

**BRAZORIA COUNTY**  
**PURCHASING DEPARTMENT**



**SUSAN P. SERRANO, CPPO, CPPB**  
Purchasing Director

**NOTICE TO PROCEED**

Tuesday, June 10, 2025

Texas Materials Group, Inc.  
Attn: Kevin Guy  
3003 Kilgore Parkway  
Baytown, TX 77523  
Sent via Email: [kevin@texasmaterials.com](mailto:kevin@texasmaterials.com)

Re: Award for ITB# 25-29 Brazoria County Road and Drainage Improvements for CDBG – Plan Set III / 30N

Dear Mr. Guy:

Your company is approved to commence the work in accordance with the above-mentioned project on Monday, June 30, 2025 with a contract time of 180 calendar days.

Please Contact the Brazoria County Project Manager to schedule work: Barbara Martinez-Engineering Department

Please complete this process by acknowledging this copy of this NOTICE TO PROCEED to the County.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Susan P. Serrano".

Susan P. Serrano, CPPO, CPPB  
Brazoria County Purchasing Director

**ACCEPTANCE OF NOTICE**

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by: Texas Materials Group, Inc.

this 12<sup>th</sup> day of June, 2025.

Printed Name and Title: Kevin Guy, Estimator

Signature: A handwritten signature in blue ink, appearing to read "Kevin Guy".



**BRAZORIA COUNTY**  
**PURCHASING DEPARTMENT**



**SUSAN P. SERRANO, CPPO, CPPB**  
Purchasing Director

May 14, 2025

Texas Materials Group, Inc.  
Attn: Kevin Guy  
3003 Kilgore Parkway  
Baytown, TX 77523  
[kevin@texasmaterials.com](mailto:kevin@texasmaterials.com)

Re: Award for ITB# 25-29 Brazoria County Road and Drainage Improvements for CDBG – Plan Set III / 30N

Dear Mr. Guy:

Brazoria County is pleased to inform you that on May 13, 2025, Commissioners' Court awarded the above listed project to your company.

The contract shall begin upon award and continue until completion of the project.

A purchase order and /or notice to proceed will follow. Do not proceed with delivery of services or materials prior to receiving a purchase order number from Brazoria Country.

A Certificate of Interested Parties, Form 1295 is required. Vendors are to log onto the Texas Ethics Commission's website [https://www.ethics.state.tx.us/whatsnew/elf\\_info\\_form1295.htm](https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm) and fill out Form 1295. Once the form is completed online, the system will issue a certificate number. Please print, sign the form, and email it to Amanda Erickson at [aerickson@brazoriacountytx.gov](mailto:aerickson@brazoriacountytx.gov).

In addition, per Texas Local Government Code 176, completion of the Conflict of Interest Questionnaire, Form CIQ, is required if applicable. You may access the form and further information on our website at <http://brazoriacountytx.gov/departments/purchasing> under the Doing Business section, Conflict of Interest Reporting.

Per Texas Local Government Code Chapters 808, 809, and 2274, completion of the Boycott Verification Form is required, if applicable. You may access the form and further information on our website at <http://brazoriacountytx.gov/departments/purchasing> under the Doing Business section.

Please email the CIQ and Boycott Verification Form to Amanda Erickson at [aerickson@brazoriacountytx.gov](mailto:aerickson@brazoriacountytx.gov).

**As a reminder, a copy of a current certificate of insurance shall be due to Brazoria County within ten (10) calendar days after receipt of notification of award. The contract shall not become effective until the certificate of insurance is received. Failure to provide said certificate may result in cancellation and/or termination of the contract. Please have the certificate of insurance names Brazoria County as an additional insured and a waiver of subrogation applies in favor of Brazoria County.**

**Per the solicitation, a performance and payment bond are required and due prior to the start of the project.**

Thank you for your interest in Brazoria County. If you have any questions, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Susan P. Serrano".

Susan P. Serrano, CPPO, CPPB  
Brazoria County Purchasing Director

# CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

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 CERTIFICATION OF FILING

**1 Name of business entity filing form, and the city, state and country of the business entity's place of business.**

Texas Materials Group, Inc.  
Baytown, TX United States

Certificate Number:  
2025-1310760

Date Filed:  
05/16/2025

Date Acknowledged:  
5/16/2025

**2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.**

Brazoria County

**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 services, goods, or other property to be provided under the contract.**

ITB# 25-29  
Brazoria County Road and Drainage Improvements for CDBG - Plan Set III / 30N

| 4 | Name of Interested Party    | City, State, Country (place of business) | Nature of interest<br>(check applicable) |              |
|---|-----------------------------|--|--|--------------|
|   |                             |  | Controlling                              | Intermediary |
|   | Texas Materials Group, Inc. | Baytown, TX United States                |  | X            |
|   |                             |  |  |              |
|   |                             |  |  |              |
|   |                             |  |  |              |
|   |                             |  |  |              |
|   |                             |  |  |              |
|   |                             |  |  |              |
|   |                             |  |  |              |
|   |                             |  |  |              |

5 Check only if there is NO Interested Party.

☐


**6 UNSWORN DECLARATION**

My name is Kevin Guy, and my date of birth is 6/24/1970.

My address is 3003 Kilgore Parkway, Baytown, TX, 77523, USA.  
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Chambers County, State of Texas, on the 16th day of May, 2025.  
(month) (year)

  
\_\_\_\_\_  
Signature of authorized agent of contracting business entity  
(Declarant)

## Boycott Verification

This verification is required pursuant to Sections 808, 809, 2271, and 2274 (87(R) Senate Bill 13 and 19 versions) of the Texas Government Code:

### Definitions:

1. Per Government Code Chapter 808, "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purpose
2. Per Government Code Chapter 809, "Boycott energy company" means, without an ordinary business purpose, refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company:
  - (A) engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; or
  - (B) does business with a company described by Paragraph (A).
3. Per Government Code Chapter 2274 (87(R) Senate Bill 19), "Discriminate against a firearm entity or firearm trade association":
  - (A) means, with respect to the entity or association, to:
    - (i) refuse to engage in the trade of any goods or services with the entity or association based solely on its status as a firearm entity or firearm trade association;
    - (ii) refrain from continuing an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association; or
    - (iii) terminate an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association;
4. "Company" has the meaning assigned by Texas Government Code Sections 808.001(2), 809.001(2), and 2274.001(2) (87(R) Senate Bill 19).

This verification is only required for a contract that is between a governmental entity and a company with 10 or more full-time employees; and has a value of \$100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. If your contract value or number of employees does not reach that threshold, please provide a written certification of the contract amount and number of employees.

I, Kevin Guy (Person name), the undersigned representative of (Company or Business Name) Texas Materials Group, Inc. (hereinafter referred to as Company) being an adult over the age of eighteen (18) years of age, do hereby depose and verify under oath that the company named above,

- (A) does not boycott Israel currently;
- (B) will not boycott Israel during the term of the contract the named Company, business or individual with Brazoria County Texas, Texas;
- (C) does not boycott energy companies currently;
- (D) will not boycott energy companies during the term of the contract the named Company, business or individual with Brazoria County, Texas;
- (E) does not discriminate against a firearm entity of firearm trade association currently; and
- (F) will not discriminate against a firearm entity of firearm trade association during the term of the contract the named Company, business or individual with Brazoria County, Texas

May 16, 2025

DATE

  
SIGNATURE OF COMPANY REPRESENTATIVE



# 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.

Texas Materials Group, Inc.

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.

NONE

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

May 16, 2025

Date





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

5/16/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION** IS **WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

|   |  |   |
|---|--|---|
| <b>PRODUCER</b><br>Liberty Mutual Insurance Co. National Insurance East<br>500 N 3rd St, Suite 300<br>Wausau, WI 54403<br><br>www.LibertyMutual.com | <b>CONTACT</b><br>NAME: Valerie Reece<br>PHONE (A/C, No, Ext): 513-867-3822<br>E-MAIL ADDRESS: Oldcastle.certs@LibertyMutual.com<br><br><b>INSURER(S) AFFORDING COVERAGE</b><br>INSURER A: Liberty Mutual Fire Insurance Company<br>INSURER B: Liberty Insurance Corporation<br>INSURER C:<br>INSURER D:<br>INSURER E:<br>INSURER F: | <b>NAIC #</b><br>23035<br>42404<br><br><br><br><br><br><br> |
|---|--|---|

**COVERAGES****CERTIFICATE NUMBER:** 85340588**REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE   | ADDL INSD                                    | SUBR WVD                            | POLICY NUMBER   | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS  |
|----------|---|--|-------------------------------------|---|-------------------------|-------------------------|---|
| A        | <input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b><br><input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR<br><input checked="" type="checkbox"/> Primary/Non-Contributory<br><input checked="" type="checkbox"/> Separation of Insured<br>GEN'L AGGREGATE LIMIT APPLIES PER:<br><input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC<br>OTHER: | <input checked="" type="checkbox"/>          | <input checked="" type="checkbox"/> | TB2-C81-004095-114<br><br>XCU Coverage Included   | 9/1/2024                | 9/1/2025                | EACH OCCURRENCE \$2,000,000<br>DAMAGE TO RENTED PREMISES (Ea occurrence) \$300,000<br>MED EXP (Any one person) \$50,000<br>PERSONAL & ADV INJURY \$2,000,000<br>GENERAL AGGREGATE \$4,000,000<br>PRODUCTS - COMP/OP AGG \$4,000,000<br>\$ |
| A        | <input checked="" type="checkbox"/> <b>AUTOMOBILE LIABILITY</b><br><input checked="" type="checkbox"/> ANY AUTO<br><input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS<br><input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY  | <input checked="" type="checkbox"/>          | <input checked="" type="checkbox"/> | AS2-C81-004095-124<br><br>AS2-C81-054502-524<br>Physical Damage only:<br>Comprehensive Ded \$10,000<br>Collision Ded \$10,000 | 9/1/2024                | 9/1/2025                | COMBINED SINGLE LIMIT (Ea accident) \$2,000,000<br>BODILY INJURY (Per person) \$<br>BODILY INJURY (Per accident) \$<br>PROPERTY DAMAGE (Per accident) \$<br>\$  |
|          | <input type="checkbox"/> <b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR<br><input type="checkbox"/> <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE<br>DED <input type="checkbox"/> RETENTION \$   |  |                                     |   |                         |                         | EACH OCCURRENCE \$<br>AGGREGATE \$<br>\$  |
| B        | <b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b><br>ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)<br>If yes, describe under DESCRIPTION OF OPERATIONS below   | Y/N<br><input checked="" type="checkbox"/> N | N/A                                 | WA7-C8D-004095-024<br>All except OH, ND, WA, WY<br><br>WC7-C81-004095-014<br>WI, MN   | 9/1/2024                | 9/1/2025                | <input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER<br>E.L. EACH ACCIDENT \$1,000,000<br>E.L. DISEASE - EA EMPLOYEE \$1,000,000<br>E.L. DISEASE - POLICY LIMIT \$1,000,000                                    |
| A        | Excess Liability - Auto Liability   | <input checked="" type="checkbox"/>          | <input checked="" type="checkbox"/> | TL2-681-054653-444 (Auto)   | 9/1/2024                | 9/1/2025                | Each Occurrence \$1,000,000   |

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES** (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: ITB #25-29 Brazoria County Road and Drainage Improvements for CDBG-Plan Set III / 30N.  
Brazoria County is listed as additional insured with regards to the general liability, automobile liability, and excess liability policies, where required by written contract. 30-day Notice of Cancellation.  
Waiver of subrogation is included in favor of the additional insured, where required by written contract, and where applicable by law.

**CERTIFICATE HOLDER****CANCELLATION**

|   |  |
|---|--|
| Brazoria County<br>237 E. Locust<br>Angleton TX 77515 | <b>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.</b><br><br><b>AUTHORIZED REPRESENTATIVE</b><br>Valerie Reece<br> |
|---|--|

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ACORD 25 (2016/03)

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Policy Number: AS2-C81-004095-124, AS2-C81-054502-524  
Issued by: Liberty Mutual Fire Insurance Co.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**DESIGNATED INSURED - NONCONTRIBUTING**

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM  
GARAGE COVERAGE FORM  
MOTOR CARRIERS COVERAGE FORM  
TRUCKERS COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" under the Who Is An Insured Provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage form.

**Schedule**

**Name of Person(s) or Organizations(s):**

Any person or organization where the Named Insured has agreed by written contract to include such person or organization

**Regarding Designated Contract or Project:**

Any

Each person or organization shown in the Schedule of this endorsement is an "insured" for Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured Provision contained in Section II of the Coverage Form.

The following is added to the **Other Insurance Condition:**

If you have agreed in a written agreement that this policy will be primary and without right of contribution from any insurance in force for an Additional Insured for liability arising out of your operations, and the agreement was executed prior to the "bodily injury" or "property damage", then this insurance will be primary and we will not seek contribution from such insurance.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US (WAIVER OF SUBROGATION)**

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM  
BUSINESS AUTO COVERAGE FORM  
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

### **SCHEDULE**

**Name(s) Of Person(s) Or Organization(s):**

Any person or organization for whom you perform work under a written contract if the contract requires you to obtain this agreement from us, but only if the contract is executed prior to the injury or damage occurring.

**Premium: \$ INCL**

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The **Transfer Of Rights Of Recovery Against Others To Us** condition does not apply to the person(s) or organization(s) shown in the Schedule, but only to the extent that subrogation is waived prior to the "accident" or the "loss" under a contract with that person or organization.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **POLLUTION LIABILITY – BROADENED COVERAGE FOR COVERED AUTOS – BUSINESS AUTO AND MOTOR CARRIER COVERAGE FORMS**

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM  
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

**A. Covered Autos Liability Coverage** is changed as follows:

1. Paragraph **a.** of the **Pollution** Exclusion applies only to liability assumed under a contract or agreement.
2. With respect to the coverage afforded by Paragraph **A.1.** above, Exclusion **B.6. Care, Custody Or Control** does not apply.

**B. Changes In Definitions**

For the purposes of this endorsement, Paragraph **D.** of the **Definitions** Section is replaced by the following:

- D.** "Covered pollution cost or expense" means any cost or expense arising out of:
1. Any request, demand, order or statutory or regulatory requirement that any "insured" or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of "pollutants"; or
  2. Any claim or "suit" by or on behalf of a governmental authority for damages because of testing for, monitoring, cleaning up, removing, containing, treating, detoxifying or neutralizing, or in any way responding to or assessing the effects of "pollutants".

"Covered pollution cost or expense" does not include any cost or expense arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of "pollutants":

- a.** Before the "pollutants" or any property in which the "pollutants" are contained are moved from the place where they are accepted by the "insured" for movement into or onto the covered "auto"; or
- b.** After the "pollutants" or any property in which the "pollutants" are contained are moved from the covered "auto" to the place where they are finally delivered, disposed of or abandoned by the "insured".

Paragraphs **a.** and **b.** above do not apply to "accidents" that occur away from premises owned by or rented to an "insured" with respect to "pollutants" not in or upon a covered "auto" if:

- (1) The "pollutants" or any property in which the "pollutants" are contained are upset, overturned or damaged as a result of the maintenance or use of a covered "auto"; and
- (2) The discharge, dispersal, seepage, migration, release or escape of the "pollutants" is caused directly by such upset, overturn or damage.

Premium: INCL



Policy Number: AS2-C81-004095-124, AS2-C81-054502-524, TB2-C81-004095-114  
Issued By: Liberty Mutual Fire Insurance Co.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**NOTICE OF CANCELLATION TO THIRD PARTIES**

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE PART  
MOTOR CARRIER COVERAGE PART  
GARAGE COVERAGE PART  
TRUCKERS COVERAGE PART  
EXCESS AUTOMOBILE LIABILITY INDEMNITY COVERAGE PART  
SELF-INSURED TRUCKER EXCESS LIABILITY COVERAGE PART  
COMMERCIAL GENERAL LIABILITY COVERAGE PART  
EXCESS COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART  
LIQUOR LIABILITY COVERAGE PART

| Schedule                                     |                                      |                           |
|--|--------------------------------------|---------------------------|
| Name of Other Person(s)/<br>Organization(s): | Email Address or mailing<br>address: | Number<br>Days<br>Notice: |
| Where required by written contract           | Where required by written contract   | 90                        |
|  |                                      |                           |
|  |                                      |                           |
|  |                                      |                           |
|  |                                      |                           |
|  |                                      |                           |

- A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule above. We will send notice to the email or mailing address listed above at least 10 days, or the number of days listed above, if any, before the cancellation becomes effective. In no event does the notice to the third party exceed the notice to the first named insured.
- B. This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

All other terms and conditions of this policy remain unchanged.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT**

This endorsement modifies insurance provided under the following:

### COMMERCIAL GENERAL LIABILITY COVERAGE PART

- A.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage A, and for all medical expenses caused by accidents under Section I – Coverage C, which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule below:
1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
  2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under Coverage C regardless of the number of:
    - a. Insureds;
    - b. Claims made or "suits" brought; or
    - c. Persons or organizations making claims or bringing "suits".
  3. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule below.
  4. The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.
- B.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage A, and for all medical expenses caused by accidents under Section I – Coverage C, which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule below:
1. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
  2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.
- C.** When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.
- D.** If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.
- E.** The provisions of Section III – Limits Of Insurance not otherwise modified by this endorsement shall continue to apply as stipulated.

**SCHEDULE****Designated Construction Project(s):**

All Projects.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION**

This endorsement modifies insurance provided under the following:

### COMMERCIAL GENERAL LIABILITY COVERAGE PART

**A. Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

**B.** With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

**C.** With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

### **SCHEDULE**

**Name Of Additional Insured Person(s)  
Or Organization(s):**

**Location(s) Of Covered Operations**

Any owner, lessee, or contractor for whom you have agreed in writing prior to a loss to provide liability insurance

Any location listed in such agreement

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.



**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

### **SCHEDULE**

| <b>Name Of Additional Insured Person(s)<br/>Or Organization(s)</b>   | <b>Location And Description Of Completed Operations</b> |
|--|---|
| Any owner, lessee, or contractor for whom you have agreed in writing prior to a loss to provided liability insurance | Any location listed in such agreement                   |
|  |   |
|  |   |

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

**A. Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

**B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

Policy Number TB2-C81-004095-114  
Issued by: Liberty Mutual Fire Insurance Company

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**OTHER INSURANCE AMENDMENT – SCHEDULED ADDITIONAL INSURED**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART  
LIQUOR LIABILITY COVERAGE PART

**Schedule**

**Name of Person(s) or Organization(s):** Any person or organization for which such coverage is required by written contract prior to a loss

If you are obligated under a written agreement to provide liability insurance on a primary, excess, contingent, or any other basis for any person(s) or organization(s) shown in the Schedule of this endorsement that qualifies as an additional insured on this Policy, this Policy will apply solely on the basis required by such written agreement and Paragraph **4. Other Insurance** of **Section IV – Conditions** will not apply. Where the applicable written agreement does not specify on what basis the liability insurance will apply, the provisions of Paragraph **4. Other Insurance** of **Section IV – Conditions** will apply. However, this insurance is excess over any other insurance available to the additional insured for which it is also covered as an additional insured for the same "occurrence", claim or "suit".

## WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

The following is added to Paragraph **8. Transfer Of Rights Of Recovery Against Others To Us of Section IV – Conditions:**

We waive any right of recovery we may have against the person or organization shown in the Schedule below because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule below.

### SCHEDULE

**Name Of Person Or Organization:**

As required by written contract or agreement entered into prior to loss.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

## NOTICE OF CANCELLATION TO THIRD PARTIES

- A.** If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule below. We will send notice to the email or mailing address listed below at least 10 days, or the number of days listed below, if any, before cancellation becomes effective. In no event does the notice to the third party exceed the notice to the first named insured.
- B.** This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

### Schedule

| Name of Other Person(s) / Organization(s): | Email Address or mailing address: | Number Days Notice: |
|--|-----------------------------------|---------------------|
| Schedule on file with the Company          | Schedule on file with the Company | 90                  |

All other terms and conditions of this policy remain unchanged.

Issued by Liberty Insurance Corporation 21814

For attachment to Policy No. WA7-C8D-004095-024 Effective Date Premium \$

Issued to CRH Americas, Inc.



## WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Not applicable in Alaska, Kentucky, New Hampshire, New Jersey

### Schedule

Any person or organization for which the employer has agreed by written contract, executed prior to loss, may execute a waiver of subrogation. However, for purposes of work performed by the employer in Missouri, this waiver of subrogation does not apply to any construction group of classifications as designated by the waiver of right to recover from others (subrogation) rule in our manual.

Where required by contract or written agreement prior to loss and allowed by law.

In the states of Connecticut, Florida, Iowa, Maryland, Nebraska and Oregon, the premium charge is 1% of the total manual premium, subject to a minimum premium of \$250 per policy.

In the states of Alabama, Arizona, Arkansas, Colorado, Delaware, District of Columbia, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Michigan, Mississippi, Missouri, Montana, Nevada, New Mexico, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Vermont and West Virginia, the premium charge is 2% of the total manual premium, subject to a minimum premium of \$100 per policy.

In the states of New York and Tennessee, the premium charge is 2% of the total manual premium, subject to a minimum premium of \$250 per policy.

In the state of Virginia, the premium charge is 5% of the total manual premium, subject to a minimum premium of \$250 per policy.

In the state of Hawaii, the premium charge is \$250 and determined as follows: The premium charge for this endorsement is 1% of the total manual premium, subject to a minimum premium of \$250 per policy.

In the state of Louisiana, the premium charge is 2% of the total standard premium, subject to a minimum premium of \$250 per policy.

In the state of Massachusetts, the premium charge is 1% of the total

manual premium.

Issued by    Liberty Insurance Corporation 21814

For attachment to Policy No.    WA7-C8D-004095-024                      Effective Date                      Premium \$

Issued to    CRH Americas, Inc.                      Endorsement No.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**AMENDMENT OF CANCELLATION PROVISIONS –  
SCHEDULED PERSON OR ORGANIZATION**

This endorsement modifies insurance provided under the following:

**EXCESS LIABILITY COVERAGE PART**

Any term or provision of the Cancellation Conditions of the policy or any endorsement amending or replacing such Conditions is amended by the following:

- A.** If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule of this endorsement. We will send notice to the email or mailing address listed below at least 10 days, or the number of days listed below, if any, before the cancellation becomes effective. In no event will the notice period to the persons or organizations scheduled below exceed the notice to the first Named Insured.
- B.** This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

**SCHEDULE**

| <b>Name of Person(s) or Organization(s):</b> | <b>Email Address or Mailing Address:</b> | <b>Number of<br/>Days Advance<br/>Notice:</b> |
|--|--|---|
| Per Schedule on file with company            | Per Schedule on file with company        | 30  |

This endorsement does not change any other provision of the policy.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**GEORGIA CHANGES - CANCELLATION AND NONRENEWAL**

This endorsement modifies insurance provided under the following:

COMMERCIAL UMBRELLA COVERAGE PART  
EXCESS LIABILITY COVERAGE PART

**A.** Section **VI - CONDITION D. Cancellation** Paragraph **1.** is deleted and replaced by the following:

- 1.** The first Named Insured shown in the Declarations may cancel this policy by mailing or delivering to us advance written notice of cancellation, subject to the following:
  - a.** If only the interest of the first Named Insured is affected, the effective date of cancellation will be either the date we receive notice from the first Named Insured or the date specified in the notice, whichever is later. However, upon receiving a written notice of cancellation from the first Named Insured, we may waive the requirement that the notice state the future date of cancellation by confirming the date and time of cancellation in writing to the first Named Insured.
  - b.** If by statute, regulation or contract this policy may not be cancelled unless notice is given to a governmental agency, mortgagee or other third party, we will mail or deliver at least 10 days notice to the first Named Insured and the third party as soon as practicable after receiving the first Named Insured's request for cancellation.

Our notice will state the effective date of cancellation, which will be the later of the following:

- (1)** 10 days from the date of mailing or delivering our notice, or
- (2)** the effective date of cancellation stated in the first Named Insured's notice to us.

**B.** Section **VI – CONDITION D. Cancellation** paragraph **5.** is deleted and replaced by the following:

- 5.** Premium Refund
  - a.** If this policy is cancelled, we will send the first Named Insured any premium refund due.
  - b.** If we cancel, the refund will be pro rata, except as provided in c. below.
  - c.** If the cancellation results from a failure of the first Named Insured to pay, when due, any premium to us or any amount, when due, under a premium finance agreement, then the refund may be less than pro rata. Calculation of the return premium at less than pro rata represents a penalty charged on unearned premium.
  - d.** If the first Named Insured cancels, the refund may be less than pro rata.
  - e.** The cancellation will be effective even if we have not made or offered a refund.

**C.** The following is added to Section **VI. - CONDITION D. Cancellation** and supersedes any provision to the contrary:

If we decide to:

1. cancel or nonrenew this policy; or
2. increase current policy premium by more than 15% (other than any increase due to change in risk, exposure or experience modification or resulting from an audit of auditable coverages); or
3. change any policy provision which would limit or restrict coverage;

Then:

We will mail or deliver notice of our action (including the dollar amount of any increase in renewal premium of more than 15%) to the first Named Insured and lienholder, if any, at the last mailing address known to us. We will mail or deliver notice at least:

1. 10 days before the effective date of cancellation if this policy has been in effect less than 60 days or if we cancel for nonpayment of premium; or
2. 45 days before the effective date of cancellation if this policy has been in effect 60 or more days and we cancel for a reason other than nonpayment of premium; or
3. 45 days before the expiration date of this policy if we decide to renew, increase the premium or limit or restrict coverage.

**D.** The following is added to Section **VI. - CONDITION D. Cancellation**.

If notice is mailed, proof of mailing will be sufficient proof of notice.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **AMENDMENT OF OTHER INSURANCE PRIMARY AND NONCONTRIBUTORY – DESIGNATED PERSON OR ORGANIZATION**

This endorsement modifies insurance provided under the following:

EXCESS LIABILITY COVERAGE PART

### **SCHEDULE**

**Name of Person or Organization:** Any person or organization that qualifies as an additional Insured under this policy.

Condition **I. Other Insurance** under Section **VI. Conditions** is deleted and replaced by the following:

#### **Other Insurance**

If other insurance applies to a "loss" that is also covered by this policy, this policy will apply excess of the other insurance, unless the other insurance is specifically written to be excess of this policy. Nothing herein will be construed to make this policy subject to the terms, conditions and limitations of such other insurance.

Other insurance includes any type of self-insurance or other mechanism by which an Insured arranges for funding of legal liabilities.

However, this insurance will not seek contribution from any other insurance available to an additional insured shown in the Schedule of this endorsement, provided that:

1. The additional insured is a Named Insured on such other insurance;
2. You have agreed in a written contract or agreement with the designated additional insured to provide insurance for that person or organization on a primary or a primary and noncontributory basis and such agreement was made prior to a "loss" covered by this insurance;
3. "Underlying insurance" includes the person or organization as an additional insured; and
4. "Underlying insurance" provides coverage to the person or organization on a primary and noncontributory basis.

This endorsement does not change any other provision of the policy.



**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**AMENDMENT OF CANCELLATION PROVISIONS –  
SCHEDULED PERSON OR ORGANIZATION**

This endorsement modifies insurance provided under the following:

**EXCESS LIABILITY COVERAGE PART**

Any term or provision of the Cancellation Conditions of the policy or any endorsement amending or replacing such Conditions is amended by the following:

- A.** If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule of this endorsement. We will send notice to the email or mailing address listed below at least 10 days, or the number of days listed below, if any, before the cancellation becomes effective. In no event will the notice period to the persons or organizations scheduled below exceed the notice to the first Named Insured.
- B.** This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

**SCHEDULE**

| <b>Name of Person(s) or Organization(s):</b> | <b>Email Address or Mailing Address:</b> | <b>Number of<br/>Days Advance<br/>Notice:</b> |
|--|--|---|
| Per Schedule on file with company            | Per Schedule on file with company        | 30  |

This endorsement does not change any other provision of the policy.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **AMENDMENT OF OTHER INSURANCE PRIMARY AND NONCONTRIBUTORY – DESIGNATED PERSON OR ORGANIZATION**

This endorsement modifies insurance provided under the following:

EXCESS LIABILITY COVERAGE PART

### **SCHEDULE**

**Name of Person or Organization:** Any person or organization that qualifies as an additional Insured under this policy.

Condition **I. Other Insurance** under Section **VI. Conditions** is deleted and replaced by the following:

#### **Other Insurance**

If other insurance applies to a "loss" that is also covered by this policy, this policy will apply excess of the other insurance, unless the other insurance is specifically written to be excess of this policy. Nothing herein will be construed to make this policy subject to the terms, conditions and limitations of such other insurance.

Other insurance includes any type of self-insurance or other mechanism by which an Insured arranges for funding of legal liabilities.

However, this insurance will not seek contribution from any other insurance available to an additional insured shown in the Schedule of this endorsement, provided that:

1. The additional insured is a Named Insured on such other insurance;
2. You have agreed in a written contract or agreement with the designated additional insured to provide insurance for that person or organization on a primary or a primary and noncontributory basis and such agreement was made prior to a "loss" covered by this insurance;
3. "Underlying insurance" includes the person or organization as an additional insured; and
4. "Underlying insurance" provides coverage to the person or organization on a primary and noncontributory basis.

This endorsement does not change any other provision of the policy.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**GEORGIA CHANGES - CANCELLATION AND NONRENEWAL**

This endorsement modifies insurance provided under the following:

COMMERCIAL UMBRELLA COVERAGE PART  
EXCESS LIABILITY COVERAGE PART

**A.** Section **VI - CONDITION D. Cancellation** Paragraph **1.** is deleted and replaced by the following:

- 1.** The first Named Insured shown in the Declarations may cancel this policy by mailing or delivering to us advance written notice of cancellation, subject to the following:
  - a.** If only the interest of the first Named Insured is affected, the effective date of cancellation will be either the date we receive notice from the first Named Insured or the date specified in the notice, whichever is later. However, upon receiving a written notice of cancellation from the first Named Insured, we may waive the requirement that the notice state the future date of cancellation by confirming the date and time of cancellation in writing to the first Named Insured.
  - b.** If by statute, regulation or contract this policy may not be cancelled unless notice is given to a governmental agency, mortgagee or other third party, we will mail or deliver at least 10 days notice to the first Named Insured and the third party as soon as practicable after receiving the first Named Insured's request for cancellation.

Our notice will state the effective date of cancellation, which will be the later of the following:

- (1)** 10 days from the date of mailing or delivering our notice, or
- (2)** the effective date of cancellation stated in the first Named Insured's notice to us.

**B.** Section **VI – CONDITION D. Cancellation** paragraph **5.** is deleted and replaced by the following:

- 5.** Premium Refund
  - a.** If this policy is cancelled, we will send the first Named Insured any premium refund due.
  - b.** If we cancel, the refund will be pro rata, except as provided in c. below.
  - c.** If the cancellation results from a failure of the first Named Insured to pay, when due, any premium to us or any amount, when due, under a premium finance agreement, then the refund may be less than pro rata. Calculation of the return premium at less than pro rata represents a penalty charged on unearned premium.
  - d.** If the first Named Insured cancels, the refund may be less than pro rata.
  - e.** The cancellation will be effective even if we have not made or offered a refund.

**C.** The following is added to Section **VI. - CONDITION D. Cancellation** and supersedes any provision to the contrary:

If we decide to:

1. cancel or nonrenew this policy; or
2. increase current policy premium by more than 15% (other than any increase due to change in risk, exposure or experience modification or resulting from an audit of auditable coverages); or
3. change any policy provision which would limit or restrict coverage;

Then:

We will mail or deliver notice of our action (including the dollar amount of any increase in renewal premium of more than 15%) to the first Named Insured and lienholder, if any, at the last mailing address known to us. We will mail or deliver notice at least:

1. 10 days before the effective date of cancellation if this policy has been in effect less than 60 days or if we cancel for nonpayment of premium; or
2. 45 days before the effective date of cancellation if this policy has been in effect 60 or more days and we cancel for a reason other than nonpayment of premium; or
3. 45 days before the expiration date of this policy if we decide to renew, increase the premium or limit or restrict coverage.

**D.** The following is added to Section **VI. - CONDITION D. Cancellation**.

If notice is mailed, proof of mailing will be sufficient proof of notice.

## TEXAS WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

This endorsement applies only to the insurance provided by the policy because Texas is shown in Item 3.A. of the Information Page.

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule, but this waiver applies only with respect to bodily injury arising out of the operations described in the Schedule where you are required by a written contract to obtain this waiver from us.

This endorsement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

The premium for this endorsement is shown in the Schedule.

### Schedule

1. ☐ Specific Waiver

Name of person or organization

☒ Blanket Waiver

Any person or organization for whom the Named Insured has agreed by written contract to furnish this waiver.

2. Operations:

All Texas Operations

3. Premium:

The premium charge for this endorsement shall be 2 percent of the premium developed on payroll in connection with work performed for the above person(s) or organization(s) arising out of the operations described.

4. Advance Premium:

Issued by Liberty Insurance Corporation 21814

For attachment to Policy No. WA7-C8D-004095-024

Effective Date

Premium \$

Issued to CRH Americas, Inc.

Endorsement No.

**BRAZORIA COUNTY EXHIBIT B ADDITIONAL REQUIREMENTS**  
**ITB #25-29 BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG-SET III / 30N**  
**GENERAL LAND OFFICE CONTRACT NUMBER 19-076-003-B352-CDBG-DR 2016 FLOOD ALLOCATION**

**ADDITIONAL INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION**

1. Contract and Contract Documents

- a. The project to be constructed pursuant to this contract will be financed with assistance from the General Land Office (GLO) through the Community Development Block Grant – Disaster Recovery (CDBG-DR) fund and is subject to all applicable Federal and State laws and regulations.
- b. The Plans, Specifications and Addenda shall form part of this contract and the provisions thereof shall be binding upon the parties as if they were herein fully set forth.

2. Definitions

Whenever used in any of the Contract Documents, the following meanings shall be given to the terms here in defined:

- (a) The term "Contract" means the Contract executed between the Brazoria County, hereinafter called the "County" and Texas Materials Group, Inc, hereinafter called "Contractor", of which these GENERAL  
(Name of Construction Co.)  
CONDITIONS, form a part.
- (b) The term "Project Area" means the area within the specified Contract limits of the Improvements contemplated to be constructed in whole or in part under this contract.
- (c) The term "Engineer" means CobbFendley, Engineer in charge, serving the City/County with  
(name of engineering firm)  
architectural or engineering services, his successor, or any other person or persons, employed by the City/County for the purpose of directing or having in charge the work embraced in this Contract.
- (d) The term "Contract Documents" means and shall include the following: Executed Contract, Addenda (if any), Invitation for Bids, Instructions to Bidders, Signed Copy of Bid, General Conditions, Special Conditions, Technical Specifications, and Drawings (as shown in Attachment C Plan Set I).

3. Supervision By Contractor

- (a) Except where the Contractor is an individual and personally supervises the work, the Contractor shall provide a competent superintendent, satisfactory to the Engineer, on the work at all times during working hours with full authority to act as Contractor's agent. The Contractor shall also provide adequate staff for the proper coordination and expediting of his work.
- (b) The Contractor shall be responsible for all work executed under the Contract. Contractor shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

4. Subcontracts

- (a) The Contractor shall not execute an agreement with any subcontractor or permit any subcontractor to perform any work included in this contract until Contractor has verified the subcontractor has been cleared (not suspended or debarred) to participate in federally funded contracts.
- (b) No proposed subcontractor shall be disapproved by the County except for cause.



- (c) The Contractor shall be as fully responsible to the County for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them.
- (d) The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work and required compliance by each subcontractor with the applicable provisions of the Contract.
- (e) Nothing contained in the Contract shall create any contractual relation between any subcontractor and the County.
- (f) Contractors are encouraged to subcontract with Minority Business Enterprises, Small Business Enterprises, Women Business Enterprises, and labor surplus area firms.

#### 5. Fitting and Coordination of Work

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, subcontractors, or material suppliers engaged upon this Contract.

#### 6. Payments to Contractor *(additional information can be found in section 12.0 Payments to Contractor in the ITB document)*

##### (a) Partial Payments

- 1) The Contractor shall prepare the requisition for partial payment as of the last day of the month and submit it, with the required number of copies, to the Brazoria County Project Manager for approval. The amount of the payment due the Contractor shall be determined by adding to the total value of work completed to date, the value of materials properly stored on the site and deducting (1) five percent (5%) of the total amount, to be retained until final payment, and (2) the amount of all previous payments. The total value of work completed to date shall be based on the estimated quantities of work completed and on the unit prices contained in the agreement. The value of materials properly stored on the site shall be based upon the estimated quantities of such materials and the invoice prices. Copies of all invoices shall be available for inspection of the Engineer.
- 2) Monthly or partial payments made by the County to the Contractor are advanced for the purpose of assisting the contractor to expedite the work of construction. The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the County. Such payments shall not constitute a waiver of the right of the County to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the County in all details.

##### (b) Final Payment

- 1) After final inspection and the acceptance by the County of all work under the Contract, the Contractor shall prepare the requisition for final payment which shall be based upon the careful inspection of each item of work at the applicable unit prices stipulated in the Contract. The total amount of the final payment due the Contractor under this Contract shall be the amount computed as described above less all previous payments.
- 2) Before paying the final estimate, County shall require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the Project) and services to the Contractor. The County may make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments made shall in no way impair the obligations of any surety or sureties furnished under this Contract.
- 3) Any amount due the County under Liquidated Damages, shall be deducted from the final payment due the contractor.

(c) Payments Subject to Submission of Certificates

Each payment to the Contractor by the County shall be made subject to submission by the Contractor of all written certifications required of it and its subcontractors.

(d) Withholding Payments

The County may withhold any payment due the Contractor as deemed necessary to protect the County, and if so elects, may also withhold any amounts due from the Contractor to any subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the County and will not require the County to determine or adjust any claims or disputes between the Contractor and its subcontractors or material dealers, or to withhold any moneys for their protection unless the County elects to do so. The failure or refusal of the County to withhold any moneys from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

7. Changes in the Work

- (a) The County may make changes in the scope of work required to be performed by the Contractor under the Contract without relieving or releasing the Contractor from any obligations under the Contract or any guarantee given pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise. Additionally, all such change orders must be approved by CDBG-DR prior to execution of same.
- (b) Except for the purpose of affording protection against any emergency endangering health, life, limb or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the County authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract Price will be valid unless so ordered.
- (c) If applicable unit prices are contained in the Contract, the County may order the Contractor to proceed with desired unit prices specified in the Contract; provided that in case of a unit price contract the net value of all changes does not increase the original total amount of the agreement by more than twenty-five percent (25%) or decrease the original total amount by more than twenty-five percent (25%) for municipalities and eighteen percent (18%) for counties without the written consent of the contractor. [Texas Local Government Code Section 252.048(d) and Section 262.031(b)]
- (d) Each change order shall include in its final form:
  - 1) A detailed description of the change in the work.
  - 2) The Contractor's proposal (if any) or a confirmed copy thereof.
  - 3) A definite statement as to the resulting change in the contract price and/or time.
  - 4) The statement that all work involved in the change shall be performed in accordance with contract requirements except as modified by the change order.
  - 5) The procedures as outlined in this Section for a unit price contract also apply in any lump sum contract.

8. Claims for Extra Cost

- (a) If the Contractor claims that any instructions by Drawings or otherwise involve extra cost or extension of time, he shall, within ten days after the receipt of such instructions, and in any event before proceeding to execute the work, submit his protest thereto in writing to the County, stating clearly and in detail the basis of his objections. No such claim will be considered unless so made.
- (b) Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.
- (c) Any discrepancies which may be discovered between actual conditions and those represented by the Drawings and maps shall be reported at once to the County and work shall not proceed except at the Contractor's risk, until written instructions have been received from the County.
- (d) If, on the basis of the available evidence, the County determines that an adjustment of the Contract Price and/or time is justifiable, a change order shall be executed.

#### 9. Assignment or Novation

The Contractor shall not assign nor transfer, whether by assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the County. No assignment or novation of this Contract shall be valid unless the assignment or novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools, and equipment supplied for the performance of the work under this Contract in favor of all persons, Contractors, or corporations rendering such labor or services or supplying such materials, tools, or equipment.

#### 10. Technical Specifications and Drawings

Anything mentioned in the Technical Specifications and not shown on the Drawings or vice versa, shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in Drawings, or Technical Specifications, the matter shall be immediately submitted to the County for review. Contractor shall be liable for any issues or expenses in the event the discrepancy is not submitted to the County.

#### 11. Shop Drawings

- (a) All required shop drawings, machinery details, layout drawings, etc. shall be submitted to the Engineer in single copy for approval sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking if necessary. The Contractor may proceed, only at Contractor's own risk, with manufacture or installation of any equipment or work covered by said shop drawings, etc. until they are approved and no claim, by the Contractor, for extension of the contract time shall be granted by reason of his failure in this respect.
- (b) Any drawings submitted without the Contractor's stamp of approval will not be considered and will be returned to him for proper resubmission. If any drawings show variations from the requirements of the Contract because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of contract price and/or time, otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been approved.

- (c) If a shop drawing is in accordance with the contract or involves only minor adjustment in the interest of the County not involving a change in contract price or time, the engineer may approve the drawing. The approval shall not relieve the Contractor from responsibility to adhere to the contract or for any error in the drawing.

## 12. Requests for Supplementary Information

It shall be the responsibility of the Contractor to make timely requests of the County for any additional information which should be furnished by the County under the terms of this Contract, and which is required in the planning and execution of the work. Such requests may be submitted from time to time as the need approaches, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and the latest date by which each will be required by the Contractor. The first list shall be submitted within two weeks after Contract award and shall be as complete as possible at that time. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provision of this section.

## 13. Materials and Workmanship

- (a) Unless otherwise specifically provided for in the technical specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the technical specifications as "equal to" any particular standard, the Engineer shall decide the question of equality.
- (b) The Contractor shall furnish to the County for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics, and all other pertinent information as required, and shall likewise submit for approval full information concerning all other materials or articles which he proposes to incorporate.
- (c) Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- (d) Materials specified by reference to the number or symbol of a specific standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to type, class or grade, or modified in the technical specifications shall have full force and effect as though printed therein.
- (e) The County may require the Contractor to dismiss from the work such employee or employees as the County or the Engineer may deem unqualified.

## 14. Samples, Certificates and Tests

- (a) The Contractor shall submit all material or equipment samples, certificates, affidavits, etc., as called for in the contract documents or required by the Engineer, promptly after award of the contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time.
- (b) Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed information which will assist the Engineer in making a prompt decision regarding the acceptability of the sample. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.

- (c) Approval of any materials shall be general only and shall not constitute a waiver of the County's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.
- (d) Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:
  - 1) The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, except those samples taken on the project by the Engineer;
  - 2) The Contractor shall assume all costs of re-testing materials which fail to meet contract requirements;
  - 3) The Contractor shall assume all costs of testing materials offered in substitution for those found deficient;
  - 4) The County will pay all other expenses.

#### 15. Permits and Codes

- (a) The Contractor shall give all notices required by and comply with all applicable federal and state laws, ordinances, and codes of the Local Government. All construction work and/or utility installations shall comply with all applicable ordinances, and codes including all written waivers. Before installing any work, the Contractor shall examine the drawings and technical specifications for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the County. Where the requirements of the drawings and technical specifications fail to comply with such applicable ordinances or codes, the County will adjust the Contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices.
- (b) Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility at variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the drawings and technical specifications), the Contractor shall remove such work without cost to the County.
- (c) The Contractor shall at his own expense, secure and pay for all permits for street pavement, sidewalks, shed, removal of abandoned water taps, sealing of house connection drains, pavement cuts, buildings, electrical, plumbing, water, gas and sewer permits required by the local regulatory body or any of its agencies.
- (d) The Contractor shall comply with applicable local laws and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the Improvements contained in this Contract.
- (e) The Contractor will be required to make arrangements for and pay the water, electrical power, or any other utilities required during construction.
- (f) During construction of this project, the Contractor shall use every means possible to control the amount of dust created by construction. Prior to the close of a day's work, the Contractor, if directed by the County, shall moisten the surrounding area to prevent a dusty condition.

## 16. Care of Work

- (a) The Contractor shall be responsible for all damages to person or property that occur as a result of its fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance.
- (b) The Contractor shall provide sufficient competent watchmen, both day and night, including Saturdays, Sundays, and holidays, from the time the work is commenced until final completion and acceptance.
- (c) In an emergency affecting the safety of life, limb or property, including adjoining property, the Contractor, without special instructions or authorization from the County is authorized to act to prevent such threatened loss or injury. Contractor shall follow all instructions of County.
- (d) The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and shall be responsible for completely repairing any damage thereto caused by the operations.
- (e) The Contractor shall shore up, brace, underpin, secure, and protect as maybe necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the improvements included in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the County from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the County may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

## 17. Accident Prevention

- (a) No laborer or mechanic employed in the performance of this Contract shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety as determined under construction safety and health standards promulgated by the Department of Labor.
- (b) The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work.
- (c) The Contractor shall maintain an accurate record of all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the County with reports concerning these matters.
- (d) The Contractor shall indemnify and hold harmless the County from any claims for damages resulting from property damage, personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this contract.
- (e) The Contractor shall provide trench safety for all excavations more than five feet deep prior to excavation. All OSHA Standards for trench safety must be adhered to by the Contractor.
- (f) The contractor shall at all times conduct work in such a manner as to ensure the least possible inconvenience to vehicular and pedestrian traffic. At the close of the work each day, all streets where possible in the opinion of the County, shall be opened to the public in order that persons living in the area may have access to their homes or businesses by the use of the streets. Barricades, warning signs, and necessary lighting shall be provided to the satisfaction of the County at the expense of the Contractor.



## 18. Sanitary Facilities

The Contractor shall furnish, install and maintain ample sanitary facilities for laborers. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

## 19. Use of Premises

- (a) The Contractor shall confine equipment, storage of materials, and construction operations to the contract limits as shown on the drawings and as prescribed by ordinances or permits, or as may be desired by the County, and shall not unreasonably encumber the site or public rights of way with materials and construction equipment.
- (b) The Contractor shall comply with all reasonable instructions of the County and all existing federal, state and local regulations regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

## 20. Removal of Debris, Cleaning, Etc.

The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights of way reasonably clear. Upon completion of the work, he shall remove all temporary construction facilities, debris and unused materials provided for work, and put the whole site of the work and public rights of way in a neat and clean condition.

## 21. Inspection

- (a) All materials and workmanship shall be subject to inspection, examination, or test by the County and Engineer at any and all times during manufacture or construction and at any and all places where such manufacture or construction occurs. The County shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected. Rejected material shall be promptly segregated and removed from the Project Area and replaced with material of specified quality without charge. If the Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the County may by contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any Monies which may be due the Contractor, without prejudice to any other rights or remedies of the County.
- (b) The Contractor shall furnish promptly all materials reasonably necessary for any tests which may be required. All tests by the County will be performed in such manner as not to delay the work unnecessarily and will be made in accordance with the provisions of the technical specifications.
- (c) The Contractor shall notify the County sufficiently in advance of back filling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the County, the Contractor shall uncover for inspection and recover such facilities at Contractor's expense, when so requested by the County.
- (d) Should it be considered necessary or advisable by the County at any time before final acceptance of the entire work to make an examination of work already completed, the Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any important or essential respect, due to fault of the Contractor or subcontractors, the Contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, shall be reimbursable and if completion of the work of the entire Contract has been delayed, a suitable extension of time will be approved.

- (e) Inspection of materials and appurtenances to be incorporated in the improvements included in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such inspection and acceptance, unless otherwise stated in the technical specifications, shall be final, except as regards to: (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the inspection of materials as a whole or in part will be made at the Project Site.
- (f) Neither inspection, testing, approval nor acceptance of the work in whole or in part, by the County or its agents shall relieve the Contractor or its sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

## 22. Review by County

The County and its authorized representatives and agents shall have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however that all instructions and approval with respect to the work will be given to the Contractor only by the County through its authorized representatives or agents.

## 23. Final Inspection

When the Improvements included in this Contract are substantially completed, the Contractor shall notify the County in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The County will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable.

*Per Brazoria County, substantial completion is defined as a designated portion of a construction project that is sufficiently complete in accordance with the contract for the owner to occupy and /or utilize it for its intended use, without undue interference.*

## 24. Deduction for Uncorrected Work

If the County deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the County and subject to settlement, in case of dispute, as herein provided.

## 25. Warranty of Title

No material, supplies, or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease-purchase or other agreement by which an interest is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same, together with all improvements and appurtenances constructed or placed by Contractor, to the County free from any claims, liens, or charges. Neither the Contractor nor any person, firm, or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any law permitting such persons to look to funds due the Contractor. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

## 26. Warranty of Workmanship and Materials

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the improvements included in this Contract by the County or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship.

The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of twelve (12) months from the date of final acceptance of the work.

#### 27. Job Offices

- (a) The Contractor and its subcontractors may maintain such office and storage facilities on the site as are necessary for the proper conduct of the work. These shall be located so as to cause no interference to any work to be performed on the site. The County shall be consulted with regard to locations.
- (b) Upon completion of the improvements, or as directed by the County, the Contractor shall remove all such temporary structures and facilities from the site, and leave the site of the work in the condition required by the Contract.

#### 28. Partial Use of Site Improvements

The County may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the technical specifications and if in its opinion, each such section is reasonably safe, fit, and convenient for the use and accommodation for which it was intended, provided:

- (a) The use of such sections of the Improvements shall in no way impede the completion of the remainder of the work by the Contractor.
- (b) The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.

#### 29. Contract Documents and Drawings

The County will furnish the Contractor without charge, one (1) copy of the Contract Documents, including Technical Specifications and Drawings. Additional copies requested by the Contractor will be furnished at cost.

### ADMINISTRATIVE REQUIREMENTS

#### 30. Local Program Liaison

For purposes of this Agreement, the County's Project Manager or equivalent authorized person will serve as the Local Program Liaison and primary point of contact for the Contractor. All required progress reports and communication regarding the project shall be directed to this liaison and other local personnel as appropriate.

#### 31. Access to Information

- (a) The U.S. Department of Housing and Urban Development (HUD), Inspectors General, the Comptroller General of the United States, the General Land Office (GLO), and the County, or any of their authorized representatives, shall have access to any documents, papers, or other records of the Contractor which are pertinent to the CDBG-DR award, in order to make audits, examinations, excerpts, and transcripts, and to closeout the City's/County's CDBG-DR contract with GLO. **2 CFR 200.336 (former 24 CFR 85.36(i)(10))**

**The Office of the Comptroller General of the United States, the Government Accountability Office, the Office of Inspector General, or any authorized representative of the U.S. Government shall also have this right of inspection.**

- (b) Contractor shall include the substance of this clause in all subcontracts it awards.

## FEDERAL REQUIREMENTS

### 32. Resolution of Program Non-Compliance and Disallowed Costs

In the event of any dispute, claim, question, or disagreement arising from or relating to this Contract, or the breach thereof, including determination of responsibility for any costs disallowed as a result of non-compliance with federal, state or CDBG-DR program requirements, the parties hereto shall use their best efforts to settle the dispute, claim, question or disagreement. To this effect, the parties shall consult and negotiate with each other in good faith within 30 days of receipt of a written notice of the dispute or invitation to negotiate, and attempt to reach a just and equitable solution satisfactory to both parties. If the matter is not resolved by negotiation within 30 days of receipt of written notice or invitation to negotiate, the parties agree first to try in good faith to settle the matter by mediation administered by the American Arbitration Association under its Commercial Mediation Procedures before resorting to arbitration, litigation, or some other dispute resolution procedure. The parties may enter into a written amendment to this Contract and choose a mediator that is not affiliated with the American Arbitration Association. The parties shall bear the costs of such mediation equally. If the matter is not resolved through such mediation within 60 days of the initiation of that procedure, either party may proceed to file suit.

### 33. Conflicts of Interest

- (a) Governing Body. No member of the governing body of the County and no other officer, employee, or agent of the County, who exercises any functions or responsibilities in connection with administration, construction, engineering, or implementation of CDBG-DR award between GLO and the City / County, shall have any personal financial interest, direct or indirect, in the Contractor or this Contract; and the Firm shall take appropriate steps to assure compliance.
- (b) Other Local Public Officials. No other public official, who exercises any functions or responsibilities in connection with the planning and carrying out of administration, construction, engineering or implementation of the CDBG-DR award between GLO and the County, shall have any personal financial interest, direct or indirect, in the Contractor or this Contract; and the Contractor shall take appropriate steps to assure compliance.
- (c) The Contractor and Employees. The Contractor warrants and represents that it has no conflict of interest associated with the CDBG-DR award between GLO and the County or this Contract. The Contractor further warrants and represents that it shall not acquire an interest, direct or indirect, in any geographic area that may benefit from the CDBG-DR award between GLO and the County or in any business, entity, organization or person that may benefit from the award. The Contractor further agrees that it will not employ an individual with a conflict of interest as described herein.

### 34. Non Segregated Facilities

The Contractor certifies that he does not and will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not and will not permit his employees any segregated facilities at any of his establishments, or permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. As used in this paragraph the term "segregated facilities" means any waiting rooms, work areas, rest rooms 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.

### 35. The Provision of Local Training, Employment, and Business Opportunities

(a) To the greatest extent feasible opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by persons residing in the area of the project. See also GLO Section 3 Policy and "Exhibit G" on the GLO-DR website.

(b) The Contractor will include this clause in every subcontract for work in connection with the project.

### 36. Gender Neutral - Gender References

When necessary, unless the context clearly requires otherwise, any gender-specific or gender-neutral term in this Contract (for example, he, she, it, etc.) is to be read as referring to any other gender or to no gender.

## STATE REQUIREMENTS

### 37. Verification No Boycott Israel.

As required by Chapter 2270, Government Code, CONTRACTOR hereby verifies that it does not boycott Israel and will not boycott Israel through the term of this Agreement. For purposes of this verification, "boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes.

### 38. Foreign Terrorist Organizations.

Pursuant to Chapter 2252, Texas Government Code, [Company] represents and certifies that, at the time of execution of this Agreement neither [Company], nor any wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of the same (i) engages in business with Iran, Sudan, or any foreign terrorist organization as described in Chapters 806 or 807 of the Texas Government Code, or Subchapter F of Chapter 2252 of the Texas Government Code, or (ii) is a company listed by the Texas Comptroller of Public Accounts under Sections 806.051, 807.051, or 2252.153 of the Texas Government Code. The term "foreign terrorist organization" in this paragraph has the meaning assigned to such term in Section 2252.151 of the Texas Government Code.

## ENVIRONMENTAL CONDITIONS

### 39. Lead-Based Paint

The Subrecipient agrees that any construction or rehabilitation of residential structures with assistance provided under this Agreement shall be subject to HUD Lead-Based Paint Regulations at 24 CFR 570.608, and 24 CFR Part 35, Subpart B. Such regulations pertain to all CDBG-assisted housing and require that all owners, prospective owners, and tenants of properties constructed prior to 1978 be properly notified that such properties may include lead-based paint. Such notification shall point out the hazards of lead-based paint and explain the symptoms, treatment and precautions that should be taken when dealing with lead-based paint poisoning and the advisability and availability of blood lead level screening for children under seven. The notice should also point out that if lead-based paint is found on the property, abatement measures may be undertaken. The regulations further require that, depending on the amount of Federal funds applied to a property, paint testing, risk assessment, treatment and/or abatement may be conducted.

#### 40. Flood Disaster Protection

In accordance with the requirements of the Flood Disaster Protection Act of 1973 (42 U.S.C. 4001), the Subrecipient shall assure that for activities located in an area identified by the Federal Emergency Management Agency (FEMA) as having special flood hazards, flood insurance under the National Flood Insurance Program is obtained and maintained as a condition of financial assistance for acquisition or construction purposes (including rehabilitation).

#### 41. Other Conditions

Any special conditions such as mitigation measures will be carried out as instructed by the Environmental Review Record. Please refer to the environmental review record for applicable mitigation measures and see attached Authority to Use Grant Funds for applicable mitigation measures.

#### MINORITY/FEMALE GOALS AND TIMETABLES

The female employment goal is effective as of April 1980 and is currently 6.9%. The percentages for minority participation in Texas are:

##### **Texarkana Area:**

|  |      |
|--|------|
| Texarkana & Bowie Co.  | 19.7 |
| Non-MSA Counties of Camp, Cass, Lamar, Morris, Red River & Titus | 20.2 |

##### **Tyler-Longview Area:**

|  |      |
|--|------|
| Longview, Gregg Co. & Harrison Co.   | 22.8 |
| Tyler & Smith Co.  | 23.5 |
| Non-MSA Counties of Anderson, Angelina, Cherokee, Henderson, Marion, Nacogdoches, Panola, Rusk, San Augustine, Shelby, Upshur & Wood | 22.5 |

##### **Beaumont-Port Arthur Area:**

|  |      |
|--|------|
| Beaumont, Port Arthur, Orange, Hardin Co., Jefferson Co., & Orange Co. | 22.6 |
| Non-MSA Counties of Jasper, Houston, Newton, Sabine, & Tyler           | 22.6 |

##### **Houston Area:**

|   |      |
|---|------|
| Bryan, College Station & Brazos Co.   | 23.7 |
| Galveston, Texas City & Galveston Co.   | 28.9 |
| Houston, Brazoria Co., Fort Bend Co., Harris Co., Liberty Co., Montgomery Co. & Waller Co.  | 27.3 |
| Non-MSA Counties of Austin, Burleson, Calhoun, Chambers, Colorado, DeWitt, Fayette, Goliad, Grimes, Jackson, Lavaca, Leon, Madison, Matagorda, Polk, Robertson, San Jacinto, Trinity, Victoria, Walker, Washington, & Wharton | 27.4 |

##### **Austin Area:**

|  |      |
|--|------|
| Austin, Hays Co., Travis Co., & Williamson Co.                     | 24.1 |
| Non-MSA Counties of Bastrop, Blanco, Burnet, Caldwell, Lee & Llano | 24.2 |

##### **Waco, Killeen, Temple Area:**

|  |      |
|--|------|
| Killeen, Temple, Bell Co. & Coryell Co.  | 16.4 |
| Waco & McLennan Co.  | 20.7 |
| Non-MSA Counties of Bosque, Falls, Freestone, Hamilton, Hill, Lampasas, Limestone, Milam & Mills | 18.6 |

##### **Dallas, Fort Worth Area:**

|   |      |
|---|------|
| Dallas, Fort Worth, Collin Co., Dallas Co., Denton Co., Ellis Co., Hood Co., Johnson Co., Kaufman Co., Parker Co., Rockwall Co., Tarrant Co. & Wise Co. | 18.2 |
| Sherman, Denison & Grayson Co.  | 9.4  |
| Non-MSA Counties of Cooke, Delta, Erath, Fannin, Franklin, Hopkins, Hunt, Jack, Montague, Navarro, Palo Pinto, Rains, Somervell, & Van Zandt            | 17.2 |

##### **Wichita Falls Area:**

|  |      |
|--|------|
| Wichita Falls, Clay Co. & Wichita Co.  | 12.4 |
| Non-MSA Counties of Archer, Baylor, Cottle, Foard, Hardeman, Wilbarger & Young | 11.0 |



**Abilene Area:**

|   |      |
|---|------|
| Abilene, Callaghan Co., Jones Co. & Taylor Co.  | 11.6 |
| Non-MSA Counties of Brown, Coleman, Comanche, Eastland, Fisher, Haskell, Kent, Knox, Mitchell, Nolan, Scurry, Shackelford, Stephens, Stonewall & Throckmorton | 10.9 |

**San Angelo Area:**

|   |      |
|---|------|
| San Angelo & Tom Green Co.  | 19.2 |
| Non-MSA Counties of Coke, Concho, Crockett, Irion, Kimble, McCullough, Mason, Menard, Reagan, Runnels, San Saba, Schleicher, Sterling, Sutton & Terrell | 20.0 |

**San Antonio Area:**

|  |      |
|--|------|
| Laredo & Webb Co.  | 87.3 |
| San Antonio, Bexar Co., Comal Co. & Guadalupe Co.  | 47.8 |
| Non-MSA Counties of Atascosa, Bandera, Dimmit, Edwards, Frio, Gillespie, Gonzales, Jim Hogg, Karnes, Kendall, Kerr, Kinney, La Salle, McMullen, Maverick, Medina, Real, Uvalde, Val Verde, Wilson, Zapata & Zavala | 49.4 |

**Corpus Christi Area:**

|   |      |
|---|------|
| Corpus Christi, Nueces Co. & San Patricio Co.   | 41.7 |
| Non-MSA Counties of Aransas, Bee, Brooks, Duval, Jim Wells, Kenedy, Kleberg, Live Oak & Refugio | 44.2 |

**Brownsville, McAllen, Harlingen Area:**

|  |      |
|--|------|
| Brownsville, Harlingen, San Benito & Cameron Co. | 71.0 |
| McAllen, Pharr, Edinburg & Hidalgo Co.           | 72.8 |
| Non-MSA Counties of Starr & Willacy              | 72.9 |

**Odessa, Midland Area:**

|   |      |
|---|------|
| Midland & Midland Co.   | 19.1 |
| Odessa & Ector Co.  | 15.1 |
| Non-MSA Counties of Andrews, Crane, Glasscock, Howard, Loving, Martin, Pecos, Reeves, Upton, Ward & Winkler | 18.9 |

**El Paso Area:**

|   |      |
|---|------|
| El Paso & El Paso Co.   | 57.8 |
| Non-MSA Counties of Brewster, Culbertson, Hudspeth, Jeff Davis & Presidio | 49.0 |

**Lubbock Area:**

|   |      |
|---|------|
| Lubbock & Lubbock Co.   | 19.6 |
| Non-MSA Counties of Bailey, Borden, Cochran, Crosby, Dawson, Dickens, Floyd, Gaines, Garza, Hale, Hockley, King, Lamb, Lynn, Motley, Terry & Yoakum | 19.5 |

**Amarillo Area:**

|   |      |
|---|------|
| Amarillo, Potter Co. & Randall Co.  | 9.3  |
| Non-MSA Counties of Armstrong, Briscoe, Carson, Castro, Childress, Collingsworth, Dallam, Deaf Smith, Donley, Gray, Hall, Hansford, Hartley, Hemphill, Hutchinson, Lipscomb, Moore, Ochiltree, Oldham, Parmer, Roberts, Sherman, Swisher, & Wheeler | 11.0 |

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**A. APPLICABILITY**

The Project or Program to which the construction work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

**1. Minimum wages and fringe benefits**

- i. All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in 29 CFR 5.5(d) and (e), the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(v) of these contract clauses; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under 29 CFR 5.5(a)(1)(iii)) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

**ii. Frequently recurring classifications**

**A.** In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to 29 CFR 5.5(a)(1)(iii), provided that:

1. The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;
  2. The classification is used in the area by the construction industry; and
  3. The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.
- B.** The Administrator will establish wage rates for such classifications in accordance with 29 CFR 5.5(a)(1)(iii)(A)(3). Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

**iii. Conformance**

**A.** The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be

classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

1. The work to be performed by the classification requested is not performed by a classification in the wage determination; and
  2. The classification is used in the area by the construction industry; and
  3. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- B.** The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.
- C.** If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to [DBAconformance@dol.gov](mailto:DBAconformance@dol.gov). The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- D.** In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to [DBAconformance@dol.gov](mailto:DBAconformance@dol.gov), refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- E.** The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under 29 CFR 5.5 (a)(1)(iii)(C) and (D). The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to 29 CFR 5.5 (a)(1)(iii)(C) or (D) must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

**iv. Fringe benefits not expressed as an hourly rate**

Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

**v. Unfunded plans**

If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in 29 CFR 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

- vi. Interest** In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

## **2. Withholding**

### **i. Withholding requirements**

The U. S. Department of Housing and Urban Development may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in 29 CFR 5.5(a) for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work (or otherwise working in construction or development of the project under a development statute) all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in 29 CFR 5.5(a)(3)(iv), HUD may on its own initiative and after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

### **ii. Priority to withheld funds**

The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:

- A.** A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- B.** A contracting agency for its procurement costs;
- C.** A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- D.** A contractor's assignee(s);
- E.** A contractor's successor(s); or
- F.** A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

## **3. Records and certified payrolls**

### **i. Basic record requirements**

**A. Length of record retention.** All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

**B. Information required** Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

**C. Additional records relating to fringe benefits.** Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(v) that the wages of any laborer or mechanic include the amount of any

costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

**D. Additional records relating to apprenticeship** Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

**ii. Certified payroll requirements**

**A. Frequency and method of submission** The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to HUD if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the certified payrolls to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to HUD. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system

**B. Information required** The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i)(B), except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the sponsoring government agency (or the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records).

**C. Statement of Compliance** Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

1. That the certified payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information and basic records are being maintained under 29 CFR 5.5 (a)(3)(i), and such information and records are correct and complete;
2. That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly

from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

3. That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.
  - D. **Use of Optional Form WH-347** The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the “Statement of Compliance” required by 29 CFR 5.5(a)(3)(ii)(C).
  - E. **Signature** The signature by the contractor, subcontractor, or the contractor’s or subcontractor’s agent must be an original handwritten signature or a legally valid electronic signature.
  - F. **Falsification** The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.
  - G. **Length of certified payroll retention** The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.
- iii. **Contracts, subcontracts, and related documents** The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.
- iv **Required disclosures and access**
- A. **Required record disclosures and access to workers** The contractor or subcontractor must make the records required under 29 CFR 5.5(a)(3)(i)–(iii), and any other documents that HUD or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by 29 CFR 5.1, available for inspection, copying, or transcription by authorized representatives of HUD or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.
  - B. **Sanctions for non-compliance with records and worker access requirements** If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to 29 CFR 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.
  - C. **Required information disclosures** Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to HUD if the agency is a party to

the contract, or to the Wage and Hour Division of the Department of Labor. If the Federal agency is not such a party to the contract, the contractor, subcontractor, or both, must, upon request, provide the full Social Security number and last known address, telephone number, and email address of each covered worker to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to HUD, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

#### **4. Apprentices and equal employment opportunity**

##### **i. Apprentices**

- A. Rate of pay** Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- B. Fringe benefits** Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.
- C. Apprenticeship ratio** The allowable ratio of apprentices to journeymen on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to 29 CFR 5.5(a)(4)(i)(D). Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in 29 CFR 5.5(a)(4)(i)(A), must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.
- D. Reciprocity of ratios and wage rates** Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

- ii Equal employment opportunity** The use of apprentices and journeymen under this part must be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

#### **5 Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

**6 Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (11), along with the applicable wage determination(s) and such other clauses or contract modifications as the U.S. Department of Housing and Urban Development may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate.

**7 Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8 Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

**9 Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of eligibility.**

i. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

ii. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

iii. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

**11 Anti-retaliation** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

i. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;

ii. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;

iii. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5; or

iv. Informing any other person about their rights under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5.

**B. Contract Work Hours and Safety Standards Act (CWHSSA)**

The Agency Head must cause or require the contracting officer to insert the following clauses set forth in 29 CFR 5.5(b)(1), (2), (3), (4), and (5) in full, or (for contracts covered by the Federal Acquisition Regulation) by reference, in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses must



be inserted in addition to the clauses required by 29 CFR 5.5(a) or 4.6. As used in this paragraph, the terms “laborers and mechanics” include watchpersons and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in 29 CFR 5.5(b)(1) the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchpersons and guards, employed in violation of the clause set forth in 29 CFR 5.5(b)(1), in the sum of \$31 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in 29 CFR 5.5(b)(1).

**3. Withholding for unpaid wages and liquidated damages**

**i. Withholding process** The U.S Department of Housing and Urban Development or the recipient of Federal assistance may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in 29 CFR 5.5(b) on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

**ii Priority to withheld funds** The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:

- A.** A contractor’s surety(ies), including without limitation performance bond sureties and payment bond sureties;
- B.** A contracting agency for its procurement costs;
- C.** A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor’s bankruptcy estate;
- D.** A contractor’s assignee(s);
- E.** A contractor’s successor(s); or
- F.** A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

**4. Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses set forth in 29 CFR 5.5(b)(1) through (5) and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in 29 CFR 5.5(b)(1) through (5). In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss,

due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

- 5 Anti-retaliation** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:
- i. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in 29 CFR part 5;
  - ii. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or 29 CFR part 5;
  - iii. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or 29 CFR part 5; or
  - iv. Informing any other person about their rights under CWHSSA or 29 CFR part 5.
- C. CWHSSA required records clause** In addition to the clauses contained in 29 CFR 5.5(b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other laws referenced by 29 CFR 5.1, the Agency Head must cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor must maintain regular payrolls and other basic records during the course of the work and must preserve them for a period of 3 years after all the work on the prime contract is completed for all laborers and mechanics, including guards and watchpersons, working on the contract. Such records must contain the name; last known address, telephone number, and email address; and social security number of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid; daily and weekly number of hours actually worked; deductions made and actual wages paid. Further, the Agency Head must cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph must be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview workers during working hours on the job.
- D. Incorporation of contract clauses and wage determinations by reference** Although agencies are required to insert the contract clauses set forth in this section, along with appropriate wage determinations, in full into covered contracts, and contractors and subcontractors are required to insert them in any lower-tier subcontracts, the incorporation by reference of the required contract clauses and appropriate wage determinations will be given the same force and effect as if they were inserted in full text.
- E. Incorporation by operation of law** The contract clauses set forth in this section (or their equivalent under the Federal Acquisition Regulation), along with the correct wage determinations, will be considered to be a part of every prime contract required by the applicable statutes referenced by 29 CFR 5.1 to include such clauses, and will be effective by operation of law, whether or not they are included or incorporated by reference into such contract, unless the Administrator grants a variance, tolerance, or exemption from the application of this paragraph. Where the clauses and applicable wage determinations are effective by operation of law under this paragraph, the prime contractor must be compensated for any resulting increase in wages in accordance with applicable law.

#### **F. HEALTH AND SAFETY**

The provisions of this paragraph (F) are applicable where the amount of the prime contract exceeds **\$100,000**.

1. No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety, as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
2. The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96), 40 U.S.C. § 3701 et seq.
3. The contractor shall include the provisions of this paragraph in every subcontract, so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

## Title 29: Labor

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### PART 3—CONTRACTORS AND SUBCONTRACTORS ON PUBLIC BUILDING OR PUBLIC WORK FINANCED IN WHOLE OR IN PART BY LOANS OR GRANTS FROM THE UNITED STATES

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AUTHORITY: R.S. 161, sec. 2, 48 Stat. 848; Reorg. Plan No. 14 of 1950, 64 Stat. 1267; 5 U.S.C. 301; 40 U.S.C. 3145; Secretary's Order 01-2008; and Employment Standards Order No. 2001-01.

SOURCE: 29 FR 97, Jan. 4, 1964, unless otherwise noted.

#### §3.1 Purpose and scope.

This part prescribes “anti-kickback” regulations under section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c), popularly known as the Copeland Act. This part applies to any contract which is subject to Federal wage standards and which is for the construction, prosecution, completion, or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States. The part is intended to aid in the enforcement of the minimum wage provisions of the Davis-Bacon Act and the various statutes dealing with federally assisted construction that contain similar minimum wage provisions, including those provisions which are not subject to Reorganization Plan No. 14 (e.g., the College Housing Act of 1950, the Federal Water Pollution Control Act, and the Housing Act of 1959), and in the enforcement of the overtime provisions of the Contract Work Hours Standards Act whenever they are applicable to construction work. The part details the obligation of contractors and subcontractors relative to the weekly submission of statements regarding the wages paid on work covered thereby; sets forth the circumstances and procedures governing the making of payroll deductions from the wages of those employed on such work; and delineates the methods of payment permissible on such work.

#### §3.2 Definitions.

As used in the regulations in this part:

(a) The terms *building* or *work* generally include construction activity as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work. The terms include, without limitation, buildings, structures, and improvements of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, powerlines, pumping stations, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals; dredging, shoring, scaffolding, drilling, blasting, excavating, clearing, and landscaping. Unless conducted in connection with and at the site of such a building or work as is described in the foregoing sentence, the manufacture or furnishing of materials, articles, supplies, or equipment (whether or not a Federal or State agency acquires title to such materials, articles, supplies, or equipment during the course of the manufacture or furnishing, or owns the materials from which they are manufactured or furnished) is not a *building* or *work* within the meaning of the regulations in this part.

(b) The terms *construction*, *prosecution*, *completion*, or *repair* mean all types of work done on a particular building or work at the site thereof, including, without limitation, altering, remodeling, painting and decorating, the transporting of materials and supplies to or from the building or work by the employees of the construction contractor or construction

subcontractor, and the manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the building or work, by persons employed at the site by the contractor or subcontractor.

(c) The terms *public building* or *public work* include building or work for whose construction, prosecution, completion, or repair, as defined above, a Federal agency is a contracting party, regardless of whether title thereof is in a Federal agency.

(d) The term *building or work financed in whole or in part by loans or grants from the United States* includes building or work for whose construction, prosecution, completion, or repair, as defined above, payment or part payment is made directly or indirectly from funds provided by loans or grants by a Federal agency. The term includes building or work for which the Federal assistance granted is in the form of loan guarantees or insurance.

(e) Every person paid by a contractor or subcontractor in any manner for his labor in the construction, prosecution, completion, or repair of a public building or public work or building or work financed in whole or in part by loans or grants from the United States is *employed* and receiving *wages*, regardless of any contractual relationship alleged to exist between him and the real employer.

(f) The term *any affiliated person* includes a spouse, child, parent, or other close relative of the contractor or subcontractor; a partner or officer of the contractor or subcontractor; a corporation closely connected with the contractor or subcontractor as parent, subsidiary, or otherwise, and an officer or agent of such corporation.

(g) The term *Federal agency* means the United States, the District of Columbia, and all executive departments, independent establishments, administrative agencies, and instrumentalities of the United States and of the District of Columbia, including corporations, all or substantially all of the stock of which is beneficially owned by the United States, by the District of Columbia, or any of the foregoing departments, establishments, agencies, and instrumentalities.

[29 FR 97, Jan. 4, 1964, as amended at 38 FR 32575, Nov. 27, 1973]

### **§3.3 Weekly statement with respect to payment of wages.**

(a) As used in this section, the term *employee* shall not apply to persons in classifications higher than that of laborer or mechanic and those who are the immediate supervisors of such employees.

(b) Each contractor or subcontractor engaged in the construction, prosecution, completion, or repair of any public building or public work, or building or work financed in whole or in part by loans or grants from the United States, shall furnish each week a statement with respect to the wages paid each of its employees engaged on work covered by this part 3 and part 5 of this title during the preceding weekly payroll period. This statement shall be executed by the contractor or subcontractor or by an authorized officer or employee of the contractor or subcontractor who supervises the payment of wages, and shall be on the back of Form WH 347, "Payroll (For Contractors Optional Use)" or on any form with identical wording. Copies of Form WH 347 may be obtained from the Government contracting or sponsoring agency or from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site.

(c) The requirements of this section shall not apply to any contract of \$2,000 or less.

(d) Upon a written finding by the head of a Federal agency, the Secretary of Labor may provide reasonable limitations, variations, tolerances, and exemptions from the requirements of this section subject to such conditions as the Secretary of Labor may specify.

[29 FR 97, Jan. 4, 1964, as amended at 33 FR 10186, July 17, 1968; 47 FR 23679, May 28, 1982; 73 FR 77511, Dec. 19, 2008]

### **§3.4 Submission of weekly statements and the preservation and inspection of weekly payroll records.**

(a) Each weekly statement required under §3.3 shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work, or, if there is no representative of a Federal or State agency at the site of the building or work, the statement shall be mailed by the contractor or subcontractor, within such time, to a Federal or State agency contracting for or financing the building or work. After such examination and check as may be made, such statement, or a copy thereof, shall be kept available, or shall be transmitted together with a report of any violation, in accordance with applicable procedures prescribed by the United States Department of Labor.

(b) Each contractor or subcontractor shall preserve his weekly payroll records for a period of three years from date of completion of the contract. The payroll records shall set out accurately and completely the name and address of each laborer and mechanic, his correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Such payroll records shall be made available at all times for inspection by the contracting officer or his authorized representative, and by authorized representatives of the Department of Labor.

(Reporting and recordkeeping requirements in paragraph (b) have been approved by the Office of Management and Budget under control number 1215-0017)

[29 FR 97, Jan. 4, 1964, as amended at 47 FR 145, Jan. 5, 1982]

### **§3.5 Payroll deductions permissible without application to or approval of the Secretary of Labor.**

Deductions made under the circumstances or in the situations described in the paragraphs of this section may be made without application to and approval of the Secretary of Labor:

(a) Any deduction made in compliance with the requirements of Federal, State, or local law, such as Federal or State withholding income taxes and Federal social security taxes.

(b) Any deduction of sums previously paid to the employee as a bona fide prepayment of wages when such prepayment is made without discount or interest. A *bona fide prepayment of wages* is considered to have been made only when cash or its equivalent has been advanced to the person employed in such manner as to give him complete freedom of disposition of the advanced funds.

(c) Any deduction of amounts required by court process to be paid to another, unless the deduction is in favor of the contractor, subcontractor, or any affiliated person, or when collusion or collaboration exists.

(d) Any deduction constituting a contribution on behalf of the person employed to funds established by the employer or representatives of employees, or both, for the purpose of providing either from principal or income, or both, medical or hospital care, pensions or annuities on retirement, death benefits, compensation for injuries, illness, accidents, sickness, or disability, or for insurance to provide any of the foregoing, or unemployment benefits, vacation pay, savings accounts, or similar payments for the benefit of employees, their families and dependents: *Provided, however,* That the following standards are met:

(1) The deduction is not otherwise prohibited by law;

(2) It is either:

(i) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of or for the continuation of employment, or

(ii) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees;

(3) No profit or other benefit is otherwise obtained, directly or indirectly, by the contractor or subcontractor or any affiliated person in the form of commission, dividend, or otherwise; and

(4) The deductions shall serve the convenience and interest of the employee.

(e) Any deduction contributing toward the purchase of United States Defense Stamps and Bonds when voluntarily authorized by the employee.

(f) Any deduction requested by the employee to enable him to repay loans to or to purchase shares in credit unions organized and operated in accordance with Federal and State credit union statutes.

(g) Any deduction voluntarily authorized by the employee for the making of contributions to governmental or quasi-governmental agencies, such as the American Red Cross.

(h) Any deduction voluntarily authorized by the employee for the making of contributions to Community Chests, United Givers Funds, and similar charitable organizations.

(i) Any deductions to pay regular union initiation fees and membership dues, not including fines or special assessments: *Provided, however,* that a collective bargaining agreement between the contractor or subcontractor and representatives of its employees provides for such deductions and the deductions are not otherwise prohibited by law.

(j) Any deduction not more than for the "reasonable cost" of board, lodging, or other facilities meeting the requirements of section 3(m) of the Fair Labor Standards Act of 1938, as amended, and part 531 of this title. When such a deduction is made the additional records required under §516.25(a) of this title shall be kept.

(k) Any deduction for the cost of safety equipment of nominal value purchased by the employee as his own property for his personal protection in his work, such as safety shoes, safety glasses, safety gloves, and hard hats, if such equipment is not required by law to be furnished by the employer, if such deduction is not violative of the Fair Labor Standards Act or prohibited by other law, if the cost on which the deduction is based does not exceed the actual cost to the employer where the equipment is purchased from him and does not include any direct or indirect monetary return to the employer where the equipment is purchased from a third person, and if the deduction is either

(1) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance; or

(2) Provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees.

[29 FR 97, Jan. 4, 1964, as amended at 36 FR 9770, May 28, 1971]

### **§3.6 Payroll deductions permissible with the approval of the Secretary of Labor.**

Any contractor or subcontractor may apply to the Secretary of Labor for permission to make any deduction not permitted under §3.5. The Secretary may grant permission whenever he finds that:

(a) The contractor, subcontractor, or any affiliated person does not make a profit or benefit directly or indirectly from the deduction either in the form of a commission, dividend, or otherwise;

(b) The deduction is not otherwise prohibited by law;

(c) The deduction is either (1) voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance, or (2) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees; and

(d) The deduction serves the convenience and interest of the employee.

### **§3.7 Applications for the approval of the Secretary of Labor.**

Any application for the making of payroll deductions under §3.6 shall comply with the requirements prescribed in the following paragraphs of this section:

(a) The application shall be in writing and shall be addressed to the Secretary of Labor.

(b) The application need not identify the contract or contracts under which the work in question is to be performed. Permission will be given for deductions on all current and future contracts of the applicant for a period of 1 year. A renewal of permission to make such payroll deduction will be granted upon the submission of an application which makes reference to the original application, recites the date of the Secretary of Labor's approval of such deductions, states affirmatively that there is continued compliance with the standards set forth in the provisions of §3.6, and specifies any conditions which have changed in regard to the payroll deductions.

(c) The application shall state affirmatively that there is compliance with the standards set forth in the provisions of §3.6. The affirmation shall be accompanied by a full statement of the facts indicating such compliance.

(d) The application shall include a description of the proposed deduction, the purpose to be served thereby, and the classes of laborers or mechanics from whose wages the proposed deduction would be made.

(e) The application shall state the name and business of any third person to whom any funds obtained from the proposed deductions are to be transmitted and the affiliation of such person, if any, with the applicant.

[29 FR 97, Jan. 4, 1964, as amended at 36 FR 9771, May 28, 1971]

### **§3.8 Action by the Secretary of Labor upon applications.**

The Secretary of Labor shall decide whether or not the requested deduction is permissible under provisions of §3.6; and shall notify the applicant in writing of his decision.

### **§3.9 Prohibited payroll deductions.**

Deductions not elsewhere provided for by this part and which are not found to be permissible under §3.6 are prohibited.

### **§3.10 Methods of payment of wages.**

The payment of wages shall be by cash, negotiable instruments payable on demand, or the additional forms of compensation for which deductions are permissible under this part. No other methods of payment shall be recognized on work subject to the Copeland Act.

### **§3.11 Regulations part of contract.**

All contracts made with respect to the construction, prosecution, completion, or repair of any public building or public work or building or work financed in whole or in part by loans or grants from the United States covered by the regulations in this part shall expressly bind the contractor or subcontractor to comply with such of the regulations in this part as may be applicable. In this regard, see §5.5(a) of this subtitle.





**Texas General Land Office**  
Community Development Block Grant (CDBG)  
Disaster Recovery Program

**Code of Federal Regulations**  
**Title 24- Housing and Urban Development**

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Volume: 1

Date: 2003-04-01

Original Date: 2003-04-01

Title: Section 135.38- Section 3 Clause

Context: Title 24- Housing and Urban Development. Subtitle B- Relating to Housing and Urban Development . Chapter 1- Office of Assistant Secretary for Equal Opportunity, Department. Part 135 Economic Opportunities for Low-and Very Low-Income Persons. Subpart B- Economic Opportunities for Section 3 Residents and Section 3 Business Concerns.

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§ 135.38            Section 3 clause.

All section 3 covered contracts shall include the following clause (referred to as the section 3 clause):

- A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.
- C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

- E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.
- F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

# U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

## Section 3

### Economic Opportunity

*A Piece of the American Dream*

*This project is federally funded and Section 3 compliance and reporting applies to all executed prime or sub contracts over \$100,000.*

#### About Section 3

Section 3 of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701u) (as amended), requires that economic opportunities generated by certain HUD financial assistance for housing (including Public and Indian Housing) and community development programs shall, to the greatest extent feasible, be given to low and very low-income persons, particularly those who are recipients of government assistance for housing, and to businesses that provide economic opportunities for these persons.

Other HUD programs covered by Section 3 (to distinguish between HUD Public and Indian housing programs) are those that provide housing or community development assistance for housing rehabilitation, housing construction, or other public construction project.

#### Who are Section 3 residents?

Public housing residents including persons with disabilities. Low and very low income persons who live in the area where a HUD assisted project is located.

