is fabricated, Installed, or completed.
- 4.2 **COMMUNICATIONS IN ADMINISTRATION OF THE CONTRACT.** Except as otherwise provided in the Contract or when authorized by City Engineer in writing, Contractor shall communicate with Project Manager. Contractor shall communicate with Design Consultant, Design Consultant's subconsultants, and separate contractors through Project Manager. The City will communicate with Subcontractors and Suppliers through Contractor.
- 4.3 **CLAIMS AND DISPUTES.**
- 4.3.1 **Documentation by Project Manager:** Contractor shall submit Claims, including those alleging an error or omission by Project Manager or Design Consultant, to Project Manager for documentation and recommendation to City Engineer.
- 4.3.2 **Decision of City Engineer:** Upon submission of Claim by Project Manager or Contractor, City Engineer will resolve Claims in accordance with Section 4.4.
- 4.3.3 **Time Limits on Claims:** Claims by Contractor must be made within 90 days after occurrence of event giving rise to the Claim.
- 4.3.4 **Continuing the Contract Performance:** Pending final resolution of a Claim including referral to non-binding mediation, unless otherwise agreed in writing, Contractor shall proceed diligently with the performance of the Contract and the City will continue to make payments in accordance with the Contract.
- 4.3.4.1 Pending final resolution of a Claim including referral to non-binding mediation, Contractor is responsible for safety and protection of physical properties and conditions at site.
- 4.3.5 **Claims for Concealed or Unknown Conditions:** Concealed or unknown physical conditions include utility lines, other man-made structures, storage facilities, Pollutants and Pollutant Facilities, and the like, but do not include conditions arising from Contractor operations, or failure of Contractor to properly protect and safeguard subsurface facilities. Concealed conditions also include naturally-occurring soil conditions outside the range of soil conditions identified through geotechnical investigations, but do not include conditions arising from groundwater, rain, or flood.
- 4.3.5.1 If conditions are encountered at the site which are Underground Facilities or otherwise concealed or unknown conditions which differ materially from:
- 4.3.5.1.1 those indicated by the Contract; or
- 4.3.5.1.2 conditions which Contractor could have discovered through site inspection, geotechnical testing, or otherwise;
- then Contractor will give written notice to City Engineer no later than five days after Contractor's first observation of the condition and before condition is disturbed. Contractor's failure to provide notice constitutes a waiver of a Claim.
- 4.3.5.2 City Engineer will promptly investigate concealed or unknown conditions. If City Engineer determines that conditions at the site are not materially different and that no change in Contract Price or Contract Time is justified, City Engineer will notify Contractor in writing, stating reasons. If City Engineer determines the conditions differ materially and cause increase or decrease in Contractor's cost or time required for performance of part of the Work, City Engineer will recommend an adjustment in Contract Price or Contract Time, or both, as provided in Article 7. Opposition by a Party to the City Engineer's determination

must be made within 21 days after City Engineer has given notice of the decision. If the Parties cannot agree on adjustment to Contract Price or Contract Time, adjustment is subject to further proceedings pursuant to Section 4.4.

- 4.3.6 *Claims for Additional Cost:* If Contractor wishes to make a Claim for increase in Contract Price, Contractor shall give written notice before proceeding with work for which Contractor intends to submit a Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.
- 4.3.6.1 Contractor may file a Claim in accordance with Section 4.4 if Contractor believes it has incurred additional costs, for the following reasons:
- 4.3.6.1.1 written interpretation of City Engineer;
  - 4.3.6.1.2 order by City Engineer to stop the Work when Contractor is not at fault;
  - 4.3.6.1.3 suspension of the Work by City Engineer;
  - 4.3.6.1.4 termination of the Contract by City Engineer; or
  - 4.3.6.1.5 The City's non-compliance with another provision of the Contract.
- 4.3.6.2 No increase in Contract Price is allowed for delays or hindrances to the Work, except for direct and unavoidable extra costs to Contractor caused by failure of the City to provide information and services, or to make land and materials available, when required of the City under the Contract. Any increase claimed is subject to the provisions of Section 4.4 and Article 7.
- 4.3.6.3 The City is not liable for Claims for delay when Date of Substantial Completion occurs prior to expiration of Contract Time.
- 4.3.7 *Claims for Additional Time:* If Contractor wishes to make a Claim for an increase in Contract Time, Contractor shall give written notice as provided in Section 8.2. In case of continuing delay, only one Claim is necessary.

#### 4.4 **RESOLUTION OF CLAIMS AND DISPUTES.**

- 4.4.1 City Engineer will review Claims and take one or more of the following preliminary actions within 30 days of receipt of Claim:
- 4.4.1.1 submit a suggested time to meet and discuss the Claim with City Engineer;
  - 4.4.1.2 reject Claim, in whole or in part, stating reasons for rejection;
  - 4.4.1.3 recommend approval of the Claim by the other Party;
  - 4.4.1.4 suggest a compromise; or
  - 4.4.1.5 take other actions as City Engineer deems appropriate to resolve the Claim.
- 4.4.2 City Engineer may request additional supporting data from claimant. Party making Claim shall, within 10 days after receipt of City Engineer's request, submit additional supporting data requested by City Engineer.
- 4.4.3 At any time prior to rendering a written decision regarding a Claim, City Engineer may refer Claim to non-binding mediation. If Claim is resolved, City Engineer will prepare and obtain all appropriate documentation. If Claim is not resolved, City Engineer will take receipt of Claim and begin a new review under Section 4.4.
- 4.4.4 If Claim is not referred to or settled in non-binding mediation, City Engineer may conduct a hearing and will render a written decision, including findings of fact, within 75 days of receipt of Claim, or a time mutually agreed upon by the Parties in writing. City Engineer may notify Surety and request Surety's assistance in resolving Claim. City Engineer's decision is final and binding on the Parties.

- 4.5 *CONDITION PRECEDENT TO SUIT; WAIVER OF ATTORNEY FEES AND INTEREST.*
- 4.5.1 A final decision by the City Engineer is a condition precedent to file suit in any jurisdiction for a claim made in connection with this Contract.
- 4.5.2 Neither the City nor Contractor may recover attorney fees for any claim brought in connection with this Contract.
- 4.5.3 Neither the City nor the Contractor may recover interest for any damages claim brought in connection with this Contract except as allowed by TEXAS LOCAL GOVERNMENT CODE Chapter 2251.
- 4.6 *INTERIM PAYMENT WAIVER & RELEASE.*
- 4.6.1 In accordance with section 4.3, the Contractor shall use due diligence in the discovery and submission of any Claim against the City related to the Contractor's work.
- 4.6.2 The Contractor shall submit any Claim to the City not later than the 90th day after the occurrence of the event giving rise to the Claim.
- 4.6.3 Any failure to timely comply with the requirements of section 4.6.2 waives and releases any Claim when the Contractor submits an application for payment after the 90th day.
- 4.6.4 This waiver does not cover any retainage. In case of any conflict of law, this language shall be revised to the minimum extent necessary to avoid legal conflict. This waiver is made specifically for the benefit of the City.

## **ARTICLE 5**

### **SUBCONTRACTORS AND SUPPLIERS**

- 5.1 *AWARD OF SUBCONTRACTS OTHER CONTRACTS FOR PORTIONS OF THE WORK.*
- 5.1.1 Contractor may not contract with a Subcontractor, Supplier, person, or entity that City Engineer has made a reasonable and timely objection to.
- 5.1.2 If City Engineer has a reasonable objection to person or entity proposed by Contractor, Contractor shall propose another with whom City Engineer has no reasonable objection.
- 5.1.3 Contractor shall execute contracts with approved Subcontractors, Suppliers, persons, or entities before the Subcontractors or Suppliers begin work under the Contract. All such contracts must be executed and sent to the OBO Director and Contracting Department within 30 days after the date of the Notice to Proceed and must include provisions set forth in Articles 3 and 5 of this Document.
- 5.1.4 Contractor shall notify City Engineer in writing of any proposed change of Subcontractor, Supplier, person, or entity previously accepted by the City.
- 5.1.5 Contractor shall make timely payments to Subcontractors and Suppliers for performance of the Contract. Contractor shall protect, defend, and indemnify the City from any claim or liability arising out of Contractor's failure to make the payments. Disputes relating to payment of Business Enterprise Subcontractors or Suppliers will be submitted to arbitration in same manner as other disputes under Business Enterprise subcontracts. Failure of Contractor to comply with decisions of arbitrator may be determined by City Engineer a material breach leading to termination of the Contract.
- 5.2 *CONTRACTOR RESPONSIBILITY FOR SUBCONTRACTORS.*



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- 5.2.1 Contractor is responsible to the City, as may be required by laws and regulations, for all acts and omissions of Subcontractors, Suppliers, and other persons and organizations performing or furnishing any of the Work under direct or indirect contract with Contractor.
  - 5.2.2 Contractor shall make available to each proposed Subcontractor, prior to execution of subcontract, copies of the Contract to which Subcontractor is bound by this Section 5.2. Contractor shall notify Subcontractor of any terms of proposed subcontract which may be at variance with the Contract.
  - 5.2.3 The City's approval of Subcontractor or Suppliers does not relieve Contractor of its obligation to perform, or to have performed to the full satisfaction of the City, the Work required by the Contract.
  - 5.2.4 Unless there is a contractual relationship between Contractor and a Subcontractor or Supplier to the contrary, Contractor shall withhold no more retainage from Subcontractors or Suppliers than City withholds from Contractor under this Agreement. However, once a Subcontractor or Supplier completes performance, Contractor shall release all retainage to that Subcontractor or Supplier regardless if City continues to retain under this Agreement.
  - 5.2.5 Prior to a Subcontractor or Supplier commencing performance for Contractor, Contractor shall meet with that Subcontractor or Supplier to provide instructions on invoicing procedures, dispute resolution procedures, and statutory rights, such as claim filing procedures under the McGregor Act. Subcontractors and Suppliers must certify to the City Engineer that Contractor has fulfilled the requirements of this Section.

## **ARTICLE 6**

### **CONSTRUCTION BY THE CITY OR BY SEPARATE CONTRACTORS**

- 6.1 *THE CITY'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS.*  
The City may perform on-site construction operations related to the Work and as part of the Project with the City's workforce or with separate contractors.
- 6.2 *COORDINATION.*
  - 6.2.1 The City will coordinate activities of the City's workforce and of each separate contractor with work of Contractor, and Contractor shall cooperate with the City and separate contractors.
    - 6.2.1.1 Contractor shall participate with other separate contractors and the City in reviewing their construction schedules when directed to do so by the Project Manager. Contractor shall make revisions to construction schedule and Contract Price deemed necessary after joint review and mutual agreement. Construction schedules shall then constitute schedules to be used by Contractor, separate contractors, and the City, until subsequently revised.
  - 6.2.2 Contractor shall afford to the City and to separate contractors reasonable opportunity for introduction and storage of their materials and equipment, and for performance of their activities.
  - 6.2.3 If part of Contractor's work depends on proper execution of construction or operations by the City or a separate contractor, Contractor shall, prior to proceeding with that portion of the Work, inspect the other work and promptly report to City Engineer apparent discrepancies or defects in the other construction that would render it unsuitable for the proper execution of the Work. Failure of Contractor to report apparent discrepancies or defects in the other construction shall constitute acknowledgment that the City's or

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separate contractor's completed or partially completed construction is fit and proper to receive Contractor's work, except as to discrepancies or defects not then reasonably discoverable.

6.3 **MUTUAL RESPONSIBILITY.**

6.3.1 The responsible party bears the costs caused by delays, by improperly timed activities, or by nonconforming construction.

6.3.2 Contractor shall promptly remedy damage caused by Contractor to completed or partially completed construction or to property of the City or separate contractor.

6.3.3 Claims or disputes between Contractor and other City contractors, or subcontractors of other City contractors, working on the Project must be submitted to binding arbitration in accordance with Construction Industry Arbitration Rules of the American Arbitration Association upon demand by any party to the dispute or by the City.

6.4 **THE CITY'S RIGHT TO CLEAN UP.** If dispute arises among Contractor, separate contractors, and the City as to responsibility under their respective contracts for maintaining premises and surrounding area free from waste materials and rubbish as described in Section 3.21, the City may clean up and allocate cost among those responsible, as determined by City Engineer.

**ARTICLE 7**

**CHANGES IN THE WORK**

7.1 **CHANGES.**

7.1.1 Changes in scope of the Work, subject to limitations in Article 7 and elsewhere in the Contract, may be accomplished without invalidating the Contract, or without notifying Surety by:

- 7.1.1.1 Change Order;
- 7.1.1.2 Work Change Directive; or
- 7.1.1.3 Minor Change in the Work.

7.1.2 The following types of Change Orders require City Council approval:

- 7.1.2.1 a single Change Order that exceeds five percent of Original Contract Price,
- 7.1.2.2 a Change Order which, when added to previous Change Orders, exceeds five percent of Original Contract Price,
- 7.1.2.3 a Change Order, in which the total value of increases outside of the general scope of work approved by City Council, when added to increases outside the general scope of work approved by City Council in previous Change Orders, exceeds 40 percent of the Original Contract Price, even if the net increase to the Original Contract Price is five percent or less.

In this context, "increase" means an increase in quantity resulting from the addition of locations not within the scope of work approved by City Council, or the addition of types of goods or services not bid as unit price items.

Nothing in this Section is intended to permit an increase of the Contract Price in excess of the limit set out in TEX. LOC. GOV'T CODE ANN. §252.048 or its successor statute.

7.1.3 Contractor shall proceed promptly to execute changes in the Work provided in Modifications, unless otherwise stated in the Modification.

7.2 **WORK CHANGE DIRECTIVES.**

- 7.2.1 A Work Change Directive cannot change Contract Price or Contract Time, but is evidence that the Parties agree that a change, ordered by directive, will be incorporated in a subsequently issued Change Order as to its effect, if any, on Contract Price or Contract Time.
- 7.2.2 Failure by Contractor to commence work identified in a Work Change Directive within the time specified by City Engineer, or to complete the work in a reasonable period of time, may be determined by City Engineer to be a material breach of Contract.
- 7.2.3 A Work Change Directive is used in the absence of total agreement of the terms of a Change Order. Interim payments are made in accordance with Paragraph 9.6.1.
- 7.2.4 If Contractor signs a Work Change Directive, then Contractor agrees to its terms including adjustment in Contract Price and Contract Time or method for determining them. Agreement by the Parties to adjustments in Contract Price and Contract Time are immediately recorded as a Change Order.
- 7.2.5 City Engineer, by Work Change Directive, may direct Contractor to take measures as necessary to expedite construction to achieve Date of Substantial Completion on or before expiration of Contract Time. When the Work is expedited solely for convenience of the City and not due to Contractor's failure to prosecute timely completion of the Work, then Contractor is entitled to an adjustment in Contract Price equal to actual costs determined in accordance with Article 7.

7.3 *ADJUSTMENTS IN CONTRACT PRICE.*

- 7.3.1 Adjustments in Contract Price are accomplished by Change Order and are based on one of the following methods:
  - 7.3.1.1 mutual acceptance of fixed price, properly itemized and supported by sufficient data to permit evaluation;
  - 7.3.1.2 unit prices stated in the Contract or subsequently agreed upon;
  - 7.3.1.3 cost to be determined in a manner agreed upon by the Parties and mutually acceptable fixed or percentage fee; or
  - 7.3.1.4 as provided in Paragraph 7.3.2.
- 7.3.2 If Contractor does not agree with a change in Contract Price or Contract Time or the method for adjusting them specified in the Work Change Directive within 21 days from date of the Work Change Directive's issuance, method and adjustment are determined by City Engineer. If Project Manager or Contractor disagree with City Engineer's determination they then may file a Claim in accordance with Section 4.4.

	<u>Overhead</u>	<u>Profit</u>
to Contractor for change in the Work performed by Subcontractors:	10 percent	0 percent
to first tier Subcontractors for change in the Work performed by its Subcontractors:	10 percent	0 percent
to Contractor and Subcontractor for change in the Work performed by their respective firms:	10 percent	5 percent

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- 7.3.2.1 If City Engineer determines a method and adjustment in Contract Price under Paragraph 7.3.2, Contractor shall provide, in a form as City Engineer may prescribe, appropriate supporting data for items submitted under Paragraph 7.3.2. Failure to submit the data within 21 days of request for the data by City Engineer shall constitute waiver of a Claim.
  - 7.3.2.2 Unless otherwise provided in the Contract, costs for the purposes of this Paragraph 7.3.2 are limited to the following:
    - 7.3.2.2.1 costs of labor, including labor burden as stated below for social security, unemployment insurance, customary and usual fringe benefits required by agreement or custom, and Workers' Compensation insurance;
      - 7.3.2.2.1.1 the maximum labor burden applied to costs of labor for changes in the Work is 55 percent;
    - 7.3.2.2.2 costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
    - 7.3.2.2.3 rental costs of machinery and equipment, exclusive of hand tools, whether rented from Contractor or others, with prior approval of City Engineer;
    - 7.3.2.2.4 costs of premiums for Bonds and insurance and permit fees related to the change in the Work;
    - 7.3.2.2.5 additional costs of direct supervision of work and field office personnel directly attributable to the change; and
    - 7.3.2.2.6 allowances for overhead and profit as stated below.
      - 7.3.2.2.6.1 the maximum allowances for overhead and profit on increases due to Change Orders:
        - 7.3.2.2.6.2 for changes in the Work performed by Contractor and Subcontractors, allowance for overhead and profit are applied to an amount equal to cost of all additions less cost of all deletions to the Work. Allowance for overhead to Contractor and first tier Subcontractors on changes performed by Subcontractors are applied to an amount equal to the sum of all increases to the Work by applicable Subcontractors.
  - 7.3.3 If the City deletes or makes a change, which results in a net decrease in Contract Price, the City is entitled to a credit calculated in accordance with Paragraphs 7.3.1 and 7.3.2 and Subparagraphs 7.3.2.1, and 7.3.2.2.1 through 7.3.2.2.5. When both additions and credits covering related work or substitutions are involved in a change, allowance for overhead and profit is figured on the basis of a net increase, if any, with respect to that change in accordance with Subparagraph 7.3.2.2.6.
  - 7.3.4 When Contractor agrees with the determination made by City Engineer concerning adjustments in Contract Price and Contract Time, or the Parties otherwise reach agreement upon the adjustments, the agreement will be immediately recorded by Change Order.
- 7.4 **MINOR CHANGES IN THE WORK.** A Minor Change in Work is binding on the Parties. Contractor shall acknowledge, in a written form acceptable to City Engineer, that there is no change in Contract Time or Contract Price and shall carry out the written orders promptly.

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**ARTICLE 8**

**TIME**

**8.1**     ***PROGRESS AND COMPLETION.***

8.1.1     Time is of the essence in the Contract. By executing the Contract, Contractor agrees that Contract Time is a reasonable period for performing the Work.

8.1.2     *Computation of Time:* In computing any period of time prescribed or allowed by the General Conditions, the day of the act, event, or default after which designated period of time begins to run is not to be included. Last day of the period so computed is to be included, unless it is a Sunday or Legal Holiday, in which event the period runs until end of next day which is not a Sunday or Legal Holiday. Sundays and Legal Holidays are considered to be days and are to be included in all other time computations relative to Contract Time.

8.1.3     Contractor may not commence the Work prior to the effective date of insurance and Bonds required by Article 11.

8.1.4     Contractor shall proceed expeditiously and without interruption, with adequate forces, and shall achieve Date of Substantial Completion within Contract Time.

8.1.5     Should progress of the Work fall behind construction schedule, except for reasons stated in Paragraph 8.2.1, Contractor shall promptly submit at the request of Project Manager, updated construction schedule to City Engineer for approval. Contractor's failure to submit updated schedule may, at City Engineer's discretion, constitute a material breach of the Contract. Contractor shall take action necessary to restore progress by working the hours, including night shifts and lawful overtime operations as necessary, to achieve Date of Substantial Completion within Contract Time.

8.1.6     Except in connection with safety or protection of persons or the Work or property at the site or adjacent to the site, and except as otherwise indicated in the Contract, all the Work at the site will be performed Monday through Saturday between the hours of 7:00 a.m. and 7:00 p.m. Contractor may not perform work between 7:00 p.m. and 7:00 a.m., on a Sunday, or on a Legal Holiday, without giving City Engineer 24-hour prior written notice and receiving written consent of City Engineer.

**8.2**     ***DELAYS AND EXTENSIONS OF TIME.***

8.2.1     Contractor may request extension of Contract Time for a delay in performance of work that arises from causes beyond control and without fault or negligence of Contractor. Examples of these causes are:

- 8.2.1.1     acts of God or of the public enemy;
- 8.2.1.2     acts of government in its sovereign capacity;
- 8.2.1.3     fires;
- 8.2.1.4     floods;
- 8.2.1.5     epidemics;
- 8.2.1.6     quarantine restrictions;
- 8.2.1.7     strikes;
- 8.2.1.8     freight embargoes;
- 8.2.1.9     unusually severe weather; and
- 8.2.1.10    discovery of Pollutants or Pollutant Facilities at the site.

8.2.2     For any reason other than those listed in Section 4.3.6.2, if the Contractor's work is delayed in any manner or respect, the Contractor shall have no claim for damages and shall have no right of additional compensation from the City by reason of any delay or

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- increased expense to the Contractor's work, except for an extension of time as provided in this provision.
- 8.2.3 Contractor may request an extension of Contract Time for delay only if:
- 8.2.3.1 delay is caused by failure of Subcontractor or Supplier to perform or make progress; and
  - 8.2.3.2 cause of failure is beyond control of both Contractor and Subcontractor or Supplier.
- 8.2.4 Claims relating to Contract Time must be made in accordance with Paragraph 4.3.7.
- 8.2.5 Claims for extending or shortening Contract Time are based on written notice promptly delivered by the Party making Claim to other Party. Claim must accurately describe occurrence generating Claim, and a statement of probable effect on progress of the Work.
- 8.2.6 Claims for extension of Contract Time are considered only when a Claim is filed within the time limits stated in Paragraph 4.3.3.
- 8.2.6.1 Notwithstanding paragraph 4.3.3, an extension of time for delays under this paragraph may be granted only upon written application by the Contractor within 48 hours from the claimed delay.
- 8.2.7 Written notice of Claim must be accompanied by claimant's written statement that adjustment claimed is entire adjustment to which claimant is entitled as a result of the occurrence of the event. When the Parties cannot agree, Claims for adjustment in Contract Time are determined by City Engineer in accordance with Section 4.4.
- 8.2.8 Adjustments to Contract Time are accomplished by Change Order.

## **ARTICLE 9**

### **PAYMENTS AND COMPLETION**

- 9.1 ***UNIT PRICE WORK.***
- 9.1.1 Where the Contract provides that all or part of the Work is based on Unit Prices, the Original Contract Price includes, for all Unit Price work, an amount equal to the sum of Unit Prices times Unit Price Quantities for each separately identified item of Unit Price work.
  - 9.1.2 Each Unit Price includes an amount to cover Contractor's overhead and profit for each separately identified item.
  - 9.1.3 The Contractor may not make a Claim against the City for excess or deficiency in Unit Price Quantities provided in the Contract, except as provided in Subparagraph 9.1.4. Payment at the prices stated in the Contract is in full for the completed work. Contractor is not entitled to additional payment for materials, supplies, labor, tools, machinery and all other expenditures incidental to satisfactory completion of the Work.
  - 9.1.4 City Engineer may increase or decrease quantities of the Work within limitations stated in Paragraph 7.1.2. Contractor is entitled to payment for actual quantities of items provided at Unit Prices set forth in the Contract.
  - 9.1.5 Where the final quantity of work performed by Contractor on Major Unit Price Work item differs by more than 25 percent from quantity of the item stated in the Contract, a Party may request an adjustment in Unit Price, for the portion that differs by more than 25 percent, by a Change Order under Section 7.3.

9.2 *ESTIMATES FOR PAYMENT, UNIT PRICE WORK.*

9.2.1 Following the day of each month indicated in the Contract, Project Manager will prepare a Certificate for Payment for the preceding monthly period based on estimated units of work completed. Prior to preparing Certificate of Payment, Contractor shall have submitted to City Engineer, on a form approved by the Director of the Office of Business Opportunity, evidence satisfactory to the City Engineer of payments made to Subcontractors and Suppliers for the month preceding the month for which the Certificate for Payment is prepared, including evidence of electronic submission of certified payrolls.

9.2.2 Before final completion, City Engineer will review and confirm with Contractor the actual final installed Unit Price quantities. City Engineer's determination of actual final installed Unit Price quantities will be included in the final Certificate for Payment and any previous underpayments and overpayments will be reconciled with the actual final Unit Price quantities. Contractor shall file written notice of intent to appeal, if any, City Engineer's determination within 10 days of receipt of final Certificate for Payment. Upon expiration of the 10-day period, City Engineer's decision is final and binding on the Parties. If Contractor submits notice within the 10-day period, Contractor shall submit a Claim in accordance with Section 4.4.

9.3 *STIPULATED PRICE WORK.* For work contracted on a Stipulated Price basis, 10 days before submittal of first Application for Payment, Contractor shall submit to City Engineer a Schedule of Values allocated to various portions of the Work, prepared in the form and supported by the data as City Engineer may require to substantiate its accuracy. This schedule, as approved by City Engineer, is used as a basis for approval of Contractor's Applications for Payment.

9.4 *APPLICATIONS FOR PAYMENT, STIPULATED PRICE WORK.*

9.4.1 For work contracted on a Stipulated Price basis, Contractor shall submit Applications for Payment to City Engineer each month on a form acceptable to City Engineer in accordance with Schedule of Values. Application must indicate percentages of completion of each portion of the Work listed in Schedule of Values as of the end of the period covered by the Application for Payment.

9.4.2 Applications for Payment must be supported by substantiating data as City Engineer may require and must reflect retainages as provided below. Evidence satisfactory to the City Engineer of payments made to Subcontractors and Suppliers for the month preceding the month for which the Application for Payment is submitted must accompany each Application for Payment on a form approved by the Director of the Office of Business Opportunity. Evidence of electronic submission of certified payrolls must be included. Application must be sworn and notarized.

9.5 *CERTIFICATES FOR PAYMENT.*

9.5.1 City Engineer will, within 10 days after the date specified in the Contract for Unit Price work, or upon receipt of Contractor's Application for Payment for Stipulated Price work, issue a Certificate for Payment for work based on amount which City Engineer determines is properly due, with copy to Contractor.

9.5.2 Unless otherwise provided in the Contract, payment for completed work and for properly stored Products is conditioned upon compliance with procedures satisfactory to City Engineer to protect the City's interests. Procedures will include applicable insurance, storage, and transportation to site for materials and equipment stored off-site. Contractor is responsible for maintaining materials and equipment until Date of Substantial Completion.