#### What is a Section 3 Business?

A section 3 business is one:  
That is owned by Section 3 residents  
Employs Section 3 residents or;

Subcontracts with businesses that provide opportunities to low and very low income persons.

#### Who receives Economic Opportunities under Section 3?

*For training and employment:*

- ✓ persons in public and assisted housing;
- ✓ persons in the affected project neighborhood;
- ✓ participants in HUD Youth-build programs;
- ✓ homeless persons.

*For contracting:*  
✓ businesses which fit the definition of a Section 3 business.

#### How can individuals and businesses find out more about Section 3?

Contact GrantWorks at 512-420-0303 ext. 334 or Fair Housing and Equal Opportunity representative at your nearest HUD Office.

#### What am I required to do as a contractor?

- ✓ Submit monthly new hires report (pg.7-8)
- ✓ Post any job vacancies at [www.workintexas.com](http://www.workintexas.com)
- ✓ Keep a log of all applicants and indicate why
- ✓ Section 3 Residents who applied were not hired
- ✓ Retain copies of any employment applications completed by public housing, Section 8, voucher holders, Section 3 Residents

#### How to Post Job Vacancies

As required by the GLO Section 3 Policy, all Grantees and contractors receiving DR funding must post all job vacancies with the state's free job matching system – WorkInTexas.com. There are two ways to do this. Self-register with an employer account and post jobs directly online or contact your local Workforce Solutions Office. Staff is available to assist with account registration and/or can post jobs on your behalf at [WorkInTexas.com](http://WorkInTexas.com). **The job title and job description must include the word SEC3.**

#### More ways to find Section 3 Applicants

- ✓ Advertising in other publications such as newspapers and websites
- ✓ Placing posters in prominent places in target areas
- ✓ Distributing flyers to the local Public Housing Authority

Where can I find my local Workforce Solution Center?  
You may search for one here:

[http://www.twc.state.tx.us/directories/offices-services.html?mid=0\\_07262226541895678](http://www.twc.state.tx.us/directories/offices-services.html?mid=0_07262226541895678)

#### HUD Compliance and Monitoring?

HUD monitors the performance of recipients and contractors. HUD examines employment and contract records for evidence of actions taken to train and employ Section 3 residents and to award contracts to Section 3 businesses. HUD provides technical assistance to recipients and contractors in order to obtain compliance with Section 3 requirements.

#### What if it appears that an entity is not complying?

There is a complaint process. Section 3 residents and business concerns may file complaints if they think a violation of Section 3 requirements has occurred where a HUD-funded project is planned or underway. Complaints will be investigated; if appropriate, voluntary resolutions will be sought. There are appeal rights to the Secretary, Section 3 residents and businesses may also seek judicial relief.

#### How can Section 3 businesses or residents complain about a violation of Section 3 requirements?

By filing a complaint in writing to the local HUD FHEO Office or to:

#### The Assistant Secretary for Fair Housing and Equal Opportunity

U.S. Department of Housing and Urban Development  
451 Seventh Street, SW, Room 5100  
Washington, DC 20410-2000  
1-800-689-9777

1-800-927-9276 (TTY)

[www.hud.gov](http://www.hud.gov) [www.espanol.hud.gov](http://www.espanol.hud.gov)

A written complaint should contain:

1. Name and address of the person filing the complaint
2. Name and address of subject of complaint (HUD recipient or contractor).
3. Description of acts or omissions in alleged violation of Section 3.
4. Statement of corrective actions sought

## ASSURANCES - CONSTRUCTION PROGRAMS

OMB Approval No. 4040-0009  
Expiration Date: 02/28/2022

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET.  
SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

**NOTE:** Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other non-discrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.



11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333) regarding labor standards for federally-assisted construction subagreements.
14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.
20. Will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from (1) Engaging in severe forms of trafficking in persons during the period of time that the award is in effect (2) Procuring a commercial sex act during the period of time that the award is in effect or (3) Using forced labor in the performance of the award or subawards under the award.

### **General Affirmations**

To the extent they apply, Provider affirms and agrees to the following, without exception:

1. Provider represents and warrants that, in accordance with Section 2155.005 of the Texas Government Code, neither Provider nor the firm, corporation, partnership, or institution represented by Provider, or anyone acting for such a firm, corporation, partnership, or institution has (1) violated any provision of the Texas Free Enterprise and Antitrust Act of 1983, Chapter 15 of the Texas Business and Commerce Code, or the federal antitrust laws, or (2) communicated directly or indirectly the contents of this Contract or any solicitation response upon which this Contract is based to any competitor or any other person engaged in the same line of business as Provider.
2. If the Contract is for services, Provider shall comply with Section 2155.4441 of the Texas Government Code, requiring the purchase of products and materials produced in the State of Texas in performing service contracts.
3. Under Section 231.006 of the Family Code, the vendor or applicant [Provider] certifies that the individual or business entity named in this Contract, bid or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this Contract may be terminated and payment may be withheld if this certification is inaccurate.
4. A bid or an application for a contract, grant, or loan paid from state funds must include the name and social security number of the individual or sole proprietor and each partner, shareholder, or owner with an ownership interest of at least 25 percent of the business entity submitting the bid or application. Provider certifies it has submitted this information to the GLO.
5. If the Contract is for the purchase or lease of computer equipment, as defined by Texas Health and Safety Code Section 361.952(2), Provider certifies that it is in compliance with Subchapter Y, Chapter 361 of the Texas Health and Safety Code, related to the Computer Equipment Recycling Program and the Texas Commission on Environmental Quality rules in Title 30 Texas Administrative Code Chapter 328.
6. Pursuant to Section 2155.003 of the Texas Government Code, Provider represents and warrants that it has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the Contract.
7. Payments due under the Contract shall be directly applied towards eliminating any debt or delinquency Provider owes to the State of Texas including, but not limited to, delinquent taxes, delinquent student loan payments, and delinquent child support.
8. Upon request of the GLO, Provider shall provide copies of its most recent business continuity and disaster recovery plans.

9. If the Contract is for consulting services governed by Texas Government Code Chapter 2254, Subchapter B, in accordance with Section 2254.033 of the Texas Government Code, relating to consulting services, Provider certifies that it does not employ an individual who has been employed by The GLO or another agency at any time during the two years preceding the Provider's submission of its offer to provide consulting services to the GLO or, in the alternative, Provider, in its offer to provide consulting services to the GLO, disclosed the following: (i) the nature of the previous employment with the GLO or other state agency; (ii) the date the employment was terminated; and (iii) the annual rate of compensation for the employment at the time of its termination.
10. If the Contract is not for architecture, engineering, or construction services, Provider must use the dispute resolution process provided for in Chapter 2260 of the Texas Government Code to attempt to resolve any dispute arising under the Contract.
11. If the Contract is for architecture, engineering, or construction services, subject to Texas Government Code, Section 2260.002 and Texas Civil Practice and Remedies Code Chapter 114, Provider shall use the dispute resolution process provided for in Chapter 2260 of the Texas Government Code to attempt to resolve all disputes arising under this Contract. In accordance with the Texas Civil Practice and Remedies Code, Section 114.005, claims encompassed by Texas Government Code, Section 2260.002(3) and Texas Civil Practice and Remedies Code Section 114.002 shall be governed by the dispute resolution process set forth below in subsections (a)-(d).
  - a. Notwithstanding Texas Government Code, Chapter 2260.002(3) and Chapter 114.012 and any other statute or applicable law, if the Provider's claim for breach of contract cannot be resolved by the parties in the ordinary course of business, Provider may make a claim against the GLO for breach of contract and the GLO may assert a counterclaim against the Provider as is contemplated by Texas Government Code, Chapter 2260, Subchapter B. In such event, Provider must provide written notice to the GLO of a claim for breach of the Contract not later than the 180th day after the date of the event giving rise to the claim. The notice must state with particularity: (1) the nature of the alleged breach; (2) the amount the Provider seeks as damages; and (3) the legal theory of recovery.
  - b. The chief administrative officer, or if designated in the Contract, another officer of the GLO, shall examine the claim and any counterclaim and negotiate with the Provider in an effort to resolve them. The negotiation must begin no later than the 120th day after the date the claim is received, as is contemplated by Texas Government Code, Chapter 2260, Section 2260.052.
  - c. If the negotiation under paragraph (b) above results in the resolution of some disputed issues by agreement or in a settlement, the parties shall reduce the agreement or settlement to writing and each party shall sign the agreement or settlement. A partial settlement or resolution of a claim does not waive a party's rights under this Contract as to the parts of the claim that are not resolved.

- d. If a claim is not entirely resolved under paragraph (b) above, on or before the 270th day after the date the claim is filed with the GLO, unless the parties agree in writing to an extension of time, the parties may agree to mediate a claim made under this dispute resolution procedure. This dispute resolution procedure is the Provider's sole and exclusive process for seeking a remedy for an alleged breach of contract by the GLO if the parties are unable to resolve their disputes as described in this section.
  - e. Nothing in the Contract shall be construed as a waiver of the state's or the GLO's sovereign immunity. This Contract shall not constitute or be construed as a waiver of any of the privileges, rights, defenses, remedies, or immunities available to the State of Texas. The failure to enforce, or any delay in the enforcement, of any privileges, rights, defenses, remedies, or immunities available to the State of Texas under this Contract or under applicable law shall not constitute a waiver of such privileges, rights, defenses, remedies or immunities or be considered as a basis for estoppel. The GLO does not waive any privileges, rights, defenses, or immunities available to it by entering into this Contract or by its conduct, or by the conduct of any representative of the GLO, prior to or subsequent to entering into this Contract.
  - f. Compliance with the dispute resolution process provided for in Texas Government Code, Chapter 2260, subchapter B and incorporated by reference in subsection (a)-(d) above is a condition precedent to the Provider: (1) filing suit pursuant to Chapter 114 of the Civil Practices and Remedies Code; or (2) initiating a contested case hearing pursuant to Subchapter C of Chapter 2260 of the Texas Government Code.
12. Provider represents and warrants that, pursuant to Section 2270.002 of the Texas Government Code, Provider does not boycott Israel and will not boycott Israel during the term of the Contract.
13. This Contract is contingent upon the continued availability of lawful appropriations by the Texas Legislature. Provider understands that all obligations of the GLO under this Contract are subject to the availability of state funds. If such funds are not appropriated or become unavailable, the GLO may terminate the Contract. The Contract shall not be construed as creating a debt on behalf of the GLO in violation of Article III, Section 49a of the Texas Constitution.
14. Provider certifies that it is not listed on the federal government's terrorism watch list as described in Executive Order 13224.
15. In accordance with Section 669.003 of the Texas Government Code, relating to contracting with the executive head of a state agency, Provider certifies that it is not (1) the executive head of the GLO, (2) a person who at any time during the four years before the effective date of the Contract was the executive head of the GLO, or (3) a person who employs a current or former executive head of the GLO.



16. Provider represents and warrants that all statements and information prepared and submitted in connection with this Contract are current, complete, true, and accurate. Submitting a false statement or making a material misrepresentation during the performance of this Contract is a material breach of contract and may void the Contract or be grounds for its termination.
17. Pursuant to Section 2155.004(a) of the Texas Government Code, Provider certifies that neither Provider nor any person or entity represented by Provider has received compensation from the GLO to participate in the preparation of the specifications or solicitation on which this Contract is based. Under Section 2155.004(b) of the Texas Government Code, Provider certifies that the individual or business entity named in this Contract is not ineligible to receive the specified contract and acknowledges that the Contract may be terminated and payment withheld if this certification is inaccurate. This Section does not prohibit Provider from providing free technical assistance.
18. Provider represents and warrants that it is not engaged in business with Iran, Sudan, or a foreign terrorist organization, as prohibited by Section 2252.152 of the Texas Government Code.
19. If the Contract is for professional or consulting services governed by Texas Government Code Chapter 2254, Provider represents and warrants that none of its employees including, but not limited to, those authorized to provide services under the Contract, were former employees of the GLO during the twelve (12) month period immediately prior to the date of execution of the Contract.
20. The Contract shall be governed by and construed in accordance with the laws of the State of Texas, without regard to the conflicts of law provisions. The venue of any suit arising under the Contract is fixed in any court of competent jurisdiction of Travis County, Texas, unless the specific venue is otherwise identified in a statute which directly names or otherwise identifies its applicability to the GLO.
21. IF THE CONTRACT IS NOT FOR ARCHITECTURE OR ENGINEERING SERVICES GOVERNED BY TEXAS GOVERNMENT CODE CHAPTER 2254, PROVIDER SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS THE STATE OF TEXAS AND THE GLO, AND/OR THEIR OFFICERS, AGENTS, EMPLOYEES, REPRESENTATIVES, CONTRACTORS, ASSIGNEES, AND/OR DESIGNEES FROM ANY AND ALL LIABILITY, ACTIONS, CLAIMS, DEMANDS, OR SUITS, AND ALL RELATED COSTS, ATTORNEY FEES, AND EXPENSES ARISING OUT OF, OR RESULTING FROM ANY ACTS OR OMISSIONS OF PROVIDER OR ITS AGENTS, EMPLOYEES, SUBCONTRACTORS, ORDER FULFILLERS, OR SUPPLIERS OF SUBCONTRACTORS IN THE EXECUTION OR PERFORMANCE OF THE CONTRACT AND ANY PURCHASE ORDERS ISSUED UNDER THE CONTRACT. THE DEFENSE SHALL BE COORDINATED BY PROVIDER WITH THE OFFICE OF THE TEXAS ATTORNEY GENERAL WHEN Texas STATE AGENCIES ARE NAMED DEFENDANTS IN ANY LAWSUIT AND PROVIDER MAY NOT AGREE TO ANY SETTLEMENT WITHOUT FIRST OBTAINING THE

CONCURRENCE FROM THE OFFICE OF THE TEXAS ATTORNEY GENERAL. PROVIDER AND THE GLO SHALL FURNISH TIMELY WRITTEN NOTICE TO EACH OTHER OF ANY SUCH CLAIM.

22. IF THE CONTRACT IS FOR ARCHITECTURE OR ENGINEERING SERVICES GOVERNED BY TEXAS GOVERNMENT CODE CHAPTER 2254, PROVIDER SHALL INDEMNIFY AND HOLD HARMLESS THE STATE OF TEXAS AND THE GLO, AND/OR THEIR OFFICERS, AGENTS, EMPLOYEES, REPRESENTATIVES, CONTRACTORS, ASSIGNEES, AND/OR DESIGNEES FROM ANY AND ALL LIABILITY, ACTIONS, CLAIMS, DEMANDS, OR SUITS, AND ALL RELATED DAMAGES, COSTS, ATTORNEY FEES, AND EXPENSES TO THE EXTENT CAUSED BY, ARISING OUT OF, OR RESULTING FROM ANY ACTS OF NEGLIGENCE, INTENTIONAL TORTS, WILLFUL MISCONDUCT, PERSONAL INJURY OR DAMAGE TO PROPERTY, AND/OR OTHERWISE RELATED TO PROVIDER'S PERFORMANCE, AND/OR FAILURES TO PAY A SUBCONTRACTOR OR SUPPLIER BY THE PROVIDER OR ITS AGENTS, EMPLOYEES, SUBCONTRACTORS, ORDER FULFILLERS, CONSULTANTS UNDER CONTRACT TO PROVIDER, OR ANY OTHER ENTITY OVER WHICH THE CONTRACTOR EXERCISES CONTROL, OR SUPPLIERS OF SUBCONTRACTORS IN THE EXECUTION OR PERFORMANCE OF THE CONTRACT. THE DEFENSE SHALL BE COORDINATED BY PROVIDER WITH THE OFFICE OF THE TEXAS ATTORNEY GENERAL WHEN Texas STATE AGENCIES ARE NAMED DEFENDANTS IN ANY LAWSUIT AND PROVIDER MAY NOT AGREE TO ANY SETTLEMENT WITHOUT FIRST OBTAINING THE CONCURRENCE FROM THE OFFICE OF THE TEXAS ATTORNEY GENERAL. PROVIDER AND THE GLO SHALL FURNISH TIMELY WRITTEN NOTICE TO EACH OTHER OF ANY SUCH CLAIM
23. PROVIDER SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE GLO AND THE STATE OF TEXAS FROM AND AGAINST ANY AND ALL CLAIMS, VIOLATIONS, MISAPPROPRIATIONS OR INFRINGEMENT OF ANY PATENT, TRADEMARK, COPYRIGHT, TRADE SECRET OR OTHER INTELLECTUAL PROPERTY RIGHTS AND/OR OTHER INTANGIBLE PROPERTY, PUBLICITY OR PRIVACY RIGHTS, AND/OR IN CONNECTION WITH OR ARISING FROM: (1) THE PERFORMANCE OR ACTIONS OF PROVIDER PURSUANT TO THIS CONTRACT; (2) ANY DELIVERABLE, WORK PRODUCT, CONFIGURED SERVICE OR OTHER SERVICE PROVIDED HEREUNDER; AND/OR (3) THE GLO'S AND/OR PROVIDER'S USE OF OR ACQUISITION OF ANY REQUESTED SERVICES OR OTHER ITEMS PROVIDED TO THE GLO BY PROVIDER OR OTHERWISE TO WHICH THE GLO HAS ACCESS AS A RESULT OF PROVIDER'S PERFORMANCE UNDER THE CONTRACT. PROVIDER AND THE GLO shall FURNISH TIMELY WRITTEN NOTICE TO EACH OTHER OF ANY SUCH CLAIM. PROVIDER SHALL BE LIABLE TO PAY ALL COSTS OF DEFENSE, INCLUDING ATTORNEYS' FEES. THE DEFENSE SHALL BE COORDINATED BY PROVIDER WITH THE OFFICE OF THE TEXAS ATTORNEY GENERAL (OAG) WHEN TEXAS STATE AGENCIES ARE NAMED DEFENDANTS IN ANY LAWSUIT AND

PROVIDER MAY NOT AGREE TO ANY SETTLEMENT WITHOUT FIRST OBTAINING THE CONCURRENCE FROM OAG. IN ADDITION, PROVIDER WILL REIMBURSE THE GLO AND THE STATE OF TEXAS FOR ANY CLAIMS, DAMAGES, COSTS, EXPENSES OR OTHER AMOUNTS, INCLUDING, BUT NOT LIMITED TO, ATTORNEYS' FEES AND COURT COSTS, ARISING FROM ANY SUCH CLAIM. IF THE GLO DETERMINES THAT A CONFLICT EXISTS BETWEEN ITS INTERESTS AND THOSE OF PROVIDER OR IF THE GLO IS REQUIRED BY APPLICABLE LAW TO SELECT SEPARATE COUNSEL, THE GLO WILL BE PERMITTED TO SELECT SEPARATE COUNSEL AND PROVIDER WILL PAY ALL REASONABLE COSTS OF THE GLO'S COUNSEL.

24. Provider has disclosed in writing to the GLO all existing or potential conflicts of interest relative to the performance of the Contract.
25. Sections 2155.006 and 2261.053 of the Texas Government Code, prohibit state agencies from accepting a solicitation response or awarding a contract that includes proposed financial participation by a person who, in the past five years, has been convicted of violating a federal law or assessed a penalty in connection with a contract involving relief for Hurricane Rita, Hurricane Katrina, or any other disaster, as defined by Section 418.004 of the Texas Government Code, occurring after September 24, 2005. Under Sections 2155.006 and 2261.053 of the Texas Government Code, Provider certifies that the individual or business entity named in this Contract is not ineligible to receive the specified contract and acknowledges that this Contract may be terminated and payment withheld if this certification is inaccurate.
26. Provider understands that the GLO will comply with the Texas Public Information Act (Chapter 552 of the Texas Government Code) as interpreted by judicial rulings and opinions of the Attorney General of the State of Texas. Information, documentation, and other material related to this Contract may be subject to public disclosure pursuant to the Texas Public Information Act. In accordance with Section 2252.907 of the Texas Government Code, Provider shall make any information created or exchanged with the State/GLO pursuant to the Contract, and not otherwise excepted from disclosure under the Texas Public Information Act, available in a format that is accessible by the public at no additional charge to the State or the GLO.
27. The person executing this Contract certifies that he/she is duly authorized to execute this Contract on his/her own behalf or on behalf of Provider and legally empowered to contractually bind Provider to the terms and conditions of the Contract and related documents.
28. If the Contract is for architectural or engineering services, pursuant to Section 2254.0031 of the Texas Government Code, which incorporates by reference Section 271.904(d) of the Texas Local Government Code, Provider shall perform services (1) with professional skill and care ordinarily provided by competent engineers or architects practicing under the same or similar circumstances and professional license, and (2) as expeditiously as is

prudent considering the ordinary professional skill and care of a competent engineer or architect.

29. The state auditor may conduct an audit or investigation of any entity receiving funds from the state directly under the Contract or indirectly through a subcontract under the Contract. The acceptance of funds directly under the Contract or indirectly through a subcontract under the Contract acts as acceptance of the authority of the state auditor, under the direction of the legislative audit committee, to conduct an audit or investigation in connection with those funds. Under the direction of the legislative audit committee, an entity that is the subject of an audit or investigation by the state auditor must provide the state auditor with access to any information the state auditor considers relevant to the investigation or audit. Provider shall ensure that this paragraph concerning the authority to audit funds received indirectly by subcontractors through the Contract and the requirement to cooperate is included in any subcontract it awards. The GLO may unilaterally amend the Contract to comply with any rules and procedures of the state auditor in the implementation and enforcement of Section 2262.154 of the Texas Government Code.
30. Provider certifies that neither it nor its principals are debarred, suspended, proposed for debarment, declared ineligible, or otherwise excluded from participation in the Contract by any state or federal agency.
31. Provider expressly acknowledges that state funds may not be expended in connection with the purchase of an automated information system unless that system meets certain statutory requirements relating to accessibility by persons with visual impairments. Accordingly, Provider represents and warrants to the GLO that any technology provided to the GLO for purchase pursuant to this Contract is capable, either by virtue of features included within the technology or because it is readily adaptable by use with other technology, of: providing equivalent access for effective use by both visual and non-visual means; presenting information, including prompts used for interactive communications, in formats intended for non-visual use; and being integrated into networks for obtaining, retrieving, and disseminating information used by individuals who are not blind or visually impaired. For purposes of this Section, the phrase "equivalent access" means a substantially similar ability to communicate with or make use of the technology, either directly by features incorporated within the technology or by other reasonable means such as assistive devices or services which would constitute reasonable accommodations under the Americans With Disabilities Act or similar state or federal laws. Examples of methods by which equivalent access may be provided include, but are not limited to, keyboard alternatives to mouse commands and other means of navigating graphical displays, and customizable display appearance.
32. If the Contract is for the purchase or lease of covered television equipment, as defined by Section 361.971(3) of the Texas Health and Safety Code, Provider certifies its compliance with Subchapter Z, Chapter 361 of the Texas Health and Safety Code, related to the Television Equipment Recycling Program.

## EXHIBIT A – REQUIRED DOCUMENTS

- RESPONDENT CERTIFICATION FORM
- BIDDER/RESPONDENT’S AFFIRMATION & SDNs/BLOCKED PERSONS AFFIRMATION
- WORKERS COMPENSATION REQUIREMENTS
- CERTIFICATION REGARDING LOBBYING FORM & DISCLOSURE OF LOBBYING ACTIVITIES AND INSTRUCTIONS
- EXCEPTIONS TO STANDARD TERMS & CONDITIONS & SPECIAL REQUIREMENTS (*if applicable*) (If vendor has any exceptions to the ITB terms and conditions or special requirements, they must be included with the ITB submittal in order to be considered)
- SIGNED ADDENDA (*if applicable*)
- NON-COLLUSION AFFIDAVIT
- BID BOND
- STATEMENT OF BIDDER’S QUALIFICATIONS
- CONFLICT OF INTEREST QUESTIONNAIRE – FORM CIQ (*if applicable*)
- CONTRACTOR ACKNOWLEDGEMENT OF STORMWATER MANAGEMENT PROGRAM
- CERTIFICATE AS TO CORPORATE PRINCIPAL
- CERTIFICATION OF BIDDER REGARDING CIVIL RIGHTS LAWS AND REGULATIONS
- CONTRACTORS CERTIFICATION OF RECOVERED MATERIALS
- CONTRACTORS’ LOCAL OPPORTUNITY PLAN & PROPOSED CONTRACT BREAKDOWN
- CERTIFICATION FOR BUSINESS CONCERNS
- CONTRACTOR’S CERTIFICATION-CONCERNING LABOR STANDARDS AND PREVAILING WAGE REQUIREMENTS
- TITLE 24 HOUSING & URBAN DEVELOPMENT-OFFICE OF ASSISTANT SECRETARY FOR EQUAL OPPORTUNITY – DEPARTMENT OF HOUSING & URBAN DEVELOPMENT PART 135-ECONOMIC OPPORTUNITIES FOR LOW-AND VERY-LOW INCOME PERSONS
- NEW HIRES SECTION 3 MONTHLY COMPLIANCE REPORT
- TEXAS GOVERNMENT CODE 552, SUBCHAPTER J ACKNOWLEDGEMENT FORM
- PROHIBITED TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES AND EQUIPMENT CERTIFICATION FORM (*Vendor to sign form if applicable to telecommunications*)
- SECTION 504 CERTIFICATION-POLICY OF NONDISCRIMINATION ON THE BASIS OF DISABILITY
- CHILD SUPPORT STATEMENT FOR NEGOTIATED CONTRACTS AND GRANTS
- ARTICLE 7 – ATTACHMENTS TO BID
- BRAZORIA COUNTY EXHIBIT B ADDITIONAL REQUIREMENTS ACKNOWLEDGEMENT FORM
- CONTRACTORS FINAL PAYMENT AFFIDAVIT
- CONTRACTOR CERTIFICATION OF EFFORTS TO FULLY COMPLY WITH EMPLOYMENT AND TRAINING PROVISIONS OF SECTION 3
- ATTORNEY’S REVIEW CERTIFICATION
- VENDOR DATA SHEET & W-9 FORM



# BRAZORIA COUNTY RESPONDENT CERTIFICATION FORM

*Note: In order to sign the documents electronically and insert an authorized signature into the PDF, you will need to use the latest version of Adobe Reader. Be aware that such a signature will have the full legal force of a handwritten signature under Texas law. Additionally, all documents with company name and authorized/contact person, and their title with the company, must be identical and match the W-9 with the company's legal name. Documents with different company names may be considered non-responsive.*

Texas Materials Group, Inc.

LEGAL NAME OF CONTRACTING COMPANY

58-1401466

FEDERAL I.D. # (Company or Corporation)

039939236

DUN & BRADSTREET D-U-N-S NUMBER

281-421-5721

TELEPHONE NUMBER

N/A

FACSIMILE NUMBER

Kevin Guy

CONTACT PERSON

Estimator

TITLE

3003 Kilgore Parkway

COMPLETE MAILING ADDRESS

Baytown, Texas

CITY & STATE

77523

ZIP CODE

3003 Kilgore Parkway

COMPLETE STREET ADDRESS

Baytown, Texas

CITY & STATE

77523

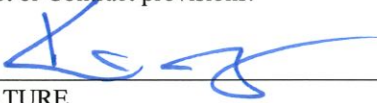
ZIP CODE

kevin@texasmaterials.com

EMAIL ADDRESS

## CERTIFICATION

By my signature hereon, I certify that the Goods and/or Services that I propose to furnish will meet or exceed every specification contained herein, and that I have read each and every page of the Specifications/Statement of Work, other requirements, as well as, the Standard Terms & Conditions and Bid Table. Further, I agree that if my offer is accepted, I shall perform as required in these Contract documents. I am aware that, once accepted by Brazoria County, my offer becomes a binding Contract in accordance with the provisions herein of the aforementioned Contract documents, and that I will not be permitted to attempt enforcement of any other Contract or Contract provisions.



SIGNATURE

"must be authorized to execute on behalf of company"

May 1, 2025

DATE

Kevin Guy

Typewritten or Printed Name

Estimator

Title

# BRAZORIA COUNTY BIDDER/RESPONDENT'S AFFIRMATION

*This form must be completed, signed, and returned by Bidder/Respondent*

**NOTE: FAILURE TO SIGN AND RETURN THIS FORM WITHIN 10 DAYS OF AWARD NOTIFICATION MAY RESULT IN THE TERMINATION OF ANY RESULTING PURCHASE ORDER OR CONTRACT.**

1. Bidder/Respondent affirms that they are duly authorized to execute this Contract, that this company, corporation, firm, partnership or individual has not prepared this bid/offer in collusion with any other bidder, and that the contents of this bid/offer as to prices, terms or conditions of said bid/offer have not been communicated by the undersigned nor by any employee or Director to any other person engaged in this type of business prior to the official opening of this bid/offer.
2. Bidder/Respondent hereby assigns to purchaser any and all claims for overcharges associated with this Contract which arise under the antitrust laws of the United States, 15 USCA Section 1 et seq., and which arise under the antitrust laws of the State of Texas, Tex. Bus. & Com. Code, Section 15.01, et seq.
3. Pursuant to §262.0276 (a) of the Texas Local Government Code and subject to Brazoria County Court Order No. 36 of October 28, 2003, Bidder/Respondent, hereby affirms that Bidder/Respondent:

*(Please check all that are applicable)*

☒ Does not own taxable property in Brazoria County.

☒ Does not owe any ad valorem taxes to Brazoria County or is not otherwise indebted to Brazoria County.

\*\*\*\*\*

## BIDDER/RESPONDENT'S SDNs/BLOCKED PERSONS AFFIRMATION

1. Pursuant to §2155.077 of the Texas Government Code and subject to Brazoria County Court Order No19 of August 9, 2005, Bidder/Respondent, hereby affirms that Bidder/Respondent:

*(Please check all that are applicable)*

☒ Is not excluded from doing business at the federal level.

☒ Is not listed as Specially Designated Nationals (SDN)s/Blocked Persons (individuals and companies owned or controlled by or acting for or on behalf of targeted Countries; or individuals, groups and entities, such as terrorists and narcotics traffickers designated under programs that are not country-specific).

2. Brazoria County may not make procurement transactions with SDNs/Blocked Persons.

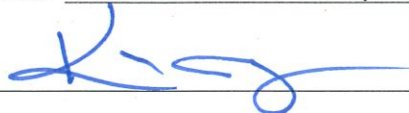
\*\*\*\*\*

If any additional information is required regarding these requirements, please contact The Brazoria County Purchasing Department PRIOR to execution.

\*\*\*\*\*

Bidder/Respondent Company Name Texas Materials Group, Inc.

Signature of Company Official  
Authorizing the Bid/Offer



Date May 1, 2025

Company Official  
(Printed Name) Kevin Guy

Official's Position Estimator

# WORKERS' COMPENSATION REQUIREMENTS

## BIDDER/RESPONDENT INSTRUCTIONS:

**READ THIS ENTIRE DOCUMENT CAREFULLY. FOLLOW ALL INSTRUCTIONS. YOU ARE RESPONSIBLE FOR FULFILLING ALL REQUIREMENTS AND SPECIFICATIONS. BE SURE YOU UNDERSTAND THEM.**

The following requirements and specifications supersede all other Requirements where applicable.

## Workers' Compensation Insurance Coverage

### A. Definitions

Certificate of coverage ("certificate") – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

Duration of the project – includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

Persons providing services on the project ("subcontractor" in §406.096) – includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity or employees of any entity with furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

- B. The contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.
- C. The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.
- D. If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.
- E. The contractor shall obtain from each person providing services on a project, and provide to the governmental entity:
  - (1) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and
  - (2) no later than seven (7) days after receipt by the contractor, 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 project.
- F. The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.
- G. The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.
- H. The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.
- I. The contractor shall contractually require each person with whom it contracts to provide services on a project, to:
  - (1) provide coverage, base on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
  - (2) provide to the contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;
  - (3) provide the 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 project;
  - (4) obtain from each other person with whom it contracts, and provide to the contractor:
    - (a) a certificate of coverage, prior to the other person beginning work on the project; and
    - (b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;



- (5) retain all required certificated of coverage on file for the duration of the project and for one (1) year thereafter;
- (6) notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew of should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and
- (7) contractually require each person with whom it contracts, to perform as required by paragraphs (9.1) - (9.7), with the certificates of coverage to be provided to the person for whom they are providing services.

**J.** By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier of, or in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administration penalties, criminal penalties, civil penalties, or other civil actions.

**K.** The contractor's failure to comply with any of these provision is a breach of contract by the contractor which entitles the governmental entity to declare the contract void if the contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

**If awarded a contract for ITB #25-29, by my signature below, I certify that I will provide workers' compensation insurance coverage for each employee employed on this project. I also certify that each of my subcontractors will also provide workers compensation for each employee employed on this project.**

  
\_\_\_\_\_  
SIGNATURE

Kevin Guy  
\_\_\_\_\_  
Typewritten or Printed Name

May 1, 2025  
\_\_\_\_\_  
DATE

Estimator  
\_\_\_\_\_  
Title

## CERTIFICATION REGARDING LOBBYING

### Certifications For Contracts, Grants, Loans, And Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed within this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.



Signature/Authorized Certifying Official

Kevin Guy, Estimator

Typed Name and Title

Texas Materials Group, Inc.

Applicant / Organization

May 1, 2025

Date Signed

## INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.  
  
(b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

---

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503

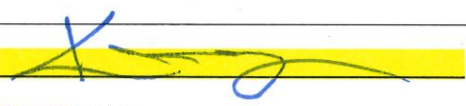
**N/A - No Lobbying Activities to Disclose**

Approved by OMB

0348-0046

**Disclosure of Lobbying Activities**

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352  
(See reverse for public burden disclosure)

|   |   |   |
|---|---|---|
| <b>Type of Federal Action:</b><br>_____ a. contract<br>_____ b. grant<br>_____ c. cooperative agreement<br>_____ d. loan<br>_____ e. loan guarantee<br>_____ f. loan insurance  | <b>Status of Federal Action:</b><br>_____ a. bid/offer/application<br>_____ b. initial award<br>_____ c. post-award | <b>Report Type:</b><br>_____ a. initial filing<br>_____ b. material change  |
| <b>Name and Address of Reporting Entity:</b><br>_____ Prime _____ Subawardee<br>Tier _____, if Known:<br><br><b>Congressional District, if known:</b>   |   | <b>If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:</b><br><br><b>Congressional District, if known:</b>   |
| <b>Federal Department/Agency:</b>   |   | <b>7. Federal Program Name/Description:</b><br><br>CFDA Number, if applicable: _____  |
| <b>Federal Action Number, if known:</b>   |   | <b>9. Award Amount, if known:</b><br><br>\$   |
| <b>10. a. Name and Address of Lobbying Registrant</b><br>(if individual, last name, first name, MI):  |   | <b>b. Individuals Performing Services</b> (including address if different from No. 10a)<br>(last name, first name, MI):   |
| <b>11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</b> |   | <b>Signature:</b> <br><b>Print Name:</b> Kevin Guy<br><b>Title:</b> Estimator<br><b>Telephone No.:</b> 281-421-5721 <b>Date:</b> 5/1/2025 |
| <b>Federal Use Only</b>   |   | <b>Authorized for Local Reproduction</b><br>Standard Form - LLL (Rev. 7-97)   |

*Note: If this form is not applicable to your company, please mark the form N/A and sign the highlighted signature field above.*

**VENDOR TO INSERT EXCEPTIONS TO  
STANDARD TERMS & CONDITIONS & SPECIAL  
REQUIREMENTS HERE (IF APPLICABLE)**

✓ Company does not have exceptions *(If applicable, check here)*

**Or**

       Company does have exceptions *(If applicable, check here and list exceptions below for consideration. Brazoria County will review all exceptions listed and will formally communicate as to if any exceptions are accepted by the County. If exceptions are accepted by the County, they will be added in the form of an addendum.)*



**SIGNED ADDENDA (IF APPLICABLE)**

**VENDOR TO INSERT SIGNED ADDENDUMS HERE**

# BRAZORIA COUNTY ADDENDUM NUMBER \_\_\_\_\_

## ITB #25-29 BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG- PLAN SET III / 30N - GENERAL LAND OFFICE CONTRACT NUMBER 19-076-003-B352- CDBG-DR 2016 FLOOD ALLOCATION

PLEASE INCLUDE THIS SIGNED ADDENDUM WITH YOUR SEALED ITB/CSP/RFP/RFSQ  
PACKAGE.

This Addendum modifies the ITB #25-29 package as follows:

1. Definitions: All definitions set forth in the Contract shall have the same meaning unless stated otherwise in this Addendum.
2. The following requirement in section 1.0 SPECIFICATIONS / SCOPE OF WORK has been removed:

The contractor shall perform no less than 25% of the specified work in this agreement with its own employees, and subcontract no more than 75% of the work without prior written consent from the Owner.

3. All other terms and conditions of the ITB are to remain unchanged.

Please refer any questions regarding this ITB to the Brazoria County Purchasing Department at (979) 864-1825 or [bidclarifications@brazoriacountytx.gov](mailto:bidclarifications@brazoriacountytx.gov).

Texas Materials Group, Inc.

LEGAL NAME OF CONTRACTING COMPANY

281-421-5721

TELEPHONE NUMBER

N/A

FACSIMILE NUMBER

SIGNATURE

Kevin Guy, Estimator

NAME AND TITLE PRINTED

\*Addendum approved by:



Susan P. Serrano, CPPO, CPPB  
County Purchasing Director

04/30/2025

Date

# NON-COLLUSION AFFIDAVIT

THE STATE OF TEXAS

OWNER Brazoria County

Before me, the undersigned authority, on this day personally appeared Kevin Guy  
who being by me duly sworn upon oath says: that he is duly qualified and authorized to make this affidavit for and on behalf of  
Texas Materials Group, Inc. ("Contractor"), of and is fully cognizant of the fact herein set out: that Contractor has  
not, either directly or indirectly, entered into any agreement with OWNER in any collusion: or otherwise taken any action in restraint  
of free competitive bidding in connection with the contract for the above referenced project.

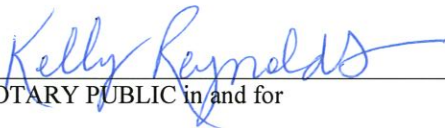


Kevin Guy, Estimator

Name

Title

SWORN TO AND SUBSCRIBED BEFORE ME by the said Kevin Guy, this 30th day of  
April, 20 25, to certify which witness my hand and seal of office.

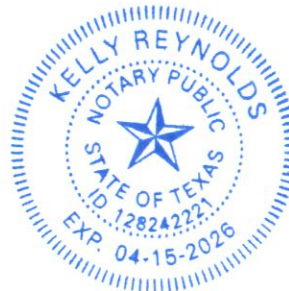


NOTARY PUBLIC in and for

State of Texas

Printed Name: Kelly Reynolds

My Commission Expires: April 15, 2026





**COPY OF THE BID BOND**

**VENDOR TO INSERT COPY OF BID BOND HERE**

# Document A310<sup>TM</sup> – 2010

Conforms with The American Institute of Architects AIA Document 310

Bond Number: 69453-LIB-25-143

## Bid Bond

### CONTRACTOR:

(Name, legal status and address)

Texas Materials Group, Inc.

3003 Kilgore Pkwy Bldg A

Baytown, TX 77523-9917

### OWNER:

(Name, legal status and address)

Brazoria County

237 E. Locust Street, STE 406

Angleton, TX 77515

### SURETY:

(Name, legal status and principal place of business)

Liberty Mutual Insurance Company

175 Berkeley Street

Boston, MA 02116

State of Inc: Massachusetts

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

**BOND AMOUNT:** Five Percent of Amount Bid (5%)

### PROJECT:

(Name, location or address, and Project number, if any)

ITB #25-29 Brazoria County Road and Drainage Improvements for CDBG-Plan Set III / 30N General Land Office Contract Number 19-076-003-B352-CDBG-DR 2016 Flood Allocation

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 25th day of April, 2025

(Witness)

*Jessica Richmond*

(Witness) Jessica Richmond

Texas Materials Group, Inc.

(Principal)

(Seal)

(Title) *Kevin Guy, Estimator*

Liberty Mutual Insurance Company

(Surety)

(Seal)

(Title)

*S. Gross*  
Stephanie Gross, Attorney-in-Fact



Seal No. 4440

ACTION BY WRITTEN CONSENT  
OF THE BOARD OF DIRECTORS  
OF  
**TEXAS MATERIALS GROUP, INC.**

The undersigned, being all of the members of the Board of Directors of Texas Materials Group, Inc., a Delaware corporation (the “*Corporation*”), do hereby, pursuant to applicable Delaware statute, give this written consent to the taking of the following actions, such actions to have the same force and effect had a meeting been duly called and held:

**I. ELECTION OF OFFICERS**

**RESOLVED**, that effective February 10, 2025, all previous elections of officers are terminated, and the following persons be, and hereby are, elected to serve as officers of the Corporation (each individually, an “*Officer*” and collectively, the “*Officers*”) in the capacities set forth opposite their respective names until such time as their successors shall be elected and qualified:

|                       |   |
|-----------------------|---|
| Aaron Price           | President                                 |
| Martin Merx           | Secretary/Treasurer                       |
| Derek Angel           | Vice President/Assistant Secretary        |
| Kal A. Kincaid        | Vice President/Assistant Secretary        |
| John Shogren          | Vice President/Assistant Secretary        |
| Mike Brown            | Vice President/Assistant Secretary        |
| Rodney McCarn         | Vice President/Assistant Secretary        |
| Wayne Sweet           | Vice President/Assistant Secretary        |
| Bryan Kalbfleisch     | Vice President/Assistant Secretary        |
| David M. Toolan       | Admin. Vice President/Assistant Secretary |
| Jessica Aldrich       | Assistant Secretary/Assistant Treasurer   |
| Kristin Davis         | Assistant Secretary                       |
| Dejan Mandic          | Assistant Secretary                       |
| Scott Frazier         | Assistant Secretary                       |
| Therese Leon Guerrero | Assistant Secretary                       |
| Robert Checkley       | Assistant Secretary                       |
| Derek Schluterman     | Assistant Secretary                       |
| Robin Jennings        | Assistant Secretary                       |
| Angela Kvarme         | Assistant Secretary                       |
| Tom Hershberger       | Assistant Secretary                       |
| Linda Lancaster       | Assistant Secretary                       |

**FURTHER RESOLVED**, that the Officers be, and each of them hereby is, authorized to execute and deliver agreements, contracts, documents, certificates, and other instruments, under the seal of the Corporation if required, for the purpose of conducting the Corporation’s business, including without limitation, selling products and securing construction work, and to take such other action, as they may deem necessary, advisable, convenient, or appropriate to carry out and fully perform duties incident to the office or offices so appointed, and such other duties as may be prescribed by the Board of Directors from time to time;

**FURTHER RESOLVED**, that the following persons are hereby designated Officers solely for the purpose of attesting signatures of other Officers signing on behalf of the Corporation, and for executing and attesting various corporate documents, tax returns, affidavits, and other instruments as may be necessary from time to time:

|                   |                     |
|-------------------|---------------------|
| Michael F. Deaton | Assistant Secretary |
| Tim P. George     | Assistant Secretary |
| William P. Jones  | Assistant Secretary |

## **II. APPOINTMENT OF AUTHORIZED EMPLOYEES**

**RESOLVED**, that effective February 10, 2025 all previous appointments of authorized employees are terminated, and that the following persons be and each of them hereby is appointed to serve as an authorized employee of the Corporation, which persons shall be authorized to execute and deliver such agreements, contracts, documents, certificates and other instruments, under the seal of the Corporation if required, for the purpose of conducting the Corporation's business including, without limitation, selling products and securing construction work:

|                       |                   |
|-----------------------|-------------------|
| Adam Newsom           | Josh King         |
| Bobby Daggett         | Kaylon Page       |
| Brach Whitman         | Keith Pierson     |
| Brian Ridlon          | Kelly Andrews     |
| Carlton Golden        | Kevin Guy         |
| Chris Michael         | Kevin Kipp        |
| Clayton Truitt        | Kyle Lewis        |
| Danny Schnyder        | Lance Phillips    |
| David Moore           | Lisa Roberts      |
| David Reese           | Nicholas Bockoven |
| Dean Donnellan        | Nik Arikidis      |
| Dean W. Buchanan      | Phillip King      |
| Donald Blackburn      | Preston Bassinger |
| Ed Farris             | Robert Banks      |
| Geno Carrier IV       | Robert Brown      |
| Jacob Trim            | Robert Dunlap     |
| Jake Kilgore          | Ron Stinson       |
| James A. Connor       | Sam Davis         |
| Jared Dean            | Scott Blanchard   |
| Jason (Thad) Traverse | TJ Brown          |
| Johnathan Murphy      | Trey Golden       |
| Jose Armenta          | Troy Rakes        |

**FURTHER RESOLVED**, that the President of the Corporation may, from time to time, without further action by the Board of Directors, appoint other persons to serve as authorized employees, or remove any individuals from this capacity, and to direct those

appointed to take such action, as he may deem necessary, advisable, convenient or appropriate to carry out and fully perform the duties incident to the office of President.

### III. AUTHORIZATION OF TRADE NAMES

**RESOLVED**, that the activities and operations of the Corporation may be carried on in any of the following manners or styles as may from time-to-time be deemed necessary or appropriate:

**East Texas Asphalt, A CRH Company**  
**Gulf Coast, A CRH company**  
**Moore Brothers Construction, A CRH Company**  
**Texas Bit, A CRH company**  
**Texas Concrete, A CRH company**  
**Texas Materials, A CRH company**  
**Texas Materials Group Production Asset Company LLC**  
**Few Ready Mix, A CRH Company**  
**Builders Supply, A CRH Company**

**FURTHER RESOLVED**, that the President of the Corporation may, from time to time, without further action by the Board of Directors, authorize the use of additional trade names, and to deem unauthorized any trade name previously authorized, as he may deem necessary, advisable, convenient or appropriate.

### IV. MISCELLANEOUS

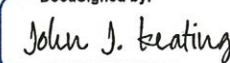
**RESOLVED**, that all actions previously taken by any Officer of the Corporation appointed hereunder in his/her capacity as such Officer be, and each of them hereby is, adopted, ratified, confirmed and approved in all respects as the authorized acts and deeds of the Corporation;

**FURTHER RESOLVED**, that each undersigned agrees that electronic signatures, whether digital or encrypted, of the Board of Directors are intended to authenticate this consent and to have the same force and effect as manual signatures. As used in the previous sentence, the term "electronic signatures" means any electronic sound, symbol or process attached to or logically associated with this consent and executed and adopted by a member of the Board of Directors with the intent to sign such consent, including, but not limited to, e-mail electronic signatures executed through DocuSign Services; and

**FURTHER RESOLVED**, that this Consent, following execution by all of the members of the Board of Directors, be filed in appropriate order in the minute book of the Corporation.

Signed by:  
  
F877D38C11274ED...

Aaron Price

DocuSigned by:  
  
6DBD0A4A9D404EA...

John J. Keating





## POWER OF ATTORNEY

Certificate No: 8204866

Liberty Mutual Insurance Company  
The Ohio Casualty Insurance Company  
West American Insurance Company

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Stephanie Gross

all of the city of Houston, state of TX each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 1st day of July, 2024.



Liberty Mutual Insurance Company  
The Ohio Casualty Insurance Company  
West American Insurance Company

By:

Nathan J. Zangerle  
Nathan J. Zangerle, Assistant Secretary

STATE OF PENNSYLVANIA ss  
COUNTY OF MONTGOMERY

On this 1st day of July, 2024, before me personally appeared Nathan J. Zangerle, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



Commonwealth of Pennsylvania - Notary Seal  
Teresa Pastella, Notary Public  
Montgomery County  
My commission expires March 28, 2029  
Commission number 1126044  
Member, Pennsylvania Association of Notaries

By:

Teresa Pastella  
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

#### ARTICLE IV - OFFICERS: Section 12. Power of Attorney.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

#### ARTICLE XIII - Execution of Contracts: Section 5. Surety Bonds and Undertakings.

Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

**Certificate of Designation** - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Nathan J. Zangerle, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

**Authorization** - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, of Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company do hereby certify that this power of attorney executed by said Companies is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 25th day of April, 2025.



By:

Renee C. Llewellyn  
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.



Figure: 28 TAC § 1.601(a)(2)(B)

### **Have a complaint or need help?**

If you have a problem with a claim or your premium, call your insurance company or HMO first. If you can't work out the issue, the Texas Department of Insurance may be able to help.

Even if you file a complaint with the Texas Department of Insurance, you should also file a complaint or appeal through your insurance company or HMO. If you don't, you may lose your right to appeal.

Liberty Mutual Insurance Company

To get information or file a complaint with your insurance company or HMO:

**Call:** Liberty Mutual Surety Claims **at** 206-473-6210

Online: [www.LibertyMutualSuretyClaims.com](http://www.LibertyMutualSuretyClaims.com)

Email: [HOSCL@libertymutual.com](mailto:HOSCL@libertymutual.com)

Mail: P.O. Box 34526 Seattle, WA 98124

### **The Texas Department of Insurance**

To get help with an insurance question or file a complaint with the state:

Call with a question: 1-800-252-3439

File a complaint: [www.tdi.texas.gov](http://www.tdi.texas.gov)

Email: [ConsumerProtection@tdi.texas.gov](mailto:ConsumerProtection@tdi.texas.gov)

Mail: MC 111-1A, P.O. Box 149091, Austin, TX 78714-9091

### **¿Tiene una queja o necesita ayuda?**

Si tiene, un problema con una reclamación o con su prima de seguro, llame primero a su compañía de seguros o HMO. Si no puede resolver el problema, es posible que el Departamento de Seguros de Texas (Texas Department of Insurance, por su nombre en inglés) pueda ayudar.

Aun si usted presenta una queja ante el Departamento de Seguros de Texas, también debe presentar una queja a través del proceso de quejas o de apelaciones de su compañía de seguros o HMO. Si no lo hace, podría perder su derecho para apelar.

Liberty Mutual Insurance Company

Para obtener información o para presentar una queja ante su compañía de seguros o HMO:

**Llame a:** Liberty Mutual Surety Claims

**al** 206-473-6210

En línea: [www.LibertyMutualSuretyClaims.com](http://www.LibertyMutualSuretyClaims.com)

Correo electrónico: [HOSCL@libertymutual.com](mailto:HOSCL@libertymutual.com)

Dirección postal: P.O. Box 34526      Seattle, WA 98124

**El Departamento de Seguros de Texas**

Para obtener ayuda con una pregunta relacionada con los seguros o para presentar una queja ante el estado:

Llame con sus preguntas al: 1-800-252-3439

Presente una queja en: [www.tdi.texas.gov](http://www.tdi.texas.gov)

Correo electrónico: [ConsumerProtection@tdi.texas.gov](mailto:ConsumerProtection@tdi.texas.gov)

Dirección postal: MC 111-1A, P.O. Box 149091, Austin, TX 78714-9091






As part of its business continuity efforts during the pendency of the COVID-19 pandemic, Liberty Mutual Insurance Company ("LMIC") on behalf of itself and the companies listed below has authorized its Attorneys-in-Fact to affix its corporate seal for surety obligations in a digital format in lieu of its traditional raised seal to any bond issued on its behalf by any such Attorney-in-Fact:

Liberty Mutual Insurance Company  
Liberty Mutual Fire Insurance Company  
The Ohio Casualty Insurance Company  
West American Insurance Company  
Safeco Insurance Company of America  
American States Insurance Company

LMIC agrees and affirms on behalf of itself and the other companies listed herein, that the digital corporate seal referenced above has the same binding effect when affixed to a bond or a Power of Attorney document as if it were a raised corporate seal.

Effective this 23<sup>rd</sup> day of March, 2020.

By:   
Renee C. Llewellyn, Assistant Secretary

# BRAZORIA COUNTY

## STATEMENT OF BIDDER'S QUALIFICATIONS

All questions must be answered and the data given must be clear and comprehensive. **This statement must be notarized.** If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information it desires.

Date: May 1, 2025

Bidder (Legal Name of Firm): Texas Materials Group, Inc.

Date Organized: 1945

Name of Owner(s): Corporation

Address: 3003 Kilgore Parkway, Baytown, Texas 77523

Date Incorporated October 1, 1980

Federal ID Number: 58-1401466

Number of Years in contracting business under present name 6

List all other names under which your business has operated in the last 10 years: Oldcastle Materials Texas, Inc. changed its name to Texas Materials Group, Inc. October 2018, then acquired Angel Brothers Holdings/Enterprises July 2021

### Work Presently Under Contract:

| Contract                      | Amount \$ | Completion Date |
|-------------------------------|-----------|-----------------|
| See attached Work in Progress |           |                 |
|                               |           |                 |
|                               |           |                 |

Type of work performed by your company: Clearing and grubbing, earthwork, soil stabilization and base materials, pavement milling and recycling, asphalt paving, concrete paving, storm drainage, water and sanitary sewer lines

Total Staff employed by Firm (Break down by Managers and Trades on separate sheet): 710

Have you ever failed to complete any work awarded to you? ☐ Yes ☒ No

(If yes, please attach summary of details on a separate sheet. Include brief explanation of cause and resolution)

Have you ever defaulted on a contract? ☐ Yes ☒ No

(If yes, please attach summary of details on a separate sheet.)

Has your organization had any disbarments or suspensions that have been imposed in the past five years or that was still in effect during the five-year period or is still in effect? ☐ Yes ☒ No

(If yes, list and explain; such list must include disbarments and suspensions of officers, principals, partners, members, and employees of your organization.)

List the projects most recently completed by your firm (include project of similar importance):

| Project  | Amount \$ | Mo/Yr Completed |
|--|-----------|-----------------|
| <u>See attached Completed Projects Five Year History</u> |           |                 |
| <hr/>  |           |                 |
| <hr/>  |           |                 |

Major equipment available for **this** contract: See attached Equipment List

Are you in compliance with all applicable EEO requirements? ☒ Yes ☐ No

(If no, please attach summary of details on a separate sheet.))

Are you a Section 3 business? (see below) ☐ Yes ☒ No

Section 3 Business Concerns:

- a) Businesses that are 51 percent or more owned by Section 3 residents;
- b) Businesses whose permanent, full-time employees include persons, at least 30 percent of whom are currently Section 3 residents, or within three years of the date of first employment with the firm were Section 3 residents;
- c) Businesses that provide evidence of a commitment to subcontract in excess of 25 percent of the dollar amount of all subcontracts to be awarded to businesses that meet the qualifications described above; or
- d) Businesses located within the City/County's jurisdiction that identifies themselves as Section 3 Business Concerns because they provide economic opportunities for low- and very low-income persons.

Bank References

Address: Bank of America , 600 Peachtree Street NE

Contact Name: Lois D. Marshall

City & State: Atlanta, Georgia Zip: 30308 Phone Number: Fax: 415-343-9310

Credit available: \$ Confidential

Has the firm or predecessor firm been involved in a bankruptcy or reorganization? ☐ Yes ☒ No

(If yes, please attach summary of details on a separate sheet.)

List on a sheet attached hereto all judgements, claims, arbitration proceedings, or suits pending or outstanding against bidder over the last five (5) years with amount of claim and brief description. N/A

List on a sheet attached hereto all lawsuits or requested arbitration with regard to construction contracts which bidder has initiated within the last five (5) years and brief explanation of claim and outcome. N/A

Attach resume(s) for the principal member(s) of your organization, including the officers as well as the proposed superintendent for the project.

Signed this 30th day of April, 2025.

  
\_\_\_\_\_  
Signature

Kevin Guy, Estimator

Printed Name and Title

Texas Materials Group, Inc.  
Company Name

**Notary Statement:**

Kevin Guy being duly sworn, says that he/she is the Estimator Position/Title  
of Texas Materials Group, Inc. (Firm Name), and hereby swears that the answers to the foregoing  
questions and all statements therein contained are true and correct. He/she hereby authorizes and requests any person,  
firm, or corporation to furnish any information requested City/County of Brazoria in verification of the  
recitals comprising this Statement of Bidder's Qualifications.

Subscribed and sworn before me this 30th day of April, 2025.

Notary Public

Kelly Reynolds  
Signature

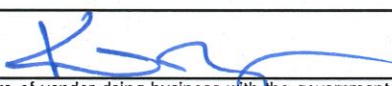
Kelly Reynolds  
Printed Name



My Commission Expires: April 15, 2026,

The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.

N/A

| <b>CONFLICT OF INTEREST QUESTIONNAIRE</b><br>For vendor doing business with local governmental entity  |  | <b>FORM CIQ</b>                       |
|--|--|---------------------------------------|
| <p>This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.</p> <p>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).</p> <p>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.</p> <p>A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.</p>  |  | <b>OFFICE USE ONLY</b>                |
| <p><b>1</b> Name of vendor who has a business relationship with local governmental entity.</p> <p style="text-align: center;">Texas Materials Group, Inc.</p>  |  | <p>Date Received</p>                  |
| <p><b>2</b> <input type="checkbox"/> 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.)</p>  |  |                                       |
| <p><b>3</b> Name of local government officer about whom the information is being disclosed.</p> <p style="text-align: center;">None</p> <p style="text-align: center;">_____<br/>Name of Officer</p>   |  |                                       |
| <p><b>4</b> 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.</p><br><br><p style="margin-left: 40px;">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?</p> <p style="margin-left: 100px;"><input type="checkbox"/> Yes      <input type="checkbox"/> No</p><br><p style="margin-left: 40px;">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?</p> <p style="margin-left: 100px;"><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> |  |                                       |
| <p><b>5</b> 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.</p>   |  |                                       |
| <p><b>6</b> <input type="checkbox"/> 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).</p>  |  |                                       |
| <p><b>7</b></p> <p style="text-align: center;"><br/>_____<br/>Signature of vendor doing business with the governmental entity</p>   |  | <p>May 1, 2025<br/>_____<br/>Date</p> |



**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.



**Contractor Acknowledgement of Stormwater Management Program**

I hereby acknowledge that I am aware of the Stormwater Management Program and standard operating procedures developed by Brazoria County in compliance with the TPDES General Permit No. TXR040000. I agree to comply with all applicable best management practices and standard operating procedures while conducting my services for Brazoria County. I agree to conduct all services in a manner that does not introduce illicit discharges of pollutants to streets, stormwater inlets, drainage ditches or any portion of the drainage system. The following materials and/or pollutant sources must not be discharged to the drainage system as a result of any services provided:

1. Grass clippings, leaves, mulch, rocks, sand, dirt or other waste materials resulting from landscaping activities, (except those materials resulting from ditch mowing or maintenance activities)
2. Herbicides, pesticides and/or fertilizers, (except those intended for aquatic use)
3. Detergents, fuels, solvents, oils and/or lubricants, other equipment and/or vehicle fluids,
4. Other hazardous materials including paints, thinners, chemicals or related waste materials,
5. Uncontrolled dewatering discharges, equipment and/or vehicle wash waters,
6. Sanitary waste, trash, debris, or other waste products
7. Wastewater from wet saw machinery,
8. Other pollutants that degrade water quality or pose a threat to human health or the environment.

Furthermore, I agree to notify Brazoria County immediately of any issue caused by or identified by  
Texas Materials Group, Inc. that is believed to be an immediate threat to human health or the environment.  
(Company/Contractor)

  
Contractor Signature

May 1, 2025  
Date

Kevin Guy  
Printed Name

Estimator  
Title

**CERTIFICATE AS TO CORPORATE PRINCIPAL**

I, TJ Brown, certify that I am the Secretary of the Corporation named as Principal in the bid bond; that Kevin Guy, who signed the said bond on behalf of the Principal was then Estimator of said corporation; that I know his/her signature, and his/her signature thereto is genuine; and that said bond was duly signed, sealed, and attested to, on behalf of said corporation by authority of its governing body.



Corporate  
Seal

Title: VP Construction

\* Power-of-attorney for person signing for Surety Company must be attached to bond.



N/A

## CONTRACTOR CERTIFICATIONS

|  |                     |
|--|---------------------|
| U.S. Department of Housing and Urban Development   |                     |
| <b>CERTIFICATION OF BIDDER REGARDING CIVIL RIGHTS LAWS AND REGULATIONS</b>   |                     |
| INSTRUCTIONS   |                     |
| CERTIFICATION OF BIDDER REGARDING Executive Order 11246 and Federal Laws Requiring Federal Contractor to adopt and abide by equal employment opportunity and affirmative action in their hiring, firing, and promotion practices. This includes practices related to race, color, gender, religion, national origin, disability, and veterans' rights.   |                     |
| NAME AND ADDRESS OF BIDDER (include ZIP Code)<br><br>Texas Materials Group, Inc.<br>3003 Kilgore Parkway<br>Baytown, Texas 77523   |                     |
| CERTIFICATION BY BIDDER  |                     |
| Bidder has participated in a previous contract or subcontract subject to Civil Rights Laws and Regulations.<br><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   |                     |
| The undersigned hereby certifies that:<br><br><input checked="" type="checkbox"/> The Provision of <u>Local Training, Employment, and Business Opportunities</u> clause (Section 3 provision) is included in the Contract. A written Section 3 plan (Local Opportunity Plan) was prepared and submitted as part of the bid proceedings (if bid equals or exceeds \$100,000).<br><br><input checked="" type="checkbox"/> The <u>Equal Opportunity</u> clause is included in the Contract (if bid equals or exceeds \$10,000). |                     |
| Have you ever been or are you being considered for sanction due to violation of Executive Order 11246, as amended?<br><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  |                     |
| Kevin Guy, Estimator   |                     |
| NAME AND TITLE OF SIGNER (Please type)   |                     |
| SIGNATURE<br>   | May 1, 2025<br>DATE |

Te

**CONTRACTOR'S CERTIFICATION of RECOVERED MATERIAL**

**ACKNOWLEDGEMENT**

I, Kevin Guy (Principal's Name) of Texas Materials Group, Inc. (Company Name), (hereinafter called "Contractor"), acknowledge the recovered material bidding requirements found in 2 CFR 200.322 that requires the Contractor to procure those items designated in the guidelines of the Environmental Protection Agency (EPA) at 40 CFR 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition.

I also acknowledge that this requirement shall apply to items purchased (1) where the Contractor purchases in excess of \$10,000 of the item under this contract; or (2) where during the preceding fiscal year, the value of the quantity acquired was in excess of \$10,000.

Finally, I acknowledge the attached list of recovered materials included in the bid documents.

(For up-to-date listing, please go to <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program#directory>)

Kevin Guy, Estimator

Printed Name and Title

  
Signature

May 1, 2025

Date

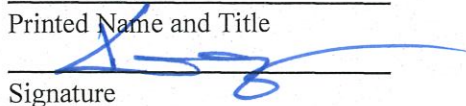
**USE OF RECOVERED MATERIAL**

**Please check one:**

- ☒ Recovered materials are included in this bid:  
Materials included E.A.P.
- ☐ Recovered materials are not reasonably available in a reasonable period of time.
- ☐ Recovered materials fail to meet reasonable performance standards, which are determined on the basis of the guidelines of the National Institute of Standards and Technology, if applicable.
- ☐ Recovered materials are only available at an unreasonable price.

Kevin Guy, Estimator

Printed Name and Title

  
Signature

May 1, 2025

Date

## CONTRACTOR'S LOCAL OPPORTUNITY PLAN

Texas Materials Group, Inc.  
(name of company) agrees to implement the following specific affirmative action steps directed at increasing the utilization of lower income residents and businesses within the (City/County) of Brazoria.  
Texas Materials Group, Inc.

- A. To ascertain from the City/County's CDBG program official the exact boundaries of the project area and where advantageous, seek the assistance of local officials in preparing and implementing the affirmative action plan.
- B. To attempt to recruit from within the city the necessary number of lower income residents through: local advertising media, signs placed at the proposed site for the project, and community organizations and public or private institutions operating within and servicing the project area such as Service Employment and Redevelopment (SER), Opportunities Industrialization Center (OIC), Urban League, Concentrated Employment Program, Hometown Plan, or the U.S. Employment Service.
- C. To maintain a list of all lower income residents who have applied either on their own or on referral from any source, and to employ such persons, if otherwise eligible and if a vacancy exists.
- D. To insert this plan in all bid documents and to require all bidders on subcontracts to submit an affirmative action plan including utilization goals and the specific steps planned to accomplish these goals.
- E. To ensure that subcontracts (greater than \$10,000), which are typically let on a negotiated rather than a bid basis in areas other than the covered project area, are also let on a negotiated basis, whenever feasible, in a covered project area.
- F. To formally contact unions, subcontractors, and trade associations to secure their cooperation in this effort.
- G. To ensure that all appropriate project area business concerns are notified of pending sub-contractual opportunities.
- H. To maintain records, including copies of correspondence, memoranda, etc., which document that all of the above affirmative action steps have been taken.
- I. To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of this plan.
- J. To maintain records concerning the amount and number of contracts, subcontracts, and purchases which contribute to objectives.
- K. To maintain records of all projected work force needs for all phases of the project by occupation, trade, skill level, and number of positions and to update these projections based on the extent to which hiring meets these Local Opportunity objectives.

As officers and representatives of Texas Materials Group, Inc. (name of company), we the undersigned have read and fully agree to this Plan and the City/County's Section 3 Plan, and become a party to the full implementation of the program and its provisions.

  
Signature

Kevin Guy, Estimator

Printed Name

Estimator

Title

May 1, 2025

Date

## **INSTRUCTIONS FOR PROPOSED CONTRACTS BREAKDOWN AND ESTIMATED PROJECT WORKFORCE BREAKDOWN**

### **Proposed Contracts Breakdown**

Type of Contracts – list all construction, materials, or other types of subcontracts (for example: electrical, plumbing, concrete, boring, etc.)

No. of Contracts – Number of contracts under this category

Approximate Total Dollar Amount – Total amount of each contract

Estimated No. to Local Business – Number of contracts awarded to local businesses and Section 3 businesses

Estimated \$ Amount to Local Business - How many dollars will be spent locally for each type of contract? For example: will you hire any local employees or subcontractors?

### **Estimated Project Workforce Breakdown**

Work Classifications – Classification of project employees as defined on Wage Rate

Total Estimated Positions – List the number employees for each work classification will you need on this project

Number of Positions Currently Filled – List the number of estimated positions you currently have filled

Number of Positions Not Filled – List the number of estimated positions you currently do not have filled

Number of Positions to Fill with Low to Moderate Income (Section 3) Residents – List the number of local residents earning low to moderate incomes that you plan to employ to fill the estimated positions not filled



**PROPOSED CONTRACTS BREAKDOWN**

| Type of Contracts            | No. of Contracts | Approx. Total Dollar Amount | Estimated No. to local Business | Estimated \$ Amount Local Business |
|------------------------------|------------------|-----------------------------|---------------------------------|------------------------------------|
| Barricades, signs & striping | 1                | 52,000                      | 1                               | 52,000                             |
| Cement                       | 1                | 157,000                     | 1                               | 157,000                            |
| HMA                          | 1                | 670,000                     | 1                               | 670,000                            |
| Truckering                   | 1                | 87,000                      | 1                               | 87,000                             |
|                              |                  |                             |                                 |                                    |

**ESTIMATED PROJECT WORKFORCE BREAKDOWN**

| Work Classification | Total Estimated Positions | No. of Positions Currently Filled | No. of Positions not Filled | No. of Positions to fill with LMI Residents (Section 3) |
|---------------------|---------------------------|-----------------------------------|-----------------------------|---|
| TMC                 |                           |                                   |                             |   |
| Common Labor        | 4                         | 4                                 | 0                           | 0   |
| Equipment Oper      | 5                         | 5                                 | 0                           | 0   |
| Heavy Equip Oper    | 4                         | 4                                 | 0                           | 0   |
| Truck Driver        | 3                         | 3                                 | 0                           | 0   |
| Quality Control     | 1                         | 1                                 | 0                           | 0   |
| Foreman             | 3                         | 3                                 | 0                           | 0   |
| Flagger             | 2                         | 2                                 | 0                           | 0   |
|                     |                           |                                   |                             |   |
|                     |                           |                                   |                             |   |
| Totals              | 22                        | 22                                | 0                           | 0   |



**Texas General Land Office**  
Community Development Block Grant (CDBG)  
Disaster Recovery Program

**CERTIFICATION FOR BUSINESS CONCERNS**  
**Seeking Section 3 Preference in Contracting and**  
**Demonstration of Capability**

Economic Opportunities for Low and Very Low-Income Persons

|                       |                              |             |
|-----------------------|------------------------------|-------------|
| Grantee/Subrecipient: | Contract Number:             | Date:       |
| Brazoria County       | 19-076-003-B352-CDBG-DR 2016 | May 1, 2025 |

**CONTRACTOR INFORMATION**

**Name of Business** Texas Materials Group, Inc.

**Address of Business** 3003 Kilgore Parkway, Baytown, Texas 77523

Type of Business: ☒ Corporation ☐ Partnership ☐ Non-Profit  
☐ Sole Proprietorship ☐ Joint Venture Consortium

**Attach the following documentation as evidence of Section 3 eligible status:**  
(Definition of "Section 3 Business Concern" in 24 CFR 135 describes the three alternative qualifications.)

**For Business claiming status as a Section 3 resident-owned enterprise:**

- |   |   |
|---|---|
| <input type="checkbox"/> Copy of resident lease   | <input type="checkbox"/> Copy of receipt of public assistance |
| <input type="checkbox"/> Copy of evidence of participation in a public assistance program | <input type="checkbox"/> Other evidence                       |

**For business entity as applicable:**

- |   |   |
|---|---|
| <input type="checkbox"/> Copy of Articles of Incorporation                                      | <input type="checkbox"/> Certificate of Good Standing |
| <input type="checkbox"/> Assumed Business Name Certificate                                      | <input type="checkbox"/> Partnership Agreement        |
| <input type="checkbox"/> List of owners/stockholders and % ownership of each appointed officers | <input type="checkbox"/> Corporation Annual Report    |
| <input type="checkbox"/> Organization chart with names and titles and brief function statement  | <input type="checkbox"/> Latest Board minutes         |
|   | <input type="checkbox"/> Additional documentation     |

**For business entity claiming Section 3 status by subcontracting 25 percent of the dollar awarded to qualified Section 3 business(es):**

- ☐ List of subcontracted Section 3 business(es) and subcontract amount

**For business claiming Section 3 status, by claiming at least 30 percent of their workforce are currently Section 3 residents or were Section 3 eligible residents within 3 years of date of first employment with the business:**

- |   |   |
|---|---|
| <input type="checkbox"/> List of all current full-time employees                            | <input type="checkbox"/> List of employees claiming Section 3 status                                  |
| <input type="checkbox"/> PHA/IHA Residential lease less than 3 years from day of employment | <input type="checkbox"/> Other evidence of Section 3 status less than 3 years from date of employment |

**Evidence of ability to perform successfully under the terms and conditions of the proposed contract:**

- |   |  |
|---|--|
| <input type="checkbox"/> Current financial statement                  | <input type="checkbox"/> Statement of ability to comply with public policy |
| <input type="checkbox"/> List of owned equipment                      |  |
| <input type="checkbox"/> List of all contracts for the past two years |  |

Authorized Name and Signature Kevin Guy

April 30, 2025

Date

(Corporate Seal)

Attested By: Kelly Reynolds

Kelly Reynolds

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM  
CONTRACTOR'S CERTIFICATION

**CONCERNING LABOR STANDARDS AND PREVAILING WAGE REQUIREMENTS**

|                            |  |
|----------------------------|--|
| TO (appropriate recipient) | DATE <u>May 1, 2025</u>  |
|                            | PROJECT NUMBER (if any)<br><u>19-076-003-B352-CDBG-DR 2016 Flood Allocation</u>  |
| C/O                        | PROJECT NAME<br><u>ITB #25-29 Brazoria County Road and Drainage Improvements for CDBG-Plan Set III / 30N General Land Office</u> |

1. The undersigned, having executed a contract with Brazoria County  
\_\_\_\_\_ for the construction of the above-identified project, acknowledges that:

- (a) The Labor Standards provisions are included in the aforesaid contract,
- (b) Correction of any infractions of the aforesaid conditions, including infractions by any subcontractors and any lower tier subcontractors, is Contractor's responsibility.

2. Certifies that:

- (a) Neither Contractor nor any firm, partnership or association in which it has substantial interest is designated as an ineligible contractor by the Comptroller General of the United States pursuant to Section 5.6(b) of the Regulations of the Secretary of Labor, Part 5 (29 CFR, Part 5) or pursuant to Section 3(a) of the Davis-Bacon Act, as amended.
- (b) No part of the aforementioned contract has been or will be subcontracted to any subcontractor if such subcontractor or any firm, corporation, partnership or association in which such subcontractor has a substantial interest is designated as an ineligible contractor pursuant to any of the aforementioned regulatory or statutory provisions.

3. Contractor agrees to obtain and forward to the aforementioned recipient within ten days after the execution of any subcontract, including those executed by subcontractors and any lower tier subcontractors, a Subcontractor's Certification Concerning Labor Standards and Prevailing Wage Requirements executed by the subcontractors.

4. Certifies that:

(a) The legal name and the business address of the undersigned are:

Texas Materials Group, Inc.  
3003 Kilgore Parkway  
Baytown, Texas 77523

(b) The undersigned is (choose one):

(1) A SINGLE PROPRIETORSHIP

(3) A CORPORATION ORGANIZED IN THE STATE OF

Delaware

(2) A PARTNERSHIP

(4) OTHER ORGANIZATION (Describe)

(c) The name, title and address of the owner, partners or officers of the undersigned are:

| NAME                              | TITLE | ADDRESS |
|-----------------------------------|-------|---------|
| See attached Election of Officers |       |         |
|                                   |       |         |
|                                   |       |         |
|                                   |       |         |
|                                   |       |         |
|                                   |       |         |

(d) The names and addresses of all other persons having a substantial interest in the undersigned, and the nature of the interest are:

| NAME | ADDRESS | NATURE OF INTEREST |
|------|---------|--------------------|
| None |         |                    |
|      |         |                    |
|      |         |                    |
|      |         |                    |
|      |         |                    |

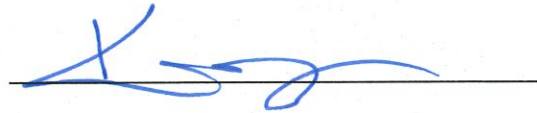
(e) The names, addresses and trade classifications of all other building construction contractors in which the undersigned has a substantial interest are:

| NAME | ADDRESS | TRADE CLASSIFICATION |
|------|---------|----------------------|
| None |         |                      |
|      |         |                      |
|      |         |                      |
|      |         |                      |
|      |         |                      |

Texas Materials Group, Inc.  
(Contractor)

Date May 1, 2025

By





ACTION BY WRITTEN CONSENT  
OF THE BOARD OF DIRECTORS  
OF  
**TEXAS MATERIALS GROUP, INC.**

The undersigned, being all of the members of the Board of Directors of Texas Materials Group, Inc., a Delaware corporation (the “*Corporation*”), do hereby, pursuant to applicable Delaware statute, give this written consent to the taking of the following actions, such actions to have the same force and effect had a meeting been duly called and held:

**I. ELECTION OF OFFICERS**

**RESOLVED**, that effective February 10, 2025, all previous elections of officers are terminated, and the following persons be, and hereby are, elected to serve as officers of the Corporation (each individually, an “*Officer*” and collectively, the “*Officers*”) in the capacities set forth opposite their respective names until such time as their successors shall be elected and qualified:

|                       |   |
|-----------------------|---|
| Aaron Price           | President                                 |
| Martin Merx           | Secretary/Treasurer                       |
| Derek Angel           | Vice President/Assistant Secretary        |
| Kal A. Kincaid        | Vice President/Assistant Secretary        |
| John Shogren          | Vice President/Assistant Secretary        |
| Mike Brown            | Vice President/Assistant Secretary        |
| Rodney McCarn         | Vice President/Assistant Secretary        |
| Wayne Sweet           | Vice President/Assistant Secretary        |
| Bryan Kalbfleisch     | Vice President/Assistant Secretary        |
| David M. Toolan       | Admin. Vice President/Assistant Secretary |
| Jessica Aldrich       | Assistant Secretary/Assistant Treasurer   |
| Kristin Davis         | Assistant Secretary                       |
| Dejan Mandic          | Assistant Secretary                       |
| Scott Frazier         | Assistant Secretary                       |
| Therese Leon Guerrero | Assistant Secretary                       |
| Robert Checkley       | Assistant Secretary                       |
| Derek Schluterman     | Assistant Secretary                       |
| Robin Jennings        | Assistant Secretary                       |
| Angela Kvarme         | Assistant Secretary                       |
| Tom Hershberger       | Assistant Secretary                       |
| Linda Lancaster       | Assistant Secretary                       |

**FURTHER RESOLVED**, that the Officers be, and each of them hereby is, authorized to execute and deliver agreements, contracts, documents, certificates, and other instruments, under the seal of the Corporation if required, for the purpose of conducting the Corporation’s business, including without limitation, selling products and securing construction work, and to take such other action, as they may deem necessary, advisable, convenient, or appropriate to carry out and fully perform duties incident to the office or offices so appointed, and such other duties as may be prescribed by the Board of Directors from time to time;

**FURTHER RESOLVED**, that the following persons are hereby designated Officers solely for the purpose of attesting signatures of other Officers signing on behalf of the Corporation, and for executing and attesting various corporate documents, tax returns, affidavits, and other instruments as may be necessary from time to time:

|                   |                     |
|-------------------|---------------------|
| Michael F. Deaton | Assistant Secretary |
| Tim P. George     | Assistant Secretary |
| William P. Jones  | Assistant Secretary |

## **II. APPOINTMENT OF AUTHORIZED EMPLOYEES**

**RESOLVED**, that effective February 10, 2025 all previous appointments of authorized employees are terminated, and that the following persons be and each of them hereby is appointed to serve as an authorized employee of the Corporation, which persons shall be authorized to execute and deliver such agreements, contracts, documents, certificates and other instruments, under the seal of the Corporation if required, for the purpose of conducting the Corporation's business including, without limitation, selling products and securing construction work:

|                       |                   |
|-----------------------|-------------------|
| Adam Newsom           | Josh King         |
| Bobby Daggett         | Kaylon Page       |
| Brach Whitman         | Keith Pierson     |
| Brian Ridlon          | Kelly Andrews     |
| Carlton Golden        | Kevin Guy         |
| Chris Michael         | Kevin Kipp        |
| Clayton Truitt        | Kyle Lewis        |
| Danny Schnyder        | Lance Phillips    |
| David Moore           | Lisa Roberts      |
| David Reese           | Nicholas Bockoven |
| Dean Donnellan        | Nik Arikidis      |
| Dean W. Buchanan      | Phillip King      |
| Donald Blackburn      | Preston Bassinger |
| Ed Farris             | Robert Banks      |
| Geno Carrier IV       | Robert Brown      |
| Jacob Trim            | Robert Dunlap     |
| Jake Kilgore          | Ron Stinson       |
| James A. Connor       | Sam Davis         |
| Jared Dean            | Scott Blanchard   |
| Jason (Thad) Traverse | TJ Brown          |
| Johnathan Murphy      | Trey Golden       |
| Jose Armenta          | Troy Rakes        |

**FURTHER RESOLVED**, that the President of the Corporation may, from time to time, without further action by the Board of Directors, appoint other persons to serve as authorized employees, or remove any individuals from this capacity, and to direct those

appointed to take such action, as he may deem necessary, advisable, convenient or appropriate to carry out and fully perform the duties incident to the office of President.

### III. AUTHORIZATION OF TRADE NAMES

**RESOLVED**, that the activities and operations of the Corporation may be carried on in any of the following manners or styles as may from time-to-time be deemed necessary or appropriate:

**East Texas Asphalt, A CRH Company**  
**Gulf Coast, A CRH company**  
**Moore Brothers Construction, A CRH Company**  
**Texas Bit, A CRH company**  
**Texas Concrete, A CRH company**  
**Texas Materials, A CRH company**  
**Texas Materials Group Production Asset Company LLC**  
**Few Ready Mix, A CRH Company**  
**Builders Supply, A CRH Company**

**FURTHER RESOLVED**, that the President of the Corporation may, from time to time, without further action by the Board of Directors, authorize the use of additional trade names, and to deem unauthorized any trade name previously authorized, as he may deem necessary, advisable, convenient or appropriate.

### IV. MISCELLANEOUS

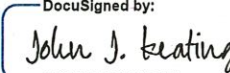
**RESOLVED**, that all actions previously taken by any Officer of the Corporation appointed hereunder in his/her capacity as such Officer be, and each of them hereby is, adopted, ratified, confirmed and approved in all respects as the authorized acts and deeds of the Corporation;

**FURTHER RESOLVED**, that each undersigned agrees that electronic signatures, whether digital or encrypted, of the Board of Directors are intended to authenticate this consent and to have the same force and effect as manual signatures. As used in the previous sentence, the term "electronic signatures" means any electronic sound, symbol or process attached to or logically associated with this consent and executed and adopted by a member of the Board of Directors with the intent to sign such consent, including, but not limited to, e-mail electronic signatures executed through DocuSign Services; and

**FURTHER RESOLVED**, that this Consent, following execution by all of the members of the Board of Directors, be filed in appropriate order in the minute book of the Corporation.

Signed by:  
  
F877D38C11274ED...

Aaron Price

DocuSigned by:  
  
6DBD0A4A9D404EA...

John J. Keating



## Texas General Land Office

Community Development Block Grant (CDBG)  
Disaster Recovery Program

[Code of Federal Regulations]

[Title 24, Volume 1]

[Revised as of April 1, 2003]

From the U.S. Government Printing Office via GPO Access

[CITE: 24CFR135.92]

[Page 704-707]

TITLE 24--HOUSING AND URBAN DEVELOPMENT  
CHAPTER I--OFFICE OF ASSISTANT SECRETARY FOR EQUAL OPPORTUNITY,  
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
PART 135--ECONOMIC OPPORTUNITIES FOR LOW- and VERY LOW-INCOME PERSONS

### Table of Contents

#### Appendix to Part 135

#### **I. EXAMPLES OF EFFORTS TO OFFER TRAINING AND EMPLOYMENT OPPORTUNITIES TO SECTION 3 RESIDENTS**

- (1) Entering into ``first source'' hiring agreements with organizations representing Section 3 residents.
- (2) Sponsoring a HUD-certified ``Step-Up'' employment and training program for section 3 residents.
- (3) Establishing training programs, which are consistent with the requirements of the Department of Labor, for public and Indian housing residents and other section 3 residents in the building trades.
- (4) Advertising the training and employment positions by distributing flyers (which identify the positions to be filled, the qualifications required, and where to obtain additional information about the application process) to every occupied dwelling unit in the housing development or developments where category 1 or category 2 persons (as these terms are defined in Sec. 135.34) reside.
- (5) Advertising the training and employment positions by posting flyers (which identify the positions to be filled, the qualifications required, and where to obtain additional information about the application process) in the common areas or other prominent areas of the housing development or developments. For HAs, post such advertising in the housing development or developments where category 1 or category 2 persons reside; for all other recipients, post such advertising in the housing development or developments and transitional housing in the neighborhood or service area of the section 3 covered project.
- (6) Contacting resident councils, resident management corporations, or other resident organizations, where they exist, in the housing development or developments where category 1 or category 2 persons reside, and community organizations in HUD assisted neighborhoods, to request the assistance of these organizations in notifying residents of the training and employment positions to be filled.