9.5.3 Contractor shall document its use of Ultra Low Sulfur Diesel Fuel by providing invoices and receipts evidencing Contractor's use.

9.6 *COMPUTATIONS OF CERTIFICATES FOR PAYMENT.*

9.6.1 Subject to the provisions of the Contract, the amount of each Certificate for Payment is calculated as follows:

- 9.6.1.1 that portion of Contract Price allocated to completed work as determined by:
  - 9.6.1.1.1 multiplying the percentage of completion of each portion of the Work listed in the Schedule of Values by the value of that portion of the Work, or
  - 9.6.1.1.2 multiplying Unit Price quantities Installed times the Unit Prices listed in the Contract;
- 9.6.1.2 plus progress payments for completed work that has been properly authorized by Modifications;
- 9.6.1.3 less retainage of five percent;
- 9.6.1.4 plus actual costs, properly substantiated by certified copies of invoices and freight bills, of non-perishable materials and equipment delivered and properly stored, if approved in advance by Project Manager, less 15 percent;
- 9.6.1.5 less any previous payments by the City.

9.7 *DECISIONS TO WITHHOLD CERTIFICATION.*

9.7.1 City Engineer may decline to certify payment and may withhold payment in whole or in part to the extent reasonably necessary to protect the City if, in City Engineer's opinion, there is reason to believe that:

- 9.7.1.1 nonconforming work has not been remedied;
- 9.7.1.2 the Work cannot be completed for unpaid balance of Contract Price;
- 9.7.1.3 there is damage to the City or another contractor;
- 9.7.1.4 the Work will not be completed within Contract Time and that unpaid balance will not be adequate to cover actual and liquidated damages;
- 9.7.1.5 probable evidence that third party claims will be filed in court, in arbitration, or otherwise;
- 9.7.1.6 Contractor has failed to make payments to Subcontractors or Suppliers for labor, material, or equipment; or
- 9.7.1.7 Contractor has persistently failed to carry out work in accordance with the Contract.
- 9.7.1.8 Contractor has not paid Subcontractors or Suppliers because of a payment dispute; or
- 9.7.1.9 Contractor has failed to provide satisfactory evidence described in Paragraphs 9.2.1, 9.4.2, and 9.8.2.

9.7.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

9.7.3 City Engineer may decline to certify payment and may withhold request for payment in whole or in part upon failure of Contractor to submit initial construction schedule or monthly schedule updates, as required in Paragraphs 3.15.1 and 3.15.3.

9.8 *PROGRESS PAYMENTS.*

9.8.1 The City will make payment, in an amount certified by City Engineer, within 20 days after City Engineer has issued a Certificate for Payment.

9.8.2 The City has no obligation to pay or to facilitate the payment to a Subcontractor or Supplier, except as may otherwise be required by law. Contractor shall comply with the prompt payment requirements of Chapter 2251 of the Government Code. State law requires payment of Subcontractors and Suppliers by Contractor within 7 calendar days of Contractor's receipt of payment from the City, unless there is a payment dispute between Contractor and a Subcontractor or Supplier evidenced on a form approved by



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the Director of Mayor's Office of Business Opportunity and submitted to the City Engineer each month with Application for Payment or Estimate for Payment. **CONTRACTOR SHALL DEFEND AND INDEMNIFY THE CITY FROM ANY CLAIMS OR LIABILITY ARISING OUT OF CONTRACTOR'S FAILURE TO MAKE THESE PAYMENTS.**

9.8.2.1 The City may, upon request and at the discretion of City Engineer, furnish to Subcontractor information regarding percentages of completion or the amounts applied for by Contractor, and action taken thereon by the City because of work done by the Subcontractor.

9.8.2.2 Contractor shall prepare and submit to City Engineer a Certification of Payment to Subcontractors and Suppliers form to be attached to each monthly Estimate for Payment or Application for Payment.

9.8.3 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Work by the City, does not constitute acceptance of work which is not in accordance with the Contract.

9.9 **DATE OF SUBSTANTIAL COMPLETION.**

9.9.1 When Contractor considers the Work, or a portion thereof designated by City Engineer, to be substantially complete, Contractor shall prepare and submit to Project Manager a comprehensive punch list of items to be completed or corrected. Failure to include an item on the punch list does not alter the responsibility of Contractor to comply with the Contract.

9.9.1.1 By submitting the punch list to Project Manager, Contractor represents that work on the punch list will be completed within the time provided for in Subparagraph 9.9.4.3.

9.9.2 Upon receipt of Contractor's punch list, Project Manager will inspect the Work, or designated portion thereof, to verify that the punch list contains all items needing completion or correction. If Project Manager's inspection discloses items not on Contractor's punch list, the items must be added to the punch list of items to be completed or corrected. If Project Manager's inspection reveals that Contractor is not yet substantially complete, Contractor shall complete or correct the deficiencies and request another inspection by Project Manager. The City may recover the costs of re-inspection from Contractor.

9.9.3 Prior to City Engineer's issuing a Certificate of Substantial Completion, Contractor shall also provide:

9.9.3.1 Certificate of Occupancy for new construction, or Certificate of Compliance for remodeled work, as applicable, and

9.9.3.2 compliance with Texas Accessibility Standards through state inspection of the Work, if required. If Contractor calls for inspection in a timely manner and the inspection is delayed through no fault of Contractor, and City Engineer so confirms, City Engineer may, upon request by Contractor, add the inspection to the punch list in Paragraph 9.9.2 and issue a Certificate of Substantial Completion.

9.9.4 When the Work, or designated portion thereof, is determined by City Engineer to be sufficiently complete in accordance with the Contract so the City can occupy or utilize the Work, or designated portion thereof, for the purpose for which it is intended, City Engineer will prepare a Certificate of Substantial Completion that incorporates the punch list in Paragraph 9.9.2 and establishes:

9.9.4.1 Date of Substantial Completion;

9.9.4.2 responsibilities of the Parties for security, maintenance, heating, ventilating and air conditioning, utilities, damage to the Work, and insurance; and

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- 9.9.4.3 fixed time within which Contractor shall complete all items on punch list of items to be corrected accompanying the certificate.
- 9.9.5 Warranties required by the Contract shall commence on the Date of Substantial Completion unless otherwise provided by City Engineer in Certificate of Substantial Completion. Warranties may not commence on items not substantially completed.
- 9.9.6 After Date of Substantial Completion and upon application by Contractor and approval by City Engineer, the City may make payment, reflecting adjustment in retainage, if any, as follows:
- 9.9.6.1 with the consent of Surety, the City may increase payment to Contractor to 96 percent of Contract Price, less value of items to be completed and accrued liquidated damages.
- 9.9.7 Contractor shall complete or correct the items in Paragraph 9.9.2 within the time period set out in the Certificate of Substantial Completion. If Contractor fails to do so, the City may issue a Notice of Noncompliance and proceed according to Section 2.5.
- 9.10 ***PARTIAL OCCUPANCY OR USE.***
- 9.10.1 The City may occupy or use any completed or partially completed portion of the Work at any stage, provided the occupancy or use is consented to by Contractor and Contractor's insurer and authorized by public authorities having jurisdiction over the Work. Consent of Contractor to partial occupancy or use may not be unreasonably withheld.
- 9.10.2 Immediately prior to the partial occupancy or use, Project Manager and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used to determine and record condition of the Work.
- 9.10.3 Partial occupancy or use of a portion of the Work does not constitute acceptance of work not in compliance with requirements of the Contract.
- 9.11 ***FINAL COMPLETION AND FINAL PAYMENT.***
- 9.11.1 Contractor shall review the Contract and inspect the Work prior to Contractor notification to City Engineer that the Work is complete and ready for final inspection. Contractor shall submit affidavit that the Work has been inspected and that the Work is complete in accordance with requirements of the Contract.
- 9.11.2 Project Manager will make final inspection within 15 days after receipt of Contractor's written notice that the Work is ready for final inspection and acceptance. If Project Manager finds the Work has been completed in accordance with the Contract, Contractor shall submit items set out in Paragraph 9.11.4 and, for stipulated price contracts, a final Application for Payment. City Engineer will, within 10 days, issue Certificate of Final Completion stating that to the best of City Engineer's knowledge, information, and belief, the Work has been completed in accordance with the Contract, and will recommend acceptance of the Work by City Council.
- 9.11.3 Should work be found not in compliance with requirements of the Contract, City Engineer will notify Contractor in writing of items of noncompliance. Upon inspection and acceptance of the corrections by Project Manager, compliance with all procedures of Paragraph 9.11.2, and Contractor's submission of the items set out in Paragraph 9.11.4, the City Engineer will issue Certificate of Final Completion to Contractor as provided in Paragraph 9.11.2.
- 9.11.4 Contractor shall submit the following items to City Engineer before City Engineer will issue a Certificate of Final Completion:

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- 9.11.4.1 affidavit that payrolls, invoices for materials and equipment, and other indebtedness of Contractor connected with the Work, less amounts withheld by the City, have been paid or otherwise satisfied. If required by City Engineer, Contractor shall submit further proof including waiver or release of lien or claims from laborers or Suppliers of Products;
  - 9.11.4.2 certificate evidencing that insurance required by the Contract to remain in force after final payment is currently in effect, will not be canceled or materially changed until at least 30 days written notice has been given to the City;
  - 9.11.4.3 written statement that Contractor knows of no substantial reason that insurance will not be renewable to cover correction and warranty period required by the Contract;
  - 9.11.4.4 consent of Surety to final payment; and
  - 9.11.4.5 copies of record documents, maintenance manuals, tests, inspections, and approvals.

Upon City Engineer's issuance of a Certificate of Final Completion, Contractor may request increase in payment to 99 percent of Contract Price, less accrued liquidated damages.

- 9.11.5 If Contractor fails to submit required items in Paragraph 9.11.4 within 10 days of Project Manager's inspection of the Work under Paragraph 9.11.2 or Paragraph 9.11.3, City Engineer may, but is not obligated to:
    - 9.11.5.1 deduct liquidated damages accrued from monies held;
    - 9.11.5.2 proceed to City Council for acceptance of the Work, minus some or all of the items Contractor fails to submit under Paragraph 9.11.4; and,
    - 9.11.5.3 upon acceptance by City Council of the portion of the Work completed, make final payment as set out in Paragraph 9.11.8.
  - 9.11.6 If final completion is materially delayed through no fault of Contractor, or by issuance of Change Orders affecting date of final completion, and City Engineer so confirms, the City may, upon application by Contractor and certification by City Engineer, and without terminating the Contract, make payment of balance due for that portion of the Work fully completed and accepted.
  - 9.11.7 If remaining balance due for work not corrected is less than retainage stipulated in the Contract, Contractor shall submit to City Engineer written consent of Surety to payment of balance due for that portion of the Work fully completed and accepted, prior to certification of the payment. The payment is made under terms governing final payment, except that it does not constitute waiver of Claims.
  - 9.11.8 The City will make final payment to Contractor within 30 days after acceptance of the Work by City Council, subject to limitations, if any, as stated in the Contract.
  - 9.11.9 Acceptance of final payment by Contractor shall constitute a waiver of all Claims, whether known or unknown, by Contractor, except those previously made in writing and identified by Contractor as unsettled at the time of final payment.
- 9.12 **LIQUIDATED DAMAGES.**
- 9.12.1 Contractor, Surety, and the City agree that failure to complete the Work within Contract Time will cause damages to the City and that actual damages from harm are difficult to estimate accurately. Therefore, Contractor, Surety, and the City agree that Contractor and Surety are liable for and shall pay to the City the amount stipulated in Supplementary Conditions as liquidated damages, and that the amount of damages fixed therein is a reasonable forecast of just compensation for harm to the City resulting from Contractor's

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failure to complete the Work within Contract Time. The amount stipulated will be paid for each day of delay beyond Contract Time until Date of Substantial Completion.

- 9.12.2 Contractor shall pay the City an amount equal to \$1,200.00 per diesel operating vehicle or piece of motorized equipment per incident of high sulfur diesel fuel usage.

**ARTICLE 10**  
**SAFETY PRECAUTIONS**

- 10.1 **SAFETY PROGRAMS.** Contractor is responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with performance of the Contract. Contractor shall submit a safety program to City Engineer prior to mobilizing for the Work, and is solely responsible for safety, efficiency, and adequacy of ways, means, and methods, and for damage which might result from failure or improper construction, maintenance, or operation performed by Contractor.
- 10.2 **POLLUTANTS AND POLLUTANT FACILITIES.**
- 10.2.1 If Contractor encounters material on-site which it reasonably believes to be a Pollutant or facilities which it reasonably believes to be a Pollutant Facility, Contractor shall immediately stop work in affected area and immediately notify City Engineer, confirming the notice thereafter in writing.
- 10.2.2 If City Engineer determines that the material is a Pollutant or facility is a Pollutant Facility, work in affected area may not be resumed except by Modification, and only if the work would not violate applicable laws or regulations.
- 10.2.3 If City Engineer determines that the material is not a Pollutant or a facility is not a Pollutant Facility, work in affected area will be resumed upon issuance of a Modification.
- 10.2.4 Contractor is not required to perform, unless authorized by Change Order, work relating to Pollutants or Pollutant Facilities except for that work relating to Pollutants or Pollutant Facilities specified in the Contract.
- 10.3 **SAFETY OF THE ENVIRONMENT, PERSONS, AND PROPERTY.**
- 10.3.1 Contractor shall take reasonable precautions for safety and shall provide reasonable protection to prevent damage, injury, or loss from all causes, to:
- 10.3.1.1 employees performing work on-site, and other persons who may be affected thereby;
- 10.3.1.2 work, including Products to be incorporated into the Work, whether in proper storage, under control of Contractor or Subcontractor; and
- 10.3.1.3 other property at or adjacent to the site, such as trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal or replacement in course of construction.
- 10.3.2 Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on safety of persons, property, or environment.
- 10.3.2.1 Contractor shall comply with requirements of Underground Facility Damage Prevention and Safety Act TEX. UTIL. CODE ANN. Ch. 251 (Vernon Supp. 2002).
- 10.3.2.2 Contractor shall comply with all safety rules and regulations of the Federal Occupational Health and Safety Act of 1970 and subsequent amendments (OSHA).

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- 10.3.3 Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection of persons and property, including posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities.
- 10.3.4 Contractor shall designate responsible member of Contractor's organization at site whose duty is prevention of accidents. This person will be Contractor's Superintendent unless otherwise designated by Contractor in writing to City Engineer.
- 10.3.5 Contractor shall prevent windblown dust and may not burn or bury trash debris or waste products on-site. Contractor shall prevent environmental pollution, including but not limited to particulates, gases and noise, as a result of the Work.
- 10.3.6 When use or storage of hazardous materials or equipment, or unusual methods are necessary for execution of the Work, Contractor shall exercise utmost care and carry on the activities under supervision of properly qualified personnel.
- 10.3.7 Contractor shall promptly remedy damage and loss to property referred to in Subparagraphs 10.3.1.2 and 10.3.1.3, caused in whole or in part by Contractor, or Subcontractors, which is not covered by insurance required by the Contract. Contractor is not required to remedy damage or loss attributable to the City, Design Consultant, or other contractors.
- 10.4 **EMERGENCIES.** In emergencies affecting safety of persons or property, Contractor shall act at Contractor's discretion to prevent imminent damage, injury, or loss. Additional compensation or extension of time claimed by Contractor because of emergencies are determined as provided in Article 7.

## **ARTICLE 11**

### **INSURANCE AND BONDS**

- 11.1 **GENERAL INSURANCE REQUIREMENTS.**
- 11.1.1 With no intent to limit Contractor's liability under indemnification provisions set forth in Paragraphs 3.25 and 3.26, Contractor shall provide and maintain in full force and effect during term of the Contract and all extensions and amendments thereto, at least the following insurance and available limits of liability.
- 11.1.2 If any of the following insurance is written as "claims made" coverage and the City is required to be carried as additional insured, then Contractor's insurance shall include a two-year extended discovery period after last date that Contractor provides any work under the Contract.
- 11.1.3 Aggregate amounts of coverage, for purposes of the Contract, are agreed to be amounts of coverage available during fixed 12-month policy period.
- 11.2 **INSURANCE TO BE PROVIDED BY CONTRACTOR.**
- 11.2.1 *Risks and Limits of Liability.* Contractor shall maintain the insurance coverages in the listed amounts, as set out in Table 1.
- 11.2.2 If Limit of Liability for Excess Coverage is \$2,000,000 or more, Limit of Liability for Employer's Liability may be reduced to \$500,000.
- 11.2.3 *Insurance Coverage.* At all times during the term of this Contract and any extensions or renewals, Contractor shall provide and maintain insurance coverage that meets the

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Contract requirements. Prior to beginning performance under the Contract, at any time upon the Director's request, or each time coverage is renewed or updated, Contractor shall furnish to the Director current certificates of insurance, endorsements, all policies, or other policy documents evidencing adequate coverage, as necessary. Contractor shall be responsible for and pay (a) all premiums and (b) any claims or losses to the extent of any deductible amounts. Contractor waives any claim it may have for premiums or deductibles against the City, its officers, agents, or employees. Contractor shall also require all subcontractors or consultants whose subcontracts exceed \$100,000 to provide proof of insurance coverage meeting all requirements stated above except amount. The amount must be commensurate with the amount of the subcontract, but no less than \$500,000 per claim.

- 11.2.4 *Form of insurance.* The form of the insurance shall be approved by the Director and the City Attorney; such approval (or lack thereof) shall never (a) excuse non-compliance with the terms of this Section, or (b) waive or estop the City from asserting its rights to terminate this Contract. The policy issuer shall (1) have a Certificate of Authority to transact insurance business in Texas, or (2) be an eligible non-admitted insurer in the State of Texas and have a Best's rating of at least B+, and a Best's Financial Size Category of Class VI or better, according to the most current Best's Key Rating Guide. Each insurer is subject to approval by City Engineer in City Engineer's sole discretion as to conformance with these requirements.
- 11.2.5 *Required Coverage.* The City shall be an Additional Insured under this Contract, and all policies except Professional Liability and Worker's Compensation must name the City as an Additional Insured. Contractor waives any claim or right of subrogation to recover against the City, its officers, agents, or employees, and each of Contractor's insurance policies except professional liability must contain coverage waiving such claim. Each policy, except Workers' Compensation and Professional Liability, must also contain an endorsement that the policy is primary to any other insurance available to the Additional Insured with respect to claims arising under this Contract. If professional liability coverage is written on a "claims made" basis, Contractor shall also provide proof of renewal each year for two years after substantial completion of the Project, or in the alternative: evidence of extended reporting period coverage for a period of two years after substantial completion, or a project liability policy for the Project covered by this Contract with a duration of two years after substantial completion.
- 11.2.6 *Deductibles.* Contractor assumes and bears any claims or losses to extent of deductible amounts and waives any claim it may ever have for same against the City, its officers, agents, or employees.
- 11.2.7 *Notice.* **CONTRACTOR SHALL GIVE 30 DAYS' ADVANCE WRITTEN NOTICE TO THE DIRECTOR IF ANY OF ITS INSURANCE POLICIES ARE CANCELED OR NON-RENEWED.** Within the 30-day period, Contractor shall provide other suitable policies in order to maintain the required coverage. If Contractor does not comply with this requirement, the Director, at his or her sole discretion, may immediately suspend Contractor from any further performance under this Agreement and begin procedures to terminate for default.
- 11.2.8 *Subrogation.* Contractor waives any claim or right of subrogation to recover against the City, its officers, agents, or employees. Each policy, except professional liability, must contain an endorsement waiving such claim.
- 11.2.9 *Endorsement of Primary Insurance.* Each policy, except Workers' Compensation policies, must contain an endorsement that the policy is primary insurance to any other insurance available to additional insured with respect to claims arising hereunder.

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- 11.2.10 *Liability for Premium.* Contractor is solely responsible for payment of all insurance premium requirements hereunder and the City is not obligated to pay any premiums.
- 11.2.11 *Additional Requirements for Workers' Compensation Insurance Coverage.* Contractor shall, in addition to meeting the obligations set forth in Table 1, maintain throughout the term of the Contract Workers' Compensation coverage as required by statute, and Contractor shall specifically comply with requirements set forth in Paragraph 11.2.10. The definitions set out below shall apply only for purposes of this Paragraph 11.2.10.
- 11.2.12 Definitions.
- 11.2.12.1 *Certificate of Coverage:* A copy of certificate of insurance, or coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory Workers' Compensation insurance coverage for Contractor's, Subcontractor's, or Supplier's employees providing services for the duration of the Contract.
- 11.2.12.2 *Duration of the Work:* Includes the time from Date of Commencement of the Work until Contractor's work under the Contract has been completed and accepted by City Council.
- 11.2.12.3 *Persons providing services for the Work (Subcontractor in Texas Labor Code § 406.096):* includes all persons or entities performing all or part of services Contractor has undertaken to perform on the Work, regardless of whether that person contracted directly with Contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of the entity, or employees of entity which furnishes persons to provide services on the Work. Services include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to the Work. Services do not include activities unrelated to the Work, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.
- 11.2.13 Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of coverage agreements, which meets the statutory requirements of TEX. LAB. CODE ANN., Section 401.011(44) for employees of Contractor providing services on the Work, for duration of the Work.
- 11.2.14 Contractor shall provide a Certificate of Coverage to the City prior to being awarded the Contract.
- 11.2.15 If coverage period shown on Contractor's original Certificate of Coverage ends during duration of the Work, Contractor shall file new Certificate of Coverage with the City showing that coverage has been extended.
- 11.2.16 Contractor shall obtain from each person providing services on the Work, and provide to City Engineer:
- 11.2.16.1 Certificate of Coverage, prior to that person beginning work on the Work, so the City will have on file Certificates of Coverage showing coverage for all persons providing services on the Work; and
- 11.2.16.2 no later than seven days after receipt by Contractor, new Certificate of Coverage showing extension of coverage, if coverage period shown on current Certificate of Coverage ends during the duration of the Work.
- 11.2.17 Contractor shall retain all required Certificates of Coverage for the duration of the Work and for one year thereafter.

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- 11.2.18 Contractor shall notify City Engineer in writing by certified mail or personal delivery, within 10 days after Contractor knew or should have known, of any change that materially affects provision of coverage of any person providing services on the Work.
- 11.2.19 Contractor shall post on-site a notice, in text, form and manner prescribed by Texas Workers' Compensation Commission, informing all persons providing services on the Work that they are required to be covered, and stating how person may verify coverage and report lack of coverage.
- 11.2.20 Contractor shall contractually require each person with whom it contracts to provide services on the Work to:
- 11.2.20.1 provide coverage, based on proper reporting of classification codes, payroll amounts and filing of any coverage agreements, which meets statutory requirements of TEX. LAB. CODE ANN., Section 401.011(44) for all its employees providing services on the Work, for the duration of the Work;
  - 11.2.20.2 provide to Contractor, prior to that person's beginning work on the Work, a Certificate of Coverage showing that coverage is being provided for all employees of the person providing services on the Work, for the duration of the Work;
  - 11.2.20.3 provide Contractor, prior to the end of the coverage period, a new Certificate of Coverage showing extension of coverage, if the coverage period shown on the current Certificate of Coverage ends during the duration of the Work;
  - 11.2.20.4 obtain from each other person with whom it contracts, and provide to Contractor: (1) Certificate of Coverage, prior to other person's beginning work on the Work; and (2) new Certificate of Coverage showing extension of coverage, prior to end of coverage period, if coverage period shown on the current Certificate of Coverage ends during duration of the Work.
  - 11.2.20.5 retain all required Certificates of Coverage on file for the duration of the Work and for one year thereafter;
  - 11.2.20.6 notify City Engineer in writing by certified mail or personal delivery within 10 days after person knew, or should have known, of change that materially affects provision of coverage of any person providing services on the Work; and
  - 11.2.20.7 contractually require each person with whom it contracts to perform as required by Paragraphs 11.2.10.1 through 11.2.10.7, with Certificates of Coverage to be provided to person for whom they are providing services.
- 11.2.21 By signing the Contract or providing or causing to be provided a Certificate of Coverage, Contractor is representing to the City that all employees of Contractor who will provide services on the Work will be covered by Workers' Compensation coverage for the duration of the Work, that coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with appropriate insurance carrier. Contractor is not allowed to self-insure Workers' Compensation. Contractor may be subject to administrative penalties, criminal penalties, civil penalties, or other civil actions for providing false or misleading information.
- 11.2.22 Contractor's failure to comply with Paragraph 11.2.10 is a breach of the Contract by Contractor, which entitles the City to declare the Contract void if Contractor does not remedy breach within 10 days after receipt of notice of breach from City Engineer.
- 11.2.23 *Subcontractor Insurance Requirements:* Contractor shall require Subcontractors and Suppliers to obtain Commercial General Liability, Workers' Compensation, Employer's Liability and Automobile Liability coverage that meets all the requirements of Paragraph



11.2. The amount must be commensurate with the amount of the subcontract, but not less than \$500,000 per occurrence. Contractor shall require all Subcontractors with whom it contracts directly, whose subcontracts exceed \$100,000, to provide proof of Commercial General Liability and Automobile Liability insurance coverage meeting the above requirements. Contractor shall comply with all requirements set out under Paragraph 11.2.10 as to Workers' Compensation Insurance for all Subcontractors and Suppliers.

TABLE 1 REQUIRED COVERAGE	
Coverage	Limit of Liability
Workers' Compensation	<ul style="list-style-type: none"> <li>• Texas Statutory Limits for Workers' Compensation</li> </ul>
Employer's Liability	<ul style="list-style-type: none"> <li>• Bodily Injury by Accident \$1,000,000 (each accident)</li> <li>• Bodily Injury by Disease \$1,000,000 (policy limit)</li> <li>• Bodily Injury by Disease \$1,000,000 (each employee)</li> </ul>
Commercial General Liability: Including Broad Form Property Damage, Contractual Liability, Explosion, Underground and Collapse, Bodily Injury, Personal Injury, Products, and Completed Operations (for a period of one year following completion of the Work).	<ul style="list-style-type: none"> <li>• \$1,000,000 Limit (each occurrence), subject to general aggregate Limit of \$2,000,000</li> <li>• Products and Completed Operations \$2,000,000 aggregate Limit</li> </ul>
Owner's and Contractor's Protective Liability	<ul style="list-style-type: none"> <li>• \$1,000,000 each Occurrence/ aggregate</li> </ul>
Installation Floater (Unless alternative coverage approved by City Attorney)	<ul style="list-style-type: none"> <li>• Value of stored material or equipment, listed on Certificates of Payments, but not yet incorporated into the Work</li> </ul>
Automobile Liability Insurance: (For automobiles furnished by Contractor in course of his performance under the Contract, including Owned, Non-owned, and Hired Auto coverage)	<ul style="list-style-type: none"> <li>• \$1,000,000 combined single limit each occurrence for (1) Any Auto or (2) All Owned, Hired, and Non-Owned Autos</li> </ul>
Excess Coverage	<ul style="list-style-type: none"> <li>• \$1,000,000 each occurrence/ aggregate in excess of limits specified for Commercial General Liability, and Automobile Liability</li> </ul>
Aggregate Limits are per 12-month policy period unless otherwise indicated.	