N/A

- (7) Sponsoring (scheduling, advertising, financing or providing in-kind services) a job informational meeting to be conducted by an HA or contractor representative or representatives at a location in the housing development or developments where category 1 or category 2 persons reside or in the neighborhood or service area of the section 3 covered project.
- (8) Arranging assistance in conducting job interviews and completing job applications for residents of the housing development or developments where category 1 or category 2 persons reside and in the neighborhood or service area in which a section 3 project is located.  
[[Page 705]]
- (9) Arranging for a location in the housing development or developments where category 1 persons reside, or the neighborhood or service area of the project, where job applications may be delivered to and collected by a recipient or contractor representative or representatives.
- (10) Conducting job interviews at the housing development or developments where category 1 or category 2 persons reside, or at a location within the neighborhood or service area of the section 3 covered project.
- (11) Contacting agencies administering HUD Youthbuild programs, and requesting their assistance in recruiting HUD Youthbuild program participants for the HA's or contractor's training and employment positions.
- (12) Consulting with State and local agencies administering training programs funded through JTPA or JOBS, probation and parole agencies, unemployment compensation programs, community organizations and other officials or organizations to assist with recruiting Section 3 residents for the HA's or contractor's training and employment positions.
- (13) Advertising the jobs to be filled through the local media, such as community television networks, newspapers of general circulation, and radio advertising.
- (14) Employing a job coordinator, or contracting with a business concern that is licensed in the field of job placement (preferably one of the section 3 business concerns identified in part 135), that will undertake, on behalf of the HA, other recipient or contractor, the efforts to match eligible and qualified section 3 residents with the training and employment positions that the HA or contractor intends to fill.
- (15) For an HA, employing section 3 residents directly on either a permanent or a temporary basis to perform work generated by section 3 assistance. (This type of employment is referred to as "force account labor" in HUD's Indian housing regulations. See 24 CFR 905.102, and Sec. 905.201(a)(6).)
- (16) Where there are more qualified section 3 residents than there are positions to be filled, maintaining a file of eligible qualified section 3 residents for future employment positions.
- (17) Undertaking job counseling, education and related programs in association with local educational institutions.
- (18) Undertaking such continued job training efforts as may be necessary to ensure the continued employment of section 3 residents previously hired for employment opportunities.
- (19) After selection of bidders but prior to execution of contracts, incorporating into the contract a negotiated provision for a specific number of public housing or other section 3 residents to be trained or employed on the section 3 covered assistance.
- (20) Coordinating plans and implementation of economic development (e.g., job training and preparation, business development assistance for residents) with the planning for housing and community development.





**Texas General Land Office**  
Community Development Block Grant (CDBG)  
Disaster Recovery Program

**NEW HIRES SECTION 3  
MONTHLY COMPLIANCE REPORT**

Reporting Month:

Economic Opportunities for Low and Very Low-Income Persons

This form is distributed to the General Contractor (GC) at the Pre-Construction Meeting. GC is also required to provide this form to any subcontractor firms that they anticipate hiring for this project.

**CONTRACTOR INFORMATION**

Name of Business:

Address of Business:

Authorized Representative for this contract:

Authorized Signatory:

**ADDITIONALLY, PLEASE REVIEW AND COMPLY WITH STEPS 1 - 3 BELOW:**

1. You must **sign and date** this form for the each applicable reporting month in connection with awarded project and deliver to:

2. When you **hire** a Section 3 resident in connection with this project, you must also complete this form and submit it to the Section 3 Coordinator identified above. Even if there were no **new hires** this form **must be completed and submitted to the Section 3 Coordinator identified above.**

☐ I have not hired any new employees during the reporting Month specified.

I have hired ☐ Section 3 employees and/or ☐ non-Section 3 employees during the reporting month shown here.

**The following is a list of the new hires and the trades:**

|    | New Hire Name | Job Category/Trade | Full-time? Yes or No |
|----|---------------|--------------------|----------------------|
| 1. |               |                    | <input type="text"/> |
| 2. |               |                    | <input type="text"/> |
| 3. |               |                    | <input type="text"/> |
| 4. |               |                    | <input type="text"/> |

I have taken one or more of the following recruitment steps to hire a Section 3 Resident with the highest training and employment priority ranking. **Provide a brief description of actions taken:**

I have taken steps to find a Section 3 Resident in the applicable targeted areas where the project(s)/assistance will take place. **List areas:**

- ☐ Placed signs or posters at prominent places in each of the above listed areas. *Photographs were taken to document this action.*

I have advertised to fill vacancy(ies) at the site(s), where work is taking place, in connection with this project.

**List advertisements (name publication, e.g. Work in Texas, Houston Chronicle, and/or website(s):**

- ☐ Distributed employment flyers to the administrative office of the local Public Housing Authority.
- ☐ Provided notice of positions available to the Texas Workforce Commission for potential applicants. *Provide copy of notice.*
- ☐ Contacted employment referrals or Youthbuild Program referrals. **List contacts:**

- ☐ Contacted with applicable parties to ensure that any HUD Youthbuild programs currently operating in the project(s) area/ assistance will take place.
- ☐ Kept a log of all applicants and indicate the reasons why Section 3 Residents who applied were not hired.
- ☐ Retained copies of any employment applications completed by public housing, Section 8 certificate or voucher holders or other Section 3 Residents.
- ☐ Sent a notice about Section 3 training and employment requirements and opportunities to labor organizations or to worker representatives with whom our firm has a collective bargaining or other agreement.

### 3. Verification

- ☐ I have attached proof of all checked items.

Authorized Name and Signature

Attested By:

Date/Time Field


Text



# TEXAS GOVERNMENT CODE 552, SUBCHAPTER J

## ACKNOWLEDGEMENT FORM

**Respondent acknowledges having read and understood the following law,  
effective January 1, 2020**

  
\_\_\_\_\_  
SIGNATURE  
"must be authorized to execute on behalf of company"

May 1, 2025  
\_\_\_\_\_  
DATE

Kevin Guy  
\_\_\_\_\_  
Typewritten or Printed Name

Estimator  
\_\_\_\_\_  
Title

### SUBCHAPTER J. ADDITIONAL PROVISIONS RELATED TO CONTRACTING INFORMATION

Sec. 552.371. CERTAIN ENTITIES REQUIRED TO PROVIDE CONTRACTING INFORMATION TO GOVERNMENTAL BODY IN CONNECTION WITH REQUEST. (a) This section applies to an entity that is not a governmental body that executes a contract with a governmental body that:

(1) has a stated expenditure of at least \$1 million in public funds for the purchase of goods or services by the governmental body; or

(2) results in the expenditure of at least \$1 million in public funds for the purchase of goods or services by the governmental body in a fiscal year of the governmental body.

(b) This section applies to a written request for public information received by a governmental body that is a party to a contract described by Subsection (a) for contracting information related to the contract that is in the custody or possession of the entity and not maintained by the governmental body.

(c) A governmental body that receives a written request for information described by Subsection (b) shall request that the entity provide the information to the governmental body. The governmental body must send the request in writing to the entity not later than the third business day after the date the governmental body receives the written request described by Subsection (b).

(d) Notwithstanding Section [552.301](#):

(1) a request for an attorney general's decision under Section [552.301](#)(b) to determine whether contracting information subject to a written request described by Subsection (b) falls within an exception to disclosure under this chapter is considered timely if made not later than the 13th business day after the date the governmental body receives the written request described by Subsection (b);

(2) the statement and copy described by Section [552.301](#)(d) is considered timely if provided to the requestor not later than the 13th business day after the date the governmental body receives the written request described by Subsection (b);

(3) a submission described by Section [552.301](#)(e) is considered timely if submitted to the attorney general not later than the 18th business day after the date the governmental body receives the written request described by Subsection (b); and

(4) a copy described by Section [552.301](#)(e-1) is considered timely if sent to the requestor not later than the 18th business day after the date the governmental body receives the written request described by Subsection (b).

(e) Section [552.302](#) does not apply to information described by Subsection (b) if the governmental body:

(1) complies with the requirements of Subsection (c) in a good faith effort to obtain the information from the contracting entity;

(2) is unable to meet a deadline described by Subsection (d) because the contracting entity failed to provide the information to the governmental body not later than the 13th business day after the date the governmental body received the written request for the information; and

(3) if applicable and notwithstanding the deadlines prescribed by Sections [552.301](#)(b), (d), (e), and (e-1), complies with the requirements of those subsections not later than the eighth business day after the date the governmental body receives the information from the contracting entity.

(f) Nothing in this section affects the deadlines or duties of a governmental body under Section [552.301](#) regarding information the governmental body maintains, including contracting information.

Sec. 552.372. BIDS AND CONTRACTS. (a) A contract described by Section [552.371](#) must require a contracting entity to:

(1) preserve all contracting information related to the contract as provided by the records retention requirements applicable to the governmental body for the duration of the contract;

(2) promptly provide to the governmental body any contracting information related to the contract that is in the custody or possession of the entity on request of the governmental body; and

(3) on completion of the contract, either:

(A) provide at no cost to the governmental body all contracting information related to the contract that is in the custody or possession of the entity; or

(B) preserve the contracting information related to the contract as provided by the records retention requirements applicable to the governmental body.

(b) Unless Section [552.374](#)(c) applies, a bid for a contract described by Section [552.371](#) and the contract must include the following statement: "The requirements of Subchapter J, Chapter [552](#), Government Code, may apply to this (include "bid" or "contract" as applicable) 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."

(c) A governmental body may not accept a bid for a contract described by Section [552.371](#) or award the contract to an entity that the governmental body has determined has knowingly or intentionally failed to comply with this subchapter in a previous bid or contract described by that section unless the governmental body determines and documents that the entity has taken adequate steps to ensure future compliance with the requirements of this subchapter.

Sec. 552.373. NONCOMPLIANCE WITH PROVISION OF SUBCHAPTER. A governmental body that is the party to a contract described by Section [552.371](#) shall provide notice to the entity that is a party to the contract if the entity fails to comply with a requirement of this subchapter applicable to the entity. The notice must:

(1) be in writing;

(2) state the requirement of this subchapter that the entity has violated; and

(3) unless Section [552.374](#)(c) applies, advise the entity that the governmental body may terminate the contract without further obligation to the entity if the entity does not cure the violation on or before the 10th business day after the date the governmental body provides the notice.

Sec. 552.374. TERMINATION OF CONTRACT FOR NONCOMPLIANCE. (a) Subject to Subsection (c), a governmental body may terminate a contract described by Section [552.371](#) if:

(1) the governmental body provides notice under Section [552.373](#) to the entity that is party to the contract;

(2) the contracting entity does not cure the violation in the period prescribed by Section [552.373](#);



Type text here (3) the governmental body determines that the contracting entity has intentionally or knowingly failed to comply with a requirement of this subchapter; and

(4) the governmental body determines that the entity has not taken adequate steps to ensure future compliance with the requirements of this subchapter.

(b) For the purpose of Subsection (a), an entity has taken adequate steps to ensure future compliance with this subchapter if:

(1) the entity produces contracting information requested by the governmental body that is in the custody or possession of the entity not later than the 10th business day after the date the governmental body makes the request; and

(2) the entity establishes a records management program to enable the entity to comply with this subchapter.

(c) A governmental body may not terminate a contract under this section if the contract is related to the purchase or underwriting of a public security, the contract is or may be used as collateral on a loan, or the contract's proceeds are used to pay debt service of a public security or loan.

Sec. 552.375. OTHER CONTRACT PROVISIONS. Nothing in this subchapter prevents a governmental body from including and enforcing more stringent requirements in a contract to increase accountability or transparency.

Sec. 552.376. CAUSE OF ACTION NOT CREATED. This subchapter does not create a cause of action to contest a bid for or the award of a contract with a governmental body.

Added by Acts 2019, 86th Leg., R.S., Ch. 1216 (S.B. [943](#)), Sec. 9, eff. January 1, 2020.

N/A

## PROHIBITED TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES AND EQUIPMENT CERTIFICATION FORM

*(Vendor to sign form if applicable to telecommunications)*

The undersigned vendor hereby represents and warrants that the equipment, systems, and/or services which it will provide to Brazoria County do not use covered telecommunications equipment or services (as defined in Section 889 John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY 2019 NDAA), Pub. L. No. 115-232 (2018)) as a substantial or essential component of any system, or as critical technology of any system.

Additionally the undersigned vendor hereby represents and warrants that the equipment, systems, and/or services it will provide are not prohibited from being procured using grant funds under section 889 of the FY 2019 NDAA.

---

COMPANY NAME

---

SIGNATURE OF COMPANY REPRESENTATIVE

---

PRINTED NAME

---

TITLE

---

DATE

<sup>n</sup>  
SECTION 504 CERTIFICATION

**POLICY OF NONDISCRIMINATION ON THE BASIS OF DISABILITY**

The Texas Materials Group, Inc. does not discriminate on the basis of disability status in the admission or access to, or treatment or employment in, its federally assisted programs or activities.

(Name) Dwight Deserne

(Address) 3003 Kilgore Parkway

Baytown, Texas 77523

City                      State                      Zip

Telephone Number ( 281 ) 421 - 5721 Voice

(       ) \_\_\_\_\_ - \_\_\_\_\_ TDD

Dwight Deserne has been designated to coordinate compliance with the nondiscrimination requirements contained in the Department of Housing and Urban Development's (HUD) regulations implementing Section 504 (24 CFR Part 8. dated June 2, 1988).

## CHILD SUPPORT STATEMENT FOR NEGOTIATED CONTRACTS AND GRANTS

Under Section 231.006, Family Code, the vendor or applicant certifies that the individual or business entity named in this contract, bid, or application is eligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated and payment may be withheld if this certification is inaccurate.

Section 231.006, Family Code, specifies that a child support obligor who is more than 30 days delinquent in paying child support and a business entity in which the obligor is a sole proprietor, partner, shareholder, or owner with an ownership interest of at least 25% is not eligible to receive payments from state funds under a contract to provide property, materials, or services; or receive a state-funded grant or loan.

List below the name and ownership percentage of the individual or sole proprietor and each partner, shareholder, or owner with an ownership interest of at least 25% of the business entity submitting the bid or application.

| NAME | OWNERSHIP BY % |
|------|----------------|
| N/A  |                |
|      |                |
|      |                |
|      |                |

A child support obligor or business entity ineligible to receive payments described above remains ineligible until all arrearage have been paid or the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency.

The undersigned proposer certifies that he or she, is the proposing individual, or the sole proprietor of the proposing business, and is eligible under Section 231.006 of the Texas Family Code, to receive the payments of State funds which may be disbursed in connection with a contract arising from this solicitation, The undersigned each further acknowledges that a contract resulting from this solicitation may be terminated and payment may be withheld if the certification provided herein is found to be inaccurate.

  
\_\_\_\_\_  
Signature – Company Official

Texas Materials Group, Inc.  
\_\_\_\_\_  
Printed/Type Firm Name

Kevin Guy, Estimator  
\_\_\_\_\_  
Printed/Typed Name and Title

May 1, 2025  
\_\_\_\_\_  
Date



# **BRAZORIA COUNTY**

## **ARTICLE 7 – ATTACHMENTS TO BID**

**VENDORS ARE TO PROVIDE WITH THEIR BID SUBMITTAL, THE FOLLOWING:**

- LIST OF PROPOSED SUBCONTRACTORS
- LIST OF PROPOSED SUPPLIERS
- LIST OF PROJECT EXPERIENCE REFERENCES [See attached Work in Progress and Five Year Completed Project History](#)
- DESCRIPTION OF PROJECT APPROACH & CONSTRUCTION PHASING AS DIRECTED IN THE SUMMARY OF WORK
- EVIDENCE OF AUTHORITY TO DO BUSINESS IN THE STATE OF THE PROJECT

PROPOSED SUBCONTRACTORS:

Traffic Signs + Lines LLC

PROPOSED MAJOR SUPPLIERS:

MARTIN ASPHALT

ARCUSA

Texas Materials



### Project Approach & Construction Phasing

- a. Barricades Signs and Traffic Handling: Texas Materials Group will furnish and maintain all barricades and warning signs, including temporary and portable traffic control devices necessary to complete construction. TMG utilizes the latest standards of the Texas MUTCD.
- b. Erosion Control: TMG will install, maintain, and remove erosion, and environmental control measure to prevent or reduce the discharge of pollutants in accordance with the Storm Water Pollution Prevention Plan (SWP3).
- c. Preparing Right of Way: TMG will prepare the right of way for construction operations by removing and disposing of obstructions.
- d. Cement Treat Roadway: TMG will pulverize, mix and compact cement the roadway.
- e. Hot Mix Asphalt – TMG will place 1.5" of level up HMA to correct irregularities and improve overall ride quality. Final ride surface will be overlaid with 1.5" HMA.

Type text here  
Type text here



**BRAZORIA COUNTY COURTHOUSE  
PURCHASING DEPARTMENT  
237 E. LOCUST STREET, SUITE 406  
ANGLETON, TEXAS 77515  
TEL: 979-864-1825**

**BRAZORIA COUNTY EXHIBIT B ADDITIONAL REQUIREMENTS  
ACKNOWLEDGMENT FORM**

By my signature hereon, I certify that I have read each and every page of  
Exhibit B Additional Requirements.

**VENDORS MUST INCLUDED THE SIGNED ACKNOWLEDGEMENT FORM  
WITH THEIR ITB SUBMITTAL**

Texas Materials Group, Inc.

Legal Name of Contracting Company

Kevin Guy

Contact Person

3003 Kilgore Parkway, Baytown, Texas 77523

Complete Mailing Address

281-421-5721

Telephone Number

Facsimile Number

kevin@texasmaterials.com

Email Address

Signature

A handwritten signature in blue ink, appearing to read "Kevin Guy", is written over a horizontal line.

May 1, 2025

Date

## CONTRACTOR'S FINAL PAYMENT AFFIDAVIT

County: \_\_\_\_\_

CDBG-DR No: \_\_\_\_\_

Contractor: \_\_\_\_\_

Date: \_\_\_\_\_

**BEFORE ME, THE UNDERSIGNED AUTHORITY**, on this day personally appeared \_\_\_\_\_, who being duly sworn, on oath, says that he is a duly authorized representative of \_\_\_\_\_; Contractor, and that all terms of the Contract for the completion of certain public works described as \_\_\_\_\_

\_\_\_\_\_; County of \_\_\_\_\_, Texas have been satisfactorily completed and that ALL sums of money for payrolls, bills for material and equipment, and other indebtedness connected with the Work for the Owner or its property might in any way be responsible to the best of my knowledge and belief, have been paid or will be paid or otherwise satisfied within thirty days after receipt of final payment from the Owner, or within the period of time required by Article 601f, Vernon's Civil Statutes. Payments not made in full at the time of this affidavit are listed below.

**FINAL PAYMENTS** pending as of this date hereof are: \_\_\_\_\_ None Pending \_\_\_\_\_ As Listed Below

| Individual or Co. Name | Mailing Address | Amount Owed |
|------------------------|-----------------|-------------|
|                        |                 |             |
|                        |                 |             |
|                        |                 |             |
|                        |                 |             |
|                        |                 |             |

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

Affidavit must be signed by an individual owner or partner in partnership, or by a person authorized by by-laws or Board of Directors to sign for a corporation. If Contractor is a joint venture or partnership of individuals, either may sign, but if a joint venture in which a corporation is a party, separate affidavits must be executed by each corporation and by each individual owner or partnership. In the event subcontractors, laborers, or material suppliers have not been paid in full, the Contractor shall list here on the amount owed and the name and address of each subcontractor, laborer, or material supplier to whom such payment is owed.

-----  
Sworn and Subscribed before me this, the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public in and for \_\_\_\_\_  
County, Texas

(SEAL)





**Texas General Land Office**  
Community Development Block Grant (CDBG)  
Disaster Recovery Program

**Contractor Certification of Efforts to Fully Comply  
with Employment and Training Provisions of Section 3**

Economic Opportunities for Low and Very Low-Income Persons

**THE BIDDER REPRESENTS AND CERTIFIES AS PART OF ITS BID/OFFER THAT IT:**

|   |
|---|
| <input type="checkbox"/> Is a Section 3 Business Concern. A Section 3 Business Concern means a business concern:<br>1. That is 51% or more owned by Section 3 Resident(s); or<br>2. Whose permanent, full-time employees include persons, at least 30% of whom are currently Section 3 Residents, or<br>3. That provides evidence of a commitment to subcontract in excess of 25% of the dollar value of all subcontracts to be awarded to Section 3 Business Concerns, that meet the qualifications set forth in paragraphs 1 or 2 herein. |
| <input checked="" type="checkbox"/> Is <b>NOT</b> a Section 3 Business Concern, but who has and will continue to seek compliance with Section 3 by certifying the following efforts to be undertaken.   |
| <b>EFFORTS TO AWARD SUBCONTRACTOR TO SECTION 3 CONCERNS</b><br>(Check ALL that apply)   |
| <input type="checkbox"/> By contacting business assistance agencies, minority contractors associations and community organizations to inform them of the contracting opportunities and requesting their assistance in identifying Section 3 businesses which may solicit bids for a portion of the work.  |
| <input type="checkbox"/> By advertising contracting opportunities by posting notices, which provide general information about the work to be contracted and where to obtain additional information, in the common areas of the applicable development(s) owned and managed by the Housing Authority.  |
| <input type="checkbox"/> By providing written notice to all known Section 3 Business Concerns of contracting opportunities. This notice should be in sufficient time to allow the Section 3 Business Concerns to respond to bid invitations   |
| <input type="checkbox"/> By following up with Section 3 Business Concerns that have expressed interest in the contracting opportunities.  |
| <input type="checkbox"/> By coordinating meetings at which Section 3 Business Concerns could be informed of specific elements of the work for which subcontract bids are being sought.  |
| <input type="checkbox"/> By conducting workshops on contracting procedures and specific contracting opportunities in a timely manner so that Section 3 Business Concerns can take advantage of contracting opportunities.   |
| <input type="checkbox"/> By advising Section Business Concerns as to where they seek assistance to overcome barriers such as inability to obtain bonding, lines of credit, financing, or insurance and aiding Section 3 Businesses in qualifying for such bonding, financing, insurance, etc....  |
| <input type="checkbox"/> Where appropriate, by breaking out contract work into economically feasible units to facilitate participation by Section 3 businesses.   |
| <input type="checkbox"/> By developing and using a list of eligible Section 3 Business Concerns.  |
| <input type="checkbox"/> By actively supporting and undertaking joint ventures with Section 3 Businesses.   |
| <b>EFFORTS TO PROVIDE TRAINING AND EMPLOYMENT TO SECTION 3 RESIDENTS</b>  |
| <input type="checkbox"/> By entering into a "first source" hiring agreements with organizations representing Section 3 Residents.   |
| <input type="checkbox"/> By establishing training programs, which are consistent with the requirements of the Department of Labor, specifically for Section 3 Residents in the building trades.   |
| <input type="checkbox"/> By advertising employment and training positions to dwelling units occupied by Category 1 and 2 residents.   |
| <input type="checkbox"/> By contacting resident councils and other resident organizations in the affected housing development to request assistance in notifying residents of the training and employment positions to be filled.   |
| <input type="checkbox"/> By arranging interviews and conducting interviews on the job site.   |
| <input type="checkbox"/> By undertaking such continued job-training efforts as may be necessary to ensure the continued employment of Section 3 Residents previously hired for employment opportunities.  |

Contractor Name/Business Name:

Texas Materials Group, Inc.

Signature Field

Date/Time Field

May 1, 2025



## ATTORNEY'S REVIEW CERTIFICATION

I, the undersigned, \_\_\_\_\_, the duly authorized and acting legal representative of the \_\_\_\_\_, do hereby certify as follows:

I have examined the attached contract(s) and surety bonds and am of the opinion that each of the agreements may be duly executed by the proper parties, acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties; and that the agreements shall constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

Attorney's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Attorney's Name: \_\_\_\_\_

Texas State Bar Number: \_\_\_\_\_

☐ New Vendor☐ Business Name Change☐ Address Change☐ Tax Info Change (W-9)☒ Other (Bid)VENDOR NAME Texas Materials Group, Inc.COMPLETED BY: Kevin Guy DATE FORM COMPLETED: May 1, 2025SAM.GOV: VENDOR D & B DUNS NUMBER: 039939236/SAM.gov ID F8HFSQYTF6X7 CAGE CODE: 3VJW5Is vendor incorporated? ☒ Yes ☐ No; If incorporated: How incorporated: \_\_\_\_\_ Where incorporated: DelawareHas Name Changed in past two (2) years? ☐ Yes ☒ No If Yes, When \_\_\_\_\_FORMER NAME: N/A3003 Kilgore Parkway

PHYSICAL STREET ADDRESS (Cannot be P.O. Box)

Baytown

CITY

Texas 77523

STATE / ZIP

Kevin GuyPRIMARY PERSON AUTHORIZED TO EXECUTE A  
FINANCIAL/BANKING AGREEMENTEstimator

TITLE

(281) 421-5721

TELEPHONE #

  
SIGNATURE OF ABOVE INDIVIDUALkevin@texasmaterials.com

EMAIL ADDRESS

SECONDARY PERSON AUTHORIZED TO EXECUTE  
A FINANCIAL/BANKING AGREEMENT

TITLE

( )  
TELEPHONE #

SIGNATURE OF ABOVE INDIVIDUAL

EMAIL ADDRESS

www.texasmaterialsgroup.com

WEBSITE ADDRESS

**REMITTANCE INFORMATION**

REMIT TO NAME (If different from above)

P. O. Box 845198

REMIT TO ADDRESS

Dallas

CITY

Texas 75284

STATE / ZIP

CONTACT PERSON/TITLE

512-861-7100

TELEPHONE #

FACSIMILE #

EMAIL ADDRESS

Is this the only remit address you have?

☒ Yes ☐ No

If no, please provide information:



**Request for Taxpayer  
Identification Number and Certification**

Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

Give form to the  
requester. Do not  
send to the IRS.

**Before you begin.** For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

|   |  |   |
|---|--|---|
| Print or type.<br>See Specific Instructions on page 3.  | <b>1</b> Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)<br><b>Texas Materials Group, Inc.</b>   |   |
|   | <b>2</b> Business name/disregarded entity name, if different from above.<br><b>dba Texas Materials, dba Few Ready Mix, dba Builders Supply</b>   |   |
|   | <b>3a</b> Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only <b>one</b> of the following seven boxes.<br><input type="checkbox"/> Individual/sole proprietor <input checked="" type="checkbox"/> C corporation <input type="checkbox"/> S corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate<br><input type="checkbox"/> LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) _____<br><b>Note:</b> Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.<br><input type="checkbox"/> Other (see instructions) _____ |   |
|   | <b>4</b> Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):<br>Exempt payee code (if any) <b>5</b><br>Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any) <b>E</b><br><i>(Applies to accounts maintained outside the United States.)</i>  |   |
|   | <b>3b</b> If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions <input type="checkbox"/>  |   |
| <b>5</b> Address (number, street, and apt. or suite no.). See instructions.<br><b>11714 Wilson Parke Ave, Ste 155</b> |  | Requester's name and address (optional) |
| <b>6</b> City, state, and ZIP code<br><b>Austin, TX 78726</b>   |  |   |
| <b>7</b> List account number(s) here (optional)   |  |   |

**Part I Taxpayer Identification Number (TIN)**

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

|                                       |   |   |   |   |   |   |   |   |
|---------------------------------------|---|---|---|---|---|---|---|---|
| <b>Social security number</b>         |   |   |   |   |   |   |   |   |
|                                       |   |   | - |   |   |   | - |   |
| or                                    |   |   |   |   |   |   |   |   |
| <b>Employer identification number</b> |   |   |   |   |   |   |   |   |
| 5                                     | 8 | - | 1 | 4 | 0 | 1 | 4 | 6 |

**Part II Certification**

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

**Sign Here** Signature of U.S. person *Kelley Anderson*

Date **1/1/25**

**Vendor Billing Address:** TXR-AP@na.crh.com / 11714 Wilson Parke Ave, Ste 155, Austin, TX 78726

**Customer Remittance Address:** TXRnoreplyAR@na.crh.com / PO Box 845198, Dallas, TX 75284 (Online Portal: [mytexasmaterialsgroup.myamatportal.com](http://mytexasmaterialsgroup.myamatportal.com))

We rebranded from APAC-Texas, Inc. in 2016, and from Oldcastle Materials Texas, Inc. in 2018. Then in 2023, we consolidated all dba names to Texas Materials, and are no longer operating under Gulf Coast, TexasBit, Texas Concrete, East Texas Asphalt, or Moore Brothers Construction.

**Other acquired business names included in our current business entity:**

Mathews Brothers Construction, Trotti & Thomson, Texas Bitulithic Co, Wheeler Coatings Asphalt, Armor Asphalt, Ironhorse Asphalt, Lindsey Contractors, JLB Contracting, Angel Brothers Construction, Century Asphalt, Century Terminals, LD Construction, East Texas Asphalt, Moore Brothers Construction, Aggregate Rail Cars, West Louisiana Aggregates, Coastal Ready-Mix, Gary Whitman Materials, Lone Star Concrete, Few Ready Mix Concrete Co., Montana Nelson (MN) Ready Mix, and Builders Supply Company.

Should we be listed under any of the business names noted above please update to reflect this W-9.

For more information on our company please visit: <https://texasmaterials.com/our-story/>

## Request for Taxpayer

**Give Form to the requester. Do not send to the IRS.**

► Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

|   |  |
|---|--|
| <b>1</b> Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.  |  |
| <b>2</b> Business name/disregarded entity name, if different from above   |  |
| <b>3</b> Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.   | <b>4</b> Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): |
| <input type="checkbox"/> Individual/sole proprietor or single-member LLC  | Exempt payee code (if any) _____   |
| <input type="checkbox"/> C Corporation  | Exemption from FATCA reporting code (if any) _____   |
| <input type="checkbox"/> S Corporation  | (Applies to accounts maintained outside the U.S.)  |
| <input type="checkbox"/> Partnership  |  |
| <input type="checkbox"/> Trust/estate   |  |
| <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ► _____  |  |
| Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. |  |
| <input type="checkbox"/> Other (see instructions) ► _____   |  |
| <b>5</b> Address (number, street, and apt. or suite no.) See instructions.  | Requester's name and address (optional)  |
| <b>6</b> City, state, and ZIP code  |  |
| <b>7</b> List account number(s) here (optional)   |  |

**Part I Taxpayer Identification Number (TIN)**

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

**Social security number**

|  |  |  |   |  |  |   |  |  |  |  |
|--|--|--|---|--|--|---|--|--|--|--|
|  |  |  | - |  |  | - |  |  |  |  |
|--|--|--|---|--|--|---|--|--|--|--|

or

**Employer identification number**

|  |  |  |   |  |  |  |  |  |  |  |
|--|--|--|---|--|--|--|--|--|--|--|
|  |  |  | - |  |  |  |  |  |  |  |
|--|--|--|---|--|--|--|--|--|--|--|

## Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification Instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

|                  |                            |        |
|------------------|----------------------------|--------|
| <b>Sign Here</b> | Signature of U.S. person ▶ | Date ▶ |
|                  |                            |        |

## General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9).

### Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
  - Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
  - Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
  - Form 1099-S (proceeds from real estate transactions)
  - Form 1099-K (merchant card and third party network transactions)
  - Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
  - Form 1099-C (canceled debt)
  - Form 1099-A (acquisition or abandonment of secured property)
- Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What Is backup withholding, later.*

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

**Note:** If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

**Foreign person.** If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*).

**Nonresident alien who becomes a resident alien.** Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

**Example.** Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

## Backup Withholding

**What is backup withholding?** Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

**Payments you receive will be subject to backup withholding if:**

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the Instructions for Part II for details),
3. The IRS tells the requester that you furnished an incorrect TIN,
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships*, earlier.

## What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

## Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

## Penalties

**Failure to furnish TIN.** If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

**Civil penalty for false information with respect to withholding.** If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.



**Criminal penalty for falsifying information.** Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

**Misuse of TINs.** If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

## Specific Instructions

### Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

**Note: ITIN applicant:** Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

### Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

### Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

| IF the entity/person on line 1 is a(n) . . .   | THEN check the box for . . .  |
|--|---|
| • Corporation  | Corporation   |
| • Individual   | Individual/sole proprietor or single-member LLC   |
| • Sole proprietorship, or  |   |
| • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.                              |   |
| • LLC treated as a partnership for U.S. federal tax purposes,  | Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation) |
| • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or  |   |
| • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes. |   |
| • Partnership  | Partnership   |
| • Trust/estate   | Trust/estate  |

### Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

#### Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947



The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

| IF the payment is for . . .  | THEN the payment is exempt for . . .  |
|--|---|
| Interest and dividend payments   | All exempt payees except for 7  |
| Broker transactions  | Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012. |
| Barter exchange transactions and patronage dividends                                   | Exempt payees 1 through 4   |
| Payments over \$600 required to be reported and direct sales over \$5,000 <sup>1</sup> | Generally, exempt payees 1 through 5 <sup>2</sup>   |
| Payments made in settlement of payment card or third party network transactions        | Exempt payees 1 through 4   |

<sup>1</sup> See Form 1099-MISC, Miscellaneous Income, and its Instructions.

<sup>2</sup> However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

**Exemption from FATCA reporting code.** The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(ii)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

**Note:** You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

## Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

## Line 6

Enter your city, state, and ZIP code.

## Part I. Taxpayer Identification Number (TIN)

**Enter your TIN in the appropriate box.** If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

**Note:** See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

**How to get a TIN.** If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at [www.SSA.gov](http://www.SSA.gov). You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at [www.irs.gov/Businesses](http://www.irs.gov/Businesses) and clicking on Employer Identification Number (EIN) under Starting a Business. Go to [www.irs.gov/Forms](http://www.irs.gov/Forms) to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to [www.irs.gov/OrderForms](http://www.irs.gov/OrderForms) to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

**Note:** Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

**Caution:** A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

## Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

**Signature requirements.** Complete the certification as indicated in items 1 through 5 below.

**1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.** You must give your correct TIN, but you do not have to sign the certification.

**2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983.** You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

**3. Real estate transactions.** You must sign the certification. You may cross out item 2 of the certification.

**4. Other payments.** You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

**5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions.** You must give your correct TIN, but you do not have to sign the certification.

## What Name and Number To Give the Requester

| For this type of account:  | Give name and SSN of:   |
|--|---|
| 1. Individual  | The individual  |
| 2. Two or more individuals (joint account) other than an account maintained by an FFI                          | The actual owner of the account or, if combined funds, the first individual on the account <sup>1</sup> |
| 3. Two or more U.S. persons (joint account maintained by an FFI)   | Each holder of the account  |
| 4. Custodial account of a minor (Uniform Gift to Minors Act)   | The minor <sup>2</sup>  |
| 5. a. The usual revocable savings trust (grantor is also trustee)  | The grantor-trustee <sup>1</sup>  |
| b. So-called trust account that is not a legal or valid trust under state law                                  | The actual owner <sup>1</sup>   |
| 6. Sole proprietorship or disregarded entity owned by an individual  | The owner <sup>3</sup>  |
| 7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A)) | The grantor <sup>4</sup>  |
| For this type of account:  | Give name and EIN of:   |
| 8. Disregarded entity not owned by an individual   | The owner   |
| 9. A valid trust, estate, or pension trust   | Legal entity <sup>4</sup>   |
| 10. Corporation or LLC electing corporate status on Form 8832 or Form 2553                                     | The corporation   |
| 11. Association, club, religious, charitable, educational, or other tax-exempt organization                    | The organization  |
| 12. Partnership or multi-member LLC  | The partnership   |
| 13. A broker or registered nominee   | The broker or nominee   |

| For this type of account:   | Give name and EIN of: |
|---|-----------------------|
| 14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments | The public entity     |
| 15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))  | The trust             |

<sup>1</sup> List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

<sup>2</sup> Circle the minor's name and furnish the minor's SSN.

<sup>3</sup> You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

<sup>4</sup> List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

**\*Note:** The grantor also must provide a Form W-9 to trustee of trust.

**Note:** If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

## Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

**Protect yourself from suspicious emails or phishing schemes.** Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to [phishing@irs.gov](mailto:phishing@irs.gov). You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at [spam@uce.gov](mailto:spam@uce.gov) or report them at [www.ftc.gov/complaint](http://www.ftc.gov/complaint). You can contact the FTC at [www.ftc.gov/idtheft](http://www.ftc.gov/idtheft) or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see [www.IdentityTheft.gov](http://www.IdentityTheft.gov) and Pub. 5027.

Visit [www.irs.gov/IdentityTheft](http://www.irs.gov/IdentityTheft) to learn more about identity theft and how to reduce your risk.

## Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

**Kevin L. Guy**  
6300 Bayou Blvd.  
Baytown, Texas 77521  
(713) 410-2892  
[kevin@texasmaterials.com](mailto:kevin@texasmaterials.com)

**Objective:**

To obtain a leadership position within a team-oriented management group.

**Education:**

Texas A&M University, College Station, TX  
BS in Construction Science May 1997

**Experience:**

**May 1997 - Present**

**Estimator / Project Manager, Texas Materials Group, Inc. (formerly Angel Brothers Holdings Corp.)**

- Prepare lump sum & unit price proposals for a variety of civil projects, experienced in public, private & industrial projects.  
(\$100,000.00 - \$50,000,000.00)
- Manage construction of projects successfully bid / negotiated, the company has a “cradle to grave” project management ideology.

**June 1996 – August 1996**

**Assistant Estimator / Project Manager Angel Brothers Enterprises, Ltd.**

- Fulfilled degree requirement for 12-week internship in construction related field.
- Helped with quantity take-offs (manual & computer aided)
- Worked closely with a project manager in preparing a successful proposal for an industrial site-work package for Bayer Chemical.

**Related Skills:**

- Surveying
- Detour & Construction Traffic Control (MUTCD) Design & Implementation
- Technical Writing; Legal Agreements, Professional Proposals, Etc.
- Excavation volume calculations and the utilization of a variety excavation related software packages.
- AutoCAD design work ranging from traffic control plans to a multi-million dollar oval track facility.

**Computer Related Skills:**

- AutoCAD
- Agtek Earthwork 3D & Highway Sections
- Spectra Precision Paydirt / Site Work package
- Spectra Precision Terramodel
- Microsoft Office Suite (Word, Excel, Publisher, Access, Project)
- Primavera
- Microsoft Project

# ARLEY GARZA

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Senior Project Estimator

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## CONTACT

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832-483-2361

[arley.garza@texasmaterials.com](mailto:arley.garza@texasmaterials.com)

Houston, Texas

## PROFILE

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Civil Project Estimator experienced in estimating and managing a variety of infrastructure projects ranging in cost from \$250,000 to \$30,000,000 for public and private entities.

## SKILLS

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Project Estimating

Project Management

Microsoft Project

P6

## EXPERIENCE

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Project Estimator

**Texas Materials Group, Inc. (formerly Angel Brothers Holdings Corp.)**  
**2017-Present**

Competitive cost estimating of both unit price and lump sum bid proposals. Work closely with field project managers to ensure projects are built out on time as designed and estimated from project start to close out. Preparation of RFIs and Change Orders.

## EDUCATION

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University of Houston

BS, Construction Science

**Jes Ripley Allen**  
4630 Wild Bluebonnet Way  
Houston, TX 77084  
(979) 571-5898

**Education:**

---

|   |                     |          |
|---|---------------------|----------|
| Texas A&M University                      | College Station, TX | May 2011 |
| Bachelor of Science, Construction Science |                     |          |

**Experience:**

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|                             |             |                         |
|-----------------------------|-------------|-------------------------|
| Texas Materials Group, Inc. | Houston, TX | November 2021 - Present |
|-----------------------------|-------------|-------------------------|

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Construction Superintendent

- Planning, scheduling and overseeing crews across the Houston Metropolitan area. Projects include Texas Department of Transportation and other public entities in addition to private jobs. Assist project managers in scheduling, cost review, and project completion on schedule.

|                     |             |                            |
|---------------------|-------------|----------------------------|
| Pulice Construction | Midland, TX | March 2021 – November 2021 |
|---------------------|-------------|----------------------------|

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Texas Department of Transportation – IH 20 Reconstruction and Overpass  
Contract Total: \$51,000,000

Drainage & Structures Superintendent

- Planning work for drainage crews and subcontractors to complete the necessary drainage work per the schedule and to review cost.
- Pre-Construction planning for the Bridge Construction on IH 20. Other duties included planning and performing concrete work associated with drainage tie ins, concrete lined channels, Concrete CIP Walls.

|                                 |             |                           |
|---------------------------------|-------------|---------------------------|
| Zachry Construction Corporation | Houston, TX | February 2017- March 2021 |
|---------------------------------|-------------|---------------------------|

---

Harris County Toll Road - Beltway 8 Contract 338 & 346  
Contract Total: \$170,000,000

Field Engineer for Structures and Various Subcontractors

- Maintained coordination and Interface between ZCC and HCTRA with regards to the schedule, design issues, and other issues that affect the project.
- Assisted Superintendent and Crews to make sure necessary tools, supplies, and long lead items are ordered for the work to progress.

Drainage & ITS Superintendent

- Planning work for two drainage crews to complete the necessary drainage work per the schedule and to review cost.
- Communication with the ITS Subcontractor to determine the critical work to be able to complete the necessary fiber cut overs to be able to progress the project forward. Coordination with HCTRA and other entities to schedule outages for fiber cut overs.



#### Structure & Traffic Control Superintendent

- Planning work for 7 crews to complete the Structures work per the schedule and to review cost & schedule impacts.
- Planning work for two traffic control crews to perform major & minor traffic switches, daily lane closures, and other necessary items with the assistance of the field engineer & other discipline superintendents.

Zachry Construction Corporation                      Statesville, NC                      February 2016- February 2017  
I-40/I-77 Statesville, NC

Contract Total: \$89,000,000.00

- Project Engineer Interface between ZCC and NCDOT with regards to the schedule, design issues, and other issues that affect the project. Review monthly pay estimates and review accuracy of monthly pay quantities.

#### Structure Superintendent

- Planning work for 5 crews to complete the Structures work per the schedule and to review cost & schedule impacts.

Zachry-Odebrecht Parkway Builders                      Houston, TX                      November 2012-February 2016

SH 99 Grand Parkway Segments F1, F2, G

Contract Total: \$1,083,000,000.00

ROW Engineer

- Weekly review of sub-consultants progress and then reporting the progress to the project schedule and review of the schedule with regards to missing progress or changes to the critical path.
- Daily interaction and interface between the ROW and the Segment Managers with regards to progress, ROW update, Current Release for Construction Dates, and other ROW issues between ROW and the Segments. Additionally, constant interface with sub-consultants to aid in ROW acquisition, issues with design, issues with TxDOT, and management of necessary resources.

SH 99 Grand Parkway Segment G

Field Engineer- Walls & Misc.

- Daily/Weekly/Monthly review & tracking of several subcontractors progress and then reporting the progress to the project schedule and review of the schedule with regards to missing progress or changes to the critical path. Monthly review and reconciliation of quantities to make sure subcontractors are paid based off of work performed.
- Daily progress tracking, time card review of 7-10 ZOPB Foremen including review of crew progress, performance, and updating tracking sheets & project quantity tracking program.

SH 99 Grand Parkway Segment G

Superintendent- General




- Planning work for 5-7 crews to complete the work on the Grand Parkway per the schedule and to report the progress to the project schedule and review of the schedule with regards to missing progress or changes to the critical path.

- |                          |                 |                           |
|--------------------------|-----------------|---------------------------|
| Zachry Construction Corp | San Antonio, TX | March 2012- November 2012 |
| Estimator Level 1        |                 |                           |

- Schieffer Construction & TKM Solutions College Station, TX May 2007 - November 2012

Operation of heavy equipment: Track hoes, loaders, mixers, farm tractor scrapers, dozers, motor graders  
10 and 30 hour OSHA Certification, ACI certification, First Aid & CPR Trained  
Competent Person in Trench Safety  
JLG Certified to train on Man lifts and Forklifts  
Survey Equipment: Trimble GPS, Topcon Total Station, Topcon and Trimble machine control.  
Computer Programs: Excel, Hard Dollar, AutoCAD, Bluebeam, MicroStation, and Terramodel, & SAP.  
ROW Acquisition and Condemnation in the State of Texas

# Joshua Chovaz

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(361)935-3474   
Jchovaz24@yahoo.com 

I'm seeking opportunities to expand my construction knowledge with a team of motivated individuals. My years of site experience have given me perspective on how to properly layout and execute construction processes and activities for optimum outcome.

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## Skills

- Data Analysis
  - Vendor Relations
  - Document Management
  - Construction Turnover
  - Database Management
  - Client Relations
  - Microsoft Office
  - Bluebeam
  - GDMS
  - Sharepoint
  - Fusion
  - Orbit
- 

## Experience

2020 – PRESENT

### **Project Manager / Texas Materials, Baytown Tx.**

- Manage day to day site operations for multiple projects around the greater Houston area
- Submit and maintain records of all change orders and RFIs for projects.
- Coordinate activities with subcontractors on site.
- Track daily quantities to incorporate into monthly pay estimates.
- Approve crew time daily.
- Communicate equipment and trucking needs with office personnel.

2019 – 2020

### **Site Document Control / Clough, Pasadena Tx.**

- Develop the site document control procedure for proper handling and storage of construction records and drawings.
- Maintain registers to track drawing revisions, site redlines, Technical Queries and various other turnover documentation.
- Manage all hard copy construction books for site to ensure all parties are using the most up to date drawings.
- Assist subcontractors with the turnover of Manufacturers Data Report as their work is completed.
- Incorporate Manufacturers Data Report into the Project Data Book that will be part of the final turnover to client.
- Develop site redline/markup procedure to be implemented on current and future projects.
- Support engineering with processing Technical Queries in a timely manner.
- Upload and transmit new revisions, as well as, redlines into the document management system (Fusion) and ensure they are making it to all necessary construction personnel.

2017 – 2019

## **Document Control Manager / Linde, La Porte Tx.**

- Establish procedural framework for identifying, collecting, distributing and filing the controlled documents for the project. This involves writing and maintaining document control procedures and participating in the development and roll-out of document control tools, such as scanning hardware, and computer software.
- Assist in creating project procedures for check records and inspection documentation by creating procedures and flowcharts.
- Interface with IT support for Document Control issues, which includes process enhancements to existing software, developing recommendations for new hardware and/or software that may benefit the Document Control Environment. In general, identify trends and recommend “best practices.”
- Manage subcontractor Technical Queries to ensure timely responses.
- Ensure the information and management control system is implemented in compliance with the Client’s standard; and is updated to reflect revisions to those standards.
- Coordinate document submissions and retrievals with our international offices using Global Document Management System (GDMS).
- Maintain & update site documentation – including but not limited to Requests for Inspections, Submittals, Technical Queries & Mechanical Completion handover documentation.
- Develop and prepare Mechanical Completion package turnover procedure as well as final documentation for the project.
- Transmit documents to subcontractors from the Engineering Department using (GDMS).
- Develop and execute reporting procedures.
- Utilize Grip software to assist the Scheduling Department in coordinating and tracking direct employees’ arrival and duration on site.

2013 – 2017

## **Document Control / Lauren Engineers**

- Maintained & updated physical site documents for all departments, including field workbooks.
- Managed master weld tracker for end of job turnover.
- Built work packages and organized material in accordance with task needs.
- Processed all transmittals to and from site, including turnover of all final documentation.
- Developed turnover books for project completion.
- Performed weekly audits of all site construction documents.
- Notify discipline leads of any drawing revisions that impact their area of the construction process.

2016 – 2017

## **Shipping & Receiving Supervisor / Lauren Engineers**

- Developed plans of action for both anticipated and unexpected logistical issues during the transport of material.
- Staged all material in laydown yard based on storage requirements and sequence in the construction process.
- Planned and implemented warehouse safety programs.
- Conferred with department heads to coordinate warehouse activities in accordance with daily construction processes.
- Maintained reports and logistical data needed for end of job documentation and turnover.

2014 – 2015

## **Site Procurement Coordinator / Lauren Engineers**

- Prepared and processed purchase orders for materials and equipment, with follow-up on expedited items
- Ensured all necessary documentation for purchases were provided, including Material Safety Data Sheets and country or origin requirements.
- Developed relationships with local and regional vendors/suppliers to ensure the most competitive pricing available.
- Performed monthly inventory reconciliation.
- Maintained rental logs of all material and equipment on site.

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## **Education**

2010

## **B.S. Communications / Florida Southern College**

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## **Group Affiliations**

- American Society of Safety Professionals (ASSP)
- Energy Professional – Oil, Gas, Solar, LNG, Nuclear, Tidal, Renewables
- Industrial Construction Professionals

### Staff Breakdown

| EE ID # | Description             | Position                  | Total |
|---------|-------------------------|---------------------------|-------|
| 351565  | Accounting / Finance    | Accountant                | 3     |
| 351465  | Accounting / Finance    | Accountant                |       |
| 351573  | Accounting / Finance    | Accountant                |       |
| 643392  | Accounting / Finance    | Accounting Assistant      | 1     |
| 638016  | Accounting / Finance    | Accounting Clerk          | 5     |
| 638074  | Accounting / Finance    | Accounting Clerk          |       |
| 331797  | Accounting / Finance    | Accounting Clerk          |       |
| 643284  | P2P - Accounts Payable  | Accounting Clerk          |       |
| 643302  | P2P - Accounts Payable  | Accounting Clerk          |       |
| 351387  | Sales                   | Accounting Manager        | 1     |
| 643445  | P2P - Accounts Payable  | Accounts Payable Clerk    | 2     |
| 643409  | P2P - Accounts Payable  | Accounts Payable Clerk    |       |
| 636974  | Administrative / Misc.  | Administrative Assistant  | 3     |
| 642055  | Administrative / Misc.  | Administrative Assistant  |       |
| 642995  | Equipment               | Administrative Assistant  |       |
| 338683  | Administrative / Misc.  | Area Manager              | 2     |
| 351393  | Administrative / Misc.  | Area Manager              |       |
| 642478  | Administrative / Misc.  | Assist Contract Admin     | 1     |
| 637189  | Hourly Payroll-NonUnion | Carpenter                 | 11    |
| 643494  | Hourly Payroll-NonUnion | Carpenter                 |       |
| 636860  | Hourly Payroll-NonUnion | Carpenter                 |       |
| 646115  | Hourly Payroll-NonUnion | Carpenter                 |       |
| 643461  | Hourly Payroll-NonUnion | Carpenter                 |       |
| 646083  | Hourly Payroll-NonUnion | Carpenter                 |       |
| 642549  | Hourly Payroll-NonUnion | Carpenter                 |       |
| 643202  | Hourly Payroll-NonUnion | Carpenter                 |       |
| 642743  | Hourly Payroll-NonUnion | Carpenter                 |       |
| 642864  | Hourly Payroll-NonUnion | Carpenter                 |       |
| 643227  | Hourly Payroll-NonUnion | Carpenter                 |       |
| 351558  | Administrative / Misc.  | Community Relations Admin | 1     |
| 611716  | Hourly Payroll-NonUnion | Concrete Finisher         | 16    |
| 638913  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 621273  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 638442  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 638517  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 638388  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 620997  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 606990  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 609296  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 620867  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 638481  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 645754  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 642027  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 643146  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 638971  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 643263  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 642137  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 642916  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 638657  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 646068  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 642155  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 642221  | Hourly Payroll-NonUnion | Concrete Finisher         |       |
| 642321  | Hourly Payroll-NonUnion | Concrete Finisher         |       |



|        |                           |                               |    |
|--------|---------------------------|-------------------------------|----|
| 642394 | Hourly Payroll-NonUnion   | Concrete Finisher             | 40 |
| 643389 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642409 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642473 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642505 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 643119 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642045 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642579 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 643475 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642595 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 643042 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 643327 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642706 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 645687 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642739 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642292 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642836 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642835 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642936 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 646037 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642895 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642909 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 642766 | Hourly Payroll-NonUnion   | Concrete Finisher             |    |
| 292121 | Plant/Location Managers   | Const. Superintendent         | 6  |
| 351557 | Plant/Location Managers   | Const. Superintendent         |    |
| 351421 | Plant/Location Managers   | Const. Superintendent         |    |
| 351423 | Plant/Location Managers   | Const. Superintendent         |    |
| 351433 | Plant/Location Managers   | Const. Superintendent         |    |
| 351479 | Plant/Location Managers   | Const. Superintendent         |    |
| 351470 | Administrative / Misc.    | Construction Administrator    | 1  |
| 637054 | Hourly Payroll-NonUnion   | Construction Laborers         | 2  |
| 643137 | Hourly Payroll-NonUnion   | Construction Laborers         |    |
| 612582 | Salary Payroll-Exempt     | Construction Supervisor       | 1  |
| 642589 | Hourly Payroll-NonUnion   | Construction Utilityperson    | 2  |
| 642631 | Hourly Payroll-NonUnion   | Construction Utilityperson    |    |
| 638819 | OP - Credit & Collections | Credit Collections Specialist | 2  |
| 643372 | OP - Credit & Collections | Credit Collections Specialist |    |
| 351408 | Accounting / Finance      | Credit Manager                | 1  |
| 643341 | Dispatch / Delivery       | Customer Service Manager      | 1  |
| 643153 | Hourly Payroll-NonUnion   | Customer Service Rep          | 12 |
| 642444 | Dispatch / Delivery       | Customer Service Rep          |    |
| 642638 | Dispatch / Delivery       | Customer Service Rep          |    |
| 642672 | Dispatch / Delivery       | Customer Service Rep          |    |
| 642689 | Hourly Payroll-NonUnion   | Customer Service Rep          |    |
| 643109 | Dispatch / Delivery       | Customer Service Rep          |    |
| 643222 | Hourly Payroll-NonUnion   | Customer Service Rep          |    |
| 642803 | Dispatch / Delivery       | Customer Service Rep          |    |
| 643223 | Hourly Payroll-NonUnion   | Customer Service Rep          |    |
| 643241 | Hourly Payroll-NonUnion   | Customer Service Rep          |    |
| 638815 | Hourly Payroll-NonUnion   | Customer Service Rep          |    |
| 642972 | Hourly Payroll-NonUnion   | Customer Service Rep          |    |
| 350981 | Quality Control           | Director Quality Control      | 1  |
| 351412 | Dispatch / Delivery       | Dispatcher                    | 2  |
| 642927 | Dispatch / Delivery       | Dispatcher                    |    |
| 638867 | Hourly Payroll-NonUnion   | Distributor Driver            |    |

|        |                         |                            |    |
|--------|-------------------------|----------------------------|----|
| 642742 | Hourly Payroll-NonUnion | Distributor Driver         | 4  |
| 645694 | Hourly Payroll-NonUnion | Distributor Driver         |    |
| 642926 | Hourly Payroll-NonUnion | Distributor Driver         |    |
| 643272 | Hourly Payroll-NonUnion | Dozer Operator             | 2  |
| 643267 | Hourly Payroll-NonUnion | Dozer Operator             |    |
| 643342 | Safety                  | EHS Coordinator            | 2  |
| 642943 | Administrative / Misc.  | EHS Coordinator            |    |
| 346871 | Safety                  | EHS Manager                | 1  |
| 351560 | Administrative / Misc.  | EHS Representative         | 1  |
| 642246 | Hourly Payroll-NonUnion | Electrician                | 3  |
| 642482 | Hourly Payroll-NonUnion | Electrician                |    |
| 642696 | Hourly Payroll-NonUnion | Electrician                |    |
| 351343 | Salary Payroll-Exempt   | Electrician Supervisor     | 1  |
| 351437 | Safety                  | Environmental Compl. Mgr   | 1  |
| 638849 | Equipment               | Equipment Administrator    | 1  |
| 342606 | Equipment               | Equipment Manager          | 1  |
| 637961 | Hourly Payroll-NonUnion | Equipment Operator         | 23 |
| 614266 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 645675 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 646116 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 638777 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 613890 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 638882 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 638121 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 645607 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 642126 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 643303 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 642172 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 643472 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 643351 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 645689 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 642975 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 642981 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 642452 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 642550 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 642861 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 642632 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 643116 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 642959 | Hourly Payroll-NonUnion | Equipment Operator         |    |
| 643093 | Hourly Payroll-NonUnion | Equipment Operator Trainee | 1  |
| 642542 | Equipment               | Equipment Superintendent   | 1  |
| 351373 | Estimators/Engineers    | Estimating Manager         | 1  |
| 637347 | Estimators/Engineers    | Estimator                  | 11 |
| 351575 | Estimators/Engineers    | Estimator                  |    |
| 636699 | Estimators/Engineers    | Estimator                  |    |
| 351562 | Estimators/Engineers    | Estimator                  |    |
| 351324 | Estimators/Engineers    | Estimator                  |    |
| 351574 | Estimators/Engineers    | Estimator                  |    |
| 351364 | Estimators/Engineers    | Estimator                  |    |
| 351372 | Estimators/Engineers    | Estimator                  |    |
| 351413 | Estimators/Engineers    | Estimator                  |    |
| 351472 | Estimators/Engineers    | Estimator                  |    |
| 351478 | Estimators/Engineers    | Estimator                  |    |
| 643047 | Hourly Payroll-NonUnion | Flagger                    |    |
| 642498 | Hourly Payroll-NonUnion | Flagger                    |    |

|        |                         |                          |    |
|--------|-------------------------|--------------------------|----|
| 643343 | Hourly Payroll-NonUnion | Flagger                  | 5  |
| 642797 | Hourly Payroll-NonUnion | Flagger                  |    |
| 643233 | Hourly Payroll-NonUnion | Flagger                  |    |
| 611406 | Salary Payroll-Exempt   | Foreperson               | 46 |
| 620721 | Salary Payroll-Exempt   | Foreperson               |    |
| 618755 | Salary Payroll-Exempt   | Foreperson               |    |
| 638866 | Salary Payroll-Exempt   | Foreperson               |    |
| 609047 | Salary Payroll-Exempt   | Foreperson               |    |
| 350958 | Salary Payroll-Exempt   | Foreperson               |    |
| 611223 | Salary Payroll-Exempt   | Foreperson               |    |
| 607003 | Salary Payroll-Exempt   | Foreperson               |    |
| 333491 | Salary Payroll-Exempt   | Foreperson               |    |
| 609607 | Salary Payroll-Exempt   | Foreperson               |    |
| 617532 | Salary Payroll-Exempt   | Foreperson               |    |
| 638167 | Salary Payroll-Exempt   | Foreperson               |    |
| 314281 | Salary Payroll-Exempt   | Foreperson               |    |
| 607002 | Salary Payroll-Exempt   | Foreperson               |    |
| 351322 | Salary Payroll-Exempt   | Foreperson               |    |
| 351333 | Salary Payroll-Exempt   | Foreperson               |    |
| 351476 | Salary Payroll-Exempt   | Foreperson               |    |
| 351337 | Salary Payroll-Exempt   | Foreperson               |    |
| 642249 | Salary Payroll-Exempt   | Foreperson               |    |
| 643052 | Salary Payroll-Exempt   | Foreperson               |    |
| 351366 | Salary Payroll-Exempt   | Foreperson               |    |
| 642354 | Salary Payroll-Exempt   | Foreperson               |    |
| 351365 | Salary Payroll-Exempt   | Foreperson               |    |
| 351370 | Salary Payroll-Exempt   | Foreperson               |    |
| 351371 | Salary Payroll-Exempt   | Foreperson               |    |
| 351374 | Salary Payroll-Exempt   | Foreperson               |    |
| 642423 | Salary Payroll-Exempt   | Foreperson               |    |
| 351375 | Salary Payroll-Exempt   | Foreperson               |    |
| 642424 | Salary Payroll-Exempt   | Foreperson               |    |
| 642301 | Salary Payroll-Exempt   | Foreperson               |    |
| 351395 | Salary Payroll-Exempt   | Foreperson               |    |
| 351402 | Salary Payroll-Exempt   | Foreperson               |    |
| 351403 | Salary Payroll-Exempt   | Foreperson               |    |
| 351404 | Salary Payroll-Exempt   | Foreperson               |    |
| 642624 | Salary Payroll-Exempt   | Foreperson               |    |
| 351417 | Salary Payroll-Exempt   | Foreperson               |    |
| 642339 | Salary Payroll-Exempt   | Foreperson               |    |
| 351442 | Salary Payroll-Exempt   | Foreperson               |    |
| 642913 | Salary Payroll-Exempt   | Foreperson               |    |
| 351445 | Salary Payroll-Exempt   | Foreperson               |    |
| 351446 | Salary Payroll-Exempt   | Foreperson               |    |
| 351458 | Salary Payroll-Exempt   | Foreperson               |    |
| 643108 | Salary Payroll-Exempt   | Foreperson               |    |
| 351515 | Salary Payroll-Exempt   | Foreperson               |    |
| 643026 | Salary Payroll-Exempt   | Foreperson               |    |
| 351463 | Salary Payroll-Exempt   | Foreperson               |    |
| 638883 | Hourly Payroll-NonUnion | Haul Truck Driver        | 5  |
| 645711 | Hourly Payroll-NonUnion | Haul Truck Driver        |    |
| 642129 | Hourly Payroll-NonUnion | Haul Truck Driver        |    |
| 643402 | Hourly Payroll-NonUnion | Haul Truck Driver        |    |
| 642886 | Hourly Payroll-NonUnion | Haul Truck Driver        |    |
| 638124 | Hourly Payroll-NonUnion | Heavy Equipment Operator |    |

|        |                          |                          |    |
|--------|--------------------------|--------------------------|----|
| 638472 | Hourly Payroll-NonUnion  | Heavy Equipment Operator | 11 |
| 638928 | Hourly Payroll-NonUnion  | Heavy Equipment Operator |    |
| 636704 | Hourly Payroll-NonUnion  | Heavy Equipment Operator |    |
| 638061 | Hourly Payroll-NonUnion  | Heavy Equipment Operator |    |
| 646100 | Hourly Payroll-NonUnion  | Heavy Equipment Operator |    |
| 608892 | Hourly Payroll-NonUnion  | Heavy Equipment Operator |    |
| 642370 | Hourly Payroll-NonUnion  | Heavy Equipment Operator |    |
| 643165 | Hourly Payroll-NonUnion  | Heavy Equipment Operator |    |
| 643371 | Hourly Payroll-NonUnion  | Heavy Equipment Operator |    |
| 646038 | Hourly Payroll-NonUnion  | Heavy Equipment Operator |    |
| 643490 | Salary Payroll-NonExempt | Intern VC                | 1  |
| 642101 | Hourly Payroll-NonUnion  | Lab Technician           | 4  |
| 642317 | Hourly Payroll-NonUnion  | Lab Technician           |    |
| 642683 | Hourly Payroll-NonUnion  | Lab Technician           |    |
| 642757 | Hourly Payroll-NonUnion  | Lab Technician           |    |
| 621109 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 645597 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 638963 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 638565 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 638169 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 612740 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 611459 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 638972 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 634072 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 638906 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 645644 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 621013 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 638957 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 645697 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 606987 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 638874 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 638316 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 620998 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 643497 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 645615 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 611460 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 638876 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 608891 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 609129 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 645696 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 607000 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 637156 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 646087 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 638771 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 645761 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 621014 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 643495 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 645635 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 642018 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 642023 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 642022 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 642068 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 645625 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 642132 | Hourly Payroll-NonUnion  | Laborer                  |    |
| 638964 | Hourly Payroll-NonUnion  | Laborer                  |    |

|        |                         |         |
|--------|-------------------------|---------|
| 642157 | Hourly Payroll-NonUnion | Laborer |
| 638816 | Hourly Payroll-NonUnion | Laborer |
| 642165 | Hourly Payroll-NonUnion | Laborer |
| 642168 | Hourly Payroll-NonUnion | Laborer |
| 642183 | Hourly Payroll-NonUnion | Laborer |
| 645731 | Hourly Payroll-NonUnion | Laborer |
| 646036 | Hourly Payroll-NonUnion | Laborer |
| 642281 | Hourly Payroll-NonUnion | Laborer |
| 642280 | Hourly Payroll-NonUnion | Laborer |
| 642287 | Hourly Payroll-NonUnion | Laborer |
| 646104 | Hourly Payroll-NonUnion | Laborer |
| 642296 | Hourly Payroll-NonUnion | Laborer |
| 642313 | Hourly Payroll-NonUnion | Laborer |
| 642178 | Hourly Payroll-NonUnion | Laborer |
| 642366 | Hourly Payroll-NonUnion | Laborer |
| 643136 | Hourly Payroll-NonUnion | Laborer |
| 642393 | Hourly Payroll-NonUnion | Laborer |
| 642402 | Hourly Payroll-NonUnion | Laborer |
| 642480 | Hourly Payroll-NonUnion | Laborer |
| 645652 | Hourly Payroll-NonUnion | Laborer |
| 642488 | Hourly Payroll-NonUnion | Laborer |
| 642509 | Hourly Payroll-NonUnion | Laborer |
| 642510 | Hourly Payroll-NonUnion | Laborer |
| 642524 | Hourly Payroll-NonUnion | Laborer |
| 642551 | Hourly Payroll-NonUnion | Laborer |
| 642559 | Hourly Payroll-NonUnion | Laborer |
| 642565 | Hourly Payroll-NonUnion | Laborer |
| 646105 | Hourly Payroll-NonUnion | Laborer |
| 643266 | Hourly Payroll-NonUnion | Laborer |
| 642628 | Hourly Payroll-NonUnion | Laborer |
| 642627 | Hourly Payroll-NonUnion | Laborer |
| 642643 | Hourly Payroll-NonUnion | Laborer |
| 642167 | Hourly Payroll-NonUnion | Laborer |
| 642645 | Hourly Payroll-NonUnion | Laborer |
| 643209 | Hourly Payroll-NonUnion | Laborer |
| 642652 | Hourly Payroll-NonUnion | Laborer |
| 643203 | Hourly Payroll-NonUnion | Laborer |
| 642708 | Hourly Payroll-NonUnion | Laborer |
| 642731 | Hourly Payroll-NonUnion | Laborer |
| 642090 | Hourly Payroll-NonUnion | Laborer |
| 642750 | Hourly Payroll-NonUnion | Laborer |
| 645710 | Hourly Payroll-NonUnion | Laborer |
| 645746 | Hourly Payroll-NonUnion | Laborer |
| 642839 | Hourly Payroll-NonUnion | Laborer |
| 642845 | Hourly Payroll-NonUnion | Laborer |
| 642852 | Hourly Payroll-NonUnion | Laborer |
| 643220 | Hourly Payroll-NonUnion | Laborer |
| 642879 | Hourly Payroll-NonUnion | Laborer |
| 642902 | Hourly Payroll-NonUnion | Laborer |
| 638686 | Hourly Payroll-NonUnion | Laborer |
| 643161 | Hourly Payroll-NonUnion | Laborer |
| 642947 | Hourly Payroll-NonUnion | Laborer |
| 642969 | Hourly Payroll-NonUnion | Laborer |
| 642745 | Hourly Payroll-NonUnion | Laborer |
| 642997 | Hourly Payroll-NonUnion | Laborer |

|        |                         |                     |    |
|--------|-------------------------|---------------------|----|
| 646117 | Hourly Payroll-NonUnion | Laborer             | 14 |
| 643028 | Hourly Payroll-NonUnion | Laborer             |    |
| 606999 | Hourly Payroll-NonUnion | Leadperson          |    |
| 606991 | Hourly Payroll-NonUnion | Leadperson          |    |
| 621715 | Hourly Payroll-NonUnion | Leadperson          |    |
| 642016 | Hourly Payroll-NonUnion | Leadperson          |    |
| 643098 | Hourly Payroll-NonUnion | Leadperson          |    |
| 642363 | Hourly Payroll-NonUnion | Leadperson          |    |
| 642332 | Hourly Payroll-NonUnion | Leadperson          |    |
| 643471 | Hourly Payroll-NonUnion | Leadperson          |    |
| 642474 | Hourly Payroll-NonUnion | Leadperson          |    |
| 643121 | Hourly Payroll-NonUnion | Leadperson          |    |
| 642705 | Hourly Payroll-NonUnion | Leadperson          |    |
| 642725 | Hourly Payroll-NonUnion | Leadperson          |    |
| 642771 | Hourly Payroll-NonUnion | Leadperson          |    |
| 643049 | Hourly Payroll-NonUnion | Leadperson          | 33 |
| 620047 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 616111 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 637446 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 634073 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642007 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642032 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 643246 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642075 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 645683 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642170 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642201 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642224 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642229 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642248 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642257 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642312 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642400 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 636799 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642421 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642515 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 643470 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 643350 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642733 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642752 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642796 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642801 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642804 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 643314 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642823 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642907 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642911 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 638886 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 643017 | Hourly Payroll-NonUnion | Loader Operator     |    |
| 642548 | Hourly Payroll-NonUnion | Lube Technician     | 3  |
| 642713 | Hourly Payroll-NonUnion | Lube Technician     |    |
| 643171 | Hourly Payroll-NonUnion | Lube Technician     |    |
| 351459 | Estimators/Engineers    | Maintenance Manager | 1  |
| 642230 | Hourly Payroll-NonUnion | Maintenance Person  | 1  |
| 642866 | Equipment               | Manager             | 1  |



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|--------|-------------------------|--------------------------|----|
| 643008 | Equipment               | Manager                  | 4  |
| 638863 | Hourly Payroll-NonUnion | Mechanic                 | 27 |
| 638875 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 610136 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 609720 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642029 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642039 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 643330 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 643224 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 643487 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642303 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 643385 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 645737 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642782 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642486 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 643221 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642617 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 643381 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642722 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 643376 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642749 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642784 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642844 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642901 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642900 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 643415 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642674 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642932 | Hourly Payroll-NonUnion | Mechanic                 |    |
| 642159 | Hourly Payroll-NonUnion | Milling/Reclaim Operator | 9  |
| 642177 | Hourly Payroll-NonUnion | Milling/Reclaim Operator |    |
| 643264 | Hourly Payroll-NonUnion | Milling/Reclaim Operator |    |
| 642197 | Hourly Payroll-NonUnion | Milling/Reclaim Operator |    |
| 642255 | Hourly Payroll-NonUnion | Milling/Reclaim Operator |    |
| 642348 | Hourly Payroll-NonUnion | Milling/Reclaim Operator |    |
| 643369 | Hourly Payroll-NonUnion | Milling/Reclaim Operator |    |
| 643291 | Hourly Payroll-NonUnion | Milling/Reclaim Operator |    |
| 643001 | Hourly Payroll-NonUnion | Milling/Reclaim Operator |    |
| 642242 | Administrative / Misc.  | Office Administrator     | 1  |
| 643197 | Hourly Payroll-NonUnion | Office Clerk             | 1  |
| 642880 | Equipment               | Office Manager           | 1  |
| 351599 | Plant/Location Managers | Operations Analyst       | 1  |
| 614147 | Plant/Location Managers | Operations Manager       | 5  |
| 351483 | Plant/Location Managers | Operations Manager       |    |
| 351332 | Plant/Location Managers | Operations Manager       |    |
| 643087 | Plant/Location Managers | Operations Manager       |    |
| 642942 | Plant/Location Managers | Operations Manager       |    |
| 643448 | Hourly Payroll-NonUnion | Operator                 |    |
| 606983 | Hourly Payroll-NonUnion | Operator                 |    |
| 637196 | Hourly Payroll-NonUnion | Operator                 |    |
| 606985 | Hourly Payroll-NonUnion | Operator                 |    |
| 608896 | Hourly Payroll-NonUnion | Operator                 |    |
| 607270 | Hourly Payroll-NonUnion | Operator                 |    |
| 636533 | Hourly Payroll-NonUnion | Operator                 |    |
| 645714 | Hourly Payroll-NonUnion | Operator                 |    |
| 643447 | Hourly Payroll-NonUnion | Operator                 |    |

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|--------|-------------------------|----------------|
| 615918 | Hourly Payroll-NonUnion | Operator       |
| 638975 | Hourly Payroll-NonUnion | Operator       |
| 643247 | Hourly Payroll-NonUnion | Operator       |
| 642006 | Hourly Payroll-NonUnion | Operator       |
| 642014 | Hourly Payroll-NonUnion | Operator       |
| 643244 | Hourly Payroll-NonUnion | Operator       |
| 642056 | Hourly Payroll-NonUnion | Operator       |
| 642072 | Hourly Payroll-NonUnion | Operator       |
| 642073 | Hourly Payroll-NonUnion | Operator       |
| 642195 | Hourly Payroll-NonUnion | Operator       |
| 643147 | Hourly Payroll-NonUnion | Operator       |
| 642233 | Hourly Payroll-NonUnion | Operator       |
| 642234 | Hourly Payroll-NonUnion | Operator       |
| 642236 | Hourly Payroll-NonUnion | Operator       |
| 642240 | Hourly Payroll-NonUnion | Operator       |
| 642244 | Hourly Payroll-NonUnion | Operator       |
| 642250 | Hourly Payroll-NonUnion | Operator       |
| 642300 | Hourly Payroll-NonUnion | Operator       |
| 642345 | Hourly Payroll-NonUnion | Operator       |
| 642335 | Hourly Payroll-NonUnion | Operator       |
| 642013 | Hourly Payroll-NonUnion | Operator       |
| 642357 | Hourly Payroll-NonUnion | Operator       |
| 642391 | Hourly Payroll-NonUnion | Operator       |
| 642392 | Hourly Payroll-NonUnion | Operator       |
| 643192 | Hourly Payroll-NonUnion | Operator       |
| 642460 | Hourly Payroll-NonUnion | Operator       |
| 642507 | Hourly Payroll-NonUnion | Operator       |
| 642516 | Hourly Payroll-NonUnion | Operator       |
| 642537 | Hourly Payroll-NonUnion | Operator       |
| 642538 | Hourly Payroll-NonUnion | Operator       |
| 643186 | Hourly Payroll-NonUnion | Operator       |
| 642576 | Hourly Payroll-NonUnion | Operator       |
| 643150 | Hourly Payroll-NonUnion | Operator       |
| 642633 | Hourly Payroll-NonUnion | Operator       |
| 642716 | Hourly Payroll-NonUnion | Operator       |
| 642720 | Hourly Payroll-NonUnion | Operator       |
| 643194 | Hourly Payroll-NonUnion | Operator       |
| 642729 | Hourly Payroll-NonUnion | Operator       |
| 643183 | Hourly Payroll-NonUnion | Operator       |
| 643400 | Hourly Payroll-NonUnion | Operator       |
| 642840 | Hourly Payroll-NonUnion | Operator       |
| 642004 | Hourly Payroll-NonUnion | Operator       |
| 643156 | Hourly Payroll-NonUnion | Operator       |
| 642958 | Hourly Payroll-NonUnion | Operator       |
| 642964 | Hourly Payroll-NonUnion | Operator       |
| 643138 | Hourly Payroll-NonUnion | Operator       |
| 643157 | Hourly Payroll-NonUnion | Operator       |
| 643006 | Hourly Payroll-NonUnion | Operator       |
| 643023 | Hourly Payroll-NonUnion | Operator       |
| 643025 | Hourly Payroll-NonUnion | Operator       |
| 608894 | Hourly Payroll-NonUnion | Paver Operator |
| 610212 | Hourly Payroll-NonUnion | Paver Operator |
| 642196 | Hourly Payroll-NonUnion | Paver Operator |
| 642377 | Hourly Payroll-NonUnion | Paver Operator |
| 642382 | Hourly Payroll-NonUnion | Paver Operator |

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|--------|-------------------------|----------------------|----|
| 642470 | Hourly Payroll-NonUnion | Paver Operator       | 16 |
| 642564 | Hourly Payroll-NonUnion | Paver Operator       |    |
| 642702 | Hourly Payroll-NonUnion | Paver Operator       |    |
| 642701 | Hourly Payroll-NonUnion | Paver Operator       |    |
| 642789 | Hourly Payroll-NonUnion | Paver Operator       |    |
| 645572 | Hourly Payroll-NonUnion | Paver Operator       |    |
| 642841 | Hourly Payroll-NonUnion | Paver Operator       |    |
| 642884 | Hourly Payroll-NonUnion | Paver Operator       |    |
| 642953 | Hourly Payroll-NonUnion | Paver Operator       |    |
| 642967 | Hourly Payroll-NonUnion | Paver Operator       |    |
| 643030 | Hourly Payroll-NonUnion | Paver Operator       |    |
| 642728 | Hourly Payroll-NonUnion | Paving Laborer       | 3  |
| 642730 | Hourly Payroll-NonUnion | Paving Laborer       |    |
| 642760 | Hourly Payroll-NonUnion | Paving Laborer       |    |
| 51316  | Hourly Payroll-NonUnion | Paving Operator I    | 1  |
| 642976 | Hourly Payroll-NonUnion | Pipelayer            | 8  |
| 643133 | Hourly Payroll-NonUnion | Pipelayer            |    |
| 642454 | Hourly Payroll-NonUnion | Pipelayer            |    |
| 643155 | Hourly Payroll-NonUnion | Pipelayer            |    |
| 642441 | Hourly Payroll-NonUnion | Pipelayer            |    |
| 642655 | Hourly Payroll-NonUnion | Pipelayer            |    |
| 643476 | Hourly Payroll-NonUnion | Pipelayer            |    |
| 642514 | Hourly Payroll-NonUnion | Pipelayer            | 5  |
| 642080 | Salary Payroll-Exempt   | Plant Foreman        |    |
| 642265 | Salary Payroll-Exempt   | Plant Foreman        |    |
| 643158 | Salary Payroll-Exempt   | Plant Foreman        |    |
| 642479 | Salary Payroll-Exempt   | Plant Foreman        |    |
| 642594 | Salary Payroll-Exempt   | Plant Foreman        |    |
| 351526 | Plant/Location Managers | Plant Manager        | 7  |
| 314278 | Plant/Location Managers | Plant Manager        |    |
| 642266 | Plant/Location Managers | Plant Manager        |    |
| 642506 | Plant/Location Managers | Plant Manager        |    |
| 634074 | Plant/Location Managers | Plant Manager        |    |
| 642754 | Plant/Location Managers | Plant Manager        |    |
| 351443 | Plant/Location Managers | Plant Manager        |    |
| 638864 | Hourly Payroll-NonUnion | Plant Operator       | 10 |
| 637975 | Hourly Payroll-NonUnion | Plant Operator       |    |
| 608895 | Hourly Payroll-NonUnion | Plant Operator       |    |
| 642108 | Hourly Payroll-NonUnion | Plant Operator       |    |
| 642239 | Hourly Payroll-NonUnion | Plant Operator       |    |
| 642621 | Hourly Payroll-NonUnion | Plant Operator       |    |
| 642636 | Hourly Payroll-NonUnion | Plant Operator       |    |
| 642703 | Hourly Payroll-NonUnion | Plant Operator       |    |
| 642780 | Hourly Payroll-NonUnion | Plant Operator       |    |
| 642877 | Hourly Payroll-NonUnion | Plant Operator       |    |
| 351409 | Plant/Location Managers | Plant Superintendent | 1  |
| 642106 | Plant/Location Managers | Production Manager   | 3  |
| 642316 | Plant/Location Managers | Production Manager   |    |
| 642442 | Plant/Location Managers | Production Manager   |    |
| 351260 | Salary Payroll-Exempt   | Project Foreman      |    |
| 351578 | Salary Payroll-Exempt   | Project Foreman      |    |
| 351130 | Salary Payroll-Exempt   | Project Foreman      |    |
| 634210 | Salary Payroll-Exempt   | Project Foreman      |    |
| 637345 | Salary Payroll-Exempt   | Project Foreman      |    |
| 351520 | Salary Payroll-Exempt   | Project Foreman      |    |

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|--------|-------------------------|----------------------------|----|
| 351328 | Salary Payroll-Exempt   | Project Foreman            | 16 |
| 351506 | Salary Payroll-Exempt   | Project Foreman            |    |
| 351354 | Salary Payroll-Exempt   | Project Foreman            |    |
| 351484 | Salary Payroll-Exempt   | Project Foreman            |    |
| 351496 | Salary Payroll-Exempt   | Project Foreman            |    |
| 351570 | Salary Payroll-Exempt   | Project Foreman            |    |
| 616578 | Salary Payroll-Exempt   | Project Foreman            |    |
| 351429 | Salary Payroll-Exempt   | Project Foreman            |    |
| 351507 | Salary Payroll-Exempt   | Project Foreman            |    |
| 636645 | Salary Payroll-Exempt   | Project Foreman            |    |
| 332312 | Plant/Location Managers | Project Manager            | 6  |
| 351488 | Plant/Location Managers | Project Manager            |    |
| 351499 | Plant/Location Managers | Project Manager            |    |
| 351383 | Plant/Location Managers | Project Manager            |    |
| 351592 | Administrative / Misc.  | Project Manager            |    |
| 351489 | Plant/Location Managers | Project Manager            |    |
| 620114 | Quality Control         | QC Manager                 | 1  |
| 637186 | Hourly Payroll-NonUnion | QC Technician              | 11 |
| 637015 | Hourly Payroll-NonUnion | QC Technician              |    |
| 637960 | Hourly Payroll-NonUnion | QC Technician              |    |
| 637944 | Hourly Payroll-NonUnion | QC Technician              |    |
| 643384 | Hourly Payroll-NonUnion | QC Technician              |    |
| 621244 | Hourly Payroll-NonUnion | QC Technician              |    |
| 643431 | Hourly Payroll-NonUnion | QC Technician              |    |
| 636946 | Hourly Payroll-NonUnion | QC Technician              |    |
| 643375 | Hourly Payroll-NonUnion | QC Technician              |    |
| 642721 | Hourly Payroll-NonUnion | QC Technician              |    |
| 642945 | Hourly Payroll-NonUnion | QC Technician              |    |
| 350903 | Salary Payroll-Exempt   | Quality Control Specialist | 4  |
| 638537 | Salary Payroll-Exempt   | Quality Control Specialist |    |
| 642100 | Salary Payroll-Exempt   | Quality Control Specialist |    |
| 642753 | Salary Payroll-Exempt   | Quality Control Specialist |    |
| 351527 | Salary Payroll-Exempt   | Quality Control Supervisor | 4  |
| 620495 | Salary Payroll-Exempt   | Quality Control Supervisor |    |
| 637389 | Salary Payroll-Exempt   | Quality Control Supervisor |    |
| 351596 | Salary Payroll-Exempt   | Quality Control Supervisor |    |
| 643496 | Administrative / Misc.  | Receptionist               | 3  |
| 645751 | Human Resources         | Receptionist               |    |
| 643434 | Human Resources         | Receptionist               |    |
| 618877 | Hourly Payroll-NonUnion | Roller Operator            | 11 |
| 608734 | Hourly Payroll-NonUnion | Roller Operator            |    |
| 638448 | Hourly Payroll-NonUnion | Roller Operator            |    |
| 642064 | Hourly Payroll-NonUnion | Roller Operator            |    |
| 642158 | Hourly Payroll-NonUnion | Roller Operator            |    |
| 642315 | Hourly Payroll-NonUnion | Roller Operator            |    |
| 642417 | Hourly Payroll-NonUnion | Roller Operator            |    |
| 642557 | Hourly Payroll-NonUnion | Roller Operator            |    |
| 642593 | Hourly Payroll-NonUnion | Roller Operator            |    |
| 643410 | Hourly Payroll-NonUnion | Roller Operator            |    |
| 646090 | Hourly Payroll-NonUnion | Roller Operator            |    |
| 642061 | Safety                  | Safety                     | 3  |
| 642086 | Safety                  | Safety                     |    |
| 642535 | Safety                  | Safety                     |    |
| 643304 | Safety                  | Safety/EHS Assistant       | 1  |
| 351586 | Sales                   | Sales                      |    |