11.3 **PROOF OF INSURANCE.**

11.3.1 Prior to commencing services and at time during the term of the Contract, Contractor shall furnish City Engineer with Certificates of Insurance, along with Affidavit from Contractor confirming that Certificate accurately reflects insurance coverage that is available during term of the Contract. If requested in writing by City Engineer, Contractor shall furnish City Engineer with certified copies of Contractor's actual insurance policies. Failure of Contractor to provide certified copies, as requested, may be deemed, at City Engineer's or City Attorney's discretion, a material breach of the Contract.

11.3.2 Notwithstanding the proof of insurance requirements, Contractor shall continuously maintain in effect required insurance coverage set forth in Paragraph 11.2. Failure of

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Contractor to comply with this requirement does constitute a material breach by Contractor allowing the City, at its option, to immediately suspend or terminate work, or exercise any other remedy allowed under the Contract. Contractor agrees that the City has not waived or is not estopped to assert a material breach of the Contract because of any acts or omissions by the City regarding its review or non-review of insurance documents provided by Contractor, its agents, employees, or assigns.

- 11.3.3 Contractor shall provide updated certificates of insurance to the Director upon request. The Contractor shall be responsible for delivering a current certificate of insurance in the proper form to the Director as long as Contractor is required to furnish insurance coverage under Paragraph 11.2.
- 11.3.4 Every certificate of insurance Contractor delivers in connection with this Contract shall
- 11.3.4.1 be less than 12 months old;
  - 11.3.4.2 include all pertinent identification information for the Insurer, including the company name and address, policy number, NAIC number or AMB number, and authorized signature;
  - 11.3.4.3 include in the Certificate Holder Box the Project name and reference numbers, contractor's email address, and indicates the name and address of the Project Manager;
  - 11.3.4.4 include the Contractor's email address in the Certificate Holder Box;
  - 11.3.4.5 include the Project reference numbers on the City address so the Project reference number is visible in the envelope window; and
  - 11.3.4.6 be appropriately marked to accurately identify all coverages and limits of the policy, effective and expiration dates, and waivers of subrogation in favor of the City for Commercial General Liability, Automobile Liability, and Worker's Compensation/Employers' Liability.
- 11.4 **PERFORMANCE AND PAYMENT BONDS.** For Contracts over the value of \$25,000, Contractor shall provide Bonds on the City's standard forms covering faithful performance of the Contract and payment of obligations arising thereunder as required in the Contract pursuant to Chapter 2253 of the Government Code. The Bonds must be for 100 percent of Original Contract Price and in accordance with conditions stated on standard City Performance and Payment Bond and Statutory Payment Bond forms. Bonds may be obtained from Contractor's usual source and cost for the Bonds are included in Contract Price.
- 11.5 **MAINTENANCE BONDS – One-year Maintenance Bond.** Contractor shall provide Bond on standard City One-year Maintenance Bond form, providing for Contractor's correction, replacement, or restoration of any portion of the Work which is found to be not in compliance with requirements of the Contract during one-year correction period required in Paragraph 12.2. The Maintenance Bond must be for 100 percent of the Original Contract Price.
- 11.6 **SURETY.**
- 11.6.1 A Bond that is given or tendered to the City pursuant to the Contract must be executed by a surety company that is authorized and admitted to write surety Bonds in the State of Texas.
  - 11.6.2 If a Bond is given or tendered to the City pursuant to the Contract in an amount greater than 10 percent of Surety's capital and surplus, Surety shall provide certification that Surety has reinsured that portion of the risk that exceeds 10 percent of Surety's capital and surplus. The reinsurance must be with one or more reinsurers who are duly authorized, accredited, or trusted to do business in the State of Texas. The amount reinsured by reinsurer may not exceed 10 percent of reinsurer's capital and surplus. The amount of allowed capital and surplus must be based on information received from State Board of Insurance.

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- 11.6.3 If the amount of a Bond is greater than \$100,000, Surety shall:
- 11.6.3.1 also hold certificate of authority from the United States Secretary of Treasury to qualify as surety on obligations permitted or required under federal law; or,
  - 11.6.3.2 Surety may obtain reinsurance for any liability in excess of \$100,000 from reinsurer that is authorized and admitted as a reinsurer in the State of Texas and is the holder of a certificate of authority from the United States Secretary of the Treasury to qualify as surety or reinsurer on obligations permitted or required under federal law.
- 11.6.4 Determination of whether Surety on the Bond or the reinsurer holds a certificate of authority from the United States Secretary of the Treasury is based on information published in Federal Register covering the date on which Bond was executed.
- 11.6.5 Each Bond given or tendered to the City pursuant to the Contract must be on City forms with no changes made by Contractor or Surety, and must be dated, executed, and accompanied by power of attorney stating that the attorney in fact executing such the bond has requisite authority to execute such Bond. The Bonds must be dated and must be no more than 30 days old.
- 11.6.6 Surety shall designate in its Bond, power of attorney, or written notice to the City, an agent resident in Harris County to whom any requisite notices may be delivered and on whom service of process may be had in matters arising out of the suretyship.
- 11.6.7 Contractor shall furnish information to a payment bond beneficiary as required by TEX. GOV'T CODE ANN. CH. 2253.
- 11.7 **DELIVERY OF BONDS.** Contractor shall deliver required Bonds to the City within time limits stated in Notice of Intent to Award and prior to Date of Commencement of the Work.

## **ARTICLE 12**

### **UNCOVERING AND CORRECTION OF THE WORK**

- 12.1 **UNCOVERING OF THE WORK.** If a portion of the Work has been covered which City Engineer has not specifically requested to observe prior to its being covered, City Engineer may request to see such work and it must be uncovered by Contractor. If such work is in accordance with the Contract, the costs of uncovering and covering such work are charged to the City by Change Order. If such work is not in accordance with the Contract, Contractor shall pay for uncovering and shall correct the nonconforming Work promptly after receipt of Notice of Noncompliance to do so.
- 12.2 **CORRECTION OF THE WORK.**
- 12.2.1 Contractor shall promptly correct or remove work rejected by City Engineer or work failing to conform to requirements of the Contract, whether observed before or after Date of Substantial Completion and whether fabricated, Installed, or completed.
  - 12.2.2 Contractor bears costs of correcting the rejected or nonconforming work including additional testing and inspections, and compensation for Design Consultant's services and expenses made necessary thereby.
  - 12.2.3 If within one year after Date of Substantial Completion, or after date for commencement of warranties established under Paragraph 9.9.5 or by other applicable special warranty required by the Contract, whichever is later in time, any of the Work is found not to be in accordance with the requirements of the Contract, Contractor shall correct such work promptly after receipt of Notice of Noncompliance to do so.

- 12.2.4 One-year correction period for portions of the Work completed after Date of Substantial Completion will begin on the date of acceptance of that portion of the Work. This obligation under this Paragraph survives acceptance of the Work under the Contract and termination of the Contract.
- 12.2.5 The one-year correction period does not establish a duration for the Contractor's general warranty under Paragraph 3.12. The City retains the right to recover damages from the Contractor as long as may be permitted by the applicable statute of limitations.
- 12.2.6 If Contractor does not proceed with correction of the nonconforming work within time fixed by Notice of Noncompliance, the City may correct nonconforming work or remove nonconforming work and store salvageable Products at Contractor's expense. Contractor shall pay the costs of correction of nonconforming work and removal and storage of salvageable Products to the City. If Contractor does not pay costs of the correction or removal and storage within 10 days after written notice, the City may sell the Products at auction or at private sale. The City will account for proceeds thereof after deducting costs and damages that would have been borne by Contractor, including compensation for services of Design Consultant and necessary expenses. If the proceeds of sale do not cover costs which Contractor should have borne, Contractor shall pay the value of the deficiency to the City.
- 12.2.7 Contractor bears cost of correcting work originally installed by Contractor, the City, or by separate contractors and damaged by Contractor's correction or removal of Contractor's work.
- 12.3 **ACCEPTANCE OF NONCONFORMING WORK.** If City Engineer prefers to accept work which is not in accordance with requirements of the Contract, City Engineer may do so only by issuance of Change Order, instead of requiring its removal and correction. City Engineer will determine Contract Price reduction. The reduction will become effective even if final payment has been made.

### **ARTICLE 13**

#### **MISCELLANEOUS PROVISIONS**

- 13.1 **GOVERNING LAW AND VENUE.** This Contract shall be construed and interpreted in accordance with the applicable laws of the State of Texas and City of Houston. Venue for any disputes relating in any way to this Contract shall lie exclusively in Harris County, Texas.
- 13.2 **SUCCESSORS.** The Contract binds and benefits the Parties and their legal successors and permitted assigns; however, this Paragraph 13.2.1 does not alter the restrictions on assignment and disposal of assets set out in Paragraph 13.3.1. The Contract does not create any personal liability on the part of any officer or agent of the City.
- 13.3 **BUSINESS STRUCTURE AND ASSIGNMENTS.**
- 13.3.1 Contractor may not assign the Contract at law or otherwise, or dispose of all or substantially all of its assets without City Engineer's prior written consent. Nothing in this Section, however, prevents the assignment of accounts receivable or the creation of a security interest as described in §9.406 of the Texas Business & Commerce Code. In the case of such an assignment, Contractor shall immediately furnish the City with proof of the assignment and the name, telephone number, and address of the assignee and a clear identification of the fees to be paid to the assignee.

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- 13.3.2 Any series, as defined by the TEX. BUS. ORG. CODE ANN., affiliate, subsidiary, or successor to which Contractor assigns or transfers assets shall join in privity and be jointly and severally liable under this Contract.
- 13.4 **WRITTEN NOTICE.**
- 13.4.1 All notices required or permitted by the Contract must be in writing and must be effected by hand delivery; registered or certified mail, return receipt requested; or facsimile with confirmation copy mailed to receiving Party. Notice is sufficient if made or addressed with proper postage to the address stated in the Agreement for each Party ("Notice Address") or faxed to the facsimile number stated in the Agreement for each Party. The notice is deemed delivered on the earlier of:
- 13.4.1.1 the date the Notice is actually received;
- 13.4.1.2 the third day following deposit in a United States Postal Service post office or receptacle; or
- 13.4.1.3 the date the facsimile is sent unless the facsimile is sent after 5:00 p.m. local time of the recipient and then it is deemed received on the following day.
- Any Party may change its Notice Address or facsimile number at any time by giving written notice of the change to the other Party in the manner provided for in this Paragraph at least 15 days prior to the date the change is affected.
- 13.5 **RIGHTS AND REMEDIES.**
- 13.5.1 Duties and obligations imposed by the Contract and rights and remedies available thereunder are in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.
- 13.5.2 No act or failure to act by the City or Contractor is a waiver of rights or duties afforded them under the Contract, nor is the act or failure to act constitute approval of or acquiescence in a breach of the Contract. No waiver, approval or acquiescence is binding unless in writing and, in the case of the City, signed by City Engineer.
- 13.6 **TESTS AND INSPECTIONS.**
- 13.6.1 Contractor shall give City Engineer, Construction Manager, and Design Consultant timely notice of the time and place where tests and inspections are to be made. Contractor shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- 13.6.2 The City will employ and pay for services of an independent testing laboratory to perform inspections or acceptance tests required by the Contract except:
- 13.6.2.1 inspections or tests covered by Paragraph 13.6.3;
- 13.6.2.2 those otherwise specifically provided in the Contract; or
- 13.6.2.3 costs incurred in connection with tests or inspections conducted pursuant to Paragraph 12.2.2.
- 13.6.3 Contractor is responsible for and shall pay all costs in connection with inspection or testing required in connection with City Engineer's acceptance of a Product to be incorporated into the Work, or of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation into the Work.
- 13.6.4 Neither observations by the City, Construction Manager, or Design Consultant, nor inspections, tests, or approvals by others, relieves Contractor from Contractor's obligations to perform the Work in accordance with the Contract.
- 13.7 **INTEREST.** No interest will accrue on late payments by the City except as provided under Chapter 2251 of the Government Code.

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- 13.8 *PARTIES IN INTEREST.* The Contract does not bestow any rights upon any third party, but binds and benefits the Parties only.
- 13.9 *ENTIRE CONTRACT.* The Contract merges the prior negotiations and understandings of the Parties and embodies the entire agreement of the Parties. No other agreements, assurances, conditions, covenants, express or implied, or other terms of any kind, exist between the Parties regarding the Contract.
- 13.10 *WRITTEN AMENDMENT.* Changes to the Contract that cannot be effected by Modifications, must be made by written amendment, which will not be effective until approved by City Council.
- 13.11 *COMPLIANCE WITH LAWS.*
- 13.11.1 Contractor shall comply with the Americans with Disabilities Act of 1990 as amended (ADA) and Texas Architectural Barriers Act and all regulations relating to either statute.
- 13.11.2 Contractor shall comply with all applicable federal, state, and city laws, rules and regulations.
- 13.12 *SEVERABILITY.* If any part of the Contract is for any reason found to be unenforceable, all other parts remain enforceable to the extent permitted by law.
- 13.13 *COMPLIANCE WITH CERTAIN STATE LAW REQUIREMENTS.*
- 13.13.1 *Anti-Boycott of Israel.* Contractor certifies that Contractor is not currently engaged in, and agrees for the duration of this Agreement not to engage in, the boycott of Israel as defined by Section 808.001 of the Texas Government Code.
- 13.13.2 *Anti-Boycott of Energy Companies.* Contractor certifies that Contractor is not currently engaged in, and agrees for the duration of this Agreement not to engage in, the boycott of energy companies as defined by Section 809.001 of the Texas Government Code.
- 13.13.3 *Anti-Boycott of Firearm Entities or Firearm Trade Associations.* Contractor certifies that Contractor does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, or will not discriminate against a firearm entity or firearm trade association for the duration of this Agreement, as defined by Section 2274.001 of the Texas Government Code.
- 13.13.4 *Certification of No Business with Foreign Terrorist Organizations.* For purposes of Section 2252.152 of the Code, Contractor certifies that, at the time of this Agreement neither Contractor nor any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of Contractor, is a company listed by the Texas Comptroller of Public Accounts under Sections 2252.153 or 2270.0201 of the Code as a company known to have contracts with or provide supplies or to a foreign terrorist organization.
- 13.14 *ZERO TOLERANCE POLICY FOR HUMAN TRAFFICKING & RELATED ACTIVITIES.* The requirements and terms of the City of Houston's Zero Tolerance Policy for Human Trafficking and Related Activities, as set forth in Executive Order 1-56, as revised from time to time, are incorporated into this Agreement for all purposes. Contractor has reviewed Executive Order 1-56, as revised, and shall comply with its terms and conditions as they are set out at the time of this Agreement's effective date. Contractor shall notify the City's Chief Procurement Officer, City Attorney, and the Director of any information regarding possible violation by the Contractor or its subcontractors providing services or goods under this Agreement.

#### **ARTICLE 14**

#### **TERMINATION OR SUSPENSION OF THE CONTRACT**

14.1 *TERMINATION BY THE CITY FOR CAUSE.*

14.1.1 Each of the following acts or omissions of Contractor or occurrences shall constitute an "Event of Default" under the Contract:

- 14.1.1.1 Contractor refuses or fails to supply enough properly skilled workers or proper Products;
- 14.1.1.2 Contractor disregards laws, ordinances, rules, regulations, or orders of a public authority having jurisdiction;
- 14.1.1.3 Contractor is guilty of material breach of any duty or obligation of Contractor under the Contract, including, but not limited to, failure to submit certified payrolls electronically;
- 14.1.1.4 Contractor has had any other contract with the City terminated for cause at any time subsequent to the effective date of the Contract as set out in the Agreement; or
- 14.1.1.5 Contractor fails to utilize Ultra Low Sulfur Diesel Fuel, as required in Paragraph 3.9.1.1.

14.1.2 If an Event of Default occurs, City Engineer may, at his option and without prejudice to any other rights or remedies which the City may have, deliver a written notice to Contractor and Surety describing the Event of Default and giving the Contractor 10 days to cure the Event of Default. If after the cure period, Contractor has failed or refused to cure the Event of Default, then City Engineer may deliver a second written notice to Contractor giving notice of the termination of the Contract or of the termination of Contractor's performance under the Contract ("Notice of Termination"). If City Engineer issues a Notice of Termination, then City Engineer may, subject to any prior rights of Surety and any other rights of the City under the Contract or at law:

- 14.1.2.1 request that Surety complete the Work; or
- 14.1.2.2 take possession of the site and all materials, equipment, tools, and construction equipment and machinery on the site owned by Contractor; and
- 14.1.2.3 finish the Work by whatever reasonable method City Engineer may deem expedient.

14.1.3 After Contractor's receipt of a Notice of Termination, and except as otherwise directed in writing by City Engineer, Contractor shall:

- 14.1.3.1 stop the Work on the date and to the extent specified in the Notice of Termination;
- 14.1.3.2 place no further orders or subcontracts for Products or services;
- 14.1.3.3 terminate all orders and subcontracts to the extent that they relate to performance of work terminated;
- 14.1.3.4 assign to the City, in the manner, at the times, and to the extent directed by City Engineer, all rights, title, and interest of Contractor, under the terminated supply orders and subcontracts. The City may settle or pay claims arising out of termination of the orders and subcontracts;
- 14.1.3.5 settle all outstanding liabilities and all claims arising out of the termination of supply orders and subcontracts with approval of City Engineer;
- 14.1.3.6 take action as may be necessary, or as City Engineer may direct, for protection and preservation of property related to the Work that is in possession of Contractor, and in which the City has or may acquire an interest; and
- 14.1.3.7 secure the Work in a safe state before leaving the site, providing any necessary safety measures, shoring, or other devices.

14.1.4 If the City terminates the Contract or terminates Contractor's performance under the Contract for any one or more of the reasons stated in Paragraph 14.1.1, Contractor may not receive any further payment until the Work is complete, subject to Paragraph 14.1.5.

14.1.5 If the unpaid balance of Contract Price exceeds the costs of finishing the Work, including liquidated damages and other amounts due under the Contract, the balance will be paid to Contractor. If the costs of finishing the Work exceed the unpaid balance, Contractor shall, within 10 days of receipt of written notice setting out the amount of the excess costs, pay the difference to the City. The amount to be paid to Contractor or the City will be certified by City Engineer in writing, and this obligation for payment shall survive termination of the Contract or termination of Contractor's performance under the Contract. Termination of the Contractor for cause shall not relieve the Surety from its obligation to complete the project.

14.2 *TERMINATION BY THE CITY FOR CONVENIENCE.*

14.2.1 City Engineer may, without cause and without prejudice to other rights or remedies of the City, give Contractor and Surety a Notice of Termination with a seven days written notice.

14.2.2 After receipt of the Notice of Termination, and except as otherwise approved by City Engineer, Contractor shall conform to requirements of Paragraph 14.1.3.

14.2.3 After receipt of the Notice of Termination, Contractor shall submit and substantiate to the City its termination Claim, in forms required by City Engineer. The Claim will be submitted and substantiated to the City promptly, but no later than six months from the effective date of termination, unless one or more extensions are granted by City Engineer in writing. If Contractor fails to submit its termination Claim within the time allowed, in accordance with Paragraph 14.2.4, City Engineer will determine, on the basis of available information, the amount, if any, due to Contractor because of termination, and City Engineer's determination is final and binding on the Parties. The City will then pay to Contractor the amount so determined.

14.2.4 City Engineer will determine, on the basis of information available to City Engineer, the amount due, if any, to Contractor for the termination as follows:

14.2.4.1 Contract Price for all work performed in accordance with the Contract up to the date of termination determined in the manner prescribed for monthly payments in Article 9, except no retainage is withheld by the City either for payment determined by percentage of completion or for materials and equipment delivered to the site, in storage or in transit.

14.2.4.2 Reasonable termination expenses, including costs for settling and paying Subcontractor and Supplier claims arising out of termination of the Work, reasonable cost of preservation and protection of the City's property after termination, if required, and the cost of Claim preparation. Termination expenses do not include field or central office overhead, salaries of employees of Contractor, or litigation costs, including attorneys' fees.

No amount is allowed for anticipated profit or central office overhead on uncompleted work, or any cost or lost profit for other business of Contractor alleged to be damaged by the termination.

14.2.5 Contractor shall promptly remove from the site any construction equipment, tools, and temporary facilities, except the temporary facilities which City Engineer may wish to purchase and retain.

14.2.6 Contractor shall cooperate with City Engineer during the transition period.

14.2.7 The City will take possession of the Work and materials delivered to the site, in storage, or in transit, as of date or dates specified in the Notice of Termination, and is responsible for maintenance, utilities, security, and insurance, as stated in Notice of Termination.

14.3 *SUSPENSION BY THE CITY FOR CONVENIENCE.*



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- 14.3.1 City Engineer may, without cause, after giving Contractor and Surety 24-hour prior written notice, order Contractor to suspend, delay, or interrupt the Work in whole or in part for a period of time as City Engineer may determine.
- 14.3.2 An adjustment will be made in Contract Time equivalent to the time of suspension.
- 14.3.3 Adjustment will be made to Contract Price for increases in the cost of performance of the Work, including profit on increased cost of performance caused by suspension, delay, or interruption of the Work in accordance with Paragraph 7.3. No adjustment will be made to the extent that:
- 14.3.3.1 performance was, or would have been, suspended, delayed, or interrupted by another cause for which Contractor is responsible; or
  - 14.3.3.2 adjustment is made or denied under another provision of the Contract.
- 14.4 **TERMINATION BY CONTRACTOR.**
- 14.4.1 Contractor may terminate the Contract if the Work is stopped for a period of 30 days through no act or fault of Contractor, directly related to one of these events:
- 14.4.1.1 issuance of an order of a court or other public authority having jurisdiction;
  - 14.4.1.2 act of government, such as a declaration of national emergency which makes material unavailable; or
  - 14.4.1.3 if repeated suspensions, delays, or interruptions by the City as described in Paragraph 14.3 constitute, in the aggregate, more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less;
- No termination will be effective for the above reasons if Contractor delivers written notice to City Engineer describing the reason for termination, giving the proposed termination date, and granting the City a reasonable opportunity to respond and cure any City default before termination is effective.
- 14.4.2 If the Contract is terminated pursuant to this Paragraph 14.4, Contractor shall comply with the requirements of Paragraphs 14.2.2 through 14.2.7.

[END OF DOCUMENT]

Document 00800

SUPPLEMENTARY CONDITIONS

The following Paragraphs amend and supplement the August 7, 2023 edition of the General Conditions. Unaltered portions of General Conditions remain in effect.

ARTICLE 1 - GENERAL PROVISIONS:

1.1 *DEFINITIONS: Insert the following Paragraphs 1.1.9.1, 1.1.23, and 1.1.25, and reorder the remaining definitions accordingly. Please insert the amended definition of "Specifications".*

1.1.9.1 The firm of \_\_\_\_\_ has been employed by the City as Construction Manager for the Work.

1.1.23 *Good Faith Efforts:* Steps taken to achieve an MBE, WBE, SBE, or PDBE goal or other requirements which, by their scope, intensity, and usefulness, demonstrate the bidder's responsiveness to fulfill the business opportunity objective, as well as the Contractor's responsibility to put forth measures to meet or exceed the MBE, WBE, SBE, or PDBE goal (Contract Goal). These steps apply from before a contract's award, through its duration, and after its conclusion, in the event the Contractor has been unsuccessful in meeting the Contract Goal. These efforts are required whether a Goal Oriented Contract or a Regulated Contract, as defined in the Office of Business Opportunity's Policy & Procedures Manual, available at <http://www.houstontx.gov/obo>.

1.1.25 *Incidental Work:* Work described as incidental shall be work defined in Document 01110 - Summary of Work, that do not have a direct pay item listed in the Document 00410B - Bid Form Part B, or less than 1% of the Contract Price and not capable of being measured. If Work is identified as Incidental Work and also covered by Bid Form Part B quantities, then the unit price item quantities in the Bid Form Part B shall govern.

1.1.45 *Specifications:* Divisions 01 through 16 of the documents that are incorporated into the Agreement, consisting of written General Requirements and requirements for Products, standards, and workmanship for the Work, and performance of related services. All specifications are amended to include, under the Measurement and Payment Section, the following sentence: "Work described as Incidental Work shall not be paid as a separate unit price item."

ARTICLE 3 - THE CONTRACTOR

3.5 *LABOR; MINORITY AND WOMEN BUSINESS ENTERPRISE COMPLIANCE: Insert the following Paragraphs, 3.5.3.1, 3.5.3.2, and 3.5.3.3.*

3.5.3.1 If the Original Contract Price is greater than One Million Dollars, Contractor shall make Good Faith Efforts to comply with the City ordinances regarding Minority Business Enterprises (MBE), Women Business Enterprises (WBE), Persons with Disabilities Business Enterprises (PDBE) and Small Business Enterprise (SBE) participation goals which are as follows:

- 3.5.3.1.1 the MBE goal is 28.0 percent,
- 3.5.3.1.2 the WBE goal is 8.0 percent, and
- 3.5.3.1.3 the PDBE goal is 0.0 percent.
- 3.5.3.1.4 Up to 50% of the advertised goal may be met at the Prime level if the Prime is a City-certified firm. The bidder must select one (1) certification type for Prime level credit. Prime level participation percentage must not exceed the individual MBE or WBE advertised goal. Prime level credit does not apply to SBE-certified firms.
- 3.5.3.1.5 On a subcontracting level only, the bidder may substitute SBE participation of no more than four percent of the MBE goal, the WBE goal, or portions of the MBE goal and WBE goal.
- 3.5.3.1.6 The bidder may not use Native-American-owned firms that are certified as MBEs to meet MBE contract goals. Native-Americans firms can only be used as SBEs in fulfillment of the above stated goals.
- 3.5.3.1.7 The bidder may not use MWSBE Suppliers to account for more than 50% of the MWSBE participation plan.

3.5.3.2 The MBE, WBE, PDBE, and SBE goals are specific to this Agreement. The Contractor shall make reasonable efforts to achieve these goals.