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|--------|-------------------------|------------------------|---|
| 351309 | Sales                   | Sales                  | 4 |
| 351593 | Sales                   | Sales                  |   |
| 351456 | Sales                   | Sales                  |   |
| 643435 | Sales                   | Sales Coordinator      | 3 |
| 642286 | Sales                   | Sales Coordinator      |   |
| 642536 | Sales                   | Sales Coordinator      |   |
| 350900 | Sales                   | Sales Manager          | 4 |
| 351524 | Estimators/Engineers    | Sales Manager          |   |
| 351330 | Sales                   | Sales Manager          |   |
| 351580 | Sales                   | Sales Manager          |   |
| 610152 | Hourly Payroll-NonUnion | Scale Operator         | 2 |
| 637540 | Hourly Payroll-NonUnion | Scale Operator         |   |
| 646108 | Hourly Payroll-NonUnion | Scalehouse             | 3 |
| 642243 | Hourly Payroll-NonUnion | Scalehouse             |   |
| 643255 | Hourly Payroll-NonUnion | Scalehouse             |   |
| 638792 | Hourly Payroll-NonUnion | Screed Person          | 1 |
| 642534 | Hourly Payroll-NonUnion | Shop Assistant         | 1 |
| 642558 | Hourly Payroll-NonUnion | Shop Laborer           | 1 |
| 351043 | Plant/Location Managers | Superintendent         | 5 |
| 609809 | Plant/Location Managers | Superintendent         |   |
| 642489 | Plant/Location Managers | Superintendent         |   |
| 351397 | Plant/Location Managers | Superintendent         |   |
| 351441 | Plant/Location Managers | Superintendent         |   |
| 637948 | Hourly Payroll-NonUnion | Survey/Gradesetter     | 2 |
| 638956 | Hourly Payroll-NonUnion | Survey/Gradesetter     |   |
| 620906 | Salary Payroll-Exempt   | Surveyor               | 2 |
| 637361 | Hourly Payroll-NonUnion | Surveyor               |   |
| 645663 | Hourly Payroll-NonUnion | Traffic Coordinator    | 8 |
| 645617 | Hourly Payroll-NonUnion | Traffic Coordinator    |   |
| 642405 | Hourly Payroll-NonUnion | Traffic Coordinator    |   |
| 643442 | Hourly Payroll-NonUnion | Traffic Coordinator    |   |
| 642563 | Hourly Payroll-NonUnion | Traffic Coordinator    |   |
| 645672 | Hourly Payroll-NonUnion | Traffic Coordinator    |   |
| 643184 | Hourly Payroll-NonUnion | Traffic Coordinator    |   |
| 642965 | Hourly Payroll-NonUnion | Traffic Coordinator    |   |
| 80247  | Dispatch / Delivery     | Transportation Manager | 2 |
| 351348 | Dispatch / Delivery     | Transportation Manager |   |
| 638398 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 610134 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 638752 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 638145 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 614402 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 611124 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 643212 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 643219 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 642062 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 642121 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 642000 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 642150 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 642163 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 642228 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 642278 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 642285 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 642324 | Hourly Payroll-NonUnion | Truck Driver           |   |
| 642330 | Hourly Payroll-NonUnion | Truck Driver           |   |

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|--------|-------------------------|--------------------|-----|
| 642326 | Hourly Payroll-NonUnion | Truck Driver       | 63  |
| 642356 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642403 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643404 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642420 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 40842  | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642468 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643420 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642449 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642481 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642503 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642519 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642523 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642555 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642562 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642588 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643353 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642598 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642654 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642666 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643141 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643182 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642707 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642712 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643432 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642772 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643421 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642792 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643293 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642805 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643408 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642810 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642838 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642854 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642863 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643417 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643430 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643367 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642764 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642956 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642961 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642940 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642979 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 642991 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643317 | Hourly Payroll-NonUnion | Truck Driver       |     |
| 643423 | Hourly Payroll-NonUnion | Water Truck Driver | 3   |
| 642644 | Hourly Payroll-NonUnion | Water Truck Driver |     |
| 643129 | Hourly Payroll-NonUnion | Water Truck Driver |     |
| 643187 | Hourly Payroll-NonUnion | Welder             | 4   |
| 642187 | Hourly Payroll-NonUnion | Welder             |     |
| 643159 | Hourly Payroll-NonUnion | Welder             |     |
| 642554 | Hourly Payroll-NonUnion | Welder             |     |
|        |                         | Total =            | 710 |





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## **GULF COAST AREA – BAYTOWN/NAVASOTA WORK IN PROGRESS**

**Project:** **Jefferson County – US 69 (CSJ 0065-07-062)**  
(Asphalt Paving)

Owner: TxDOT  
Contact: David Collins, P.E., 409-924-6521  
Contract Amount: \$24,913,683.82  
% Complete: 99%

**Project:** **Road Construction at Cullen Boulevard  
(Segment B) (20/0124)**  
(Concrete Paving, Drainage, Utilities)

Owner: Harris County, Precinct 1  
Contact: Rich Elwood, Director PID-CPD, 713-274-1531  
Contract Amount: \$12,707,778.73  
% Complete: 86%

**Project:** **Harris County – FM 1960 (CSJ 1685-03-058)**  
(Asphalt and Concrete Paving, Drainage)

Owner: TxDOT  
Contact: Phil Garlin, P. E., 281-319-6400  
Contract Amount: \$61,395,902.86  
% Complete: 99%

**Project:** **Austin County – FM 109 (CSJ 0716-01-047)**  
(Asphalt Restoration)

Owner: TxDOT  
Contact: Ryan Simper, P.E., 979-532-3143  
Contract Amount: \$10,268,057.96  
% Complete: 99%

**Project:** **Brazoria County – FM 2004 (CSJ 2523-02-068)**  
(Asphalt Paving, Drainage, Bridge)

Owner: TxDOT  
Contact: Maria Aponte, P.E., 979-864-8500  
Contract Amount: \$29,790,599.54  
% Complete: 99%

**Project:** **Road Construction at Hufsmith Road (20/0332)**  
(Asphalt Paving, Drainage)  
Owner: Harris County, Precinct 4  
Contact: Rich Elwood, Director PID-CPD, 713-274-1531  
Contract Amount: \$4,527,783.50  
% Complete: 80%

**Project:** **Galveston County – FM 518 (CSJ 0976-03-105)**  
(Asphalt Overlay)  
Owner: TxDOT  
Contact: David Lazaro, P.E., 409-978-2500  
Contract Amount: \$5,745,830.69  
% Complete: 78%

**Project:** **Fayette County – BS 71 (CSJ 0266-01-086)**  
(Asphalt Paving)  
Owner: TxDOT  
Contact: Covey Morrow, P.E., 361-293-4387  
Contract Amount: \$3,853,852.00  
% Complete: 99%

**Project:** **Galveston County – FM 2004 (CSJ 2523-01-026)**  
(Asphalt Overlay)  
Owner: TxDOT  
Contact: David Lazaro, P.E., 409-978-2500  
Contract Amount: \$7,957,768.57  
% Complete: 99%

**Project:** **Kilgore Parkway** (Concrete Paving, Drainage)  
Owner: Chambers County  
Contact: Cory Taylor, County Engineer, 409-267-2708  
Contract Amount: \$11,804,748.92  
% Complete: 99%

**Project:** **Montgomery County – FM 2854 Etc. (CSJ 2744-01-032 Etc.)** (Asphalt Overlay)  
Owner: TxDOT  
Contact: Abraham Guzman, P.E., 936-538-3300  
Contract Amount: \$13,697,977.65  
% Complete: 99%

**Project:** **NASA Parkway Roadway Improvements (22-05)**  
(Concrete Paving)  
Owner: City of Webster  
Contact: David Glasco, Manager Engineering & Construction, 281-316-4139  
Contract Amount: \$7,510,635.85  
% Complete: 99%

|                  |  |
|------------------|--|
| <b>Project:</b>  | <b>Burleson County – CR (CSJ 0917-30-059, Etc.)</b><br>(Bridge Replacement)                      |
| Owner:           | TxDOT  |
| Contact:         | James Kreamer, P.E., 979-836-9359  |
| Contract Amount: | \$1,929,531.60   |
| % Complete:      | 99%  |
| <br>             |  |
| <b>Project:</b>  | <b>Jefferson County – SH 124 (CSJ 0368-02-046)</b><br>(Bridge Replacement)                       |
| Owner:           | TxDOT  |
| Contact:         | David Collins, P.E., 409-924-6521  |
| Contract Amount: | \$7,294,249.50   |
| % Complete:      | 63%  |
| <br>             |  |
| <b>Project:</b>  | <b>Washington County – PR 12 (CSJ 6414-36-001)</b><br>(Asphalt Paving)                           |
| Owner:           | TxDOT  |
| Contact:         | James Kreamer, P.E., 979-836-9359  |
| Contract Amount: | \$1,039,030.57   |
| % Complete:      | 95%  |
| <br>             |  |
| <b>Project:</b>  | <b>Hardin County, Etc. – US 69</b><br><b>(CSJ 0065-06-070, Etc.)</b> (Asphalt Paving)            |
| Owner:           | TxDOT  |
| Contact:         | David Collins, P.E., 409-924-6521  |
| Contract Amount: | \$11,661,796.62  |
| % Complete:      | 99%  |
| <br>             |  |
| <b>Project:</b>  | <b>Grimes County – SH 105 (CSJ 0315-04-083)</b><br>(Asphalt Paving)                              |
| Owner:           | TxDOT  |
| Contact:         | James Robbins, P.E., 979-778-6233  |
| Contract Amount: | \$2,080,429.16   |
| % Complete:      | 99%  |
| <br>             |  |
| <b>Project:</b>  | <b>Washington County, Etc. – SH 105, Etc.</b><br><b>(CSJ 0315-07-040, Etc.)</b> (Asphalt Paving) |
| Owner:           | TxDOT  |
| Contact:         | James Kreamer, P.E., 979-836-9359  |
| Contract Amount: | \$4,465,436.69   |
| % Complete:      | 99%  |
| <br>             |  |
| <b>Project:</b>  | <b>Liberty County – FM 834 (CSJ 1146-01-029)</b><br>(Asphalt Paving)                             |
| Owner:           | TxDOT  |
| Contact:         | Roberto Rodriguez, P.E., 936-336-2244  |
| Contract Amount: | \$5,102,169.37   |
| % Complete:      | 99%  |

|                  |   |
|------------------|---|
| <b>Project:</b>  | <b>Street Rehabilitation - Tanglewood/Briarwood Phase 1A, Street Realignment – Dallas &amp; Roberson Intersection, Fire Station 8-Presswood, Southmore Drive, Fire Station 6 (2019-10, 2021-12, 2022-32, 2023-05)</b> (Asphalt and Concrete Paving, Drainage) |
| Owner:           | City of Conroe  |
| Contact:         | Chris Bogert, City Engineer, 936-522-3100   |
| Contract Amount: | \$2,996,749.22  |
| % Complete:      | 99%   |
|                  |   |
| <b>Project:</b>  | <b>Jasper County – FM 2246 (CSJ 2120-01-028)</b>  |
| Owner:           | TxDOT   |
| Contact:         | Bryce Broussard, P.E., 409-883-3476   |
| Contract Amount: | \$11,443,431.31   |
| % Complete:      | 98%   |
|                  |   |
| <b>Project:</b>  | <b>Liberty County – SH 105 (CSJ 0951-01-068)</b>  |
|                  | (Asphalt Overlay)   |
| Owner:           | TxDOT   |
| Contact:         | Roberto Rodriguez, P.E., 936-336-2244   |
| Contract Amount: | \$2,278,878.65  |
| % Complete:      | 99%   |
|                  |   |
| <b>Project:</b>  | <b>Walker County – IH 45 (CSJ 6439-34-001)</b>  |
|                  | (Asphalt Base Repair)   |
| Owner:           | TxDOT   |
| Contact:         | Delmy Reyes, P.E., 936-295-3462   |
| Contract Amount: | \$6,822,031.70  |
| % Complete:      | 62%   |
|                  |   |
| <b>Project:</b>  | <b>Brazos County – FM 2818, Etc. (CSJ 2851-01-051, Etc.)</b> (Asphalt Paving)   |
| Owner:           | TxDOT   |
| Contact:         | James Robbins, P.E., 979-778-6233   |
| Contract Amount: | \$2,289,660.27  |
| % Complete:      | 99%   |
|                  |   |
| <b>Project:</b>  | <b>Chambers County – FM 3246 (CSJ 6413-57-001)</b>  |
|                  | (Asphalt Rehabilitation)  |
| Owner:           | TxDOT   |
| Contact:         | Roberto Rodriguez, Jr., P.E., 936-336-2244  |
| Contract Amount: | \$1,503,669.58  |
| % Complete:      | 94%   |
|                  |   |
| <b>Project:</b>  | <b>Galveston County – FM 646 (CSJ 2523-03-014, Etc.)</b>  |
|                  | (Asphalt Paving)  |
| Owner:           | TxDOT   |
| Contact:         | David Lazaro, P.E., 409-978-2500  |
| Contract Amount: | \$18,314,979.15   |
| % Complete:      | 19%   |

|                  |  |
|------------------|--|
| <b>Project:</b>  | <b>Chambers County – FM 1724 (CSJ 6420-79-001)</b><br>(Asphalt Paving)                                       |
| Owner:           | TxDOT  |
| Contact:         | Roberto Rodriguez, Jr., P.E., 936-336-2244   |
| Contract Amount: | \$1,305,586.46   |
| % Complete:      | 99%  |
| <br>             |  |
| <b>Project:</b>  | <b>Burleson County – FM 975 (CSJ 1129-01-028)</b><br>(Asphalt Paving, Drainage)                              |
| Owner:           | TxDOT  |
| Contact:         | James Kreamer, P.E., 979-836-9359  |
| Contract Amount: | \$5,362,049.10   |
| % Complete:      | 39%  |
| <br>             |  |
| <b>Project:</b>  | <b>Harris County – IH 10 (CSJ 0271-07-324)</b><br>(Asphalt Overlay)  |
| Owner:           | TxDOT  |
| Contact:         | Hamoon Bahrami, P.E., 713-934-5900   |
| Contract Amount: | \$2,017,828.55   |
| % Complete:      | 99%  |
| <br>             |  |
| <b>Project:</b>  | <b>Montgomery County – FM 1791 (CSJ 1706-02-008)</b><br>(Asphalt Overlay)                                    |
| Owner:           | TxDOT  |
| Contact:         | Abraham Guzman, P.E., 936-538-3300   |
| Contract Amount: | \$1,131,462.94   |
| % Complete:      | 99%  |
| <br>             |  |
| <b>Project:</b>  | <b>Montgomery County – FM 1375 (CSJ 1402-03-012)</b><br>(Asphalt Overlay)                                    |
| Owner:           | TxDOT  |
| Contact:         | Abraham Guzman, P.E., 936-538-3300   |
| Contract Amount: | \$3,057,109.16   |
| % Complete:      | 99%  |
| <br>             |  |
| <b>Project:</b>  | <b>Asphalt Overlay for Various Roadways<br/>(Package 2023-2) (23/0293)</b>                                   |
| Owner:           | Harris County, Precinct 3  |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531  |
| Contract Amount: | \$7,640,265.47   |
| % Complete:      | 99%  |
| <br>             |  |
| <b>Project:</b>  | <b>Wade North Area Various Roads for the<br/>BetterStreets2Neighborhoods Community<br/>Program (23/0344)</b> |
| Owner:           | Harris County, Precinct 2  |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531  |
| Contract Amount: | \$9,941,354.77   |
| % Complete:      | 99%  |

|                  |  |
|------------------|--|
| <b>Project:</b>  | <b>Brazos County – FM 60 (CSJ 0506-01-123)</b>                               |
|                  | (Traffic Control)  |
| Owner:           | TxDOT  |
| Contact:         | James Robbins, P.E., 979-778-6233  |
| Contract Amount: | \$1,034,835.32   |
| % Complete:      | 91%  |
| <br>             |  |
| <b>Project:</b>  | <b>Liberty County – SH 105 (CSJ 6442-45-001)</b>                             |
|                  | (ACP Overlay)  |
| Owner:           | TxDOT  |
| Contact:         | Roberto Rodriguez, P.E., 936-336-2244  |
| Contract Amount: | \$1,454,823.23   |
| % Complete:      | 99%  |
| <br>             |  |
| <b>Project:</b>  | <b>Barrett Station Subdivision (Phase 2) Drainage Improvements (23/0337)</b> |
|                  | (Asphalt Paving, Water Line)   |
| Owner:           | Harris County, Precinct 3  |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531                                  |
| Contract Amount: | \$12,399,472.60  |
| % Complete:      | 85%  |
| <br>             |  |
| <b>Project:</b>  | <b>Chambers County – SH 124 (CSJ 0368-01-093)</b>                            |
|                  | (Asphalt Overlay)  |
| Owner:           | TxDOT  |
| Contact:         | Roberto Rodriguez, P.E., 936-336-2244  |
| Contract Amount: | \$4,721,208.40   |
| % Complete:      | 96%  |
| <br>             |  |
| <b>Project:</b>  | <b>Shadowlake Subdivision Asphalt Roadway Reconstruction (23/0358)</b>       |
|                  |  |
| Owner:           | Harris County, Precinct 1  |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531                                  |
| Contract Amount: | \$3,962,466.00   |
| % Complete:      | 47%  |
| <br>             |  |
| <b>Project:</b>  | <b>Harris County – US 90 (CSJ 0028-02-099)</b>                               |
|                  | (Asphalt Overlay)  |
| Owner:           | TxDOT  |
| Contact:         | Phillip Garlin, P.E., 281-319-6451   |
| Contract Amount: | \$17,639,189.08  |
| % Complete:      | 99%  |
| <br>             |  |
| <b>Project:</b>  | <b>Austin County – CR (CSJ 0913-20-092, Etc.)</b>                            |
|                  | (Bridge Replacement)   |
| Owner:           | TxDOT  |
| Contact:         | Ryan Simper, P.E., 979-532-3143  |
| Contract Amount: | \$4,082,425.50   |
| % Complete:      | 62%  |



|                    |  |
|--------------------|--|
| <b>Project:</b>    | <b>Harris County – IH 610 (CSJ 0271-16-167)</b>        |
|                    | (Asphalt Overlay)                                      |
| Owner:             | TxDOT  |
| Contact:           | Jamal Elahi, P.E., 281-464-5500                        |
| Contract Amount:   | \$1,469,308.97   |
| % Complete:        | 64%  |
| <br>               |  |
| <b>Project:</b>    | <b>Liberty County – FM 1008 (CSJ 0952-01-062)</b>      |
|                    | (Asphalt Overlay)                                      |
| Owner:             | TxDOT  |
| Contact:           | Roberto Rodriguez, P.E., 936-336-2244                  |
| Contract Amount:   | \$2,510,574.62   |
| % Complete:        | 88%  |
| <br>               |  |
| <b>Project:</b>    | <b>Harris County – US 90 (CSJ 0028-02-098)</b>         |
|                    | (Asphalt Overlay)                                      |
| Owner:             | TxDOT  |
| Contact:           | Phillip Garlin, P.E., 281-319-6451                     |
| Contract Amount:   | \$13,252,233.20  |
| % Complete:        | 99%  |
| <br>               |  |
| <b>Project:</b>    | <b>Liberty County – SH 146 (CSJ 0388-03-083)</b>       |
|                    | (Asphalt Overlay)                                      |
| Owner:             | TxDOT  |
| Contact:           | Roberto Rodriguez, P.E., 936-336-2244                  |
| Contract Amount:   | \$6,437,215.43   |
| % Complete:        | 43%  |
| <br>               |  |
| <b>Project:</b>    | <b>Liberty County – FM 160 (CSJ 0787-02-022)</b>       |
|                    | (Asphalt Paving)                                       |
| Owner:             | TxDOT  |
| Contact:           | Roberto Rodriguez, P.E., 936-336-2244                  |
| Contract Amount:   | \$4,033,902.96   |
| % Complete:        | 52%  |
| <br>               |  |
| <b>Project:</b>    | <b>Harris County – IH 610 (CSJ 6462-24-001)</b>        |
|                    | (Asphalt Pavement Repair)                              |
| Owner:             | TxDOT  |
| Contact:           | Jamal Elahi, P.E., 281-464-5500                        |
| Contract Amount:   | \$1,357,267.00   |
| % Complete:        | 99%  |
| <br>               |  |
| <b>Project:</b>    | <b>Asphalt Streets Mill and Overlay (RW2011)</b>       |
| Owner:             | City of Baytown  |
| Contact:           | Frank Simoneaux, P.E., Dir. of PW & Eng., 281-420-6545 |
| Original Contract: | \$3,524,597.49 – 100% Complete                         |
| Renewal #1:        | \$3,524,350.68 – 31% Complete                          |

|                  |  |
|------------------|--|
| <b>Project:</b>  | <b>Two Step Boulevard – Onsite Segment</b><br>(Asphalt Paving, Drainage, Bridge)                             |
| Owner:           | Montgomery County Municipal Utility District No. 123<br>c/o Halff Associates, Inc.                           |
| Contact:         | Kurt Russell, P.E., 936-777-6400   |
| Contract Amount: | \$7,979,381.25   |
| % Complete:      | 22%  |
| <br>             |  |
| <b>Project:</b>  | <b>Two Step Boulevard – Offsite Segment</b><br>(Asphalt Paving, Drainage, Bridge)                            |
| Owner:           | Montgomery County Municipal Utility District No. 123<br>c/o Halff Associates, Inc.                           |
| Contact:         | Kurt Russell, P.E., 936-777-6400   |
| Contract Amount: | \$6,625,594.45   |
| % Complete:      | 23%  |
| <br>             |  |
| <b>Project:</b>  | <b>FM 565 Turn Lanes at FM 3180</b><br>(Asphalt Paving, Drainage)  |
| Owner:           | IDV Kilgore, LLC on behalf of<br>Chambers County Improvement District No. 3<br>c/o Quiddity Engineering, LLC |
| Contact:         | Maxwell Dennis, P.E., 832-913-4000   |
| Contract Amount: | \$1,567,361.75   |
| % Complete:      | 19%  |
| <br>             |  |
| <b>Project:</b>  | <b>Chambers County – FM 1406 (CSJ 6463-97-001)</b><br>(ACP Overlay)  |
| Owner:           | TxDOT  |
| Contact:         | Roberto Rodriguez, P.E., 936-336-2244  |
| Contract Amount: | \$972,179.36   |
| % Complete:      | 99%  |
| <br>             |  |
| <b>Project:</b>  | <b>Chambers County, Etc. – SH 73</b><br><b>(CSJ 0508-03-114, Etc.)</b> (Asphalt Overlay)                     |
| Owner:           | TxDOT  |
| Contact:         | David Collins, P.E., 409-924-6521  |
| Contract Amount: | \$23,504,060.54  |
| % Complete:      | 69%  |
| <br>             |  |
| <b>Project:</b>  | <b>Two Step Boulevard – Mound Creek Segment</b><br>(Asphalt Paving, Drainage, Bridge)                        |
| Owner:           | Montgomery County Municipal Utility District No. 123<br>c/o Halff Associates, Inc.                           |
| Contact:         | Kurt Russell, P.E., 936-777-6400   |
| Contract Amount: | \$15,418,537.25  |
| % Complete:      | 2%   |

**Project:** **Milam County – US 190 (CSJ 0185-03-033)**  
(Asphalt Paving)  
Owner: TxDOT  
Contact: James Kreamer, P.E., 979-836-9359  
Contract Amount: \$3,219,619.90  
% Complete: 30%

**Project:** **Asphalt Pavement Rehabilitation (24-067)**  
Owner: Fort Bend County  
Contact: Stacy Slawinski, County Engineer, 281-633-7500  
Contract Amount: \$4,992,151.50  
% Complete: 97%

**Project:** **Harris County – IH 10 (CSJ 0508-01-391)**  
(Asphalt Overlay)  
Owner: TxDOT  
Contact: Jamal Elahi, P.E., 281-464-5500  
Contract Amount: \$18,314,585.41  
% Complete: 17%

**Project:** **Santa Fe North Road Improvements  
(COSFTX-RFP2024-0822N)** (Asphalt Paving)  
Owner: City of Santa Fe  
Contact: Alun Thomas, City Manager, 409-925-6412  
Contract Amount: \$617,138.20  
% Complete: 54%

**Project:** **Santa Fe South Road Improvements  
(COSFTX-RFP2024-0822S)** (Asphalt Paving)  
Owner: City of Santa Fe  
Contact: Alun Thomas, City Manager, 409-925-6412  
Contract Amount: \$1,546,487.45  
% Complete: 51%

**Project:** **GLO CDBG-MIT Street and Drainage Improvements  
(GLO Contract No. 22-085-068-D326)**  
(Asphalt Paving, Drainage)  
Owner: City of Bédias c/o Quiddity Engineering, LLC  
Contact: Brian Dobiyanski, P.E., 979-731-8000  
Contract Amount: \$3,153,801.10  
% Complete: 0%

**Project:** **Ralston Acres Subdivision (2018) Drainage  
Improvements (CDBG-MIT/GLO) (24/0368)**  
(Asphalt Paving, Drainage)  
Owner: Harris County, Precinct 1  
Contact: Rich Elwood, Director PID-CPD, 713-274-1531  
Contract Amount: \$15,848,087.00  
% Complete: 0%

**Project:** **Main Street (Crosby-Lynchburg Road)  
Asphalt Overlay from I-10 to Thorn Street  
(Package 2024-1) (CDBG) (24/0374)**  
(Asphalt Paving, Drainage)  
Owner: Harris County, Precinct 3  
Contact: Rich Elwood, Director PID-CPD, 713-274-1531  
Contract Amount: \$3,897,869.00  
% Complete: 0%

**Project:** **HCTRA SH 249 Emergency Repairs at SH 99**  
(Asphalt Paving)  
Owner: Harris County, Harris County Toll Road Authority  
Contact: Victoria Guerra, P.E., 713-587-7107  
Contract Amount: \$1,326,994.80  
% Complete: 0%

**Project:** **Galveston County – SH 87 (CSJ 0367-06-067)**  
(Asphalt Overlay)  
Owner: TxDOT  
Contact: David Lazaro, P.E., 409-978-2500  
Contract Amount: \$7,342,374.25  
% Complete: 0%

**Project:** **Harris County – IH 69 (CSJ 0027-13-237)**  
(Asphalt Overlay)  
Owner: TxDOT  
Contact: Hamoon Bahrami, P.E., 713-934-5900  
Contract Amount: \$44,841,587.31  
% Complete: 0%



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## **GULF COAST AREA – BAYTOWN/NAVASOTA COMPLETED PROJECTS FIVE (5) YEAR HISTORY**

|                  |  |
|------------------|--|
| <b>Project:</b>  | <b>Montgomery County – FM 2090 (CSJ 1912-01-022)</b><br>(Asphalt Overlay)          |
| Owner:           | TxDOT  |
| Contact:         | Abraham Guzman, P.E., 936-538-3300   |
| Contract Amount: | \$9,002,022.69   |
| Complete:        | February 2025  |
| <b>Project:</b>  | <b>Colorado County – CS (CSJ 0913-26-065)</b>                                      |
| Owner:           | TxDOT  |
| Contact:         | Ryan Simper, P.E., 979-532-3143  |
| Contract Amount: | \$420,723.11   |
| Complete:        | February 2025  |
| <b>Project:</b>  | <b>Oak Street Bridge Replacement (CDV21-0074)</b>                                  |
| Owner:           | Chambers County  |
| Contact:         | Cory Taylor, County Engineer, 409-267-2708   |
| Contract Amount: | \$776,395.00   |
| Complete:        | January 2025   |
| <b>Project:</b>  | <b>Galveston County – FM 3005 (CSJ 0051-09-024)</b><br>(Asphalt Overlay, Drainage) |
| Owner:           | TxDOT  |
| Contact:         | David Lazaro, P.E., 409-978-2500   |
| Contract Amount: | \$34,884,980.38  |
| Complete:        | November 2024  |
| <b>Project:</b>  | <b>Austin County – FM 2502 (CSJ 0315-09-011)</b><br>(Safety Improvements)          |
| Owner:           | TxDOT  |
| Contact:         | Ryan Simper, P.E., 979-532-3143  |
| Contract Amount: | \$1,427,178.65   |
| Complete:        | November 2024  |
| <b>Project:</b>  | <b>Clay Road (21/0357) (Asphalt Paving, Drainage)</b>                              |
| Owner:           | Harris County, Precinct 3  |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531  |
| Contract Amount: | \$5,218,706.87   |
| Complete:        | October 2024   |

|                  |   |
|------------------|---|
| <b>Project:</b>  | <b>Harris County – FM 865 (CSJ 0976-01-043)</b><br>(Asphalt Rehabilitation)               |
| Owner:           | TxDOT   |
| Contact:         | Jamal Elahi, P.E., 281-464-5500   |
| Contract Amount: | \$4,287,775.15  |
| Complete:        | October 2024  |
| <br>             |   |
| <b>Project:</b>  | <b>Chambers Commons</b><br>(Concrete Paving, Drainage, Utilities)                         |
| Owner:           | KM 146 Partners, LLC<br>c/o KM Realty Advisors, LLC                                       |
| Contact:         | Randall D. Keith, Manager, 713-275-2600   |
| Contract Amount: | \$12,418,885.00   |
| Complete:        | September 2024  |
| <br>             |   |
| <b>Project:</b>  | <b>Old Reliance Road Phase 1 Reconstruction (23-580)</b><br>(Asphalt Paving, Drainage)    |
| Owner:           | Brazos County   |
| Contact:         | Prarthana Banerji, County Engineer, 979-822-2127  |
| Contract Amount: | \$4,762,372.69  |
| Complete:        | September 2024  |
| <br>             |   |
| <b>Project:</b>  | <b>Wharton County – FM 3086 (CSJ 3173-01-004)</b><br>(Restore Existing Roadway)           |
| Owner:           | TxDOT   |
| Contact:         | Ryan Simper, P.E., 979-532-3143   |
| Contract Amount: | \$3,428,287.98  |
| Complete:        | September 2024  |
| <br>             |   |
| <b>Project:</b>  | <b>Wharton County – US 59 (CSJ 0089-06-093)</b><br>(Asphalt Paving)                       |
| Owner:           | TxDOT   |
| Contact:         | Ryan Simper, P.E., 979-532-3143   |
| Contract Amount: | \$2,260,846.49  |
| Complete:        | September 2024  |
| <br>             |   |
| <b>Project:</b>  | <b>Hastings Phase I – Infrastructure Fund Grant Program 2020 (24-12)</b> (Asphalt Paving) |
| Owner:           | Brazoria County   |
| Contact:         | Matt Hanks, County Engineer, 979-864-1265   |
| Contract Amount: | \$1,093,243.79  |
| Complete:        | September 2024  |
| <br>             |   |
| <b>Project:</b>  | <b>Liberty County – SH 146 (CSJ 0389-01-044)</b><br>(Asphalt Overlay)                     |
| Owner:           | TxDOT   |
| Contact:         | Roberto Rodriguez, Jr., P.E., 936-336-2244  |
| Contract Amount: | \$10,682,147.68   |
| Complete:        | August 2024   |

**Project:** **Asphalt Overlay for Various Roadways  
(Package 2023-1) (23/0143)**  
Owner: Harris County, Precinct 3  
Contact: Rich Elwood, Director PID-CPD, 713-274-1531  
Contract Amount: \$6,225,059.56  
Complete: August 2024

**Project:** **CR 305 Subgrade and Surface Improvements  
(2024-317)**  
(Stabilization, Seal-Coating)  
Owner: Leon County  
Contact: Kyle Workman, Commissioner, 903-512-2316  
Contract Amount: \$107,491.50  
Complete: August 2024

**Project:** **Fayette County – BS 71-E (CSJ 0265-14-008)**  
(Bridge Replacement)  
Owner: TxDOT  
Contact: Covey Morrow, P.E., 361-293-4387  
Contract Amount: \$13,448,782.29  
Complete: July 2024

**Project:** **Montgomery County – FM 1314 (CSJ 1986-01-067)**  
(Asphalt Overlay)  
Owner: TxDOT  
Contact: Abraham Guzman, P.E., 936-538-3300  
Contract Amount: \$4,786,833.24  
Complete: July 2024

**Project:** **Needlepoint Road South Paving and Drainage  
Improvements** (Concrete Paving, Drainage)  
Owner: Chambers County  
Contact: Cory Taylor, County Engineer, 409-267-2708  
Contract Amount: \$1,170,093.90  
Complete: May 2024

**Project:** **Plum Grove Road Improvements  
Community Block Grant 2021 CDV21-0283**  
(Asphalt Paving)  
Owner: City of Plum Grove  
c/o LJA Engineering, Inc.  
Contact: Manuel Mendoza, Jr., PM, 409-833-3363  
Contract Amount: \$275,703.12  
Complete: March 2024



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| <b>Project:</b>  | <b>Harris County – IH 10 (CSJ 0508-01-354)</b>   |
|                  | (Asphalt Overlay)  |
| Owner:           | TxDOT  |
| Contact:         | Jamal Elahi, P.E., 281-464-5500  |
| Contract Amount: | \$6,915,461.22   |
| Complete:        | February 2024  |
| <br>             |  |
| <b>Project:</b>  | <b>Fisher Road – Phase 2 (Concrete Paving, Drainage)</b>   |
| Owner:           | Cedar Port Navigation and Improvement District<br>c/o Jacobs Engineering Group, Inc.               |
| Contact:         | Aniruddha Dutta, P.E., 281-721-8400  |
| Contract Amount: | \$5,830,058.64   |
| Complete:        | February 2024  |
| <br>             |  |
| <b>Project:</b>  | <b>Colorado County – FM 102 (CSJ 0027-03-073)</b>  |
| Owner:           | TxDOT  |
| Contact:         | Ryan Simper, P.E., 979-532-3143  |
| Contract Amount: | \$4,030,810.66   |
| Complete:        | February 2024  |
| <br>             |  |
| <b>Project:</b>  | <b>Twinwood Parkway Phase 1B, Segment C-D</b>  |
|                  | (Asphalt Paving, Drainage)   |
| Owner:           | Fort Bend County Municipal Utility District No. 213<br>c/o LJA Engineering, Inc.                   |
| Contact:         | Steven Boyd, P.E., 713-953-5200  |
| Contract Amount: | \$3,124,261.64   |
| Complete:        | February 2024  |
| <br>             |  |
| <b>Project:</b>  | <b>Fort Bend County – US 90A (CSJ 0027-07-032)</b>   |
|                  | (Concrete Paving, Drainage, Utilities, Bridge)   |
| Owner:           | TxDOT  |
| Contact:         | Carlos Zepeda, Jr., P.E., 281-238-7900   |
| Contract Amount: | \$6,637,842.40   |
| Complete:        | January 2024   |
| <br>             |  |
| <b>Project:</b>  | <b>Harris County – SH 3 (CSJ 0051-02-101)</b>  |
| Owner:           | TxDOT  |
| Contact:         | David Lazaro, P.E., 409-978-2500   |
| Contract Amount: | \$14,440,718.62  |
| Complete:        | November 2023  |
| <br>             |  |
| <b>Project:</b>  | <b>Road and Drainage Improvements for CDBG –<br/>Plan Set I (23-19) (Asphalt Paving, Drainage)</b> |
| Owner:           | Brazoria County  |
| Contact:         | Matt Hanks, County Engineer, 979-864-1265  |
| Contract Amount: | \$4,919,490.90   |
| Complete:        | November 2023  |

**Project:** **Tall Pines Addition Subdivision Road and Drainage Improvements (21/0328)**  
(Asphalt Paving, Drainage)  
Owner: Harris County, Precinct 3  
Contact: Rich Elwood, Director PID-CPD, 713-274-1531  
Contract Amount: \$3,854,215.60  
Complete: November 2023

**Project:** **Fort Bend Grand Parkway Toll Road (SH 99) (Peek Road to south of River Park Drive)**  
(Asphalt Overlay, Concrete Repair)  
Owner: Fort Bend Grand Parkway Toll Road Authority  
c/o BGE, Inc.  
Contact: Gary Gehbauer, P.E., 281-558-8700  
Contract Amount: \$2,532,375.82  
Complete: November 2023

**Project:** **Harris County – SH 3 (CSJ 0051-06-018)**  
(Asphalt Overlay)  
Owner: TxDOT  
Contact: Jamal Elahi, P.E., 281-464-5500  
Contract Amount: \$2,430,729.34  
Complete: November 2023

**Project:** **Road and Drainage Improvements for CDBG – Plan Set II (23-20)** (Asphalt Paving, Drainage)  
Owner: Brazoria County  
Contact: Matt Hanks, County Engineer, 979-864-1265  
Contract Amount: \$1,513,068.38  
Complete: November 2023

**Project:** **Galveston County – SH 87 (CSJ 0051-04-067)**  
(Asphalt and Concrete Paving, Drainage)  
Owner: TxDOT  
Contact: David Lazaro, P.E., 409-978-2500  
Contract Amount: \$12,272,925.06  
Complete: October 2023

**Project:** **A. Myers Road Extension**  
(Concrete Paving, Drainage)  
Owner: Fort Bend County Municipal Utility District No. 184  
c/o Quiddity  
Contact: Justin M. Au, P.E., 281-363-4039  
Contract Amount: \$2,258,544.70  
Complete: October 2023

**Project:** **Pedregal Section 3** (Concrete Paving, Drainage, Utilities)  
Owner: LPI Property Management, LLC  
on behalf of City of League City  
c/o Dannenbaum Engineering Corporation  
Contact: Kyle Kern, P.E., 713-520-9570  
Contract Amount: \$9,552,678.45  
Complete: September 2023

**Project:** **DeWitt County – FM 766 (CSJ 1113-01-028)**  
Owner: TxDOT  
Contact: Covey Morrow, P.E., 361-293-4387  
Contract Amount: \$9,170,452.07  
Complete: September 2023

**Project:** **Asphalt Street Rehabilitation Various Streets – RE1704G Package 6 – Mobility**  
Owner: City of League City  
Contact: Scott Tuma, PMP., 281-554-1000  
Contract Amount: \$4,550,510.39  
Complete: September 2023

**Project:** **Caldwell County – US 183 (CSJ 0152-03-062)**  
Owner: TxDOT  
Contact: Diana Schulze, P.E., 512-321-2195  
Contract Amount: \$1,778,911.14  
Complete: September 2023

**Project:** **Old Austin Highway Pavement Rehabilitation (ENG 2023-01)** (Asphalt Paving)  
Owner: City of Bastrop  
c/o Walker Partners  
Contact: R. Alan Munger, P.E., CFM, 979-599-9870  
Contract Amount: \$1,490,107.00  
Complete: September 2023

**Project:** **Egremont Court Drainage Improvements (23-037)**  
Owner: City of College Station  
Contact: Melissa Thomas, P.E., LEED AP, 979-764-6324  
Contract Amount: \$254,808.50  
Complete: September 2023

**Project:** **Chambers County – FM 563 (CSJ 1023-01-035)**  
(Asphalt Overlay)  
Owner: TxDOT  
Contact: Roberto Rodriguez, P.E., 936-336-2244  
Contract Amount: \$5,513,051.50  
Complete: August 2023

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| <b>Project:</b>  | <b>Montgomery County – FM 1097 (CSJ 1259-01-042)</b><br>(Asphalt Paving, Drainage)              |
| Owner:           | TxDOT   |
| Contact:         | Abraham Guzman, P.E., 936-538-3300  |
| Contract Amount: | \$19,201,163.91   |
| Complete:        | July 2023   |
| <br>             |   |
| <b>Project:</b>  | <b>Old Houston Road Construction (21-06)</b><br>(Asphalt Paving, Drainage)                      |
| Owner:           | Montgomery County   |
| Contact:         | Jeff Johnson, County Engineer, 936-539-7833   |
| Contract Amount: | \$5,676,675.42  |
| Complete:        | July 2023   |
| <br>             |   |
| <b>Project:</b>  | <b>Asphalt Concrete Pavement Overlay, Base Repair of Various Roads (21/0243)</b>                |
| Owner:           | Harris County, Precinct 1   |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531   |
| Contract Amount: | \$3,054,014.80 (through Renewal #2)   |
| Complete:        | July 2023   |
| <br>             |   |
| <b>Project:</b>  | <b>Austin County – FM 2429 (CSJ 2320-01-011)</b><br>(Bridge)                                    |
| Owner:           | TxDOT   |
| Contact:         | Ryan Simper, P.E., 979-532-3143   |
| Contract Amount: | \$2,047,212.24  |
| Complete:        | July 2023   |
| <br>             |   |
| <b>Project:</b>  | <b>ARP Supplemental Roads 2021 Package II (22-56)</b><br>(Asphalt Paving)                       |
| Owner:           | Brazoria County   |
| Contact:         | Matt Hanks, County Engineer, 979-864-1265   |
| Contract Amount: | \$1,707,841.20  |
| Complete:        | July 2023   |
| <br>             |   |
| <b>Project:</b>  | <b>Sedona Section 7</b> (Concrete Paving)   |
| Owner:           | West FM 517, Ltd.<br>on behalf of City of League City<br>c/o Dannenbaum Engineering Corporation |
| Contact:         | Kyle Kern, P.E., 713-520-9570   |
| Contract Amount: | \$1,071,948.30  |
| Complete:        | July 2023   |
| <br>             |   |
| <b>Project:</b>  | <b>Liberty County – SH 321 (CSJ 6384-22-001)</b><br>(ACP Overlay)                               |
| Owner:           | TxDOT   |
| Contact:         | Roberto Rodriguez, P.E., 936-336-2244   |
| Contract Amount: | \$2,964,299.36  |
| Complete:        | June 2023   |

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| <b>Project:</b>  | <b>ARP Supplemental Roads 2021 Package I (22-55)</b><br>(Asphalt Paving)               |
| Owner:           | Brazoria County  |
| Contact:         | Matt Hanks, County Engineer, 979-864-1265  |
| Contract Amount: | \$1,223,177.70   |
| Complete:        | June 2023  |
| <br>             |  |
| <b>Project:</b>  | <b>Western League City<br/>Water &amp; Sanitary Sewer Facilities</b>                   |
| Owner:           | West FM 517, Ltd. on behalf of City of League City<br>c/o Dannenbaum Engineering Corp. |
| Contact:         | Steve Sheldon, P.E., 713-520-9570  |
| Contract Amount: | \$11,154,690.00  |
| Complete:        | May 2023   |
| <br>             |  |
| <b>Project:</b>  | <b>Asphalt Overlay (Package 2021-2) (21/0248)</b>                                      |
| Owner:           | Harris County, Precinct 4  |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531  |
| Contract Amount: | \$6,287,859.02   |
| Complete:        | May 2023   |
| <br>             |  |
| <b>Project:</b>  | <b>Harris County – IH 610 (CSJ 0271-17-175)</b><br>(Asphalt Overlay)                   |
| Owner:           | TxDOT  |
| Contact:         | Hamoon Bahrami, P.E., 713-934-5900   |
| Contract Amount: | \$2,275,255.85   |
| Complete:        | May 2023   |
| <br>             |  |
| <b>Project:</b>  | <b>Brazoria County – VA (CSJ 0912-31-310)</b><br>(Bicycle Infrastructure)              |
| Owner:           | TxDOT  |
| Contact:         | Maria Aponte, P.E., 979-864-8500   |
| Contract Amount: | \$1,967,008.35   |
| Complete:        | May 2023   |
| <br>             |  |
| <b>Project:</b>  | <b>Eisenhower Park Roadway Reconstruction<br/>(22/0092)</b> (Asphalt Paving, Drainage) |
| Owner:           | Harris County, Precinct 1  |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531  |
| Contract Amount: | \$2,524,440.75   |
| Complete:        | April 2023   |
| <br>             |  |
| <b>Project:</b>  | <b>Bastrop County – US 290 (CSJ 0114-05-037)</b>                                       |
| Owner:           | TxDOT  |
| Contact:         | Diana Schulze, P.E., 512-321-2195  |
| Contract Amount: | \$37,138,730.80  |
| Complete:        | March 2023   |

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| <b>Project:</b>  | <b>Mulberry Farms Section 1 and Entry Road</b><br>(Concrete Paving)   |
| Owner:           | Mulberry Farms, LLC<br>c/o LJA Engineering, Inc.  |
| Contact:         | Jorge Gonzalez, P.E., 713-953-5200  |
| Contract Amount: | \$1,493,954.50  |
| Complete:        | March 2023  |
| <br>             |   |
| <b>Project:</b>  | <b>Brazoria County – SH 35 (CSJ 0179-03-034)</b><br>(Asphalt Overlay)   |
| Owner:           | TxDOT   |
| Contact:         | Maria Aponte, P.E., 979-864-8500  |
| Contract Amount: | \$5,666,904.34  |
| Complete:        | February 2023   |
| <br>             |   |
| <b>Project:</b>  | <b>FM 1409 Overpass at IH-10 (CSJ 0762-03-021)</b>  |
| Owner:           | Chambers County   |
| Contact:         | Cory Taylor, County Engineer, 409-267-2708  |
| Contract Amount: | \$5,187,910.35  |
| Complete:        | February 2023   |
| <br>             |   |
| <b>Project:</b>  | <b>River Ranch Boulevard Phase One, River Ranch Estates Section 1, and River Ranch Meadows Section 1</b> (Concrete Paving, Drainage, Utilities) |
| Owner:           | River Ranch Holdings, LLC on behalf of River Ranch M.U.D. No. 3 and River Ranch Improvement District<br>c/o LJA Engineering, Inc.               |
| Contact:         | Piyali Chatterjee, CAG-Project Coordinator, 713-953-5200  |
| Contract Amount: | \$7,804,548.60  |
| Complete:        | December 2022   |
| <br>             |   |
| <b>Project:</b>  | <b>Galveston County – PR 66 (CSJ 6381-09-001)</b><br>(Asphalt Base Repair, Overlay)   |
| Owner:           | TxDOT   |
| Contact:         | David Lazaro, P.E., 409-978-2500  |
| Contract Amount: | \$3,568,678.21  |
| Complete:        | December 2022   |
| <br>             |   |
| <b>Project:</b>  | <b>Hot Mix Asphaltic Concrete (HMAC) Pavement Installation</b>  |
| Owner:           | Waller County   |
| Contact:         | J. Ross McCall, County Engineer, 979-826-7670   |
| Contract Amount: | \$2,608,313.39  |
| Complete:        | December 2022   |

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| <b>Project:</b>  | <b>Harris County – SH 6 (CSJ 1685-05-115)</b>        |
|                  | (Asphalt Overlay)                                    |
| Owner:           | TxDOT  |
| Contact:         | Hamoon Bahrami, P.E., 713-934-5900                   |
| Contract Amount: | \$1,967,141.76                                       |
| Complete:        | December 2022  |
| <br>             |  |
| <b>Project:</b>  | <b>Harris County – FM 1960 (CSJ 1685-01-110)</b>     |
|                  | (Asphalt Overlay)                                    |
| Owner:           | TxDOT  |
| Contact:         | Hamoon Bahrami, P.E., 713-934-5900                   |
| Contract Amount: | \$3,476,712.47                                       |
| Complete:        | October 2022   |
| <br>             |  |
| <b>Project:</b>  | <b>Encino Estates Section 5 (Asphalt Paving)</b>     |
| Owner:           | Encino Estates, Ltd.                                 |
| Contact:         | Pat Baker, 832-797-6187                              |
| Contract Amount: | \$511,715.94   |
| Complete:        | October 2022   |
| <br>             |  |
| <b>Project:</b>  | <b>HMAC Installation</b>                             |
| Owner:           | Waller County  |
| Contact:         | J. Ross McCall, County Engineer, 979-826-7670        |
| Contract Amount: | \$1,669,988.70                                       |
| Complete:        | September 2022                                       |
| <br>             |  |
| <b>Project:</b>  | <b>Alvin 2021 Asphalt Pavement Project (B-21-17)</b> |
| Owner:           | City of Alvin  |
| Contact:         | Michelle Segovia, City Engineer, 281-388-4284        |
| Contract Amount: | \$1,617,056.70                                       |
| Complete:        | September 2022                                       |
| <br>             |  |
| <b>Project:</b>  | <b>Cemetery Road Maintenance Overlay (B221017)</b>   |
| Owner:           | Galveston County                                     |
| Contact:         | Lee Crowder, Road Administrator, 281-534-4152        |
| Contract Amount: | \$638,530.80   |
| Complete:        | September 2022                                       |
| <br>             |  |
| <b>Project:</b>  | <b>Bastrop County – US 290 (CSJ 0114-06-029)</b>     |
| Owner:           | TxDOT  |
| Contact:         | Diana Schulze, P.E., 512-321-2195                    |
| Contract Amount: | \$16,136,394.54                                      |
| Complete:        | August 2022  |



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| <b>Project:</b>  | <b>Construction of Bridges at Louetta Road and Little Cypress Creek (20/0136)</b><br>(Concrete Paving, Drainage, Utilities) |
| Owner:           | Harris County, Precincts 3 and 4  |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531   |
| Contract Amount: | \$8,586,702.14  |
| Complete:        | August 2022   |
|                  |   |
| <b>Project:</b>  | <b>49<sup>th</sup> Street Improvements (COG-CON-19-117)</b><br>(Asphalt Paving, Drainage, Utilities)                        |
| Owner:           | City of Galveston   |
| Contact:         | Trina Jankowski, P.M., 409-797-3966   |
| Contract Amount: | \$3,627,021.15  |
| Complete:        | August 2022   |
|                  |   |
| <b>Project:</b>  | <b>Rollingbrook Drive Reconstruction</b><br>(Concrete Paving, Drainage)   |
| Owner:           | City of Baytown   |
| Contact:         | Frank Simoneaux, P.E., Dir. of PW & Eng., 281-420-6545  |
| Contract Amount: | \$2,664,629.66  |
| Complete:        | August 2022   |
|                  |   |
| <b>Project:</b>  | <b>Garth Road Paving &amp; Drainage Facilities</b><br>(Concrete Paving, Drainage)   |
| Owner:           | Lennar Homes of Texas, L.P.<br>obo Harris County M.U.D. No. 213-A<br>c/o Jones & Carter, Inc.                               |
| Contact:         | Brian Geier, P.E., 713-777-5337   |
| Contract Amount: | \$3,417,003.93  |
| Complete:        | July 2022   |
|                  |   |
| <b>Project:</b>  | <b>Rankin Road Paving, Drainage, and Water Line Improvements Project (20-05)</b> (Asphalt Paving)                           |
| Owner:           | City of Humble<br>c/o ARKK Engineers  |
| Contact:         | Doug Bradford, P.E., 713-400-2755   |
| Contract Amount: | \$3,021,741.69  |
| Complete:        | July 2022   |
|                  |   |
| <b>Project:</b>  | <b>Harris County – FM 1093 (CSJ 1258-04-063)</b>  |
| Owner:           | TxDOT   |
| Contact:         | Hamoon Bahrami, P.E., 713-934-5900  |
| Contract Amount: | \$16,502,349.06   |
| Complete:        | June 2022   |
|                  |   |
| <b>Project:</b>  | <b>Bastrop County – SH 304 (CSJ 0573-01-032)</b>  |
| Owner:           | TxDOT   |
| Contact:         | Diana Schulze, P.E., 512-321-2195   |
| Contract Amount: | \$5,705,974.61  |
| Complete:        | June 2022   |

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| <b>Project:</b>  | <b>Friendswood Lakes Boulevard (B201029)</b><br>(Concrete Paving, Drainage, Utilities)                  |
| Owner:           | Galveston County<br>c/o Terra Associates, Inc.  |
| Contact:         | A.G.A.N. Nanayakkara, P.E., 713-993-0333  |
| Contract Amount: | \$4,299,674.64  |
| Complete:        | June 2022   |
| <br>             |   |
| <b>Project:</b>  | <b>Hurricane Harvey Round 1 – Infrastructure Improvements (GLO 20-065-095-C264)</b><br>(Asphalt Paving) |
| Owner:           | Liberty County  |
| Contact:         | David Douglas, Engineering Administrator, 936-336-4560  |
| Contract Amount: | \$3,591,149.46  |
| Complete:        | June 2022   |
| <br>             |   |
| <b>Project:</b>  | <b>Encino Estates Section 4</b> (Asphalt Paving, Drainage)  |
| Owner:           | Encino Estates, Ltd.  |
| Contact:         | Pat Baker, 832-797-6187   |
| Contract Amount: | \$956,218.50  |
| Complete:        | June 2022   |
| <br>             |   |
| <b>Project:</b>  | <b>City Wide Overlay Package #22 (N-321037-0071-4)</b>  |
| Owner:           | City of Houston   |
| Contact:         | Steven Loo, P.E., 832-395-2151  |
| Contract Amount: | \$6,063,065.51  |
| Complete:        | May 2022  |
| <br>             |   |
| <b>Project:</b>  | <b>Brazos County – FM 158 (CSJ 0212-03-062)</b>   |
| Owner:           | TxDOT   |
| Contact:         | James Robbins, P.E., 979-778-6233   |
| Contract Amount: | \$5,262,559.78  |
| Complete:        | May 2022  |
| <br>             |   |
| <b>Project:</b>  | <b>Brazoria County – SH 288 (CSJ 0598-02-126)</b><br>(Concrete Paving, Drainage)                        |
| Owner:           | TxDOT   |
| Contact:         | Maria Aponte, P.E., 979-864-8500  |
| Contract Amount: | \$2,827,733.41  |
| Complete:        | May 2022  |
| <br>             |   |
| <b>Project:</b>  | <b>Asphaltic Pavement Overlay Services for Public Works (S89-L29376)</b>                                |
| Owner:           | City of Houston   |
| Contact:         | Larius Hassen, P.M., 832-395-4703   |
| Contract Amount: | \$2,763,056.01  |
| Complete:        | May 2022  |

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| <b>Project:</b>     | <b>Laneview Road Widening (GLO 20-065-062-C180)</b>       |
| Owner:              | (Asphalt Paving)  |
| Contact:            | Waller County   |
| Contract Amount:    | J. Ross McCall, County Engineer, 979-826-7670             |
| Complete:           | \$1,740,155.20  |
|                     | May 2022  |
| <br><b>Project:</b> | <br><b>Harris County – IH 10 (CSJ 0508-01-346, etc.)</b>  |
| Owner:              | TxDOT   |
| Contact:            | Jamal Elahi, P.E., 281-464-5500                           |
| Contract Amount:    | \$23,271,304.70   |
| Complete:           | April 2022  |
| <br><b>Project:</b> | <br><b>Chambers County – FM 565 (CSJ 1024-01-042)</b>     |
| Owner:              | (Asphalt Paving, Drainage)                                |
| Contact:            | TxDOT   |
| Contract Amount:    | Noel Salac, P.E., 936-336-2244                            |
| Complete:           | \$5,083,673.38  |
|                     | April 2022  |
| <br><b>Project:</b> | <br><b>Harris County – SH 35 (CSJ 0178-01-036)</b>        |
| Owner:              | TxDOT   |
| Contact:            | Jamal Elahi, P.E., 281-464-5500                           |
| Contract Amount:    | \$2,489,363.92  |
| Complete:           | April 2022  |
| <br><b>Project:</b> | <br><b>Concrete &amp; Asphalt Restoration</b>             |
| Owner:              | <b>(S-MA1000-0007-4; File No. WA11142-09)</b>             |
| Contact:            | City of Houston   |
| Contract Amount:    | Steven Loo, P.E., 832-395-2151                            |
| Complete:           | \$2,326,970.65  |
|                     | April 2022  |
| <br><b>Project:</b> | <br><b>San Jacinto – SH 150 (CSJ 0395-02-041, etc.)</b>   |
| Owner:              | TxDOT   |
| Contact:            | Clint Jones, P.E., 936-327-8981                           |
| Contract Amount:    | \$12,210,063.22   |
| Complete:           | March 2022  |
| <br><b>Project:</b> | <br><b>Langston Boulevard Extension, Phase 1 (RD-020)</b> |
| Owner:              | (Concrete Paving, Drainage & Utilities)                   |
| Contact:            | City of Mont Belvieu                                      |
| Contract Amount:    | Ricardo Villagrand, P.E., City Engineer, 281-576-2213     |
| Complete:           | \$8,629,302.82  |
|                     | March 2022  |

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| <b>Project:</b>  | <b>Chambers County Logistics Terminal North Entrance</b><br>(Concrete Paving, Drainage)   |
| Owner:           | Katoen Natie Engineering USA, Inc.  |
| Contact:         | Hans D'hooghe, 281-470-5439   |
| Contract Amount: | \$4,254,925.85  |
| Complete:        | March 2022  |
|                  |   |
| <b>Project:</b>  | <b>River Farms Sections 5 &amp; 6</b> (Concrete Paving, WS&D)   |
| Owner:           | Lanai, LLLP.<br>c/o GC Engineering, Inc.  |
| Contact:         | Umesh KC, P.E., 281-412-7008  |
| Contract Amount: | \$1,985,390.00  |
| Complete:        | March 2022  |
|                  |   |
| <b>Project:</b>  | <b>Brazoria County – FM 1459 (CSJ 1413-01-018)</b><br>(Asphalt Overlay)   |
| Owner:           | TxDOT   |
| Contact:         | Maria Aponte, P.E., 979-864-8500  |
| Contract Amount: | \$1,566,164.74  |
| Complete:        | March 2022  |
|                  |   |
| <b>Project:</b>  | <b>Chambers County – SH 61 (CSJ 6349-21-001)</b><br>(Asphalt Overlay)   |
| Owner:           | TxDOT   |
| Contact:         | Noel Salac, P.E., 936-336-2244  |
| Contract Amount: | \$560,567.52  |
| Complete:        | March 2022  |
|                  |   |
| <b>Project:</b>  | <b>Perry Avenue Extension Project (RD-021)</b><br>(Concrete Paving, Drainage & Utilities)   |
| Owner:           | City of Mont Belvieu  |
| Contact:         | Ricardo Villagrand, P.E., City Engineer, 281-576-2213   |
| Contract Amount: | \$11,153,240.04   |
| Complete:        | February 2022   |
|                  |   |
| <b>Project:</b>  | <b>Cedar Port Parkway – Phase 2</b><br><b>East Fisher Road – Phase 1</b><br><b>SH 99 @ Cedar Port Parkway</b><br>(Concrete Paving & Drainage) |
| Owner:           | Chambers County Improvement District No. 1  |
| Contact:         | Brock Lewis, P.E., 832-603-2261   |
| Contract Amount: | \$5,413,484.84  |
| Complete:        | February 2022   |
|                  |   |
| <b>Project:</b>  | <b>Nita Way Roadway</b> (Concrete Paving)   |
| Owner:           | Chambers County Improvement District No. 1  |
| Contact:         | Brock Lewis, P.E., 832-603-2261   |
| Contract Amount: | \$2,714,122.15  |
| Complete:        | February 2022   |

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| <b>Project:</b>  | <b>Langston Boulevard Phase 2 Water Line (RD-020)</b>   |
| Owner:           | City of Mont Belvieu  |
| Contact:         | Ricardo Villagrand, P.E., City Engineer, 281-576-2213   |
| Contract Amount: | \$1,377,301.00  |
| Complete:        | February 2022   |
| <br>             |   |
| <b>Project:</b>  | <b>Rain Tree Section 3 (Concrete Paving)</b>  |
| Owner:           | Lanai, LLLP.<br>c/o GC Engineering, Inc.  |
| Contact:         | Umesh KC, P.E., 281-412-7008  |
| Contract Amount: | \$1,080,197.75  |
| Complete:        | February 2022   |
| <br>             |   |
| <b>Project:</b>  | <b>Asphalt Overlay (Package 2021-2) (21/0248)</b>   |
| Owner:           | Harris County, Precinct 3   |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531   |
| Contract Amount: | \$576,837.50  |
| Complete:        | February 2022   |
| <br>             |   |
| <b>Project:</b>  | <b>NRG Park Parking Lot Repairs &amp; Improvements (18/0339) (Asphalt &amp; Concrete Paving &amp; Drainage)</b> |
| Owner:           | Harris County   |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531   |
| Contract Amount: | \$5,240,892.57  |
| Complete:        | January 2022  |
| <br>             |   |
| <b>Project:</b>  | <b>Asphalt Overlay of Various Roads (Package 2020-2) (20/0310)</b>  |
| Owner:           | Harris County, Precinct 3   |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531   |
| Contract Amount: | \$4,703,203.26  |
| Complete:        | December 2021   |
| <br>             |   |
| <b>Project:</b>  | <b>2018 Annual Mill &amp; Overlay Project (w/Two Renewals)</b>  |
| Owner:           | City of Baytown   |
| Contact:         | Frank Simoneaux, P.E., Dir. of PW & Eng., 281-420-6545  |
| Contract Amount: | \$2,575,166.29  |
| Complete:        | November 2021   |
| <br>             |   |
| <b>Project:</b>  | <b>Harris County – IH 10 (CSJ 6366-19-001)</b>  |
|                  | (Asphalt Overlay)   |
| Owner:           | TxDOT   |
| Contact:         | Melody Galland, P.E., 281-464-5500  |
| Contract Amount: | \$843,019.57  |
| Complete:        | November 2021   |

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| <b>Project:</b><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete:     | <b>Beinhorn Road Reconstruction</b> (Asphalt Paving)<br>City of Hunters Creek Village<br>James Stewart, Director of Public Works, 713-465-2150<br>\$476,935.25<br>October 2021   |
| <b>Project:</b><br>Owner:<br><br>Contact:<br>Contract Amount:<br>Complete: | <b>Southwinds Section 3</b> (Concrete Paving)<br>Baytown-45 Residential Development<br>c/o CobbFendley<br>Iraida Tang, P.E., 713-462-3242<br>\$1,075,853.90<br>September 2021  |
| <b>Project:</b><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete:     | <b>Galveston County – FM 270 (CSJ 3312-02-017)</b><br>(Asphalt Paving)<br>TxDOT<br>Jamal Elahi, P.E., 281-464-5500<br>\$578,358.28<br>September 2021   |
| <b>Project:</b><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete:     | <b>West Bay Road Overlay</b><br>Chambers County<br>Cory Taylor, County Engineer, 409-267-8379<br>\$446,963.00<br>September 2021  |
| <b>Project:</b><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete:     | <b>Galveston County – CR (CSJ 0912-73-183)</b><br>TxDOT<br>Jamal Elahi, P.E., 281-464-5500<br>\$9,231,610.20<br>August 2021  |
| <b>Project:</b><br><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete: | <b>Repair of Various Roads in the Crosby and East Aldine Camp Areas for the BetterStreets2Neighborhoods Community Program (20/0261)</b><br>Harris County, Precinct 2<br>Rich Elwood, Director PID-CPD, 713-274-1531<br>\$3,124,793.26<br>July 2021 |
| <b>Project:</b><br>Owner:<br><br>Contact:<br>Contract Amount:<br>Complete: | <b>Rain Tree Section 2</b> (Concrete Paving, Utilities)<br>Lanai, LLLP.<br>c/o GC Engineering, Inc.<br>Umesh KC, P.E., 281-412-7008<br>\$974,614.75<br>July 2021   |

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| <b>Project:</b>  | <b>Wharton County – US 59 (CSJ 0089-06-081)</b>        |
|                  | (Concrete Paving)                                      |
| Owner:           | TxDOT  |
| Contact:         | Ryan Simper, P.E., 979-532-3141                        |
| Contract Amount: | \$19,748,295.60  |
| Complete:        | June 2021  |
| <br>             |  |
| <b>Project:</b>  | <b>City Wide Overlay Package #21 (N-321037-0070-4)</b> |
| Owner:           | City of Houston  |
| Contact:         | Steven Loo, P.E., 832-395-2151                         |
| Contract Amount: | \$3,659,343.56   |
| Complete:        | June 2021  |
| <br>             |  |
| <b>Project:</b>  | <b>Harris County – SL 8 (CSJ 3256-02-095)</b>          |
| Owner:           | TxDOT  |
| Contact:         | John Elam, P. E., 281-319-6400                         |
| Contract Amount: | \$2,016,882.10   |
| Complete:        | June 2021  |
| <br>             |  |
| <b>Project:</b>  | <b>Liberty County – SH 105 (CSJ 6347-85-001)</b>       |
| Owner:           | TxDOT  |
| Contact:         | Noel Salac, P.E., 936-336-2244                         |
| Contract Amount: | \$1,868,408.37   |
| Complete:        | May 2021   |
| <br>             |  |
| <b>Project:</b>  | <b>Santa Fe Various Street Improvements (B201032)</b>  |
|                  | (Asphalt Paving)                                       |
| Owner:           | Galveston County                                       |
| Contact:         | Michael Shannon, County Engineer, 409-770-5453         |
| Contract Amount: | \$1,141,206.18   |
| Complete:        | May 2021   |
| <br>             |  |
| <b>Project:</b>  | <b>East Kennings Road (20/0222)</b>                    |
|                  | (Asphalt Paving & Drainage)                            |
| Owner:           | Harris County, Precinct 2                              |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531            |
| Contract Amount: | \$1,498,944.30   |
| Complete:        | April 2021   |
| <br>             |  |
| <b>Project:</b>  | <b>City of Arcola Various Roads (19-088)</b>           |
|                  | <b>Bond Project 17120x</b>                             |
|                  | (Asphalt Paving & Drainage)                            |
| Owner:           | Fort Bend County                                       |
| Contact:         | Stacy Slawinski, County Engineer, 281-342-3411         |
| Contract Amount: | \$1,415,476.66   |
| Complete:        | April 2021   |



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| <b>Project:</b><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete:     | <b>Deer Pines Section 2 Asphalt Paving</b><br>Deer Pines, Ltd.<br>Pat Baker, 281-290-1900<br>\$352,500.00<br>April 2021  |
| <b>Project:</b><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete:     | <b>Washington County – FM 389 (CSJ 0315-08-037)</b><br>TxDOT<br>Eric Bennett, P.E., 979-836-9359<br>\$5,555,121.93<br>March 2021   |
| <b>Project:</b><br>Owner:<br><br>Contact:<br>Contract Amount:<br>Complete: | <b>Rain Tree Section 1</b> (Concrete Paving, WS&D)<br>Lanai, LLLP.<br>c/o GC Engineering, Inc.<br>Umesh KC, P.E., 281-412-7008<br>\$5,490,009.40<br>March 2021   |
| <b>Project:</b><br><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete: | <b>Waller County – FM 359 (CSJ 0543-01-065)</b><br>(Asphalt Overlay)<br>TxDOT<br>Carlos Zepeda, Jr., P.E., 281-238-7900<br>\$1,686,465.13<br>March 2021  |
| <b>Project:</b><br>Owner:<br><br>Contact:<br>Contract Amount:<br>Complete: | <b>Lakeway Subdivision</b> (Concrete Paving, WS&D)<br>Dutton Lake, LLC<br>c/o GC Engineering, Inc.<br>Umesh KC, P.E., 281-412-7008<br>\$1,294,828.50<br>March 2021   |
| <b>Project:</b><br><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete: | <b>South Main Street Drainage Improvements (DR2002) (19-076-002-B351)</b><br>(Concrete Paving & Drainage)<br>City of Baytown<br>Frank Simoneaux, P.E., Dir. of PW & Eng., 281-420-6545<br>\$1,199,359.65<br>March 2021                     |
| <b>Project:</b><br><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete: | <b>Repairs &amp; New Construction of Asphalt Parking Lots, Roads, &amp; Hike &amp; Bike Trails (16/0318-2) (Renewal #2)</b><br>Harris County, Precinct 2<br>Rich Elwood, Director PID-CPD, 713-274-1531<br>\$5,667,301.51<br>February 2021 |

**Project:** **City Wide Overlay Package #24 (N-321037-0075-4)**  
Owner: City of Houston  
Contact: Steven Loo, P.E., 832-395-2151  
Contract Amount: \$5,386,921.56  
Complete: January 2021

**Project:** **FY2019 Roadway Rehabilitation/Overlay Package #1 (N-321040-0018-4) (Asphalt & Concrete Paving)**  
Owner: City of Houston  
Contact: Steven Loo, P.E., 832-395-2151  
Contract Amount: \$4,845,779.58  
Complete: January 2021

**Project:** **FY2019 Pavement Repair & Rehab Work Orders No. 2 (N-321040-0010-4)**  
Owner: City of Houston  
Contact: Steven Loo, P.E., 832-395-2151  
Contract Amount: \$4,411,398.71  
Complete: January 2021

**Project:** **2019-2020 Street Maintenance Program (ST2019) (Asphalt & Concrete Paving)**  
Owner: City of Friendswood  
Contact: Tuan Nguyen, P.M., 281-996-3200  
Contract Amount: \$4,352,863.75  
Complete: January 2021

**Project:** **Asphalt Reconstruction Package 4, Shellside Area (RE-1704D)**  
Owner: City of League City  
Contact: Scott Tuma, P.M., 713-554-1000  
Contract Amount: \$3,347,736.07  
Complete: January 2021

**Project:** **Chambers County – SH 124 (CSJ 0367-01-070) (Asphalt Overlay)**  
Owner: TxDOT  
Contact: Noel Salac, P.E., 936-336-2244  
Contract Amount: \$2,919,245.10  
Complete: January 2021

**Project:** **Liberty County – FM 1008 (CSJ 0952-01-060)**  
Owner: TxDOT  
Contact: Noel Salac, P.E., 936-336-2244  
Contract Amount: \$3,365,432.07  
Complete: December 2020

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| <b>Project:</b>  | <b>Harris County – FM 1093 (CSJ 1258-04-062)</b>         |
|                  | (Asphalt Overlay)  |
| Owner:           | TxDOT  |
| Contact:         | Hamoon Bahrami, P.E., 713-934-5900                       |
| Contract Amount: | \$2,080,400.84   |
| Complete:        | December 2020  |
| <br>             |  |
| <b>Project:</b>  | <b>KTN Storm Sewer Pellet Collector Screen II</b>        |
| Owner:           | Katoen Natie Gulf Coast Inc.                             |
| Contact:         | Hans D'hooghe, 281-470-5439                              |
| Contract Amount: | \$2,000,456.76   |
| Complete:        | December 2020  |
| <br>             |  |
| <b>Project:</b>  | <b>Waller County – FM 1489 (CSJ 1418-01-012)</b>         |
| Owner:           | TxDOT  |
| Contact:         | Carlos Zepeda, Jr., P.E., 281-238-7900                   |
| Contract Amount: | \$1,631,135.17   |
| Complete:        | December 2020  |
| <br>             |  |
| <b>Project:</b>  | <b>Galveston County – FM 518 (CSJ 6354-42-001)</b>       |
|                  | (Asphalt Overlay)  |
| Owner:           | TxDOT  |
| Contact:         | Jamal Elahi, P.E., 281-464-5500                          |
| Contract Amount: | \$1,376,766.25   |
| Complete:        | December 2020  |
| <br>             |  |
| <b>Project:</b>  | <b>Fort Bend County – FM 762 (CSJ 0543-03-076)</b>       |
| Owner:           | TxDOT  |
| Contact:         | William Semora, Jr., P.E., 281-238-7900                  |
| Contract Amount: | \$845,830.35   |
| Complete:        | December 2020  |
| <br>             |  |
| <b>Project:</b>  | <b>Blue Heron, Section 1 (Concrete Paving, WS&amp;D)</b> |
| Owner:           | Snowberry Development, LLC<br>c/o Hutchison & Associates |
| Contact:         | Jerry Crouch, P.E., 281-422-8213                         |
| Contract Amount: | \$412,847.25   |
| Complete:        | December 2020  |
| <br>             |  |
| <b>Project:</b>  | <b>Colorado County – IH 10 (CSJ 6327-53-001)</b>         |
| Owner:           | TxDOT  |
| Contact:         | Ryan Simper, P.E., 979-532-3141                          |
| Contract Amount: | \$343,249.13   |
| Complete:        | December 2020  |
| <br>             |  |
| <b>Project:</b>  | <b>Galveston County – SH 87 (CSJ 0367-03-037)</b>        |
| Owner:           | TxDOT  |
| Contact:         | Jamal Elahi, P.E., 281-464-5500                          |
| Contract Amount: | \$10,203,335.82  |
| Complete:        | November 2020  |

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| <b>Project:</b>  | <b>Asphalt Overlay of Various Roads (Old Town of Hockley 2018 – Package 2) (20/0002)</b>  |
| Owner:           | Harris County, Precinct 3   |
| Contact:         | Rich Elwood, Director PID-CPD, 713-274-1531   |
| Contract Amount: | \$3,138,154.14  |
| Complete:        | November 2020   |
| <br>             |   |
| <b>Project:</b>  | <b>Harris County – IH 10 (CSJ 6352-03-001)</b>  |
|                  | (Emergency Retaining Wall Repair)   |
| Owner:           | TxDOT   |
| Contact:         | Mark Wooldridge, P. E., 713-802-5000  |
| Contract Amount: | \$2,955,070.95  |
| Complete:        | November 2020   |
| <br>             |   |
| <b>Project:</b>  | <b>Harris County – IH 610 (CSJ 0271-15-090)</b>   |
|                  | (Upgrade Storm Sewer)   |
| Owner:           | TxDOT   |
| Contact:         | Melody Galland, P.E., 281-464-5500  |
| Contract Amount: | \$1,407,317.63  |
| Complete:        | November 2020   |
| <br>             |   |
| <b>Project:</b>  | <b>Sedona Section 6 (Concrete Paving, WS&amp;D)</b>   |
| Owner:           | Bay Colony West Municipal Utility District<br>c/o Dannenbaum Engineering Corp.  |
| Contact:         | Bobby Heck, P.E., 713-520-9570  |
| Contract Amount: | \$10,246,356.90   |
| Complete:        | October 2020  |
| <br>             |   |
| <b>Project:</b>  | <b>Harris County – FM 865 (CSJ 0976-01-039)</b>   |
| Owner:           | TxDOT   |
| Contact:         | Melody Galland, P.E., 281-464-5500  |
| Contract Amount: | \$2,332,438.01  |
| Complete:        | October 2020  |
| <br>             |   |
| <b>Project:</b>  | <b>Chambers County – FM 565 (CSJ 1024-01-076)</b>   |
| Owner:           | TxDOT   |
| Contact:         | Noel Salac, P.E., 936-336-2244  |
| Contract Amount: | \$1,150,291.31  |
| Complete:        | October 2020  |
| <br>             |   |
| <b>Project:</b>  | <b>Lower Greens Bayou Regional Detention Embankment &amp; Control Structure Improvements For the Harris County Flood Control District Project ID #P500-01-00-E001 (18/0319)</b> |
| Owner:           | Harris County/Harris County Flood Control District  |
| Contact:         | Brandie Johnson, P.E., CFM, 713-684-4134  |
| Contract Amount: | \$2,314,368.61  |
| Complete:        | September 2020  |

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| <b>Project:</b>  | <b>Galveston County – SH 3 (CSJ 0051-03-111)</b>                                  |
| Owner:           | TxDOT   |
| Contact:         | Jamal Elahi, P.E., 281-464-5500   |
| Contract Amount: | \$1,854,284.55  |
| Complete:        | September 2020  |
| <br>             |   |
| <b>Project:</b>  | <b>Goose Creek Reserve Section 4 (Concrete Paving)</b>                            |
| Owner:           | D.R. Horton – Texas, Ltd.<br>c/o LJA Engineering, Inc.                            |
| Contact:         | Melony Gay, P.E., 713-953-5200  |
| Contract Amount: | \$1,696,069.89  |
| Complete:        | September 2020  |
| <br>             |   |
| <b>Project:</b>  | <b>FY2020 Asphalt Reconstruction &amp; Overlay (20012)</b>                        |
| Owner:           | City of La Porte  |
| Contact:         | Ray Mayo, Public Works Director, 281-471-9650                                     |
| Contract Amount: | \$581,291.63  |
| Complete:        | September 2020  |
| <br>             |   |
| <b>Project:</b>  | <b>Harris County – FM 521 (CSJ 0111-01-092)</b>                                   |
| Owner:           | TxDOT   |
| Contact:         | Melody Galland, P.E., 281-464-5500  |
| Contract Amount: | \$3,331,755.45  |
| Complete:        | August 2020   |
| <br>             |   |
| <b>Project:</b>  | <b>Harris County – FM 2920 (CSJ 2941-02-055)</b>                                  |
| Owner:           | TxDOT   |
| Contact:         | John Elam, P. E., 281-319-6400  |
| Contract Amount: | \$6,284,610.95  |
| Complete:        | July 2020   |
| <br>             |   |
| <b>Project:</b>  | <b>Crown Colony Paving &amp; Drainage (RD-017)</b><br>(Asphalt Paving & Drainage) |
| Owner:           | City of Mont Belvieu  |
| Contact:         | Ricardo Villagrand, P.E., City Engineer, 281-576-2213                             |
| Contract Amount: | \$4,026,957.32  |
| Complete:        | July 2020   |
| <br>             |   |
| <b>Project:</b>  | <b>Montgomery County – FM 1488 (CSJ 0523-08-014)</b>                              |
| Owner:           | TxDOT   |
| Contact:         | Adam Galland, P.E., 936-538-3300  |
| Contract Amount: | \$3,564,728.71  |
| Complete:        | July 2020   |
| <br>             |   |
| <b>Project:</b>  | <b>Lynnwood Section 4 (Concrete Paving, WS&amp;D)</b>                             |
| Owner:           | Grohman Venture W-1 LTD<br>c/o GC Engineering, Inc.                               |
| Contact:         | Bharath Devineni, P.E., 281-412-7008  |
| Contract Amount: | \$984,470.36  |
| Complete:        | July 2020   |

**Project:** Harris County – IH 69 Etc. (CSJ 0177-11-154, etc.)  
Owner: TxDOT  
Contact: Frank Leong, P.E., 713-934-5900  
Contract Amount: \$2,791,549.78  
Complete: June 2020

**Project:** Seawall Boulevard (COG-CON-19-098)  
(Asphalt Overlay)  
Owner: City of Galveston  
Contact: Trina Jankowski, P.M., 409-797-3966  
Contract Amount: \$1,121,918.71  
Complete: June 2020

**Project:** Tropical Storm Imelda 2019 Removal & Replacement of Storm Damaged Bridge (19/0350)  
Owner: Harris County, Precinct 2  
Contact: Rich Elwood, Director PID-CPD, 713-274-1531  
Contract Amount: \$1,108,646.74  
Complete: June 2020

**Project:** San Jacinto Boulevard Phase II Project  
(Concrete Paving, Drainage & Utilities)  
Owner: City of Baytown  
Contact: Frank Simoneaux, P.E. Dir. of PW & Eng., 281-420-6545  
Contract Amount: \$7,447,208.74  
Complete: May 2020

**Project:** Lakes of Champions Boulevard Improvements  
(Asphalt & Concrete Paving)  
Owner: City of Mont Belvieu  
c/o Binkley & Barfield Consulting Engineers  
Contact: Tommy Cromer, P.E., 713-869-3433  
Contract Amount: \$3,438,761.11  
Complete: May 2020

**Project:** BAWA FM 1405 16" Waterline Project  
Owner: Baytown Area Water Authority  
c/o Engineering Coordinator's Office  
Baytown Municipal Service Center  
Contact: Frank Simoneaux, P.E. Dir. of PW & Eng., 281-420-6545  
Contract Amount: \$1,315,008.51  
Complete: May 2020

**Project:** Hunt Road Expansion  
(Concrete Paving, Drainage & Utilities)  
Owner: City of Baytown  
Contact: Frank Simoneaux, P.E. Dir. of PW & Eng., 281-420-6545  
Contract Amount: \$8,043,878.21  
Complete: April 2020

|  |   |
|--|---|
| <b>Project:</b><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete:     | <b>Encino Estates Section 2, Asphalt Paving</b><br>Encino Estates, Ltd.<br>Pat Baker, 832-797-6187<br>\$2,186,583.72<br>April 2020  |
| <b>Project:</b><br>Owner:<br><br>Contact:<br>Contract Amount:<br>Complete: | <b>Cedar Bayou Grace UMC</b> (Concrete Paving, WS&D)<br>Cedar Bayou Grace United Methodist Church<br>c/o Hutchison & Associates<br>Jerry Gainer, P.E., 281-422-8213<br>\$1,099,582.00<br>April 2020 |
| <b>Project:</b><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete:     | <b>Liberty County – SH 321 (CSJ 0593-01-120)</b><br>TxDOT<br>Noel Salac, P.E., 936-336-2244<br>\$5,278,152.76<br>March 2020   |
| <b>Project:</b><br>Owner:<br><br>Contact:<br>Contract Amount:<br>Complete: | <b>River Farms Section 3</b> (Concrete Paving, WS&D)<br>Lanai, LLLP.<br>c/o GC Engineering, Inc.<br>Umesh KC, P.E., 281-412-7008<br>\$4,180,360.33<br>March 2020                                    |
| <b>Project:</b><br><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete: | <b>2018 Street Maintenance Program (ST2018)</b><br>(Asphalt Paving)<br>City of Friendswood<br>George L. Cherepes, CFM, 281-996-3200<br>\$1,987,979.34<br>March 2020                                 |
| <b>Project:</b><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete:     | <b>Harris County – IH 45 (CSJ 0500-03-594)</b><br>TxDOT<br>John Elam, P. E., 281-319-6400<br>\$1,690,883.50<br>March 2020   |
| <b>Project:</b><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete:     | <b>Galveston County – IH 45 (CSJ 0500-01-145)</b><br>TxDOT<br>Jamal Elahi, P.E., 281-464-5500<br>\$1,521,675.59<br>March 2020   |
| <b>Project:</b><br>Owner:<br>Contact:<br>Contract Amount:<br>Complete:     | <b>Galveston County – FM 3005 (CSJ 0051-09-120)</b><br>TxDOT<br>Jamal Elahi, P.E., 281-464-5500<br>\$2,880,806.50<br>February 2020  |





A CRH COMPANY

## Equipment List

| Equipment # | Description           | Make      | Model          | Year | Ownership Type |
|-------------|-----------------------|-----------|----------------|------|----------------|
| 01.250345   | Pickup Truck 1/2Ton   | Dodge     | 1500           | 2019 | Owned          |
| 01.259899   | Pickup Truck 1/2Ton   | Chevrolet | 1500 LT DC 4X4 | 2020 | Rented         |
| 01.259922   | Pickup Truck 1/2Ton   | Chevrolet | 1500 4X4 Ext   | 2021 | Rented         |
| 01.259986   | Pickup Truck 1/2Ton   | Ram       | 1500           | 2023 | Rented         |
| 01.280722   | Pickup Truck 3/4Ton   | Chevrolet | 2500           | 2013 | Owned          |
| 01.280750   | Pickup Truck 3/4Ton   | Chevrolet | 2500           | 2015 | Owned          |
| 01.280751   | Pickup Truck 3/4Ton   | Chevrolet | 2500           | 2015 | Owned          |
| 01.280752   | Pickup Truck 3/4Ton   | Chevrolet | 2500           | 2015 | Owned          |
| 01.280755   | Pickup Truck 1Ton     | Chevrolet | 3500           | 2015 | Owned          |
| 01.280760   | Pickup Truck 1/2Ton   | Chevrolet | 1500           | 2014 | Owned          |
| 01.280766   | Pickup Truck 3/4Ton   | Chevrolet | 2500           | 2015 | Owned          |
| 01.280774   | Pickup Truck 1/2Ton   | Chevrolet | 1500           | 2015 | Owned          |
| 01.280777   | Pickup Truck 1Ton     | Chevrolet | C35            | 2015 | Owned          |
| 01.280778   | Pickup Truck 1Ton     | Chevrolet | C35            | 2015 | Owned          |
| 01.280789   | Pickup Truck 1Ton     | Chevrolet | C35            | 2015 | Owned          |
| 01.280801   | Pickup Truck 1Ton     | Chevrolet | 3500           | 2016 | Owned          |
| 01.280804   | Pickup Truck 1Ton     | Chevrolet | 3500           | 2015 | Owned          |
| 01.280806   | Pickup Truck 1Ton     | Chevrolet | 3500           | 2015 | Owned          |
| 01.280809   | Pickup Truck 1Ton     | Chevrolet | 3500           | 2015 | Owned          |
| 01.280812   | Pickup Truck 1Ton     | Chevrolet | 3500           | 2015 | Owned          |
| 01.280817   | Pickup Truck 1Ton     | Ford      | F550           | 2016 | Owned          |
| 01.280818   | Pickup Truck 1/2Ton   | Chevrolet | 1500           | 2016 | Owned          |
| 01.280820   | Pickup Truck 1/2Ton   | Chevrolet | 1500           | 2016 | Owned          |
| 01.280821   | Pickup Truck 1/2Ton   | Chevrolet | 1500           | 2016 | Owned          |
| 01.280823   | Pickup Truck 1Ton     | Chevrolet | 3500           | 2016 | Owned          |
| 01.280824   | Pickup Truck 1Ton     | Chevrolet | 3500           | 2016 | Owned          |
| 01.280828   | Pickup Truck 3/4Ton   | Chevrolet | 2500           | 2016 | Owned          |
| 01.280832   | Pickup Truck 1Ton     | Chevrolet | 3500           | 2016 | Owned          |
| 01.280839   | Pickup Truck 1Ton     | Chevrolet | 3500           | 2016 | Owned          |
| 01.280844   | Pickup Truck 1Ton     | Ford      | F450           | 2016 | Owned          |
| 01.280849   | Pickup Truck 1/2Ton   | Ford      | F150           | 2016 | Owned          |
| 01.280851   | Pickup Truck 1Ton     | Ford      | F550           | 2016 | Owned          |
| 01.280854   | Pickup Truck 3/4Ton   | Chevrolet | 2500           | 2016 | Owned          |
| 01.280855   | Sport Utility Vehicle | Ford      | Expedition     | 2017 | Owned          |
| 01.280859   | Pickup Truck 3/4Ton   | Chevrolet | 2500           | 2017 | Owned          |
| 01.280860   | Pickup Truck 3/4Ton   | Chevrolet | 2500           | 2017 | Owned          |
| 01.280863   | Pickup Truck 1Ton     | Ford      | F550           | 2016 | Owned          |
| 01.280868   | Pickup Truck 1Ton     | Chevrolet | 3500           | 2017 | Owned          |
| 01.280869   | Pickup Truck 1Ton     | Chevrolet | 3500           | 2017 | Owned          |
| 01.280876   | Sport Utility Vehicle | Ford      | Expedition     | 2017 | Owned          |
| 01.280893   | Pickup Truck 3/4Ton   | Chevrolet | 2500           | 2018 | Owned          |
| 01.280895   | Pickup Truck 3/4Ton   | Chevrolet | 2500           | 2018 | Owned          |
| 01.280896   | Pickup Truck 3/4Ton   | Chevrolet | 2500           | 2018 | Owned          |
| 01.280908   | Pickup Truck 3/4Ton   | Chevrolet | 2500 HD        | 2019 | Owned          |
| 01.280913   | Pickup Truck 1/2Ton   | GMC       | 1500 Sierra    | 2018 | Owned          |

| Equipment # | Description         | Make      | Model             | Year | Ownership Type |
|-------------|---------------------|-----------|-------------------|------|----------------|
| 01.280914   | Pickup Truck 1Ton   | Chevrolet | 3500              | 2016 | Owned          |
| 01.280925   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2019 | Owned          |
| 01.280926   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2019 | Owned          |
| 01.280927   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2019 | Owned          |
| 01.280929   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2019 | Owned          |
| 01.280930   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2019 | Owned          |
| 01.280931   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2019 | Owned          |
| 01.280936   | Pickup Truck 1/2Ton | Ford      | F150              | 2019 | Owned          |
| 01.280938   | Pickup Truck 1/2Ton | Ford      | F150              | 2019 | Owned          |
| 01.280939   | Pickup Truck 1Ton   | Ford      | F350              | 2019 | Owned          |
| 01.280940   | Pickup Truck 1Ton   | Chevrolet | C35               | 2020 | Owned          |
| 01.280941   | Pickup Truck 1Ton   | Chevrolet | C35               | 2020 | Owned          |
| 01.280942   | Pickup Truck 1Ton   | Chevrolet | C35               | 2020 | Owned          |
| 01.280943   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2020 | Owned          |
| 01.280944   | Pickup Truck 3/4Ton | Chevrolet | 2500 HD           | 2020 | Owned          |
| 01.280945   | Pickup Truck 3/4Ton | Chevrolet | 2500 HD           | 2020 | Owned          |
| 01.280954   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2020 | Owned          |
| 01.280955   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2020 | Owned          |
| 01.280956   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2020 | Owned          |
| 01.280957   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2020 | Owned          |
| 01.280961   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2020 | Owned          |
| 01.280962   | Pickup Truck 1Ton   | Chevrolet | 3500              | 2020 | Owned          |
| 01.280963   | Pickup Truck 1Ton   | Chevrolet | 3500              | 2020 | Owned          |
| 01.280969   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2020 | Owned          |
| 01.280978   | Pickup Truck 1Ton   | Chevrolet | 3500              | 2021 | Owned          |
| 01.280984   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2021 | Owned          |
| 01.280985   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2021 | Owned          |
| 01.280986   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2021 | Owned          |
| 01.280987   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2021 | Owned          |
| 01.280988   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2021 | Owned          |
| 01.280989   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2021 | Owned          |
| 01.280994   | Pickup Truck 1Ton   | Chevrolet | 3500              | 2021 | Owned          |
| 01.281007   | Pickup Truck 3/4Ton | Ford      | 250               | 2022 | Owned          |
| 01.281008   | Pickup Truck 3/4Ton | Ford      | 250               | 2022 | Owned          |
| 01.281009   | Pickup Truck 3/4Ton | Ford      | 250               | 2022 | Owned          |
| 01.281010   | Pickup Truck 3/4Ton | Ford      | 250               | 2022 | Owned          |
| 01.281011   | Pickup Truck 3/4Ton | Chevrolet | 2500 HD Silverado | 2023 | Owned          |
| 01.281012   | Pickup Truck 3/4Ton | Chevrolet | 2500 Silverado    | 2023 | Owned          |
| 01.281013   | Pickup Truck 3/4Ton | Ford      | F250              | 2022 | Owned          |
| 01.281014   | Pickup Truck 3/4Ton | Ford      | F250              | 2022 | Owned          |
| 01.281015   | Pickup Truck 3/4Ton | Ford      | F250              | 2022 | Owned          |
| 01.281016   | Pickup Truck 3/4Ton | Chevrolet | 2500 Silverado    | 2023 | Owned          |
| 01.281017   | Pickup Truck 3/4Ton | Chevrolet | 2500 Silverado    | 2023 | Owned          |
| 01.281018   | Pickup Truck 3/4Ton | Chevrolet | 2500 Silverado    | 2023 | Owned          |
| 01.281019   | Pickup Truck 3/4Ton | Chevrolet | 2500 HD Silverado | 2023 | Owned          |
| 01.281020   | Pickup Truck 3/4Ton | Chevrolet | 2500 Silverado    | 2023 | Owned          |
| 01.281021   | Pickup Truck 3/4Ton | Chevrolet | 2500 Silverado    | 2023 | Owned          |
| 01.281022   | Pickup Truck 3/4Ton | Chevrolet | 2500 Silverado    | 2023 | Owned          |
| 01.281023   | Pickup Truck 1/2Ton | Chevrolet | 1500 Silverado    | 2023 | Owned          |
| 01.281024   | Pickup Truck 1/2Ton | Chevrolet | 1500 Silverado    | 2023 | Owned          |
| 01.281025   | Pickup Truck 3/4Ton | Chevrolet | 2500 Silverado    | 2023 | Owned          |
| 01.281026   | Pickup Truck 3/4Ton | Chevrolet | 2500 Silverado    | 2023 | Owned          |
| 01.281027   | Pickup Truck 3/4Ton | Chevrolet | 2500 Silverado    | 2023 | Owned          |
| 01.281028   | Pickup Truck 3/4Ton | Chevrolet | 2500 Silverado    | 2023 | Owned          |
| 01.281029   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2023 | Owned          |

| Equipment # | Description         | Make      | Model             | Year | Ownership Type |
|-------------|---------------------|-----------|-------------------|------|----------------|
| 01.289001   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2024 | Rented         |
| 01.289009   | Pickup Truck 3/4Ton | Chevrolet | 1500 LT Crew Cab  | 2023 | Rented         |
| 01.289055   | Pickup Truck 3/4Ton | Chevrolet | 2500 HD           | 2024 | Rented         |
| 01.289176   | Pickup Truck 1/2Ton | Chevrolet | 1500 LT Crew Cab  | 2022 | Rented         |
| 01.289189   | Pickup Truck 3/4Ton | Chevrolet | 2500 HD 4X4       | 2024 | Rented         |
| 01.289190   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2024 | Rented         |
| 01.289207   | Pickup Truck 3/4Ton | Chevrolet | 1500 LT Crew Cab  | 2024 | Rented         |
| 01.289209   | Pickup Truck 1/2Ton | Chevrolet | 1500 Silverado    | 2023 | Rented         |
| 01.289225   | Pickup Truck 1/2Ton | Chevrolet | 1500 LT Crew Cab  | 2023 | Rented         |
| 01.289227   | Pickup Truck 3/4Ton | Chevrolet | 2500 HD 4X4       | 2024 | Rented         |
| 01.289285   | Pickup Truck 1/2Ton | Ram       | 1500              | 2023 | Rented         |
| 01.289313   | Pickup Truck 1/2Ton | Chevrolet | 1500 LT Crew Cab  | 2021 | Rented         |
| 01.289367   | Pickup Truck 1/2Ton | Ram       | 1500              | 2024 | Rented         |
| 01.289371   | Pickup Truck 1/2Ton | Chevrolet | 1500 LT Crew Cab  | 2023 | Rented         |
| 01.289374   | Pickup Truck 1/2Ton | Ram       | 1500              | 2024 | Rented         |
| 01.289378   | Pickup Truck 1/2Ton | Ram       | 1500              | 2024 | Rented         |
| 01.289380   | Pickup Truck 1/2Ton | Ram       | 1500              | 2024 | Rented         |
| 01.289397   | Pickup Truck 1/2Ton | Ram       | 1500              | 2024 | Rented         |
| 01.289423   | Pickup Truck 1/2Ton | Dodge     | 1500              | 2023 | Rented         |
| 01.289436   | Pickup Truck 1/2Ton | Chevrolet | 1500 HD           | 2023 | Rented         |
| 01.289457   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2024 | Rented         |
| 01.289505   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2024 | Rented         |
| 01.289528   | Pickup Truck 1/2Ton | Chevrolet | 1500 LT Crew Cab  | 2023 | Rented         |
| 01.289550   | Pickup Truck 1/2Ton | Chevrolet | 1500 LT Crew Cab  | 2023 | Rented         |
| 01.289600   | Pickup Truck 1/2Ton | Ford      | F150 XLT          | 2021 | Rented         |
| 01.289622   | Pickup Truck 1/2Ton | Ford      | F150 XLT          | 2021 | Rented         |
| 01.289642   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2024 | Rented         |
| 01.289689   | Pickup Truck 1/2Ton | Chevrolet | 1500              | 2024 | Rented         |
| 01.289736   | Pickup Truck 1/2Ton | Chevrolet | 1500 LT Crew Cab  | 2023 | Rented         |
| 01.289741   | Pickup Truck 1/2Ton | Ford      | F150 XLT          | 2021 | Rented         |
| 01.289807   | Pickup Truck 3/4Ton | Chevrolet | 2500 HD 4X4       | 2024 | Rented         |
| 01.289928   | Pickup Truck 3/4Ton | Chevrolet | 2500 HD           | 2023 | Rented         |
| 01.289946   | Pickup Truck 3/4Ton | Chevrolet | 2500 Silverado HD | 2022 | Rented         |
| 01.700781   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2015 | Owned          |
| 01.700792   | Pickup Truck 3/4Ton | GMC       | 2500HD Sierra     | 2015 | Owned          |
| 01.700864   | Pickup Truck 3/4Ton | GMC       | 2500HD Sierra     | 2017 | Owned          |
| 01.700872   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2017 | Owned          |
| 01.700873   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2017 | Owned          |
| 01.700874   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2017 | Owned          |
| 01.700878   | Pickup Truck 3/4Ton | Chevrolet | 2500 HD Sierra    | 2017 | Owned          |
| 01.700886   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2018 | Owned          |
| 01.700889   | Pickup Truck 1Ton   | Chevrolet | 3500              | 2018 | Owned          |
| 01.700892   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2018 | Owned          |
| 01.700909   | Pickup Truck 1/2Ton | GMC       | 2500 Sierra       | 2019 | Owned          |
| 01.700921   | Pickup Truck 1Ton   | Chevrolet | 3500              | 2019 | Owned          |
| 01.700947   | Pickup Truck 3/4Ton | GMC       | 2500HD            | 2020 | Owned          |
| 01.700948   | Pickup Truck 3/4Ton | GMC       | 2500HD            | 2020 | Owned          |
| 01.700958   | Pickup Truck 1/2Ton | GMC       | 1500              | 2020 | Owned          |
| 01.700960   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2020 | Owned          |
| 01.700974   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2020 | Owned          |
| 01.700975   | Pickup Truck 3/4Ton | GMC       | 2500              | 2020 | Owned          |
| 01.700979   | Pickup Truck 1Ton   | Chevrolet | 3500              | 2020 | Owned          |
| 01.700981   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2021 | Owned          |
| 01.700991   | Pickup Truck 3/4Ton | Chevrolet | 2500              | 2021 | Owned          |
|             |                     |           |                   |      |                |

| Equipment # | Description                    | Make                | Model           | Year | Ownership Type |
|-------------|--------------------------------|---------------------|-----------------|------|----------------|
| 02.280006   | Trailer BH Platform/Open       | Magnum              | 10S             | 2001 | Owned          |
| 02.280010   | Trailer BH Enclosed            | Perkins Trailer     | Utility         | 1997 | Owned          |
| 02.280093   | Trailer BH Platform/Open       | Lamar               | LOWBOY          | 2005 | Owned          |
| 02.280099   | Trailer BH Platform/Open       | Lamar               | LOWBOY          | 2006 | Owned          |
| 02.280106   | Trailer BH Enclosed            | Pace American       | OB610SA         | 2007 | Owned          |
| 02.280118   | Trailer BH Platform/Open       | Lamar               | LX              | 2007 | Owned          |
| 02.280130   | Trailer BH Platform/Open       | Lamar               | LOWBOY          | 2009 | Owned          |
| 02.280151   | Trailer BH Platform/Open       | Hefty               | PW1             | 2010 | Owned          |
| 02.280152   | Trailer BH Platform/Open       | Hefty               | PW2             | 2010 | Owned          |
| 02.280161   | Trailer BH Platform/Open       | Hefty               | PW3             | 2011 | Owned          |
| 02.280182   | Trailer BH Platform/Open       | Bragg               | LOWBOY          | 2007 | Owned          |
| 02.280188   | Trailer BH Platform/Open       | Big Tex             | Utility         | 2013 | Owned          |
| 02.280226   | Trailer BH Platform/Open       | Performance Trailer | SA6010          | 2014 | Owned          |
| 02.280227   | Trailer BH Platform/Open       | Pace American       | MC7720          | 2014 | Owned          |
| 02.280247   | Trailer BH Platform/Open       | Top Hat             | RA16X7          | 2016 | Owned          |
| 02.280282   | Trailer BH Platform/Open       | Big Tex             | 10Pl18          | 2016 | Owned          |
| 02.280291   | Trailer BH Platform/Open       | Big Tex             | Utility         | 2017 | Owned          |
| 02.280292   | Trailer BH Platform/Open       | Big Tex             | Utility         | 2017 | Owned          |
| 02.280293   | Trailer BH Platform/Open       | Big Tex             | Utility         | 2017 | Owned          |
| 02.280331   | Trailer BH Platform/Open       | American            | TC              | 2019 | Owned          |
| 02.280332   | Trailer BH Platform/Open       | Performance Trailer | SA77X10         | 2019 | Owned          |
| 02.280333   | Trailer BH Enclosed            | Multiquip           | WT5C            | 2019 | Owned          |
| 02.280335   | Trailer BH Platform/Open       | American            | TC              | 2019 | Owned          |
| 02.280347   | Trailer BH Platform/Open       | Top Hat             | HP20X83         | 2020 | Owned          |
| 02.280348   | Trailer BH Platform/Open       | Top Hat             | HP20X83         | 2020 | Owned          |
| 02.280349   | Trailer BH Platform/Open       | Top Hat             | HP20X83         | 2020 | Owned          |
| 02.280350   | Trailer BH Platform/Open       | Top Hat             | HP20X83         | 2020 | Owned          |
| 02.280351   | Trailer BH Enclosed            | Cargo Mate          | TXLEEH612SA     | 2021 | Owned          |
| 02.280360   | Trailer BH Platform/Open       | Top Hat             | 16X77" FB       | 2021 | Owned          |
| 02.280361   | Trailer BH Enclosed            | Cargo Mate          | EHW612SA        | 2021 | Owned          |
| 02.280363   | Trailer BH Platform/Open       | Top Hat             | HP20X83         | 2024 | Owned          |
| 02.280364   | Trailer BH Platform/Open       | Top Hat             | HP20X83         | 2024 | Owned          |
| 02.280365   | Trailer BH Platform/Open       | Diamond C           | DET202L         | 2024 | Owned          |
| 02.380738   | Trailer BH Enclosed            | Mauldin             | MT300           | 2015 | Owned          |
| 02.700011   | Trailer BH Enclosed            | Cargo               | 7X12            | 2022 | Owned          |
| 02.700079   | Trailer BH Platform/Open       | Haulmark            | TS5X8DS2        | 2005 | Owned          |
| 02.700159   | Trailer BH Platform/Open       | Tiger               | 77X16           | 2011 | Owned          |
| 02.700194   | Trailer BH Platform/Open       | Ameritrail          | 16 FT           | 2014 | Owned          |
| 02.700196   | Trailer BH Enclosed            | Cargo Mate          | CMC5240-1400252 | 2014 | Owned          |
| 02.700197   | Trailer BH Enclosed            | Cargo Mate          | CMC5240-1400252 | 2014 | Owned          |
| 02.700222   | Trailer BH Platform/Open       | Ranch King          | TC20610-90ESR   | 2015 | Owned          |
| 02.700223   | Trailer BH Platform/Open       | Ranch King          | TC20610-90ESR   | 2015 | Owned          |
| 02.700287   | Trailer BH Enclosed            | Cargo Mate          | CMC5240-1400252 | 2015 | Owned          |
| 02.700307   | Trailer BH Platform/Open       | Ameritrail          | 12 FT           | 2017 | Owned          |
| 02.700318   | Trailer BH Platform/Open       | Magnum              | P818            | 2018 | Owned          |
| 02.700360   | Trailer BH Enclosed            | Haulmark            | TSV5882         | 2021 | Owned          |
|             |                                |                     |                 |      |                |
| 04.280003   | Trailer FW Water/Fuel Tanker   | International       | 4300            | 1988 | Owned          |
| 04.280004   | Trailer FW Water/Fuel Tanker   | Niece               | NPT12000        | 2018 | Owned          |
| 04.280029   | Trailer FW Asphalt Tanker      | Polar Corp.         | (Unknown)       | 1999 | Owned          |
| 04.280054   | Trailer FW Dry Bulk Cement     | Brenner             | Tank Semi       | 1996 | Owned          |
| 04.280060   | Trailer FW Asphalt Tanker      | LBT                 | N6304           | 2005 | Owned          |
| 04.280103   | Trailer FW Asphalt Tanker      | Harmon              | 1N21SI          | 2007 | Owned          |
| 04.280163   | Trailer FW End Dump/Stablelift | Hanson Trailers     | End Dump        | 2011 | Owned          |
| 04.280164   | Trailer FW Asphalt Tanker      | Fruehauf            | (Unknown)       | 1991 | Owned          |

| Equipment # | Description                    | Make                 | Model          | Year | Ownership Type |
|-------------|--------------------------------|----------------------|----------------|------|----------------|
| 04.280166   | Trailer FW Asphalt Tanker      | Fruehauf             | (Unknown)      | 1998 | Owned          |
| 04.280169   | Trailer FW End Dump/Stablelift | Hanson Trailers      | End Dump       | 2011 | Owned          |
| 04.280170   | Trailer FW End Dump/Stablelift | Hanson Trailers      | End Dump       | 2011 | Owned          |
| 04.280171   | Trailer FW End Dump/Stablelift | Hanson Trailers      | End Dump       | 2011 | Owned          |
| 04.280172   | Trailer FW End Dump/Stablelift | Hanson Trailers      | End Dump       | 2011 | Owned          |
| 04.280173   | Trailer FW Asphalt Tanker      | Etnyre               | ADTR 7,000 Gal | 2012 | Owned          |
| 04.280174   | Trailer FW Asphalt Tanker      | Etnyre               | ADTR 7,000 Gal | 2012 | Owned          |
| 04.280175   | Trailer FW Asphalt Tanker      | Etnyre               | ADTR 7,000 Gal | 2012 | Owned          |
| 04.280176   | Trailer FW Asphalt Tanker      | Etnyre               | ADTR 7,000 Gal | 2012 | Owned          |
| 04.280177   | Trailer FW End Dump/Stablelift | Hanson Trailers      | End Dump       | 2011 | Owned          |
| 04.280178   | Trailer FW End Dump/Stablelift | Hanson Trailers      | End Dump       | 2011 | Owned          |
| 04.280183   | Trailer FW Dry Bulk Cement     | Trail King           | APB1033        | 2006 | Owned          |
| 04.280184   | Trailer FW Dry Bulk Cement     | Acro                 | Tanker Trailer | 1984 | Owned          |
| 04.280185   | Trailer FW Lowboy 30-50Ton     | Etnyre               | PRTN55TD3      | 2013 | Owned          |
| 04.280190   | Trailer FW End Dump/Stablelift | Clement              | ROT3645WETBR   | 2014 | Owned          |
| 04.280195   | Trailer FW Dry Bulk Cement     | J & J Trailer        | (Unknown)      | 1993 | Owned          |
| 04.280203   | Trailer FW End Dump/Stablelift | Clement              | Rock Star      | 2015 | Owned          |
| 04.280204   | Trailer FW End Dump/Stablelift | Clement              | Rock Star      | 2015 | Owned          |
| 04.280207   | Trailer FW End Dump/Stablelift | Clement              | Rock Star      | 2015 | Owned          |
| 04.280208   | Trailer FW End Dump/Stablelift | Clement              | Rock Star      | 2015 | Owned          |
| 04.280209   | Trailer FW End Dump/Stablelift | Clement              | Rock Star      | 2015 | Owned          |
| 04.280210   | Trailer FW End Dump/Stablelift | Clement              | Rock Star      | 2015 | Owned          |
| 04.280211   | Trailer FW End Dump/Stablelift | Clement              | Rock Star      | 2015 | Owned          |
| 04.280213   | Trailer FW End Dump/Stablelift | Clement              | Rock Star      | 2015 | Owned          |
| 04.280216   | Trailer FW End Dump/Stablelift | Clement              | Rock Star      | 2015 | Owned          |
| 04.280217   | Trailer FW End Dump/Stablelift | Clement              | Rock Star      | 2015 | Owned          |
| 04.280218   | Trailer FW End Dump/Stablelift | Clement              | Rock Star      | 2015 | Owned          |
| 04.280219   | Trailer FW End Dump/Stablelift | Clement              | ROT3645WETBR   | 2015 | Owned          |
| 04.280228   | Trailer FW Asphalt Tanker      | Etnyre               | T79            | 2015 | Owned          |
| 04.280229   | Trailer FW Asphalt Tanker      | Etnyre               | T79            | 2015 | Owned          |
| 04.280230   | Trailer FW Asphalt Tanker      | Etnyre               | T79            | 2015 | Owned          |
| 04.280231   | Trailer FW Asphalt Tanker      | Etnyre               | T79            | 2015 | Owned          |
| 04.280232   | Trailer FW Asphalt Tanker      | Etnyre               | T79            | 2015 | Owned          |
| 04.280233   | Trailer FW Asphalt Tanker      | Etnyre               | T79            | 2015 | Owned          |
| 04.280234   | Trailer FW Asphalt Tanker      | Etnyre               | T79            | 2015 | Owned          |
| 04.280235   | Trailer FW Asphalt Tanker      | Etnyre               | T79            | 2015 | Owned          |
| 04.280236   | Trailer FW Asphalt Tanker      | Etnyre               | T79            | 2015 | Owned          |
| 04.280240   | Trailer FW Lowboy 30-50Ton     | Etnyre               | RTN60ETD3PS    | 2015 | Owned          |
| 04.280300   | Trailer FW Lowboy < 30Ton      | Viking Spzd Trailers | VFD46R16F35T   | 2017 | Owned          |
| 04.280301   | Trailer FW Water/Fuel Tanker   | Polar Corp.          | N9430          | 2016 | Owned          |
| 04.280302   | Trailer FW Lowboy < 30Ton      | Viking Spzd Trailers | VFD46R16F35T   | 2017 | Owned          |
| 04.280303   | Trailer FW Lowboy < 30Ton      | Viking Spzd Trailers | VFD46R16F35T   | 2017 | Owned          |
| 04.280304   | Trailer FW Lowboy < 30Ton      | Viking Spzd Trailers | VFD46R16F35T   | 2017 | Owned          |
| 04.280305   | Trailer FW Lowboy < 30Ton      | Viking Spzd Trailers | VFD46R16F35T   | 2017 | Owned          |
| 04.280306   | Trailer FW Lowboy 30-50Ton     | Etnyre               | PRTN55TD3      | 2017 | Owned          |
| 04.280311   | Trailer FW Asphalt Tanker      | Etnyre               | T85            | 2019 | Owned          |
| 04.280312   | Trailer FW Asphalt Tanker      | Etnyre               | T85            | 2019 | Owned          |
| 04.280313   | Trailer FW Asphalt Tanker      | Etnyre               | T85            | 2019 | Owned          |
| 04.280314   | Trailer FW Asphalt Tanker      | Etnyre               | T85            | 2019 | Owned          |
| 04.280315   | Trailer FW Asphalt Tanker      | Etnyre               | T85            | 2019 | Owned          |
| 04.280320   | Trailer FW Lowboy 30-50Ton     | Etnyre               | PRTN55TD3      | 2018 | Owned          |
| 04.280339   | Trailer FW Asphalt Tanker      | Heil                 | 7500           | 2021 | Owned          |
| 04.280340   | Trailer FW Asphalt Tanker      | Heil                 | 7500           | 2021 | Owned          |
| 04.280341   | Trailer FW Asphalt Tanker      | Heil                 | 7500           | 2021 | Owned          |
| 04.280342   | Trailer FW Asphalt Tanker      | Heil                 | 7500           | 2021 | Owned          |



| Equipment # | Description                    | Make        | Model             | Year | Ownership Type |
|-------------|--------------------------------|-------------|-------------------|------|----------------|
| 04.280343   | Trailer FW Asphalt Tanker      | Heil        | 7500              | 2021 | Owned          |
| 04.280344   | Trailer FW Asphalt Tanker      | Heil        | 7500              | 2021 | Owned          |
| 04.280345   | Trailer FW Asphalt Tanker      | Heil        | 7500              | 2021 | Owned          |
| 04.280355   | Trailer FW Dry Bulk Cement     | Nova        | Tanker            | 1998 | Owned          |
| 04.280356   | Trailer FW Dry Bulk Cement     | Dragon      | 130BBL            | 2016 | Owned          |
| 04.280358   | Trailer FW Asphalt Tanker      | Etnyre      | T95               | 2021 | Owned          |
| 04.280360   | Trailer FW Lowboy < 30Ton      | Top Hat     | 24X83''' EHGN 14K | 2021 | Owned          |
| 04.280361   | Trailer FW Platform/Float      | Top Hat     | 24X83''' EHGN 14K | 2021 | Owned          |
| 04.280372   | Trailer FW Lowboy 30-50Ton     | Etnyre      | LB240-3A          | 2025 | Owned          |
| 04.380012   | Trailer FW Dry Van             | Lark United | VT716TA           | 2017 | Owned          |
| 04.700215   | Trailer FW End Dump/Stablelift | Clement     | Rock Star         | 2015 | Owned          |
| 04.700259   | Trailer FW End Dump/Stablelift | Clement     | Pavestar          | 2017 | Owned          |
| 04.700261   | Trailer FW End Dump/Stablelift | Clement     | Pavestar          | 2017 | Owned          |
| 04.700265   | Trailer FW End Dump/Stablelift | Clement     | Pavestar          | 2017 | Owned          |
| 04.700276   | Trailer FW End Dump/Stablelift | Clement     | Pavestar          | 2017 | Owned          |
| 04.700353   | Trailer FW Dry Bulk Cement     | Tremcar     | 1625 CF           | 2019 | Owned          |
| 04.700354   | Trailer FW Dry Bulk Cement     | Tremcar     | 1625 CF           | 2019 | Owned          |
|             |                                |             |                   |      |                |
| 07.280764   | Truck Mech 14K-19.5K lb GVW    | Dodge       | 5500              | 2014 | Owned          |
| 07.280788   | Truck Mech 14K-19.5K lb GVW    | Ford        | F550              | 2016 | Owned          |
| 07.280842   | Truck Mech 14K-19.5K lb GVW    | Ford        | F550              | 2016 | Owned          |
| 07.280850   | Truck Mech 14K-19.5K lb GVW    | Ford        | F550              | 2016 | Owned          |
| 07.280870   | Truck Mech 14K-19.5K lb GVW    | Ford        | F550              | 2017 | Owned          |
| 07.280922   | Truck Mech 14K-19.5K lb GVW    | Ford        | F550              | 2019 | Owned          |
| 07.280949   | Truck Mech 19.6K-26K lb GVW    | Peterbilt   | 337               | 2020 | Owned          |
| 07.280953   | Truck Mech 19.6K-26K lb GVW    | Kenworth    | T270              | 2020 | Owned          |
| 07.280977   | Truck Mech 19.6K-26K lb GVW    | Peterbilt   | 337               | 2020 | Owned          |
| 07.280983   | Truck Mech 19.6K-26K lb GVW    | Kenworth    | T270              | 2021 | Owned          |
| 07.280984   | Truck Mech 19.6K-26K lb GVW    | Kenworth    | T270              | 2024 | Owned          |
| 07.700721   | Truck Mech 14K-19.5K lb GVW    | Ford        | F550              | 2013 | Owned          |
| 07.700972   | Truck Mech 19.6K-26K lb GVW    | Kenworth    | T270              | 2021 | Owned          |
|             |                                |             |                   |      |                |
| 10.280001   | Crane Rough Terrain >45Ton     | Grove       | GRT655L           | 2021 | Owned          |
| 10.700001   | Crane Rough Terrain >45Ton     | Grove       | GRT880            | 2018 | Owned          |
| 10.700010   | Crane Rough Terrain >45Ton     | Grove       | RT880E            | 2015 | Owned          |
|             |                                |             |                   |      |                |
| 12.280110   | Forklift Telescop > 8K lb      | Hyster      | H35FT             | 2006 | Owned          |
| 12.281100   | Forklift Telescop > 8K lb      | Caterpillar | TL1055C           | 2000 | Owned          |
| 12.281101   | Forklift Telescop > 8K lb      | Caterpillar | TL1055C           | 2000 | Owned          |
| 12.289162   | Boom Lift RT to 59' Gas/Dsl    | JLG         | 460SJ             | 2024 | Rented         |
| 12.289183   | Forklift Warehouse to 6K lb    | Heli        | CPYD30            | 2022 | Rented         |
| 12.289261   | Forklift Telescop > 8K lb      | JLG         | 600               | 2023 | Rented         |
| 12.289270   | Boom Lift RT to 59' Gas/Dsl    | JLG         | 460SJ             | 2023 | Rented         |
| 12.289332   | Boom Lift RT to 59' Gas/Dsl    | JLG         | 400S              | 2023 | Rented         |
| 12.289333   | Boom Lift RT 60' & Up Gas/Dsl  | Genie       | S85XC             | 2024 | Rented         |
| 12.289390   | Boom Lift RT 60' & Up Gas/Dsl  | JLG         | 1200SJP           | 2023 | Rented         |
| 12.289391   | Boom Lift RT 60' & Up Gas/Dsl  | JLG         | 2646ES            | 2023 | Rented         |
| 12.289468   | Forklift Telescop > 8K lb      | Caterpillar | TL1055            | 2023 | Rented         |
| 12.289585   | Boom Lift RT to 59' Gas/Dsl    | JLG         | 460SJ             | 2023 | Rented         |
| 12.289599   | Boom Lift RT to 59' Gas/Dsl    | Genie       | GS1930            | 2022 | Rented         |
| 12.289652   | Forklift Telescop > 8K lb      | Caterpillar | TL1055D           | 2020 | Rented         |
| 12.289656   | Boom Lift RT 60' & Up Gas/Dsl  | Genie       | ZX135/70          | 2018 | Rented         |
| 12.289715   | Forklift Telescop > 8K lb      | Caterpillar | TL1055            | 2024 | Rented         |
| 12.289806   | Forklift Telescop > 8K lb      | Caterpillar | TL1255            | 2024 | Rented         |
| 12.289931   | Forklift Telescop > 8K lb      | Caterpillar | TL943             | 2024 | Rented         |

| Equipment # | Description                    | Make           | Model      | Year | Ownership Type |
|-------------|--------------------------------|----------------|------------|------|----------------|
| 12.289933   | Boom Lift RT 60' & Up Gas/Dsl  | JLG            | 860SJ      | 2019 | Rented         |
| 12.289937   | Forklift Telescop > 8K lb      | Caterpillar    | TL1255     | 2024 | Rented         |
| 12.289980   | Forklift Telescop > 8K lb      | Caterpillar    | TL1255     | 2024 | Rented         |
|             |                                |                |            |      |                |
| 13.280009   | Vacuum/Broom Truck             | Elgin          | Broom Bear | 2016 | Owned          |
| 13.280010   | Vacuum/Broom Truck             | Freightliner   | M2 106     | 2018 | Owned          |
| 13.280011   | Vacuum/Broom Truck             | Elgin          | Badger     | 2023 | Owned          |
| 13.280028   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | RJ350      | 2009 | Owned          |
| 13.280042   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | KR350      | 2014 | Owned          |
| 13.280049   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | CRT350     | 2015 | Owned          |
| 13.280051   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | CRT350     | 2015 | Owned          |
| 13.280056   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | CRT350     | 2016 | Owned          |
| 13.280057   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | CRT350     | 2017 | Owned          |
| 13.280058   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | CRT350     | 2017 | Owned          |
| 13.280059   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | CRT350     | 2017 | Owned          |
| 13.280060   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | CRT350     | 2017 | Owned          |
| 13.280061   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | CRT350     | 2017 | Owned          |
| 13.280062   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | RJT350     | 2019 | Owned          |
| 13.280067   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | RJT350     | 2020 | Owned          |
| 13.280068   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | RJT350     | 2021 | Owned          |
| 13.280069   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | RJT350     | 2021 | Owned          |
| 13.289045   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | RCT 350    | 2023 | Rented         |
| 13.289046   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | RCT 350    | 2023 | Rented         |
| 13.289804   | Broom 4 Whl Self-Prop Frt Mtd  | Laymor         | SM300      | 1951 | Rented         |
| 13.289880   | Broom 4 Whl Self-Prop Frt Mtd  | Leeboy         | RB50       | 2024 | Rented         |
| 13.289979   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | RCT 350    | 2023 | Rented         |
| 13.700041   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | RJ350      | 2012 | Owned          |
| 13.700044   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | KR350      | 2014 | Owned          |
| 13.700045   | Broom 4 Whl Self-Prop Frt Mtd  | Broce          | KR350      | 2014 | Owned          |
|             |                                |                |            |      |                |
| 14.280061   | Dozer Crawl 71-95hp D4/D41     | John Deere     | 450J       | 2014 | Owned          |
| 14.280069   | Dozer Crawl 96-125hp D5/D58    | Caterpillar    | D5K II     | 2018 | Owned          |
| 14.280070   | Dozer Crawl 96-125hp D5/D58    | Caterpillar    | D5K II     | 2018 | Owned          |
| 14.280071   | Dozer Crawl 71-95hp D4/D41     | Caterpillar    | D5K II     | 2019 | Owned          |
| 14.280073   | Dozer Crawl 71-95hp D4/D41     | John Deere     | 450K       | 2019 | Owned          |
| 14.280078   | Dozer Crawl 71-95hp D4/D41     | Caterpillar    | D4         | 2019 | Owned          |
| 14.280079   | Dozer Crawl 71-95hp D4/D41     | Caterpillar    | D4         | 2021 | Owned          |
| 14.280083   | Dozer Crawl 96-125hp D5/D58    | John Deere     | 650K       | 2022 | Owned          |
| 14.700075   | Dozer Crawl 126-155hp D6/D61   | Caterpillar    | D6         | 2019 | Owned          |
|             |                                |                |            |      |                |
| 15.700007   | Scraper Self Load to 12CY      | Caterpillar    | 613C       | 2009 | Owned          |
|             |                                |                |            |      |                |
| 16.280002   | Small boat - Skiffs, Crew, etc | Alumacraft     | T12V       | 2011 | Owned          |
| 16.700001   | Small boat - Skiffs, Crew, etc | Tracker Marine | 1754 JON   | 2006 | Owned          |
|             |                                |                |            |      |                |
| 20.280007   | Asphalt/Sealer Kettle/Pot      | Cimline PMG    | TK250T     | 2011 | Owned          |
| 20.280010   | Asphalt/Sealer Kettle/Pot      | Marathon       | KERA 145HD | 2015 | Owned          |
| 20.280012   | Asphalt/Sealer Kettle/Pot      | Cimline PMG    | K5         | 2020 | Owned          |
| 20.280013   | Asphalt/Sealer Kettle/Pot      | Marathon       | KERA 130D  | 2020 | Owned          |
| 20.280014   | Asphalt/Sealer Kettle/Pot      | Marathon       | KERA 145HD | 2021 | Owned          |
|             |                                |                |            |      |                |
| 21.280005   | Generator Diesel 50-100kw      | Aksa           | 125KW      | 2013 | Owned          |
| 21.280006   | Generator Diesel 5-49kw        | Aksa           | 125KW      | 2014 | Owned          |
| 21.280007   | Generator Diesel 50-100kw      | Caterpillar    | XQ800      | 2012 | Owned          |
| 21.289691   | Generator Diesel 101-200kw     | Cummins        | C150D6R    | 2015 | Rented         |



| Equipment # | Description             | Make        | Model    | Year | Ownership Type |
|-------------|-------------------------|-------------|----------|------|----------------|
| 23.259919   | Loader RT 5.1-6CY 970   | Volvo       | L150G    | 2017 | Owned          |
| 23.280001   | Loader RT 2.1-3CY 936   | John Deere  | 710K     | 2013 | Owned          |
| 23.280009   | Skid Steer Track Loader | Caterpillar | 299D     | 2020 | Owned          |
| 23.280038   | Loader RT 2.1-3CY 936   | John Deere  | 544K     | 2013 | Owned          |
| 23.280044   | Loader RT 2.1-3CY 936   | John Deere  | 544K     | 2016 | Owned          |
| 23.280046   | Loader RT 2.1-3CY 936   | John Deere  | 544K     | 2019 | Owned          |
| 23.280047   | Loader RT 2.1-3CY 936   | John Deere  | 544K     | 2019 | Owned          |
| 23.280050   | Loader RT 2.1-3CY 936   | John Deere  | 544L     | 2020 | Owned          |
| 23.280053   | Loader RT 2.1-3CY 936   | John Deere  | 544L     | 2020 | Owned          |
| 23.280054   | Loader RT 2.1-3CY 936   | John Deere  | 544L     | 2021 | Owned          |
| 23.280055   | Loader RT 2.1-3CY 936   | John Deere  | 544K     | 2019 | Owned          |
| 23.280056   | Loader RT 2.1-3CY 936   | John Deere  | 544K     | 2019 | Owned          |
| 23.280057   | Loader RT 3.1-4CY 950   | Volvo       | L70H     | 2022 | Owned          |
| 23.280058   | Loader RT 3.1-4CY 950   | Volvo       | L70H     | 2022 | Owned          |
| 23.280059   | Loader RT 3.1-4CY 950   | Volvo       | L70H     | 2022 | Owned          |
| 23.280149   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2016 | Owned          |
| 23.280153   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2017 | Owned          |
| 23.280154   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2017 | Owned          |
| 23.280155   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2016 | Owned          |
| 23.280156   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2017 | Owned          |
| 23.280157   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2017 | Owned          |
| 23.280158   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2017 | Owned          |
| 23.280160   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2019 | Owned          |
| 23.280161   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2019 | Owned          |
| 23.280162   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2019 | Owned          |
| 23.280163   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2019 | Owned          |
| 23.280164   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2021 | Owned          |
| 23.280168   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2021 | Owned          |
| 23.280169   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980M     | 2021 | Owned          |
| 23.280170   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980 XE   | 2023 | Owned          |
| 23.280171   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980 XE   | 2023 | Owned          |
| 23.280172   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980 XE   | 2023 | Owned          |
| 23.280173   | Loader RT 6.1-7.5CY 980 | Volvo       | L220H    | 2023 | Owned          |
| 23.280174   | Loader RT 6.1-7.5CY 980 | Volvo       | L220H    | 2023 | Owned          |
| 23.280175   | Loader RT 6.1-7.5CY 980 | Volvo       | L220H    | 2023 | Owned          |
| 23.280176   | Loader RT 6.1-7.5CY 980 | Volvo       | L220H    | 2023 | Owned          |
| 23.280177   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980 XE   | 2024 | Owned          |
| 23.280178   | Loader RT 6.1-7.5CY 980 | Caterpillar | 980 XE   | 2024 | Owned          |
| 23.280179   | Loader RT 4.1-5CY 966   | Volvo       | L180H    | 2023 | Owned          |
| 23.280216   | Skid Steer Tire Loader  | John Deere  | 318D     | 2013 | Owned          |
| 23.289036   | Skid Steer Track Loader | Kubota      | SSV75-2  | 2022 | Rented         |
| 23.289136   | Skid Steer Track Loader | Caterpillar | 299D3 XE | 2024 | Rented         |
| 23.289294   | Skid Steer Track Loader | Caterpillar | 259      | 2023 | Rented         |
| 23.289362   | Skid Steer Tire Loader  | Caterpillar | 272D3    | 2022 | Rented         |
| 23.289398   | Skid Steer Tire Loader  | Bobcat      | S590     | 2024 | Rented         |
| 23.289418   | Skid Steer Track Loader | Takeuchi    | TL8      | 2023 | Rented         |
| 23.289428   | Skid Steer Track Loader | Gehl        | RT210    | 2021 | Rented         |
| 23.289489   | Skid Steer Track Loader | Caterpillar | 289D3    | 2024 | Rented         |
| 23.289491   | Skid Steer Track Loader | Caterpillar | 289D3    | 2024 | Rented         |
| 23.289538   | Skid Steer Track Loader | Caterpillar | 289D     | 2023 | Rented         |
| 23.289540   | Skid Steer Track Loader | Caterpillar | 289D     | 2023 | Rented         |
| 23.289718   | Skid Steer Track Loader | Caterpillar | 289D3    | 2024 | Rented         |
| 23.289720   | Skid Steer Track Loader | Caterpillar | 289D3    | 2024 | Rented         |
| 23.289722   | Skid Steer Track Loader | Caterpillar | 289D3    | 2024 | Rented         |

| Equipment # | Description                    | Make        | Model     | Year | Ownership Type |
|-------------|--------------------------------|-------------|-----------|------|----------------|
| 23.289723   | Skid Steer Track Loader        | Caterpillar | 289D3     | 2024 | Rented         |
| 23.289727   | Skid Steer Track Loader        | Caterpillar | 289D3     | 2024 | Rented         |
| 23.289818   | Skid Steer Track Loader        | Bobcat      | T740      | 2021 | Rented         |
| 23.289963   | Skid Steer Track Loader        | Caterpillar | 299D3 XE  | 2022 | Rented         |
| 23.700009   | Skid Steer Tire Loader         | John Deere  | 317G      | 2019 | Owned          |
| 23.700026   | Loader RT 2.1-3CY 936          | John Deere  | 544J      | 2006 | Owned          |
| 23.700045   | Loader RT 3.1-4CY 950          | John Deere  | 644K      | 2017 | Owned          |
| 23.702450   | Loader RT 5.1-6CY 970          | Volvo       | L150H     | 2018 | Owned          |
| 23.702451   | Loader RT 5.1-6CY 970          | Volvo       | L150H     | 2018 | Owned          |
|             |                                |             |           |      |                |
| 24.280041   | Loader Backhoe <15ft 416       | John Deere  | 310SL     | 2016 | Owned          |
| 24.280046   | Loader Backhoe <15ft 416       | John Deere  | 310SL     | 2017 | Owned          |
| 24.280047   | Loader Backhoe <15ft 416       | John Deere  | 310SL     | 2017 | Owned          |
| 24.280048   | Loader Backhoe <15ft 416       | John Deere  | 310SL     | 2017 | Owned          |
| 24.280049   | Loader Backhoe <15ft 416       | John Deere  | 310SL     | 2020 | Owned          |
| 24.280050   | Loader Backhoe <15ft 416       | John Deere  | 310SL     | 2020 | Owned          |
| 24.289109   | Loader Backhoe 15-16ft 426     | Caterpillar | 420 XE    | 2023 | Rented         |
| 24.289119   | Loader Backhoe 15-16ft 426     | Caterpillar | 420 XE    | 2023 | Rented         |
| 24.289575   | Loader Backhoe 15-16ft 426     | Caterpillar | 420E      | 2024 | Rented         |
| 24.289597   | Loader Backhoe <15ft 416       | John Deere  | 310LEP    | 2019 | Rented         |
| 24.289680   | Loader Backhoe <15ft 416       | John Deere  | 310LEP    | 2021 | Rented         |
| 24.289816   | Loader Backhoe 15-16ft 426     | Caterpillar | 420E      | 2023 | Rented         |
| 24.289852   | Loader Backhoe <15ft 416       | Caterpillar | 416       | 2024 | Rented         |
| 24.700042   | Loader Backhoe <15ft 416       | John Deere  | 310L      | 2016 | Owned          |
| 24.700052   | Loader Backhoe 15-16ft 426     | Caterpillar | 420F      | 2019 | Owned          |
| 24.700053   | Loader Backhoe 15-16ft 426     | Caterpillar | 420F      | 2019 | Owned          |
|             |                                |             |           |      |                |
| 27.280029   | Haul Truck Articulate 26-30Ton | Caterpillar | 725C II   | 2017 | Owned          |
| 27.280033   | Haul Truck Articulate 26-30Ton | Caterpillar | 730C II   | 2019 | Owned          |
|             |                                |             |           |      |                |
| 29.280008   | Spreader Chip Self-Propelled   | Etnyre      | K Series  | 2018 | Owned          |
| 29.280009   | Spreader Chip Self-Propelled   | Etnyre      | K Series  | 2020 | Owned          |
| 29.280010   | Hyd Hammer > 3300 ftlb         | Epiroc      | HB3100    | 2018 | Owned          |
| 29.280012   | Hyd Hammer > 3300 ftlb         | Epiroc      | HB3100    | 2018 | Owned          |
| 29.280013   | Hyd Hammer 1201-3300 ftlb      | Epiroc      | HB3100    | 2021 | Owned          |
| 29.280014   | Hyd Hammer > 3300 ftlb         | Epiroc      | MB 1000   | 2018 | Owned          |
| 29.280015   | Hyd Hammer > 3300 ftlb         | Epiroc      | HB3100    | 2018 | Owned          |
| 29.280016   | Hyd Hammer 1201-3300 ftlb      | Epiroc      | MB 1000   | 2018 | Owned          |
| 29.280017   | Hyd Hammer > 3300 ftlb         | Epiroc      | MB 1000   | 2022 | Owned          |
| 29.280018   | Hyd Hammer > 3300 ftlb         | Epiroc      | MB 1000   | 2022 | Owned          |
| 29.280019   | Hyd Hammer 1201-3300 ftlb      | Epiroc      | HB3100    | 2022 | Owned          |
| 29.280020   | Hyd Hammer 1201-3300 ftlb      | Epiroc      | HB3100    | 2022 | Owned          |
| 29.280021   | Hyd Hammer > 3300 ftlb         | Epiroc      | HB3100    | 2018 | Owned          |
| 29.280022   | Hyd Hammer > 3300 ftlb         | Epiroc      | HB3100    | 2022 | Owned          |
| 29.280023   | Hyd Hammer to 1200 ftlb.       | Gomaco      | RTP500    | 2022 | Owned          |
| 29.280024   | Hyd Hammer 1201-3300 ftlb      | Epiroc      | MB 1000   | 2022 | Owned          |
| 29.280025   | Hyd Hammer 1201-3300 ftlb      | Epiroc      | MB 1000   | 2022 | Owned          |
| 29.280026   | Hyd Hammer > 3300 ftlb         | Epiroc      | MB 1000   | 2022 | Owned          |
| 29.280027   | Hyd Hammer > 3300 ftlb         | Epiroc      | MB 1000   | 2018 | Owned          |
| 29.280028   | Hyd Hammer > 3300 ftlb         | Epiroc      | HB3100    | 2018 | Owned          |
| 29.280029   | Hyd Hammer > 3300 ftlb         | Atlas       | ER1500-3X | 2015 | Owned          |
| 29.280030   | Hyd Hammer to 1200 ftlb.       | Epiroc      | MB 1000   | 2018 | Owned          |
| 29.280031   | Hyd Hammer to 1200 ftlb.       | Kent        | KHP35     | 2018 | Owned          |
| 29.280032   | Hyd Hammer > 3300 ftlb         | Epiroc      | MB 1000   | 2022 | Owned          |
| 29.280033   | Hyd Hammer 1201-3300 ftlb      | Epiroc      | MB 1000   | 2018 | Owned          |

| Equipment # | Description                  | Make        | Model   | Year | Ownership Type |
|-------------|------------------------------|-------------|---------|------|----------------|
| 29.280034   | Hyd Hammer > 3300 ftlb       | Epiroc      | MB 1000 | 2018 | Owned          |
| 29.280035   | Hyd Hammer > 3300 ftlb       | Epiroc      | MB 1000 | 2018 | Owned          |
| 29.280036   | Hyd Hammer > 3300 ftlb       | Okada       | 210     | 2018 | Owned          |
| 29.280037   | Hyd Hammer > 3300 ftlb       | NPK         | GH12    | 2024 | Owned          |
| 29.280038   | Hyd Hammer > 3300 ftlb       | NPK         | GH12    | 2024 | Owned          |
| 29.280039   | Hyd Hammer to 1200 ftlb.     | Epiroc      | HB3100  | 2024 | Owned          |
| 29.280040   | Hyd Hammer to 1200 ftlb.     | Epiroc      | HB3100  | 2024 | Owned          |
| 29.280041   | Hyd Hammer 1201-3300 ftlb    | NPK         | GH12    | 2024 | Owned          |
| 29.280042   | Hyd Hammer 1201-3300 ftlb    | NPK         | GH12    | 2024 | Owned          |
| 29.280043   | Hyd Hammer 1201-3300 ftlb    | NPK         | GH12    | 2024 | Owned          |
| 29.280044   | Hyd Hammer 1201-3300 ftlb    | NPK         | GH12    | 2024 | Owned          |
| 29.280045   | Hyd Hammer 1201-3300 ftlb    | NPK         | GH12    | 2024 | Owned          |
| 29.280101   | Hyd Hammer > 3300 ftlb       | Okada       | 210     | 2007 | Owned          |
| 29.289932   | Pile Driver Dsl 51-100K ftlb | Furukawa    | FX375   | 2024 | Rented         |
| 29.350004   | Road Widener Attachment      | Blaw Knox   | RW100B  | 2014 | Owned          |
|             |                              |             |         |      |                |
| 30.280030   | Grader 201-274hp 14          | John Deere  | 672G    | 2011 | Owned          |
| 30.280038   | Grader 126-144hp             | Caterpillar | 12M3    | 2016 | Owned          |
| 30.280039   | Grader 126-144hp             | Caterpillar | 120M    | 2016 | Owned          |
| 30.280043   | Grader 201-274hp 14          | Caterpillar | 140M II | 2019 | Owned          |
| 30.280045   | Grader 201-274hp 14          | John Deere  | 670G    | 2020 | Owned          |
| 30.280046   | Grader 201-274hp 14          | Caterpillar | 140     | 2023 | Owned          |
| 30.700033   | Grader 201-274hp 14          | Caterpillar | 140M    | 2011 | Owned          |
| 30.700036   | Grader 201-274hp 14          | Caterpillar | 140M    | 2015 | Owned          |
| 30.700040   | Grader 201-274hp 14          | Caterpillar | 140M    | 2019 | Owned          |
|             |                              |             |         |      |                |
| 31.280041   | Excavator Crwlr 18-23Ton 320 | Caterpillar | 320E    | 2013 | Owned          |
| 31.280048   | Excavator Crwlr 41-50Ton 345 | Caterpillar | 336F    | 2015 | Owned          |
| 31.280058   | Excavator Crwlr 41-50Ton 345 | Caterpillar | 336FL   | 2017 | Owned          |
| 31.280059   | Excavator Crwlr 41-50Ton 345 | Caterpillar | 336FL   | 2017 | Owned          |
| 31.280060   | Excavator Crwlr 41-50Ton 345 | Caterpillar | 336FL   | 2017 | Owned          |
| 31.280064   | Excavator Crwlr 41-50Ton 345 | Caterpillar | 336FL   | 2019 | Owned          |
| 31.280065   | Excavator Crwlr 28-32Ton 325 | John Deere  | 245G    | 2019 | Owned          |
| 31.280066   | Excavator Crwlr 33-40Ton 330 | Caterpillar | 336     | 2019 | Owned          |
| 31.280067   | Excavator Crwlr 33-40Ton 330 | Caterpillar | 336     | 2019 | Owned          |
| 31.280073   | Excavator Crwlr 33-40Ton 330 | Caterpillar | 336     | 2020 | Owned          |
| 31.280074   | Excavator Crwlr 33-40Ton 330 | Caterpillar | 336     | 2020 | Owned          |
| 31.280075   | Excavator Crwlr 28-32Ton 325 | Caterpillar | 325     | 2020 | Owned          |
| 31.280077   | Excavator Crwlr 33-40Ton 330 | Caterpillar | 336     | 2020 | Owned          |
| 31.280078   | Excavator Crwlr 33-40Ton 330 | Caterpillar | 336     | 2020 | Owned          |
| 31.280079   | Excavator Crwlr 33-40Ton 330 | Caterpillar | 336     | 2020 | Owned          |
| 31.280083   | Excavator Crwlr 28-32Ton 325 | John Deere  | 245G    | 2020 | Owned          |
| 31.280085   | Excavator Crwlr 18-23Ton 320 | Caterpillar | 320 07  | 2019 | Owned          |
| 31.280087   | Excavator Crwlr 33-40Ton 330 | Caterpillar | 305E2   | 2021 | Owned          |
| 31.280090   | Excavator Crwlr 41-50Ton 345 | Volvo       | EC350EL | 2022 | Owned          |
| 31.280091   | Excavator Crwlr 41-50Ton 345 | Volvo       | EC350EL | 2022 | Owned          |
| 31.280092   | Excavator Crwlr 33-40Ton 330 | Volvo       | EC300EL | 2023 | Owned          |
| 31.280093   | Excavator Crwlr 33-40Ton 330 | Volvo       | EC300EL | 2023 | Owned          |
| 31.280094   | Excavator Crwlr 33-40Ton 330 | Volvo       | EC300EL | 2023 | Owned          |
| 31.280095   | Excavator Crwlr 18-23Ton 320 | Volvo       | EC220E  | 2023 | Owned          |
| 31.280096   | Excavator Crwlr 18-23Ton 320 | Volvo       | EC220E  | 2023 | Owned          |
| 31.280097   | Excavator Crwlr 18-23Ton 320 | Volvo       | EC220EL | 2023 | Owned          |
| 31.280098   | Excavator Crwlr 18-23Ton 320 | Volvo       | EC220EL | 2023 | Owned          |
| 31.280099   | Excavator Crwlr 41-50Ton 345 | Volvo       | EC350EL | 2023 | Owned          |
| 31.280100   | Excavator Crwlr 33-40Ton 330 | Volvo       | EC300EL | 2024 | Owned          |

| Equipment # | Description                  | Make          | Model            | Year | Ownership Type |
|-------------|------------------------------|---------------|------------------|------|----------------|
| 31.280101   | Excavator Crwlr 33-40Ton 330 | Volvo         | EC300EL          | 2024 | Owned          |
| 31.280207   | Excavator Crwlr 33-40Ton 330 | Caterpillar   | 330F LCR         | 2017 | Owned          |
| 31.280208   | Excavator Crwlr 33-40Ton 330 | Caterpillar   | 335F LCR         | 2017 | Owned          |
| 31.289056   | Excavator Crawler to 12Ton   | Volvo         | ECR145E          | 2021 | Rented         |
| 31.289345   | Excavator Crawler to 12Ton   | Volvo         | ECR145E          | 2022 | Rented         |
| 31.289646   | Excavator Crawler to 12Ton   | Bobcat        | E35              | 2022 | Rented         |
| 31.700039   | Excavator Crwlr 33-40Ton 330 | Caterpillar   | 329E             | 2012 | Owned          |
| 31.700046   | Excavator Crawler to 12Ton   | John Deere    | 35G              | 2015 | Owned          |
| 31.700070   | Excavator Crawler to 12Ton   | John Deere    | 30G              | 2017 | Owned          |
| 31.700071   | Excavator Crawler to 12Ton   | John Deere    | 35G              | 2019 | Owned          |
|             |                              |               |                  |      |                |
| 32.280010   | Excavator Truck Mtd Gradall  | Gradall       | XL4100           | 2017 | Owned          |
| 32.280011   | Excavator Truck Mtd Gradall  | Gradall       | XL4100           | 2019 | Owned          |
| 32.280012   | Excavator Truck Mtd Gradall  | Gradall       | 4100             | 2023 | Owned          |
|             |                              |               |                  |      |                |
| 34.250081   | T/C Arrowboard               | Terex         | AL 4000          | 2008 | Owned          |
| 34.280001   | Light Plants                 | Wacker Neuson | LTV6L            | 2008 | Owned          |
| 34.280003   | T/C Arrowboard               | Wanco         | WTSP55LSA        | 2001 | Owned          |
| 34.280010   | Light Plants                 | Wacker Neuson | LTV6L            | 2013 | Owned          |
| 34.280015   | T/C Arrowboard               | Wanco         | WTSP55LSA        | 2008 | Owned          |
| 34.280016   | T/C Arrowboard               | Wanco         | WTSP55LSA        | 2004 | Owned          |
| 34.280017   | T/C Message Boards           | Solar Tech    | Silent Messenger | 2009 | Owned          |
| 34.280022   | T/C Arrowboard               | Solar Tech    | Silent Sentinel  | 2011 | Owned          |
| 34.280031   | T/C Message Boards           | Solar Tech    | Silent Messenger | 2013 | Owned          |
| 34.280033   | T/C Message Boards           | Solar Tech    | Silent Messenger | 2013 | Owned          |
| 34.280034   | T/C Arrowboard               | Solar Tech    | Silent Sentinel  | 2012 | Owned          |
| 34.280035   | T/C Arrowboard               | Wanco         | WTSP55LSA        | 2014 | Owned          |
| 34.280036   | T/C Arrowboard               | Wanco         | WTSP55LSA        | 2014 | Owned          |
| 34.280039   | T/C Arrowboard               | Wanco         | WTSP55LSA        | 2014 | Owned          |
| 34.280043   | T/C Message Boards           | Solar Tech    | Silent Messenger | 2016 | Owned          |
| 34.280044   | T/C Message Boards           | Solar Tech    | Silent Messenger | 2016 | Owned          |
| 34.280046   | T/C Message Boards           | Solar Tech    | Silent Messenger | 2016 | Owned          |
| 34.280049   | T/C Arrowboard               | Wanco         | WTSP55LSA        | 2017 | Owned          |
| 34.280054   | T/C Arrowboard               | Wanco         | WTSP55LSA        | 2017 | Owned          |
| 34.280055   | T/C Arrowboard               | Wanco         | WTSP55LSA        | 2017 | Owned          |
| 34.280065   | T/C Arrowboard               | Solar Tech    | AB0525           | 2020 | Owned          |
| 34.280066   | T/C Arrowboard               | Solar Tech    | AB0525           | 2020 | Owned          |
| 34.280067   | T/C Arrowboard               | Solar Tech    | AB0525           | 2020 | Owned          |
| 34.280068   | T/C Arrowboard               | Solar Tech    | AB0525           | 2020 | Owned          |
| 34.280069   | T/C Arrowboard               | Solar Tech    | AB0525           | 2020 | Owned          |
| 34.280070   | T/C Arrowboard               | Solar Tech    | AB0525           | 2020 | Owned          |
| 34.280073   | T/C Message Boards           | Solar Tech    | Silent Messenger | 2019 | Owned          |
| 34.280074   | T/C Message Boards           | Solar Tech    | Silent Messenger | 2019 | Owned          |
| 34.280075   | T/C Message Boards           | Solar Tech    | Silent Messenger | 2019 | Owned          |
| 34.280077   | T/C Message Boards           | Solar Tech    | Silent Messenger | 2019 | Owned          |
| 34.280079   | Light Plants                 | Magnum        | MLT 3060K        | 2013 | Owned          |
| 34.280100   | Light Plants                 | Terex         | AL 4000          | 2008 | Owned          |
| 34.280101   | Light Plants                 | Terex         | AL 4000          | 2008 | Owned          |
| 34.280102   | Light Plants                 | Terex         | AL 4000          | 2008 | Owned          |
| 34.280327   | T/C Attenuator Trucks        | International | 4700             | 2001 | Owned          |
| 34.280481   | T/C Attenuator Trucks        | International | 4300             | 2005 | Owned          |
| 34.280482   | T/C Attenuator Trucks        | International | 4300             | 2004 | Owned          |
| 34.280483   | T/C Attenuator Trucks        | International | 4300             | 2004 | Owned          |
| 34.280520   | T/C Attenuator Trucks        | International | 4300             | 2010 | Owned          |
| 34.280548   | T/C Attenuator Trucks        | International | 4300             | 2013 | Owned          |

| Equipment # | Description           | Make          | Model            | Year | Ownership Type |
|-------------|-----------------------|---------------|------------------|------|----------------|
| 34.280550   | T/C Attenuator Trucks | International | 4300             | 2013 | Owned          |
| 34.280552   | T/C Attenuator Trucks | International | 4300             | 2013 | Owned          |
| 34.280573   | T/C Attenuator Trucks | International | 4300             | 2012 | Owned          |
| 34.280575   | T/C Attenuator Trucks | International | 4300             | 2013 | Owned          |
| 34.280576   | T/C Attenuator Trucks | International | 4300             | 2013 | Owned          |
| 34.280580   | T/C Attenuator Trucks | International | 4300             | 2013 | Owned          |
| 34.280581   | T/C Attenuator Trucks | International | 4300             | 2013 | Owned          |
| 34.280582   | T/C Attenuator Trucks | International | 4300             | 2013 | Owned          |
| 34.280586   | T/C Attenuator Trucks | Chevrolet     | 6500             | 2007 | Owned          |
| 34.280588   | T/C Attenuator Trucks | Mack          | R600             | 2022 | Owned          |
| 34.280589   | T/C Attenuator Trucks | Mack          | R600             | 2022 | Owned          |
| 34.281016   | T/C Message Boards    | Solar Tech    | Silent Messenger | 2009 | Owned          |
| 34.281034   | T/C Message Boards    | Solar Tech    | Silent Messenger | 2013 | Owned          |
| 34.281049   | T/C Message Boards    | Wanco         | MTLBM-S-LL       | 2017 | Owned          |
| 34.281050   | T/C Message Boards    | Wanco         | MTLBM-S-LL       | 2017 | Owned          |
| 34.281051   | T/C Message Boards    | Wanco         | MTLBM-S-LL       | 2017 | Owned          |
| 34.281054   | T/C Message Boards    | Wanco         | MTLBM-S-LL       | 2017 | Owned          |
| 34.281055   | T/C Message Boards    | Wanco         | MTLBM-S-LL       | 2017 | Owned          |
| 34.281065   | T/C Message Boards    | Solar Tech    | Silent Messenger | 2018 | Owned          |
| 34.281066   | T/C Message Boards    | Solar Tech    | Silent Messenger | 2018 | Owned          |
| 34.281067   | T/C Message Boards    | Solar Tech    | Silent Messenger | 2018 | Owned          |
| 34.284017   | Light Plants          | Magnum        | MLT-3060MMHS     | 2016 | Owned          |
| 34.289045   | T/C Attenuator Trucks | Ford          | F750             | 2018 | Rented         |
| 34.289096   | T/C Message Boards    | Wanco         | WTMMB            | 2022 | Rented         |
| 34.289228   | T/C Attenuator Trucks | International | MV607            | 2022 | Rented         |
| 34.289280   | T/C Message Boards    | Wanco         | WTMMB            | 2022 | Rented         |
| 34.289302   | T/C Message Boards    | Wanco         | WTMMB            | 2021 | Rented         |
| 34.289321   | T/C Message Boards    | Wanco         | WTMMB            | 2018 | Rented         |
| 34.289323   | T/C Message Boards    | Wanco         | WTMMB            | 2022 | Rented         |
| 34.289326   | T/C Message Boards    | Wanco         | WTMMB            | 2022 | Rented         |
| 34.289362   | T/C Message Boards    | Wanco         | WTMMB            | 2018 | Rented         |
| 34.289364   | T/C Message Boards    | Solar Tech    | Silent Messenger | 2020 | Rented         |
| 34.289568   | T/C Message Boards    | Wanco         | WTMMB            | 2022 | Rented         |
| 34.289643   | T/C Message Boards    | Wanco         | WTMMB            | 2020 | Rented         |
| 34.289681   | T/C Message Boards    | Wanco         | WTMMB            | 2022 | Rented         |
| 34.289686   | T/C Message Boards    | Wanco         | WTMMB            | 2023 | Rented         |
| 34.289705   | T/C Message Boards    | Wanco         | WTMMB            | 2018 | Rented         |
| 34.289752   | T/C Message Boards    | Wanco         | WTMMB            | 2021 | Rented         |
| 34.289793   | T/C Message Boards    | Wanco         | WTSP55LSAC       | 2021 | Rented         |
| 34.289829   | Light Plants          | Allmand       | LT NP2 LED       | 2020 | Rented         |
| 34.289952   | Light Plants          | Allmand       | LT NP2 LED       | 2022 | Rented         |
| 34.289959   | T/C Message Boards    | Solar Tech    | Silent Messenger | 2022 | Rented         |
| 34.700021   | T/C Message Boards    | Solar Tech    | Silent Messenger | 2011 | Owned          |
| 34.700030   | T/C Arrowboard        | Solar Tech    | Silent Sentinel  | 2011 | Owned          |
| 34.700040   | T/C Arrowboard        | K&K           | 15 LED           | 2016 | Owned          |
| 34.700045   | T/C Arrowboard        | Arrow Master  | Pro-Line 15      | 2014 | Owned          |
| 34.700089   | T/C Message Boards    | PathMark      | 30210            | 2019 | Owned          |
| 34.700369   | T/C Attenuator Trucks | Chevrolet     | 6500             | 2007 | Owned          |
| 34.700562   | T/C Attenuator Trucks | International | 4300             | 2013 | Owned          |
| 34.701047   | T/C Message Boards    | Wanco         | MTLBM-S-LL       | 2016 | Owned          |
| 34.701058   | T/C Message Boards    | Wanco         | MTLBM-S-LL       | 2017 | Owned          |
| 34.701059   | T/C Message Boards    | Wanco         | MTLBM-S-LL       | 2017 | Owned          |
|             |                       |               |                  |      |                |
| 49.280004   | Pumps o-9'''          | Gorman-Rupp   | 16C2             | 2015 | Owned          |
| 49.280006   | Pumps o-9'''          | Gorman-Rupp   | B16AD            | 2017 | Owned          |



| Equipment # | Description                   | Make         | Model   | Year | Ownership Type |
|-------------|-------------------------------|--------------|---------|------|----------------|
| 49.280007   | Pumps 0-9'''                  | Gorman-Rupp  | B16AD   | 2017 | Owned          |
| 49.280009   | Pumps 0-9'''                  | Global Pump  | 6GSTAP  | 2020 | Owned          |
| 49.280010   | Pumps 0-9'''                  | Gorman-Rupp  | F4L912  | 2012 | Owned          |
| 49.700005   | Pumps 0-9'''                  | Gorman-Rupp  | 16C2F4L | 2011 | Owned          |
|             |                               |              |         |      |                |
| 50.280370   | Truck Bed/Utlty 2 Axle 20-26K | Chevrolet    | 6500    | 2007 | Owned          |
| 50.280485   | Truck Bed/Utlty 2 Axle 20-26K | Freightliner | M21     | 2014 | Owned          |
| 50.280486   | Truck Bed/Utlty 2 Axle 20-26K | Freightliner | M21     | 2013 | Owned          |
| 50.280487   | Truck Bed/Utlty 2 Axle 20-26K | Ford         | 550     | 2022 | Owned          |
| 50.280488   | Truck Bed/Utlty 2 Axle 20-26K | Ford         | 550     | 2022 | Owned          |
| 50.280489   | Truck Bed/Utlty 2 Axle 20-26K | Ford         | 550     | 2022 | Owned          |
| 50.280490   | Truck Bed/Utlty 2 Axle 20-26K | Ford         | 550     | 2022 | Owned          |
| 50.280491   | Truck Bed/Utlty 2 Axle 20-26K | Ford         | 550     | 2022 | Owned          |
| 50.280560   | Truck Bed/Utlty 3 Axle 33-56K | Kenworth     | T370    | 2019 | Owned          |
|             |                               |              |         |      |                |
| 51.280557   | Truck End Dump 3 Axle 11-15CY | Kenworth     | T880    | 2019 | Owned          |
| 51.280558   | Truck End Dump 3 Axle 11-15CY | Kenworth     | T880    | 2019 | Owned          |
| 51.280559   | Truck End Dump 3 Axle 11-15CY | Kenworth     | T880    | 2019 | Owned          |
| 51.289469   | Truck End Dump 2 Axle 5-6CY   | Ford         | F750    | 2021 | Rented         |
|             |                               |              |         |      |                |
| 52.280377   | Truck Tractor 3 Axle > 60K    | Peterbilt    | 384     | 2011 | Owned          |
| 52.280380   | Truck Tractor 3 Axle > 60K    | Peterbilt    | 384     | 2011 | Owned          |
| 52.280389   | Truck Tractor 3 Axle > 60K    | Peterbilt    | 386     | 2011 | Owned          |
| 52.280521   | Truck Tractor 3 Axle > 60K    | Kenworth     | T800    | 2017 | Owned          |
| 52.280536   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880SH  | 2017 | Owned          |
| 52.280539   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880SH  | 2017 | Owned          |
| 52.280547   | Truck Tractor 3 Axle > 60K    | Kenworth     | T800    | 2018 | Owned          |
| 52.280569   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2019 | Owned          |
| 52.280570   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2019 | Owned          |
| 52.280571   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2019 | Owned          |
| 52.280572   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2019 | Owned          |
| 52.280578   | Truck Tractor 3 Axle > 60K    | Kenworth     | T800    | 2020 | Owned          |
| 52.280591   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280592   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280593   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280594   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280595   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280596   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280597   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280598   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280599   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280600   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280601   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280602   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280613   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280614   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280615   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280616   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280617   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280618   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280619   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280620   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280622   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280623   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |
| 52.280624   | Truck Tractor 3 Axle > 60K    | Kenworth     | T880    | 2021 | Owned          |

| Equipment # | Description                | Make          | Model    | Year | Ownership Type |
|-------------|----------------------------|---------------|----------|------|----------------|
| 52.280625   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280627   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280628   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280629   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280630   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280631   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280647   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280648   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280649   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280650   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280651   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280652   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280653   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280654   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280655   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280656   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
| 52.280665   | Truck Tractor 3 Axle > 60K | Kenworth      | T800     | 2021 | Owned          |
| 52.280666   | Truck Tractor 3 Axle > 60K | Kenworth      | T800     | 2021 | Owned          |
| 52.280667   | Truck Tractor 3 Axle > 60K | Freightliner  | Cascadia | 2019 | Leased         |
| 52.280668   | Truck Tractor 3 Axle > 60K | Freightliner  | Cascadia | 2019 | Leased         |
| 52.280669   | Truck Tractor 3 Axle > 60K | Freightliner  | Cascadia | 2019 | Leased         |
| 52.280670   | Truck Tractor 3 Axle > 60K | Freightliner  | Cascadia | 2019 | Leased         |
| 52.280671   | Truck Tractor 3 Axle > 60K | Freightliner  | Cascadia | 2019 | Leased         |
| 52.280672   | Truck Tractor 3 Axle > 60K | Freightliner  | Cascadia | 2019 | Leased         |
| 52.280673   | Truck Tractor 3 Axle > 60K | Freightliner  | Cascadia | 2019 | Leased         |
| 52.280674   | Truck Tractor 3 Axle > 60K | Freightliner  | Cascadia | 2019 | Leased         |
| 52.280675   | Truck Tractor 3 Axle > 60K | Freightliner  | Cascadia | 2019 | Leased         |
| 52.280676   | Truck Tractor 3 Axle > 60K | Freightliner  | Cascadia | 2019 | Leased         |
| 52.289052   | Truck Tractor 3 Axle > 60K | International | ProStar  | 2021 | Rented         |
| 52.289107   | Truck Tractor 3 Axle > 60K | Ford          | F750     | 2022 | Rented         |
| 52.700641   | Truck Tractor 3 Axle > 60K | Kenworth      | T880     | 2021 | Owned          |
|             |                            |               |          |      |                |
| 53.250058   | Truck Water 3 Axle 2-7Kgal | International | 4200     | 2008 | Owned          |
| 53.280231   | Truck Water 3 Axle 2-7Kgal | Kenworth      | T800     | 2001 | Owned          |
| 53.280290   | Truck Water 3 Axle 2-7Kgal | International | 9400     | 2005 | Owned          |
| 53.280357   | Truck Water 3 Axle 2-7Kgal | International | 9200     | 2007 | Owned          |
| 53.280358   | Truck Water 3 Axle 2-7Kgal | International | 9200     | 2007 | Owned          |
| 53.280379   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 384      | 2011 | Owned          |
| 53.280381   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 384      | 2011 | Owned          |
| 53.280382   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 384      | 2011 | Owned          |
| 53.280384   | Truck Water 3 Axle 2-7Kgal | International | 4300     | 1999 | Owned          |
| 53.280387   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2011 | Owned          |
| 53.280388   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2011 | Owned          |
| 53.280390   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2011 | Owned          |
| 53.280392   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2011 | Owned          |
| 53.280393   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2011 | Owned          |
| 53.280396   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2011 | Owned          |
| 53.280401   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2011 | Owned          |
| 53.280406   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2011 | Owned          |
| 53.280414   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2011 | Owned          |
| 53.280425   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2011 | Owned          |
| 53.280432   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2011 | Owned          |
| 53.280442   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2012 | Owned          |
| 53.280447   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2012 | Owned          |
| 53.280449   | Truck Water 3 Axle 2-7Kgal | Peterbilt     | 386      | 2012 | Owned          |



| Equipment # | Description                    | Make          | Model     | Year | Ownership Type |
|-------------|--------------------------------|---------------|-----------|------|----------------|
| 53.280495   | Truck Water 3 Axle 2-7Kgal     | International | 4200      | 2007 | Owned          |
| 53.289076   | Truck Water 3 Axle 2-7Kgal     | International | MV607SBA  | 2024 | Rented         |
| 53.289082   | Truck Water 3 Axle 2-7Kgal     | International | MV607SBA  | 2024 | Rented         |
| 53.700291   | Truck Water 3 Axle 2-7Kgal     | International | 9400      | 2005 | Owned          |
| 53.700467   | Truck Water 3 Axle 2-7Kgal     | Sterling      | LT7500    | 2007 | Owned          |
| 53.700493   | Truck Water 3 Axle 2-7Kgal     | International | 4200      | 2007 | Owned          |
| 53.704290   | Truck Water 3 Axle 2-7Kgal     | Peterbilt     | 386       | 2011 | Owned          |
|             |                                |               |           |      |                |
| 54.280361   | Truck Distributor 3 Axle 2-4K  | International | 7300      | 2008 | Owned          |
| 54.280503   | Truck Distributor 3 Axle 2-4K  | Freightliner  | 108SD     | 2016 | Owned          |
| 54.280583   | Truck Distributor 3 Axle 2-4K  | Freightliner  | M2 106    | 2020 | Owned          |
| 54.280629   | Truck Distributor 2 Axle to 2K | Freightliner  | M2 106    | 2020 | Owned          |
| 54.280630   | Truck Distributor 2 Axle to 2K | Freightliner  | M2 106    | 2024 | Owned          |
| 54.280667   | Truck Distributor 3 Axle 2-4K  | Freightliner  | M2 106    | 2022 | Owned          |
|             |                                |               |           |      |                |
| 55.280496   | Trk Lube/Fuel 3 Axle 1-2Kgal   | Peterbilt     | 386       | 2015 | Owned          |
| 55.280541   | Trk Lube/Fuel 3 Axle 1-2Kgal   | International | 7600      | 2017 | Owned          |
| 55.280542   | Trk Lube/Fuel 3 Axle 1-2Kgal   | International | 7600      | 2017 | Owned          |
| 55.280579   | Trk Lube/Fuel 3 Axle 1-2Kgal   | Peterbilt     | 348       | 2020 | Owned          |
| 55.280677   | Trk Lube/Fuel 3 Axle 1-2Kgal   | Freightliner  | M2 106    | 2024 | Owned          |
|             |                                |               |           |      |                |
| 56.280478   | Trk Mixer Rear Disc 3Ax 10CY   | Peterbilt     | 365       | 2013 | Owned          |
|             |                                |               |           |      |                |
| 60.280003   | Mtrl Trsfr > 25Ton Hopper      | Roadtec       | SB2500C   | 2005 | Owned          |
| 60.280009   | Mtrl Trsfr > 25Ton Hopper      | Roadtec       | SB2500E   | 2012 | Owned          |
| 60.280014   | Mtrl Trsfr > 25Ton Hopper      | Roadtec       | SB2500E   | 2017 | Owned          |
| 60.280015   | Mtrl Trsfr > 25Ton Hopper      | Roadtec       | SB2500E   | 2019 | Owned          |
| 60.280016   | Mtrl Trsfr > 25Ton Hopper      | Roadtec       | SB3000    | 2023 | Owned          |
|             |                                |               |           |      |                |
| 62.280030   | Asph Paver Tire > 29K lbs      | Roadtec       | RP190E    | 2019 | Owned          |
| 62.280034   | Asph Paver Tire > 29K lbs      | Roadtec       | RP190E    | 2018 | Owned          |
| 62.280035   | Asph Paver Tire to 18K lbs     | Bomag         | BF300C-2  | 2020 | Owned          |
| 62.280037   | Novachip / Microlift Paver     | Roadtec       | SP200E    | 2020 | Owned          |
| 62.280038   | Asph Paver Tire 19-28K lbs     | Roadtec       | RP170E    | 2022 | Owned          |
| 62.280039   | Asph Paver Tire > 29K lbs      | Roadtec       | RP190E    | 2023 | Owned          |
| 62.280040   | Asph Paver Tire > 29K lbs      | Caterpillar   | AP 1000   | 2023 | Owned          |
| 62.280041   | Asph Paver Tire > 29K lbs      | Caterpillar   | AP 1000   | 2023 | Owned          |
| 62.700023   | Novachip / Microlift Paver     | Roadtec       | SP200E    | 2014 | Owned          |
|             |                                |               |           |      |                |
| 64.280032   | Roller Vib Single Drum > 12Ton | Bomag         | BW213PDH5 | 2017 | Owned          |
| 64.280034   | Roller Vib Single Drum 3-8Ton  | Bomag         | BW177PDH3 | 2017 | Owned          |
| 64.280045   | Roller Vib Dbl Drum 11-13Ton   | Dynapac       | CC624HF   | 2013 | Owned          |
| 64.280056   | Roller Vib Dbl Drum > 13Ton    | Hamm          | HD140 V0  | 2016 | Owned          |
| 64.280061   | Roller Vib Dbl Drum 8-11Ton    | Bomag         | BW138AD5  | 2017 | Owned          |
| 64.280063   | Roller Vib Dbl Drum 8-11Ton    | Bomag         | BW161ADO5 | 2017 | Owned          |
| 64.280064   | Roller Vib Dbl Drum > 13Ton    | Bomag         | BW206ADO5 | 2017 | Owned          |
| 64.280065   | Roller Vib Dbl Drum 8-11Ton    | Bomag         | BW100SL5  | 2017 | Owned          |
| 64.280070   | Roller Vib Single Drum 8-12Ton | Bomag         | BW211     | 2019 | Owned          |
| 64.280071   | Roller Vib Single Drum 8-12Ton | Bomag         | BW211DH5  | 2019 | Owned          |
| 64.280074   | Roller Vib Dbl Drum 8-11Ton    | Bomag         | BW138AD5  | 2019 | Owned          |
| 64.280079   | Roller Vib Dbl Drum > 13Ton    | Bomag         | BW206ADO5 | 2020 | Owned          |
| 64.280080   | Roller Vib Dbl Drum 8-11Ton    | Bomag         | BW120SL   | 2019 | Owned          |
| 64.280083   | Roller Vib Dbl Drum > 13Ton    | Bomag         | BW206ADO5 | 2020 | Owned          |
| 64.280084   | Roller Vib Dbl Drum 8-11Ton    | Bomag         | BW161ADO5 | 2020 | Owned          |
| 64.280085   | Roller Vib Dbl Drum > 13Ton    | Bomag         | BW206ADO5 | 2020 | Owned          |

| Equipment # | Description                    | Make        | Model         | Year | Ownership Type |
|-------------|--------------------------------|-------------|---------------|------|----------------|
| 64.280090   | Roller Vib Dbl Drum 8-11Ton    | Bomag       | BW138AD5      | 2020 | Owned          |
| 64.280092   | Roller Vib Dbl Drum > 13Ton    | Caterpillar | CB15          | 2023 | Owned          |
| 64.280093   | Roller Vib Dbl Drum > 13Ton    | Caterpillar | CB15          | 2023 | Owned          |
| 64.280094   | Roller Vib Dbl Drum > 13Ton    | Caterpillar | CB15          | 2023 | Owned          |
| 64.280095   | Roller Vib Dbl Drum > 13Ton    | Caterpillar | CB15          | 2023 | Owned          |
| 64.281035   | Roller Vib Single Drum 3-8Ton  | Bomag       | BW177PDH3     | 2017 | Owned          |
| 64.281045   | Roller Vib Single Drum 8-12Ton | Bomag       | BW211         | 2021 | Owned          |
| 64.289171   | Roller Vib Single Drum to 3Ton | Hamm        | HD14 VT       | 2023 | Rented         |
| 64.289184   | Roller Vib Dbl Drum 8-11Ton    | Caterpillar | CC4.0         | 2022 | Rented         |
| 64.700023   | Roller Vib Single Drum 8-12Ton | Bomag       | BW211         | 2012 | Owned          |
| 64.700041   | Roller Vib Single Drum 8-12Ton | Bomag       | BW211         | 2015 | Owned          |
| 64.700087   | Roller Vib Single Drum 8-12Ton | Bomag       | BW211         | 2017 | Owned          |
| 64.700089   | Roller Vib Single Drum 8-12Ton | Bomag       | BW211         | 2017 | Owned          |
| 64.701042   | Roller Vib Single Drum > 12Ton | Bomag       | BW213PDH4     | 2015 | Owned          |
|             |                                |             |               |      |                |
| 65.289545   | Roller Rubber Tire 10-15Ton    | Dynapac     | CP2700        | 2022 | Rented         |
| 65.289806   | Roller Rubber Tire 10-15Ton    | Caterpillar | CW16          | 2023 | Rented         |
| 65.289986   | Roller Rubber Tire 10-15Ton    | Dynapac     | CP1200        | 2023 | Rented         |
| 65.700030   | Roller Rubber Tire 16-30Ton    | Dynapac     | CP274         | 2011 | Owned          |
| 65.700043   | Roller Rubber Tire 16-30Ton    | Caterpillar | CW34          | 2018 | Owned          |
|             |                                |             |               |      |                |
| 66.280019   | AsphGrind-Recyc > 500hp        | Roadtec     | SX8E          | 2018 | Owned          |
| 66.280021   | AsphGrind-Recyc > 500hp        | Roadtec     | SX8E          | 2020 | Owned          |
| 66.280023   | AsphGrind-Recyc 400-500hp      | Bomag       | RS460         | 2020 | Owned          |
| 66.280024   | AsphGrind-Recyc 400-500hp      | Wirtgen     | WR240i        | 2023 | Owned          |
| 66.281022   | AsphGrind-Recyc 400-500hp      | Bomag       | RS460         | 2020 | Owned          |
| 66.289246   | AsphGrind-Recyc 400-500hp      | Caterpillar | RM350         | 2024 | Rented         |
|             |                                |             |               |      |                |
| 69.280024   | Asph Grinders-Profile 11' -12' | Roadtec     | RX900E-4      | 2016 | Owned          |
| 69.280026   | Asph Grinders-Profilers 7'-8'  | Roadtec     | RX700E-4      | 2017 | Owned          |
| 69.280028   | Asph Grinders-Profilers 3'-4'  | Bomag       | BM1300/30     | 2017 | Owned          |
| 69.280029   | Asph Grinders-Profilers 3'-4'  | Bomag       | BM1300/30     | 2018 | Owned          |
| 69.280032   | Asph Grinders-Profilers 7'-8'  | Roadtec     | RX600E        | 2019 | Owned          |
| 69.280033   | Asph Grinders-Profilers 7'-8'  | Roadtec     | RX700E        | 2019 | Owned          |
| 69.280034   | Asph Grinders-Profile 11' -12' | Roadtec     | RX900E-4      | 2024 | Owned          |
| 69.289005   | Asph Grinders-Profilers 7'-8'  | Roadtec     | RX700E-4      | 2024 | Rented         |
|             |                                |             |               |      |                |
| 71.250143   | Placer Concrete Distribution   | Gomaco      | (Unknown)     | 2005 | Owned          |
| 71.280003   | Concrete Paver 8' to 25'       | Gomaco      | TC600         | 2007 | Owned          |
| 71.280005   | Concrete Paver > 25'           | Gomaco      | GP2600        | 2015 | Owned          |
| 71.280007   | Concrete Paver > 25'           | Gomaco      | Commander III | 2017 | Owned          |
| 71.280008   | Concrete Paver 8' to 25'       | Gomaco      | RTP500        | 2021 | Owned          |
| 71.280009   | Concrete Paver > 25'           | Terex       | 3600          | 2021 | Owned          |
| 71.700004   | Concrete Paver 8' to 25'       | Terex       | 3600          | 2014 | Owned          |
| 71.700006   | Curb Machine, Conc <12K lb <8' | Curb Fox    | 3000          | 2016 | Owned          |
|             |                                |             |               |      |                |
| 72.280010   | Self Propelled Saws            | Husqvarna   | FS4000        | 2017 | Owned          |
| 72.280012   | Self Propelled Saws            | Husqvarna   | FS7000D       | 2020 | Owned          |
| 72.280013   | Self Propelled Saws            | Husqvarna   | FS7000D       | 2020 | Owned          |
| 72.280014   | Self Propelled Saws            | Husqvarna   | FS7000D       | 2020 | Owned          |
| 72.280015   | Self Propelled Saws            | Husqvarna   | FS7000D       | 2020 | Owned          |
| 72.280016   | Self Propelled Saws            | Husqvarna   | FS7000D       | 2020 | Owned          |
| 72.280017   | Self Propelled Saws            | Husqvarna   | FS4000        | 2020 | Owned          |
|             |                                |             |               |      |                |
| 76.280014   | Compressor Portable to 250cfm  | Atlas Copco | XAS185KD      | 2017 | Owned          |

| Equipment # | Description                   | Make        | Model                | Year | Ownership Type |
|-------------|-------------------------------|-------------|----------------------|------|----------------|
| 76.280017   | Compressor Portable to 250cfm | Atlas Copco | XAS185KD             | 2017 | Owned          |
| 76.280018   | Compressor Portable to 250cfm | Atlas       | XAS185CD7            | 2012 | Owned          |
| 76.289021   | Compressor Portable to 250cfm | Sullair     | 185DPQ1              | 2024 | Rented         |
| 76.700016   | Compressor Portable to 250cfm | Atlas Copco | XAS185KD             | 2017 | Owned          |
|             |                               |             |                      |      |                |
| 88.091054   | Misc Equip Motorized          | Roadtec     | SB2500D              | 2022 | Owned          |
| 88.280003   | Misc Equip Motorized          | Roadtec     | 12.6 Milling Head    | 2022 | Owned          |
| 88.280004   | Misc Equip Motorized          | Roadtec     | SB2500D              | 2022 | Owned          |
| 88.280005   | Misc Equip Motorized          | Roadtec     | SB2500D              | 2022 | Owned          |
| 88.280007   | Misc Equip Motorized          | Caterpillar | BunceP32 PaverSystem | 2023 | Owned          |
| 88.280008   | Misc Equip Motorized          | Caterpillar | BunceP32 PaverSystem | 2023 | Owned          |
| 88.280009   | Misc Equip Motorized          | Caterpillar | AP 1055D             | 2023 | Owned          |
| 88.280101   | Misc Equip Motorized          | Polaris     | Ranger 570           | 2014 | Owned          |
| 88.280102   | Misc Equip Motorized          | Polaris     | Ranger 570           | 2019 | Owned          |
| 88.280150   | Misc Equip Tow Type           | Polaris     | 3400                 | 2010 | Owned          |
| 88.280151   | Misc Equip Motorized          | Fuel Master | 2500                 | 2023 | Owned          |
| 88.700003   | Misc Equip Tow Type           | Hotsy       | HD4.0/40 GB          | 2019 | Owned          |

| Status                       | #               | Description                                      | Spec No.  | Unit | Quantity Required | Unit Price    | Total Cost    |
|------------------------------|-----------------|--|-----------|------|-------------------|---------------|---------------|
| Success: All values provided | #0-1            | PREPARING ROW                                    | 0100-7002 | STA  | 163               | \$ 1,000.00   | \$ 163,000.00 |
| Success: All values provided | #0-2            | EXCAVATION (ROADWAY)                             | 0110-7001 | CY   | 3413              | \$ 45.00      | \$ 153,585.00 |
| Success: All values provided | #0-3            | HYDROMULCH SEEDING                               | 0164      | AC   | 2                 | \$ 1,400.00   | \$ 2,800.00   |
| Success: All values provided | #0-4            | CEMENT   | 0275-7001 | TON  | 783               | \$ 215.00     | \$ 168,345.00 |
| Success: All values provided | #0-5            | CEM TRT (MX EXT MTL/NW BASE)(DC)(10")            | 0275-7008 | SY   | 45184             | \$ 6.30       | \$ 284,659.20 |
| Success: All values provided | #0-6            | SALV, HAUL & STKPL RCL APH PV (2" TO 4")         | 0305-7003 | SY   | 39762             | \$ 0.50       | \$ 19,881.00  |
| Success: All values provided | #0-7            | TACK COAT  | 0341-7082 | GALS | 5965              | \$ 4.10       | \$ 24,456.50  |
| Success: All values provided | #0-8            | MOBILIZATION                                     | 0500-7001 | LS   | 1                 | \$ 200,000.00 | \$ 200,000.00 |
| Success: All values provided | #0-9            | BARRICADES, SIGNS AND TRAFFIC HANDLING           | 0502-7001 | MO   | 6                 | \$ 1,100.00   | \$ 6,600.00   |
| Success: All values provided | #0-10           | TEMP SEDMT CONT FENCE (INSTALL)                  | 0506-7039 | LF   | 600               | \$ 1.10       | \$ 660.00     |
| Success: All values provided | #0-11           | TEMP SEDMT CONT FENCE (REMOVE)                   | 0506-7041 | LF   | 600               | \$ 1.10       | \$ 660.00     |
| Success: All values provided | #0-12           | ONE-WAY TRAF CONT (FLAGGER CONT)                 | 0510-7001 | HR   | 80                | \$ 55.00      | \$ 4,400.00   |
| Success: All values provided | #0-13           | RELOCATE EXISTING MAILBOX                        | 0560-7012 | EA   | 11                | \$ 275.00     | \$ 3,025.00   |
| Success: All values provided | #0-14           | IN SM RD SN SUP & AM FLOOD GAUGE ASSEMBLY        | 0644      | EA   | 4                 | \$ 980.00     | \$ 3,920.00   |
| Success: All values provided | #0-15           | RE PM W/RET REQ TY I (Y) 4" (BRK) (100MIL)       | 0666-7414 | LF   | 2260              | \$ 1.70       | \$ 3,842.00   |
| Success: All values provided | #0-16           | RE PM W/RET REQ TY I (W) 4" (SLD) (100MIL)       | 0666-7405 | LF   | 33310             | \$ 0.80       | \$ 26,648.00  |
| Success: All values provided | #0-17           | REFL PAV MRK TY I (Y) 4" (SLD) (100MIL)          | 0666-7417 | LF   | 14020             | \$ 0.80       | \$ 11,216.00  |
| Success: All values provided | #0-18           | RE PM W/RET REQ TY I (W) 24" (SLD) (100MIL)      | 0666-7151 | LF   | 15                | \$ 22.00      | \$ 330.00     |
| Success: All values provided | #0-19           | D-GR HMA (SQ) TY-D SAC-B PG64-22 (1.5")          | 0341-7045 | TON  | 3942              | \$ 100.00     | \$ 394,200.00 |
| Success: All values provided | #0-20           | D-GR HMA (SQ) TY-D SAC-B PG64-22 (1.5" LEVEL-UP) | 0341-7046 | TON  | 3942              | \$ 100.00     | \$ 394,200.00 |
| Basket Total                 | \$ 1,866,427.70 |  |           |      |                   |               |               |
| Grand Total                  | \$ 1,866,427.70 |  |           |      |                   |               |               |



**BRAZORIA COUNTY COURTHOUSE  
PURCHASING DEPARTMENT  
237 E. LOCUST STREET, SUITE 406  
ANGLETON, TEXAS 77515  
TEL: 979-864-1825**

**BRAZORIA COUNTY  
INVITATION TO BID COVER SHEET**

The INVITATION TO BID (ITB) and accompanying documents are for your convenience in submitting a bid for the referenced products and/or services for BRAZORIA COUNTY.