3.5.3.3 Failure by Contractor to comply with the goals for MBE, WBE, SBE, or PDBE is a material breach of the Agreement, which may result in termination of the Agreement, or such other remedy permitted as the City deems appropriate.

## ARTICLE 8 - TIME

8.1 *PROGRESS AND COMPLETION: Add the following Paragraph 8.1.6.1.*

8.1.6.1 Contractor shall credit the City by Change Order for inspection services for overtime work or work performed on Sundays or Legal Holidays. The amount Contractor credits the City will be \$129.00 per hour per inspector for inspection services.

## ARTICLE 9 - PAYMENTS AND COMPLETION

9.12 *LIQUIDATED DAMAGES: Insert the following Paragraph 9.12.1.1.*

9.12.1.1 The amount of liquidated damages payable by Contractor or Surety for each and every day of delay beyond Contract Time, are \$1,200.00 per day.

9.13 **CONTRACTOR BONUS:**  
 Not Applicable

**ARTICLE 11 - INSURANCE AND BONDS**

**TABLE 1  
 REQUIRED COVERAGES**

(Coverage)	(Limit of Liability)
.1 Workers' Compensation	Statutory Limits for Workers' Compensation
.2 Employer's Liability	Bodily Injury by Accident \$1,000,000 (each accident) Bodily Injury by Disease \$1,000,000 (policy limit) Bodily Injury by Disease \$1,000,000 (each employee)
.3 Commercial General Liability: Including Contractor's Protective, Broad Form Property Damage, Contractual Liability, Explosion, Underground and Collapse, Bodily Injury, Personal Injury, Products, and Completed Operations (for a period of one year following completion of the Work)	Combined single limit of \$1,000,000 (each occurrence), subject to general aggregate of \$2,000,000; Products and Completed Operations \$1,000,000 aggregate.
.4 Owner's and Contractor's Protective Liability	\$1,000,000 combined single limit each Occurrence/aggregate
.5 Installation Floater (Unless alternative coverage by City Attorney)	Value of stored equipment or material, listed on Certificates of Payments, but not yet incorporated into the Work
.6 Automobile Liability Insurance: (For automobiles furnished by Contractor in course of his performance under the Contract, including Owned, Non-owned, and Hired Auto coverage)	\$1,000,000 combined single limit each occurrence for (1) Any Auto or (2) All Owned, Hired, and Non-Owned Autos.
.7 Excess Coverage	\$1,000,000 each occurrence/combined aggregate in excess of limits specified for Employer's Liability, Commercial General Liability, and Automobile Liability
<b>.8 Optional Coverages</b>	<b>(Required when checked)</b>

<p><input checked="" type="checkbox"/> (a) Contractor's Pollution Liability including pollution coverage for Contractual Liability, Clean-up costs, Abatement, Transport and Non-owned disposal sites. Including Bodily Injury Liability, Property Damage Liability and environmental damage arising from pollution conditions caused in performance of operations. Include Asbestos and Lead if part of operations.</p> <p>(MCS-90 endorsement: To Auto Policy and removal of Pollution Exclusion)</p>	<p>\$1,000,000 each occurrence</p> <p>\$1,000,000 CSL</p>
<p><input type="checkbox"/> (b) Property &amp; Casualty Coverage: "All Causes of Loss" Builders Risk Form for directing physical change to building or plant construction on Work site and/or all land improvements including all work. [Including but not limited to earthquake, flood, boiler and machinery--including testing, damage to existing or adjoining property, time element coverage, collapse, soft costs (management, architecture, financial costs, pre-opening costs, etc.), transit coverage, off-site storage].</p>	<p>100% Contract price, including all change orders</p>
<p><input type="checkbox"/> (c) Increased Excess Coverage</p>	<p>\$ _____ each occurrence aggregate in excess of limits specified for Employer's Liability, Commercial General Liability, and Automotive Liability</p>
<p>*Defense costs are excluded from face amount of policy. Aggregate Limits are per 12-month policy period unless otherwise indicated.</p> <p>*Use Builder's Risk insurance for projects that include lift stations, plant or facility work. Include Building Wage rates in the project manual</p> <p>*Flood Hazard Insurance: Contractor shall apply for flood insurance on all insurable structures built under the Contract. A copy of the completed application must be provided to City Engineer before commencing construction of the Work. Contractor shall obtain flood hazard insurance as soon as possible and submit a copy of the policy to City Engineer. Use Flood Hazard Insurance only for projects that include structures. Do not include Flood Insurance for line projects, projects outside of the 100-year floodplain, or projects with structures less than \$10,000 in value.</p>	

**TABLE 2**  
**ADDITIONAL REQUIRED COVERAGE**  
DEFENSE COSTS EXCLUDED FROM FACE AMOUNT OF POLICY.

(Coverage)	(Limit of Liability)
<p><u>Contractor's Pollution Liability:</u> Including pollution coverage for Contractual Liability, Clean-up costs, Abatement,</p>	<p>\$1,000,000 each occurrence</p>

Transport, and Non-owned disposal sites. Including Bodily Injury Liability, Property Damage Liability, and environmental damage arising from pollution conditions caused in performance of operations. Including Asbestos and Lead if part of operations.

(MCS - 90 endorsement to Auto Policy and removal of Pollution Exclusion)

\$1,000,000  
CSL

11.5            *MAINTENANCE BONDS: Insert the following Paragraph 11.5.2.*

11.5.2            One-year Surface Correction Bond: Contractor shall provide, on the City standard form, an additional One-Year Bond in an amount equal to four percent of the Original Contract Price or cost of repair. Bond shall provide for Contractor's correction, replacement, or restoration of backfill or subsurface and surface work not in accordance with the Contract, within one year from the date the One-Year Maintenance Bond has expired.

END OF DOCUMENT

Document 00805

**EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS**  
(City of Houston Information Requirements  
for the Successful Bidder on All Construction Contracts)

**DOCUMENTS THAT MUST BE SIGNED AND RETURNED TO THE CITY OF  
HOUSTON PRIOR TO FINAL EXECUTION OF CONTRACT**

- Certification by Bidder Regarding Equal Employment Opportunity ..... EEO-3
- Total Work Force Composition of the Company..... EEO-6  
*or in lieu thereof, a copy of the latest Equal Employment Opportunity  
Commission's EEO-1 form (This information is required only if the Contractor  
has a work force of 50 or more people and the Contract is \$50,000 or more.)*
- Company's Equal Employment Opportunity Compliance Program ..... EEO-7

**INFORMATION THAT MUST BE SUPPLIED DURING THE COURSE OF THE WORK**

- Certification By Proposed Subcontractor Regarding  
Equal Employment Opportunity ..... EEO-26
- Subcontractor's Equal Employment Opportunity  
Compliance Program ..... EEO-29
- Certification by Proposed Material Suppliers, Lessors, and Professional  
Service Providers Regarding Equal Employment Opportunity ..... EEO-30

**PLEASE COMPLETE PAGES EEO-3 THROUGH EEO-7 AND MAIL TO:**

**Houston Airport System  
Office of Business Opportunity  
Contract Compliance Section  
111 Standifer Drive  
Humble, Texas 77338**

The remainder of the reports can be mailed at the appropriate time.

**EQUAL EMPLOYMENT OPPORTUNITY PROGRAM REQUIREMENTS**

The following are Equal Employment Opportunity requirements to be met and documents to be submitted to:

Houston Airport System  
Office of Business Opportunity  
Contract Compliance Section  
111 Standifer Drive  
Humble, Texas 77338

Under the conditions and terms of all City construction contract, the prime contractor is responsible for all Equal Employment Opportunity compliance, including subcontractor compliance.

**EQUAL EMPLOYMENT OPPORTUNITY FORMS (EEO Forms)**

These forms are submitted by the prime contractors at the beginning of the Project and as requested:

- EEO Forms 3, 6, and 7 by prime contractors.

These forms are submitted by all subcontractors before they begin work on the project.

- EEO Forms 26 - 29 by subcontractors.

This form is submitted by all suppliers, lessors, or professional services providers before they begin work on the project:

- EEO Form 30

**POSTING**

The following poster should be clearly displayed on each job site, or in case of annual service agreements, in the Contractor's office:

Equal Employment Opportunity is the Law Poster

**JOB SITE VISITS**

Site visits will be made by a Contract Compliance Officer who will make their presence known to the Project Manager, Supervisor, or Foreman, and will conduct interviews with employees on site.

**PAYMENT AND EVALUATION**

Upon completion of the Project, as part of the contract-awarding department's total clearance process, the Office of Business Opportunity's Contract Compliance Section must certify to the department that all EEO compliance requirements have been met.



**EQUAL EMPLOYMENT OPPORTUNITY  
PROGRAM REQUIREMENTS**

**STANDARD DOCUMENT**

**CERTIFICATION BY BIDDER REGARDING  
EQUAL EMPLOYMENT OPPORTUNITY**

**GENERAL**

In accordance with Executive Order 11246 (30 F.R. 12319-25), the implementing rules and regulations thereof, and orders of the Secretary of Labor, a certification regarding Equal Opportunity is required of bidders or prospective contractors and their proposed subcontractors prior to the award of contracts or subcontracts.

**CERTIFICATION OF BIDDER**

Bidder's Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ Fax : \_\_\_\_\_

Name of the company's EEO Officer: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Web Page/URL Address: \_\_\_\_\_

IRS Employer Identification Number: \_\_\_\_\_

Work to be performed: \_\_\_\_\_

Project No: \_\_\_\_\_

1. Participation in a previous contract or subcontract.
  - a. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.  YES  NO
  - b. Compliance reports were required to be filed in connection with such contract or subcontract.  YES  NO
  - c. Bidder has filed all compliance reports required by Executive Orders 10925, 11114, 11246, or by regulations of the Equal Employment Opportunity Commission issued pursuant to Title VII of the Civil Rights Act of 1964.  YES  NO
  - d. If answer of Item c. is "No", please explain in detail on reverse side of this certification.

**EQUAL EMPLOYMENT OPPORTUNITY  
PROGRAM REQUIREMENTS**

**STANDARD DOCUMENT**

- 2. Dollar amount of bid:\$ \_\_\_\_\_
  
- 3. Anticipated performance period in days: \_\_\_\_\_
  
- 4. Expected total number of employees to perform the proposed construction: \_\_\_\_\_
  
- 5. Nonsegregated facilities.

- a. Notice to prospective federally-assisted construction contractors

- (1) A Certification of Nonsegregated Facilities, as required by the May 9, 1967, Order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted to the recipient prior to the award of a federally-assisted construction contract exceeding \$50,000 which is not exempt from the provisions of the Equal Opportunity Clause.
  
- (2) Contractors receiving federally-assisted construction contract awards exceeding \$50,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide the forwarding of the following notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$50,000 and are not exempt from the provisions of the Equal Opportunity Clause.

The federally-assisted construction Contractor certifies that he/she does not maintain or provide any segregated facilities at any of his/her establishments, and does not permit employees to perform their services at any location, under his/her control, where segregated facilities are maintained. The federally-assisted construction Contractor certifies further that he/she will not maintain or provide segregated facilities at any of his/her establishments, and will not permit employees to perform their services at any location, under his/her control, where segregated facilities are maintained. The federally-assisted construction Contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this Contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin because of habit, local custom, or otherwise. The federally-assisted construction Contractor agrees that (except where he/she has obtained identical certifications from proposed Subcontractors for specific time periods) he/she will obtain identical certifications in duplicate from proposed Subcontractors prior to the award of subcontracts exceeding \$50,000 which are not exempt from the provisions of the Equal Opportunity Clause, and that he/she will retain the duplicate of such certifications in his/her files. The Subcontractor will include the original in his/her bid package.

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6. Race or ethnic group designation of bidder. Enter race or ethnic group in appropriate box:

- White       Black       Hispanic  
 Pacific Islander, Asian       American Indian, Aleut.

7. Gender of Owner       Male       Female

REMARKS: \_\_\_\_\_

Certification - The information above is true and complete to the best of my knowledge and belief.

\_\_\_\_\_  
Company Officer (Please Type)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

**EQUAL EMPLOYMENT OPPORTUNITY  
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**CITY OF HOUSTON  
Company Wide EEO Report**

OBO-01-13-001  
Office of Business Opportunity  
04/13

1. Check One <input type="checkbox"/> Prime <input type="checkbox"/> Subcontractor		2. Name and Address		3. FEID No.	
4. County				5. TX CSJ DOT Project No. (if Applicable)	
6. Contractor's Beginning Work Date on Project		7. City Of Houston Contract No.		8. This Report is based on Pay Period ending MM/DD/YYYY	

**9. TEXAS CONSTRUCTION EMPLOYMENT**

JOB CATEGORIES	TABLE A																		TABLE B	
	TOTAL EMPLOYEES		TOTAL MINORITIES		WHITE (Not of Hispanic Origin)		BLACK (Not of Hispanic Origin)		HISPANIC		AMERICAN INDIAN or ALASKAN NATIVE		ASIAN		NATIVE HAWAIIAN OR OTHER PACIF ISL		TWO OR MORE RACES		On-The-Job Trainees (OJT)	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
OFFICIALS (MANAGERS)	0	0	0	0																
SUPERVISORS	0	0	0	0																
FOREMEN/WOMEN	0	0	0	0																
ADMIN SUPPORT	0	0	0	0																
EQUIPMENT OPERATORS	0	0	0	0																
MECHANICS	0	0	0	0																
TRUCK DRIVERS	0	0	0	0																
IRONWORKERS	0	0	0	0																
CARPENTERS	0	0	0	0																
CEMENT MASONS	0	0	0	0																
ELECTRICIANS	0	0	0	0																
PIPEFITTERS, PLUMBERS	0	0	0	0																
PAINTERS	0	0	0	0																
LABORERS, SEMI-SKILLED	0	0	0	0																
LABORERS, UNSKILLED	0	0	0	0																
<b>TOTALS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE C																		OJT TOTALS	
On-The-Job Trainee																		M	F
																		0	0

10. IF ANY EMPLOYEES REPORTED IN 'TABLE A' ARE APPRENTICES, NAME OF THE PROGRAM, JOB CATEGORY, COUNT, RACE & SEX.

11. SUMMARIZE ALL HIRES FOR THE ENTIRE ACTIVE MONTH BY JOB CATEGORY, RACE, SEX (USE ADDITIONAL SHEET IF NEEDED).

	PRINTED NAME-FIRST/LAST	EMAIL ADDRESS	PHONE	SIGNATURE	DATE
12. PREPARER					
13. REVIEWER					

**EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE PROGRAM  
FOR**

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**Name of Company**

The Company's Office of Business Opportunity Program shall consist of documented good faith efforts to comply with the goals, timetables, and objectives set forth in the following Affirmative Action steps:

- A. City of Houston's Specific Equal Employment Opportunity Policy and Clause as contained in City Council Ordinance No. 78-1538, passed August 9, 1978.
- B. Notice of Requirement for Office of Business Opportunity to ensure Equal Employment Opportunity (Executive Order 11246).
- C. Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246).

Project: \_\_\_\_\_

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Company Officer (Please Type)

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Signature

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Date

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

**SPECIAL PROVISIONS  
SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY POLICY**

**1. GENERAL**

- a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity are required by Executive Order 11246, as amended. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for Project activities under this Contract and shall supplement the notice of requirement for affirmative action to ensure equal employment opportunity and standard federal equal employment opportunity construction contract specifications.
- b. The Contractor shall work with the City and the Federal Government in carrying out equal employment opportunity obligations and in their review of his/her activities under the Contract.
- c. The prime Contractor and all Subcontractors holding subcontracts of \$50,000 or more shall comply with the following minimum specific requirement activities of equal employment opportunity. The Contractor shall include these requirements in every subcontract of \$50,000 or more with such modification of language as is necessary to make them binding on the Subcontractor.

**2. EQUAL EMPLOYMENT OPPORTUNITY POLICY**

The Contractor shall accept as his/her operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, age, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, color, sex, or national origin. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

**3. EQUAL EMPLOYMENT OPPORTUNITY OFFICER**

The Contractor shall designate and make known to the City contracting officers an equal employment opportunity officer (hereinafter referred to as the EEO Officer) who must be capable of effectively administering and promoting an active Contractor program of equal employment opportunity and who must be assigned adequate authority and responsibilities to do so.

**4. DISSEMINATION OF POLICY**

- a. All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement the Contractor's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure that the above agreement will be met, the following actions shall be taken as a minimum:
  - (1) Periodic meetings of supervisory and personnel office employees shall be conducted before the start of work and then not less often than once every six months, at which time the Contractor's equal employment opportunity policy and its implementation will be reviewed and explained. The meetings shall be conducted by the EEO Officer or other knowledgeable company official.
  - (2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, or other knowledgeable company official, covering all major aspects of the Contractor's equal employment opportunity obligations, within 30 days following their reporting for duty with the Contractor.
  - (3) The EEO Officer or appropriate company official shall instruct all employees engaged in the direct recruitment of employees for the Project relative to the methods followed by the Contractor in locating and hiring minorities and females.
- b. In order to make the Contractor's equal employment opportunity policy known to all employees, prospective employees, and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the Contractor shall take the following actions:
  - (1) Notices and posters setting forth the Contractor's equal employment opportunity policy shall be placed in areas readily accessible to employees, applicants for employment, and potential employees.
  - (2) The Contractor's equal employment opportunity policy and the procedures to implement such policy shall be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

## 5. RECRUITMENT

- a. When advertising for employees, the Contractor shall include in all advertisements for employees the notation "An Equal Opportunity Employer". All such advertisements will be published in newspapers, or

**EQUAL EMPLOYMENT OPPORTUNITY  
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other publications, having a large circulation among minority groups in the area from which the Project work force would normally be derived.

- b. The Contractor shall, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee-referral sources likely to yield qualified minority-group applicants, including, but not limited to, State employment agencies, schools, colleges, minority-group organizations, and female recruitment agencies. To meet this requirement, the Contractor shall, through his/her EEO Officer, identify sources of potential minority and female employees, and establish with such identified sources procedures whereby such group applicants may be referred to the Contractor for employment consideration.

In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he/she is expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with equal employment opportunity Contract provisions. (The U. S. Department of Labor has held that where implementation of such agreements has the effect of discriminating against minorities or women, or obligates the Contractor to do the same, such implementation violates Executive Order 11246 as amended).

- c. The Contractor shall encourage his/her present employees to refer female or minority-group applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring such applicants will be discussed with employees.

**6. PERSONNEL ACTIONS**

- a. Wage, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff and termination, shall be taken without regard to race, color, religion, sex, national origin, or age. The following procedures shall be followed:

- (1) The Contractor shall conduct periodic inspections of Project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of Project-site personnel.
- (2) The Contractor shall periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- (3) The Contractor shall periodically review selected personnel actions in depth to determine whether there is evidence of discrimination.

Where evidence is found, the Contractor shall promptly take corrective action. If the review indicates that the discrimination may



extend beyond the actions reviewed, such corrective action shall include all affected persons.

- (4) The Contractor shall promptly investigate all complaints of alleged discrimination made in connection with his/her obligations under this Contract, shall attempt to resolve such complaints, and shall take appropriate corrective action. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the Contractor shall inform every complainant of all avenues of appeal.

## 7. TRAINING AND PROMOTION

- a. The Contractor shall assist in locating, qualifying, and increasing the skills of minority-group and women employees and applicants for employment.
- b. Consistent with the Contractor's work force requirements and as permissible under Federal and State regulations, the Contractor shall make full use of training programs, i.e., apprenticeship and on-the-job training programs, for the geographical area of Contract performance.
- c. The Contractor shall advise employees and applicants for employment of available training programs and entrance requirements for each.
- d. The Contractor shall periodically review the training and promotion potential of minority-group and women employees and shall encourage eligible employees to apply for such training and promotion.

## 8. UNIONS

If the Contractor relies in whole or in part upon unions as a source of employees, he/she shall use his/her best efforts to obtain the cooperation of such unions to increase minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the Contractor, either directly or through a contractor's association acting as his/her agent, will include the procedures set forth below:

- a. The Contractor shall use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority-group members and women for membership in the unions and increasing the skills of minority-group employees and women so that they may qualify for higher-paying employment.
- b. The Contractor shall use best efforts to incorporate an equal employment opportunity clause into all union agreements to the end that such unions will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, or age.

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- c. The Contractor is to obtain information as to the referral practices and policies of the labor union, except that to the extent such information is within the exclusive possession of the labor union, and such labor union refuses to furnish such information to the Contractor, the Contractor shall so certify to the City and shall set forth what efforts have been made to obtain such information.
- d. In the event the union is unable to provide the Contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the Contractor shall, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, age, sex, or national origin, making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U. S. Department of Labor has held that it shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such Contractor shall immediately notify the City.

9. SUBCONTRACTING

- a. The Contractor shall use his/her best efforts to solicit bids from and to utilize minority-group and female subcontractors or subcontractors with meaningful minority-group and/or female representation among their employees.
- b. The Contractor shall use his/her best efforts to assure Subcontractors' compliance with their equal employment opportunity obligations.

10. RECORDS AND REPORTS

- a. The Contractor shall keep such records as are necessary to determine compliance with the Contractor's equal employment opportunity obligations. The records kept by the Contractor will be designed to indicate:
  - (1) The number of minority and non-minority group members and women employed in each work classification on the Project.
  - (2) The progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to contractors who rely in whole or in part on unions as a source of their work force).
  - (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees.

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- (4) The progress and efforts being made in securing the services of female and minority subcontractors.
  
- b. All records, including payrolls, must be retained for a period of three years following completion of the Contract work and shall be available at reasonable times and places for inspection by authorized representatives of the City and/or the appropriate federal agency.

CITY OF HOUSTON, TEXAS

EQUAL EMPLOYMENT OPPORTUNITY CLAUSE

Pursuant to City Council Ordinance No. 78-1538, passed August 9, 1978, all contracts entered into by the City of Houston involving the expenditure of \$50,000 or more, shall incorporate the following Equal Employment Opportunity Clause:

1. The Contractor, Subcontractor, vendor, Supplier, or lessee shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, or age. The Contractor, Subcontractor, vendor, Supplier, or lessee shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, sex, national origin, or age. Such action will include, but not be limited to, the following: employment; upgrading; demotion or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor, Subcontractor, vendor, Supplier, or lessee agrees to post in conspicuous places available to employees, and applicants for employment, notices to be provided by the City setting forth the provisions of this Equal Employment Opportunity Clause.
2. The Contractor, Subcontractor, vendor, Supplier, or lessee states that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, national origin, or age.
3. The Contractor, Subcontractor, vendor, Supplier, or lessee shall send to each labor union or representatives of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer advising the said labor union or workers' representative of the Contractor's and Subcontractor's commitments under Section 202 of Executive Order No. 11246, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The Contractor, Subcontractor, vendor, Supplier, or lessee will comply with all provisions of Executive Order No. 11246 and the rules, regulations, and relevant orders of the Secretary of Labor or other Federal Agency responsible for enforcement of the equal opportunity and affirmative action provisions applicable, and shall likewise furnish all information and reports required by the Mayor and/or Contractor Compliance Officers for purposes of investigation to ascertain and effect compliance with this program.
5. The Contractor, Subcontractor, vendor, Supplier, or lessee shall furnish all information and reports required by Executive Order No. 11246, and by

**EQUAL EMPLOYMENT OPPORTUNITY  
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the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and shall permit access to all books, records, and accounts by the appropriate City and Federal officials for purposes of investigation to ascertain compliance with such rules, regulations, and orders. Compliance reports filed at such times as directed shall contain information as to the employment practice policies, program, and work force statistics of the Contractor, Subcontractor, vendor, Supplier, or lessee.

6. In the event of a Contractor's, Subcontractor's, vendor's, Supplier's, or lessee's non-compliance with the non-discrimination clause of this Contract or with any of such rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part, and the Contractor, Subcontractor, vendor, Supplier, or lessee may be declared ineligible for further City contracts in accordance with procedures provided in Executive Order No. 11246, and such other sanctions may be imposed and remedies invoked as provided in said Executive Order, or by rule, regulation, or order of the Secretary of Labor, or as may otherwise be provided by law.
7. The Contractor shall include the provisions of paragraphs 1 through 8 of this Equal Employment Opportunity Clause in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965 so that such provisions will be binding upon each Subcontractor or vendor. The Contractor shall take such action with respect to any subcontractor or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event the Contractor becomes involved in, or is threatened with litigation with a Subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.
8. The Contractor shall file and shall cause each of his Subcontractors, if any, to file compliance reports with the City in the form and to the extent as may be prescribed by the Office of Business Opportunity. Compliance reports filed at such times as directed shall contain information as to the practices, policies, programs, employment policies, and employment statistics of the Contractor and each Subcontractor.

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**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION  
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY  
(EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

Timetables	Goals for Minority Participation for Each Trade	Goals for Female Participation for Each Trade
	(Refer to Document 00800)	(Refer to Document 00800)

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally-assisted) performed in the covered area.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals established for the geographical area where the Contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the Contract, the Executive Order, and regulations in 41 CFR part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$50,000 at any tier for construction work under the Contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the Subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the Contract is to be performed.
4. As used in this Notice, and in the Contract resulting from this solicitation, the "covered area" is The Houston, Texas Standard Metropolitan Statistical Area.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY  
CONSTRUCTION CONTRACT SPECIFICATIONS  
(EXECUTIVE ORDER 11246)

1. As used in these specifications:
  - a. "Covered area" means the geographical area described in the solicitation from which this Contract resulted;
  - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
  - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U. S. Treasury Department Form 941.
  - d. "Minority" includes:
    - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
    - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
    - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
    - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$50,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this Contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U. S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be

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able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in Paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this Contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women, shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
  - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which Contractor's employees are assigned to work. The Contractor, where possible, shall assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
  - b. Establish and maintain a current list of minority and female recruitment



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sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

- c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
- d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
- f. Disseminate the Contractor's EEO policy: by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions, including specific review of these items with on-site supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

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- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other contractors and subcontractors with whom the Contractor does or anticipates doing business.
  - i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
  - j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
  - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
  - l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare, through appropriate training, etc., for such opportunities.
  - m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
  - n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
  - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
  - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist

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in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is under-utilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in Paragraph 7 of these Specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.B.
14. The Contractor shall designate a responsible official to monitor all employment-related activity to ensure that the company EEO policy is being carried out, to

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submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee the name, address, telephone number, construction trade, union affiliation, if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily-understandable and retrievable form; however to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

DESCRIPTION OF JOB CATEGORIES

Officials, Managers, and Administrators

Occupations requiring administrative personnel who set board policies, exercise overall responsibility for the execution of these policies, or provide specialized consultation on a regional, district, area basis, or direct individual departments or special phases of a firm's operations.