**“ITB #25-29 BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG-PLAN SET III / 30N  
GENERAL LAND OFFICE  
CONTRACT NUMBER 19-076-003-B352-CDBG-DR 2016 FLOOD ALLOCATION”**

**THURSDAY, MAY 1, 2025 at 11:00 A.M. LOCAL TIME**

**Sealed Hard Copy or Electronic bids shall be received no later than the due date and time above.**

**\*BID OPENING WILL BE AVAILABLE VIA ZOOM. MEETING LINK IS AVAILABLE ON THE PROJECT  
DETAILS PAGE IN BONFIRE UNDER “IMPORTANT EVENTS”. BONFIRE LINK:  
<https://brazoriacounty.bonfirehub.com/portal/?tab=login>**

**IF SUBMITTING AN ELECTRONIC SEALED OFFER:**

**PREFERRED METHOD IS USING THE “BONFIRE” ELECTRONIC BIDDING PLATFORM.**

**USE LINK, <https://brazoriacounty.bonfirehub.com/portal/?tab=login>,**

**CLICK THE HELP BUTTON PROVIDED IN THE BONFIRE WEBSITE AS NEEDED.**

**IF SUBMITTING A HARD COPY SEALED OFFER:**

**THE PHYSICAL ADDRESS FOR COURIERS, HAND DELIVERIES AND THE US POSTAL SERVICE IS:**

SUSAN SERRANO, CPPO, CPPB  
PURCHASING DIRECTOR  
BRAZORIA COUNTY COURTHOUSE CAMPUS ADMINISTRATION BUILDING  
237 E. LOCUST STREET, SUITE 406  
ANGLETON, TEXAS 77515

**PLEASE USE THE RETURN LABEL PROVIDED WITH THIS SOLICITATION:**

***\*\*Please note: US Postal Service mailing address***

***The U.S. mail may not deliver to the physical address shown above. Respondents who prefer to use the U.S. mail may submit their offers using the U.S. Postal Service mailing address shown above.***

***However, packages delivered by the U.S. Postal Service to the Brazoria County mailing address are subject to delays that may cause a response to be rejected due to missing a solicitation receipt deadline.***

*Responses delivered to the mailing address are routed through the County mailroom and may not reach the required location in time for the bid / offer opening.*

*Respondents using the U.S. mail should take this possible delay into account when using the U.S. mail.*

BRAZORIA COUNTY is very conscious and extremely appreciative of the time and effort you have expended to submit an offer. We would appreciate it if you would indicate on any “No Offer” response, any requirement of this ITB which may have influenced your decision to “No Offer”. If your response to this ITB is a “No Offer” response, please complete the Statement of No Offer in this ITB package and submit.

Any prospective respondent desiring any explanation or interpretation of the solicitation must make a written request online through Bonfire electronic platform or email the project facilitator as shown in Section “Questions Due Date (for Clarifications)”, which must be received by the Purchasing Department at least five (5) business days prior to the scheduled time for the offer opening. Any information given to a prospective respondent concerning this solicitation will be furnished promptly to all other known prospective respondents as a written amendment/addendum to the solicitation. Brazoria County reserves the right to accept or reject any or all bids/offers as it deems in its best interest and to waive any formalities.

**It is the Respondent’s responsibility to verify the issuance of Addenda in regard to this Offer.** All Addenda shall be submitted to all known respondents and shall be posted on the Bonfire electronic bidding platform at <https://brazoriacounty.bonfirehub.com/portal/?tab=login>. Brazoria County shall not be responsible for failed internet connections or power interruptions.

All required Offer documents shown on the Table of Contents, including any Addenda Receipt Forms which may have been issued, must be submitted in the Bonfire electronic bidding platform or a sealed envelope included in a hard copy submittal, marked with the bidder’s company name, the Offer name, number and due date.



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SUSAN SERRANO, CPPO, CPPB  
Purchasing Director  
Brazoria County Courthouse Campus Administration Building  
237 E. Locust Street, Suite 406  
Angleton, Texas 77515

Published Dates: THURSDAY, APRIL 10, 2025  
THURSDAY, APRIL 17, 2025

# BRAZORIA COUNTY CONTRACT SHEET

## THE STATE OF TEXAS COUNTY OF BRAZORIA

This memorandum of agreement made and entered into on the \_\_\_\_\_ day of \_\_\_\_\_, 2025, by and between Brazoria County in the State of Texas (hereinafter designated County), acting herein by County Judge L.M. “Matt” Sebesta, Jr., by virtue of an order of Brazoria County Commissioners’ Court, and \_\_\_\_\_ (hereinafter designated Vendor/Contractor).

(company name)

WITNESSETH:

The Vendor and the County agree that the Instructions to Respondents, Specifications/Statement of Work, Standard Terms & Conditions, and all other requirements herein for **ITB #25-29 BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG- PLAN SET III / 30N - GENERAL LAND OFFICE CONTRACT NUMBER 19-076-003-B352-CDBG-DR 2016 FLOOD ALLOCATION** as stated in the Invitation to Bid Table of Contents hereto attached and made a part hereof, together with the bond (when required), vendor’s response and awarded pricing structure, shall constitute the full agreement and Contract between parties and for furnishing the items set out and described; the County agrees to pay the prices stipulated in the accepted offer.

The order of precedence shall be:

- ITB #25-29 BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG-PLAN SET III / 30N - GENERAL LAND OFFICE CONTRACT NUMBER 19-076-003-B352-CDBG-DR 2016 FLOOD ALLOCATION
- Vendor’s Response to the above listed bid and awarded pricing.

Executed at Angleton, Texas this \_\_\_\_\_ day of \_\_\_\_\_ 2025.

By: \_\_\_\_\_  
County Judge Signature

By: \_\_\_\_\_  
Printed Name

By: \_\_\_\_\_  
Signature of Vendor

By: \_\_\_\_\_  
Printed Name and Title

SIGNATURE REQUIRED BY  
VENDOR UPON AWARD



# INVITATION TO BID

## TABLE OF CONTENTS

### ITB #25-29 BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG- PLAN SET III / 30N - GENERAL LAND OFFICE CONTRACT NUMBER 19-076-003-B352-CDBG-DR 2016 FLOOD ALLOCATION

All documents included in this Table of Contents represent components which comprise this bid/offer package and subsequent awarded executed contract. The documents shown in Exhibit A and Exhibit B are required to be submitted in your bid/offer package. *It is the respondent's responsibility to be thoroughly familiar with all requirements and specifications. Be sure you understand the requirements before you return your bid/offer packet.*

*The "Exhibit A - Required Forms" and "Exhibit B – Additional Requirements" below are required to be uploaded into the Bonfire electronic procurement portal system or included with your hard copy submittal in one (1) large sealed envelope or box with the Brazoria County Return Label affixed.*

#### EXHIBIT A – REQUIRED DOCUMENTS

#### FAILURE TO RETURN THE FOLLOWING FORMS MAY DEEM YOUR BID AS NON-RESPONSIVE.

- RESPONDENT CERTIFICATION FORM
- BIDDER/RESPONDENT'S AFFIRMATION & SDNs/BLOCKED PERSONS AFFIRMATION
- WORKERS COMPENSATION REQUIREMENTS
- CERTIFICATION REGARDING LOBBYING FORM & DISCLOSURE OF LOBBYING ACTIVITIES AND INSTRUCTIONS
- EXCEPTIONS TO STANDARD TERMS & CONDITIONS & SPECIAL REQUIREMENTS *(if applicable)*  
(If vendor has any exceptions to the ITB terms and conditions or special requirements, they must be included with the ITB submittal in order to be considered)
- SIGNED ADDENDA *(if applicable)*
- NON-COLLUSION AFFIDAVIT
- BID BOND
- STATEMENT OF BIDDER'S QUALIFICATIONS
- CONFLICT OF INTEREST QUESTIONNAIRE – FORM CIQ
- CONTRACTOR ACKNOWLEDGEMENT OF STORMWATER MANAGEMENT PROGRAM
- CERTIFICATE AS TO CORPORATE PRINCIPAL
- CERTIFICATION OF BIDDER REGARDING CIVIL RIGHTS LAWS AND REGULATIONS
- CONTRACTORS CERTIFICATION OF RECOVERED MATERIALS
- CONTRACTORS' LOCAL OPPORTUNITY PLAN & PROPOSED CONTRACT BREAKDOWN
- CERTIFICATION FOR BUSINESS CONCERNS
- CONTRACTOR'S CERTIFICATION-CONCERNING LABOR STANDARDS AND PREVAILING WAGE REQUIREMENTS
- TITLE 24 HOUSING & URBAN DEVELOPMENT-OFFICE OF ASSISTANT SECRETARY FOR EQUAL OPPORTUNITY – DEPARTMENT OF HOUSING & URBAN DEVELOPMENT PART 135-ECONOMIC OPPORTUNITIES FOR LOW-AND VERY-LOW INCOME PERSONS
- NEW HIRES SECTION 3 MONTHLY COMPLIANCE REPORT
- TEXAS GOVERNMENT CODE 552, SUBCHAPTER J ACKNOWLEDGEMENT FORM
- PROHIBITED TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES AND EQUIPMENT CERTIFICATION FORM *(Vendor to sign form if applicable to telecommunications)*
- SECTION 504 CERTIFICATION-POLICY OF NONDISCRIMINATION ON THE BASIS OF DISABILITY
- CHILD SUPPORT STATEMENT FOR NEGOTIATED CONTRACTS AND GRANTS
- ARTICLE 7 – ATTACHMENTS TO BID
- BRAZORIA COUNTY EXHIBIT B ADDITIONAL REQUIREMENTS ACKNOWLEDGEMENT FORM

- CONTRACTORS FINAL PAYMENT AFFIDAVIT
- CONTRACTOR CERTIFICATION OF EFFORTS TO FULLY COMPLY WITH EMPLOYEMENT AND TRAINING PROVISIONS OF SECTION 3
- ATTORNEY’S REVIEW CERTIFICATION
- VENDOR DATA SHEET & W-9 FORM

## **EXHIBIT B –ADDITIONAL REQUIREMENTS**

### **Attachments to the ITB:**

- Exhibit A – Required Documents
- Exhibit B – Additional Requirements
- Attachment A – Bid Table
- Attachment B – Specifications
- Attachment C – Plan Set III
- Attachment D – Advertisement for Bid
- Attachment E – Authority to Use Grant Funds
- Attachment F – Geotechnical Report
- Attachment G – Environmental Mitigation Measures

# **BRAZORIA COUNTY**

## **SPECIFICATIONS / SCOPE OF WORK**

**ITB #25-29 BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG- PLAN SET III / 30N -  
GENERAL LAND OFFICE CONTRACT NUMBER 19-076-003-B352-CDBG-DR 2016 FLOOD ALLOCATION**

### **1.0 SPECIFICATIONS / SCOPE OF WORK**

#### **Specifications and Plans can be found in Attachment B Specifications and Attachment C PLAN SET III**

The contractor shall perform no less than 25% of the specified work in this agreement with its own employees, and subcontract no more than 75% of the work without prior written consent from the Owner.

### **2.0 MAINTENANCE WARRANTY**

The Contractor warrants to the Owner "County" that all materials and workmanship used in the construction of the Project will be free from defects in materials and workmanship for a period of one (1) year from the date of substantial completion of the Project. If any defect in materials or workmanship occurs during the warranty period, the Contractor shall promptly repair or replace the defective materials or workmanship at its own expense.

This warranty shall not apply to defects caused by: acts of God or other force majeure events, or any other cause, beyond the reasonable control of the Contractor.

The Owner shall notify the Contractor in writing of any defects in materials or workmanship within a reasonable time after discovery of such defects. If the Contractor fails to repair or replace the defective materials or workmanship within a reasonable time after receipt of notice from the Owner, the Owner may have the defective materials or workmanship repaired or replaced at the Contractor's expense.

### **3.0 GLO SIGNAGE REQUIREMENTS**

All signs shall be placed in a prominent, visible public location at the construction site, and legible from at least three (3) feet distance.

Permanent signage is required on any public building or facility funded under this Contract. Please refer to the plans and specifications for further details.

For other construction projects (e.g., water transmission lines, sewer collection lines, drainage, roadways, housing rehabilitation) funded under this Contract, temporary signage shall be placed in a prominent location at the construction project site or along a major thoroughfare within the locality.

All signage required shall contain the following:

"This project is funded by the Texas General Land Office of the State of Texas, to  
provide for disaster recovery and restoration of infrastructure for communities impacted  
by the Floods of 2016. Funds allocated by the United States Department of Housing and Urban Development through the  
Community Development Block Grant Program."

# BRAZORIA COUNTY

## INSTRUCTIONS TO BIDDERS

### ITB #25-29 BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG- PLAN SET III / 30N - GENERAL LAND OFFICE CONTRACT NUMBER 19-076-003-B352-CDBG-DR 2016 FLOOD ALLOCATION

The following requirements and specifications shall be in addition to the other requirements contained herein and shall supersede the other requirements where applicable.

#### 1.0 THE CONTRACT:

The Contract consists of all documents included in this Invitation to Bid Number 25-29, as well as addenda issued prior to execution of the Contract and modifications issued after execution of the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may only be amended or modified under the terms of this Contract. Brazoria County may make partial or complete awards to one or more vendors (if applicable) whichever is in the best interest of the County.

In accordance with Texas Government Code 2269, Brazoria County is seeking bids for the reconstruction of the existing asphalt pavement for County Road 30 North located in Angleton, Texas. The construction limits include the overall road length of approximately 16,266 linear-feet and will maintain a 22-foot road width. There are two existing concrete bridges along the project limits and will be excluded from the scope of work. The proposed work will also incorporate new pavement markings, flood gauge assemblies, and relocation of mailboxes, as needed. A traffic control plan will be utilized throughout construction in phases to ensure access to the road and adjacent residences at all times. Upon project completion, the site will be restored to existing conditions or better.

The County may consider the following to determine award of contract:

- (1) the price;
- (2) the respondent's experience and reputation;
- (3) the quality of the respondent's goods or services;
- (4) the impact on the ability of the governmental entity to comply with rules relating to historically underutilized businesses;
- (5) the respondent's safety record;
- (6) the respondent's proposed personnel;
- (7) whether the respondent's financial capability is appropriate to the size and scope of the project;
- and
- (8) any other relevant factor specifically listed in the request for bids, proposals, or qualifications.

Estimated Budget: \$2,342,591.00

Estimated Completion Time is 150 calendar days

Final Completion Time: 180 calendar days

The project to be constructed will be financed with assistance from the General Land Office (GLO) under the U.S. Department of Housing and Urban Development Community Development Block Grant – Disaster Recovery (CDBG-DR) program and is subject to all applicable Federal and State laws and regulations. Brazoria County is the subrecipient of the grant funding and is hereby referred to as “County”.

#### 1.1 AVAILABILITY OF FUNDS

***This Contract and all claims, suits or obligations arising under or related to this Contract are subject to the receipt and availability of funds appropriated by the Texas Legislature for the purposes of this Contract or the respective claim, suit or obligation, as applicable***

*In order to keep the project within the estimated budget, as shown above, if the base bid total and any alternate bid items received from the apparent low bidder exceed the estimated budget, Brazoria County reserves the right to remove any combination of roads from the base bid and any alternate items.*

## **2.0 QUESTIONS DUE DATE (FOR CLARIFICATIONS)**

Any prospective respondent desiring any explanation or interpretation of the proposal must make a written request which must be received by the Purchasing Department on or before Monday, April 21, 2025. The request must be emailed to [bidclarifications@brazoriacountytx.gov](mailto:bidclarifications@brazoriacountytx.gov). Emails must include the project name and number in the subject field.

All responses to questions or clarification requests will be answered in the form of an addendum after the question deadline and no later than 5 business days prior to the opening/closing date of the solicitation.

## **3.0 PRE-BID MEETING**

A pre-bid meeting will be held on Wednesday, April 16, 2025 at 2:00 p.m. C.S.T. in the Purchasing Conference Room located in the Brazoria County Courthouse Administration Building, 237 E. Locust Street, Suite 406, Angleton, Texas. Attendance is not mandatory in order to submit an offer; however, due to the nature of the bid specifications, it is highly recommended. Interested parties are encouraged to download all of the bid documents prior to attending the meeting.

The pre-bid meeting will have an option to attend via Microsoft Teams. Meeting link is available on the Project Details page in Bonfire under "Important Events". Bonfire link: <https://brazoriacounty.bonfirehub.com/portal/?tab=login>

## **4.0 BID REQUIREMENTS**

The ITB includes instructions to respondents, specifications and contract documents. It is the responsibility of each Respondent before submitting a bid to examine the contract documents thoroughly.

**ITB SUBMISSIONS MAY BE PROVIDED IN ONE OF TWO WAYS, AS EXPLAINED BELOW:**

### **If submitting an ITB Electronic Document Submission (using the Bonfire electronic platform)**

Respondent shall fill out and upload the "Exhibit A Required Forms" into the Bonfire electronic platform. An authorized representative of the company **MUST** sign all required forms. See "Exhibit A Required Forms" for instructions on signing electronically.

### **If submitting an ITB Hard Copy Document Submission**

One (1) original hard copy shall be submitted, which will consist of "Exhibit A Required Forms".

The hard copy submission shall be sealed in an envelope or box for delivery to the Brazoria County Purchasing Director per instructions herein. All documents included in the response and the outside of the envelope and/or box must be labeled with the vendor name and the ITB number. A Return Label is also provided in this solicitation.

## **5.0 PREVAILING WAGE RATES**

Chapter 2258 of the Texas Government Code requires state agencies, cities, counties, independent school districts, and all other political subdivisions that engage in public work projects using public funds to include prevailing wage rate in the project request for proposal documents and Contract.

Current prevailing wage rates are incorporated in the Contract documents.

## **6.0 QUANTITIES**

Brazoria County makes no guarantee of actual contract expenditure.

*In order to keep the project within the estimated budget, as shown above, if the base bid total and any alternate bid items received from the apparent low bidder exceed the estimated budget, Brazoria County reserves the right to remove any combination of roads from the base bid and any alternate items.*

## **7.0 INCLEMENT WEATHER FOR HARD COPY SUBMITTALS:**

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a bid/proposal submission deadline, the bid closing will automatically be postponed until the next business day the County is open and at the time shown on the Cover Sheet.

If inclement weather conditions or any other unforeseen event causes delays in carrier service operations, the County may issue an addendum to all known vendors interested in the project to extend the deadline.

It will be the responsibility of the vendor to notify the County of their interest in the project if these conditions are impacting their ability to turn in a submission within the stated deadline. The County reserves the right to make the final judgment call to extend any deadline.

## **8.0 INSURANCE**

Contractor shall furnish certificates of insurance to County evidencing compliance with the insurance requirements hereof for the duration of the project. Certificates shall indicate name of Contractor, name of insurance company, policy number, term of coverage and limits of coverage.

Insurance shall be placed with insurers having an A.M. Best's rating of no less than A. Such insurance must be issued by a casualty company authorized to do business in the State of Texas, and in standard form approved by the Board of Insurance Commissioners of the State of Texas, with coverage provisions insuring the public from loss or damage that may arise to any person or property by reason of services rendered by Contractor.

Insurance required herein shall be maintained in full force and effect during the life of this contract and shall be issued on an occurrence basis. Contractor shall require that any and all subcontractors that are not protected under the Contractor's own insurance policies take and maintain insurance of the same nature and in the same amounts as required of Contractor and provide written proof of such insurance to Contractor. Proof of renewed/replacement coverage shall be provided upon expiration, termination, or cancellation of any policy. Contractor shall not allow any subcontractor to commence work on the subcontract until such insurance required for the subcontractor has been obtained and approved.

In the event that the insurance is renewed during the duration of the contract, Contractor shall furnish certificate of insurance to the County evidencing renewal of policy within 30 days of renewal.

Contractor shall provide County with at least 30 days prior written notice of any reduction in the limit of liability by endorsement of the policy, cancellation or non-renewal of the insurance coverage required under this Agreement.

Certificates of Insurance, fully executed by a licensed representative of the insurance company written or countersigned by an authorized Texas state agency, shall be filed with the County Purchasing Agent within ten (10) business days of issuance of notification from the County Purchasing Agent to Bidder that the contract is being activated as written proof of such insurance and further provided that Bidder shall not commence work under this contract until it has obtained all insurance required herein and provided written proof as required herein.

### **WAIVER OF SUBROGATION:**

All policies of insurance shall waive all rights of subrogation against Brazoria County, its officers, employees and agents.

### **ADDITIONALLY INSURED:**

Further, on vendor's certificate of insurance supplied to Brazoria County, Brazoria County shall be listed as additionally insured with the exception of workers compensation insurance. The certificate holder shall be as follows:

Brazoria County  
237 E. Locust Street, Suite 401  
Angleton, TX 77515

### **POLLUTION LIABILITY**

The Vendor shall carry in full force during the term of the Contract, and any extensions thereof, pollution liability insurance not less than the value of this Contract.

## **9.0 LIQUIDATED DAMAGES, TERMINATIONS AND DELAYS**

If the Contractor shall fail to fully complete the work within the time specified on the Bid Offer Sheet (subject however to extensions of time duly granted in the manner and for the causes specified in the herein) the Contractor shall be charged by Brazoria County as liquidated and ascertained damages the sum of seven hundred and eighty five (\$785.00) dollars for each working day that the work remains incomplete beyond the time herein fixed for the completion, it being hereby expressly and mutually agreed that from the nature of the case it would be impracticable and extremely difficult to fix the actual damage which would or will be suffered in the event that the Contractor should fail to fully complete the work within the time specified, and it being further agreed that said charge herein provided for is reasonable and proper in the premises. The amount so charged may be deducted by Brazoria County from any moneys which might otherwise be or become payable to the Contractor.

### **9.1 Excusable Delays.**

The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated or ascertained damages for any delays in the completion of the work due to:

- Controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, national defense, or any other national emergency; or
- Causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not limited to, acts of God or of the public enemy, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions.

Provided, however, the Contractor shall promptly notify Brazoria County Project Manager within ten (10) days in writing of the cause of any delay. Upon receipt of such notification, the Brazoria County Project Manager shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this Contract, the delay is determined by the Brazoria County Project Manager to be excusable, Brazoria County shall extend the time for completing the work for a period of time commensurate with the period of excusable delay. Any delay by the Contractor in not notifying the Brazoria County Project Manager shall not be excused.

### **9.2 Right of Brazoria County to Terminate Contract.**

In the event that any of the provisions of this Contract are violated by the Contractor, or by any of its subcontractors, the County of Brazoria may serve written notice upon the Contractor and the Surety of its intention to terminate the contract.

The notices shall contain the reasons for such intention to terminate the Contract, and unless such violation or delay shall cease and satisfactory arrangement of correction be made within ten (10) days, the Contract shall, upon the expiration of said ten (10) days, cease and terminate.

In the event of any such termination, Brazoria County shall immediately serve notice thereof upon the Surety and the Contractor.

The Surety shall have the right to take over and perform the contract. Provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, Brazoria County may take over the work and complete the project by proposal or bid, or by force account. The Contractor and its Surety shall be liable to Brazoria County for any excess cost incurred. In such event, Brazoria County may take possession of and utilize in completing the work such materials, appliances, and plant as may be on the site of the work and necessary therefore.

## **WEATHER DAYS REQUIREMENTS**

Non-working days due to inclement weather ("weather days") will be granted upon meeting the following requirements:

- Contractor shall notify Brazoria County Project Manager on the particular day that work is not performed due to inclement weather.



- If the Brazoria County Project Manager agrees that the scheduled substantial or major work cannot be performed due to the weather conditions, then the Contractor must submit, in writing, a letter stating the following:
  - What work was not performed
  - Day work was not performed
  - Weather conditions at the site on that particular day
  - Affected areas of critical path

The letter must be received by close of the next business day, or a weather day will not be granted.

- If the Brazoria County Project Manager agrees that the scheduled substantial or major work cannot be performed due to the weather conditions, then one or more days will be credited, but the contractual sum shall not be amended to account for Contractor's overhead, supervision, profit, or any other cost or expense associated with nonperformance of work.

## 10.0 CHANGE ORDERS

Due to budget constraints, change orders will be limited to those revisions that are due to unforeseen conditions and are approved by Brazoria County. Vendors are advised to fully understand the scope of work and to review the specifications and drawings in order to submit any requests for clarifications prior to the proposal opening.

In the event a change order is required and approved by Brazoria County, said changes shall be incorporated into this Contract in the form of a change order. All change orders shall be subject to the review and approval of Brazoria County Commissioner's Court, or the Court's designee, and shall be in accordance with the Local Government Code. All change order work must be authorized by Brazoria County prior to the start of the work in order for the County's awarded grant administrator to review the change order request, obtain approval by the General Land Office (GLO). In addition, work cannot begin prior to an environmental consultation or re-evaluation by the GLO.

Any discrepancies which may be discovered between actual conditions and those represented by the specifications or drawings shall be reported at once to the Brazoria County Project Manager and work shall not proceed except at the Vendor's risk, until written instructions have been received by him from the Brazoria County Project Manager. Change orders are limited to a 25% increase from the original contract price and an 18% decrease from the original contract price.

## 11.0 FINAL INSPECTION

When the work included in this Contract is substantially completed, the Vendor shall notify the Project Manager in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The Project Manager will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable.

Per Brazoria County, substantial completion is defined as a designated portion of a construction project that is sufficiently complete in accordance with the contract for the owner to occupy and / or utilize it for its intended use, without undue interference.

## 12.0 PAYMENTS TO CONTRACTOR:

- 12.1 *Funding for this project will be provided by the General Land Office as a reimbursable account.*
- 12.2 *NOTE! There is risk involved with this contract. All fees, payments and consideration due the awarded contractor are contingent upon the County receiving the funds from the General Land Office.*
- 12.3 *Once the contractor submits their invoice or pay application, it will be reviewed by the Project Engineer, County representatives, GrantWorks, who is the County's awarded Grant Administrator and finally the General Land Office (GLO).*
- 12.4 *Upon final approval by the GLO, the GLO will deposit the funds for the County to have the invoice / pay application signed by the County Judge and submitted for final payment.*
- 12.5 *The average timeframe from submission of invoice by the contractor to final payment by the County may take up to thirty (30) to sixty (60) days; however, the final payment by the County cannot be fully determined as it is dependent upon funds being approved and received by the GLO.*

### **13.0 ADDITIONAL INFORMATION**

#### **13.1 Purchase Orders:**

- 13.1.1 The awarded vendor must receive a proper Purchase Order Number from Brazoria County prior to the start date of the project.

#### **13.2 Pay Applications**

- 13.2.1 Invoices or pay applications shall be mailed to the address on the Purchase Order.
- 13.2.2 All invoices or pay applications must reference the appropriate Purchase Order number.
- 13.2.3 Invoices or pay applications shall include additional detailed information if applicable to the project.
- 13.2.4 Pay applications will need to be signed and approved by all parties prior to receipt for payment.

#### **13.3 Pricing:**

- 13.3.1 All prices shall be firm and shall not be subject to escalation for the term of this contract except as specifically stated herein.

### **14.0 HISTORICALLY UNDERUTILIZED BUSINESSES (HUB's)**

Historically Underutilized Businesses (HUB's) are encouraged to participate in the bid/RFP processes. Although Brazoria County does not certify HUB vendors, Brazoria County recognizes the certifications of other governmental entities. If you are certified by a government entity, please upload the certificate with your response electronically in the Bonfire electronic platform or include a hard copy of your certificate in your submittal.

Per Code of Federal Regulations, Title 2, § 200.321, "Contracting with small and minority businesses, women's business enterprises, and labor surplus area firms", if awarded vendor is a prime contractor and subcontractors are to be let by prime contractor, the following affirmative steps are required of the prime contractor:

- (1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- (2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- (3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- (4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
- (5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce

Brazoria County must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

### **15.0 SYSTEM FOR AWARD MANAGEMENT (SAM)**

The System for Award Management (SAM) is the official registration required prior to bidding on a contract with any federal government agency, including local governments who receive federal funds.

Prior to award, Brazoria County will check [www.sam.gov](http://www.sam.gov), the System for Award Management (SAM), to ensure that the proposed vendor has not been debarred. Vendor shall provide their Unique Entity ID number to Brazoria County in order to check [www.sam.gov](http://www.sam.gov) for debarment. If you do not have a Unique Entity ID number, you can request a number for free by visiting <https://sam.gov/content/entity-registration>. For additional information about the change from DUNS to Unique Entity ID visit <https://www.gsa.gov/about-us/organization/federal-acquisition-service/office-of-systems-management/integrated-award-environment-iae/iae-systems-information-kit/unique-entity-id-is-here>. Brazoria County is unable to conduct business with vendors who have been debarred.

## **16.0 PROJECT MANAGER**

Project managers will be from the Brazoria County Engineering Office, CDBG Office and the County's contracted engineering firm, Cobb Fendley.

The County will maintain oversight to ensure that contractors perform in accordance with the terms, conditions and specifications of the contract.

## **17.0 AWARD LETTER / NOTICE TO PROCEED AND PRE-CONSTRUCTION MEETING**

After the award has been made in Commissioner's Court, an award letter will be sent to the vendor with information on how to submit any required documentation needed to finalize the award.

Once all required bonds, insurance forms and other applicable forms have been submitted to the Purchasing Department, the Project Manager will contact the awarded contractor and set up the pre-construction meeting in order to schedule the mobilization start date of the project and issue the Notice to Proceed letter.

## **18.0 DISCLOSURE OF CERTAIN RELATIONSHIP**

Texas Local Government Code chapter 176 requires that any vendor or person who enters or seeks to enter into a contract with a local governmental entity (including any agent of such person or vendor) disclose in the Questionnaire Form CIQ the vendor or person's employment, affiliation, business relationship, family relationship or provision of gifts that might cause a conflict of interest with a local governmental entity.

By law, this questionnaire must be completed and filed with the records administrator of Brazoria County no later than the seventh business day after the date the person engages or communicates with Brazoria County or becomes aware of facts that require the completion of the questionnaire pursuant to Texas Local Government Code section 176.006.

A person commits an offense if the person knowingly violates Texas Local Government Code section 176.006. An offense under this section is a Class C misdemeanor.

A copy of House Bill 23 which amended the Texas Local Government Code Chapter 176 is available

at: <http://www.capitol.state.tx.us/tlodocs/84R/billtext/html/HB00023F.HTM>

Texas Local Government Code Chapter 176 can be found

here: <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>

Questionnaire Form CIQ is included in this bid/offer.

By submitting a response to this request, the vendor or person represents compliance with the requirements of Texas Local Government Code chapter 176. If required, completed forms should be sent with your bid submittal, as well as to:

Brazoria County Courthouse  
County Clerk's Office  
111 E. Locust Street, Suite 200  
Angleton, TX 77515

## **19.0 CERTIFICATE OF INTERESTED PARTIES**

Effective January 1, 2016, all contracts and contract amendments, extensions, or renewals executed by the Commissioners Court will require the completion of Form 1295 "Certificate of Interested Parties" pursuant to Government Code § 2252.908. Form 1295 must be completed by awarded vendor at time of signed contract submittal.

Form 1295 and definitions are included in this bid/offer for your information

All responding vendors may access a video from the Texas Ethics Commission which explains the process on how to submit Form 1295. The video link is available on the Brazoria County Purchasing website at <http://brazoriacountytx.gov/departments/purchasing/doing-business>.

## 20.0 GLO SIGNAGE REQUIREMENTS

On any public building or facility funded under this Contract, Grant Subrecipient shall place permanent signage. Signs shall be placed in a prominent, visible public location. Grant Subrecipient shall format each sign to best fit the architectural design of the building or facility but should be legible from at least three (3) feet distance. It is highly recommended to bid permanent signage as its own line item in the bid.

For other construction projects (e.g., water transmission lines, sewer collection lines, drainage, roadways, housing rehabilitation) funded under this Contract, Grant Subrecipient shall place temporary signage erected in a prominent location at the construction project site or along a major thoroughfare within the locality. GrantWorks can provide a laminated temporary project sign at the preconstruction meeting upon request.

All signage shall contain the following:

**“This project is funded by the Texas General Land Office of the State of Texas, to provide for disaster recovery and restoration of infrastructure for communities impacted by the Floods of 2016. Funds allocated by the United States Department of Housing and Urban Development through the Community Development Block Grant Program.”**

## 21.0 ADDITIONAL REQUIREMENTS (FEDERAL)

### 21.1 Remedies

“If the bidder/vendor fails to comply with the terms and conditions of this Agreement, Brazoria County may take one or more of the following actions, as appropriate to the circumstance:

- (a) Temporarily withhold payments pending the bidder/vendor commencing in good-faith corrective action to cure the deficiency;
- (b) Permanently withhold payments; and/or
- (c) Take any and all other remedies that may be legally available.

### 21.2 Access to Records and Record Retention

“Retention of Records. The contractor agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case contractor agrees to maintain same until the FEMA or applicable Federal Administrator, Brazoria County, the Comptroller General of the United States, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related to the litigation or settlement of claims.”

Access to Records. The following access to records requirements apply to this contract:

- 1) The contractor agrees to provide Brazoria County, the FEMA or applicable Federal Administrator, Brazoria County, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions.
- 1) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
- 2) The contractor agrees to provide the FEMA or applicable Federal Administrator, Brazoria County, the Comptroller General of the United States, or any of their authorized representatives or their authorized representatives access to construction or other work sites pertaining to the work being completed under this contract.

### 21.3 Debarment and Suspension

“Suspension and Debarment

- (1) The contractor is required to verify that none of the contractor, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C and must

include a requirement to comply with these regulations in any lower tier covered transaction it enters into.  
(3) This certification is a material representation of fact relied upon by Brazoria County. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to Texas Department of Emergency Management and Brazoria County, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

(4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions."

#### **21.4 Procurement of Recovered Materials (Solid Waste Disposal Act):**

1) In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired

(i) Competitively within a timeframe providing for compliance with the contract performance schedule;

(ii) Meeting contract performance requirements; or

(iii) At a reasonable price.

Information about this requirement is available at EPA's Comprehensive Procurement Guidelines web site, <http://www3.epa.gov/epawaste/consolve/tools/cpg/index.htm>

The list of EPA-designate items is available at <http://www3.epa.gov/epawaste/consolve/tools/cpg/products/index.htm>

#### **21.5 Domestic Preferences for Procurements (2 CFR 200.322)**

(a) As appropriate and to the extent consistent with law, the non-Federal entity should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award.

(b) For purposes of this section:

(1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

(2) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

#### **21.7 Compliance with Federal Law, Regulations, and Executive Orders**

"This is an acknowledgement that General Land Office (GLO), or applicable Federal Administrator, financial assistance will be used to fund the contract only. The contractor will comply will all applicable federal law, regulations, executive orders, GLO, or applicable Federal Administrator , policies, procedures, and directives."

#### **21.8 No Obligation by Federal Government**

"The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

## **21.9 Program Fraud and False or Fraudulent Statements or Related Acts**

"The contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the contractor's actions pertaining to this contract."

## **21.10 Termination for Cause and Convenience**

Termination with Cause:

"Upon written notice to the Contractor of a defect or breach of this Agreement, Contractor has five (5) business days to cure any defect(s) or breach(es) cited in said notice. If Contractor fails to cure the defect(s) or breach(es) within the five (5) business days allowed, Brazoria County may terminate this Agreement. Nevertheless, Brazoria County reserves the right to provide written notice to the Contractor that this Agreement shall continue if Contractor has in good-faith commenced efforts to cure said defect(s) or breach(es) and Contractor agrees, in writing, to continue to act without undue delay to cure said defect(s) or breach(es).

Termination Without Cause:

This contract may be terminated by either the County or the Contractor at any time, without cause, by providing the other Party at least thirty (30) calendar days' prior written notice.

## **21.11 Clean Air Act**

(1) The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

(2) The contractor agrees to report each violation to Brazoria County and understands and agrees that Brazoria County will, in turn, report each violation as required to assure notification to the applicable federal program Administrator, and the appropriate Environmental Protection Agency Regional Office.

(3) The contractor agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by the applicable federal program Administrator.

## **21.12 Federal Water Pollution Control Act**

(1) The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

(2) The contractor agrees to report each violation to Brazoria County and understands and agrees that Brazoria County will, in turn, report each violation as required to assure notification to Brazoria County and the appropriate Environmental Protection Agency Regional Office.

(3) The contractor agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by the applicable federal program Administrator."

## **21.13 Byrd Anti-Lobbying Amendment**

Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer of employee of Congress, or an employee of a member of Congress in connection with obtaining and Federal contract, grant, or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.

Contractor shall file the required certification: The undersigned certifies, to the best of his or her knowledge and belief, that:

(a) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress,

an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(c) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. 2 CFR 200 APPENDIX II (I) and 24 CFR §570.303

#### **21.14 Energy Efficiency**

The Contractor shall comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201)

#### **21.15 Equal Opportunity:**

§ 60-1.4 Equal opportunity clause.

Government contracts. Except as otherwise provided, each contracting agency shall include the following equal opportunity clause contained in section 202 of the order in each of its Government contracts (and modifications thereof if not included in the original contract):

During the performance of this contract, the Contractor agrees as follows:

1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

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. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.



(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) 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 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

## **21.16 Davis-Bacon Act and Copeland Anti-Kickback Act**

### Davis-Bacon Act, as amended (40 U.S.C. 3141-3148).

When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. 2 CFR 200 APPENDIX II (D)

#### (1) Minimum wages.

(i) All [laborers](#) and mechanics [employed](#) or working upon [the site of the work](#) (or under the [United States Housing Act of 1937](#) or under the [Housing Act of 1949](#) in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the [Secretary](#) of Labor under the Copeland Act ([29 CFR part 3](#))), the full amount of [wages](#) and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the [wage determination](#) of the [Secretary](#) of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such [laborers](#) and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section

1(b)(2) of the [Davis-Bacon Act](#) on behalf of [laborers](#) or mechanics are considered [wages](#) paid to such [laborers](#) or mechanics, subject to the provisions of [paragraph \(a\)\(1\)\(iv\)](#) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such [laborers](#) and mechanics shall be paid the appropriate wage rate and fringe benefits on the [wage determination](#) for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). [Laborers](#) or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the [employer's](#) payroll records accurately set forth the time spent in each classification in which work is performed. The [wage determination](#) (including any additional classification and wage rates conformed under [paragraph \(a\)\(1\)\(ii\)](#) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at [the site of the work](#) in a prominent and accessible place where it can be easily seen by the workers.

(ii)

(A) The [contracting officer](#) shall require that any class of [laborers](#) or mechanics, including helpers, which is not listed in the [wage determination](#) and which is to be [employed](#) under the [contract](#) shall be classified in conformance with the [wage determination](#). The [contracting officer](#) shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the [wage determination](#); and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the [wage determination](#).

(B) If the contractor and the [laborers](#) and mechanics to be [employed](#) in the classification (if known), or their representatives, and the [contracting officer](#) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the [contracting officer](#) to the [Administrator](#) of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The [Administrator](#), or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the [contracting officer](#) or will notify the [contracting officer](#) within the 30-day period that additional time is necessary.

(C) In the event the contractor, the [laborers](#) or mechanics to be [employed](#) in the classification or their representatives, and the [contracting officer](#) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the [contracting officer](#) shall refer the questions, including the views of all interested parties and the recommendation of the [contracting officer](#), to the [Administrator](#) for determination. The [Administrator](#), or an authorized representative, will issue a determination within 30 days of receipt and so advise the [contracting officer](#) or will notify the [contracting officer](#) within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this [contract](#) from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the [contract](#) for a class of [laborers](#) or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as [stated](#) in the [wage determination](#) or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the [wages](#) of any [laborer](#) or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the [Secretary](#) of Labor has found, upon the written request of the contractor, that the applicable standards of the [Davis-Bacon Act](#) have been met. The [Secretary](#) of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The (write in name of [Federal Agency](#) or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this [contract](#) or any other Federal [contract](#) with the same prime

contractor, or any other federally-assisted [contract](#) subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay [laborers](#) and mechanics, including [apprentices](#), trainees, and helpers, [employed](#) by the contractor or any subcontractor the full amount of [wages](#) required by the [contract](#). In the event of failure to pay any [laborer](#) or mechanic, including any [apprentice](#), [trainee](#), or helper, [employed](#) or working on [the site of the work](#) (or under the [United States Housing Act of 1937](#) or under the [Housing Act of 1949](#) in the construction or development of the project), all or part of the [wages](#) required by the [contract](#), the (Agency) may, after written notice to the contractor, [sponsor](#), applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all [laborers](#) and mechanics working at [the site of the work](#) (or under the [United States Housing Act of 1937](#), or under the [Housing Act of 1949](#), in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of [wages](#) paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the [Davis-Bacon Act](#)), daily and weekly number of hours worked, deductions made and actual [wages](#) paid. Whenever the [Secretary](#) of Labor has found under [29 CFR 5.5\(a\)\(1\)\(iv\)](#) that the [wages](#) of any [laborer](#) or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the [Davis-Bacon Act](#), the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the [laborers](#) or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing [apprentices](#) or [trainees](#) under approved programs shall maintain written evidence of the registration of [apprenticeship programs](#) and certification of [trainee](#) programs, the registration of the [apprentices](#) and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)

(A) The contractor shall submit weekly for each week in which any [contract](#) work is performed a copy of all payrolls to the (write in name of appropriate federal agency) if the [agency](#) is a party to the [contract](#), but if the [agency](#) is not such a party, the contractor will submit the payrolls to the applicant, [sponsor](#), or owner, as the case may be, for transmission to the (write in name of agency). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under [29 CFR 5.5\(a\)\(3\)\(i\)](#), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each [employee](#) (e.g., the last four digits of the [employee](#)'s social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the (write in name of appropriate federal agency) if the [agency](#) is a party to the [contract](#), but if the [agency](#) is not such a party, the contractor will submit them to the applicant, [sponsor](#), or owner, as the case may be, for transmission to the (write in name of agency), the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the [sponsoring](#) government [agency](#) (or the applicant, [sponsor](#), or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons [employed](#) under the [contract](#) and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, [29 CFR part 5](#), the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, [29 CFR part 5](#), and that such information is correct and complete;

(2) That each [laborer](#) or mechanic (including each helper, [apprentice](#), and trainee) [employed](#) on the [contract](#) during the payroll period has been paid the full weekly [wages](#) earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full [wages](#) earned, other than permissible deductions as set forth in Regulations, [29 CFR part 3](#);

(3) That each [laborer](#) or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable [wage determination](#) incorporated into the [contract](#).

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by [paragraph \(a\)\(3\)\(ii\)\(B\)](#) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and [section 231](#) of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under [paragraph \(a\)\(3\)\(i\)](#) of this section available for inspection, copying, or transcription by authorized representatives of the (write the name of the agency) or the Department of Labor, and shall permit such representatives to interview [employees](#) during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the [Federal agency](#) may, after written notice to the contractor, [sponsor](#), applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to [29 CFR 5.12](#).

#### (4) Apprentices and trainees -

(i) Apprentices. [Apprentices](#) will be permitted to work at less than the predetermined rate for the work they performed when they are [employed](#) pursuant to and individually registered in a bona fide [apprenticeship program](#) registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, [Employer](#) and Labor Services, or with a [State Apprenticeship Agency](#) recognized by the Office, or if a person is [employed](#) in his or her first 90 days of probationary employment as an [apprentice](#) in such an [apprenticeship program](#), who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, [Employer](#) and Labor Services or a [State Apprenticeship Agency](#) (where appropriate) to be eligible for probationary employment as an [apprentice](#). The allowable ratio of [apprentices](#) to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an [apprentice](#) wage rate, who is not registered or otherwise [employed](#) as [stated](#) above, shall be paid not less than the applicable wage rate on the [wage determination](#) for the classification of work actually performed. In addition, any [apprentice](#) performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the [wage determination](#) for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every [apprentice](#) must be paid at not less than the rate specified in the registered program for the [apprentice's](#) level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable [wage determination](#). [Apprentices](#) shall be paid fringe benefits in accordance with the provisions of the [apprenticeship program](#). If the [apprenticeship program](#) does not specify fringe benefits, [apprentices](#) must be paid the full amount of fringe benefits listed on the [wage determination](#) for the applicable classification. If the [Administrator](#) determines that a different practice prevails for the applicable [apprentice](#) classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, [Employer](#) and Labor Services, or a [State Apprenticeship Agency](#) recognized by the Office, withdraws approval of an [apprenticeship program](#), the contractor will no longer be permitted to utilize [apprentices](#) at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in [29 CFR 5.16](#), [trainees](#) will not be permitted to work at less than the predetermined rate for the work performed unless they are [employed](#) pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of [trainees](#) to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every [trainee](#) must be paid at not less than the rate specified in the approved program for the [trainee's](#) level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable [wage](#)

determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

#### **“Compliance with the Copeland “Anti-Kickback” Act.**

(1) Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

(2) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as the FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.



(3) Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.”

#### **21.17 Contract Work Hours and Safety Standards Act**

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(1) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The (write in the name of the Federal agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.”

#### **21.18 Rights to Inventions Made Under a Contract or Agreement**

b. If the FEMA (or Federal) award meets the definition of “funding agreement” under 37 C.F.R.

§ 401.2(a) and the Subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the Subrecipient must comply with the requirements of 37 C.F.R. Part 401 (Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements), and any implementing regulations issued by the awarding agency.

FEMA. See 2 C.F.R. Part 200, Appendix II, ¶ F.

c. The regulation at 37 C.F.R. § 401.2(a) currently defines “funding agreement” as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

## **21.19 Section 3 Clause**

All Section 3 covered contracts shall include the following clause (referred to as the Section 3 clause):

A. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this Section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

D. The contractor agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this Section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.

F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

G. With respect to work performed in connection with Section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of Section 3 and section 7(b) agree to comply with Section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

## **21.20 Reporting Requirements**

The Contractor shall comply with the requirements and regulations pertaining to reporting (24 CFR 85.36 (i) (7)).

## **21.21 Patent Rights**

The Contractor shall comply with the requirements and regulations pertaining to patent rights with respect to any discovery or intervention which arises or is developed in the course of or under such contract. (24 CFR 85.36 (i)(8)).

## **21.22 Copyrights and Rights in Data**

The Contractor shall comply with the requirements and regulations pertaining to copyrights and rights in data. (24 CFR 85.36 (i)(9)).



**21.23 Section 109 of the Housing and Community Development Act of 1974**

The Contractor shall comply with the provisions of Section 109 of the Housing and Community Development Act of 1974. No person in the United States shall on the ground of race, color, national origin, religion, or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title.

**21.24 Section 504 Rehabilitation Act of 1973, as amended**

The Contractor agrees that no otherwise qualified individual with disabilities shall, solely by reason of his/her disability, be denied the benefits of, or be subjected to discrimination, including discrimination in employment, under any program or activity receiving federal financial assistance.

**21.25 Age Discrimination Act of 1975**

The Contractor shall comply with the Age Discrimination Act of 1975 which provides that no person in the United States shall on the basis of age be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

**21.26 Economic Opportunities for Section 3 Residents and Section 3 Business Concerns**

The work to be performed under this Contract is subject to the requirements of section 3 of the Housing and Urban Development (HUD) Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

(b) The parties to this Contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this Contract, the parties to this Contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

(c) The Contractor agrees to send to each labor organization or representative of workers with which the Contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the Contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

(d) The Contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The Contractor will not subcontract with any subcontractor where the Contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

(e) The Contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the Contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the Contractor's obligations under 24 CFR part 135.

(f) Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this Contract for default, and debarment or suspension from future HUD assisted contracts.

(g) With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this Contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b). 24 CFR §135.38

#### **21.27 Solid Waste Disposal Act**

Contractor must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

#### **21.28 Non Segregated Facilities**

The Contractor certifies that he does not and will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not and will not permit his employees any segregated facilities at any of his establishments, or permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. As used in this paragraph the term "segregated facilities" means any waiting rooms, work areas, rest rooms 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.

#### **21.29 Gender Neutral – Gender References**

When necessary, unless the context clearly requires otherwise, any gender-specific or gender-neutral term in this Contract (for example, he, she, it, etc.) is to be read as referring to any other gender or to no gender.

## **BRAZORIA COUNTY BID BOND INFORMATION AND REQUIREMENTS**

The following requirements supersede other requirements where applicable.

**BID BOND:** All respondents must submit with bid/proposal, a bid bond for at least five percent (5%) of the total bid/proposal price for this construction of a public work project. A Bid Bond shall be issued by a surety acceptable to Brazoria County, authorized to do business in the State of Texas, as a guaranty that the respondent will enter into a contract with Brazoria County (as outlined in the Statement of Work and attachments) and that offer will furnish the requisite performance and payment bonds as may be required.

If submitting to this Bid/Offer electronically, an original (paper, not electronic) bid bond is required to be mailed to the Purchasing Department within three (3) business days *of receipt of the Intent to Award letter* and a copy of the original bid bond shall be submitted with the electronic Bid/Offer response. Please use the label found on the last page of the ITB procurement package, as well as the hard copy mailing address found in the same procurement package. If submitting to this Bid/Offer through hard copy format (not electronically), the original bid bond must be included in the Bid/Offer response.

A guaranty shall be submitted with each bid that the bidder will enter into a contract with Brazoria County for the goods and/or services as outlined in the Specifications, Scope of Work and contract attachments and that respondent will furnish the requisite performance and payment bonds as may be required within ten (10) days after award of the contract and receipt of contract and performance bond forms.

Performance bond and payment bond shall be in a sum equal to the amount of money to be paid by the County under the contract, unless otherwise stated, and shall be executed by a surety company authorized to do business in the State of Texas.

Written verification of the validity of the bond shall be received by the Purchasing Department from the Contractor's Surety before any payments will be made.

# **BRAZORIA COUNTY PERFORMANCE BOND INFORMATION AND REQUIREMENTS**

The following requirements supersede other requirements where applicable.

**PERFORMANCE BOND:** As designated below, the successful respondent must provide a performance bond, in the amount of one hundred percent (100%) of the total contract sum within ten (10) calendar days after receipt of notification of bid/proposal award. Such bond shall be executed by a corporate surety or corporate sureties in accordance with Article 7.19-1, Vernon's Texas Insurance Code. Such corporate surety/sureties shall be duly authorized and admitted to do business in the State of Texas and licensed in the State of Texas to issue fidelity and surety bonds with a Best Rating of "A" or better and have a bonding capacity adequate for the prescribed amount. Brazoria County reserves the right to accept or reject any surety company proposed by the respondent. In the event Brazoria County rejects the proposed surety company, the respondent will be afforded five (5) additional days to submit the required bonds issued by a surety company acceptable to Brazoria County.

XX PERFORMANCE BOND REQUIRED WHEN BID/PROPOSAL EXCEEDS \$100,000  
AND IS FOR PUBLIC WORK.

       PERFORMANCE BOND REQUIRED WHEN BID/PROPOSAL EXCEEDS \$50,000.00 AND IS  
REQUIRED BY BRAZORIA COUNTY.

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If the performance bond and related documents are not returned to the Brazoria County Purchasing Department, 237 E. Locust Street, Suite 406, Angleton, Texas 77515 within ten (10) days of award, Brazoria County has the right to render the award ineffective.

Written verification of the validity of the bond shall be received by the Purchasing Department from the Contractor's Surety before any payments will be made.

## **BRAZORIA COUNTY PAYMENT BOND INFORMATION AND REQUIREMENTS**

The following requirements supersede other requirements where applicable.

**PAYMENT BOND:** In the event the total accepted bid/proposal price exceeds \$25,000 the successful respondent must provide to the office of the County Purchasing Director, a payment bond in the amount of one hundred percent (100%) of the total contract sum within ten (10) calendar days after receipt of notification of bid/proposal award. Such bond shall be executed by a corporate surety or corporate sureties in accordance with Article 7.19-1, Vernon's Texas Insurance Code. Such corporate surety/sureties shall be duly authorized and admitted to do business in the State of Texas and licensed in the State of Texas to issue fidelity and surety bonds with a Best Rating of "A" or better and have a bonding capacity adequate for the prescribed amount. Brazoria County reserves the right to accept or reject any surety company proposed by the respondent. In the event Brazoria County rejects the proposed surety company, the respondent will be afforded five (5) additional days to submit the required bonds issued by a surety company acceptable to Brazoria County.

  X        PAYMENT BOND REQUIRED WHEN BID/PROPOSAL EXCEEDS \$25,000 AND IS FOR PUBLIC  
WORKS.

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If the payment bond and related documents are not returned to the Brazoria County Purchasing Department, 237 E. Locust Street, Suite 406, Angleton, Texas 77515 within ten (10) days of award, Brazoria County has the right to render the award ineffective.

Written verification of the validity of the bond shall be received by the Purchasing Department from the Contractor's Surety before any payments will be made.

# PREVAILING WAGE RATES

"General Decision Number: TX20250038 01/03/2025

Superseded General Decision Number: TX20240038

State: Texas

Construction Type: Highway

Counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, San Jacinto and Waller Counties in Texas.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

|  |  |
|--|--|
| If the contract is entered<br>  into on or after January 30,<br>  2022, or the contract is<br>  renewed or extended (e.g., an<br>  option is exercised) on or<br>  after January 30, 2022:<br> <br> <br> <br> <br> | . Executive Order 14026<br>  generally applies to the<br>  contract.<br>  . The contractor must pay<br>  all covered workers at<br>  least \$17.75 per hour (or<br>  the applicable wage rate<br>  listed on this wage<br>  determination, if it is<br>  higher) for all hours<br>  spent performing on the<br>  contract in 2025.<br> |
| If the contract was awarded on<br>  or between January 1, 2015 and<br>  January 29, 2022, and the<br>  contract is not renewed or<br>  extended on or after January<br>  30, 2022:<br> <br> <br> <br> <br>         | . Executive Order 13658<br>  generally applies to the<br>  contract.<br>  . The contractor must pay all<br>  covered workers at least<br>  \$13.30 per hour (or the<br>  applicable wage rate listed<br>  on this wage determination,<br>  if it is higher) for all<br>  hours spent performing on<br>  that contract in 2025.<br>     |

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this

wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number      Publication Date  
0                              01/03/2025

SUTX2011-013 08/10/2011

|                                       | Rates    | Fringes |
|---------------------------------------|----------|---------|
| CEMENT MASON/CONCRETE                 |          |         |
| FINISHER (Paving and Structures)..... | \$ 12.98 | **      |
| ELECTRICIAN.....                      | \$ 27.11 |         |
| FORM BUILDER/FORM SETTER              |          |         |
| Paving & Curb.....                    | \$ 12.34 | **      |
| Structures.....                       | \$ 12.23 | **      |
| LABORER                               |          |         |
| Asphalt Raker.....                    | \$ 12.36 | **      |
| Flagger.....                          | \$ 10.33 | **      |
| Laborer, Common.....                  | \$ 11.02 | **      |
| Laborer, Utility.....                 | \$ 11.73 | **      |
| Pipelayer.....                        | \$ 12.12 | **      |
| Work Zone Barricade                   |          |         |
| Servicer.....                         | \$ 11.67 | **      |
| PAINTER (Structures).....             | \$ 18.62 |         |
| POWER EQUIPMENT OPERATOR:             |          |         |
| Asphalt Distributor.....              | \$ 14.06 | **      |
| Asphalt Paving Machine.....           | \$ 14.32 | **      |
| Broom or Sweeper.....                 | \$ 12.68 | **      |
| Concrete Pavement                     |          |         |
| Finishing Machine.....                | \$ 13.07 | **      |
| Concrete Paving, Curing,              |          |         |
| Float, Texturing Machine....          | \$ 11.71 | **      |
| Concrete Saw.....                     | \$ 13.99 | **      |
| Crane, Hydraulic 80 Tons              |          |         |
| or less.....                          | \$ 13.86 | **      |
| Crane, Lattice boom 80                |          |         |
| tons or less.....                     | \$ 14.97 | **      |
| Crane, Lattice boom over              |          |         |
| 80 Tons.....                          | \$ 15.80 | **      |
| Crawler Tractor.....                  | \$ 13.68 | **      |
| Excavator, 50,000 pounds              |          |         |
| or less.....                          | \$ 12.71 | **      |
| Excavator, Over 50,000                |          |         |
| pounds.....                           | \$ 14.53 | **      |
| Foundation Drill, Crawler             |          |         |
| Mounted.....                          | \$ 17.43 | **      |
| Foundation Drill, Truck               |          |         |
| Mounted.....                          | \$ 15.89 | **      |
| Front End Loader 3 CY or              |          |         |



|                              |          |    |
|------------------------------|----------|----|
| Less.....                    | \$ 13.32 | ** |
| Front End Loader, Over 3 CY. | \$ 13.17 | ** |
| Loader/Backhoe.....          | \$ 14.29 | ** |
| Mechanic.....                | \$ 16.96 | ** |
| Milling Machine.....         | \$ 13.53 | ** |
| Motor Grader, Fine Grade.... | \$ 15.69 | ** |
| Motor Grader, Rough.....     | \$ 14.23 | ** |
| Off Road Hauler.....         | \$ 14.60 | ** |
| Pavement Marking Machine.... | \$ 11.18 | ** |
| Piledriver.....              | \$ 14.95 | ** |
| Roller, Asphalt.....         | \$ 11.95 | ** |
| Roller, Other.....           | \$ 11.57 | ** |
| Scraper.....                 | \$ 13.47 | ** |
| Spreader Box.....            | \$ 13.58 | ** |

Servicer.....\$ 13.97 \*\*

#### Steel Worker

|                              |          |    |
|------------------------------|----------|----|
| Reinforcing Steel.....       | \$ 15.15 | ** |
| Structural Steel Welder..... | \$ 12.85 | ** |
| Structural Steel.....        | \$ 14.39 | ** |

#### TRUCK DRIVER

|                              |          |    |
|------------------------------|----------|----|
| Low Boy Float.....           | \$ 16.03 | ** |
| Single Axle.....             | \$ 11.46 | ** |
| Single or Tandem Axle Dump.. | \$ 11.48 | ** |
| Tandem Axle Tractor w/Semi   |          |    |
| Trailer.....                 | \$ 12.27 | ** |

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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\*\* Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.75) or 13658 (\$13.30). 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.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at

<https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

#### Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", "SA", or "SC" denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

#### Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

#### Survey Rate Identifiers

The "SU" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates

reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

#### State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

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#### WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to [dba.reconsideration@dol.gov](mailto:dba.reconsideration@dol.gov) or by mail to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210.

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END OF GENERAL DECISION"

# **BRAZORIA COUNTY BID TABLE SUBMITTAL INSTRUCTIONS**

**ITB #25-29 BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG- PLAN SET III / 30N -  
GENERAL LAND OFFICE CONTRACT NUMBER 19-076-003-B352-CDBG-DR 2016 FLOOD ALLOCATION**

**Please follow the instructions found in Item 1.0 if you are submitting your bid electronically using Bonfire electronic bidding platform**

## **1.0 ONLINE OFFER SUBMISSION (*PREFERRED METHOD OF SUBMISSION*)**

RESPONDENT'S ARE TO DOWNLOAD AND FILL OUT THE ONLINE BID TABLE FROM BONFIRE AND THEN UPLOAD THE COMPLETED TABLE INTO BONFIRE TO BE INCLUDED WITH THEIR ONLINE BID SUBMISSION.

**Please follow the instructions found in Item 2.0 if you are submitting a sealed hard copy bid**

## **2.0 HARD COPY BID SUBMISSION**

RESPONDENT'S ARE TO INCLUDE WITH THEIR SEALED HARD COPY BID, A PRINTED COPY OF ATTACHMENT A BID TABLE.

GENERAL:       Brazoria County reserves the right to accept or reject any or all bids and waive all technicalities.  
All delivered items should be priced – FOB Destination Full Freight Allowed. Brazoria County will not pay for any additional transportation and/or shipping charges.

**BRAZORIA COUNTY  
STATEMENT OF NO BID**

**ITB #25-29 BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG- PLAN SET III / 30N -  
GENERAL LAND OFFICE CONTRACT NUMBER 19-076-003-B352-CDBG-DR 2016 FLOOD ALLOCATION**

If Respondent is not submitting on the goods and/or services as stated in this ITB, please download and complete this form.

Mail the form to:  
Brazoria County Courthouse, Purchasing Department, 237 E. Locust Street, Suite 406, Angleton, Texas 77515.

Or email to: [aerickson@brazoriacountytx.gov](mailto: aerickson@brazoriacountytx.gov)

\*\*\*\*\*

NAME OF FIRM: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

SIGNATURE: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ DATE: \_\_\_\_\_

\*\*\*\*\*

The above has declined to submit a bid response for the following reason(s) [please check all that apply]:

- \_\_\_\_\_ Specifications too “restrictive”, i.e., goods offered by our company do not meet stated specifications.
- \_\_\_\_\_ Specifications unclear (please explain below).
- \_\_\_\_\_ We do not offer this commodity and/or service or an equivalent.
- \_\_\_\_\_ Insufficient time to respond to the ITB.
- \_\_\_\_\_ Our schedule would not permit us to perform.
- \_\_\_\_\_ Cannot meet insurance requirements.

Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# **BRAZORIA COUNTY**

## **STANDARD TERMS AND CONDITIONS**

1. **FUNDING:** Funds for payment have been provided through the Brazoria County budget approved by the Commissioners Court for the current fiscal year only. State of Texas statutes prohibit the obligation and expenditure of public funds beyond the fiscal year for which a budget has been approved. Therefore, anticipated orders or other obligations that may arise past the end of the current Brazoria County fiscal year shall be subject to budget approval.
2. **DELIVERY:** Items ordered from this offer may require delivery to various locations throughout Brazoria County, as specified in this offer or at time of order. All delivery and freight charges (F.O.B. Brazoria County designated location) are to be included in the offer price except as noted herein.
3. **AWARD OF CONTRACT:** Brazoria County reserves the right to reject any or all offers, and to select any part or parts thereof without accepting the entire offer. All solicitations may be compared with contracts available to the County through other sources such as Interlocal Agreements and other appropriate sources. Brazoria County may purchase through the source that provides the best value to the County. The successful Respondent will be notified of award as promptly as a thorough analysis of offers will permit, and shall have ten (10) calendar days following date of notification of award in which to supply payment and performance bonds and certificate of insurance as may be required herein.

3.1 Brazoria County hereby notifies Respondents that pursuant to Texas Local Government Code §262.0276 (effective September 1, 2003) Brazoria County is prohibited from entering into a contract or other transaction which requires approval by the Commissioners Court with an individual, sole proprietorship, corporation, non-profit corporation, partnership joint venture, limited corporation or other entity which is indebted to the County. Further, that this Contract may be terminated and payment withheld if awarded Respondent becomes indebted to the County during the term of the Contract.

4. **EQUAL EMPLOYMENT:** All contracts will be awarded by Brazoria County without consideration as to race, religion, sex, national origin or disability of bidder. Successful bidders are required to adhere to the provisions of 42 USCA Sec. 12101 et seq., Americans with Disabilities Act.
5. **CONTRACT:** The Contract consists of the Instructions to Respondents, Specifications/Statement of Work, Standard Terms & Conditions, all well as all other documents included in the Invitation to Bid Number «Number» as stated in the Invitation to Bid Package Checklist, and any drawings and other specifications, as well as addenda issued prior to execution of the Contract, other documents listed in the Contract, and modifications issued after execution of the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. No invoices will be paid prior to acceptance of Contract by Brazoria County. No different or additional terms will become a part of this Contract, except as agreed upon by all parties hereto.
6. **INTERLOCAL PARTICIPATION:** It is hereby made a precondition of any offer for a Contract for supplies or services and a part of these specifications, that the submission of any offer in response to this request constitutes an offer made under the same conditions, for the same price, and for the same effective period as this offer, to any other governmental entity having an interlocal agreement with Brazoria County.

6.1 It is further understood, that any other governmental entity that elects to use a Brazoria County semi-annual or annual award will issue its own Contracts or purchase orders and will require separate billing.

7. **DEFAULT OF RESPONDENT:** If successful respondent defaults by failing to supply payment and performance bonds and/or certificate of insurance within the ten (10) day period allotted, award shall pass to the next respondent who provides the best value to Brazoria County upon the approval of Commissioners' Court.

7.1 Respondent, in submitting this offer, agrees that Brazoria County shall not be liable for damages in the event that the County declares the respondent in default.

8. **ADDENDA:** Any interpretations, corrections or changes to these Contract documents and specifications will be made by addenda. Sole issuing authority of addenda shall be vested in the Brazoria County Purchasing Director. Addenda will be mailed to all that are known to have received a copy of the offer package and/or Contract. Respondents shall acknowledge receipt of all addenda.
9. **SALES TAX:** Brazoria County is exempt by law from payment of Texas Sales Tax and Federal Excise Tax.



**10. ETHICAL CONDUCT:** The respondent shall not offer or accept gifts or anything of value, nor enter into any business arrangement with any employee, official, or Director of Brazoria County. No public official shall have interest in this Contract, in accordance with Texas Local Government Code Annotated Title 5, Subtitle C, Chapter 171.

**10.1** The Respondent affirms that the only person or parties interested in this offer as principals are those named herein, and that this offer is made without collusion with any other person, firm, or corporation.

**11. MINIMUM STANDARDS FOR RESPONSIBLE PROSPECTIVE BIDDERS:** A prospective bidder must affirmatively demonstrate bidder's responsibility. A prospective bidder must meet the following requirements:

- 1) Have adequate financial resources, or the ability to obtain such resources as required;
- 2) Be able to comply with the required or proposed delivery schedule;
- 3) Have a satisfactory record of performance;
- 4) Have a satisfactory record of integrity and ethics;
- 5) Be otherwise qualified and eligible to receive an award.

**11.1** Brazoria County may request representation and other information sufficient to determine bidder's ability to meet these minimum standards listed above.

**12. REFERENCES:** During an analysis of all offers, Brazoria County may request Respondent to supply a list of three (3) references to which like services or materials have been supplied by Respondent. If requested, references should include name of firm, address, telephone number and name of representative.

**13. INSURANCE:** Prior to acceptance of contract by Brazoria County, the successful Respondent must furnish a Certificate of Insurance from an approved insurance carrier for the coverage indicated.

**14. SILENCE OF SPECIFICATIONS:** The apparent silence of the specifications contained as a part of this package as to any detail or to the apparent omission of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

**15. INDEMNIFICATION:** The successful Respondent (herein after referred to as Contractor), shall defend, indemnify, and save harmless Brazoria County and all its officers, Directors, officials, agents, and employees from all suits, actions, or other claims of any character, name, and description brought for or on account of any injuries or damages of any negligent act or fault of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act of omission, neglect, or misconduct of said Contractor; or because any claims or amount recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising recovered under the Worker's Compensation Act, or any other law, ordinance, order, or decree; or of any Director, employee, subcontractor, or supplier in the execution of, or performance under, any Contract which may result from award of bid/offer.

**15.1** Further, Contractor indemnifies and will indemnify and save harmless Brazoria County from liability, claim or demand on their part, their Directors, servants, customers, employees, subcontractors, or any employees or agents of subcontractors, whether such liability, claim, or demand arise from event or casualty happening within the job site itself or elsewhere. Contractor shall pay any judgment with costs which may be obtained against Brazoria County growing out of such injury or damages.

**15.2** Money due the Contractor under and by virtue of his Contract as may be considered necessary by the County for such purpose may be retained for the use of the County, or in case no money is due, his surety may be held until such suit or suits action or actions, claim or claims for injuries or damages as aforesaid shall have been settled and suitable evidence to the effect furnished to the County, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he is adequately protected by public liability and property damage insurance.

**16. THIRD PARTY BENEFICIARY CLAUSE:** It is specifically agreed between the parties executing the Contract that it is not intended by any of the provisions of any part of the Contract to create with the public or any member thereof a third party beneficiary or to authorize anyone not a party to the Contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the Contract.

- 17. PURCHASE ORDERS REQUIRED:** All orders for materials or work must be authenticated by a purchase order issued by the Brazoria County Purchasing Department. Invoices not bearing a purchase order number will not be paid.
- 18. TESTING:** All materials being used in fulfillment of this Contract are subject to inspection or test at any time during their preparation, delivery, or use. At the option of the County Purchasing Director, they may be sampled and tested in order to determine compliance with the governing specifications. Materials not conforming to the requirements of these specifications shall not be used in fulfillment of this Contract with Brazoria County. The County reserves the right to immediately terminate any Contract found not to be in compliance with governing specifications as a result of testing by the County.
- 19. WAGES:** Contractor shall pay or cause to be paid, without cost or expense to Brazoria County, all Social Security, Unemployment and Federal Income Withholding Taxes of all employees; and all such employees shall be paid wages and benefits as required by Federal and/or State law. Contracts involving construction work or supply of materials in place shall abide by the provisions of Article 5159d Texas Revised Civil Statutes Annotated.

**20. TERMINATION OF CONTRACT:**

Termination with Cause:

“Upon written notice to the Contractor of a defect or breach of this Agreement, Contractor has five (5) business days to cure any defect(s) or breach(es) cited in said notice. If Contractor fails to cure the defect(s) or breach(es) within the five (5) business days allowed, Brazoria County may terminate this Agreement. Nevertheless, Brazoria County reserves the right to provide written notice to the Contractor that this Agreement shall continue if Contractor has in good-faith commenced efforts to cure said defect(s) or breach(es) and Contractor agrees, in writing, to continue to act without undue delay to cure said defect(s) or breach(es).

Termination Without Cause:

This contract may be terminated by either the County or the Contractor at any time, without cause, by providing the other Party at least thirty (30) calendar days' prior written notice.

- 21. DELIVERY OF NOTICES:** Any notice provided by this Contract (or required by law) to be given to the Contractor by Brazoria County shall be conclusively deemed to have been given and received on the next day after such written notice has been deposited in the mail in Angleton, Texas, by Registered or Certified mail with sufficient postage affixed thereto, addressed to the Contractor at the address so provided; provided this shall not prevent the giving of actual notice in any other manner.
- 22. DELIVERY TICKETS:** Delivery tickets shall accompany each order shipped, and shall show Contractor's name and address, delivery location, Brazoria County purchase order number and descriptive information as to item and quantity delivered.
- 23. HAZARDOUS SUBSTANCES:** State law requires that shipments of hazardous substances shall include MATERIAL SAFETY DATA SHEETS (MSDS). MSDS must be supplied with the first order shipped under any contract, and at any time MSDS is revised.
- 24. PAYMENT:** Payment shall be made upon receipt and/or acceptance in accordance with the terms of this Contract by the County of items(s) ordered, and receipt of a valid invoice in accordance with Texas Government Code chapter 2251. Contractor is required to pay subcontractors within ten (10) days.
- 25. CONTRACTOR'S LIABILITY:** The Contractor shall be responsible for all damage or injury to property of any character during the execution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work, including the Contractor's agents, employees, subcontractors, and any employees or agents of subcontractors, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.

- 25.1** When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, including the Contractor's agents, employees, subcontractors, and any employees or agents of subcontractors, he shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as he may be directed, or he shall make good such damage or injury in an acceptable manner.

- 26. DEFECTIVE MATERIALS:** Unless otherwise stated herein, items supplied under this Contract shall be subject to the County's approval. Items found defective or not meeting specifications shall be picked up and replaced by the Contractor at the next service day at no expense to the County. If item is not picked up within one (1) week after notification, the item will become a donation to the County for disposition.
- 27. WARRANTY:** Contractor shall warrant that all items and services shall conform to the proposed specifications, all warranties as stated in the Uniform Commercial Code, and be free from all defects in material, workmanship and title. Contractor and the County agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code. Further, Contractor shall provide additional warranty requirements as defined in the Scope of Work attached. Respondents must provide all warranty terms and conditions in response package.
- 28. ASSIGNMENT:** Contractor shall not sell, assign, transfer or convey this Contract, in whole or in part, without the prior written consent of Brazoria County.
- 29. GOVERNING LAW:** Contractor is advised that these requirements shall be fully governed by the laws of the State of Texas and that Brazoria County may request and rely on advice, decisions and opinions of the Attorney General of Texas and the County Attorney concerning any portion of these requirements. All disputes arising out of this agreement will be resolved in Brazoria County, Texas.
- All documents are subject to the Public Information Act requirements.
- 30. DRAWINGS:** All drawings, plans, and specifications are hereby attached and made a part of this Contract.
- 31. RIGHT TO AUDIT:** At any time during the term of this Contract and for a period of four (4) years thereafter, the State of Texas, Brazoria County, and/or other federal, State and local agencies which may have jurisdiction over this contract and/or purchase order, at reasonable times and at its expense reserve the right to audit successful bidder's records and books. If needed for audit, original or independently certified copies of off-site records will be provided to auditors at successful respondent's expense within two (2) weeks of written request.
- 32. BID BOND:** If required by the County, all respondents must submit with bid, a Bid Bond for at least five percent (5%) of the total bid price, if the bid exceeds \$100,000 in Contract price or if the Contract includes construction of public work. Such Bid Bond issued by a surety, acceptable to Brazoria County, authorized to do business in the State of Texas, is a guaranty that the respondent will enter into a contract with Brazoria County (as outlined in the Instructions/Specifications/Statement of Work and attachments) and that offer will furnish the requisite performance and payment bonds as may be required.
- 33. PERFORMANCE AND PAYMENT BONDS:** (Public Works Contract or as Required by Commissioner's Court) In the event the total accepted bid price exceeds \$25,000 the successful respondent must provide to the office of the County Purchasing Director, a payment bond, and if the price exceeds \$100,000 the successful respondent must also provide a performance bond, each in the amount of one hundred percent (100%) of the total contract sum within ten (10) calendar days after receipt of notification of bid/proposal award. Such bonds shall be executed by a corporate surety or corporate sureties in accordance with Article 7.19-1, Vernon's Texas Insurance Code. Such corporate surety/sureties shall be duly authorized and admitted to do business in the State of Texas and licensed in the State of Texas to issue fidelity and surety bonds with a Best Rating of "A" or better and have a bonding capacity adequate for the prescribed amount. Brazoria County reserves the right to accept or reject any surety company proposed by the respondent. In the event Brazoria County rejects the proposed surety company, the respondent will be afforded five (5) additional days to submit the required bonds issued by a surety company acceptable to Brazoria County.
- 34. APPLICABLE LAW:** All applicable laws and regulations of the State of Texas and ordinances and regulations of Brazoria County shall apply.
- 35. COMPLIANCE WITH APPLICABLE LAWS:** Respondent shall at all times observe and comply with all federal, state, local and municipal ordinances, rules, regulations, relating to the provision of the services contracted to be provided by respondent hereunder or which in any manner affect this Contract.
- 36. FORCE MAJEURE:** Neither the County nor the successful respondent shall be deemed in violation of this Agreement if either is prevented from performing its obligations hereunder for any reason beyond its control, including but not limited to, acts of God, civil or military authority, acts of public enemy, war riots, rebellions, accidents, fires, explosions, earthquakes, floods, or catastrophic failure of public transportation; provided however, that in the event of strikes or labor disputes, an inability to procure raw materials, equipment, power or supplies, or the enactment of any law, order, proclamation, regulation, ordinance, demand, or other requirement of any governmental agency or intergovernmental body, which prevents, restricts, interferes or delays with the performance of this Contract, the party so affected, upon giving notice to the other party, shall be excused from such performance to the extent of such prevention, restriction, delay or interference, so

long as the party so affected shall use reasonable efforts under the circumstance to avoid or remove such causes of nonperformance, and shall continue performance hereunder with the utmost dispatch whenever such causes are removed.

- 37. SEVERABILITY:** If any provision of this Contract is held to be unenforceable for any reason, the unenforceability thereof shall not affect any other provision contained herein, and the remainder of the Contract shall remain in full force and effect, and enforceable in accordance with its terms.
- 38. QUANTITIES:** Brazoria County requests purchase prices for the items identified in this offer, and in accordance with the specifications provided herein. The quantities provided are given as a guideline only for the purpose of offer preparation. These quantities shall not be construed as the total number of purchases for the Contract. This estimated figure may increase and/or decrease throughout the year. No guarantee is expressed or implied as to the total quantity of items to be purchased under this Contract.
- 38.1** Brazoria County reserves the right to add or delete like or related items at any time during the term of this Contract. The additions or deletions shall be incorporated into the contract in the form of an addendum. Additional items shall be priced in accordance with this contract with appropriate discounts being applied.
- 39. PURCHASE FROM OTHER SOURCES:** Brazoria County reserves the right to purchase goods and/or services specified herein, or of equal or like kind, through contracts established by other governmental agencies or thorough separate procurement actions due to the unique or special needs of Brazoria County. Further, the County reserves the right to obtain such goods and/or services from others without penalty or prejudice to the County or the respondent and such action shall not invalidate in whole or in part this Contract or any rights or remedies Brazoria County may have hereunder.
- 40. AGREEMENT TO NOT BOYCOTT ISRAEL:** By agreeing to this Purchase Order [or if no formal agreement, by providing the good(s) / services(s)] the vendor verifies it does not boycott Israel and will not boycott Israel, as defined by Chapter 808 of the Texas Government Code, during the term of this contract [during the time necessary to provide the good(s) / services(s)].
- 41. TEXAS GOVERNMENT CODE 552, SUBCHAPTER J:** Effective January 1, 2020, the requirements of Subchapter J, Chapter 552, Texas Government Code, may apply to this contract and the Contractor agrees that the contract can be terminated if the Contractor knowingly or intentionally fails to comply with a requirement of that subchapter.
- 42. PROHIBITED TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES AND EQUIPMENT CERTIFICATION (2 CFR 200.216):** By agreeing to this purchase order (or if no formal agreement, by providing goods/services) the vendor represents and warrants that the equipment, systems, and/or services which it will provide to Brazoria County do not use covered telecommunications equipment or services (as defined in Section 889 John S. McCain National Defense Authorization Act for Fiscal Year 2019 (FY 2019 NDAA), Pub. L. No. 115-232 (2018)) as a substantial or essential component of any system, or as critical technology of any system. Additionally, the vendor represents and warrants that the equipment, systems, and/or services it will provide are not prohibited from being procured using grant funds under section 889 of the FY 2019 NDAA.
- 43. AGREEMENT TO NOT BOYCOTT ENERGY COMPANIES:** By agreeing to this Purchase Order [or if no formal agreement, by providing the good(s) / services(s)] the vendor verifies it does not boycott energy companies and will not boycott energy companies, as defined by Chapter 809 of the Texas Government Code, during the term of this contract [during the time necessary to provide the good(s) / services(s)].
- 44. AGREEMENT TO NOT DISCRIMINATE AGAINST A FIREARM ENTITY OR TRADE ASSOCIATION:** By agreeing to this Purchase Order [or if no formal agreement, by providing the good(s) / services(s)] the vendor verifies it does not discriminate against a firearm entity or trade association and will not discriminate against a firearm entity or trade association, as defined by Chapter 2274 of the Texas Government Code, during the term of this contract [during the time necessary to provide the good(s) / services(s)].
- 45. DEBRIEF, PROTEST AND APPEAL PROCUDURES:** Please see page 20 of 48, section D. of the Brazoria County Policy and Procedure Manual which can be found on the Brazoria County Purchasing Department's "Doing Business" webpage, <https://www.brazoriacountytexas.gov/departments/purchasing/doing-business>.

**46. DISCLOSURE OF INTERESTED PARTIES FORM 1295:** A person or business, who enters into a contract with the County, meeting the conditions according to Texas Local Government Code Sec. 2252.908, is required to file Form 1295 with Texas Ethics Commission. A contract entered into by a governmental entity is voidable for failure to provide the disclosure of interested parties if the entity submits written notice to the business entity of the failure to submit the form and the business entity has not provided the form on, or before, the 10<sup>th</sup> business day after the business entity receives written notice to submit the Form 1295. **This form is not required unless there is a contract between the vendor and the Brazoria County. Do not submit this form unless you receive an award letter from the County.**

# **BRAZORIA COUNTY SPECIAL REQUIREMENTS**

## **BIDDER INSTRUCTIONS:**

**READ THIS ENTIRE DOCUMENT CAREFULLY. FOLLOW ALL INSTRUCTIONS. YOU ARE RESPONSIBLE FOR FULFILLING ALL REQUIREMENTS AND SPECIFICATIONS. BE SURE YOU UNDERSTAND THEM.**

The following requirements and specifications supersede other requirements where applicable.

### **General**

All bids inclusive of pricing shall remain firm for acceptance for a minimum period of ninety (90) days from opening date unless otherwise specified by Brazoria County.

Prices bid shall reflect the full Specifications/Statement of Work as defined per the ITB documents, inclusive of all associated costs for insurance, taxes, overhead, profit and bonding, if required and so identified.

Bidder must include all incidental costs in his pricing. Brazoria County will not provide or allow for parking or travel reimbursements for the bidder's employees. Bidder's offices, administration and/or place of business will not be on Brazoria County premises and will be the bidder's responsibility. Only those costs shown on the Pricing/Delivery Sheet and confirmed by a purchase order will be paid.

It is also understood that any and all persons who provide services under Contract to Brazoria County, resulting from this Invitation to Bid, shall be and remain employees of the Contractor, not Brazoria County. It is understood and agreed that the bidder is solely responsible for all services being provided and shall provide adequate insurance to cover against any and all losses incurred by the bidder's employees and or equipment during the course of the Contract.

All correspondence relating to this ITB, from receipt to award shall be sent to the Brazoria County Purchasing Director.

No award or acquisition can be made until Commissioners Court approves such action.

This Invitation to Bid in no manner obligates Brazoria County or any of its agencies to the eventual purchase of any goods and/or service described, implied or which may be bid, until confirmed by a written Contract and purchase order. Progress toward this end is solely at the discretion of Brazoria County and may be terminated at any time prior to the signing of a Contract.

Brazoria County will not be liable for any costs incurred by the bidder in preparing a response to this ITB. Brazoria County makes no guarantee that any goods and/or services will be purchased as a result of this Invitation to Bid, and reserves the right to reject any and all bids. All bids and their accompanying documentation will become the property of Brazoria County.

The bidder is expected to examine all documents, forms, specifications, and all instructions. Failure to do so will be at bidder's risk.

### **ITB Electronic Document Completion (using Bonfire electronic platform)**

Bidder shall fill out, electronically **SIGN**, and upload the document into the Bonfire electronic platform. An authorized representative of the bidder **MUST** electronically sign the Bidder Acknowledgement Form. The Contract will be binding upon award and when signed by the Brazoria County Judge and a purchase order authorizing the item(s) desired has been issued.

### **ITB Hard Copy Document Completion**

Bidder shall fill out, **SIGN**, and return to the Brazoria County Purchasing Department one (1) original of the complete ITB document. Bidders are to include with their sealed hard copy bid, a printed copy of Attachment A bid table.

In addition, vendors are to include the bid table (in excel format) saved to a flash drive or CD.

An authorized representative of the bidder **MUST** sign the Contract Sheet upon award. The Contract will be binding only when awarded in court and signed by the Brazoria County Judge and a purchase order authorizing the item(s) desired has been issued.

The use of liquid paper is **NOT** acceptable and may result in the disqualification of ITB. If an error is made, bidder **MUST** draw a line through the error and initial each change.

**Exceptions**

Bidder/Respondent Terms & Conditions are subject to the review and approval of Brazoria County. In the event of conflicting Terms & Conditions, the terms and conditions contained in the solicitation package shall prevail. Bidder/Respondent must clearly identify any conflict with terms & conditions by denoting them on the same page where the conflicting terms and conditions appear.

**Public Information Act**

All responses to this solicitation are in their entirety, subject to the Public Information Act. Brazoria County will respond to open records requests in accordance to law by providing all requested response information unless respondent (respondent) has specifically identified, in the response package, any section or part respondent deems confidential and/or proprietary. Respondent must note and identify such information on the page where such information appears in the same manner as other exceptions.

**Late Bid - Electronic Submissions**

Once the project closes in Bonfire, bidders are not able to upload a finalized submission electronically.

**Late Bid – Hard Copy Submissions**

Hard Copy bids received in the office of the County Purchasing Director after submission deadline will be considered void and unacceptable. Brazoria County is not responsible for lateness or non-delivery of mail, carrier, etc., and the date/time stamp in the office of the County Purchasing Director shall be the official time of receipt.

**Altering Submissions - Electronic**

If an error is made after your bid submission is finalized, click [HERE](#) for instructions. Bonfire allows for bidders to make alterations or amendments and re-submit their submissions before the project closes.

**Altering Submissions – Hard Copy**

Bids cannot be altered or amended after submission deadline. Any interlineation, alteration, or erasure made before opening time must be initialed by the signer of the bid/offer, guaranteeing authenticity.

**Substitutions to Bid**

Brazoria County reserves the right to accept any and all or none of the substitutions deemed to be in the best interest of the County.

**Withdrawal of Bid/Offer**

A bid/offer may not be withdrawn or canceled by the bidder without the permission of Brazoria County for a period of ninety (90) days following the date designated for the receipt of bids/offers, and bidder so agrees upon submittal of their bid/offer.

**Descriptions**

Any reference to model and/or make/manufacture used in bid/offer specifications or scope of work are descriptive, not restrictive. It is used to indicate the type and quality desired. Bids/Offers on items of like quality will be considered. Bid must provide hardware specifications where hardware is offered.

**Terms of Payment**

Terms of payment shall be Net Thirty (30) Days from receipt of acceptable invoice and/or acceptance of conforming goods, whichever is later. However, alternate terms will be considered and may be bid. Invoices for installed equipment and software will not be paid prior to complete acceptance by Brazoria County unless otherwise specified. If installation of equipment and software is delayed, the County reserves the right (without extra expense or penalty) to delay a portion of the payment until equipment is installed and functioning properly.

**Contract Term**

Award will be made to the lowest and best bid meeting specifications.

Award of Contract shall begin upon acceptance of Contract and shall continue until completion of the project as stated on the Notice to Proceed.

Brazoria County retains the option to rebid at any time if in its best interest and is not automatically bound to renewal or rebid.

**Pricing / Delivery**

All items should be priced – FOB Destination Full Freight Allowed, inside delivery. Brazoria County will not pay for any additional transportation and/or shipping charges.

No charges may be billed to the County unless such costs were explicitly included in the bid/proposal. Bidder will incur any costs not explicitly included in the bid/proposal and/or mutually agreed to in writing by the Brazoria County Purchasing Department.

**Reduction in Price:** If during the life of the contract, the successful bidder's net prices to other customers for items awarded herein are reduced below the contracted price, it is understood and agreed that the benefits of such reduction shall be extended to Brazoria County.

**Price Increase:** Requests for price adjustments must be solely for the purpose of accommodating an increase in the vendor's cost. A request for a pricing increase will be reviewed by Purchasing Department using the Producer Price Index (PPI) and/or Consumer Price Index (CPI) and any other research available to determine market conditions favorable to the increase. If market conditions dictate an increase to an awarded vendor's cost, the awarded vendor may submit a request to increase pricing no later than thirty (30) days after receiving notice of the County's intent to renew the contract. Requests will only be considered at the time of renewal with written approval from the County. Additionally, the vendor must de-escalate pricing on a previously escalated item, if the decrease is appropriate, due to market conditions.

The request must be in writing and substantiated with supporting documentation (i.e., increase in manufacturers direct cost, etc.). The request shall be addressed to the County Purchasing Director, 237 E. Locust, Suite 406, Angleton, Texas 77515. The request may also be emailed to the Contract Specialist listed in the solicitation. The awarded vendor's past history of honoring contracts at the bid/offer price will be an important consideration in the determination of requested price increase. Brazoria County reserves the right to accept or reject any/all of the requests for price adjustments as it deems to be in the best interest of the County. If rejected, either party may terminate the contract in accordance with the termination provisions of the contract.

#### **Contract Obligations**

This bid submitted documents and any negotiations, when properly accepted by Brazoria County, shall constitute a Contract equally binding between the successful bidder and Brazoria County. The selected bidder will be considered as the prime Contractor and shall assume responsibility for the goods and/or services. Failure to meet obligations may result in the cancellation of any Contracts.

The bidder's response may be incorporated into any Contract which results from this ITB, therefore, bidders are cautioned not to make claims or statements which they are not prepared to commit to contractually. Failure by the bidder to meet such claims will result in a requirement that the bidder provide resources necessary to meet submitted claims and/or breach of Contract.

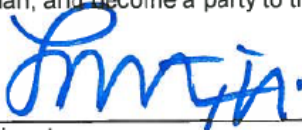


### SECTION 3 POLICY

In accordance with 12 U.S.C. 1701u, (Section 3), Brazoria County agrees to implement the following steps, which, to the *greatest extent feasible*, will provide job training, employment and contracting opportunities for Section 3 residents and Section 3 businesses of the areas in which the program/project is being carried out.

- A. Introduce and pass a resolution adopting this plan as a policy to strive to attain goals for compliance to Section 3 regulations by increasing opportunities for employment and contracting for Section 3 residents and businesses.
- B. Assign duties related to implementation of this plan to the designated Section 3 Coordinator.
- C. Notify Section 3 residents and business concerns of potential new employment and contracting opportunities as they are triggered by CDBG-DR grant awards through the use of: Public Hearings and related advertisements; public notices; bidding advertisements and bid documents; notification to local business organizations such as the Chamber(s) of Commerce or the Urban League; local advertising media including public signage; project area committees and citizen advisory boards; local HUD offices; regional planning agencies; and all other appropriate referral sources. Include Section 3 clauses in all covered solicitations and contracts.
- D. Maintain a list of those businesses that have identified themselves as Section 3 businesses for utilization in CDBG-DR funded procurements, notify those businesses of pending contractual opportunities, and make this list available for general Grant Recipient procurement needs.
- E. Maintain a list of those persons who have identified themselves as Section 3 residents and contact those persons when hiring/training opportunities are available through either the Grant Recipient or contractors.
- F. Require that all Prime contractors and subcontractors with contracts over \$100,000 commit to this plan as part of their contract work. Monitor the contractors' performance with respect to meeting Section 3 requirements and require that they submit reports as may be required by HUD or GLO to the Grant Recipient.
- G. Submit reports as required by HUD or GLO regarding contracting with Section 3 businesses and/or employment as they occur; and submit reports within 20 days of federal fiscal year end (by October 20) which identify and quantify Section 3 businesses and employees.
- H. Maintain records, including copies of correspondence, memoranda, etc., which document all actions taken to comply with Section 3 regulations.

As officers and representatives of the Brazoria County, we the undersigned have read and fully agree to this plan, and become a party to the full implementation of this program.

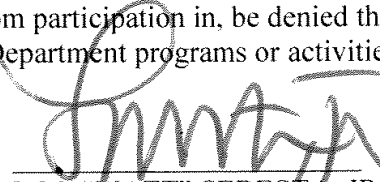
  
Signature

L. M. "Matt" Sebesta, Jr., County Judge  
Name, Title

November 27, 2018  
Date

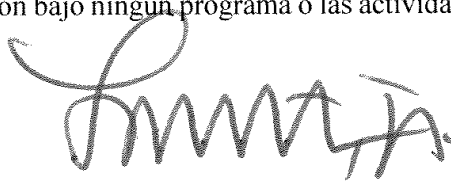
**Title VI and Related Statues  
Nondiscrimination Statement**

Brazoria County, as a recipient of Federal financial assistance and under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person shall on the grounds of race, religion (where the primary objective of the financial assistance is to provide employment per 42 U.S.S. § 2000d-3), color, national origin, sex, age or disability be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any Department programs or activities.

  
L.M. "MATT" SEBESTA, JR.  
COUNTY JUDGE

**Titulo VI y Estatutos Relacionados  
Declaration de No Discriminacion**

Brazoria County, como beneficiario de la asistencia financiera federal y según el Título VI de la Ley de Derechos Civiles de 1964 y los estatutos relacionados, asegura que ninguna persona será excluida por motivos de raza, religión (donde el objetivo principal de la ayuda financiera es proporcionar empleo por 42 USS § 2000d-3), color, origen nacional, sexo, edad o discapacidad de participacion en, o negado los beneficios de, ni será sujeto a discriminación bajo ningún programa o las actividades del Departamento.

  
L.M. "MATT" SEBESTA, JR.  
COUNTY JUDGE

## APPENDIX A of TITLE VI ASSURANCES

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(1) **Compliance with Regulations:** The contractor shall comply with the Regulation relative to nondiscrimination in federally-assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

(2) **Nondiscrimination:** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

(3) **Solicitations for Subcontractors, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

(4) **Information and Reports:** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the *Recipient* or Brazoria County to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the *Recipient*, or Brazoria County as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) **Sanctions for Noncompliance:** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the *Recipient* shall impose such contract sanctions as it or Brazoria County may determine to be appropriate, including, but not limited to: (a.) withholding of payments to the contractor under the contract until the contractor complies, and/or (b.) cancellation, termination or suspension of the contract, in whole or in part.

(6) **Incorporation of Provisions:** The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the *Recipient* or *Brazoria County* may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the *Recipient* to enter into such litigation to protect the interests of the *Recipient*, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

## **Equal Opportunity Guidelines for Construction Contractors**

*Note: To be included in bid packet and distributed at the preconstruction conference (optional)*

**1. What are the responsibilities of the offeror or bidder to ensure equal employment opportunity?**

For contracts over \$ 10,000, the offeror or bidder must comply with the "Equal Opportunity Clause" and the "Standard Federal Equal Opportunity Construction Contract Specifications."

**2. Are construction contractors required to ensure a legal working environment for all employees?**

Yes, it is the construction contractor's responsibility to provide an environment free of harassment, intimidation, and coercion to all employees and to notify all foremen and supervisors to carry out this obligation, with specific attention to minority or female individuals.

**3. To alleviate developing separate facilities for men and women on all sites, can a construction contractor place all women employees on one site?**

No, two or more women should be assigned to each site when possible.

**4. Are construction contractors required to make special outreach efforts to Section 3 or minority and female recruitment sources?**

Yes, construction contractors must establish a current list of Section 3, minority and female recruitment sources. Notification of employment opportunities, including the availability of on-the-job training and apprenticeship programs, should be given to these sources. The efforts of the construction contractors should be kept in file.

**5. Should records be maintained on the number of Section 3 residents, minority and females applying for positions with construction contractors?**

Yes, records must be maintained to include a current list of names, addresses and telephone numbers of all Section 3, minority and female applicants. The documentation should also include the results of the applications submitted.

**6. What happens if a woman or minority is sent to the union by the Contractor and is not referred back to the Contractor for employment?**

If the unions impede the construction contractor's responsibility to provide equal employment opportunity, a written notice should be submitted to GLO.

**7. What efforts are made by construction contractors to create entry-level positions for Section 3 residents, women and minorities?**

Construction contractors are required to develop on-the-job training programs, or participate in training programs, especially those funded by the Department of Labor, to create positions for Section 3 residents, women and minorities and to meet employment needs.

**8. Are any efforts made by the Contractor to publicize their Equal Employment Opportunity (EEO) policy?**

Yes, the construction contractor is responsible for notifying unions and sources of training programs of their equal employment opportunity policy. Unions should be requested to cooperate in the effort of equal opportunity. The policy should be included in any appropriate manuals, or collective bargaining agreements. The construction contractor is encouraged to publicize the equal employment opportunity policy in the company newspaper and annual report. The Contractor is also responsible to include the EEO policy in all media advertisement.

**9. Are any in-service training programs provided for staff to update the EEO policy?**

At least annually a review of the EEO policy and the affirmative action obligations are required of all personnel employees of a decision-making status. A record of the meeting including date, time, location, persons present, subject matter discussed, and disposition of the subject matter should be maintained.

**10. What recruitment efforts are made for Section 3 residents, minorities and women?**

The construction contractor must notify, both orally and in writing, Section 3, minority and female recruitment sources one month prior to the date of acceptance for apprenticeship or other training programs.

**11. Are any measures taken to encourage promotions for minorities and women?**

Yes, an annual evaluation should be conducted for all minority and female personnel to encourage these employees to seek higher positions.

**12. What efforts are taken to insure that personnel policies are in accordance with the EEO policy?**

Personnel policies in regard to job practices, work assignments, etc. should be continually monitored to insure that the EEO policy is carried out.

**13. Can women be excluded from utilizing any facilities available to men?**

No, all facilities and company activities are non-segregated except for bathrooms or changing facilities to ensure privacy.

**14. What efforts should be utilized to include minority and female contractors and suppliers?**

Take affirmative steps to ensure that small, minority, and women owned businesses are included on all lists for contractors/service providers. Solicit these businesses when issuing RFPs and RFQs and soliciting construction bids. Divide project activities into small tasks to allow participation. Keep records of all offers to minority and female construction contractors.

**15. If a construction contractor participates in a business related association that does not comply with equal opportunity affirmative action standards, does that show his/her failure to comply?**

No, the construction contractor is responsible for its own compliance.

**16. Can a construction contractor hire a subcontractor who has been debarred from government contracts pursuant to EEO?**

No. The construction contractor must suspend, terminate or cancel its contract with any Subcontractor who is in violation of the EEO policy.

**17. What effort has been taken by the construction contractor to monitor all employment to insure the company EEO policy is being carried out?**

The construction contractor must designate a responsible individual to keep accurate records of all employees that includes specific information required by the government.

**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 services, goods, or other property to be provided under the contract.

| 4 | Name of Interested Party | City, State, Country<br>(place of business) | Nature of Interest (check applicable) |              |
|---|--------------------------|---|---------------------------------------|--------------|
|   |                          |   | Controlling                           | Intermediary |
|   |                          |   |                                       |              |
|   |                          |   |                                       |              |
|   |                          |   |                                       |              |
|   |                          |   |                                       |              |
|   |                          |   |                                       |              |
|   |                          |   |                                       |              |
|   |                          |   |                                       |              |

5 Check only if there is NO Interested Party. ☐

**6 UNSWORN DECLARATION**

My name is \_\_\_\_\_, and my date of birth is \_\_\_\_\_.

My address is \_\_\_\_\_ (street) \_\_\_\_\_ (city) \_\_\_\_\_ (state) \_\_\_\_\_ (zip code) \_\_\_\_\_ (country).

I declare under penalty of perjury that the foregoing is true and correct.

Executed in \_\_\_\_\_ County, State of \_\_\_\_\_, on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.  
(month) (year)

\_\_\_\_\_  
Signature of authorized agent of contracting business entity  
(Declarant)

**ADD ADDITIONAL PAGES AS NECESSARY**

# TEXAS ETHICS COMMISSION RULES

## CHAPTER 46. DISCLOSURE OF INTERESTED PARTIES

### § 46.1. Application

- (a) This chapter applies to section 2252.908 of the Government Code
- (b) Section 2252.908 of the Government Code applies only to a contract of a governmental entity or state agency entered into after December 31, 2015, that meets either of the following conditions:
  - (1) the contract requires an action or vote by the governing body of the entity or agency; or
  - (2) The value of the contract is at least \$1 million.
- (c) A contract does not require an action or vote by the governing body of a governmental entity or state agency if:
  - (1) the governing body has legal authority to delegate to its staff the authority to execute the contract
  - (2) The governing body has delegated to its staff the authority to execute the contract; and
  - (3) The governing body does not participate in the selection of the business entity with which the contract is entered into.

### § 46.3. Definitions

- (a) "Contract" means a contract between a governmental entity or state agency and a business entity at the time it is voted on by the governing body or at the time it binds the governmental entity or state agency, whichever is earlier, and includes an amended, extended, or renewed contract.
- (b) "Business entity" includes an entity through which business is conducted with a governmental entity or state agency, regardless of whether the entity is a for-profit or nonprofit entity. The term does not include a governmental entity or state agency.
- (c) "Controlling interest" means: (1) an ownership interest or participating interest in a business entity by virtue of units, percentage, shares, stock, or otherwise that exceeds 10 percent; (2) membership on the board of directors or other governing body of a business entity of which the board or other governing body is composed of not more than 10 members; or (3) service as an officer of a business entity that has four or fewer officers, or service as one of the four officers most highly compensated by a business entity that has more than four officers. Subsection (3) of this section does not apply to an officer of a publicly held business entity or its wholly owned subsidiaries.
- (d) "Interested party" means: (1) a person who has a controlling interest in a business entity with whom a governmental entity or state agency contracts; or (2) an intermediary.
- (e) "Intermediary," for purposes of this rule, means, a person who actively participates in the facilitation of the contract or negotiating the contract, including a broker, adviser, attorney, or representative of or agent for the business entity who:
  - (1) receives compensation from the business entity for the person's participation;
  - (2) communicates directly with the governmental entity or state agency on behalf of the business entity regarding the contract; and
  - (3) is not an employee of the business entity or of an entity with a controlling interest in the business entity.
- (f) "Signed" includes any symbol executed or adopted by a person with present intention to authenticate a writing, including an electronic signature.
- (g) "Value" of a contract is based on the amount of consideration received or to be received by the business entity from the governmental entity or state agency under the contract.

### § 46.4. Changes to Contracts (new rule effective January 1, 2017)

- (a) Section 2252.908 of the Government Code does not apply to a change made to an existing contract, including an amendment, change order, or extension of a contract, except as provided by subsections (b) or (c) of this section.
- (b) Section 2252.908 of the Government Code applies to a change made to an existing contract, including an amendment, change order, or extension of a contract, if a disclosure of interested parties form was not filed for the existing contract; and either:

- (1) the changed contract requires an action or vote by the governing body of the entity or agency;  
or
- (2) the value of the changed contract is at least \$1 million.

(c) Section 2252.908 of the Government Code applies to a change made to an existing contract, including an amendment, change order, or extension of a contract, if the business entity submitted a disclosure of interested parties form to the governmental entity or state agency that is a party to the existing contract; and either:

- (1) there is a change to the disclosure of interested parties; or
- (2) the changed contract requires an action or vote by the governing body of the entity or agency;  
or
- (3) the value of the changed contract is at least \$1 million greater than the value of the existing contract.

#### § 46.5. Disclosure of Interested Parties Form

(a) A disclosure of interested parties form required by section 2252.908 of the Government Code must be filed on an electronic form prescribed by the commission that contains the following:

- (1) The name of the business entity filing the form and the city, state, and country of the business entity's place of business;
- (2) The name of the governmental entity or state agency that is a party to the contract for which the form is being filed;
- (3) The name of each interested party and the city, state, and country of the place of business of each interested party;
- (4) The identification number used by the governmental entity or state agency to track or identify the contract for which the form is being filed and a short description of the services, goods, or other property used by the governmental entity or state agency provided under the contract; and
- (5) An indication of whether each interested party has a controlling interest in the business entity, is an intermediary in the contract for which the disclosure is being filed, or both.

(b) The certification of filing and the completed disclosure of interested parties form generated by the commission's electronic filing application must be printed, signed by an authorized agent of the contracting business entity, and submitted to the governmental entity or state agency that is the party to the contract for which the form is being filed.

(c) A governmental entity or state agency that receives a completed disclosure of interested parties form and certification of filing shall notify the commission, in an electronic format prescribed by the commission, of the receipt of those documents not later than the 30th day after the date the governmental entity or state agency receives the disclosure.

(d) The commission shall make each disclosure of interested parties form filed with the commission under section 2252.908(f) of the Government Code available to the public on the commission's Internet website not later than the seventh business day after the date the commission receives the notice required under subsection (c) of this section.

**\*\*Note:** . A contract entered into by a governmental entity is voidable for failure to provide the disclosure of interested parties if the entity submits written notice to the business entity of the failure to submit the form and the business entity has not provided the form on, or before, the 10<sup>th</sup> business day after the business entity receives written notice to submit the Form 1295.



## Boycott Verification

This verification is required pursuant to Sections 808, 809, 2271, and 2274 (87(R) Senate Bill 13 and 19 versions) of the Texas Government Code:

### Definitions:

1. Per Government Code Chapter 808, "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purpose
2. Per Government Code Chapter 809, "Boycott energy company" means, without an ordinary business purpose, refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company
  - (A) engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; or
  - (B) does business with a company described by Paragraph (A).
3. Per Government Code Chapter 2274 (87(R) Senate Bill 19), "Discriminate against a firearm entity or firearm trade association":
  - (A) means, with respect to the entity or association, to:
    - (i) refuse to engage in the trade of any goods or services with the entity or association based solely on its status as a firearm entity or firearm trade association;
    - (ii) refrain from continuing an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association; or
    - (iii) terminate an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association;
4. "Company" has the meaning assigned by Texas Government Code Sections 808.001(2), 809.001(2), and 2274.001(2) (87(R) Senate Bill 19).

This verification is only required for a contract that is between a governmental entity and a company with 10 or more full-time employees; and has a value of \$100,000 or more that is to be paid wholly or partly from public funds of the governmental entity. If your contract value or number of employees does not reach that threshold, please provide a written certification of the contract amount and number of employees.

I, \_\_\_\_\_ (Person name), the undersigned representative of (Company or Business Name) \_\_\_\_\_ (hereinafter referred to as Company) being an adult over the age of eighteen (18) years of age, do hereby depose and verify under oath that the company named-above,

- (A) does not boycott Israel currently;
- (B) will not boycott Israel during the term of the contract the named Company, business or individual with Brazoria County Texas, Texas;
- (C) does not boycott energy companies currently;
- (D) will not boycott energy companies during the term of the contract the named Company, business or individual with Brazoria County, Texas;
- (E) does not boycott a firearm entity of firearm trade association currently; and
- (F) will not boycott a firearm entity of firearm trade association during the term of the contract the named Company, business or individual with Brazoria County, Texas

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE OF COMPANY REPRESENTATIVE

# INSURANCE REQUIREMENTS

The following requirements and specifications shall be in addition to the other requirements contained herein and shall supersede the other requirements where applicable.

**INSURANCE:** Prior to acceptance of contract by Brazoria County, the successful bidder must furnish a Certificate of Insurance together with a receipt showing the time period for which premium has been paid, from an approved insurance carrier for the coverage indicated below.

A. FOR CONSTRUCTION WORK CONTRACTS, THE FOLLOWING COVERAGES ARE REQUIRED:

1. Statutory workers compensation in accordance with the State of Texas requirements.
2. Comprehensive general liability including owners and contractors protective liability insurance for bodily injury, death, or property damages in the following amounts:

| COVERAGE                          | PER OCCURRENCE |
|-----------------------------------|----------------|
| a. Premises and product liability | \$3,000,000    |
| b. Aggregate policy limits        | \$3,000,000    |

3. Comprehensive automobile and truck liability insurance (covering owned, hired and non-owned vehicles):

| COVERAGE                           | PER OCCURRENCE |
|------------------------------------|----------------|
| a. Bodily injury (including death) | \$3,000,000    |
| b. Property damage                 | \$3,000,000    |

Insurance certificates and policy endorsements shall include agreements to hold Commissioners Court of Brazoria County and Brazoria County, Texas harmless; i.e., shall include coverage for “Hold Harmless Agreement”.

Failure to maintain insurance coverage as required herein shall be grounds for immediate termination of contract.

All policies must provide, by endorsement to the policy, that thirty (30) days prior written notice of cancellation or material change in coverage be given to the Purchasing Director of Brazoria County. Such insurance when accepted by the County in writing will become acceptable and shall remain unmodified until final acceptance of the work. Coverage provided must be on an occurrence basis.

No policy submitted shall be subject to limitations, conditions, or restrictions deemed inconsistent with the intent of the insurance requirements to be fulfilled by the successful bidder. The decision of Brazoria County thereon is final.

All policies shall be written through a company duly entered and authorized to transact that class of insurance in the State of Texas.

Neither approval by Brazoria County of any insurance supplied by the successful bidder, nor a failure to disapprove that insurance, shall relieve the successful bidder of full responsibility of liability, damages and accidents as set forth herein.

No additional payment shall be made for any insurance that the successful bidder may be required to carry.

Certificate Holder information shall be as follows:

Brazoria County  
237 E. Locust Street, Suite 401  
Angleton, TX 77515

**BRAZORIA COUNTY  
RETURN LABEL**

**USE THIS LABEL ONLY IF YOU ARE SUBMITTING A HARD  
COPY BID**

| <b><u>SEALED INVITATION TO BID (ITB)</u></b>  |  |
|---|--|
| <b>ITB#:</b>  | 25-29  |
| <b>OPENING DATE:</b>  | THURSDAY, MAY 1, 2025  |
| <b>OPENING TIME:</b>  | 11:00 A.M. LOCAL TIME  |
| <b>ITB DESCRIPTION:</b>   | <b>ITB #25-29 BRAZORIA COUNTY ROAD AND DRAINAGE<br/>IMPROVEMENTS FOR CDBG- PLAN SET III / 30N -<br/>GENERAL LAND OFFICE CONTRACT NUMBER 19-076-003-<br/>B352-CDBG-DR 2016 FLOOD ALLOCATION</b> |
| <b>RETURN OFFER TO:</b>   | <b>PHYSICAL ADDRESS:</b>   |
| PURCHASING DEPARTMENT<br>BRAZORIA COUNTY COURTHOUSE CAMPUS ADMINISTRATION BUILDING<br>237 E. LOCUST STREET, SUITE 406<br>ANGLETON, TX 77515 |  |
| <b><i>DATED MATERIAL – DELIVER IMMEDIATELY</i></b>  |  |

**PLEASE CUT OUT AND AFFIX THE ITB LABEL ABOVE TO THE  
OUTER MOST ENVELOPE OF YOUR RESPONSE TO HELP ENSURE  
PROPER DELIVERY!**

**\*\*\*\*\*LATE ITB's CANNOT BE ACCEPTED\*\*\*\*\***

**BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG  
SET III  
L.M.I. - CR 30 N  
BRAZORIA COUNTY, TEXAS**

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**TxDOT TECHNICAL SPECIFICATIONS**

The following specifications from the Texas Department of Transportation – 2024 – Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges as currently amended shall govern those portions of the work:

| <b><u>ITEM</u></b> | <b><u>TITLE</u></b>  |
|--------------------|--|
| 100                | Preparing Right of Way   |
| 110                | Excavation   |
| 164                | Seeding for Erosion Control                                      |
| 275                | Cement Treatment (Road-Mixed)                                    |
| 305                | Salvaging, Hauling, and Stockpiling Reclaimable Asphalt Pavement |
| 341                | Dense-Graded Hot-Mix Asphalt                                     |
| 500                | Mobilization   |
| 502                | Barricades, Signs, and Traffic Handling                          |
| 506                | Temporary Erosion, Sedimentation, and Environmental Controls     |
| 510                | One-Way Traffic Control  |
| 560                | Mailbox Assemblies   |
| 644                | Small Roadside Sign Assemblies                                   |
| 666                | Retroreflectorized Pavement Markings                             |

END OF SECTION

## Item 100

### Preparing Right of Way



#### 1. DESCRIPTION

Prepare the right of way and designated easements for construction operations by removing and disposing of all obstructions when removal of such obstructions is not specifically shown on the plans to be paid by other Items.

#### 2. MATERIALS

Furnish materials in conformance with the plans and Specifications.

#### 3. CONSTRUCTION

Protect designated features on the right of way and prune trees and shrubs as directed. Do not park equipment, service equipment, store materials, or disturb the root area under the branches of trees designated for preservation. Follow all local and state regulations when burning. Pile and burn brush at approved locations as directed. Spread mulched material at approved locations as directed. Handle hazardous materials in accordance with Article 6.10., "Hazardous Materials."

Clear areas shown on the plans of all obstructions, except those landscape features that are to be preserved. Such obstructions include remains of houses and other structures, foundations, floor slabs, concrete, brick, lumber, plaster, septic tank drain fields, basements, abandoned utility pipes or conduits, equipment, fences, retaining walls, and other items as specified on the plans. Remove vegetation and other landscape features not designated for preservation, curb and gutter, driveways, paved parking areas, miscellaneous stone, sidewalks, drainage structures, manholes, inlets, abandoned railroad tracks, scrap iron, and debris, whether above or below ground. Remove culverts, storm sewers, manholes, and inlets in proper sequence to maintain traffic and drainage. Removal of live utility facilities is not included in this Item.

Perform tree and brush removal and trimming in accordance with Article 752.4, "Work Methods."

Notify the Engineer in writing when items not shown on the plans and not reasonably detectable (buried with no obvious indication of presence) are encountered and required to be removed. These items will be handled in accordance with Article 4.5., "Differing Site Conditions."

Remove obstructions not designated for preservation to 2 ft. below natural ground in areas receiving embankment. Remove obstructions to 2 ft. below the excavation level in areas to be excavated. Remove obstructions to 1 ft. below natural ground in all other areas. Remove trees and stumps to 6 in. below ground level. Plug the remaining ends of abandoned underground structures over 3 in. in diameter using concrete to form a tight closure. Backfill, compact, and restore areas where obstructions have been removed unless otherwise directed. Use approved material for backfilling. Dispose of wells in accordance with Item 103, "Disposal of Wells."

Accept ownership, unless otherwise directed, and dispose of removed materials and debris at locations off the right of way in conformance with local, state, and federal requirements.

- 3.1. **Tree Protection.** Install tree protection for trees designated for preservation. Unless otherwise shown on the plans, install tree protection along the drip line of the trees using 4-ft. tall chain link fencing with line posts no more than 10 ft. apart. Install tree protection before beginning work.

---

## 4. MEASUREMENT

This Item will be measured by the acre; by the 100-ft. station, regardless of the width of the right of way; or by each tree removed.

Tree removal diameter will be measured in accordance with Article 752.5, "Measurement."

Tree protection will be measured by the acre of trees protected, by the foot of fencing, or by each tree protected.

---

## 5. PAYMENT

For "acre" and "station" measurement, the work performed in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Preparing Right of Way." For "each" measurement, the work performed in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Preparing Right of Way (Tree)" of the diameter specified. This price is full compensation for removal and trimming of designated trees and shrubs; removal and disposal of structures and obstructions; backfilling of holes; furnishing and placing concrete for plugs; and equipment, labor, tools, and incidentals.

Total payment of this Item will not exceed 10% of the original Contract amount until final acceptance. The remainder will be paid on the estimate after final acceptance in accordance with Article 5.12., "Final Acceptance."

5.1. **Tree Protection.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows.

5.1.1. **Subsidiary Work.** The following will not be measured or paid for directly, but will be subsidiary to "Tree Protection":

- protection for Contractor project-specific locations inside and outside the right of way;
- repair to areas to be protected that are damaged by Contractor operations;
- removal and re-installation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the protection; and
- minor adjustments, including, but not limited to, plumbing posts and re-attaching protection.

5.1.2. **Installation.** Installation will be paid for as "Tree Protection (Install)." This price is full compensation for furnishing and operating equipment and for labor, materials, tools, and incidentals.

5.1.3. **Removal.** Removal will be paid for as "Tree Protection (Remove)." This price is full compensation for furnishing and operating equipment and for proper disposal, labor, materials, tools, and incidentals.

# Item 110

## Excavation



### 1. DESCRIPTION

Excavate areas as shown on the plans or as directed. Remove materials encountered to the lines, grades, and typical sections shown on the plans and cross-sections.

### 2. MATERIALS

Accept ownership of unsuitable or excess material and dispose of material in conformance with local, state, and federal regulations, at locations outside the right of way.

### 3. CONSTRUCTION

Maintain drainage in the excavated area to avoid damage to the roadway section. Correct any damage to the subgrade caused by weather at no additional cost to the Department.

Shape slopes to avoid loosening material below or outside the proposed grades. Remove and dispose of slides or slope failures as directed.

Excavate to the grade and sections shown on the plans. Manipulate and compact subgrade in accordance with Section 132.3.4., "Compaction Methods," unless excavation is to clean homogenous rock at final grade.

Correct unsuitable material encountered at or below subgrade as directed.

3.1. **Rock Cuts.** Use approved embankment material compacted in accordance with Section 132.3.4., "Compaction Methods," to replace undercut material at no additional cost if excavation extends below the grade shown on the plans.

3.2. **Earth Cuts.** Scarify remaining material to a depth at least 6 in. below the grade shown on the plans in areas where pavement structure will be placed. Compact subgrade in accordance with Section 132.3.4., "Compaction Methods."

3.3. **Acceptance Criteria.**

3.3.1. **Grade Tolerances.**

3.3.1.1. **Staged Construction.** Grade to within 1.25 in. in the cross-section and 1.25 in. in 16 ft. measured longitudinally.

3.3.1.2. **Turnkey Construction.** Grade to within 0.5 in. in the cross-section and 0.5 in. in 16 ft. measured longitudinally.

### 4. MEASUREMENT

This Item will be measured by the cubic yard in its original position as computed by the method of average end areas or as shown on the plans.

This is a plans quantity measurement item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.

Limits of measurement for excavation in retaining wall areas will be as shown on the plans.

Shrinkage or swelling factors will not be considered in determining the calculated quantities.

---

**5.****PAYMENT**

The work performed and materials furnished in accordance with this item and measured as provided under "Measurement" will be paid for at the unit price bid for "Excavation (Roadway)," "Excavation (Channel)," "Excavation (Special)," or "Excavation (Roadway and Channel)." This price is full compensation for authorized excavation; drying; undercutting subgrade in rock cuts and reworking or replacing the undercut material; hauling; disposal of material not used elsewhere on the project; scarification and compaction; and equipment, labor, materials, tools, and incidentals.

Drying subgrade deeper than 6 in. below grade as shown on the plans will be paid for in accordance with Article 9.7., "Payment for Extra Work and Force Account Method." Excavation and replacement of unsuitable material below grade as shown on the plans will be performed and paid for in conformance with the applicable bid items. However, if Item 132, "Embankment," is not included in the Contract, payment for replacement of unsuitable material will be paid for in accordance with Article 9.7., "Payment for Extra Work and Force Account Method."

Removing, reworking, reshaping, or re-laying existing pavement structure will be paid for in conformance with the appropriate item.

When a slide or slope failure not due to the Contractor's negligence or operation occurs, payment for removal and disposal of the slide material will be in accordance with Article 9.7., "Payment for Extra Work and Force Account Method."

Excavation in backfill areas of retaining walls will not be measured or paid for directly, but will be subsidiary to pertinent items.



# Item 164

## Seeding for Erosion Control



### 1. DESCRIPTION

Prepare the surface and provide and distribute temporary or permanent seeding for erosion control as shown on the plans or as directed.

### 2. MATERIALS

- 2.1. **Seed.** Provide seed from the previous season's crop meeting the requirements of the Texas Seed Law, including the testing and labeling for pure live seed (PLS = Purity × Germination). Furnish seed of the designated species in labeled unopened bags or containers to the Engineer before planting. Use within 12 mo. from the date of the analysis. When Buffalograss is specified, use seed that is treated with potassium nitrate ( $KNO_3$ ) to overcome dormancy.

Use Tables 1–5 to determine the appropriate seeding mix and rates as shown on the plans. Include flower seeding mix in accordance with Table 5 with seeding mix shown in Table 1 and Table 2.

If a grass plant species is not available by the producers, the other grass plant species in the seeding mix will be increased proportionally by the percentage of the missing plant grass species. If a flower plant species is not available by the producers, the other flower species in the seeding mix will be increased proportionally by the percentage of the missing flower species. Substitute species and rates require approval of the Engineer before being incorporated into the seeding mx. The rates listed in the tables are for drill seeding. All other methods of placing seed will require a 25% increase in rate.

**Table 1**  
**Permanent Rural Seeding Mix**

| District       | Clay Soils<br>Species, Percent, and Rate<br>(lb. PLS per acre) | Sandy Soils<br>Species, Percent, and Rate<br>(lb. PLS per acre) |
|----------------|--|---|
| 1 (Paris)      | Hooded Windmillgrass (Burnet)                                  | 15% 0.3   |
|                | White Tridens (Guadalupe)                                      | 20% 0.4   |
|                | Little Bluestem (Coastal Plains)                               | 20% 2.0   |
|                | Florida Paspalum (Harrison)                                    | 15% 2.25  |
|                | Sideoats Grama (Haskell)                                       | 05% 0.5   |
|                | Splitbeard Bluestem (Neches)                                   | 05% 0.5   |
|                | Sand Dropseed (Taylor)   | 05% 0.1   |
|                | Canada Wildrye (Lavaca)  | 10% 2.0   |
|                | Green Sprangletop (Van Horn)                                   | 05% 0.2   |
| 2 (Fort Worth) | Hooded Windmillgrass (Burnet)                                  | 15% 0.3   |
|                | White Tridens (Guadalupe)                                      | 15% 0.3   |
|                | Sideoats Grama (Haskell)                                       | 10% 1.0   |
|                | Little Bluestem (OK Select)                                    | 10% 0.7   |
|                | Buffalograss (Texoka)  | 10% 1.5   |
|                | Silver Bluestem (Santiago)                                     | 10% 0.4   |
|                | Green Sprangletop (Van Horn)                                   | 10% 0.4   |
|                | Sand Dropseed (Taylor)   | 10% 0.2   |
|                | Canada Wildrye (Lavaca)  | 10% 2.0   |
|                | Sand Dropseed (Taylor)   | 15% 0.3   |
|                | Sideoats Grama (Haskell)                                       | 15% 1.5   |
|                | Little Bluestem (OK Select)                                    | 15% 1.05  |
|                | Hairy Grama (Chaparral)  | 15% 0.6   |
|                | Green Sprangletop (Van Horn)                                   | 10% 0.2   |
|                | Hooded Windmillgrass (Burnet)                                  | 10% 0.2   |
|                | Shortspike Windmillgrass (Welder)                              | 10% 0.2   |
|                | Silver Bluestem (Santiago)                                     | 10% 0.4   |

**Table 1 (continued)**  
**Permanent Rural Seeding Mix**

| District          | Clay Soils                                       |          | Sandy Soils                                      |          |
|-------------------|--|----------|--|----------|
|                   | Species, Percent, and Rate<br>(lb. PLS per acre) |          | Species, Percent, and Rate<br>(lb. PLS per acre) |          |
| 3 (Wichita Falls) | Sideoats Grama (Haskell)                         | 15% 1.5  | Hooded Windmillgrass (Burnet)                    | 10% 0.2  |
|                   | Green Sprangletop (Van Horn)                     | 10% 0.4  | Sand Dropseed (Taylor)                           | 15% 0.3  |
|                   | Hooded Windmillgrass (Burnet)                    | 10% 0.2  | Green Sprangletop (Van Horn)                     | 15% 0.6  |
|                   | White Tridens (Guadalupe)                        | 10% 0.2  | Sideoats Grama (Haskell)                         | 10% 1.0  |
|                   | Little Bluestem (OK Select)                      | 15% 1.05 | Little Bluestem (OK Select)                      | 10% 0.7  |
|                   | Silver Bluestem (Santiago)                       | 10% 0.4  | Silver Bluestem (Santiago)                       | 10% 0.4  |
|                   | Buffalograss (Texoka)                            | 10% 1.5  | Hairy Grama (Chaparral)                          | 10% 0.4  |
|                   | Blue Grama (Hachita)                             | 05% 0.2  | Arizona Cottontop (La Salle)                     | 10% 0.4  |
|                   | Sand Dropseed (Taylor)                           | 05% 0.1  | Blue Grama (Hachita)                             | 10% 0.4  |
|                   | Canada Wildrye (Lavaca)                          | 10% 2.0  |  |          |
| 4 (Amarillo)      | Sideoats Grama (Haskell)                         | 15% 1.5  | Green Sprangletop (Van Horn)                     | 15% 0.6  |
|                   | Silver Bluestem (Santiago)                       | 15% 0.6  | Sideoats Grama (Haskell)                         | 10% 1.0  |
|                   | Buffalograss (Texoka)                            | 15% 2.25 | Sand Dropseed (Taylor)                           | 10% 0.2  |
|                   | Green Sprangletop (Van Horn)                     | 10% 0.4  | Silver Bluestem (Santiago)                       | 10% 0.4  |
|                   | Blue Grama (Hachita)                             | 15% 0.6  | Little Bluestem (OK Select)                      | 15% 1.05 |
|                   | Hooded Windmillgrass (Burnet)                    | 05% 0.1  | Arizona Cottontop (La Salle)                     | 10% 0.4  |
|                   | White Tridens (Guadalupe)                        | 10% 0.2  | Blue Grama (Hachita)                             | 10% 0.4  |
|                   | Western Wheatgrass (Barton)                      | 10% 3.0  | Sand Lovegrass (Mason)                           | 10% 0.3  |
|                   | Canada Wildrye (Lavaca)                          | 05% 1.0  | Hooded Windmillgrass (Burnet)                    | 10% 0.2  |
|                   |  |          |  |          |
| 5 (Lubbock)       | Sideoats Grama (Haskell)                         | 15% 1.5  | Green Sprangletop (Van Horn)                     | 15% 0.6  |
|                   | Blue Grama (Hachita)                             | 15% 0.6  | Blue Grama (Hachita)                             | 15% 0.6  |
|                   | Silver Bluestem (Santiago)                       | 15% 0.6  | Sideoats Grama (Haskell)                         | 10% 1.0  |
|                   | Buffalograss (Texoka)                            | 10% 1.5  | Little Bluestem (OK Select)                      | 10% 0.7  |
|                   | White Tridens (Guadalupe)                        | 10% 0.2  | Hooded Windmillgrass (Burnet)                    | 10% 0.2  |
|                   | Green Sprangletop (Van Horn)                     | 10% 0.4  | Sand Dropseed (Taylor)                           | 10% 0.2  |
|                   | Hooded Windmillgrass (Burnet)                    | 05% 0.1  | Silver Bluestem (Santiago)                       | 10% 0.4  |
|                   | Galleta Grass (Viva)                             | 05% 0.3  | Arizona Cottontop (La Salle)                     | 10% 0.4  |
|                   | Western Wheatgrass (Barton)                      | 10% 3.0  | Sand Lovegrass (Mason)                           | 10% 0.3  |
|                   | Canada Wildrye (Lavaca)                          | 05% 1.0  |  |          |
| 6 (Odessa)        | Whiplash Pappusgrass (Permian)                   | 15% 0.9  | Sand Dropseed (Taylor)                           | 15% 0.3  |
|                   | Green Sprangletop (Van Horn)                     | 10% 0.4  | Green Sprangletop (Van Horn)                     | 10% 0.4  |
|                   | Silver Bluestem (Santiago)                       | 15% 0.6  | Sideoats Grama (Brewster)                        | 15% 1.5  |
|                   | Sideoats Grama (Brewster)                        | 10% 1.0  | Whiplash Pappusgrass (Permian)                   | 10% 0.6  |
|                   | Sand Dropseed (Taylor)                           | 10% 0.2  | Hooded Windmillgrass (Burnet)                    | 10% 0.2  |
|                   | Alkali Sacaton (Saltalk)                         | 10% 0.2  | Blue Grama (Hachita)                             | 10% 0.4  |
|                   | Arizona Cottontop (La Salle)                     | 10% 0.4  | Hairy Grama (Chaparral)                          | 10% 0.4  |
|                   | Blue Grama (Hachita)                             | 10% 0.4  | Sand Lovegrass (Mason)                           | 10% 0.3  |
|                   | Galleta Grass (Viva)                             | 10% 0.6  | Little Bluestem (Pastura)                        | 05% 0.5  |
|                   |  |          | Galleta Grass (Viva)                             | 05% 0.3  |
| 7 (San Angelo)    | Sideoats Grama (Brewster)                        | 15% 1.5  | Sand Dropseed (Taylor)                           | 15% 0.3  |
|                   | Hooded Windmillgrass (Burnet)                    | 10% 0.2  | Green Sprangletop (Van Horn)                     | 15% 0.6  |
|                   | Silver Bluestem (Santiago)                       | 10% 0.4  | Hooded Windmillgrass (Burnet)                    | 15% 0.3  |
|                   | Sand Dropseed (Taylor)                           | 10% 0.2  | Shortspike Windmillgrass (Welder)                | 10% 0.2  |
|                   | White Tridens (Guadalupe)                        | 10% 0.2  | Hairy Grama (Chaparral)                          | 10% 0.4  |
|                   | Whiplash Pappusgrass (Permian)                   | 15% 0.9  | Sand Lovegrass (Mason)                           | 10% 0.3  |
|                   | Texas Grama (Atascosa)                           | 05% 0.5  | Sideoats Grama (Brewster)                        | 10% 1.0  |
|                   | Green Sprangletop (Van Horn)                     | 10% 0.4  | Little Bluestem (OK Select)                      | 10% 0.7  |
|                   | Little Bluestem (OK Select)                      | 05% 0.35 | Whiplash Pappusgrass (Permian)                   | 05% 0.3  |
|                   | Blue Grama (Hachita)                             | 05% 0.2  |  |          |
|                   | Galleta Grass (Viva)                             | 05% 0.3  |  |          |

**Table 1 (continued)**  
**Permanent Rural Seeding Mix**

| District     | Clay Soils                                       |          | Sandy Soils                                      |          |
|--------------|--|----------|--|----------|
|              | Species, Percent, and Rate<br>(lb. PLS per acre) |          | Species, Percent, and Rate<br>(lb. PLS per acre) |          |
| 8 (Abilene)  | Sideoats Grama (Haskell)                         | 10% 1.0  | Sand Dropseed (Taylor)                           | 15% 0.3  |
|              | Hooded Windmillgrass (Burnet)                    | 10% 0.2  | Green Sprangletop (Van Horn)                     | 10% 0.4  |
|              | Buffalograss (Texoka)                            | 10% 1.5  | Hooded Windmillgrass (Burnet)                    | 15% 0.3  |
|              | Blue Grama (Hachita)                             | 10% 0.4  | Silver Bluestem (Santiago)                       | 10% 0.4  |
|              | Silver Bluestem (Santiago)                       | 10% 0.4  | Little Bluestem (OK Select)                      | 10% 0.7  |
|              | White Tridens (Guadalupe)                        | 15% 0.2  | Shortspike Windmillgrass (Welder)                | 10% 0.2  |
|              | Little Bluestem (OK Select)                      | 10% 0.7  | Hairy Grama (Chaparral)                          | 10% 0.4  |
|              | Green Sprangletop (Van Horn)                     | 10% 0.4  | Sand Lovegrass (Mason)                           | 10% 0.3  |
|              | Whiplash Pappusgrass (Permian)                   | 10% 0.6  | Arizona Cottontop (La Salle)                     | 10% 0.4  |
|              | Galleta Grass (Viva)                             | 10% 0.6  |  |          |
| 9 (Waco)     | Sideoats Grama (Haskell)                         | 15% 1.5  | Hooded Windmillgrass (Burnet)                    | 15% 0.3  |
|              | White Tridens (Guadalupe)                        | 15% 0.3  | Shortspike Windmillgrass (Welder)                | 10% 0.2  |
|              | Hooded Windmillgrass (Burnet)                    | 10% 0.2  | Hairy Grama (Chaparral)                          | 10% 0.4  |
|              | Little Bluestem (OK Select)                      | 10% 0.7  | Sand Dropseed (Taylor)                           | 15% 0.3  |
|              | Buffalograss (Texoka)                            | 10% 1.6  | Sideoats Grama (Haskell)                         | 10% 1.0  |
|              | Halls Panicum (Oso)                              | 05% 0.1  | Little Bluestem (OK Select)                      | 10% 0.7  |
|              | Silver Bluestem (Santiago)                       | 10% 0.4  | Green Sprangletop (Van Horn)                     | 10% 0.4  |
|              | Sand Dropseed (Taylor)                           | 05% 0.1  | Texas Grama (Atascosa)                           | 05% 0.15 |
|              | Green Sprangletop (Van Horn)                     | 10% 0.4  | Silver Bluestem (Santiago)                       | 10% 0.4  |
|              | Canada Wildrye (Lavaca)                          | 05% 1.0  | Canada Wildrye (Lavaca)                          | 05% 1.0  |
|              | Texas Grama (Atascosa)                           | 05% 0.5  |  |          |
|              |  |          |  |          |
| 10 (Tyler)   | Hooded Windmillgrass (Burnet)                    | 15% 0.3  | Hooded Windmillgrass (Burnet)                    | 15% 0.3  |
|              | White Tridens (Guadalupe)                        | 15% 0.3  | Sand Dropseed (Taylor)                           | 10% 0.2  |
|              | Sand Dropseed (Taylor)                           | 05% 0.1  | Little Bluestem (Coastal Plains)                 | 20% 2.0  |
|              | Little Bluestem (Coastal Plains)                 | 20% 2.0  | Florida Paspalum (Harrison)                      | 15% 2.25 |
|              | Florida Paspalum (Harrison)                      | 15% 2.25 | Splitbeard Bluestem (Neches)                     | 10% 1.0  |
|              | Splitbeard Bluestem (Neches)                     | 10% 1.0  | Green Sprangletop (Van Horn)                     | 05% 0.2  |
|              | Green Sprangletop (Van Horn)                     | 05% 0.2  | Sand Lovegrass (Mason)                           | 10% 0.4  |
|              | Sideoats Grama (Haskell)                         | 05% 0.5  | Red Lovegrass (Duval)                            | 10% 0.2  |
|              | Canada Wildrye (Lavaca)                          | 10% 2.0  | Hairy Grama (Chaparral)                          | 05% 0.2  |
|              |  |          |  |          |
| 11 (Lufkin)  | Hooded Windmillgrass (Burnet)                    | 15% 0.3  | Hooded Windmillgrass (Burnet)                    | 15% 0.3  |
|              | White Tridens (Guadalupe)                        | 15% 0.3  | Sand Dropseed (Taylor)                           | 10% 0.2  |
|              | Little Bluestem (Coastal Plains)                 | 20% 2.0  | Little Bluestem (Coastal Plains)                 | 20% 2.0  |
|              | Florida Paspalum (Harrison)                      | 15% 2.25 | Florida Paspalum (Harrison)                      | 15% 2.25 |
|              | Green Sprangletop (Van Horn)                     | 05% 0.2  | Splitbeard Bluestem (Neches)                     | 10% 1.0  |
|              | Sideoats Grama (Haskell)                         | 05% 0.5  | Green Sprangletop (Van Horn)                     | 05% 0.2  |
|              | Splitbeard Bluestem (Neches)                     | 10% 1.0  | Red Lovegrass (Duval)                            | 10% 0.2  |
|              | Sand Dropseed (Taylor)                           | 05% 0.1  | Sand Lovegrass (Mason)                           | 10% 0.4  |
|              | Canada Wildrye (Lavaca)                          | 10% 2.0  | Hairy Grama (Chaparral)                          | 05% 0.2  |
|              |  |          |  |          |
| 12 (Houston) | White Tridens (Guadalupe)                        | 10% 0.2  | Hooded Windmillgrass (Mariah)                    | 15% 0.3  |
|              | Hooded Windmillgrass (Mariah)                    | 10% 0.2  | Sand Dropseed (Nueces)                           | 15% 0.3  |
|              | Shortspike Windmillgrass (Welder)                | 15% 0.3  | Shortspike Windmillgrass (Welder)                | 10% 0.2  |
|              | Little Bluestem (Coastal Plains)                 | 15% 1.5  | Little Bluestem (Coastal Plains)                 | 15% 1.5  |
|              | Florida Paspalum (Harrison)                      | 15% 2.25 | Red Lovegrass (Duval)                            | 10% 0.2  |
|              | Red Lovegrass (Duval)                            | 05% 0.1  | Florida Paspalum (Harrison)                      | 15% 2.25 |
|              | Halls Panicum (Oso)                              | 10% 0.2  | Splitbeard Bluestem (Neches)                     | 10% 1.0  |
|              | Splitbeard Bluestem (Neches)                     | 05% 0.5  | Hairy Grama (Chaparral)                          | 05% 0.2  |
|              | Sand Dropseed (Nueces)                           | 05% 0.1  | Green Sprangletop (Van Horn)                     | 05% 0.2  |
|              | Canada Wildrye (Lavaca)                          | 10% 2.0  |  |          |
|              |  |          |  |          |
|              |  |          |  |          |

**Table 1 (continued)**  
**Permanent Rural Seeding Mix**

| District            | Clay Soils                                       |          | Sandy Soils                                      |          |
|---------------------|--|----------|--|----------|
|                     | Species, Percent, and Rate<br>(lb. PLS per acre) |          | Species, Percent, and Rate<br>(lb. PLS per acre) |          |
| 13 (Yoakum)         | White Tridens (Guadalupe)                        | 15% 0.3  | Hairy Grama (Chaparral)                          | 15% 0.6  |
|                     | Shortspike Windmillgrass (Welder)                | 15% 0.3  | Hooded Windmillgrass (Mariah)                    | 15% 0.3  |
|                     | Halls Panicum (Oso)                              | 10% 0.2  | Shortspike Windmillgrass (Welder)                | 10% 0.2  |
|                     | Plains Bristlegrass (Catarina Blend)             | 10% 0.6  | Sand Dropseed (Nueces)                           | 10% 0.2  |
|                     | Little Bluestem (Coastal Plains)                 | 15% 1.5  | Little Bluestem (Carrizo)                        | 10% 1.5  |
|                     | Sideoats Grama (South Texas)                     | 05% 0.75 | Red Lovegrass (Duval)                            | 10% 0.2  |
|                     | Texas Grama (Atascosa)                           | 10% 1.0  | Slender Grama (Dilley)                           | 10% 1.0  |
|                     | Hooded Windmillgrass (Mariah)                    | 05% 0.1  | Plains Bristlegrass (Catarina)                   | 10% 0.4  |
|                     | Sand Dropseed (Nueces)                           | 05% 0.1  | Green Sprangletop (Van Horn)                     | 10% 0.4  |
|                     | Canada Wildrye (Lavaca)                          | 10% 2.0  |  |          |
| 14 (Austin)         | Hooded Windmillgrass (Burnet)                    | 20% 0.4  | Hairy Grama (Chaparral)                          | 15% 0.6  |
|                     | White Tridens (Guadalupe)                        | 10% 0.2  | Shortspike Windmillgrass (Welder)                | 10% 0.2  |
|                     | Sideoats Grama (South Texas)                     | 10% 1.5  | Hooded Windmillgrass (Burnet)                    | 10% 0.2  |
|                     | Shortspike Windmillgrass (Welder)                | 10% 0.2  | Red Lovegrass (Duval)                            | 10% 0.2  |
|                     | Plains Bristlegrass (Catarina Blend)             | 10% 0.6  | Sand Dropseed (Nueces)                           | 10% 0.2  |
|                     | Silver Bluestem (Santiago)                       | 10% 0.4  | Little Bluestem (Carrizo)                        | 10% 1.5  |
|                     | Little Bluestem (OK Select)                      | 10% 0.7  | Sideoats Grama (South Texas)                     | 10% 1.5  |
|                     | Halls Panicum (Oso)                              | 05% 0.1  | Silver Bluestem (Santiago)                       | 10% 0.4  |
|                     | Texas Grama (Atascosa)                           | 05% 0.5  | Plains Bristlegrass (Catarina)                   | 10% 0.4  |
|                     | Canada Wildrye (Lavaca)                          | 10% 2.0  | Arizona Cottontop (La Salle)                     | 05% 0.2  |
| 15 (San Antonio)    | Sideoats Grama (South Texas)                     | 15% 2.25 | Slender Grama (Dilley)                           | 15% 1.5  |
|                     | White Tridens (Guadalupe)                        | 15% 0.3  | Hairy Grama (Chaparral)                          | 15% 0.6  |
|                     | Shortspike Windmillgrass (Welder)                | 10% 0.2  | Shortspike Windmillgrass (Welder)                | 10% 0.2  |
|                     | Halls Panicum (Oso)                              | 10% 0.2  | Hooded Windmillgrass (Mariah)                    | 10% 0.2  |
|                     | Plains Bristlegrass (Catarina Blend)             | 10% 0.6  | Red Lovegrass (Duval)                            | 10% 0.2  |
|                     | False Rhodes Grass (Kinney)                      | 05% 0.1  | Sand Dropseed (Nueces)                           | 10% 0.2  |
|                     | Hooded Windmillgrass (Mariah)                    | 05% 0.1  | Pink Pappusgrass (Maverick)                      | 05% 0.3  |
|                     | Pink Pappusgrass (Maverick)                      | 10% 0.6  | Little Bluestem (Carrizo)                        | 10% 1.5  |
|                     | Texas Grama (Atascosa)                           | 05% 0.5  | Arizona Cottontop (La Salle)                     | 05% 0.2  |
|                     | Multiflower False Rhodes Grass (Hidalgo)         | 10% 0.2  | Multiflower False Rhodes Grass (Hidalgo)         | 05% 0.1  |
| 16 (Corpus Christi) | Arizona Cottontop (La Salle)                     | 05% 0.2  | Plains Bristlegrass (Catarina)                   | 05% 0.2  |
|                     | Shortspike Windmillgrass (Welder)                | 15% 0.3  | Slender Grama (Dilley)                           | 15% 1.5  |
|                     | Pink Pappusgrass (Maverick)                      | 10% 0.6  | Hairy Grama (Chaparral)                          | 15% 0.6  |
|                     | Halls Panicum (Oso)                              | 10% 0.2  | Hooded Windmillgrass (Mariah)                    | 10% 0.2  |
|                     | Plains Bristlegrass (Catarina Blend)             | 10% 0.6  | Red Lovegrass (Duval)                            | 10% 0.2  |
|                     | White Tridens (Guadalupe)                        | 10% 0.2  | Sand Dropseed (Nueces)                           | 10% 0.2  |
|                     | Multiflower False Rhodes Grass (Hidalgo)         | 10% 0.2  | Shortspike Windmillgrass (Welder)                | 10% 0.2  |
|                     | Hooded Windmillgrass (Mariah)                    | 10% 0.2  | Pink Pappusgrass (Maverick)                      | 10% 0.6  |
|                     | Arizona Cottontop (La Salle)                     | 05% 0.2  | Multiflower False Rhodes Grass (Hidalgo)         | 10% 0.2  |
|                     | Sand Dropseed (Nueces)                           | 05% 0.1  | Arizona Cottontop (La Salle)                     | 05% 0.2  |
| 17 (Bryan)          | Sideoats Grama (South Texas)                     | 10% 1.5  | Little Bluestem (Carrizo)                        | 05% 0.75 |
|                     | Texas Grama (Atascosa)                           | 05% 0.5  |  |          |
|                     | White Tridens (Guadalupe)                        | 15% 0.3  | Sand Dropseed (Taylor)                           | 10% 0.2  |
|                     | Hooded Windmillgrass (Burnet)                    | 15% 0.3  | Shortspike Windmillgrass (Welder)                | 10% 0.2  |
|                     | Little Bluestem (Coastal Plains)                 | 15% 1.5  | Little Bluestem (Coastal Plains)                 | 15% 1.5  |
|                     | Florida Paspalum (Harrison)                      | 15% 2.25 | Green Sprangletop (Van Horn)                     | 05% 0.2  |
|                     | Shortspike Windmillgrass (Welder)                | 10% 0.2  | Florida Paspalum (Harrison)                      | 15% 2.25 |
|                     | Splitbeard Bluestem (Neches)                     | 05% 0.5  | Splitbeard Bluestem (Neches)                     | 10% 1.0  |
|                     | Green Sprangletop (Van Horn)                     | 05% 0.2  | Hooded Windmillgrass (Burnet)                    | 15% 0.3  |
|                     | Halls Panicum (Oso)                              | 05% 0.1  | Red Lovegrass (Duval)                            | 10% 0.2  |
|                     | Sand Dropseed (Taylor)                           | 05% 0.1  | Hairy Grama (Chaparral)                          | 10% 0.4  |
|                     | Canada Wildrye (Lavaca)                          | 10% 2.0  |  |          |

**Table 1 (continued)**  
**Permanent Rural Seeding Mix**

| District      | Clay Soils                                       |          | Sandy Soils                                      |          |
|---------------|--|----------|--|----------|
|               | Species, Percent, and Rate<br>(lb. PLS per acre) |          | Species, Percent, and Rate<br>(lb. PLS per acre) |          |
| 18 (Dallas)   | Sideoats Grama (Haskell)                         | 15% 1.5  | Shortspike Windmillgrass (Welder)                | 10% 0.2  |
|               | Hooded Windmillgrass (Burnet)                    | 15% 0.3  | Hairy Grama (Chaparral)                          | 15% 0.6  |
|               | White Tridens (Guadalupe)                        | 15% 0.3  | Sand Dropseed (Taylor)                           | 10% 0.2  |
|               | Little Bluestem (OK Select)                      | 15% 1.05 | Little Bluestem (OK Select)                      | 15% 1.05 |
|               | Buffalograss (Texoka)                            | 10% 1.5  | Sideoats Grama (Haskell)                         | 10% 1.0  |
|               | Silver Bluestem (Santiago)                       | 05% 0.2  | Green Sprangletop (Van Horn)                     | 10% 0.4  |
|               | Green Sprangletop (Van Horn)                     | 05% 0.2  | Hooded Windmillgrass (Burnet)                    | 10% 0.2  |
|               | Shortspike Windmillgrass (Welder)                | 05% 0.1  | Sand Lovegrass (Mason)                           | 10% 0.4  |
|               | Canada Wildrye (Lavaca)                          | 10% 2.0  | Silver Bluestem (Santiago)                       | 10% 0.4  |
|               | Sand Dropseed (Taylor)                           | 05% 0.1  |  |          |
| 19 (Atlanta)  | White Tridens (Guadalupe)                        | 15% 0.3  | Hooded Windmillgrass (Burnet)                    | 15% 0.3  |
|               | Hooded Windmillgrass (Burnet)                    | 15% 0.3  | Sand Dropseed (Taylor)                           | 10% 0.2  |
|               | Little Bluestem (Coastal Plains)                 | 20% 2.0  | Little Bluestem (Coastal Plains)                 | 20% 2.0  |
|               | Florida Paspalum (Harrison)                      | 15% 2.25 | Florida Paspalum (Harrison)                      | 15% 2.25 |
|               | Sideoats Grama (Haskell)                         | 10% 1.0  | Splitbeard Bluestem (Neches)                     | 10% 1.0  |
|               | Splitbeard Bluestem (Neches)                     | 05% 0.5  | Sand Lovegrass (Mason)                           | 10% 0.4  |
|               | Green Sprangletop (Van Horn)                     | 05% 0.2  | Red Lovegrass (Duval)                            | 10% 0.2  |
|               | Sand Dropseed (Taylor)                           | 05% 0.1  | Hairy Grama (Chaparral)                          | 10% 0.4  |
|               | Canada Wildrye (Lavaca)                          | 10% 2.0  |  |          |
| 20 (Beaumont) | White Tridens (Guadalupe)                        | 10% 0.2  | Hooded Windmillgrass (Mariah)                    | 15% 0.3  |
|               | Hooded Windmillgrass (Mariah)                    | 10% 0.2  | Sand Dropseed (Nueces)                           | 15% 0.3  |
|               | Shortspike Windmillgrass (Welder)                | 15% 0.3  | Shortspike Windmillgrass (Welder)                | 10% 0.2  |
|               | Little Bluestem (Coastal Plains)                 | 15% 1.5  | Little Bluestem (Coastal Plains)                 | 15% 1.5  |
|               | Florida Paspalum (Harrison)                      | 15% 2.25 | Red Lovegrass (Duval)                            | 10% 0.2  |
|               | Red Lovegrass (Duval)                            | 05% 0.1  | Florida Paspalum (Harrison)                      | 15% 2.25 |
|               | Halls Panicum (Oso)                              | 10% 0.2  | Splitbeard Bluestem (Neches)                     | 10% 1.0  |
|               | Splitbeard Bluestem (Neches)                     | 05% 0.5  | Hairy Grama (Chaparral)                          | 05% 0.2  |
|               | Sand Dropseed (Nueces)                           | 05% 0.1  | Green Sprangletop (Van Horn)                     | 05% 0.2  |
|               | Canada Wildrye (Lavaca)                          | 10% 2.0  |  |          |
| 21 (Pharr)    | Shortspike Windmillgrass (Welder)                | 10% 0.2  | Slender Grama (Dilley)                           | 10% 1.0  |
|               | Halls Panicum (Oso)                              | 10% 0.2  | Hairy Grama (Chaparral)                          | 10% 0.4  |
|               | White Tridens (Guadalupe)                        | 10% 0.2  | Shortspike Windmillgrass (Welder)                | 10% 0.2  |
|               | Plains Bristlegrass (Catarina Blend)             | 10% 0.6  | Red Lovegrass (Duval)                            | 10% 0.2  |
|               | Pink Pappusgrass (Maverick)                      | 10% 0.6  | Sand Dropseed (Nueces)                           | 10% 0.2  |
|               | Texas Grama (Atascosa)                           | 10% 1.0  | Hooded Windmillgrass (Mariah)                    | 10% 0.2  |
|               | Multiflower False Rhodes Grass (Hidalgo)         | 05% 0.1  | Pink Pappusgrass (Maverick)                      | 10% 0.6  |
|               | Hooded Windmillgrass (Mariah)                    | 10% 0.2  | Whiplash Pappusgrass (Webb)                      | 10% 0.6  |
|               | Arizona Cottontop (La Salle)                     | 10% 0.4  | Multiflower False Rhodes Grass (Hidalgo)         | 10% 0.2  |
|               | Sand Dropseed (Nueces)                           | 05% 0.1  | Arizona Cottontop (La Salle)                     | 10% 0.4  |
|               | Whiplash Pappusgrass (Webb)                      | 10% 0.6  |  |          |
|               |  |          |  |          |
| 22 (Laredo)   | Sideoats Grama (South Texas)                     | 15% 2.25 | Slender Grama (Dilley)                           | 15% 1.5  |
|               | Pink Pappusgrass (Maverick)                      | 10% 0.6  | Hairy Grama (Chaparral)                          | 15% 0.6  |
|               | Halls Panicum (Oso)                              | 10% 0.2  | Hooded Windmillgrass (Mariah)                    | 10% 0.2  |
|               | Plains Bristlegrass (Catarina Blend)             | 10% 0.6  | Red Lovegrass (Duval)                            | 10% 0.2  |
|               | White Tridens (Guadalupe)                        | 10% 0.2  | Sand Dropseed (Nueces)                           | 10% 0.2  |
|               | Whiplash Pappusgrass (Webb)                      | 10% 0.6  | Pink Pappusgrass (Maverick)                      | 10% 0.6  |
|               | Shortspike Windmillgrass (Welder)                | 05% 0.1  | Arizona Cottontop (La Salle)                     | 10% 0.4  |
|               | Texas Grama (Atascosa)                           | 10% 1.0  | Little Bluestem (Carrizo)                        | 05% 0.75 |
|               | False Rhodes Grass (Kinney)                      | 10% 0.2  | Sideoats Grama (South Texas)                     | 10% 1.5  |
|               | Hooded Windmillgrass (Mariah)                    | 10% 0.2  | Shortspike Windmillgrass (Welder)                | 05% 0.1  |

**Table 1 (continued)**  
**Permanent Rural Seeding Mix**

| District       | Clay Soils<br>Species, Percent, and Rate<br>(lb. PLS per acre) |         | Sandy Soils<br>Species, Percent, and Rate<br>(lb. PLS per acre) |          |
|----------------|--|---------|---|----------|
| 23 (Brownwood) | Sideoats Grama (Haskell)                                       | 15% 1.5 | Green Sprangletop (Van Horn)                                    | 15% 0.6  |
|                | Hooded Windmillgrass (Burnet)                                  | 15% 0.3 | Sand Dropseed (Taylor)  | 15% 0.3  |
|                | White Tridens (Guadalupe)                                      | 15% 0.3 | Sideoats Grama (Haskell)  | 10% 1.0  |
|                | Texas Grama (Atascosa)   | 10% 1.0 | Little Bluestem (OK Select)                                     | 15% 1.05 |
|                | Little Bluestem (OK Select)                                    | 10% 0.7 | Silver Bluestem (Santiago)                                      | 10% 0.4  |
|                | Buffalograss (Texoka)  | 10% 1.5 | Hooded Windmillgrass (Burnet)                                   | 10% 0.2  |
|                | Silver Bluestem (Santiago)                                     | 10% 0.4 | Shortspike Windmillgrass (Welder)                               | 10% 0.2  |
|                | Shortspike Windmillgrass (Welder)                              | 05% 0.1 | Hairy Grama (Chaparral)   | 10% 0.4  |
|                | Sand Dropseed (Taylor)   | 05% 0.1 | Sand Lovegrass (Mason)  | 05% 0.2  |
|                | Green Sprangletop (Van Horn)                                   | 05% 0.2 |   |          |
| 24 (El Paso)   | Green Sprangletop (Van Horn)                                   | 10% 0.4 | Sand Dropseed (Taylor)  | 20% 0.4  |
|                | Sideoats Grama (Brewster)                                      | 10% 1.0 | Sideoats Grama (Brewster)                                       | 15% 1.5  |
|                | Whiplash Pappusgrass (Permian)                                 | 10% 0.6 | Green Sprangletop (Van Horn)                                    | 15% 0.6  |
|                | Silver Bluestem (Santiago)                                     | 10% 0.4 | Hooded Windmillgrass (Burnet)                                   | 10% 0.2  |
|                | Blue Grama (Hachita)   | 10% 0.4 | Blue Grama (Hachita)  | 10% 0.4  |
|                | Galleta Grass (Viva)   | 10% 0.6 | Hairy Grama (Chaparral)   | 05% 0.2  |
|                | Alkali Sacaton (Saltalk)                                       | 10% 0.2 | Spike Dropseed (Potter)   | 10% 0.1  |
|                | Arizona Cottontop (La Salle)                                   | 10% 0.4 | Little Bluestem (Pastura)                                       | 05% 0.5  |
|                | Plains Bristlegrass (Catarina Blend)                           | 10% 0.4 | Galleta grass (Viva)  | 10% 0.6  |
|                | False Rhodes Grass (Kinney)                                    | 10% 0.2 |   |          |
| 25 (Childress) | Sideoats Grama (Haskell)                                       | 15% 1.5 | Sideoats Grama (Haskell)  | 15% 1.5  |
|                | Hooded Windmillgrass (Burnet)                                  | 15% 0.3 | Green Sprangletop (Van Horn)                                    | 10% 0.4  |
|                | Blue Grama (Hachita)   | 10% 0.4 | Sand Dropseed (Taylor)  | 10% 0.2  |
|                | Buffalograss (Texoka)  | 10% 1.5 | Hooded Windmillgrass (Burnet)                                   | 10% 0.2  |
|                | Galleta Grass (Viva)   | 10% 0.6 | Arizona Cottontop (La Salle)                                    | 10% 0.4  |
|                | Silver Bluestem (Santiago)                                     | 15% 0.6 | Blue Grama (Hachita)  | 10% 0.4  |
|                | White Tridens (Guadalupe)                                      | 10% 0.2 | Little Bluestem (OK select)                                     | 10% 1.0  |
|                | Green Sprangletop (Van Horn)                                   | 05% 0.2 | Galleta Grass (Viva)  | 10% 0.6  |
|                | Western Wheatgrass (Barton)                                    | 05% 1.5 | Sand Lovegrass (Mason)  | 05% 0.15 |
|                | Canada Wildrye (Lavaca)  | 05% 1.0 | Canada Wildrye (Lavaca)   | 10% 2.0  |
|                |  |         |   |          |
|                |  |         |   |          |

**Table 2**  
**Permanent Urban Seeding Mix**

| District          | Clay Soils<br>Species and Rates<br>(lb. PLS per acre) |     | Sandy Soils<br>Species and Rates<br>(lb. PLS per acre) |     |
|-------------------|---|-----|--|-----|
| 1 (Paris)         | Green Sprangletop                                     | 0.3 | Green Sprangletop                                      | 0.3 |
|                   | Bermudagrass  | 2.4 | Bermudagrass   | 5.4 |
|                   | Sideoats Grama (Haskell)                              | 4.5 |  |     |
| 2 (Fort Worth)    | Green Sprangletop                                     | 0.3 | Green Sprangletop                                      | 0.3 |
|                   | Sideoats Grama (El Reno)                              | 3.6 | Sideoats Grama (El Reno)                               | 3.6 |
|                   | Bermudagrass  | 2.4 | Bermudagrass   | 2.1 |
|                   | Buffalograss (Texoka)                                 | 1.6 | Sand Dropseed (Borden Co.)                             | 0.3 |
| 3 (Wichita Falls) | Green Sprangletop                                     | 0.3 | Green Sprangletop                                      | 0.3 |
|                   | Sideoats Grama (El Reno)                              | 4.5 | Sideoats Grama (El Reno)                               | 3.6 |
|                   | Bermudagrass  | 1.8 | Bermudagrass   | 1.8 |
|                   | Buffalograss (Texoka)                                 | 1.6 | Sand Dropseed (Borden Co.)                             | 0.4 |
| 4 (Amarillo)      | Green Sprangletop                                     | 0.3 | Green Sprangletop                                      | 0.3 |
|                   | Sideoats Grama (El Reno)                              | 3.6 | Sideoats Grama (El Reno)                               | 2.7 |
|                   | Blue Grama (Hachita)                                  | 1.2 | Blue Grama (Hachita)                                   | 0.9 |
|                   | Buffalograss (Texoka)                                 | 1.6 | Sand Dropseed (Borden Co.)                             | 0.4 |
| 5 (Lubbock)       |   |     | Buffalograss (Texoka)                                  | 1.6 |
|                   | Green Sprangletop                                     | 0.3 | Green Sprangletop                                      | 0.3 |
|                   | Sideoats Grama (El Reno)                              | 3.6 | Sideoats Grama (El Reno)                               | 2.7 |
|                   | Blue Grama (Hachita)                                  | 1.2 | Blue Grama (Hachita)                                   | 0.9 |
|                   | Buffalograss (Texoka)                                 | 1.6 | Sand Dropseed (Borden Co.)                             | 0.4 |
|                   |   |     | Buffalograss (Texoka)                                  | 1.6 |

**Table 2 (continued)**  
**Permanent Urban Seeding Mix**

| <b>District</b>     | <b>Clay Soils<br/>Species and Rates<br/>(lb. PLS per acre)</b> |     | <b>Sandy Soils<br/>Species and Rates<br/>(lb. PLS per acre)</b> |     |
|---------------------|--|-----|---|-----|
| 6 (Odessa)          | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Sideoats Grama (Haskell)                                       | 3.6 | Sideoats Grama (Haskell)  | 2.7 |
|                     | Blue Grama (Hachita)   | 1.2 | Sand Dropseed (Borden Co.)                                      | 0.4 |
|                     | Buffalograss (Texoka)  | 1.6 | Blue Grama (Hachita)  | 0.9 |
|                     |  |     | Buffalograss (Texoka)   | 1.6 |
| 7 (San Angelo)      | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Sideoats Grama (Haskell)                                       | 7.2 | Sideoats Grama (Haskell)  | 3.2 |
|                     | Buffalograss (Texoka)  | 1.6 | Sand Dropseed (Borden Co.)                                      | 0.3 |
|                     |  |     | Blue Grama (Hachita)  | 0.9 |
|                     |  |     | Buffalograss (Texoka)   | 1.6 |
| 8 (Abilene)         | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Sideoats Grama (Haskell)                                       | 3.6 | Sand Dropseed (Borden Co.)                                      | 0.3 |
|                     | Blue Grama (Hachita)   | 1.2 | Sideoats Grama (Haskell)  | 3.6 |
|                     | Buffalograss (Texoka)  | 1.6 | Blue Grama (Hachita)  | 0.8 |
|                     |  |     | Buffalograss (Texoka)   | 1.6 |
| 9 (Waco)            | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Bermudagrass   | 1.8 | Buffalograss (Texoka)   | 1.6 |
|                     | Buffalograss (Texoka)  | 1.6 | Bermudagrass  | 3.6 |
|                     | Sideoats Grama (Haskell)                                       | 4.5 | Sand Dropseed (Borden Co.)                                      | 0.4 |
| 10 (Tyler)          | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Bermudagrass   | 2.4 | Bermudagrass  | 5.4 |
|                     | Sideoats Grama (Haskell)                                       | 4.5 |   |     |
| 11 (Lufkin)         | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Bermudagrass   | 2.4 | Bermudagrass  | 5.4 |
|                     | Sideoats Grama (Haskell)                                       | 4.5 |   |     |
| 12 (Houston)        | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Sideoats Grama (Haskell)                                       | 4.5 | Bermudagrass  | 5.4 |
|                     | Bermudagrass   | 2.4 |   |     |
| 13 (Yoakum)         | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Sideoats Grama (South Texas)                                   | 4.5 | Bermudagrass  | 5.4 |
|                     | Bermudagrass   | 2.4 |   |     |
| 14 (Austin)         | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Bermudagrass   | 2.4 | Bermudagrass  | 4.8 |
|                     | Sideoats Grama (South Texas)                                   | 3.6 | Buffalograss (Texoka)   | 1.6 |
|                     | Buffalograss (Texoka)  | 1.6 |   |     |
| 15 (San Antonio)    | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Sideoats Grama (South Texas)                                   | 3.6 | Bermudagrass  | 4.8 |
|                     | Bermudagrass   | 2.4 | Buffalograss (Texoka)   | 1.6 |
|                     | Buffalograss (Texoka)  | 1.6 |   |     |
| 16 (Corpus Christi) | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Sideoats Grama (South Texas)                                   | 3.6 | Bermudagrass  | 4.8 |
|                     | Bermudagrass   | 2.4 | Buffalograss (Texoka)   | 1.6 |
|                     | Buffalograss (Texoka)  | 1.6 |   |     |
| 17 (Bryan)          | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Bermudagrass   | 2.4 | Bermudagrass  | 5.4 |
|                     | Sideoats Grama (Haskell)                                       | 4.5 |   |     |
| 18 (Dallas)         | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Sideoats Grama (El Reno)                                       | 3.6 | Buffalograss (Texoka)   | 1.6 |
|                     | Buffalograss (Texoka)  | 1.6 | Bermudagrass  | 3.6 |
|                     | Bermudagrass   | 2.4 | Sand Dropseed (Borden Co.)                                      | 0.4 |
| 19 (Atlanta)        | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Bermudagrass   | 2.4 | Bermudagrass  | 5.4 |
|                     | Sideoats Grama (Haskell)                                       | 4.5 |   |     |
| 20 (Beaumont)       | Green Sprangletop  | 0.3 | Green Sprangletop   | 0.3 |
|                     | Bermudagrass   | 2.4 | Bermudagrass  | 5.4 |
|                     | Sideoats Grama (Haskell)                                       | 4.5 |   |     |

**Table 2 (continued)**  
**Permanent Urban Seeding Mix**

| <b>District</b> | <b>Clay Soils<br/>Species and Rates<br/>(lb. PLS per acre)</b> | <b>Sandy Soils<br/>Species and Rates<br/>(lb. PLS per acre)</b> |
|-----------------|--|---|
| 21 (Pharr)      | Green Sprangletop 0.3  | Green Sprangletop 0.3   |
|                 | Sideoats Grama (South Texas) 3.6                               | Buffalograss (Texoka) 1.6                                       |
|                 | Buffalograss (Texoka) 1.6                                      | Bermudagrass 3.6  |
|                 | Bermudagrass 2.4   | Sand Dropseed (Borden Co.) 0.4                                  |
| 22 (Laredo)     | Green Sprangletop 0.3  | Green Sprangletop 0.3   |
|                 | Sideoats Grama (South Texas) 4.5                               | Buffalograss (Texoka) 1.6                                       |
|                 | Buffalograss (Texoka) 1.6                                      | Bermudagrass 3.6  |
|                 | Bermudagrass 1.8   | Sand Dropseed 0.4   |
| 23 (Brownwood)  | Green Sprangletop 0.3  | Green Sprangletop 0.3   |
|                 | Sideoats Grama (Haskell) 3.6                                   | Buffalograss (Texoka) 1.6                                       |
|                 | Bermudagrass 1.2   | Bermudagrass 3.6  |
|                 | Blue Grama (Hachita) 0.9                                       | Sand Dropseed (Borden Co.) 0.4                                  |
| 24 (El Paso)    | Green Sprangletop 0.3  | Green Sprangletop 0.3   |
|                 | Sideoats Grama (South Texas) 3.6                               | Buffalograss (Texoka) 1.6                                       |
|                 | Blue Grama (Hachita) 1.2                                       | Sand Dropseed (Borden Co.) 0.4                                  |
|                 | Buffalograss (Texoka) 1.6                                      | Blue Grama (Hachita) 1.8  |
| 25 (Childress)  | Green Sprangletop 0.3  | Green Sprangletop 0.3   |
|                 | Sideoats Grama (El Reno) 3.6                                   | Sand Dropseed (Borden Co.) 0.4                                  |
|                 | Blue Grama (Hachita) 1.2                                       | Buffalograss (Texoka) 1.6                                       |
|                 | Buffalograss (Texoka) 1.6                                      | Bermudagrass 1.8  |

**Table 3**  
**Temporary Cool Seeding Mix**

| <b>District</b>   | <b>All Soils<br/>Species and Rates<br/>(lb. PLS per acre)</b>          |
|---|--|
| 1 (Paris), 2 (Fort Worth), 3 (Wichita Falls), 4 (Amarillo), 5 (Lubbock),<br>6 (Odessa), 7 (San Angelo), 8 (Abilene), 18 (Dallas), 19 (Atlanta),<br>23 (Brownwood), 24 (El Paso), 25 (Childress) | Oats 30.0<br>Wheat 30.0<br>Little Barley 5.0<br>Western Wheatgrass 5.0 |
| 9 (Waco), 10 (Tyler), 11 (Lufkin), 12 (Houston), 13 (Yoakum),<br>14 (Austin), 15 (San Antonio), 16 (Corpus Christi), 17 (Bryan),<br>20 (Beaumont), 21 (Pharr), 22 (Laredo)                      | Oats 40.0<br>Little Barley 5.0   |

**Table 4**  
**Temporary Warm Seeding Mix**

| <b>District</b> | <b>All Soils<br/>Species and Rates<br/>(lb. PLS per acre)</b> |
|-----------------|---|
| All             | Brownton Millet 20.0  |



**Table 5**  
**Flower Seeding Mix**

| District  | All Soils<br>Species and Rates<br>(lb. PLS per acre) |
|---|--|
| 1 (Paris), 10 (Tyler), 11 (Lufkin), 12 (Houston),<br>17 (Bryan), 19 (Atlanta), 20 (Beaumont)  | Herbaceous Mimosa (Crockett) 1.5                     |
|   | Illinois Bundleflower (Sabine) 1.5                   |
|   | Thickspike Gayfeather (Pineywoods) 1.5               |
|   | Purple Prairie Clover (Kaneb) 0.6                    |
|   | Rio Grande Clammyweed (Zapata) 2.0                   |
| 2 (Fort Worth), 3 (Wichita Falls), 4 (Amarillo),<br>5 (Lubbock), 6 (Odessa), 7 (San Angelo),<br>8 (Abilene), 9 (Waco), 18 (Dallas),<br>23 (Brownwood), 25 (Childress) | Engelmann Daisy (Eldorado) 1.5                       |
|   | Awnless Bushsunflower (Plateau) 1.5                  |
|   | Partridge Pea 1.5                                    |
|   | Illinois Bundleflower (Sabine) 1.5                   |
|   | Rio Grande Clammyweed (Zapata) 2.0                   |
| 13 (Yoakum), 14 (Austin), 15 (San Antonio),<br>16 (Corpus Christi), 21 (Pharr), 22 (Laredo),<br>24 (El Paso)  | Indian Blanket (Fuego) 1.0                           |
|   | Awnless Bushsunflower (Venado) 0.4                   |
|   | Prostrate Bundleflower (Balli) 1.5                   |
|   | Orange Zexmenia (Goliad) 0.4                         |
|   | Rio Grande Clammyweed (Zapata) 2.0                   |

- 2.2. **Fertilizer.** Use fertilizer in accordance with Article 166.2., "Materials."
- 2.3. **Water.** Use water in accordance with Article 168.2, "Materials."
- 2.4. **Highly Erodible Land (HEL).** Add Bermudagrass to the mix shown in Table 1 at 1.0 PLS per acre if shown on the plans.
- 2.5. **Mulch.**
- 2.5.1. **Straw or Hay Mulch.** Use straw or hay mulch in accordance with Section 162.2.5., "Mulch."
- 2.5.2. **Hydro Mulch.** Use mulches that are on the Approved Products List. Submit one full set of manufacturer's literature for the selected material. Keep mulch dry until applied. Do not use molded or rotted material.
- 2.6. **Tacking Methods.** Use a tacking agent applied in conformance with the manufacturer's recommendations or by a crimping method on all straw or hay mulch operations. Use tacking agents as approved or as shown on the plans.