Includes: Officials, executives, middle management, plant managers, department managers, superintendents, salaried foremen who are members of management, purchasing agents, buyers, bureau chiefs, directors, deputy directors, wardens, examiners, sheriffs, police and fire chiefs, and kindred workers.

Professionals

Occupations which require specialized and theoretical knowledge which is usually acquired through college or experience of such kind and amount as to provide a comparable background.

Includes: Accountants, auditors, airplane pilots and navigators, architects, artists, chemists, designers, dieticians, editors, engineers, lawyers, librarians, mathematicians, natural scientists, registered professional nurses, personnel and labor relations workers, physical scientists, teachers, social workers, doctors, psychologists, economists, systems analysts, employment and vocational rehabilitation counselors, instructors, police and fire captains and lieutenants, and kindred workers.

Paraprofessionals

Occupations in which workers perform some of the duties of a professional or technician in a supportive role, which usually requires less formal training and/or experience normally required for professional or technical status. Such positions may fall within an identified pattern of a "New Careers" concept.

Includes: Library assistants, medical aides, child support workers, police auxiliary, welfare service aides, recreation assistants, homemakers aides, home health aides, and kindred workers.

Technicians

Occupations requiring a combination of basic scientific knowledge and manual skill which can be obtained through about two (2) years of post high school education, such as is offered in many technical institutes and junior colleges, or through equivalent on-the-job training.

Includes: Computer programmers and operators, draftsmen, engineering aides,

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junior engineers, mathematical aides, licensed practical or vocational nurses, photographers, radio operators, scientific assistants, surveyors, technical illustrators, technicians (medical, dental, electronics, physical sciences), police and fire sergeants, and kindred workers.

Protective Service Workers

Occupations in which workers are entrusted with public safety, security, and protection from destructive forces.

Includes: Police patrol officers, fire fighters, guards, deputy sheriffs, bailiffs, correctional officers, detectives, marshals, harbor patrol officers, and kindred workers.

Sales Workers

Occupations engaging wholly or primarily in direct selling.

Includes: Advertising agents and salespersons, insurance agents and brokers, real estate agents and brokers, stock and bond salespersons, demonstrators, salespersons and sales clerks, grocery clerks, cashiers, and kindred workers.

Office and Clerical

Occupations in which workers are responsible for internal and external communications, recording and retrieval of data and/or information and other paper work required in an office predominantly non-manual, though some manual work not directly involved with altering or transporting the products is included.

Includes: Bookkeepers, cashiers, collectors (bills and accounts), messengers and office helpers, office machine operators, shipping and receiving clerks, stenographers, typists and secretaries, telegraph and telephone operators, court transcribers, hearing reporters, statistical clerks, dispatchers, license distributors, payroll clerks, and kindred workers.

Skilled Craft Workers

Occupations in which workers perform jobs which require special manual skill through on-the-job training and experience, or through apprenticeship or other formal training programs. These workers exercise considerable independent judgment and usually receive an extensive period of training.

Includes: The building trades, hourly paid foremen and leadmen who are not members of management, mechanics and repairmen, skilled machining occupations, compositors and typesetters, electricians, engravers, job setters (metal), motion picture projectionists, pattern and model makers, stationary engineers, tailors, heavy equipment operators, carpenters, and kindred workers.

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Operatives (semi-skilled)

Workers who operate machine or processing equipment or perform other factory-type duties of intermediate skill level which can be mastered in a few weeks and require only limited training.

Includes: Apprentices (auto mechanics), plumbers, bricklayers, carpenters, electricians, mechanics, building trades, metal workers, machinists, printing trades, operatives, attendants (auto service and parking), blasters, chauffeurs, deliverymen, dressmakers and seamstresses (except factory), dryers, furnacemen, heaters (metal), laundry and dry cleaning operatives, milliners, miners, motormen, oilers, greasers, etc. (except auto), painters (except construction and maintenance), photographic process workers, stationary firemen, truck and tractor drivers, weavers (textile), welders and flame cutters, and kindred workers.

Laborers (unskilled)

Workers in manual occupations which generally require no special training. These workers perform elementary duties that may be learned in a few days and require the application of little or no independent judgment.

Includes: Garage workers, car washers and greasers, gardeners (except farm) and groundskeepers, longshoremen and stevedores, lumbermen, craftsmen, and wood choppers, laborers performing lifting, digging, mixing, loading, and pulling operations, and kindred workers.

Service/Maintenance Workers

Occupations in which workers perform duties which result in or contribute to the comfort, convenience, hygiene, or safety for the general public, or which contribute to the upkeep and care of buildings, facilities or grounds, or public property. Workers in this group may operate machinery.

Includes: Chauffeurs, laundry and dry cleaning operatives, truck drivers, trash collectors, custodial personnel, gardeners and groundskeepers, construction laborers, attendants (hospital and other institutions), professional and personal service, counter and fountain workers, elevator operators, firemen and fire protection, guards, watchmen and doorkeepers, stewards, porters, waiters, and kindred workers.

**CERTIFICATION BY PROPOSED SUBCONTRACTOR REGARDING  
EQUAL EMPLOYMENT OPPORTUNITY**

\_\_\_\_\_  
Name of Prime Contractor Project WBS & OA Number

\_\_\_\_\_  
Address

**GENERAL**

In accordance with Executive Order 11246 (30 F.R. 12319-25), the implementing rules and regulations thereof, and orders of the Secretary of Labor, a certification regarding Equal Opportunity is required of bidders or prospective contractors and their proposed subcontractors prior to the award of contracts or subcontracts.

**SUBCONTRACTOR'S CERTIFICATION**

Subcontractor's Name: \_\_\_\_\_

Address: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

IRS Employer Identification Number: \_\_\_\_\_

Job Description: \_\_\_\_\_  
(Work performed by your company for this project)

1. Participation in a previous contract or subcontract.
  - a. Subcontractor has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.  YES  NO
  - b. Compliance reports were required to be filed in connection with such contract or subcontract.  YES  NO
  - c. Subcontractor has filed all compliance reports required by Executive Orders 10925, 11114, 11246, or by regulations of the Equal Employment Opportunity Commission issued pursuant to Title VII of the Civil Rights Act of 1964.  YES  NO
  - d. If answer of Item c. is "No", please explain in detail on reverse side of this certification.

2. Dollar amount of proposed subcontract: \$ \_\_\_\_\_



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3. Anticipated performance period in days: \_\_\_\_\_
4. Expected total number of employees to perform the proposed subcontract: \_\_\_\_\_
5. Nonsegregated facilities.
  - a. Notice to prospective federally-assisted construction contractors
    - (1) A Certification of Nonsegregated Facilities, as required by the May 9, 1967, order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted to the Contractor prior to the award of a subcontract exceeding \$50,000 which is not exempt from the provisions of the Equal Opportunity Clause.
    - (2) Contractors receiving subcontract awards exceeding \$50,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$50,000 and are not exempt from the provisions of the Equal Opportunity clause.
  - b. Certification of non-segregated facilities

The federally-assisted construction contractor certified that he/she does not maintain or provide any segregated facilities at any of his/her establishments, and does not permit employees to perform their services at any location, under his/her control, where segregated facilities are maintained. The federally-assisted construction Contractor certifies further that he/she will not maintain or provide any segregated facilities at any of his/her establishments, and will not permit employees to perform their services at any location, under his/her control, where segregated facilities are maintained. The federally-assisted construction Contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this Contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants, and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin because of habit, local custom, or otherwise. The federally-assisted construction Contractor agrees that (except where he/she has obtained identical certifications from proposed Subcontractors for specific time periods) he/she will obtain identical certifications in duplicate from proposed Subcontractors prior to the award of subcontracts exceeding \$50,000 which are not exempt from the provisions of the Equal Opportunity Clause, and that he/she will retain the duplicate of such certifications in his/her files. The Contractor will include the original in his/her Bid Package.

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6. Race or ethnic group designation of bidder. Enter race or ethnic group in appropriate box:

- |  |  |                                   |
|--|--|-----------------------------------|
| <input type="checkbox"/> White                   | <input type="checkbox"/> Black                   | <input type="checkbox"/> Hispanic |
| <input type="checkbox"/> Pacific Islander, Asian | <input type="checkbox"/> American Indian, Aleut. |                                   |

7. Gender

- |                               |                                 |
|-------------------------------|---------------------------------|
| <input type="checkbox"/> Male | <input type="checkbox"/> Female |
|-------------------------------|---------------------------------|

REMARKS:

Certification - The information above is true and complete to the best of my knowledge and belief.

---

Company Officer (Please Type)

---

Signature

---

Date

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

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**CITY OF HOUSTON  
Company Wide EEO Report**

OBO-01-13-001  
Office of Business Opportunity  
04/13

1. Check One ___ Prime ___ Subcontractor	2. Name and Address	3. FEID No.
4. County		5. TX CSJ DOT Project No. (if Applicable)
6. Contractor's Beginning Work Date on Project	7. City Of Houston Contract No.	8. This Report is based on Pay Period ending MM/DD/YYYY

**9. TEXAS CONSTRUCTION EMPLOYMENT**

JOB CATEGORIES	TABLE A																		TABLE B	
	TOTAL EMPLOYEES		TOTAL MINORITIES		WHITE (Not of Hispanic Origin)		BLACK (Not of Hispanic Origin)		HISPANIC		AMERICAN INDIAN or ALASKAN NATIVE		ASIAN		NATIVE HAWAIIAN OR OTHER PACIF ISL		TWO OR MORE RACES		On-The-Job Trainees (OJT)	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
OFFICIALS (MANAGERS)	0	0	0	0																
SUPERVISORS	0	0	0	0																
FOREMEN/WOMEN	0	0	0	0																
ADMIN SUPPORT	0	0	0	0																
EQUIPMENT OPERATORS	0	0	0	0																
MECHANICS	0	0	0	0																
TRUCK DRIVERS	0	0	0	0																
IRONWORKERS	0	0	0	0																
CARPENTERS	0	0	0	0																
CEMENT MASONS	0	0	0	0																
ELECTRICIANS	0	0	0	0																
PIPEFITTERS, PLUMBERS	0	0	0	0																
PAINTERS	0	0	0	0																
LABORERS, SEMI-SKILLED	0	0	0	0																
LABORERS, UNSKILLED	0	0	0	0																
<b>TOTALS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE C																		OJT TOTALS			
																		M	F		
On-The-Job Trainee																				0	0

10. IF ANY EMPLOYEES REPORTED IN 'TABLE A' ARE APPRENTICES, NAME OF THE PROGRAM, JOB CATEGORY, COUNT, RACE & SEX.

11. SUMMARIZE ALL HIRES FOR THE ENTIRE ACTIVE MONTH BY JOB CATEGORY, RACE, SEX (USE ADDITIONAL SHEET IF NEEDED).

12. PREPARER	PRINTED NAME-FIRST/LAST	EMAIL ADDRESS	PHONE	SIGNATURE	DATE
13. REVIEWER					



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CERTIFICATION BY PROPOSED MATERIAL SUPPLIERS,  
LESSORS, AND PROFESSIONAL SERVICE PROVIDERS  
REGARDING EQUAL EMPLOYMENT OPPORTUNITY

Company Name: \_\_\_\_\_ \$ \_\_\_\_\_  
(Supplier, Lessor, Professional Service Provider) (Amount of Contract)

Company Address: \_\_\_\_\_

Company Telephone Number: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Web Page/URL Address: \_\_\_\_\_

Company Tax Identification Number: \_\_\_\_\_

Project Name & No.: \_\_\_\_\_

Materials/Services Provided: \_\_\_\_\_

In accordance with Chapter 15 of the City of Houston's Code of Ordinances, Supplier/Lessor/Professional Service Provider represents to be an equal opportunity employer and agrees to abide by the terms of the Ordinance. This certification is required of all Suppliers/Lessors/Professional Service Providers providing goods or service to this project with agreements \$50,000 or more.

- Yes  No Supplier agrees not to discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, or age.
- Yes  No Supplier agrees that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, national origin, or age.
- Yes  No Supplier will comply with all provisions of **Executive Order No. 11246** and rules, regulations and applicable orders of the Department of Labor or other Federal Agency responsible for enforcement of applicable equal opportunity and affirmative action provisions and will likewise furnish all information and reports required by the Mayor or Contract Compliance Officers for the purpose of investigation to ascertain and effect compliance with the City of Houston's Office of Business of Opportunity.
- Yes  No The Supplier shall file and cause their sub-tier contractors to file compliance reports with the City in the form and to the extent as may be prescribed by the Mayor or Contract Compliance Officers. Compliance reports filed at such times as directed shall contain information including, but not limited to, the practices, policies, programs, and employment policies.

I hereby certify that the above information is true and correct.

\_\_\_\_\_  
COMPANY OFFICER (Signature)

\_\_\_\_\_  
DATE

\_\_\_\_\_  
NAME AND TITLE (Print or type)

END OF DOCUMENT

Document 00808

**REQUIREMENTS FOR THE CITY OF HOUSTON PROGRAM FOR MINORITY, WOMEN, AND  
SMALL BUSINESS ENTERPRISES (MWSBE) AND PERSONS WITH DISABILITIES  
ENTERPRISES (PDBE)**

**CONSTRUCTION CONTRACTS**

**I. GENERAL**

**A. CITY AUTHORITIES**

1. The "OBO Director" is the City of Houston's Office of Business Opportunity ("OBO") Director, or his or her designee.

City of Houston  
611 Walker Street, 7th Floor  
Houston, Texas 77002

2. The "Contracting Department" for this Project is the City of Houston Department specified in Document 00520, "Agreement."
3. The "Project Manager" for this Project is specified in Document 00550, "Contract Approval Notification."

**II. REOCCURRING REPORTS THAT MUST BE SUBMITTED DURING THE COURSE OF  
THE CONTRACT:**

**A. MWSBE MONTHLY REPORT PROCESS**

The Contractor shall complete the MWSBE Monthly Utilization Report in the Contract Compliance and Monitoring System (available at <https://houston.mwdbe.com/>).

- B. The Contractor shall further comply with applicable instructions regarding reporting and compliance, as provided in Sections III.E and III.I below.

**III. BUSINESS ENTERPRISE PROGRAM REQUIREMENTS:**

**A. PURPOSE**

This Document facilitates implementation of City of Houston, Tex. Code of Ordinances Chapter 15, Article V, § 15-81 *et seq.*, relating to MWSBE contract participation, and Code of Ordinances Chapter 15, Article VI, § 15-90 *et seq.*, relating to PDBE contract participation (collectively, the "Business Enterprise

Program” or “MWSBE”). City of Houston, Tex. Ordinance 2013-0428, May 8, 2013.

**B. POLICY**

It is the policy of the City to encourage the full participation of Minority Business Enterprises, Women Business Enterprises, and Small Business Enterprises, and Persons with Disabilities Business Enterprises, in all phases of its procurement activities and to afford them a full and fair opportunity to compete for City contracts at all levels.

**C. POLICY ELEMENTS**

1. The Contractor agrees to ensure that MWSBE firms have a full and fair opportunity to participate in the performance of City contracts. In this regard the Contractor shall make all reasonable Good Faith Efforts to meet the Contract Goals for this Contract.
2. The Contractor and any Subcontractor shall not discriminate on the basis of race, color, religion, national origin, or sex in the performance of City contracts.
3. Contractor's performance in meeting the Participation Plan Percentage will be monitored during the construction phase of the Contract by the Office of Business Opportunity (“OBO”) and the Contracting Department (the “Department”).

**D. PERCENTAGE GOALS**

The MWSBE goals and PDBE goals, if any, for the Work are specified in Document 00800, “Supplementary Conditions.”

**E. CONTRACTOR RESPONSIBILITIES**

1. **Prior to Award:**

The Bidder shall submit MWSBE documents in accordance with the requirements of Document 00410, “Bid Form Part A.”

  - a. In accordance with the Code of Ordinances and the OBO Good Faith Efforts Policy (Attachment A), the Department shall approve an “MWSBE Participation Plan,” Document 00470 (the “Bidder’s Plan” or “Plan”), within three business days of the Bid Opening only if the Department representative determines that Bidder’s Plan meets the advertised Contract Goals and is administratively complete.
  - b. If the Department cannot approve the Bidder’s Plan, it shall forward

- the Plan to OBO, who shall review the Bidder's Plan, and if applicable, the Bidder's Document 00471, "Pre-Bid Good Faith Efforts," and Document 00472, "Bidder's MWSBE Goal Deviation Request," and determine whether the Bidder has made Good Faith Efforts to meet the Contract Goals within 10 business days of the Bid Opening.
- c. The Bidder may not use MWSBE Suppliers to account for more than 50% of the MWSBE participation plan.
  - d. If the bidder is an MBE or WBE firm certified by the City of Houston, the Bidder may use its self-performance on the contract to satisfy up to 50% of the overall goal specified in Document 00800. If the Bidder is certified as both an MBE and WBE firm, the Bidder must select one (1) certification type for which goal credit will be provided.
  - e. If OBO determines that the Bidder has failed to provide a valid participation plan or make Good Faith Efforts, or if the Bidder fails to provide documents and associated information required by this Document 00808 or reasonably requested in writing by OBO, OBO may declare the Bidder to be non-responsible.
  - f. If OBO determines that the Bidder has made Good Faith Efforts, OBO may approve Document 00472, "Bidder's Contract MWSBE Goal Deviation Request." Thereafter, the Bidder/Contractor shall be bound by the Plan, as approved or modified by OBO.
  - g. The Contractor shall:
    - (1) ensure that all MWSBE firms listed in the Plan are certified by the OBO prior to bid date. Qualified, non-certified firms may obtain priority consideration for certification if no more than two firms are certified with the same capability as the non-certified firm;
    - (2) execute written contracts with all certified Subcontractors and Suppliers. All such contracts must be executed and sent to OBO and the Contracting Department within 30 days after the date of the Notice to Proceed and must include provisions set forth in Articles 3 and 5 of Document 00700, "General Conditions;" and
    - (3) designate an MWSBE liaison officer who will administer the Contractor's MWSBE program and who shall document and maintain records of Good Faith Efforts to subcontract with MWSBE Subcontractors and Suppliers, in addition to self-performance towards a Contract Goal by a certified MBE or WBE Contractor, if applicable.

**2. After Award:**

- a. The Contractor shall submit MWSBE Monthly Utilization Reports, as requested in Article II above.



- b.** The Contractor shall complete and submit to OBO a deviation request if the Contractor reasonably believes that it will not achieve the Business Enterprise Program Participation Plan Percentage documented in the Plan and/or will not use in each Certified Firm in accordance with the Approved Plan before the Contractor uses another firm to perform the work.
- c.** The Contractor shall conform to the Plan unless OBO approves a deviation request. OBO shall approve or reject a request for deviation within five business days of receipt of the request.
- d.** OBO shall approve a deviation request if:
  - (1)** for a reason beyond the Contractor's control, the Contractor is unable to use the certified MWSBE firm in the Plan to perform the specified work. In such cases, the Contractor shall use and document Good Faith Efforts to find a similarly qualified, certified MWSBE firm to perform such specified work; or
  - (2)** the Contractor reasonably believes that, due to a change of scope, execution of the work in accordance with the directions from the Contracting Department, it is unlikely to meet the terms of the Plan. In such cases, the Contractor shall use and document Good Faith efforts to achieve MWSBE participation on the remaining work on the Contract.
  - (3)** OBO shall not unreasonably withhold approval of a deviation request.
- e.** After the Date of Substantial Completion, OBO shall evaluate the Contractor's Good Faith Efforts towards meeting the Plan, as it may be amended.
- f.** If the Contractor fails to conform to the Plan and fails to submit a Post-Award Deviation Request or provide documents and associated information required by the Good Faith Efforts Policy or reasonably requested in writing by OBO, OBO may impose sanctions in accordance with Article VI of this Document 00808.

**F. ELIGIBILITY OF MWSBE FIRMS FOR GOAL CREDIT**

- 1.** To ensure that the City's Business Enterprise Program benefits only those firms that are owned and controlled by a minority person(s), a woman (women), a person(s) with a disability, or a small business enterprise, OBO will certify the eligibility of MWSBE and PDBE Contractors, Subcontractors, and Suppliers. Contact the OBO Certification Division at 832-393-0600 or obocertification@houston.tx.gov for information regarding certification.
- 2.** Firms must be certified by OBO at the time of bid in order to be counted towards meeting MWSBE goals at contract award, or prior to a Post-

Award Deviation Request being submitted to, and approved by, OBO. OBO maintains a Certified Minority, Women and Small Business Enterprises and Persons with Disabilities Business Enterprises Directory on the City's website. This Directory also lists federally designated Disadvantaged Business Enterprises (DBEs).

**G. DETERMINATION OF MWSBE PARTICIPATION**

MWSBE participation shall be counted toward meeting the Contract Goals in response to the following:

1. Contractor may count toward its Contract Goals only those MWSBE Subcontractors/Suppliers, or the Contractor's self-performance if Contractor is a Certified MBE or WBE, performing a Commercially Useful Function.
  - a. **COMMERCIALLY USEFUL FUNCTION** means a discrete task or group of tasks, the responsibility for performance of which shall be discharged by the MWSBE firm by using its own forces or by actively supervising on-site the execution of the tasks by another entity for whose work the MWSBE firm is responsible. In determining whether a certified firm is performing a commercially useful function, factors including but not limited to the following shall be considered: (1) whether the firm has the skill and expertise to perform the work for which it is being utilized and possesses all necessary licenses; (2) whether the firm is in the business of performing, managing, or supervising the work for which it has been certified and is being utilized; and (3) whether it is performing a real and actual service that is a distinct and verifiable element of the work called for in a contract.
2. Counting MWSBE Participation:
  - a. **Prime Level Participation:** A MBE or WBE certified Prime may count its self-performance for up to 50% of the overall advertised goal. The certified MWBE Prime may count only the work in which the MWBE has performed a Commercially Useful Function. The use of a certified MWBE Prime's self-performance to meet multiple goals (e.g., MBE and WBE) on a contract is prohibited. Prime level credit does not apply to SBE certified firms.
  - b. **Subcontractor Participation:** Once a firm is certified as a MWSBE firm, the total dollar value of the subcontract awarded to the MWSBE firm is counted toward the Contract Goals, counting only the work in which the MWSBE has performed a Commercially Useful Function. The use of one MWSBE certified firm to meet multiple goals (e.g., MBE, WBE, SBE goals) on a contract is prohibited, unless expressly approved by OBO.



during the performance of this Contract. This may be accomplished through the following: job site visits; reviewing of records and reports; and interviews of randomly selected personnel.

**I. RECORDS AND REPORTS**

1. In accordance with II.A of this Document, the Contractor shall submit an initial report outlining MWSBE participation 40 days after the Notice to Proceed date, and on or before the 15th day of each month thereafter until all MWSBE subcontracting or material supply activity is completed. Each report shall cover the preceding month's activity. The Contractor shall use the MWSBE Contract Compliance and Monitoring System (B2GNow) to meet this requirement.
2. Contractor shall maintain the following records for review upon request by OBO or the Department:
  - a. Copies of executed Subcontractor agreements;
  - b. Copies of executed purchase orders;
  - c. Documentation of payments and other transactions with MWSBE Subcontractors/ Suppliers; and
  - d. Appropriate explanations of any changes or replacements of MWSBE Subcontractors/Suppliers. All replacement MWSBE Subcontractors/Suppliers must be certified by OBO.
  - e. Any other records required by OBO or Contracting Department.
3. If a Participation Plan Percentage is not being met, the monthly report shall include a narrative description of the progress being made in MWSBE participation. MWBE Primes and MWSBE Subcontractors or MWSBE Suppliers being used to meet the Participation Plan Percentage should be identified by name and the dollar amount paid to date for work performed or materials furnished by each MWSBE during the monthly period. Reports are required when no activity has occurred in a monthly period.
4. Contractor shall retain all such records for a period of four years following completion of the Work and shall be available at reasonable times and places for inspection by authorized representatives of the City including the City Controller.

**IV. SANCTIONS:**

**A. SUSPENSION PERIOD AND WAIVER**

Pursuant to Section 15-86 of the Code of Ordinances, OBO is authorized to suspend any Contractor who has failed to make Good Faith Efforts for a period of up to, but not to exceed, five years.

**B. GUIDELINES FOR IMPOSITION OF SANCTIONS**

**1. General:**

- a. OBO shall not impose any sanction except upon evidence of specific conduct on the part of a MWSBE or Contractor that is inconsistent with, or in direct contravention of, specific applicable requirements for Good Faith Efforts.
- b. Imposition and enforcement of suspensions shall be consistent with applicable state law.

**2. Severity of Sanctions:**

- a. In determining the length of any suspension, OBO shall consider the following factors:
  - (1) Whether the failure to comply with applicable requirements involved intentional conduct or, alternatively, may be reasonably concluded to have resulted from a misunderstanding on the part of the Contractor or MWSBE of the duties imposed on them by Article V of Chapter 15 of the Code of Ordinances and these procedures;
  - (2) The number of specific incidences of failure by Contractor or MWSBE to comply;
  - (3) Whether the Contractor or MWSBE has been previously suspended;
  - (4) Whether the Contractor or MWSBE has failed or refused to provide OBO with any information requested by OBO's Director or required to be submitted to OBO's Director pursuant to law or these procedures;
  - (5) Whether the Contractor or MWSBE has materially misrepresented any applicable facts in any filing or communication to OBO; and
  - (6) Whether any subsequent restructuring of the subject business or other action has been undertaken to cure the deficiencies in meeting applicable requirements.
- b. Suspensions may be for any length of time not to exceed five years. Suspensions in excess of one year shall be reserved for cases involving intentional or fraudulent misrepresentation or concealment of material facts, multiple acts in contravention of applicable requirements, cases where the Contractor or MWSBE has been previously suspended, or other similarly egregious conduct.

**C. APPEALS**

A decision to implement a suspension may be taken after notice and an opportunity for an informal conciliation conference with OBO and a hearing by

the Contract Compliance Commission. Commission members shall not have participated in the actions or investigations giving rise to the suspension hearing.

**D. NOTICE**

1. Prior to imposing any suspension, OBO shall deliver written notice to the Contractor or MWSBE setting forth the grounds for the proposed suspension and setting a date, time, and place to appear for an informal conciliation conference with OBO, in addition to information regarding the appearance before the Contract Compliance Commission for a hearing on the matter.
2. Any notice required or permitted to be given hereunder to any Contractor or MWSBE may be given either by personal delivery or by certified United States mail, postage prepaid, return receipt requested, addressed to their most recent address as specified in the records of the Office of Business Opportunity or in the Contract, if no address is on file with the Office of Business Opportunity.

**E. HEARING PROCEDURES**

Proceedings before the Contract Compliance Commission shall be conducted in accordance with Section 15-23 of the Code of Ordinances. If the Commission, in a written decision, finds that a suspension is supported by the evidence presented, the Commission shall submit its recommendation to the Mayor and City Council.

ATTACHMENT A

**CITY OF HOUSTON  
OFFICE OF BUSINESS OPPORTUNITY GOOD FAITH EFFORTS POLICY**

**General Policy.**

Good Faith Efforts are steps taken to achieve a Contract Goal or other requirements which, by their scope, intensity and usefulness demonstrates the bidder's responsiveness to fulfill the business opportunity objective prior to the award of a contract, as well as the contractor's responsibility to put forth measures to meet or exceed the Contract Goal(s) throughout the duration of the contract.

Good Faith Efforts are required to be made and demonstrated by an apparent successful bidder on goal-oriented contracts or proposer on a regulated contract prior to award of a contract. Good Faith Efforts are required on professional services and construction contracts and on procurement of goods and non-professional service contracts with goals. If a bidder, when submitting a participation plan at the time of bid or proposal submission, anticipates it cannot or will not meet the Contract Goal(s) prior to the award, the bidder must demonstrate to Office of Business Opportunity ("OBO") it has made Good Faith Efforts to meet the Contract Goal(s), to be eligible for the contract award.

Good Faith Efforts shall be evaluated on a case-by-case basis in making a determination whether a bidder or contractor is in compliance with this policy. The efforts employed by a bidder or contractor should be those that one could reasonably expect a bidder or contractor to take if the bidder or the contractor were actively and aggressively attempting to obtain MWSBE participation sufficient to meet the Contract Goal(s). Efforts taken that are mere formalities or other perfunctory acts shall not be considered Good Faith Efforts to meet Contract Goals.

The factors provided herein are representative of the types of actions OBO will consider in determining whether the bidder or contractor made Good Faith Efforts to obtain MWSBE participation to meet the Contract Goal(s). The list of factors described below are not intended to be a mandatory checklist, nor is it intended to be exhaustive or exclusive. OBO may consider other factors or types of efforts that may be relevant in appropriate cases.

If a bidder or contractor fails to submit Good Faith Efforts documentation as provided in this Policy, it waives the right to appeal OBO decisions related to this Policy. OBO will review all the efforts made by the contractor, including the quality and quantity of those efforts.

**Pre-Award.**

A bidder must submit a participation plan, Document 00470, to OBO at the time the bidder submits the bid. If the participation by certified MWBE Primes and MWSBE subcontractors documented on the participation plan ("participation") is less than the Contract Goal(s), a bidder should submit a "Pre-Bid Good Faith Efforts," Document 00471, with the bid. A bidder

should also submit a request for a deviation, using Document 00472, if the bidder, having used Good Faith Efforts, reasonably believes that it cannot meet the Contract Goal(s) or a commercially useful deviation.

In making a determination that the bidder has made a good faith effort to meet the Contract Goal(s), OBO shall consider specific documentation<sup>1</sup> concerning the steps taken to obtain MWSBE participation, with a consideration of, by way of illustration and not limitation, whether the bidder demonstrated a genuine effort to comply with the following factors:

1. Attended any pre-bid or pre-proposal meetings scheduled by the City Department;
2. Followed up with MWSBEs that attended the pre-bid or pre-proposal meetings to discuss subcontracting and supplier opportunities and contacted MWSBEs listed in the City's online directory;
3. Conducted outreach with minority and women focused organizations and associations far in advance of solicitation due date (no less than 14 business days);
4. Identified and designated portions of the work to be performed by MWSBEs to increase the likelihood of meeting the Contract Goals (including where appropriate breaking down the contract into reasonably sized subcontracts to ensure participation);
5. Advertised subcontracting opportunities in news media focused towards minority and women persons far in advance of solicitation due date;
6. Provided MWSBEs with a point of contact that was knowledgeable about the project and possessed decision-making authority to answer questions from interested MWSBEs;
7. Provided a reasonable number of MWSBEs certified with timely written notices via email, mail, and/or fax and/or with documented contact regarding the subcontracting/supplier opportunities. A "reasonable number of MWSBEs" shall be based on the number of MWSBEs available in the directory;
8. Solicited the MWSBEs within a reasonable amount of time (no less than seven business days) before bid submission, as well as followed up with the MWSBEs solicited to determine if they were interested in submitting a bid or proposal or participating on a team.
9. Provided interested MWSBEs certified to perform the solicited work with prompt

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<sup>1</sup> A list of common supporting documentation that may allow Contractors to support their good faith efforts can be found on the Office of Business Opportunity website at [www.houstontx.gov/obo](http://www.houstontx.gov/obo).



- access to the plans, specifications, scope of work and requirements of the contract;
10. Negotiated in good faith with interested MWSBEs, and not rejecting MWSBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
  11. Entered into a formal contract, or signing enforceable letters of intent with MWSBEs;
  12. Provided an explanation to any MWSBE whose bid or price quotation is rejected, unless another MWSBE is accepted for the same work, as follows:
    - a. Where price competitiveness is not the reason for rejection, a written rejection notice including the reason for rejection will be sent to the rejected MWSBE firm;
    - b. Where price competitiveness is the reason for rejection, a meeting must be held with the price-rejected MWSBE, if requested, to discuss the rejection;
  13. Ensured that MWSBE Supplier participation did not account for more than 50% of the MWSBE participation plan.
  14. Made efforts to assist interested MWSBEs in obtaining bonding, lines of credit, insurance required for the contract, and documenting MWSBE denied by bona fide surety agents;
  15. Ensured that the conditions and requirements for subcontracts and supply agreements are commensurate with industry standards and would not cause an economic hardship on MWSBEs, such as unnecessary insurance or coupling bid bonds with retainage; and
  16. Incorporated efforts not attempted earlier or on previous bids that appear more likely to lead to attaining the Contract Goal. Past performance on similar contracts with similar scopes will also be taken in consideration when determining Good Faith Efforts. A bidder that continues to make same efforts without any significant change in the level of participation may not be making Good Faith Efforts.

**Post-Award.**

The contractor must sign the approved participation plan (Document 00470 or Document 00570) prior to starting work on the Project. A contractor should submit a request for deviation from OBO if the contractor, having made Good Faith Efforts, reasonably believes that it will not achieve the Participation Plan Percentage documented in the approved participation plan. If participation is less than anticipated in the approved participation plan, the contractor must submit supporting documentation evidencing their Good Faith Efforts. A contractor that fails to

submit a deviation request and Good Faith Efforts documentation waives the right to appeal OBO decisions related to this Policy.

If the contractor is awarded the contract and fails to achieve the established Participation Plan Percentage(s), the contractor must demonstrate to OBO its efforts to meet the Participation Plan Percentage(s) and failure to do so based on circumstances that the contractor could not reasonably control. In determining whether the contractor made Good Faith Efforts to ensure full participation and achievement of the Participation Plan Percentage, OBO shall consider the following factors:

1. Whether the contractor designated an MWSBE liaison officer to administer the Contractor's MWSBE programs and to be responsible for maintenance of records of Good Faith Efforts.
2. Whether the contractor furnished prompt MWSBE Utilization Reports in a timely and accurate manner through the online Contract Monitoring System or via hard copy.
3. Whether the contractor responded to efforts to resolve disputes with MWSBEs, and genuinely attempted to resolve these issues.
4. Whether the contractor disclosed payment discrepancies timely and within the monthly reporting period;
5. Whether the contractor complied with the participation plan, unless the contractor received a deviation from the OBO Director and whether upon approval, the contractor made Good Faith Efforts to replace a removed MWSBE with another certified firm;
6. Whether MWSBE Supplier participation accounted for more than 50% of the MWSBE participation plan;
7. Whether the contractor provided an explanation to any MWSBE whose price quotation was rejected due the following reasons:
  - Where price competitiveness was not the reason for rejection, a written rejection notice which includes the reason for rejection shall be sent to the MWSBE firm.
  - Where price competitiveness was the reason for rejection, a meeting must be held with the MWSBE firm, if requested, to discuss the rejection.
8. Whether the contractor furnished prompt written responses to written inquiries from the Director or any employee of OBO regarding the MWSBE's performance or information germane to the MWSBE's certification;
9. Whether the contractor ensured that at all times during the performance of any contract or subcontract the MWSBE firm is engaging in a commercially useful

function as that term is defined in Chapter 15 of the City of Houston Code of Ordinances;

10. Whether the contractor provided the OBO information, or other material, that was factually accurate and free of material misrepresentation;
11. Whether the contractor furnished prompt responses to requests for information, books and records needed to verify compliance from the department administering the Contract, the City Attorney and the City Controller;
12. Whether the contractor attended all meetings and mediation hearings as requested by the Director or his/her designee; and
13. How the contractor may be affected by change orders, with consideration given to the size of the change orders.

**Change Orders.**

The requirement to make Good Faith Efforts to achieve the approved Participation Plan Percentage is applicable to change orders. Contractors should make Good Faith Efforts to ensure that the Participation Plan Percentage remains substantially the same after the issuance of change orders. If a contractor cannot maintain substantially the same level of participation provided in the latest approved Participation Plan, the contractor shall submit Document 00572, "Post-Award Plan Deviation Request," to the OBO for review and potential approval. In addition to other relevant factors, in evaluating whether Good Faith Efforts were made by the contractor to meet the Participation Plan Percentage despite change orders, the OBO Director shall consider the contractor's efforts to timely and efficiently deliver the project.

END OF DOCUMENT

Document 00808

**REQUIREMENTS FOR THE CITY OF HOUSTON PROGRAM FOR  
MINORITY, WOMEN, AND SMALL BUSINESS ENTERPRISES (MWSBE) AND  
PERSONS WITH DISABILITIES ENTERPRISES (PDBE)**

**CONSTRUCTION CONTRACTS**

**I. GENERAL**

**A. CITY AUTHORITIES**

1. The "OBO Director" is the City of Houston's Office of Business Opportunity Director, or his or her designee for the Houston Airport System is: Houston Airport System  
Office of Business Opportunity  
Contract Compliance Section  
111 Standifer Drive  
Humble, Texas 77338
2. The "Contracting Department" for this Project is the City of Houston specified in Document 00520 – Agreement.
3. The "Project Manager" for this Project is specified in Document 00550, Contract Approval Notification.

**II. REOCCURRING REPORTS THAT MUST BE SUBMITTED DURING THE COURSE OF THE CONTRACT:**

**A. MWSBE MONTHLY REPORT PROCESS**

The Contractor shall complete the MWSBE Monthly Utilization Report in the Contract Compliance and Monitoring System (available at <https://houston.mwdbe.com/>).

- B.** The Contractor shall comply with further, applicable instructions regarding reporting and compliance as provided in Sections III.E and III.I below.

**III. BUSINESS ENTERPRISE PROGRAM REQUIREMENTS:**

**A. PURPOSE**

This Document facilitates implementation of City of Houston, Tex. Code of Ordinances Chapter 15, Article V, § 15-81 *et seq.*, relating to MWSBE contract participation, and Code of Ordinances Chapter 15, Article VI, § 15-90 *et seq.*, relating to PDBE contract participation (collectively, the “Business Enterprise Program or “MWSBE”). City of Houston, Tex. Ordinance 2013-0428, May 8, 2013.

**B. POLICY**

It is the policy of the City to encourage the full participation of Minority and Women-owned Business Enterprises, Small Business Enterprises, and Persons with Disabilities Business Enterprises in all phases of its procurement activities and to afford them a full and fair opportunity to compete for City contracts at all levels.

**C. POLICY ELEMENTS**

1. The Contractor agrees to ensure that MWSBE firms have a full and fair opportunity to participate in the performance of City contracts. In this regard the Contractor shall make all reasonable Good Faith Efforts to meet the Contract Goals for this Contract.
2. The Contractor and any Subcontractor shall not discriminate on the basis of race, color, religion, national origin, or sex in the performance of City contracts.
3. Contractor's performance in meeting the Participation Plan Percentage will be monitored during the construction phase of the Contract by the Office of Business Opportunity (“OBO”) and the Contracting Department (the “Department”).

**D. PERCENTAGE GOALS**

The MWSBE goals and PDBE goals, if any, for the Work are specified in Document 00800 – Supplementary Conditions Goals.

**E. CONTRACTOR RESPONSIBILITIES**

1. **Prior to Award:**

The Bidder shall submit MWSBE documents in accordance with the requirements of Document 00410 – Bid Form Part A.

  - a. In accordance with the Code of Ordinances and the OBO Good Faith Efforts Policy (Attachment A), the Department shall approve

an Apparent Low Bidder's MWSBE Participation Plan, Document 00470 (the "Bidder's Plan" or "Plan"), within three business days of the Bid Opening only if the Department representative determines that Bidder's Plan meets the advertised Contract Goal and is administratively complete.

- b.** If the Department cannot approve the Bidder's Plan, it shall forward the Plan to OBO, who shall review the Bidder's Plan, and if applicable, the Bidder's Document 00471 (Record of Good Faith Efforts) and Document 00472 (Pre-Award Deviation Request) and determine whether the Bidder has made Good Faith Efforts to meet the Contract Goals within 10 business days of the Bid Opening.
- c.** If OBO determines that the Bidder has failed to provide a valid participation plan or make Good Faith Efforts or if the Bidder fails to provide documents and associated information required by this Document 00808 or reasonably requested in writing by OBO, OBO may declare the Bidder to be non-responsible.
- d.** If OBO determines that the Bidder has made Good Faith Efforts, OBO may approve the Bidder's Contract Goal Deviation request. Thereafter, the Bidder/Contractor shall be bound by the Plan, as approved or modified by OBO.
- e.** The Contractor shall:

  - (1)** ensure that all MWSBE firms listed in the Plan are certified by the Office of Business Opportunity prior to bid date. Qualified, non-certified firms may obtain priority consideration for certification if no more than two firms are certified with the same capability as the non-certified firm.
  - (2)** execute written contracts with all certified Subcontractors and Suppliers. All such contracts must be executed and sent to OBO and Contracting Department within 30 days after the date of the Notice to Proceed and must include provisions set forth in Articles 3 and 5 of Document 00700, General Conditions; and
  - (3)** designate an MWSBE liaison officer who will administer the Contractor's MWSBE program and who shall document and maintain records of Good Faith Efforts to subcontract with MWSBE Subcontractors and Suppliers.

**2. After Award:**

- a.** The Contractor shall submit MWSBE Monthly Utilization Reports, as requested in Article II above.
- b.** The Contractor shall complete and submit to OBO a deviation request if the Contractor reasonably believes that it will not achieve the Business Enterprise Program Participation Plan Percentage documented in the Plan. The Contractors shall also

- submit to OBO, with a copy to the Contracting Department, a Record of Post-Award Good Faith Efforts (Document 00571) for each Certified Firm that the Contractor does not use in accordance with the Approved Plan before the Contractor uses another firm to perform the work.
- c. The Contractor shall conform to the Plan unless OBO approves a deviation request. OBO shall approve or reject a request for deviation within five business days of receipt of the request.
  - d. OBO shall approve a deviation request if:
    - (1) for a reason beyond the Contractor's control, the Contractor is unable to use the certified MWSBE firm in the Plan to perform the specified work. In such cases, the Contractor shall use and document Good Faith Efforts to find a similarly qualified, certified MWSBE firm to perform such specified work; or
    - (2) the Contractor reasonably believes that, due to a change of scope, execution of the work in accordance with the directions from the Contracting Department is unlikely to meet the terms of the Plan. In such cases, the Contractor shall use and document Good Faith efforts to achieve a reasonable amount of MWSBE participation on the remaining work on the Contract.
    - (3) OBO shall not unreasonably withhold approval of a deviation request.
  - e. After the Date of Substantial Completion, OBO shall evaluate the Contractor's Good Faith Efforts towards meeting the Plan, as it may be amended.
  - f. If the Contractor fails to conform to the Plan and fails to submit a Post-Award Deviation Request or provide documents and associated information required by the Good Faith Efforts Policy or reasonably requested in writing by OBO, OBO may impose sanctions in accordance with Article VI of this Document 00808.

**F. ELIGIBILITY OF MWSBE FIRMS FOR SUBCONTRACTING**

- 1. To ensure that the City's Business Enterprise Program benefits only those firms that are owned and controlled by a minority person(s), a woman (women), a person(s) with a disability, or a small business enterprise, the Office of Business Opportunity will certify the eligibility of MWSBE and PDBE Contractors, Subcontractors, and Suppliers. Contact the OBO Certification Division at 832-393-0600 for information regarding certification.
- 2. Firms must be certified by OBO at the time of bid in order to be counted towards meeting MWSBE goals. OBO maintains a Certified Minority,

Women and Small Business Enterprises and Persons with Disabilities Business Enterprises Directory on the City's website. This Directory also lists federally-designated Disadvantaged Business Enterprises (DBEs).

**G. DETERMINATION OF MWSBE PARTICIPATION**

MWSBE participation shall be counted toward meeting the Contract Goals in response to the following:

1. Contractor may count toward its Contract Goals only those MWSBE Subcontractors/ Suppliers performing a Commercially Useful Function.
  - a. **COMMERCIALLY USEFUL FUNCTION** means a discrete task or group of tasks, the responsibility for performance of which shall be discharged by the MWSBE firm by using its own forces or by actively supervising on-site the execution of the tasks by another entity for whose work the MWSBE firm is responsible. In determining whether a certified firm is performing a commercially useful function, factors including but not limited to the following shall be considered: (1) whether the firm has the skill and expertise to perform the work for which it is being utilized and possesses all necessary licenses; (2) whether the firm is in the business of performing, managing, or supervising the work for which it has been certified and is being utilized; and (3) whether it is performing a real and actual service that is a distinct and verifiable element of the work called for in a contract. Without limiting the generality of the foregoing, a MWSBE will not be considered to be performing a commercially useful function, if it subcontracts more than 50 percent of a contract being counted toward the applicable Contract Goals, unless such subcontracting in excess of 50 percent has been expressly approved by OBO either pre-bid or post award.
  - b. OBO shall approve a Plan Deviation Request if the Contractor demonstrates that the industry standard for the type of work involved is to subcontract over 50 percent of the work.
2. Once a firm is certified as a MWSBE firm, the total dollar value of the subcontract awarded to the MWSBE firm is counted toward the Contract Goals, counting only the work in which the MWSBE has performed a Commercially Useful Function. The use of one MWSBE certified firm to meet multiple goals (e.g. MBE, WBE, SBE goals) on a contract is prohibited, unless expressly approved by OBO. Safety and Participation goals do not count as a single goal concerning MWSBE/DBE requirements.
3. Native-American-owned firms that are certified as MBEs cannot be used to



meet MBE contract goals. Native-Americans firms can only be used as SBEs in fulfillment of contracts goals, with any limitations expressly stated in Document 0800.

4. The dollar value of the work performed by a certified Prime Contractor may not be counted toward the MWSBE goal unless the certified Prime Contractor is a part of a joint venture. When the Contractor or Subcontractor is in a joint venture with one or more MWSBE firms, OBO shall determine the percent of participation resulting from such joint venture to be counted toward the Contract Goals. The City may count towards the Contractor's MWSBE contract goal that portion of the total value of the contract amount paid to an MWSBE joint venturer equal to the distinct, clearly defined portion of the contract work performed by the MWSBE.
4. A MWSBE Supplier's participation will be counted towards the MWSBE goals if all of the following criteria are met. The MWSBE Supplier must:
  - a. negotiate price;
  - b. determine quality and quantity;
  - c. order the materials;
  - d. show that the invoice is in the certified firm's name;
  - e. pay for the material itself;
  - f. control delivery; and
  - g. be certified to provide the supplies in the appropriate NAICS code.

If the listed criteria above are not met, only the entire amount of fees or commissions charged for assistance in the procurement of the supplies and materials, or fees or transportation charges for the delivery of supplies or materials required on a job site will be counted towards the MWSBE goal. To be counted, proof must be provided of the fees paid and the fees must be reasonable and not excessive as compared with fees customarily allowed for similar services. MWSBE Supplier participation may account for no more than 50% of the MWSBE participation plan.

5. The OBO Policy and Procedures Manual, as amended from time to time, shall apply to the Contract for other determinations regarding counting MWSBE participation not explicitly provided for in the Contract.

## **H. CONTRACTOR COMPLIANCE**

To ensure compliance with MWSBE requirements, OBO and the Department will monitor Contractor's efforts regarding MWSBE Subcontractors/Suppliers during the performance of this Contract. This may be accomplished through the following: job site visits; reviewing of records and reports; and interviews of randomly selected personnel.

**I. RECORDS AND REPORTS**

1. In accordance with II.A of this Document, the Contractor shall submit an initial report outlining MWSBE participation 40 days after the Notice to Proceed date, and on or before the 15th day of each month thereafter until all MWSBE subcontracting or material supply activity is completed. Each report shall cover the preceding month's activity. The Contractor shall use the MWSBE Contract Compliance and Monitoring System (B2G Now) to meet this requirement.
2. Contractor shall maintain the following records for review upon request by OBO or the Department:
  - a. Copies of executed Subcontractor agreements and purchase orders;
  - b. Documentation of payments and other transactions with MWSBE Subcontractors/ Suppliers; and
  - c. Appropriate explanations of any changes or replacements of MWSBE Subcontractors/Suppliers. All replacement MWSBE Subcontractors/Suppliers must be certified by OBO.
  - d. Any other records required by OBO or Contracting Department.
3. If a Participation Plan Percentage is not being met, the monthly report shall include a narrative description of the progress being made in MWSBE participation. If sufficient MWSBE Subcontractors or Suppliers to meet the Participation Plan Percentage are being utilized, they should be identified by name and the dollar amount paid to date for work performed or materials furnished by each MWSBE during the monthly period. Reports are required when no activity has occurred in a monthly period.
4. Contractor shall retain all such records for a period of four years following completion of the Work and shall be available at reasonable times and places for inspection by authorized representatives of the City including the City Controller.

**IV. SANCTIONS:**

**A. SUSPENSION PERIOD AND WAIVER**

Pursuant to Section 15-86 of the Code of Ordinances, OBO is authorized to suspend any Contractor who has failed to make Good Faith Efforts for a period of up to, but not to exceed, five years.

**B. GUIDELINES FOR IMPOSITION OF SANCTIONS**

**1. General:**

- a. OBO shall not impose any sanction except upon evidence of specific conduct on the part of a MWSBE or Contractor that is inconsistent with, or in direct contravention of, specific applicable requirements for Good Faith Efforts.
- b. Imposition and enforcement of suspensions shall be consistent with applicable state law.

**2. Severity of Sanctions:**

- a. In determining the length of any suspension, OBO shall consider the following factors:
  - (1) Whether the failure to comply with applicable requirements involved intentional conduct or, alternatively, may be reasonably concluded to have resulted from a misunderstanding on the part of the Contractor or MWSBE of the duties imposed on them by Article V of Chapter 15 of the Code of Ordinances and these procedures;
  - (2) The number of specific incidences of failure by Contractor or MWSBE to comply;
  - (3) Whether the Contractor or MWSBE has been previously suspended;
  - (4) Whether the Contractor or MWSBE has failed or refused to provide OBO with any information requested by OBO's Director or required to be submitted to OBO's Director pursuant to law or these procedures;
  - (5) Whether the Contractor or MWSBE has materially misrepresented any applicable facts in any filing or communication to OBO; and
  - (6) Whether any subsequent restructuring of the subject business or other action has been undertaken to cure the deficiencies in meeting applicable requirements.
- b. Suspensions may be for any length of time not to exceed five years. Suspensions in excess of one year shall be reserved for cases involving intentional or fraudulent misrepresentation or concealment of material facts, multiple acts in contravention of applicable requirements, cases where the Contractor or MWSBE has been previously suspended, or other similarly egregious conduct.

**C. APPEALS**

A decision to implement a suspension may be taken after notice and an opportunity for an informal conciliation conference with OBO and a hearing by the Contract Compliance Commission. Commission members shall not have participated in the actions or investigations giving rise to the suspension hearing.

**D. NOTICE**

1. Prior to imposing any suspension, OBO shall deliver written notice to the Contractor or MWSBE setting forth the grounds for the proposed suspension and setting a date, time, and place to appear for an informal conciliation conference with OBO, in addition to information regarding the appearance before the Contract Compliance Commission for a hearing on the matter.
2. Any notice required or permitted to be given hereunder to any Contractor or MWSBE may be given either by personal delivery or by certified United States mail, postage prepaid, return receipt requested, addressed to their most recent address as specified in the records of the Office of Business Opportunity or in the Contract if no address is on file with the Office of Business Opportunity.

**E. HEARING PROCEDURES**

Proceedings before the Contract Compliance Commission shall be conducted in accordance with Section 15-23 of the Code of Ordinances. If the Commission, in a written decision, finds that a suspension is supported by the evidence presented, the Commission shall submit its recommendation to the Mayor and City Council.

ATTACHMENT A

**City of Houston  
Office of Business Opportunity  
Good Faith Efforts Policy**

**General Policy.**

Good Faith Efforts are steps taken to achieve an Contract Goal or other requirements which, by their scope, intensity and usefulness demonstrates the bidder's responsiveness to fulfill the business opportunity objective prior to the award of a contract, as well as the contractor's responsibility to put forth measures to meet or exceed the Contract Goal throughout the duration of the contract.

Good Faith Efforts are required to be made and demonstrated by an apparent successful bidder on goal oriented contracts or proposer on a regulated contract prior to award of a contract. Good Faith Efforts are required on professional services and construction contracts and on procurement of goods and non-professional service contracts with goals. If a bidder, when submitting a participation plan at the time of bid or proposal submission, anticipates it cannot or will not meet the Contract Goal prior to the award, the bidder must demonstrate to Office of Business Opportunity ("OBO") it has made Good Faith Efforts to meet the Contract Goal, to be eligible for the contract award.

Good Faith Efforts shall be evaluated on a case-by-case basis in making a determination whether a bidder or contractor is in compliance with this policy. The efforts employed by a bidder or contractor should be those that one could reasonably expect a bidder or contractor to take if the bidder were actively and aggressively attempting to obtain MWSBE participation sufficient to meet the Contract Goal. Efforts taken that are mere formalities or other perfunctory acts shall not be considered Good Faith Efforts to meet Contract Goals.

The factors provided herein are representative of the types of actions OBO will consider in determining whether the bidder or contractor made Good Faith Efforts to obtain MWSBE participation to meet the Contract Goal. The factors prescribed below are not intended to be a mandatory checklist, nor is it intended to be exhaustive or exclusive. OBO may consider other factors or types of efforts that may be relevant in appropriate cases.

If a contractor fails to submit Good Faith Efforts documentation as provided in this Policy, it waives the right to appeal OBO decisions related to this Policy. OBO will review all the efforts made by the contractor, including the quality and quantity of those efforts.

**Pre-Award.**

A bidder must submit a participation plan (Document 00470) to OBO at the time the bidder submits the bid. If the participation by certified MWSBE subcontractors documented on the participation plan (“participation”) is less than the Contract Goal, a bidder should submit a Record of Good Faith Efforts (Document 00471) with the bid. A bidder should also submit a request for a deviation (Document 00472) if the bidder, having used Good Faith Efforts, reasonably believes that it cannot meet the Contract Goal or a commercially useful deviation.

In making a determination that the bidder has made a good faith effort to meet the Contract Goals, OBO shall consider specific documentation<sup>1</sup> concerning the steps taken to obtain MWSBE participation, with a consideration of, by way of illustration and not limitation, whether the bidder demonstrated a genuine effort to comply with the following factors:

1. Attended any pre-bid or pre-proposal meetings scheduled by the City Department;
2. Followed up with MWSBEs that attended the pre-bid or pre-proposal meetings to discuss subcontracting and supplier opportunities and contacted MWSBEs listed in the City’s online directory;
3. Conducted outreach with minority and women focused organizations and associations far in advance of solicitation due date (no less than 10 business days);
4. Identified and designated portions of the work to be performed by MWSBEs to increase the likelihood of meeting the Contract Goals (including where appropriate breaking down the contract into reasonably sized subcontracts to ensure participation);
5. Advertised subcontracting opportunities in news media focused towards minority and women persons far in advance of solicitation due date;
6. Provided MWSBEs with a point of contact that was knowledgeable about the project and possessed decision-making authority to answer questions from interested MWSBEs;
7. Provided a reasonable number of MWSBEs certified with timely written notices via email, mail, and/or fax and/or with documented contact regarding the subcontracting/supplier opportunities. A “reasonable number of MWSBEs” shall be based on the number of MWSBEs available in the directory;
8. Solicited the MWSBEs within a reasonable amount of time (no less than seven business days) before bid submission, as well as followed up with the MWSBEs

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<sup>1</sup> A list of common supporting documentation that may allow Contractors to support their good faith efforts can be found on the Office of Business Opportunity website at [www.houstontx.gov/obo](http://www.houstontx.gov/obo).

solicited to determine if they were interested in submitting a bid or proposal or participating on a team.

9. Provided interested MWSBEs certified to perform the solicited work with prompt access to the plans, specifications, scope of work and requirements of the contract;
10. Negotiated in good faith with interested MWSBEs, and not rejecting MWSBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
11. Entered into a formal contract, or signing enforceable letters of intent with MWSBEs;
12. Provided an explanation to any MWSBE whose bid or price quotation is rejected, unless another MWSBE is accepted for the same work, as follows:
  - a. Where price competitiveness is not the reason for rejection, a written rejection notice including the reason for rejection will be sent to the rejected MWSBE firm;
  - b. Where price competitiveness is the reason for rejection, a meeting must be held with the price-rejected MWSBE, if requested, to discuss the rejection;
13. Made efforts to assist interested MWSBEs in obtaining bonding, lines of credit, insurance required for the contract, and documenting MWSBE denied by bona fide surety agents;
14. Ensured that the conditions and requirements for subcontracts are commensurate with industry standards and would not cause an economic hardship on MWSBEs, such as unnecessary insurance or coupling bid bonds with retainage; and
15. Incorporated efforts not attempted earlier or on previous bids that appear more likely to lead to attaining the Contract Goal. Past performance on similar contracts with similar scopes will also be taken in consideration when determining Good Faith Efforts. A bidder that continues to make same efforts without any significant change in the level of participation may not be making Good Faith Efforts.

**Post-Award.**

The contractor must sign the approved participation plan (Document 00470 or Document 00570) prior to starting work on the Project. A contractor should submit a request for deviation (Document 00572) from OBO if the contractor, having made Good Faith Efforts, reasonably believes that it will not achieve the Participation Plan Percentage documented in the approved

participation plan. Unless OBO approves a deviation, a contractor must submit to OBO a Participation Summary (Document 00660) prior to City Council's consideration of any close-out, term extension, or change order. If participation is less than anticipated in the approved participation plan, the contractor must submit a Record of Good Faith Efforts (Document 00571) along with the Participation Summary. A contractor that fails to submit a deviation request and Good Faith Efforts documentation waives the right to appeal OBO decisions related to this Policy.

If the contractor is awarded the contract and fails to achieve the established Participation Plan Percentage, the contractor must demonstrate to OBO its efforts to meet the Participation Plan Percentage and failure to do so based on circumstances that the contractor could not reasonably control. In determining whether the contractor made Good Faith Efforts to ensure full participation and achievement of the Participation Plan Percentage, OBO shall consider the following factors:

1. Whether the contractor designated an MWSBE liaison officer to administer the Contractor's MWSBE programs and to be responsible for maintenance of records of Good Faith Efforts.
2. Whether the contractor furnished prompt MWSBE Utilization Reports in a timely and accurate manner through the online Contract Monitoring System or via hard copy.
3. Whether the contractor responded to efforts to resolve disputes with MWSBEs, and genuinely attempted to resolve these issues.
4. Whether the contractor disclosed payment discrepancies timely and within the monthly reporting period;
5. Whether the contractor complied with the participation plan, unless the contractor received a deviation from the OBO Director and whether upon approval, the contractor made Good Faith Efforts to replace a removed MWSBE with another certified firm;
6. Whether the contractor furnished prompt written responses to written inquiries from the Director or any employee of OBO regarding the MWSBE's performance or information germane to the MWSBE's certification;
7. Whether the contractor ensured that at all times during the performance of any contract or subcontract the MWSBE firm is engaging in a commercially useful function as that term is defined in Chapter 15 of the City of Houston Code of Ordinances;
8. Whether the contractor provided the OBO information, or other material, that was factually accurate and free of material misrepresentation;



9. Whether the contractor furnished prompt responses to requests for information, books and records needed to verify compliance from the department administering the Contract, the City Attorney and the City Controller;
10. Whether the contractor attended all meetings and mediation hearings as requested by the Director or his/her designee; and
11. How the contractor may be affected by change orders, with consideration given to the size of the change orders.

**Change Orders.**

The requirement to make Good Faith Efforts to achieve the approved Participation Plan Percentage is applicable to change orders. Contractors should make Good Faith Efforts to ensure that the Participation Plan Percentage remains substantially the same after the issuance of change orders. If a contractor cannot maintain substantially the same level of participation provided in the latest approved Participation Plan (Document 00470 or Document 00570) due to a change order, the contractor shall submit to the OBO Director and Contracting Department a Document 00571 (Post-Award Record of Good Faith Efforts) and Document 00572 (Post-Award Plan Deviation Request) in a timely manner that does not cause disruption to the project. In addition to other relevant factors, in evaluating whether Good Faith Efforts were made by the contractor to meet the Participation Plan Percentage despite change orders, the OBO Director shall consider the contractor's efforts to timely and efficiently deliver the project.

END OF DOCUMENT

**Document 00820**

**WAGE SCALE AND PAYROLL REQUIREMENTS FOR ENGINEERING  
CONSTRUCTION**

**Wage Scale Requirements**

- 1.1 Contractor and its Subcontractors must pay the general prevailing wage rates for building construction for each craft or type of worker or mechanic employed in the execution of any building construction or repair under the Contract in accordance with Chapter 2258 of the Texas Government Code and City of Houston, Texas Ordinance Nos. 85-2070, 2000-1114, 2001-152, 2006-91 and 2006-168, and 2009-247 all as amended from time to time. City Council has determined the prevailing wage rate in the locality in which the work is being performed, which is set forth in Exhibit "A."
- 1.2 This prevailing wage rate does not prohibit the payment of more than the rates stated.
- 1.3 In bidding, Contractor warrants and represents that it has carefully examined the classifications for each craft or type of worker needed to execute the Contract and determined that such classifications in Exhibit "A" include all necessary categories to perform the work under the Contract.
- 1.4 The wage scale for engineering construction is to be applied to all site work greater than five feet from an exterior wall of new building under construction or from an exterior wall of an existing building.
- 1.5 If Contractor believes that an additional classification for a particular craft or type of worker is necessary to perform work under the Contract, it must submit with its bid a request to the Contract Compliance Division of the Office of Business Opportunity ("OBO") to use an additional labor classification not listed in Exhibit "A" and specify the proposed new classification. OBO shall determine whether a proposed classification is already covered in Exhibit "A", and, if it is, specify which classification is appropriate. OBO's decision is conclusive. If OBO decides that a new classification is necessary, it will determine the appropriate prevailing wage rate for any resurveyed, amended, new, or additional craft or type of worker not covered by Exhibit "A". Such determination must be decided in accordance with procedures established by OBO, and in compliance with Chapter 2258 of the Texas Government Code and City of Houston, Texas Ordinance Nos. 85-2070, 2000-1114, 2001-152, 2006-91, 2006-168 and 2009-247 subject to City Council approval.
- 1.6 Contractor must not use any labor classification not covered by Exhibit "A" until such classification is established and approved for use by OBO.
- 1.7 A Contractor or Subcontractor who violates Chapter 2258 of the Texas Government Code must pay to the City, \$60 per each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates set forth in Exhibit "A".
- 1.8 The City may withhold money required to be withheld under Chapter 2258 of the Texas Government Code from the final payment to Contractor or earlier payments if City

Council makes a determination that there is good cause to believe that Contractor has not complied with these provisions and Chapter 2258 of the Government Code, in which case the City may withhold the money at any time subsequent to the finding by City Council.

1.9 Contractor and Subcontractors must keep records specifying:

1.9.1 the name and classification of each worker employed under the Contract; and

1.9.2 the actual per diem wages paid to each worker, and the applicable hourly rate.

The records must be open at all reasonable hours for inspection by the officers and agents of the City.

1.10 The hourly cost of salary for non-exempt workers for labor in excess of 40 hours per worker per week, shall be calculated at 1.5 times the worker's base pay, plus 1.0 times fringe benefits, for the applicable craft and level.

### **Certified Payroll Requirements**

2.1 Employees are paid weekly, and payrolls are submitted weekly using the City of Houston's electronic payroll submission module, unless the prime Contractor has been instructed to do otherwise by the Office of Business Opportunity. When no work is done after a Contractor has started work, the Contractor is required to submit a weekly compliance statement indicating no work was performed. The payrolls must reflect the exact work and classification of the workers, the exact amount that they were paid. Workers must be paid the contracted amount (prevailing wage rates). The Contractor will be penalized \$60.00 a day for each employee who is underpaid per Texas Government Code §2258.023 for all contracts.

2.2 Payrolls must be submitted electronically & indicate whether the worker worked inside or outside the building area when both wage rates are applicable to the contract.

2.3 Payrolls must be submitted each week until all work by the contractor is complete and the electronic payroll submission is marked as final in the system.

2.4 Payrolls must cover a seven-day period from the start of the work week and must be consecutive seven-day periods until all work is complete.

2.5 Payrolls must have employees' names, addresses, last four digits of the social security numbers, and job classifications. The job classifications must be the same as the classifications on the prevailing wage rate schedule.

2.6 A payroll deduction authorization form must be submitted for each employee for any deductions other than Federal and FICA taxes.

2.7 Employees must be paid overtime (time and a half) for all hours worked over 40 hours a week on both federally and City-funded contracts.

2.8 The Contractor has the responsibility to comply with all Internal Revenue Service rules

- and regulations. Contractors who submit certified payrolls with **Owner Operators (truckers)** must submit a signed tax liability statement from Owner Operator acknowledging their responsibility for Federal Income Tax and FICA reporting obligations.
- 2.9 If the Contractor wants to use the apprentice wage rates for an employee, the apprenticeship certificates must be submitted to the Office of Business Opportunity in advance of the employee working on the project and appearing on the payroll. You must comply with the listed number of journeymen to apprentices as listed.
- 2.10 A poster of the Prevailing Wage Rate Schedule should be clearly displayed on each job site from the time the project starts until the work is completed, or in case of annual service agreements, in the Contractor's office.
- 2.11 The Contractor shall submit the "Certificate from Contractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "B") to the Monitoring Authority listed in Document 00495 prior to final execution of the contract.
- 2.12 During the work, ALL Subcontractors shall submit the "Certificate from Subcontractor Appointing Officer or Employee to Supervise Payment of Employees" (Exhibit "C") to the Monitoring Authority listed in Document 00495.
- 2.13 Upon completion of the Project, as part of the contract-awarding department's total clearance process, the Office of Business Opportunity's Contract Compliance Section must review whether the Wage Rate and Payroll Requirements were met and report the results to the department.

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**EXHIBIT "A"**

**LABOR CLASSIFICATIONS AND PREVAILING WAGE RATES FOR  
ENGINEERING CONSTRUCTION 2024**

CLASSIFICATION	RATE	CLASSIFICATION	RATE
Cement Mason / Concrete Finisher- Paving and Structures	\$12.98 **	Power Equipment Operator, Foundation Drill, Truck Mounted	\$15.89 **
Electrician * 3 Journeyman to 2 Apprentices Allowed	\$27.11	Power Equipment Operator, Front End Loader, 3 CY or less	\$13.32 **
Form Builder / Form Setter- Paving and Curb	\$12.34 **	Power Equipment Operator, Front End Loader, over 3 CY	\$13.17 **
Form Builder / Form Setter- Structures	\$12.23 **	Power Equipment Operator, Loader/Backhoe	\$14.29 **
Laborer, Asphalt Raker	\$12.36 **	Power Equipment Operator, Mechanic	\$16.96 **
Laborer, Common	\$11.02 **	Power Equipment Operator, Milling Machine	\$13.53 **
Laborer, Flagger	\$10.33 **	Power Equipment Operator, Motor Grader, Fine Grade	\$15.69 **
Laborer, Pipelayer	\$12.12 **	Power Equipment Operator, Motor Grader, Rough	\$14.23 **
Laborer, Utility	\$11.73 **	Power Equipment Operator, Off Road Hauler	\$14.60 **
Laborer, Work Zone Barricade Servicer	\$11.67 **	Power Equipment Operator, Pavement Marking Machine	\$11.18 **
Painter (Structures)	\$18.62	Power Equipment Operator, Piledriver	\$14.95 **
Power Equipment Operator, Asphalt Distributor	\$14.06 **	Power Equipment Operator, Roller, Asphalt	\$11.95 **
Power Equipment Operator, Asphalt Paving Machine	\$14.32 **	Power Equipment Operator, Roller, Other	\$11.57 **
Power Equipment Operator, Broom or Sweeper	\$12.68 **	Power Equipment Operator, Scraper	\$13.47 **
Power Equipment Operator, Concrete Paving Finishing Machine	\$13.07 **	Power Equipment Operator, Spreader Box	\$13.58 **
Power Equipment Operator, Concrete Paving, Curing, Float Texturing Machine	\$11.71 **	Servicer	\$13.97 **
Power Equipment Operator, Concrete Saw	\$13.99 **	Steel Worker, Reinforcing Steel	\$15.15 **
Power Equipment Operator, Crane, Hydraulic 80 tons or less	\$13.86 **	Steel Worker, Structural Steel	\$14.39 **
Power Equipment Operator, Crane, Lattice boom 80 tons or less	\$14.97 **	Steel Worker, Structural Steel Welder	\$12.85 **
Power Equipment Operator, Crane, Lattice boom over 80 tons	\$15.80 **	Truck Driver, Low Boy Float	\$16.03 **
Power Equipment Operator, Crawler Tractor	\$13.68 **	Truck Driver, Single Axle	\$11.46 **
Power Equipment Operator, Excavator, 50,000 pounds or less	\$12.71 **	Truck Driver, Single-or Tandem Axle Dump	\$11.48 **
Power Equipment Operator, Excavator, over 50,000 pounds	\$14.53 **	Truck Driver, Tandem Axle Tractor w/ Semi-Trailer	\$12.27 **
Power Equipment Operator, Foundation Drill, Crawler Mounted	\$17.43		
Welders - Receive rate prescribed for craft performing operation to which welding is incidental			
<p>* Apprentices- must be in an approved USDOL Program and cannot exceed ratios.  ** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.</p>			
Apprentice certification certificates must be supplied with the first weekly payroll upon which the apprentice's name appears. Laborers cannot be utilized when Apprentices are shown.			

**Engineering Prevailing Wages Classification Definitions**

**Asphalt Distributor Operator**

Drives distributor truck, sets spray bars and operates valves and levers to control distribution of bituminous material for highway surfacing. May oil, grease or otherwise service and adjust equipment as needed. Performs other related duties.

**Asphalt Paving Machine Operator**

Operates paving machine that spreads and levels asphaltic concrete on highway subgrade. Controls movement of machine, raises and lowers screed, regulates width of screed. May, oil, grease, service and adjust equipment as needed. Performs other related duties.

**Asphalt Raker**

Distributes asphaltic materials evenly over road surface by raking and brushing material to correct thickness; directs Laborers when to add or take away material to fill low spots or to reduce high spots. Performs other related duties.

**Asphalt Shoveler**

A general term used on construction work covering many unskilled classifications requiring work of a physical nature. A laborer works with all crews doing everything from pick and shovel work to cleaning up lumber with hammer, shoveling and placing concrete, uses air tools, cleans concrete joints and fills joints with sealing compound from bucket or with hose and nozzle from a central source, applies coating of oil to inside face of forms, may help set and strip forms, unloads and transports reinforcing steel, cures newly poured concrete, helps lower pipe into ditch for pipelayers, builds fences, works with dirt crew keeping construction layout stakes out of the way of dirt moving equipment.

**Broom or Sweeper Operator**

Operates a self-propelled machine to sweep and clean roadway surfaces. They may also oil, grease, service and adjust equipment as needed. Performs other related duties.

**Bulldozer Operator**

Operates a crawler tractor with a bulldozer mounted in front of chassis to level, distribute and push earth or other material. May operate a ripper attachment to break up rock or other hard material. May use a push block on front of tractor to push load scrapers. May oil, grease, or otherwise service and make minor repairs to equipment as needed. Performs other related duties.

**Carpenter, Rough**

Works from plans to build, assemble, fit together, align, plum, and set in place forms for molding concrete structures. Forms may be wood, steel, aluminum, fiberglass or any other type of material. Checks form while concrete is placed. May install miscellaneous materials integral to concrete structures. May set precast concrete elements. Prepares for slip forming traffic rail and median barrier. May install permanent metal deck forms. May work with power tools Performs other related duties.

**Concrete Finisher, Paving**

Finishes the exposed surfaces of fresh concrete paving, median barrier and every element of concrete structures to the final grade and contour structures to the final grade and contour with the use of straight edges and steel trowels. Operates bridge deck finishing machine. Finishes concrete curbs and gutters. Finishes exposed surface of concrete after forms have been removed by patching imperfections with fresh concrete, rubbing surface with abrasive stone, and directing others in removing excess or defective concrete with power tools. Performs other related duties.

**Concrete Finisher, Structures**

A worker semi-skilled in concrete finishing who assists Concrete finisher by performing specific or general duties of lesser skill and keeping Concrete Finisher supplied with materials, tools, and supplies; cleaning working area an equipment; and holding materials and tools. Performs other related duties.

**Concrete Paving Curbing Machine Operator**

Operates self - propelled machine(s) which may or may not travel on concrete paving forms, spreading and leveling fresh concrete to grade by use of augers and screeds. May oil, grease or otherwise service and make adjustments to equipment as necessary. Performs other related duties.

**Concrete Paving Finishing Machine Operator**

Operates self - propelled machine(s) which may or may not travel on concrete paving forms, spreading and leveling fresh concrete to grade by use of augers and screeds. May oil, grease or otherwise service and make adjustments to equipment as necessary. Performs other related duties.

**Concrete Paving Joint Sealer Operator**

Cleans and seals joints requiring a hot or cold sealing compound in concrete paving, sidewalks, driveway and approach slabs. May oil, grease or make necessary repairs adjustments to equipment as needed. Performs other related duties.

**Concrete Paving Saw Operator**

Operates a water-cooled power saw with either or an abrasive blade to saw expansion and contraction joints in concrete paving. May also be used to saw asphaltic pavements. May oil grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

**Concrete Paving Spreader Operator**

Operates self - propelled machine(s) which may or may not travel on concrete paving forms, spreading and leveling fresh concrete to grade by use of augers and screeds. May oil, grease or otherwise service and make adjustments to equipment as necessary. Performs other related duties.

**Concrete Rubber**

Finishes the exposed surface of concrete masonry after the forms have been removed by patching holes and broken corners with fresh concrete, rubbing surface with abrasive stone to remove rough spots, and removing high spots and defective concrete with hand chisel and hammer or pneumatic chisel and powered abrasive stone. Performs other related duties.

**Crane, Clamshell, Backhoe, Derrick, Dragline, Shovel Operator**

A worker who operates a lattice boom type crane can hoist and move materials, raise and lower heavy weights and perform other related operations. May be crawler type or rubber tired. May include placement of rock riprap, clamshell, dragline, pipe and pile driving operations. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

**Crusher and Screed Plant Operator**

Operates a crusher or screening plant through which rock is run to break it into crushed stone for construction or to control flow of materials not needed. May include minor repairs and may service and make necessary adjustments to equipment as needed. Performs other related duties.

**Electrician \* 3 Journeyman to 1 Electrician Trainee and 1 Apprentice Allowed**

Plans and directs the layout of metal electrical conduit, installs wiring systems, switch-panels, buss bars, works on overhead distribution systems and underground distribution systems. Performs other related duties.

### **Flagger**

A worker who directs traffic in or around a construction site. May use signs or devices to direct traffic. May help assemble, position and clean devices or equipment used to direct traffic. Must be able to effectively communicate with the public. May require certain level of training by TXDOT specifications. Performs other related duties.

### **Form Builder/Setter, Structures**

Fits together, aligns and sets to grade metal and wooden forms for placement of concrete. Forms may be wood, steel, aluminum, fiberglass or any other type of material. Checks forms while concrete is placed. May install miscellaneous materials integral to concrete structures. May set precast concrete elements. Prepares for slip forming traffic rail and median barrier. May install permanent metal deck forms. May work with power tools. Performs other related duties.

### **Form Liner, Paving & Curb**

Fits together, panels align and sets to grade metal and wooden forms for placement of concrete. Works with survey crew to set stringline for panels or moles. Performs other related duties.

### **Form Setter, Paving & Curb**

Fits together, align and set to grade metal and wooden forms for placement of concrete paving and curbs. Works with survey crew to set stringline for paving, curb and gutter curb. Performs other related duties.

### **Foundation Drill Operator, Crawler Mounted**

Operates a hole-drilling machine that is crawler mounted. May include geotechnical operations such as soils nails, rock nails, tiebacks, anchors and jet grouting. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

### **Foundation Drill Operator, Truck Mounted**

Operates a hole drilling machine that is mounted on the rear of a rubber-tired vehicle or truck. May include soils nails, rock nails, tiebacks, anchors and jet grouting. Drive truck from location to location or may have laborer who drives truck. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

### **Front End Loader Operator**

Operates a rubber tired, skid steer or crawler type tractor with an attached scoop type bucket on front end. Machine is used to load materials from stockpiles, excavation, charging batch plants, loading and unloading trucks. May be used with attachments in lieu of the bucket. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

### **Laborer, Common**

A general term used on construction work covering many unskilled classifications requiring work of a physical nature. A laborer works with all crews doing everything from pick and shovel work to cleaning up lumber with hammer, shoveling and placing concrete, uses air tools, cleans concrete joints and fills joints with sealing compound from bucket or with hose and nozzle from a central source, applies coating of oil to inside face of forms, may help set and strip forms, unloads and transports reinforcing steel, cures newly poured concrete, helps lower pipe into ditch for pipelayers, builds fences, works with dirt crew keeping construction layout stakes out of the way of dirt moving equipment.

### **Laborer, Utility**

Performs a variety of manual duties, usually working in a utility capacity by working on multiple projects and tasks where demands require workmen with varied experience and ability to work without close



direction. Unloads and transports reinforcing steel. May occasionally place and tie reinforcing steel. Directs common laborers in pouring concrete. Erects shoring and bracing. Assists in installation of pipe. Installs, operate and maintains dewatering systems. May assist equipment operators in positioning machines, verifying grades and signaling operators. Directs truck drivers and scraper operators to dumping positions to maintain grades as directed. Uses power tools and air tools. May work as lead man in a labor crew. His performance of a wide variety of construction jobs distinguishes him from a helper assigned to a specific craft. Installs and maintains erosion control. Is more or less a general utility construction worker. May be second step in learning a skill and may later become a helper in a specific classification. Performs other related duties.

### **Manhole Builder**

Constructs a means of permanent access to water and sewer lines for maintenance purposes. This work consists of laying brick or concrete slab at bottom of ditch up to an approximate grade line near the surface of the ground. Brick or block is normally laid to form a nearly circular manhole. Brick or block is laid in by eyesight and is normally to a plumb line. Chipped or culled brick can be used quite often is. No effort may be made to keep mortar off the face of the brick and joints are not pointed. May apply coating of concrete to interior and exterior surface. Performs other related duties.

### **Mechanic**

Assembles, set up, adjusts and maintains and repairs all types of construction equipment and trucks. He may perform the duties of a welder in repair of equipment. Performs other related duties.

### **Milling Machine Operator, Fine Grade**

Operates a power-driven milling machine that planes material of the to roadbed and discharges the material into a hauling unit or a windrow. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

### **Mixer Operator**

Performs a variety of manual duties, usually working in a utility capacity by working on multiple projects and tasks where demands require workmen with varied experience and ability to work without close direction. Unloads and transports reinforcing steel. May occasionally place and tie reinforcing steel. Directs common laborers in pouring concrete. Erects shoring and bracing. Assists in installation of pipe. Installs, operate and maintains dewatering systems. May assist equipment operators in positioning machines, verifying grades and signaling operators. Directs truck drivers and scraper operators to dumping positions to maintain grades as directed. Uses power tools and air tools. May work as lead man in a labor crew. His performance of a wide variety of construction jobs distinguishes him from a helper assigned to a specific craft. Installs and maintains erosion control. Is more or less a general utility construction worker. May be second step in learning a skill and may later become a helper in a specific classification. Performs other related duties.

### **Motor Grader Operator, Rough**

Operates a motor grader. Equipment is used to grade excavation and embankment and to lay asphalt, base and other materials. May blade haul roads and do other general motor grader work but does not perform finish grade work to close specification tolerances. This operator may be a learner in the first phase of learning the skills of motor grader work. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

### **Motor Grader Operator**

Operates a motor grader. Equipment is used to grade excavation and embankment and to lay asphalt, base and other materials. May blade haul roads and do other general motor grader work but does not perform finish grade work to close specification tolerances. This operator may be a learner in the first phase of learning the skills of motor grader work. May oil, grease or otherwise service and make

necessary adjustments to equipment as needed. Performs other related duties.

**Oiler**

A learner or semi-skilled worker who under the direction of the watch engineer. May oil and grease or otherwise service all engines and necessary equipment as needed. He may clean, and paint engine room as needed. Performs other related duties.

**Painter, Structures**

Paints and stains structural steel and concrete surfaces of bridges, retaining walls, or other structures. Directs cleaning and abrasive blasting of surfaces prior to painting or staining. Performs other related duties.

**Pavement Marking Machine Operator**

Operates machine used in laying paint stripes or markers on all types of paving. Loads machine with appropriate materials and may walk or ride on machine. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

**Piledriverman**

Sets in place, aligns, plumbs direct driving of timber, concrete, steel, pipe and any other type of piling. Sets, drives and pulls steel, concrete and other types of sheet piling. Rigs pile and leads and bracing. Signals operator. Splices piles before and after driving. Directs pile cutoff. May direct jetting or drilling equipment in connection with installing piles to grade. Performs other related duties.

**Pipelayer**

Installs concrete, clay, steel, ductile iron, plastic, corrugated pipe and any other type of pipe for storm drainage, water lines, gas lines and sanitary sewer lines. Lays underground communication and electrical ducts. May install and set electrical ground boxes, hand holes, manholes, inlets and other structures. Caulks joints, makes threaded and flanged connections. Installs valves and other accessories. Performs other related duties.

**Reinforcing Steel Setter, Paving**

Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. May direct unloading of material. Determines rigging required to complete work. Gives direction to reinforcing steel worker or common or utility laborers. May install miscellaneous materials integral to concrete structure or paving. May work with power tools. Performs other related duties.

**Reinforcing Steel Setter, Structure**

Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. May direct unloading of material. Determines rigging required to complete work. Gives direction to reinforcing steel worker or common or utility laborers. May install miscellaneous materials integral to concrete structure or paving. May work with power tools. Performs other related duties.

**Roller Operator, Pneumatic, Self-Propelled**

Operates a self-propelled machine with either steel wheels pneumatic tires, which is used to compact and smooth all bituminous materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

**Roller Operator, Steel Wheel, Flat Wheel/Tamping**

Operates a self-propelled machine with either steel wheels or pneumatic tires which is used to compact earth fills, subgrade, flexible base and all other types of materials except bituminous. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

**Roller Operator, Steel Wheel, Plant Mix Pavement**

Operates a self-propelled machine with either steel wheels pneumatic tires, which is used to compact and smooth all bituminous materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

**Scraper Operator**

Operates a self-contained wheeled tractor scraper both self loading or assisted by crawler tractors or other scrapers. Used to excavate and transport earth or other materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

**Servicer**

Drives a truck, which carries various fuels, oils, greases and filters. Must have knowledge of and is responsible for the correct oiling and greasing and changing of filters on equipment according to the manufacturers' specifications. Uses compressed air grease guns, wrenches and other tools. May make adjustments to clutches, brakes and other mechanical items. Keeps record of service preventive maintenance records. May have laborer assisting him. May require CDL if driving truck on public highways. Performs other related duties.

**Sign Installer (PGM)**

Sets forms, reinforcing steel, anchor bolts and pours concrete for Sign foundations. Fabricates and erects pipe and angle Frameworks by bolting, welding or other means prior to installation of signs that are normally prefabricated. Works from plans in location and drilling holes for proper location and alignment of signs. May direct hoisting of signs into place. Fastens signs to framework by bolting and other means. Locates and sets lighting brackets. May perform other work associated with signing projects. Supervises sign erector helper. Performs other related duties.

**Slip Form Machine Operator**

Cleans and seals joints requiring a hot or cold sealing compound in concrete paving, sidewalks, driveway and approach slabs. May oil, grease or make necessary repairs adjustments to equipment as needed. Performs other related duties.

**Spreader Box operator**

Operates spreader box by adjusting hopper and strike off blade so that the gravel, stone or other material may be spread to a specific depth on road surface during seal coat and surface treatment operations. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

**Structural Steel Worker**

Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. May direct unloading of material. Determines rigging required to complete work. Gives direction to reinforcing steel worker or common or utility laborers. May install miscellaneous materials integral to concrete structure or paving. May work with power tools. Performs other related duties.

**Tractor operator, Crawler Type**

Operates a crawler tractor with a bulldozer mounted in front of chassis to level, distribute and push earth or other material. May operate a ripper attachment to break up rock or other hard material. May use a push block on front of tractor to push load scrapers. May oil, grease, or otherwise service and make minor repairs to equipment as needed. Performs other related duties.

**Tractor Operator, Pneumatic**

Operates a gasoline or diesel powered agricultural tractor that tows compaction rollers, plow, disc. water

tanks, scrapers and other similar operations. May use other miscellaneous attachments. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

**Traveling Mixer Operator**

Drives a gasoline or diesel truck upon which is mounted a concrete mixer. Operates concrete mixer and dumps concrete on the grade, into forms or into concrete pumps or buckets. Cleans mixer drum. May require CDL license for on highway use. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.

**Truck driver, lowboy-Float**

Drives a heavy-duty diesel-powered truck to which is attached a trailer upon which heavy equipment is hauled. Driver is often required to operate heavy equipment to load or unload the lowboy. May require CDL license for on highway use. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.

**Truck driver, Single Axle, Heavy**

Drive a light capacity truck for transporting loads of construction material. The truck is of single rear axle type, may have various kinds of beds attached, such as dump, flat bed, tank, etc. May require CDL license for driving on highway. May services and make necessary adjustments for proper operation equipment. Performs other related duties.

**Truck driver, Single Axle-Light**

Drive a light capacity truck for transporting loads of construction material. The truck is of single rear axle type, may have various kinds of beds attached, such as dump, flat bed, tank, etc. May require CDL license for driving on highway. May services and make necessary adjustments for proper operation equipment. Performs other related duties.

**Truck Driver, Tandem Axle, Semi-Trailer**

Drives a diesel-powered tractor pulling a semi trailer hauling materials. Hauls dirt, rock, aggregates or other material. May require CDL license for driving on highway. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.

**Work Zone Barricade Servicer**

Fabricates, erects and maintains temporary traffic control devices, including arrow boards, signs, barricades, channelizing devices, barrels and all message boards. May operates a truck during traffic control operations.

**Welders** - Receives rate for craft being performed to which welding is incidental.

**EXHIBIT "B"**

**CERTIFICATE FROM CONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO  
SUPERVISE PAYMENT OF EMPLOYEES**

Project Name \_\_\_\_\_

Project WBS#: \_\_\_\_\_ Date \_\_\_\_\_

Email Address: \_\_\_\_\_

(I) (We) hereby certify that (I am) (we are) the **Prime Contractor** for \_\_\_\_\_

\_\_\_\_\_  
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed \_\_\_\_\_, whose signature appears below, to supervise the payment of (my) (our) employees beginning \_\_\_\_\_, 20\_\_\_\_; that he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and the City of Houston, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to the City of Houston a new certificate appointing some other person for the purposes hereinabove stated.

\_\_\_\_\_  
(Identifying Signature of Appointee) Phone: \_\_\_\_\_

Attest: \_\_\_\_\_  
(Name of Firm or Corporation)

By: \_\_\_\_\_ (Signature) By: \_\_\_\_\_ (Signature)

\_\_\_\_\_  
(Title) \_\_\_\_\_ (Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and the City of Houston.

**EXHIBIT "C"**

CERTIFICATE FROM SUBCONTRACTOR APPOINTING OFFICER OR EMPLOYEE TO SUPERVISE  
PAYMENT OF EMPLOYEES

Project Name \_\_\_\_\_

Project WBS#: \_\_\_\_\_ Date \_\_\_\_\_

Email Address: \_\_\_\_\_

(I) (We) hereby certify that (I am) (we are) the **Sub Contractor** for \_\_\_\_\_

\_\_\_\_\_  
(specify type of job)

in connection with construction of the above-mentioned Project, and that (I) (we) have appointed \_\_\_\_\_, whose signature appears below, to supervise the payment of (my) (our) employees beginning \_\_\_\_\_, 20\_\_\_\_; that he/she is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the Copeland Act and the City of Houston, which he/she is to execute with (my) (our) full authority and approval until such time as (I) (we) submit to the City of Houston a new certificate appointing some other person for the purposes hereinabove stated.

\_\_\_\_\_  
(Identifying Signature of Appointee) Phone: \_\_\_\_\_

Attest: \_\_\_\_\_  
(Name of Firm or Corporation)

By: \_\_\_\_\_  
(Signature)

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Title)

NOTE: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointee be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Copeland Act and the City of Houston.

END OF DOCUMENT

Document 00830

TRENCH SAFETY GEOTECHNICAL INFORMATION

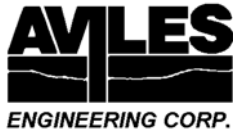
1.0 DOCUMENT INCLUDES

- A. Trench Safety Geotechnical Information: Geotechnical Information obtained for use in design of the trench safety system is included as an attachment to this document.

2.0 RELATED DOCUMENTS

- A. Section 02260 – Trench Safety System

END OF DOCUMENT



5.3.3 Pond Excavation

The contractor should be responsible for designing, constructing, and maintaining safe excavations and protecting existing structures in the vicinity of the proposed detention basins. Excavations should be in accordance with OSHA, Safety and Health Regulations, 29 CFR, Part 1926, Subpart P (Excavation and Trenches). OSHA soil classifications based on our borings are presented in Table 16.

**Table 16. OSHA Soil Classification of Pond Soils**

Boring	Depth (ft)	Elevation (ft)	OSHA Soil Classification	Soil Type
B-4	0 - 2	80.0 to 78.0	C	Fill: hard CL
	2 - 10	78.0 to 70.0	B	Very stiff to hard CH/CL
B-5	0 - 6	80.2 to 78.2	C	Fill: stiff to hard CL
	6 - 10	78.2 to 70.2	B	Very stiff CL
B-6	0 - 10	78.4 to 68.4	B	Stiff to hard CL/CH
B-11	0 - 2	80.3 to 78.3	C	Fill: very stiff CL-ML
	2 - 4	78.3 to 76.3	C	Soft to firm CL
	4 - 10	76.3 to 70.3	B	Stiff to hard CL

Notes: (1) CH = Fat Clay, CL = Lean Clay, CL-ML = Silty Clay.

(2) OSHA Soil Types for soils in the top 20 feet below grade.

A: Cohesive soils with  $q_u = 1.5$  tsf or greater ( $q_u$  = Unconfined Compressive Strength of the Soil).

B: Cohesive soils with  $q_u = 0.5$  tsf or greater.

C: Cohesive soils with  $q_u =$  less than 0.5 tsf, fill materials, or granular soil.

C\*: Submerged cohesive soils; dewatered cohesive soils can be considered OSHA Type B.

We recommend that the surcharge on the banks be limited to 300 psf or less during construction. If fill will be placed on slopes steeper than H:V = 4:1, then the slopes should be cut back into benches to provide a good





construction joint between the existing soil and new select fill, in accordance with Item 3.5 of Section 02315 of the 2020 HCFCF Standard Construction Specifications and Details. Where possible, each bench should be a minimum of 8 feet wide and a maximum of 3 feet high. Voids in the excavated slopes (if any) should be backfilled with select clay fill in accordance with Item 2.1 of Section 02314 of the 2020 HCFCF Standard Construction Specifications and Details.

Detention Pond Soil and Groundwater Conditions: Based on Borings B-4 through B-6 and B-11, the subsurface conditions within the detention pond area (considering a pond depth ranging from 9 to 9.5 feet) generally consist of soft to hard lean/fat clay (CL/CH), with approximately 2 to 6 feet of lean/silty clay (CL/CL-ML) fill material present at the ground surface in Borings B-4, B-5, and B-11.

Based on Table 11 in Section 4.1 of this report, groundwater was not encountered in the borings performed in the vicinity of the detention pond. AEC does not anticipate that groundwater will be encountered during basin excavation; if groundwater is encountered during construction, open drainage method (such as sump and pump) will likely be sufficient for groundwater control. Generalized groundwater control recommendations are presented in Section 6.2 of this report.



## City of Houston Pay or Play Program Requirements



### I. Pay or Play Program Overview

#### A. Purpose

The Pay or Play Program was established with Ordinance 2007-534 on July 1, 2007 and is governed by Executive Order 1-7. The Pay or Play Program (POP Program) creates a more level playing field and enhances fairness in the bid process between competing contractors that choose to offer health benefits to their workforce and those who do not. The program also recognizes and accounts for the fact that there are cost associated with health care of the uninsured citizens of the Houston and Harris County area.

#### B. Program Elements

##### 1. Covered contracts:

- I.) Advertised after July 1, 2007 or which is executed on or after the effective date of this Executive Order.
- II.) Contracts valued at or above \$100,000.00 (contract) and \$200,000.00 (sub-contract) including contingencies, amendments, supplemental terms and/or change orders.
- III.) Professional Service, Construction, and Service type contracts.

##### 2. Contracts not covered:

- I.) Any contract in which the primary purpose is procurement of property, goods, supplies, and or equipment.
- II.) An inter-governmental contract, inter-governmental agreement or purchasing cooperative.

3. Covered employees: This program applies to employees of a covered contractor or subcontractor, including contract labor, who are over age 18, work at least 30 hours per week and work any amount of time under a covered city contract or subcontract.

##### 4. Pay or Play Option:

- I.) "Pays" by contributing \$1.00 per covered employee per regular hour for work performed under the contract with the City; or
- II.) "Plays" by providing health benefits to covered employees. Health benefits must meet or exceed the following standards:
  - The **employer will contribute no less than \$150 per covered employee per month** toward the total premium cost.
  - The **employee contribution, if any amount, will be no greater than 50% of the monthly premium cost and no more than \$150 per month.**

***\*Note: (1)A contractor is deemed to have complied with section 5.4 of E.O. 1-7 with respect to a covered employee who is not provided health benefits if the employee refuses the benefits and the employee's contribution to the premium is no more than \$40 per month. (2) If applicable the contractor has the option to both Pay and Play.***



## City of Houston Pay or Play Program Requirements



5. **Exemptions/Waivers:** The City of Houston will award a contract to a contractor that neither Pays nor Plays only if the contractor has received an approved waiver (Form POP-4 requested by City departments only).
6. **Administration:** Contractor performance in meeting Pay or Play program requirements will be managed by the contracting department. The Office of Business Opportunity (OBO) has administrative oversight of the program, including audit responsibilities (department compliance). Questions about the program should be referred to the Department POP Liaison an updated contact list is available on <http://www.houstontx.gov/obo/popforms.html> or call Gracie Orr with the Office of Business Opportunity at 832-393-0633.

### II. Documentation and Reporting Requirements

#### A. **Document that must be signed and returned to administering department with the bid/proposal.**

- 1.) City of Houston Pay or Play Program Acknowledgment Form (Form POP-1) acknowledges bidder/proposers' knowledge of the program and its requirements, and the intention to comply.

#### B. **Documents that must be signed and returned to administering department within a period designated by the department's Contract Administrator, upon notification of low bidder or successful proposer status:**

- 1.) Certification of Compliance with Pay or Play Program (Form POP-2)

***\*Note - Contractors that opt to "play" must provide proof of coverage, including document from insurance provider, and names of covered employees.***

- 2.) List of Subcontractors (Form POP-3)

***\*Note- Review the affidavit statement at the bottom of this form for further important POP Compliance information.***

#### C. **Contractors reporting requirements:**

- 1.) **Contractors that opt to Pay**  
Provide monthly reports to administering department, detailing names of employees, hours worked, exemptions (if any) and amount owed. (Form POP-5)
- 2.) **Contractors that opt to Play**  
Provide periodic reports to the contract administrator showing proof of coverage (insurance premium invoice or insurance card) reporting schedule will be determined by administering department based on length of contract. (Form POP-7)



**City of Houston**  
**Pay or Play Program Requirements**



3.) Employee Waiver Request

Contractor may request POP program waiver by submitting the request on POP-8 if the employee is less than 18 years old, employee has other health coverage such as through spouse or parents, or Medicare/Medicaid.

***\*Note proof of coverage must be provided in the form of a copy of the employee's insurance card. (Remove social security numbers if applicable)***

- 4.) Contractors shall submit an initial report with the second invoice to the department. Payments based on monthly reports are due to the contracting department with submission of the following month's invoice. Payments may be made out to the City of Houston preferably via cashier check or business check.

**III. Compliance and Enforcement**

The Office of Business Opportunity will audit program compliance. Contractors willfully violating or misrepresenting POP program compliance will be subject to corrective and/or punitive action, including but not limited to the assessment of fines and penalties and/or debarment. The Pay or Play Program Requirements Form and all other POP Forms are available for downloading from the City of Houston's Website at <http://www.houstontx.gov/obo/popforms.html>



# Pay or Play Program Operating Procedures

## **Background**

The Pay or Play Program was established with Ordinance 2007-534 on July 1, 2007 and is governed by Executive Order 1-7. The Pay or Play Program (POP) creates a more level playing field and enhances fairness in the bid process between competing contractors that choose to offer health benefits to their workforce and those who do not. The program also recognizes and accounts for the fact that there are costs associated with providing health care for the uninsured citizens of Houston and Harris County area.

## **Administration:**

- Vendors are required to begin complying with POP within 30 days of contract award by utilizing the designated system, *B2G Workforce Module*, at <https://houston.mwdbe.com> to complete/review POP activities.
- Vendors are required to utilize *JP Morgan Chase Pay Connexion (Pay Connexion)* portal that will accept POP payments electronically. B2G Workforce Module will provide a direct link to *Pay Connexion* where contractors may submit payment via Debit Card, Credit Card, Automated Clearing House (ACH) and/or Electronic Checks (e-checks). Contractors will be charged a convenience fee per transaction.
- Vendors who onboard new employees are allowed a 60-day waiting period upon each new employee's start date to begin participating in POP. After the 60-day period has lapsed, Vendor must include the employee in POP reporting.
- The Office of Business Opportunity (OBO) has citywide administrative oversight of the program, including audit responsibilities. Vendor's compliance with POP requirements will be directly managed by the City Department with whom Vendor has contracted (Contracting Department). Questions about POP should be referred to the Contracting Department's POP Liaison. A contact list for POP Liaisons is available at <http://www.houstontx.gov/obo/popforms.html> or by contacting the OBO POP Administrator at 832-393-0633 or [Brianne.Maxwell@houstontx.gov](mailto:Brianne.Maxwell@houstontx.gov).



### **Pre-bid/Pre-Proposal Forms:**

- Vendors must complete and return the following forms before contract award by the Contracting Department:
  - *Acknowledgment Form* (POP-1)
  - *Certification of Compliance* (POP-2)
  - *Participating Subcontractors Form* (POP-3)

### **Prime/Subcontractor Waiver Request (Form POP-4):**

- Completed by Contracting Department prior to City Council approval contract award, for contract(s) that may meet exemption criteria as stated in EO 1-7. Form POP-4 must be signed by Contracting Department and forwarded, along with supporting documentation, to OBO POP Administrator for final decision.
- A new Form POP-4 is not needed for contract amendments and/or extensions, as the POP requirements in the original contract continues to apply.
- Contractors that utilize self-employed, owner/operator individuals to complete services (e.g., Truck Drivers, Day Laborers, 10-99, etc.) are POP exempt.
- Vendors should not submit a Form POP-4 for contracts enumerated in section 4.2 of EO 1-7, as those contracts are not covered under POP.

### **Pay Option Reporting (Workforce Audit):**

- Vendors will create a *Workforce Employee List* showcasing all active employees working on the City of Houston project. Vendors will complete a weekly workforce audit by the end of each month. Vendors must provide the Total Hours Worked and individual Hours Worked by each covered employee as part of the weekly workforce audit.
  - Total Hours Worked = Total Number of Hours Employee worked for Employer.
  - Hours Worked = Total Number of Hours Employee worked on COH project.

### **Invoice Submission:**

- Invoices are created from monthly *Workforce Audits* reports. Payments are due to the contracting department 30 business days after receipt of invoice. Payments



may be made through the *Pay Connexion*. Prime Vendor is responsible to the City for compliance of covered employees of covered subcontractors.

- Vendors will “Pay” by contributing \$1.00 per covered employee per regular hour for work performed under the contract with the City, not to exceed \$40.00 per employee.
  - POP will not accept partial payments; invoices must be paid in full.

#### **Play Option Reporting (Workforce Audit):**

- Vendors will create a *Workforce Employee List* showcasing all active employees working on the City of Houston project.
- Vendors will complete a quarterly workforce audits by month end of October, January, April, and July by providing proof of insurance for all active and covered employees for previous three (3) months.
- Vendors will “Play” by providing health benefits to covered employees. Health benefits must meet or exceed the following standards:
  - The employer will contribute no less than 75% of the monthly premium toward the total premium cost covered employee per month.
  - The employee contribution, if any amount, will be no greater than 25% of the monthly premium cost.

**Note: Proof of coverage (in the form of the most current Company Insurance invoice or individual employee insurance card) for POP covered employees that work on the City Project.**

#### **Employee Waiver Request (Form POP-8):**

- Vendor may request employee POP program waiver by submitting a request on the City of Houston Pay or Play (POP) *Employee Waiver Request* (Form POP-8); if a covered employee has refused health coverage through their employer or if a covered employee has acquired health coverage on their own.
  - Vendor will attach approved Form POP-8 to respective employees’ workforce profile in the designated system.



### **Self-Insured Contractor Request (Form POP-9):**

- Vendor may request for Self-Insured Status if the employer is using their own money to cover their employees' claims.
- Vendors awarded Self-Insured Status will be PLAY participants and required to report once a year.





**ATTACHMENT “ ”**

**Sample Letter of Intent**

**THIS AGREEMENT IS SUBJECT TO BINDING ARBITRATION ACCORDING TO THE TEXAS GENERAL ARBITRATION ACT.**

To: City of Houston  
Administering Department

Date: \_\_\_\_\_

Project Name and Number \_\_\_\_\_

\_\_\_\_\_

Bid Amount: \_\_\_\_\_ M/W/DBE Goal: \_\_\_\_\_

=====

\_\_\_\_\_ agrees to enter into a contractual agreement  
Prime Contractor

with \_\_\_\_\_, who will provide the following goods/  
MWBE Subcontractor

services in connection with the above referenced contract:

\_\_\_\_\_  
\_\_\_\_\_

for an estimated amount of \$ \_\_\_\_\_ or \_\_\_\_\_ % of the total contract value.

\_\_\_\_\_ is currently certified with the City of Houston's  
(M/W/DBE Subcontractor) Office of Business of Opportunity Office to function in the  
aforementioned capacity.

\_\_\_\_\_  
Prime Contractor

\_\_\_\_\_  
M/W/DBE Subcontractor

intend to work on the above-named contract in accordance with the M/W/DBE Participation Section of the City of Houston Bid Provisions, contingent upon award of the contract to the aforementioned Prime Contractor.

\_\_\_\_\_  
Signed (Prime Contactor)

\_\_\_\_\_  
Signed (M/W/DBE Subcontractor)

\_\_\_\_\_  
Printed Signature

\_\_\_\_\_  
Printed Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

## Attachment “ ”

### **CITY OF HOUSTON CERTIFIED MWBE SUBCONTRACT TERMS**

Contractor shall ensure that all subcontracts with M/WBE subcontractors and suppliers are clearly labeled **“THIS CONTRACT IS SUBJECT TO BINDING ARBITRATION ACCORDING TO THE TEXAS GENERAL ARBITRATION ACT”** and contain the following terms:

1. \_\_\_\_\_(M/WBE subcontractor) shall not delegate or subcontract more than 50% of the work under this subcontract to any other subcontractor or supplier without the express written consent of the City of Houston’s Office of Business Opportunity (“the Director”).
2. \_\_\_\_\_(M/WBE subcontractor) shall permit representatives of the City of Houston, at all reasonable times, to perform 1) audits of the books and records of the subcontractor, and 2) inspections of all places where work is to be undertaken in connection with this subcontract. Subcontractor shall keep such books and records available for such purpose for at least four (4) years after the end of its performance under this subcontract. Nothing in this provision shall affect the time for bringing a cause of action or the applicable statute of limitations.
3. Within five (5) business days of execution of this subcontract, Contractor (prime contractor) and Subcontractor shall designate in writing to the Director an agent for receiving any notice required or permitted to be given pursuant to Chapter 15 of the Houston City Code of Ordinances, along with the street and mailing address and phone number of such agent.
4. As concluded by the parties to this subcontract, and as evidenced by their signatures hereto, any controversy between the parties involving the construction or application of any of the terms, covenants or conditions of this subcontract shall, on the written request of one party served upon the other or upon notice by the Director served on both parties, be submitted to binding arbitration, under the Texas General Arbitration Act (Tex. Civ. Prac. & Rem. Code Ann., Ch. 171 – “The Act”). Arbitration shall be conducted according to the following procedures:
  - a. Upon the decision of the Director or upon written notice to the HR Director from either party that a dispute has arisen, the Director shall notify all parties that they must resolve the dispute within thirty (30) days or the matter may be referred to arbitration.
  - b. If the dispute is not resolved within the time specified, any party or the Director may submit the matter to arbitration conducted by the American Arbitration Association under the rules of the American Arbitration Association, except as otherwise required by the City’s contract with the American Arbitration Association on file in the Office of the City’s Office of Business Opportunity.

- c. Each party shall pay all fees required by the American Arbitration Association and sign a form releasing the American Arbitration Association and its arbitrators from liability for decisions reached in the arbitration.
- d. In the event the American Arbitration Association no longer administers Office of Business Opportunity arbitration for the City, the Director shall prescribe alternate procedures as necessary to provide arbitration by neutrals in accordance with the requirements of Chapter 15 of the Houston City Code of Ordinances.

These provisions apply to goal-oriented contracts. A goal-oriented contract means any contract for the supply of goods or non-professional services in excess of \$100,000.00 for which competitive proposals are required by law; not within the scope of the MBE/WBE program of the United States Environmental Protection Agency or the United States Department of Transportation; and which the City Purchasing Agent has determined to have significant MWBE subcontracting potential in fields which there are an adequate number of known MBEs and/or WBEs to compete for City contracts.

The MWBE policy of the City of Houston will be discussed during the pre-proposal conference. For information, assistance, and/or to receive a copy of the City's Office of Business Opportunity Policy and/or Ordinance, contact the Office of Business Opportunity Division at 713.837.9000, 611 Walker Street, 7<sup>th</sup> Floor, Houston, Texas 77002.