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### 3. CONSTRUCTION

Scarify the area to a depth of 4 in. before placing the seed, unless otherwise directed. Use approved equipment to vertically track the seedbed as shown on the plans or as directed. Scarify the seedbed to a depth of 4 in. or mow the area before placement of the permanent seed mix when performing permanent seeding after an established temporary seeding. Plant the seed mix specified and mulch, if required, after the area has been completed to lines and grades as shown on the plans.

Apply fertilizer in accordance with Article 166.3., "Construction." Grass seed, flower seed, and fertilizer may be distributed simultaneously during dry seeding operations, provided each component is applied at the specified rate. Do not combine fertilizer and seed in the same slurry during hydro mulch seeding operations. Apply half of the required fertilizer during the temporary seeding operation and the other half during the permanent seeding operation when temporary and permanent seeding are both specified for the same area.

Water the seeded areas at the rates and frequencies as shown on the plans or as directed.

Distribute the seed or seed mixture uniformly over the areas shown on the plans. Provide equipment with an agitator or method to maintain a uniform seed mixture during distribution.

### 3.1. Planting Season.

3.1.1. **Temporary Seed.** Plant cool seeding mix September 1–January 31. Plant warm seeding mix February 1–August 30.

3.1.2. **Permanent Seed.** End planting season for all Districts by May 15. Begin planting season for each District based on the following.

- **January 15.** 1 (Paris), 10 (Tyler), 11 (Lufkin), 12 (Houston), 13 (Yoakum), 15 (San Antonio), 16 (Corpus Christi), 17 (Bryan), 19 (Atlanta), 20 (Beaumont), 21 (Pharr), and 22 (Laredo).
- **February 1.** 2 (Fort Worth), 3 (Wichita Falls), 6 (Odessa), 7 (San Angelo), 8 (Abilene), 9 (Waco), 14 (Austin), 18 (Dallas), 23 (Brownwood), 24 (El Paso), and 25 (Childress).
- **February 15.** 4 (Amarillo) and 5 (Lubbock).

3.2. **Broadcast Seeding.** Use hand or mechanical distribution or hydro-seeding on top of the soil unless otherwise directed. Apply the mixture to the area to be seeded within 30 min. of placement of components in the equipment when seed and water are to be distributed as a slurry during hydro-seeding. Roll the planted area using a light roller or other suitable equipment. Roll sloped areas along the contour of the slopes.

3.3. **Straw or Hay Mulch Seeding.** Plant seed in accordance with Section 164.3.2., “Broadcast Seeding.” Apply straw or hay mulch uniformly over the seeded area immediately after planting the seed or seed mixture. Apply straw or hay mulch in accordance with Section 164.3.6., “Straw or Hay Mulching.” Apply tack in accordance with Section 164.2.6., “Tacking Methods.”

3.4. **Hydro Mulch Seeding.** Plant seed in accordance with Section 164.3.2., “Broadcast Seeding,” before placing mulch. Apply mulch uniformly over the seeded area immediately after planting the seed or seed mixture at the following rates.

- **Sandy Soils with Slopes of 3:1 or Less.** 2,500 lb. per acre.
- **Sandy Soils with Slopes Greater than 3:1.** 3,000 lb. per acre.
- **Clay Soils with Slopes of 3:1 or Less.** 2,000 lb. per acre.
- **Clay Soils with Slopes Greater than 3:1.** 2,300 lb. per acre.

Mulch rates are based on dry weight of mulch per acre. Mix mulch and water to make a slurry and apply uniformly over the seeded area using suitable equipment.

3.5. **Drill Seeding.** Plant at a depth of 1/4–1/3 in. using a pasture- or rangeland-type drill unless otherwise directed. Plant seed along the contour of the slopes.

3.6. **Straw or Hay Mulching.** Apply straw or hay mulch uniformly over the area as shown on the plans. Apply straw mulch at 2–2.5 ton per acre. Apply hay mulch at 1.5–2 ton per acre. Use a tacking method over the mulched area in accordance with Section 164.2.6., “Tacking Methods.”

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## 4. MEASUREMENT

This Item will be measured by the square yard or by the acre.

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## 5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Broadcast Seeding (Perm)” of the rural or urban seed mixture and sandy or clay soil specified, “Broadcast Seeding (Temp)” of warm or cool season specified, “Straw or Hay Mulch Seeding (Perm)” of the rural or urban seed mixture and sandy or clay soil specified, “Straw or Hay Mulch Seeding (Temp)” of warm or cool season specified, “Hydro Mulch Seeding (Perm)” of the rural or urban seed mixture and sandy or clay soil specified, “Hydro Mulch Seeding (Temp)” of warm or cool season specified, “Drill Seeding (Perm)” of the rural or urban seed mixture and sandy or clay soil

specified, "Drill Seeding (Temp)" of warm or cool season specified, and "Straw or Hay Mulching." This price is full compensation for furnishing materials, seeding mix, flower seeding mix, HEL seeding mix, water for hydro-seeding and hydro-mulching operations, mowing, tacking, labor, equipment, tools, supplies, and incidentals.

Fertilizer will not be paid for directly, but will be subsidiary to this Item.

Water for irrigating the seeded area, when specified, will be paid for under Item 168, "Vegetative Watering."

## Item 275

### Cement Treatment (Road-Mixed)



#### 1. DESCRIPTION

Mix and compact cement, water, and subgrade or base (with or without asphalt concrete pavement) in the roadway.

#### 2. MATERIALS

Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications. Notify the Engineer of the proposed material sources and of changes to material sources. Obtain verification from the Engineer that the specification requirements are met before using the sources. The Engineer may sample and test project materials at any time before compaction. Use material definitions in accordance with [Tex-100-E](#).

- 2.1. **Cement.** Furnish hydraulic cement that meets the requirements of [DMS-4600](#), "Hydraulic Cement," and the Department's *Hydraulic Cement Quality Monitoring Program* (HCQMP). Sources not in the HCQMP will require testing and approval before use.
- 2.2. **Subgrade.** The Engineer will determine the sulfate content in accordance with [Tex-145-E](#) and organic content in accordance with [Tex-148-E](#) before cement treatment begins. Suspend operations when material to be treated has a sulfate content greater than 7,000 ppm or an organic content greater than 2.0% and proceed as directed.
- 2.3. **Flexible Base.** Unless otherwise shown on the plans, furnish base material that meets the requirements of Item 247, "Flexible Base," for the type and grade shown on the plans, before the addition of cement. Unless otherwise shown on the plans, the compressive strength of the flexible base is waived.
- 2.4. **Water.** Furnish water free of industrial waste and other objectionable material.
- 2.5. **Asphalt.** When asphalt or emulsion is permitted for curing purposes, furnish materials that meet the requirements of Item 300, "Asphalts, Oils, and Emulsions," as shown on the plans or directed.
- 2.6. **Mix Design.** The Engineer will determine the target cement content and optimum moisture content to produce a stabilized mixture that meets the strength requirements shown on the plans. The mix will be designed in accordance with [Tex-120-E](#) or will be based on prior experience with the project materials. The Contractor may propose a mix design developed in accordance with [Tex-120-E](#). Meet strength requirements when shown on the plans. The Engineer will use [Tex-120-E](#) to verify the Contractor's proposed mix design before acceptance. Reimburse the Department for subsequent mix designs or partial designs necessitated by changes in the material or requests by the Contractor. Limit the amount of recycled asphalt pavement to no more than 50% of the mix unless otherwise shown on the plans or directed.

#### 3. EQUIPMENT

Provide machinery, tools, and equipment necessary for proper execution of the work. Provide rollers in accordance with Item 210, "Rolling." Provide proof rollers in accordance with Item 216, "Proof Rolling," when required.

- 3.1. **Cement Storage Facility.** Store cement in closed, weatherproof containers.

- 3.2. **Cement Slurry Equipment.** Use slurry tanks equipped with agitation devices to slurry cement on the project or other approved location. The Engineer may approve other slurring methods.

Provide a pump for agitating the slurry when the distributor truck is not equipped with an agitator. Equip the distributor truck with an approved sampling device.

- 3.3. **Dry Cement Distribution Equipment.** Provide equipment to spread cement evenly across the area to be treated. Provide equipment with a rotary vane feeder to spread cement, when shown on the plans.

- 3.4. **Pulverization Equipment.** Provide pulverization equipment that:

- cuts and pulverizes material uniformly to the proper depth using cutters that plane to a uniform surface over the entire width of the cut,
- provides a visible indication of the depth of cut at all times, and
- uniformly mixes the materials.

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## 4. CONSTRUCTION

Construct each layer uniformly, free of loose or segregated areas, and with the required density and moisture content. Provide a smooth surface that conforms to the typical sections, lines, and grades shown on the plans or as directed.

- 4.1. **Preparation of Subgrade or Existing Base for Treatment.** Before treating, remove existing asphalt concrete pavement in conformance with pertinent Items and the plans or as directed. Shape existing material in conformance with applicable bid items to conform to the typical sections shown on the plans and as directed.

When shown on the plans or directed, proof roll the roadbed in accordance with Item 216 before pulverizing or scarifying existing material. Correct soft spots as directed.

When material is imported from a borrow source, notify the Engineer of the location of the borrow source well in advance to allow time for testing and approval to avoid delay to the project. Stockpile as directed. The Engineer will test the borrow source and determine the sulfate and organic contents. When the borrow source has a sulfate content greater than 3,000 ppm or an organic content greater than 2.0%, proceed as directed.

When new base material is required to be mixed with existing base, deliver, place, and spread the new material in the required amount per station. Manipulate and thoroughly mix new base with existing material to provide a uniform mixture to the specified depth before shaping.

- 4.2. **Pulverization.** Pulverize or scarify existing material after shaping. If the material cannot be uniformly processed to the required depth in a single pass, excavate and windrow the material to expose a secondary grade to achieve processing to plan depth.

- 4.3. **Application of Cement.** Uniformly apply cement using dry placement unless otherwise shown on the plans. Add cement at the percentage determined in accordance with Section 275.2.6., "Mix Design." Apply cement only on an area where mixing, compacting, and finishing can be completed during the same working day.

Start cement application only when the air temperature is at least 35°F and rising or is at least 40°F. The temperature will be taken in the shade and away from artificial heat. Suspend application when the Engineer determines that weather conditions are unsuitable.

- 4.3.1. **Dry Placement.** Before applying cement, bring the prepared roadway to approximately optimum moisture content. When necessary, sprinkle in accordance with Item 204, "Sprinkling." Distribute the required quantity of dry cement using approved equipment. Minimize dust and scattering of cement by wind. Do not apply

cement when wind conditions, in the opinion of the Engineer, cause blowing cement to become dangerous to traffic or objectionable to adjacent property owners.

- 4.3.2. **Slurry Placement.** Mix the required quantity of cement with water, as approved. Provide slurry free of objectionable materials and with a uniform consistency that can be easily applied. Agitate the slurry continuously. Apply slurry within 2 hr. of adding water and when the roadway is at a moisture content drier than optimum. Distribute slurry uniformly by making successive passes over a measured section of roadway until the specified cement content is reached.

- 4.4. **Mixing.** Thoroughly mix the material and cement using approved equipment. Mix until a homogeneous mixture is obtained. Sprinkle the treated materials during the mixing operation, as directed, to maintain optimum mixing moisture. Spread and shape the completed mixture in a uniform layer.

After mixing, the Engineer may sample the mixture at roadway moisture and test in accordance with [Tex-101-E](#), Part III, to determine compliance with the gradation requirements shown in Table 1. When strength requirements are shown on the plans, the Engineer may sample the mixture to verify strength in accordance with [Tex-120-E](#) and adjust cement content to achieve the target strength for work going forward.

**Table 1**  
**Gradation Requirements (Min % Passing)**

| Sieve Size | Base | Subgrade |
|------------|------|----------|
| 1-3/4"     | 100  | 100      |
| 3/4"       | 85   | 85       |
| #4         | —    | 60       |

- 4.5. **Strength Testing.** The Engineer will sample and test the cement-treated mixture for unconfined compressive strength in accordance with [Tex-117-E](#), Part II. The unconfined compressive strength must be greater than 150 psi, unless otherwise shown on the plans.

- 4.6. **Compaction.** Compact the mixture in one lift using density control, unless otherwise shown on the plans. Complete compaction within 2 hr. after the application of water to the mixture of material and cement.

Sprinkle the treated material in accordance with Item 204, or aerate the treated material to adjust the moisture content during compaction so that it is within 2.0% of optimum as determined in accordance with [Tex-120-E](#). Adjust operations as required.

Begin rolling longitudinally at the sides and proceed toward the center, overlapping on successive trips by at least one-half the width of the roller unit. On superelevated curves, begin rolling at the low side and progress toward the high side. Offset alternating trips of the roller. Operate rollers at a speed between 2 and 6 mph, as directed.

Before final acceptance, the Engineer will select the locations of tests in each unit and measure the treated depth in accordance with [Tex-140-E](#). Correct areas deficient by more than 1/2 in. in thickness or more than 1/2% in target cement content by adding cement as required, reshaping, recompacting, and refinishing at the Contractor's expense.

Remove or rework areas that lose required stability, compaction, or finish, as directed. When a section is reworked more than 4 hr. after completion of compaction, add additional cement as directed. Perform the work at no additional cost to the Department.

- 4.6.1. **Ordinary Compaction.** Roll using approved compaction equipment, as directed. Correct irregularities, depressions, and weak spots immediately by scarifying the areas affected, adding or removing treated material as required, reshaping, and recompacting.

- 4.6.2. **Density and Moisture Control.** Compact to at least 95% of the maximum density and within  $\pm 2.0\%$  of the optimum moisture content as determined in accordance with [Tex-120-E](#). Provide the Engineer with the beginning and ending station numbers of the area completed for testing. The Engineer will determine

roadway density and moisture content in accordance with [Tex-115-E](#), Part I within 4 hr. from the time compaction is completed. The Engineer will determine random locations for testing in accordance with [Tex-115-E](#), Part IV. The Engineer may verify strength in accordance with [Tex-120-E](#) and adjust cement content to achieve the target strength for work going forward. Remove material that does not meet density requirements, or rework by adding the target cement content, reshaping, recompacting, and refinishing, at the Contractor's expense.

When the density is less than 95% of the maximum dry density, the Engineer may perform additional testing to determine the extent of the area to correct. The Engineer may accept the section if no more than one of the five most recent density tests is below the specified density and the failing test is no more than 3 pcf below the specified density.

- 4.7. **Miscellaneous and Small Areas.** Miscellaneous areas are those that typically involve handwork or discontinuous paving operations, such as temporary detours, driveways, mailbox turnouts, crossovers, gores, spot level-up areas, and other similar areas. Miscellaneous and small areas are not subject to density testing but may be tested as directed.
- 4.8. **Finishing.** Immediately after completing compaction of the final course, clip, skin, or tight-blade the surface of the cement treated material using a maintainer or subgrade trimmer to a depth of approximately 1/4 in. Remove loosened material and dispose of at an approved location. Roll the clipped surface immediately using a pneumatic tire roller until a smooth surface is attained. Add small amounts of water as needed during rolling. Shape and maintain the course and surface in conformity with the typical sections, lines, and grades shown on the plans or as directed.

Finish grade of constructed subgrade to within 0.1 ft. in the cross-section and 0.1 ft. in 16 ft. measured longitudinally.

Correct grade deviations of constructed base greater than 1/4 in. in 16 ft. measured longitudinally or greater than 1/4 in. over the entire width of the cross-section in areas where surfacing is to be placed. Remove excess material, reshape, and roll using a pneumatic tire roller. Correct as directed if material is more than 1/4 in. low. Do not surface patch.
- 4.9. **Microcracking.** When shown on the plans, maintain moisture content of the finished cement-treated base for a period of 24–48 hr. During this time, but no sooner than 24 hr., roll the finished course using a vibratory roller to induce microcracking. The vibratory roller must be in accordance with Item 210, with a static weight equal to or more than 12 ton, and the vibratory drum must be no less than 20 in. wide. The roller must travel at a speed of 2 mph, vibrating at maximum amplitude, and make two–four passes with 100% coverage excluding the outside 1 ft. of the surface crown, unless otherwise directed by the Engineer. Additional passes may be required to achieve the desired crack pattern as directed. Notify the Engineer 24 hr. before the microcracking begins.
- 4.10. **Curing.** Cure for at least 3 days by sprinkling in accordance with Item 204 or by applying an asphalt material at the rate of 0.05–0.20 gal. per square yard, as shown on the plans or as directed. When a section is microcracked, cure section for an additional 2 days after microcracking. Maintain the moisture content during curing at no lower than 2 percentage points below optimum. Continue curing until placing another course.
- 4.11. **Ride Quality.** When shown on the plans, measurement of ride quality only applies to the final travel lanes that receive a one- or two-course surface treatment for the final riding surface. Measure the ride quality of the base course either before or after the application of the prime coat, as directed, and before placement of the surface treatment. Use a certified profiler operator on the Department's MPL. When requested, furnish the Engineer with documentation for the person certified to operate the profiler.

Provide all profile data to the Engineer in electronic data files within 3 days of measuring the ride quality using the format specified in [Tex-1001-S](#). The Engineer will use Department software to evaluate longitudinal profiles to determine areas requiring corrective action. Correct 0.1-mi. sections with an average international roughness index (IRI) value greater than 100 in. per mile to an IRI value of 100 in. per mile or less, unless otherwise shown on the plans. Reprofile and correct sections that fail to maintain ride quality before the

placement of the surface treatment, as directed and approved. Unless ride deterioration is due to environmental impact, traffic, or other incidents outside the Contractor's control, perform this work at no additional expense to the Department, as approved.

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## 5. MEASUREMENT

- 5.1. **Cement.** Cement will be measured by the ton (dry weight). When cement is furnished in trucks, the weight of cement will be determined on certified scales, or the Contractor must provide a set of standard platform truck scales at an approved location. Scales must meet the requirements of Item 520, "Weighing and Measuring Equipment."

When cement is furnished in bags, indicate the manufacturer's certified weight. Bags varying more than 5% from that weight may be rejected. The average weight of bags in any shipment, as determined by weighing 10 bags taken at random, must be at least the manufacturer's certified weight.

- 5.1.1. **Slurry.** Cement slurry will be measured by the ton (dry weight) of the cement used to prepare the slurry at the jobsite or from the minimum percent dry solids content of the slurry, multiplied by the weight of the slurry in tons delivered.
- 5.2. **Cement Treatment.** Cement treatment will be measured by the square yard of surface area. The dimensions for determining the surface areas are established by the widths shown on the plans and lengths measured at placement.

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## 6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for in accordance with Section 275.5.1., "Cement," and Section 275.5.2., "Cement Treatment."

Furnishing and delivering new base will be paid for in accordance with Section 247.6.2., "Flexible Base (Roadway Delivery)." Mixing, spreading, blading, shaping, compacting, and finishing new or existing base material will be paid for under Section 275.6.2., "Cement Treatment." Removal and disposal of existing asphalt concrete pavement will be paid for in conformance with pertinent Items or in accordance with Article 4.4., "Changes in the Work."

Sprinkling and rolling, except proof rolling, will not be paid for directly, but will be subsidiary to this Item, unless otherwise shown on the plans. When proof rolling is shown on the plans or directed by the Engineer, it will be paid for in accordance with Item 216.

Where subgrade is constructed under this Contract, correction of soft spots in the subgrade or existing base will be at the Contractor's expense. Where subgrade is not constructed under this Contract, correction of soft spots in the subgrade or existing base will be in conformance with pertinent Items or in accordance with Article 4.4., "Changes in the Work."

Where subgrade to be treated under this Contract has sulfates greater than 7,000 ppm, work will be paid for in accordance with Article 4.4., "Changes in the Work."

Asphalt used solely for curing will not be paid for directly, but will be subsidiary to this Item. Asphalt placed for curing and priming will be paid for under Item 310, "Prime Coat."

- 6.1. **Cement.** Cement will be paid for at the unit price bid for "Cement." This price is full compensation for materials, delivery, equipment, labor, tools, and incidentals.
- 6.2. **Cement Treatment.** Cement treatment will be paid for at the unit price bid for "Cement Treatment (Existing Material)," "Cement Treatment (New Base)," or "Cement Treatment (Mixing Existing Material and New Base)," for the depth specified. No payment will be made for thickness or width exceeding that shown on the



plans. This price is full compensation for shaping existing material, loosening, mixing, pulverizing, spreading, applying cement, compacting, microcracking, finishing, curing, curing materials, blading, shaping and maintaining shape, replacing mixture, disposing of loosened materials, processing, hauling, preparing secondary subgrade, water, equipment, labor, tools, and incidentals.

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**Item 305****Salvaging, Hauling, and Stockpiling Reclaimable Asphalt Pavement**

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**1. DESCRIPTION**

Salvage, haul, and stockpile existing asphalt material.

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**2. CONSTRUCTION**

Remove dirt, raised pavement markings, and other debris, as directed. Remove the reclaimable asphalt material as shown on the plans or as directed. Ensure that 95% of the reclaimed material passes a 2-in. sieve unless otherwise shown on the plans. Do not contaminate asphalt material during its removal, transportation, or storage. Repair remaining pavement that is damaged by the removal operations.

Provide a clean, smooth, and well-drained stockpile area free of trash, weeds, and grass. Separate different types or quality of asphalt material into different stockpiles as directed. Stockpile material as shown on the plans or as directed.

The Contractor retains ownership of the reclaimed asphalt material unless otherwise shown on the plans. The plans or the Engineer may allow or require the use of salvaged material for other items in the Contract. Stockpile the salvaged material at the location shown on the plans or as directed if not used in other construction items of this Contract.

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**3. MEASUREMENT**

This Item will be measured by the cubic yard of material calculated by the average end area method, or as shown on the plans, in the stockpile, or the square yard in its original position.

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**4. PAYMENT**

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Salvaging, Hauling, and Stockpiling Reclaimable Asphalt Pavement" for cubic yard measurement, and for "Salvaging, Hauling, and Stockpiling Reclaimable Asphalt Pavement (Depth Specified)" for square yard measurement. This price is full compensation for cleaning and removing existing pavement; stockpile area preparation; loading, crushing or breaking, hauling, and stockpiling material; and material, equipment, labor, tools, supplies, and incidentals.

## Item 341

### Dense-Graded Hot-Mix Asphalt



#### 1. DESCRIPTION

Construct a hot-mix asphalt (HMA) pavement layer composed of a compacted, dense-graded mixture of aggregate, asphalt binder, and additives mixed hot in a mixing plant. Payment adjustments will apply to HMA placed under this Specification unless the HMA is deemed exempt in accordance with Section 341.4.9.4., "Exempt Production."

#### 2. MATERIALS

Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications.

Notify the Engineer of all material sources and before changing any material source or formulation. The Engineer will verify that the specification requirements are met and document all material source changes when the Contractor makes a source or formulation change. The Engineer may sample and test project materials anytime during the project to verify specification compliance in accordance with Item 6, "Control of Materials."

2.1. **Aggregate.** Furnish aggregates from sources that conform to the requirements shown in Table 1 and this Section. Aggregate requirements in this Section, including those shown in Table 1, may be modified or eliminated when shown on the plans. Additional aggregate requirements may be specified when shown on the plans. Provide aggregate stockpiles that meet the definitions in this Section for coarse, intermediate, or fine aggregate. Aggregate from reclaimed asphalt pavement (RAP) is not required to meet Table 1 requirements unless otherwise shown on the plans. Supply aggregates that meet the definitions in [Tex-100-E](#) for crushed gravel or crushed stone. The Engineer will designate the plant or the quarry as the sampling location. Provide samples from materials produced for the project. The Engineer will establish the Surface Aggregate Classification (SAC) and perform Los Angeles abrasion, magnesium sulfate soundness, and Micro-Deval tests. Perform all other aggregate quality tests shown in Table 1. Document all test results in the mixture design report. The Engineer may perform tests on independent or split samples to verify Contractor test results. Stockpile aggregates for each source and type separately. Determine aggregate gradations for mixture design and production testing based on the washed sieve analysis in accordance with [Tex-200-F](#), Part II.

2.1.1. **Coarse Aggregate.** Coarse aggregate stockpiles must have no more than 20% material passing the No. 8 sieve. Aggregates from sources listed in the Department's Bituminous Rated Source Quality Catalog (BRSQC) are preapproved for use. Use only the rated values for HMA listed in the BRSQC. Rated values for surface treatment (ST) do not apply to coarse aggregate sources used in HMA.

For sources not listed in the Department's BRSQC:

- build an individual stockpile for each material;
- request the Department test the stockpile for specification compliance;
- allow 30 calendar days for the Engineer to sample, test, and report results;
- use only when tested and approved; and
- once approved, do not add additional material to the stockpile unless otherwise allowed by the Engineer.

Provide coarse aggregate with at least the minimum SAC shown on the plans. SAC requirements apply only to aggregates used on the surface of travel lanes, unless otherwise shown on the plans. The SAC for sources in the Department's *Aggregate Quality Monitoring Program* (AQMP) ([Tex-499-A](#)) is listed in the BRSQC.

- 2.1.1.1. **Blending Class A and Class B Aggregates.** Class B aggregate meeting all other requirements shown in Table 1 may be blended with a Class A aggregate to meet requirements for Class A materials, unless otherwise shown on the plans. When blending Class A and Class B aggregates to meet a Class A requirement, ensure that at least 50% by weight, or volume if required, of the material retained on the No. 4 sieve comes from the Class A aggregate source, unless otherwise shown on the plans. Blend by volume if the bulk specific gravities of the Class A and Class B aggregates differ by more than 0.300. Coarse aggregate from RAP and recycled asphalt shingles (RAS) will be considered as Class B aggregate for blending purposes.

The Engineer may perform tests anytime during production, when the Contractor blends Class A and Class B aggregates to meet a Class A requirement. The Engineer will use the Department's mix design template, when electing to verify conformance, to calculate the percent of Class A aggregate retained on the No. 4 sieve by inputting the bin percentages shown from readouts in the control room at the time of production and stockpile gradations measured at the time of production. The Engineer may determine the gradations based on either washed or dry sieve analysis from samples obtained from individual aggregate cold feed bins or aggregate stockpiles. The Engineer may perform spot checks to verify the percent of Class A aggregate retained on the No. 4 sieve. The Engineer will use the gradations supplied by the Contractor in the mixture design report as an input for the template. A failing spot check will require confirmation with a stockpile gradation determined by the Engineer.

- 2.1.1.2. **Micro-Deval Abrasion.** The Engineer will perform at least one Micro-Deval abrasion test in accordance with [Tex-461-A](#) for each coarse aggregate source used in the mixture design that has a rated source soundness magnesium (RSSM) loss value greater than 15 as listed in the BRSQC. The Engineer will perform testing before the start of production and may perform additional testing anytime during production. The Engineer may obtain the coarse aggregate samples from each coarse aggregate source or may require the Contractor to obtain the samples. The Engineer may waive all Micro-Deval testing based on a satisfactory test history of the same aggregate source.

The Engineer will estimate the magnesium sulfate soundness loss for each coarse aggregate source, when tested, using the following formula:

$$Mg_{est.} = (RSSM)(MD_{act.}/RSMD)$$

where:

$Mg_{est.}$  = magnesium sulfate soundness loss

RSSM = rated source soundness magnesium

$MD_{act.}$  = actual Micro-Deval percent loss

RSMD = rated source Micro-Deval

When the estimated magnesium sulfate soundness loss is greater than the maximum magnesium sulfate soundness loss specified, the coarse aggregate source will not be allowed for use unless otherwise approved. The Engineer will consult the Materials and Tests Division, and additional testing may be required before granting approval.

- 2.1.2. **Intermediate Aggregate.** Aggregates not meeting the definition of coarse or fine aggregate will be defined as intermediate aggregate. Supply intermediate aggregates, when used, that are free of organic impurities. Supply intermediate aggregate from coarse aggregate sources, when used, that meet the requirements shown in Table 1, unless otherwise approved.

Test the stockpile if 10% or more of the stockpile is retained on the No. 4 sieve, and verify that it meets the requirements in Table 1 for crushed face count ([Tex-460-A](#)) and flat and elongated particles ([Tex-280-F](#)).

2.1.3.

**Fine Aggregate.** Fine aggregates consist of manufactured sands, screenings, and field sands. Fine aggregate stockpiles must meet the fine aggregate properties in accordance with Table 1 and the gradation requirements in accordance with Table 2. Supply fine aggregates that are free of organic impurities. The Engineer may test the fine aggregate in accordance with [Tex-408-A](#) to verify the material is free of organic impurities. Unless otherwise shown on the plans, at most 10% of the total aggregate may be field sand or other uncrushed fine aggregate. Use fine aggregate, except field sand, from coarse aggregate sources that meet the requirements shown in Table 1, unless otherwise approved.

Test the stockpile if 10% or more of the stockpile is retained on the No. 4 sieve and verify that it meets the requirements in Table 1 for crushed face count ([Tex-460-A](#)) and flat and elongated particles ([Tex-280-F](#)).

**Table 1**  
**Aggregate Quality Requirements**

| Property                                      | Test Method                         | Requirement           |
|---|-------------------------------------|-----------------------|
| <b>Coarse Aggregate</b>                       |                                     |                       |
| SAC   | <a href="#">Tex-499-A</a> (AQMP)    | As shown on the plans |
| Deleterious material, %, Max                  | <a href="#">Tex-217-F</a> , Part I  | 1.5                   |
| Decantation, %, Max                           | <a href="#">Tex-217-F</a> , Part II | 1.5                   |
| Micro-Deval abrasion, %                       | <a href="#">Tex-461-A</a>           | Note <sup>1</sup>     |
| Los Angeles abrasion, %, Max                  | <a href="#">Tex-410-A</a>           | 40                    |
| Magnesium sulfate soundness, 5 cycles, %, Max | <a href="#">Tex-411-A</a>           | 30                    |
| Crushed face count, <sup>2</sup> %, Min       | <a href="#">Tex-460-A</a> , Part I  | 85                    |
| Flat and elongated particles @ 5:1, %, Max    | <a href="#">Tex-280-F</a>           | 10                    |
| <b>Fine Aggregate</b>                         |                                     |                       |
| Linear shrinkage, %, Max                      | <a href="#">Tex-107-E</a>           | 3                     |
| Sand equivalent, %, Min                       | <a href="#">Tex-203-F</a>           | 45 <sup>3</sup>       |
| Organic impurities                            | <a href="#">Tex-408-A</a>           | Note <sup>4</sup>     |

- Used to estimate the magnesium sulfate soundness loss in accordance with Section 341.2.1.1.2., "Micro-Deval Abrasion."
- Only applies to crushed gravel.
- The Department may perform [Tex-252-F](#) on fine aggregates not meeting this minimum requirement. Fine aggregates with a methylene blue value of 10.0 mg/g or less may be used.
- Optional test.

**Table 2**  
**Gradation Requirements for Fine Aggregate**

| Sieve Size | % Passing by Wt. Or Volume |
|------------|----------------------------|
| 3/8"       | 100                        |
| #8         | 70–100                     |
| #200       | 0–30                       |

2.2.

**Mineral Filler.** Mineral filler consists of finely divided mineral matter such as agricultural lime, crusher fines, hydrated lime, or fly ash. Mineral filler is allowed unless otherwise shown on the plans. Use no more than 2% hydrated lime or fly ash, unless otherwise shown on the plans. Use no more than 1% hydrated lime if a substitute binder is used, unless otherwise shown on the plans or allowed. Test all mineral fillers except hydrated lime and fly ash in accordance with [Tex-107-E](#) to ensure specification compliance. The plans may require or disallow specific mineral fillers. Provide mineral filler, when used, that:

- is dry enough, free-flowing, and free of clumps and foreign matter as determined by the Engineer;
- does not exceed 3% linear shrinkage when tested in accordance with [Tex-107-E](#); and
- meets the gradation requirements shown in Table 3, unless otherwise shown on the plans.

**Table 3**  
**Gradation Requirements for Mineral Filler**

| Sieve Size | % Passing by Wt. or Volume |
|------------|----------------------------|
| #8         | 100                        |
| #200       | 55–100                     |

- 2.3. **Baghouse Fines.** Fines collected by the baghouse or other dust-collecting equipment may be reintroduced into the mixing drum.
- 2.4. **Asphalt Binder.** Furnish the type and grade of performance-graded (PG) asphalt binder shown on the plans that meets the requirements of Item 300, "Asphalts, Oils, and Emulsions."
- 2.5. **Tack Coat.** Furnish CSS-1H, SS-1H, EBL, or a PG binder with a minimum high-temperature grade of PG 58 for tack coat binder in accordance with Item 300. Specialized tack coat materials on the MPL for *Tracking Resistant Asphalt Interlayer* (TRAIL) will be allowed or required when shown on the plans. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use, unless required in conformance with the manufacturer's recommendation for approved TRAIL products on the MPL.
- 2.6. **Additives.** Use the type of additive specified when shown on the plans. Use the rate of additive specified in conformance with the manufacturer's recommendation. Additives that facilitate mixing and compaction or improve the quality of the mixture are allowed when approved. Provide the Engineer with documentation such as the bill of lading showing the quantity of additives used in the project unless otherwise directed.
- 2.6.1. **Lime and Liquid Antistripping Agent.** Lime or liquid antistripping agent is required when shown on the plans. When lime or a liquid antistripping agent is used, add in accordance with Item 301, "Asphalt Antistripping Agents." Do not add lime directly into the mixing drum of any plant where lime is removed through the exhaust stream unless the plant has a baghouse or dust collection system that reintroduces the lime into the drum.
- 2.6.2. **Warm-Mix Asphalt (WMA).** WMA is defined as HMA that is produced within a target temperature discharge range of 215°F and 275°F using approved WMA additives or processes from the MPL.
- WMA is allowed for use on all projects and is required when shown on the plans. When WMA is required, the maximum placement or target discharge temperature for WMA will be set at a value at or below 275°F.
- Department-approved WMA additives or processes may be used to facilitate mixing and compaction of HMA produced at target discharge temperatures above 275°F; however, such mixtures will not be defined as WMA.
- 2.6.3. **Compaction Aid.** Compaction aid is defined as a Department-approved chemical warm-mix additive, denoted as "chemical additive" on the MPL, that is used to facilitate mixing and compaction of HMA at a discharge temperature greater than 275°F.
- Compaction aid is allowed for use on all projects. Compaction aid is required when shown on the plans or as required in Section 341.4.7.1., "Weather Conditions."
- Warm-mix foaming processes, denoted as "foaming process" on the MPL, may be used to facilitate mixing and compaction of HMA at target discharge temperatures greater than 275°F; however, warm-mix foaming processes are not defined as a compaction aid.
- 2.7. **Recycled Materials.** Use of RAP and RAS is permitted unless otherwise shown on the plans. Use of RAS is restricted to only intermediate and base mixes unless otherwise shown on the plans. Do not exceed the maximum allowable percentages of RAP and RAS in accordance with Table 4. The allowable percentages in accordance with Table 4 may be decreased or increased when shown on the plans. Determine the asphalt binder content and gradation of the RAP and RAS stockpiles for mixture design purposes in accordance with [Tex-236-F](#), Part I. The Engineer may verify the asphalt binder content of the stockpiles anytime during production. Perform other tests on RAP and RAS when shown on the plans. Asphalt binder from RAP and

RAS is designated as recycled asphalt binder. Calculate and ensure that the ratio of the recycled asphalt binder to total binder does not exceed the percentages in accordance with Table 5 during mixture design and HMA production when RAP or RAS is used. Use a separate cold feed bin for each stockpile of RAP and RAS during HMA production. Surface, intermediate, and base mixes referenced in Table 4 and Table 5 are defined as follows, unless otherwise shown on the plans.

- **Surface.** The final HMA lift placed at the top of the pavement structure.
- **Intermediate.** Mixtures placed below an HMA surface mix and less than or equal to 8.0 in. below the riding surface.
- **Base.** Mixtures placed greater than 8.0 in. below the riding surface. Unless otherwise shown on the plans, mixtures used for bond breaker are defined as base mixtures.

## 2.7.1.

**RAP.** RAP is salvaged, milled, pulverized, broken, or crushed asphalt pavement. Fractionated RAP is defined as a stockpile that contains RAP material with at least 95.0% passing the 1/2-in. sieve, before burning in the ignition oven, unless otherwise approved. The Engineer may allow the Contractor to use an alternate to the 1/2-in. screen to fractionate the RAP.

Use of Contractor-owned RAP, including HMA plant waste, is permitted unless otherwise shown on the plans. Department-owned RAP stockpiles are available for the Contractor's use when the stockpile locations are shown on the plans. If Department-owned RAP is available for the Contractor's use, the Contractor may use Contractor-owned fractionated RAP and replace it with an equal quantity of Department-owned RAP. Department-owned RAP generated by required work on the Contract is available for the Contractor's use when shown on the plans. Perform any necessary tests to ensure Contractor- or Department-owned RAP is appropriate for use. The Department will not perform any tests or assume any liability for the quality of the Department-owned RAP unless otherwise shown on the plans. The Contractor will retain ownership of RAP generated on the project when shown on the plans.

Do not use Department- or Contractor-owned RAP contaminated with dirt or other objectionable materials. Do not use Department- or Contractor-owned RAP if the decantation value exceeds 5% and the plasticity index is greater than 8. Test the stockpiled RAP for decantation in accordance with [Tex-406-A](#), Part I. Determine the plasticity index in accordance with [Tex-106-E](#) if the decantation value exceeds 5%. The decantation and plasticity index requirements do not apply to RAP samples with asphalt removed by extraction or ignition.

Do not intermingle Contractor-owned RAP stockpiles with Department-owned RAP stockpiles. Remove unused Contractor-owned RAP material from the project site upon completion of the project. Return unused Department-owned RAP to the designated stockpile location.

**Table 4**  
**Max Allowable Amounts of RAP<sup>1</sup>**

| Max Allowable<br>Fractionated RAP (%) |              |      |
|---------------------------------------|--------------|------|
| Surface                               | Intermediate | Base |
| 20.0                                  | 30.0         | 35.0 |

1. Must also meet the recycled binder to total binder ratio shown in Table 5.

## 2.7.2.

**RAS.** RAS is defined as processed asphalt shingle material from manufacturing of asphalt roofing shingles or from re-roofing residential structures. Post-manufactured RAS is processed manufacturer's shingle scrap byproduct. Post-consumer RAS is processed shingle scrap removed from residential structures. Use of post-manufactured RAS or post-consumer RAS (tear-offs) is not permitted in surface mixtures unless otherwise shown on the plans. RAS may be used in intermediate and base mixtures unless otherwise shown on the plans. Up to 3% RAS may be used separately or as a replacement for fractionated RAP in accordance with Table 4 and Table 5. RAS may be used separately or in conjunction with RAP. Comply with all regulatory requirements stipulated for RAS by TCEQ.

Process the RAS by ambient grinding or granulating such that 100% of the particles pass the 3/8-in. sieve when tested in accordance with [Tex-200-F](#), Part I. Perform a sieve analysis on processed RAS material before extraction (or ignition) of the asphalt binder.

Add sand meeting the requirements of Table 1 and Table 2, or fine RAP, to RAS stockpiles if needed to keep the processed material workable. Any stockpile that contains RAS will be considered a RAS stockpile and be limited to no more than 3.0% of the HMA mixture in accordance with Table 4.

Certify compliance of the RAS with [DMS-11000](#), "Evaluating and Using Nonhazardous Recyclable Materials Guidelines." Treat RAS as an established nonhazardous recyclable material if it has not come into contact with any hazardous materials. Use RAS from shingle sources on the MPL. Remove all materials that are not part of the shingle, such as wood, paper, metal, plastic, and felt paper, before use. Determine the deleterious content of RAS material for mixture design purposes in accordance with [Tex-217-F](#), Part III. Do not use RAS if deleterious materials are more than 0.5% of the stockpiled RAS, unless otherwise approved. Submit a sample for approval before submitting the mixture design. The Department will perform the testing for deleterious material of RAS to determine specification compliance.

2.8.

**Substitute Binders.** No binder substitution will be allowed when shown on the plans. The Contractor may use a substitute PG binder shown in Table 5 instead of the PG binder originally specified, if using recycled materials, and if the substitute PG binder and mixture made with the substitute PG binder meet the following.

- The substitute binder meets the specification requirements for the substitute binder grade in accordance with Section 300.2.11., "Performance-Graded Binders."
- The mixture has less than 10.0 mm of rutting on the Hamburg wheel test ([Tex-242-F](#)) after the number of passes required for the originally specified binder. Use of substitute PG binders may be allowed only at the discretion of the Engineer if the Hamburg wheel test results are between 10.0 mm and 12.5 mm.

**Table 5**  
**Allowable PG Binders and Max Recycled Binder Ratios**

| Originally Specified PG Binder | Allowable Substitute PG Binder for Surface Mixes | Allowable Substitute PG Binder for Intermediate and Base Mixes | Max Ratio of Recycled Binder <sup>1</sup> to Total Binder (%) |              |      |
|--------------------------------|--|--|---|--------------|------|
|                                |  |  | Surface   | Intermediate | Base |
| 76-22                          | 70-22  | 70-22  | 15.0  | 25.0         | 30.0 |
| 70-22                          | Note <sup>2</sup>                                | 64-22  | 15.0  | 25.0         | 30.0 |
| 64-22                          | Note <sup>2</sup>                                | Note <sup>2</sup>  | 15.0  | 25.0         | 30.0 |
| 76-28                          | 70-28  | 70-28  | 15.0  | 25.0         | 30.0 |
| 70-28                          | Note <sup>2</sup>                                | 64-28  | 15.0  | 25.0         | 30.0 |
| 64-28                          | Note <sup>2</sup>                                | Note <sup>2</sup>  | 15.0  | 25.0         | 30.0 |

1. Combined recycled binder from RAP and RAS. RAS is not permitted in surface mixtures unless otherwise shown on the plans.
2. No binder substitution is allowed.

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### 3.

#### EQUIPMENT

Provide required or necessary equipment in accordance with Item 320, "Equipment for Asphalt Concrete Pavement."

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### 4.

#### CONSTRUCTION

Produce, haul, place, and compact the specified paving mixture. In addition to tests required in accordance with the Specification, the Contractor may perform other QC tests as necessary. Anytime during the project, the Engineer may perform production and placement tests as necessary in accordance with Item 5, "Control of the Work." Schedule and participate in a mandatory pre-paving meeting with the Engineer on or before the first day of paving unless otherwise shown on the plans.



- 4.1. **Certification.** Personnel certified by the Department-approved HMA certification program must conduct all mixture designs, sampling, and testing in accordance with Table 6. Supply the Engineer with a list of certified personnel and copies of their current certificates before beginning production and when personnel changes are made. Provide a mixture design developed and signed by a Level 2-certified specialist. Provide Level 1A-certified specialists at the plant during production operations. Provide Level 1B-certified specialists to conduct placement tests. Provide Level AGG101-certified specialists for aggregate testing.

**Table 6**  
**Test Methods, Test Responsibility, and Min Certification Levels**

| Test Description                                  | Test Method                                    | Contractor | Engineer | Level <sup>1</sup> |
|---|--|------------|----------|--------------------|
| <b>Aggregate and Recycled Material Testing</b>    |  |            |          |                    |
| Sampling  | <a href="#">Tex-221-F</a>                      | ✓          | ✓        | 1A/AGG101          |
| Dry sieve   | <a href="#">Tex-200-F, Part I</a>              | ✓          | ✓        | 1A/AGG101          |
| Washed sieve                                      | <a href="#">Tex-200-F, Part II</a>             | ✓          | ✓        | 1A/AGG101          |
| Deleterious material                              | <a href="#">Tex-217-F, Part I and Part III</a> | ✓          | ✓        | AGG101             |
| Decantation                                       | <a href="#">Tex-217-F, Part II</a>             | ✓          | ✓        | AGG101             |
| Los Angeles abrasion                              | <a href="#">Tex-410-A</a>                      | –          | ✓        | Department         |
| Magnesium sulfate soundness                       | <a href="#">Tex-411-A</a>                      | –          | ✓        | Department         |
| Micro-Deval abrasion                              | <a href="#">Tex-461-A</a>                      | –          | ✓        | AGG101             |
| Crushed face count                                | <a href="#">Tex-460-A</a>                      | ✓          | ✓        | AGG101             |
| Flat and elongated particles                      | <a href="#">Tex-280-F</a>                      | ✓          | ✓        | AGG101             |
| Linear shrinkage                                  | <a href="#">Tex-107-E</a>                      | ✓          | ✓        | AGG101             |
| Sand equivalent                                   | <a href="#">Tex-203-F</a>                      | ✓          | ✓        | AGG101             |
| Methylene blue test                               | <a href="#">Tex-252-F</a>                      | –          | ✓        | Department         |
| Bulk-specific gravity                             | <a href="#">Tex-201-F</a>                      | ✓          | ✓        | AGG101             |
| Organic impurities                                | <a href="#">Tex-408-A</a>                      | ✓          | ✓        | AGG101             |
| <b>Asphalt Binder and Tack Coat Sampling</b>      |  |            |          |                    |
| Asphalt binder sampling                           | <a href="#">Tex-500-C, Part II</a>             | ✓          | ✓        | 1A/1B              |
| Tack coat sampling                                | <a href="#">Tex-500-C, Part III</a>            | ✓          | ✓        | 1A/1B              |
| <b>Mix Design and Verification</b>                |  |            |          |                    |
| Design and job-mix formula (JMF) changes          | <a href="#">Tex-204-F</a>                      | ✓          | ✓        | 2                  |
| Mixing  | <a href="#">Tex-205-F</a>                      | ✓          | ✓        | 2                  |
| Molding (Superpave gyratory compactor [SGC])      | <a href="#">Tex-241-F</a>                      | ✓          | ✓        | 1A                 |
| Laboratory-molded density                         | <a href="#">Tex-207-F, Part I and Part VI</a>  | ✓          | ✓        | 1A                 |
| Rice gravity                                      | <a href="#">Tex-227-F, Part II</a>             | ✓          | ✓        | 1A                 |
| Ignition oven correction factors <sup>2</sup>     | <a href="#">Tex-236-F, Part II</a>             | ✓          | ✓        | 1A                 |
| Indirect tensile strength                         | <a href="#">Tex-226-F</a>                      | ✓          | ✓        | 1A                 |
| Hamburg wheel test                                | <a href="#">Tex-242-F</a>                      | ✓          | ✓        | 1A                 |
| Witnessing mixing of correction factors           | <a href="#">Tex-236-F, Part III</a>            | –          | ✓        | 1A/Department      |
| Boil test   | <a href="#">Tex-530-C</a>                      | ✓          | ✓        | 1A                 |
| <b>Production Testing</b>                         |  |            |          |                    |
| Selecting production random numbers               | <a href="#">Tex-225-F, Part I</a>              | –          | ✓        | 1A                 |
| Mixture sampling                                  | <a href="#">Tex-222-F</a>                      | ✓          | ✓        | 1A/1B              |
| Molding (SGC)                                     | <a href="#">Tex-241-F</a>                      | ✓          | ✓        | 1A                 |
| Laboratory-molded density                         | <a href="#">Tex-207-F, Part I and Part VI</a>  | ✓          | ✓        | 1A                 |
| Rice gravity                                      | <a href="#">Tex-227-F, Part II</a>             | ✓          | ✓        | 1A                 |
| Gradation and asphalt binder content <sup>2</sup> | <a href="#">Tex-236-F, Part I</a>              | ✓          | ✓        | 1A                 |
| Control charts                                    | <a href="#">Tex-233-F</a>                      | ✓          | ✓        | 1A                 |
| Moisture content                                  | <a href="#">Tex-212-F, Part II</a>             | ✓          | ✓        | 1A/AGG101          |
| Hamburg wheel test                                | <a href="#">Tex-242-F</a>                      | ✓          | ✓        | 1A                 |
| Micro-Deval abrasion                              | <a href="#">Tex-461-A</a>                      | –          | ✓        | AGG101             |
| Boil test   | <a href="#">Tex-530-C</a>                      | ✓          | ✓        | 1A                 |
| Abson recovery                                    | <a href="#">Tex-211-F</a>                      | –          | ✓        | Department         |

| Test Description                   | Test Method                                    | Contractor | Engineer | Level <sup>1</sup> |
|------------------------------------|--|------------|----------|--------------------|
| <b>Placement Testing</b>           |  |            |          |                    |
| Selecting placement random numbers | <a href="#">Tex-225-F</a> , Part II            | –          | ✓        | 1B                 |
| Trimming roadway cores             | <a href="#">Tex-251-F</a> , Part I and Part II | ✓          | ✓        | 1A/1B              |
| In-place air voids                 | <a href="#">Tex-207-F</a> , Part I and Part VI | ✓          | ✓        | 1A                 |
| In-place density (nuclear method)  | <a href="#">Tex-207-F</a> , Part III           | ✓          | –        | 1B                 |
| Establish rolling pattern          | <a href="#">Tex-207-F</a> , Part IV            | ✓          | –        | 1B                 |
| Control charts                     | <a href="#">Tex-233-F</a>                      | ✓          | ✓        | 1A                 |
| Ride quality measurement           | <a href="#">Tex-1001-S</a>                     | ✓          | ✓        | Note <sup>3</sup>  |
| Segregation (density profile)      | <a href="#">Tex-207-F</a> , Part V             | ✓          | ✓        | 1B                 |
| Longitudinal joint density         | <a href="#">Tex-207-F</a> , Part VII           | ✓          | ✓        | 1B                 |
| Thermal profile                    | <a href="#">Tex-244-F</a>                      | ✓          | –        | 1B                 |
| Shear bond strength test           | <a href="#">Tex-249-F</a>                      | –          | ✓        | Department         |

1. Levels 1A, 1B, AGG101, and 2 are certification levels provided by the Hot Mix Asphalt Center certification program.
2. Refer to Section 341.4.9.2.3., “Production Testing,” for exceptions to using an ignition oven.
3. Profiler and operator are required to be certified at the Texas A&M Transportation Institute facility when surface test Type B is specified.

4.2.

**Reporting and Responsibilities.** Use Department-provided templates to record and calculate all test data, including mixture design, production and placement QC and QA, control charts, thermal profiles, segregation density profiles, and longitudinal joint density. Obtain the current version of the templates from the Department’s website or from the Engineer. The Engineer and the Contractor will provide any available test results to the other party when requested. The maximum allowable time for the Contractor and Engineer to exchange test data is as shown in Table 7, unless otherwise approved. The Engineer and the Contractor will immediately report to the other party any test result that requires suspension of production or placement, or a payment adjustment less than 1.000, or that fails to meet the specification requirements. Record and electronically submit all test results and pertinent information on Department-provided templates.

Subsequent sublots placed after test results are available to the Contractor, which require suspension of operations, may be considered unauthorized work. Unauthorized work will be accepted or rejected at the discretion of the Engineer in accordance with Article 5.3., “Conformity with Plans, Specifications, and Special Provisions.”

**Table 7**  
**Reporting Schedule**

| Reporting Schedule                      |             |             |   |
|---|-------------|-------------|---|
| Description                             | Reported By | Reported To | To Be Reported Within                     |
| Production Quality Control              |             |             |   |
| Gradation <sup>1</sup>                  | Contractor  | Engineer    | 1 working day of completion of the sublot |
| Asphalt binder content <sup>1</sup>     |             |             |   |
| Laboratory-molded density <sup>2</sup>  |             |             |   |
| Moisture content <sup>3</sup>           |             |             |   |
| Boil test <sup>4</sup>                  |             |             |   |
| Production Quality Assurance            |             |             |   |
| Gradation <sup>3</sup>                  | Engineer    | Contractor  | 1 working day of completion of the sublot |
| Asphalt binder content <sup>3</sup>     |             |             |   |
| Laboratory-molded density <sup>1</sup>  |             |             |   |
| Hamburg wheel test <sup>5</sup>         |             |             |   |
| Boil test <sup>4</sup>                  |             |             |   |
| Binder tests <sup>5</sup>               |             |             |   |
| Placement Quality Control               |             |             |   |
| In-place air voids <sup>2</sup>         | Contractor  | Engineer    | 1 working day of completion of the lot    |
| Segregation <sup>1</sup>                |             |             |   |
| Longitudinal joint density <sup>1</sup> |             |             |   |
| Thermal profile <sup>1</sup>            |             |             |   |

| Description                             | Reported By | Reported To | To Be Reported Within  |
|---|-------------|-------------|--|
| <b>Placement Quality Assurance</b>      |             |             |  |
| In-place air voids <sup>1</sup>         | Engineer    | Contractor  | 1 working day after receiving the trimmed cores <sup>6</sup>                       |
| Segregation <sup>3</sup>                |             |             | 1 working day of completion of the lot   |
| Longitudinal joint density <sup>3</sup> |             |             |  |
| Thermal profile <sup>3</sup>            |             |             |  |
| Aging ratio <sup>5</sup>                |             |             | 5 working days after receiving the cores   |
| Shear bond strength test <sup>5</sup>   |             |             |  |
| Payment adjustment summary              | Engineer    | Contractor  | 2 working days of performing all required tests and receiving Contractor test data |

1. These tests are required on every subplot.
2. Optional test. When performed on split samples, report the results as soon as they become available.
3. To be performed at the frequency shown in Table 16 or as shown on the plans.
4. When shown on the plans.
5. To be reported as soon as the results become available.
6. Two days are allowed if cores cannot be dried to constant weight within 1 day.

The Engineer will use the Department-provided template to calculate all payment adjustment factors for the lot. Sublot samples may be discarded after the Engineer and Contractor sign off on the payment adjustment summary documentation for the lot.

Use the procedures described in [Tex-233-F](#) to plot the results of all QC and QA testing. Update the control charts as soon as test results for each subplot become available. Make the control charts readily accessible at the field laboratory. The Engineer may suspend production for failure to update control charts.

- 4.3. **Quality Control Plan (QCP).** Develop and follow the QCP in detail. Obtain approval for changes to the QCP made during the project. The Engineer may suspend operations if the Contractor fails to comply with the QCP.

Submit a written QCP before the mandatory pre-paving meeting. Receive approval of the QCP before beginning production. Include the following items in the QCP.

- 4.3.1. **Project Personnel.** For project personnel, include:

- a list of individuals responsible for QC with authority to take corrective action,
- current contact information for each individual listed, and
- current copies of certification documents for individuals performing specified QC functions.

- 4.3.2. **Material Delivery and Storage.** For material delivery and storage, include:

- the sequence of material processing, delivery, and minimum quantities to assure continuous plant operations;
- aggregate stockpiling procedures to avoid contamination and segregation;
- frequency, type, and timing of aggregate stockpile testing to assure conformance with material requirements before mixture production; and
- procedure for monitoring the quality and variability of asphalt binder.

- 4.3.3. **Production.** For production, include:

- loader operation procedures to avoid contamination in cold bins;
- procedures for calibrating and controlling cold feeds;
- procedures to eliminate debris or oversized material;
- procedures for adding and verifying rates of each applicable mixture component (e.g., aggregate, asphalt binder, RAP, RAS, lime, liquid antistriper, compaction aid, foaming process, and WMA);

- procedures for reporting job control test results; and
- procedures to avoid segregation and drain-down in the silo.

4.3.4. **Loading and Transporting.** For loading and transporting, include:

- type and application method for release agents, and
- truck-loading procedures to avoid segregation.

4.3.5. **Placement and Compaction.** For placement and compaction, include:

- proposed agenda for mandatory pre-paving meeting, including date and location;
- proposed paving plan (e.g., production rate, paving widths, joint offsets, and lift thicknesses);
- type and application method for release agents in the paver and on rollers, shovels, lutes, and other utensils;
- procedures for the transfer of mixture into the paver while avoiding physical and thermal segregation and preventing material spillage;
- process to balance production, delivery, paving, and compaction to achieve continuous placement operations and good ride quality;
- paver operations (e.g., speed, operation of wings, and height of mixture in auger chamber) to avoid physical and thermal segregation and other surface irregularities; and
- procedures to construct quality longitudinal and transverse joints.

4.4. **Mixture Design.**

4.4.1. **Design Requirements.** Use the dense-graded design procedure provided in [Tex-204-F](#), unless otherwise shown on the plans. Design the mixture to meet the requirements shown in Tables 1, 2, 3, 4, 5, 8, 9, and 10.

Design the mixture using an SGC, and 50 gyrations as the design number of gyrations (N<sub>design</sub>). Use a target laboratory-molded density of 96.0% to design the mixture; however, adjustments can be made to the N<sub>design</sub> value as shown in Table 9. The N<sub>design</sub> level may be reduced to at least 35 gyrations at the Contractor's discretion.

Use a Department-approved laboratory on the MPL to perform the Hamburg wheel test and provide results with the mixture design, or provide the laboratory mixture and request that the Department perform the Hamburg wheel test. Upon receiving the sample from the Contractor, the Engineer will be allowed 10 working days to provide the Contractor with Hamburg wheel test results on the laboratory mixture design.

The Engineer will provide the mixture design when shown on the plans. The Contractor may submit a new mixture design anytime during the project. The Engineer will verify and approve all mixture designs (JMF1) before the Contractor can begin production.

Provide the Engineer with a mixture design report using the Department-provided template. Include the following items in the report:

- the combined aggregate gradation, source, specific gravity, and percent of each material used;
- the binder source and optimum design asphalt content;
- asphalt binder content and aggregate gradation of RAP and RAS stockpiles;
- the N<sub>design</sub> level used on the SGC;
- results of all applicable tests;
- the mixing and molding temperatures;
- the signature of the Level 2 person or persons who performed the design;
- the date the mixture design was performed; and
- a unique identification number for the mixture design.

**Table 8**  
**Master Gradation Limits (% Passing by Wt. or Volume) and Void in Mineral Aggregate (VMA) Requirements**

| Sieve Size                                      | DG-B<br>Fine<br>Base | DG-C<br>Coarse<br>Surface | DG-D<br>Fine<br>Surface | DG-F<br>Fine<br>Mixture |
|---|----------------------|---------------------------|-------------------------|-------------------------|
| 2"  | —                    | —                         | —                       | —                       |
| 1-1/2"  | 100.0 <sup>1</sup>   | —                         | —                       | —                       |
| 1"  | 98.0–100.0           | 100.0 <sup>1</sup>        | —                       | —                       |
| 3/4"  | 84.0–98.0            | 95.0–100.0                | 100.0 <sup>1</sup>      | —                       |
| 1/2"  | —                    | —                         | 98.0–100.0              | 100.0 <sup>1</sup>      |
| 3/8"  | 60.0–80.0            | 70.0–85.0                 | 85.0–100.0              | 98.0–100.0              |
| #4  | 40.0–60.0            | 43.0–63.0                 | 50.0–70.0               | 70.0–90.0               |
| #8  | 29.0–43.0            | 32.0–44.0                 | 35.0–46.0               | 38.0–48.0               |
| #30   | 13.0–28.0            | 14.0–28.0                 | 15.0–29.0               | 12.0–27.0               |
| #50   | 6.0–20.0             | 7.0–21.0                  | 7.0–20.0                | 6.0–19.0                |
| #200  | 2.0–7.0              | 2.0–7.0                   | 2.0–7.0                 | 2.0–7.0                 |
| <b>Design (VMA), % Min</b>                      |                      |                           |                         |                         |
| —   | 13.0                 | 14.0                      | 15.0                    | 16.0                    |
| <b>Production (Plant-Produced) (VMA), % Min</b> |                      |                           |                         |                         |
| —   | 12.5                 | 13.5                      | 14.5                    | 15.5                    |

1. Defined as Max sieve size. No tolerance allowed.

**Table 9**  
**Laboratory Mixture Design Properties**

| Mixture Property                        | Test Method               | Requirement         |
|---|---------------------------|---------------------|
| Target laboratory-molded density, %     | <a href="#">Tex-207-F</a> | 96.0                |
| Design gyrations (N <sub>design</sub> ) | <a href="#">Tex-241-F</a> | 50 <sup>1</sup>     |
| Indirect tensile strength (dry), psi    | <a href="#">Tex-226-F</a> | 85–200 <sup>2</sup> |
| Boil test <sup>3</sup>                  | <a href="#">Tex-530-C</a> | —                   |

1. Adjust within a range of 35–100 gyrations when shown on the plans, in accordance with the specification, or when mutually agreed between the Engineer and Contractor.
2. The Engineer may allow the indirect tensile test strength to exceed 200 psi if the corresponding Hamburg wheel rut depth is >2.5 mm and <12.5 mm.
3. When shown on the plans. Used to establish baseline for comparison to production results.

**Table 10**  
**Hamburg Wheel Test Requirements**

| High-Temperature Binder Grade | Test Method               | Min # of Passes at 12.5-mm <sup>1</sup> Rut Depth, Tested at 50°C |
|-------------------------------|---------------------------|---|
| PG 64 or lower                | <a href="#">Tex-242-F</a> | 10,000 <sup>2</sup>   |
| PG 70                         |                           | 15,000 <sup>3</sup>   |
| PG 76 or higher               |                           | 20,000  |

1. The Hamburg wheel test will have a minimum rut depth of 2.5 mm.
2. May be decreased to at least 5,000 passes when shown on the plans.
3. May be decreased to at least 10,000 passes when shown on the plans.

#### 4.4.2.

**Job-Mix Formula Approval.** The JMF is the combined aggregate gradation, N<sub>design</sub> level, and target asphalt percentage used to establish target values for hot-mix production. JMF1 is the original laboratory mixture design used to produce the trial batch. When WMA is used, JMF1 may be designed and submitted to the Engineer without including the WMA additive, foaming process, or compaction aid. When WMA or a compaction aid is used, document the additive or process used and recommended rate in the JMF1 submittal. The Engineer and the Contractor will verify JMF1 based on plant-produced mixture from the trial batch, unless otherwise approved. The Engineer may accept an existing mixture design previously used on a Department project and may waive the trial batch to verify JMF1. The Department may require the Contractor to reimburse the Department for verification tests if more than two trial batches per design are required.

#### 4.4.2.1. **Contractor's Responsibilities.**

- 4.4.2.1.1. **Providing Superpave Gyratory Compactor.** Provide an SGC in accordance with Item 504, "Field Office and Laboratory," and make the SGC available to the Engineer for use in molding production samples.
- 4.4.2.1.2. **Gyratory Compactor Correlation Factors.** Use [Tex-206-F](#), Part II, to perform a gyratory compactor correlation when the Engineer uses a different SGC. Apply the correlation factor to all subsequent production test results.
- 4.4.2.1.3. **Submitting JMF1.** Furnish a mix design report (JMF1) with representative samples of all component materials and request approval to produce the trial batch. Provide approximately 25 lb. of the design mixture if opting to have the Department perform the Hamburg wheel test on the laboratory mixture, and request that the Department perform the test.
- 4.4.2.1.4. **Supplying Aggregates.** Provide approximately 40 lb. of each aggregate stockpile unless otherwise directed.
- 4.4.2.1.5. **Supplying Asphalt.** Provide at least 1 gal. of the asphalt material and enough quantities of any additives proposed for use.
- 4.4.2.1.6. **Ignition Oven Correction Factors.** Notify the Engineer before performing [Tex-236-F](#), Part II. Allow the Engineer to witness the mixing of ignition oven correction factor sample. Determine the aggregate and asphalt correction factors from the ignition oven in accordance with [Tex-236-F](#), Part II.
- If the Engineer witnesses the mixing of the ignition oven correction factor samples, provide the Engineer with identically prepared samples of the mixtures before the trial batch production, including all additives (except water), and blank samples used to determine the correction factors for the ignition oven used for QA testing during production.
- Correction factors established from a previously approved mixture design may be used for the current mixture design if the mixture design and ignition oven are the same as previously used, unless otherwise directed. Correction factors must be performed every 12 mo.
- 4.4.2.1.7. **Boil Test.** When shown on the plans, perform the test and retain the tested sample from [Tex-530-C](#) until completion of the project or as directed. Use this sample for comparison purposes during production.
- 4.4.2.1.8. **Trial Batch Production.** Provide a plant-produced trial batch upon receiving conditional approval of JMF1 and authorization to produce a trial batch. If applicable, include the WMA additive, foaming process, or compaction aid for verification testing of JMF1 and development of JMF2. Produce a trial batch mixture that meets the requirements shown in Tables 4, 5, and 11. The Engineer may accept test results from recent production of the same mixture instead of a new trial batch.
- 4.4.2.1.9. **Trial Batch Production Equipment.** Use only equipment and materials proposed for use on the project to produce the trial batch.
- 4.4.2.1.10. **Trial Batch Quantity.** Produce enough quantity of the trial batch to ensure that the mixture meets the specification requirements.
- 4.4.2.1.11. **Number of Trial Batches.** Produce trial batches as necessary to obtain a mixture that meets the specification requirements.
- 4.4.2.1.12. **Trial Batch Sampling.** Obtain a representative sample of the trial batch and split it into three equal portions in accordance with [Tex-222-F](#). Label these portions as "Contractor," "Engineer," and "Referee." Deliver samples to the appropriate laboratory as directed.
- 4.4.2.1.13. **Trial Batch Testing.** Test the trial batch to ensure the mixture produced using the proposed JMF1 meets the mixture requirements shown in Table 11. Ensure the trial batch mixture is also in compliance with the

Hamburg wheel requirement shown in Table 10. Use a Department-approved laboratory listed on the MPL to perform the Hamburg wheel test on the trial batch mixture, or request that the Department perform the Hamburg wheel test. Provide approximately 25 lb. of the trial batch mixture if opting to have the Department perform the Hamburg wheel test, and request that the Department perform the test. Upon receiving the sample from the Contractor, the Engineer will be allowed 10 working days to provide the Contractor with Hamburg wheel test results on the trial batch. Provide the Engineer with a copy of the trial batch test results.

- 4.4.2.1.14. **Development of JMF2.** After the Engineer grants full approval of JMF1, evaluate the trial batch test results, determine the optimum mixture proportions, and submit as JMF2. Adjust the asphalt binder content or gradation to achieve the specified target laboratory-molded density. The asphalt binder content established for JMF2 is not required to be within any tolerance of the optimum asphalt binder content established for JMF1; however, mixture produced using JMF2 must meet the VMA requirements for production shown in Table 8. If the optimum asphalt binder content for JMF2 is more than 0.5% lower than the optimum asphalt binder content for JMF1, the Engineer may perform or require the Contractor to perform [Tex-226-F](#) on Lot 1 production to confirm the indirect tensile strength does not exceed 200 psi. Verify that JMF2 meets the mixture requirements shown in Table 4 and Table 5.
- 4.4.2.1.15. **Mixture Production.** Use JMF2 to produce Lot 1 in accordance with Section 341.4.9.3.1.1., “Lot 1 Placement,” after receiving approval for JMF2 and a passing Hamburg wheel result on the trial batch from a laboratory listed on the MPL. Once JMF2 is approved, and without receiving the results from the Department’s Hamburg wheel test on the trial batch, the Contractor may proceed to Lot 1 production at their own risk.
- Notify the Engineer if electing to proceed without Hamburg wheel test results from the trial batch. Note that the Engineer may require up to the entire subplot of any mixture failing the Hamburg wheel test to be removed and replaced at the Contractor’s expense.
- 4.4.2.1.16. **Development of JMF3.** Evaluate the test results from Lot 1, determine the optimum mixture proportions, and submit as JMF3 for use in Lot 2.
- 4.4.2.1.17. **JMF Adjustments.** If JMF adjustments are necessary to achieve the specified requirements, make the adjustments before beginning a new lot. The adjusted JMF must:
- be provided to the Engineer in writing before the start of a new lot,
  - be numbered in sequence to the previous JMF,
  - meet the mixture requirements in accordance with Table 4 and Table 5,
  - meet the master gradation limits in accordance with Table 8, and
  - be within the operational tolerances of JMF2 in accordance with Table 11.
- 4.4.2.1.18. **Requesting Referee Testing.** Use referee testing, if needed, in accordance with Section 341.4.9.1., “Referee Testing,” to resolve testing differences with the Engineer.



**Table 11**  
**Operational Tolerances**

| Description  | Test Method  | Allowable Difference Between JMF2 and JMF1 Target <sup>1</sup> | Allowable Difference Between Current JMF and JMF2 <sup>2</sup> | Allowable Difference Between Contractor and Engineer <sup>3</sup> |
|--|--|--|--|---|
| Individual % retained on #8 sieve and larger                         | <a href="#">Tex-200-F</a><br>or<br><a href="#">Tex-236-F</a> | Must be Within Master Gradation Limits in Table 8              | ±5.0 <sup>4</sup>  | ±5.0  |
| Individual % retained on sieves smaller than #8 and larger than #200 |  |  | ±3.0 <sup>4</sup>  | ±3.0  |
| % passing the #200 sieve   |  |  | ±2.0 <sup>4</sup>  | ±1.6  |
| Asphalt binder content, %  | <a href="#">Tex-236-F</a>                                    | ±0.5   | ±0.3   | ±0.3  |
| Laboratory-molded density, %   | <a href="#">Tex-207-F</a>                                    | ±1.0   | ±1.0   | ±1.0  |
| In-place air voids, %  |  | —  | —  | ±1.0  |
| Laboratory-molded bulk specific gravity                              |  | —  | —  | ±0.020  |
| VMA, %, Min  | <a href="#">Tex-204-F</a>                                    | Note <sup>5</sup>  | Note <sup>5</sup>  | —   |
| Theoretical maximum specific (Rice) gravity                          | <a href="#">Tex-227-F</a>                                    | —  | —  | ±0.020  |

1. JMF1 is the approved laboratory mixture design used for producing the trial batch. JMF2 is the approved mixture design developed from the trial batch used to produce Lot 1.
2. Current JMF is JMF3 or higher. JMF3 is the approved mixture design used to produce Lot 2.
3. Contractor may request referee testing when values exceed these tolerances.
4. When within these tolerances, mixture production gradations may fall outside the master gradation limits; however, the % passing the #200 will be considered out of tolerance when outside the master gradation limits.
5. Verify that Table 8 requirements are met for VMA.

#### 4.4.2.2. **Engineer's Responsibilities.**

4.4.2.2.1. **Superpave Gyratory Compactor.** The Engineer will use a Department SGC, calibrated in accordance with [Tex-241-F](#), to mold samples for laboratory mixture design verification. For molding trial batch and production specimens, the Engineer will use the Contractor-provided SGC at the field laboratory or provide and use a Department SGC at an alternate location.

4.4.2.2.2. **Conditional Approval of JMF1 and Authorizing Trial Batch.** The Engineer will review and verify conformance with the following information within 2 working days of receipt:

- the Contractor's mix design report (JMF1);
- the Contractor-provided Hamburg wheel test results;
- all required materials including aggregates, asphalt, additives, and recycled materials; and
- the mixture specifications.

The Engineer will grant the Contractor conditional approval of JMF1 if the information provided on the paper copy of JMF1 indicates that the Contractor's mixture design meets the specifications. When the Contractor does not provide Hamburg wheel test results with laboratory mixture design, 10 working days are allowed for conditional approval of JMF1. The Engineer will base full approval of JMF1 on the test results on mixture from the trial batch.

Unless waived, the Engineer will determine the Micro-Deval abrasion loss in accordance with Section 341.2.1.1.2., "Micro-Deval Abrasion." If the Engineer's test results are pending after 2 working days, conditional approval of JMF1 will still be granted within 2 working days of receiving JMF1. When the Engineer's test results become available, they will be used for specification compliance.

The Contractor is authorized to produce a trial batch after the Engineer grants conditional approval of JMF1.

4.4.2.2.3. **Hamburg Wheel Testing of JMF1.** If the Contractor requests the option to have the Department perform the Hamburg wheel test on the laboratory mixture, the Engineer will mold samples in accordance with [Tex-242-F](#) to verify compliance with the Hamburg wheel test requirement shown in Table 10. Upon receiving the sample from the Contractor, the Engineer will be allowed 10 working days to provide the Contractor with Hamburg wheel test results on the laboratory mixture design.

4.4.2.2.4. **Ignition Oven Correction Factors.** The Engineer will determine ignition oven correction factors by one of the following options.



- Witness the mixing of ignition oven correction factor samples by the Contractor in accordance with [Tex-236-F](#), Part III. The Engineer will use the identically prepared samples provided by the Contractor to determine the aggregate and asphalt correction factors for the ignition oven in accordance with [Tex-236-F](#), Part II.
- If the Engineer does not witness the mixing of ignition oven correction factor samples, the Engineer will prepare the samples to determine the aggregate and asphalt correction factors for the ignition oven in accordance with [Tex-236-F](#), Part II. Notify the Contractor before performing [Tex-236-F](#), Part II. Allow the Contractor to witness the Engineer performing [Tex-236-F](#), Part II.

Correction factors must be performed every 12 mo. to be used for QA testing during production.

- 4.4.2.2.5. **Testing the Trial Batch.** Within 1 full working day, the Engineer will sample and test the trial batch to ensure that the mixture meets the requirements shown in Table 11. If the Contractor requests the option to have the Department perform the Hamburg wheel test on the trial batch mixture, the Engineer will mold samples in accordance with [Tex-242-F](#) to verify compliance with the Hamburg wheel test requirement shown in Table 10.

The Engineer will have the option to perform the following tests on the trial batch.

- [Tex-226-F](#), to verify that the indirect tensile strength meets the requirement shown in Table 9.
- [Tex-530-C](#), to retain and use for comparison purposes during production.

- 4.4.2.2.6. **Full Approval of JMF1.** The Engineer will grant full approval of JMF1 and authorize the Contractor to proceed with developing JMF2 if the Engineer's results for the trial batch meet the requirements shown in Tables 8, 9, and 10. The Engineer will notify the Contractor that an additional trial batch is required if the trial batch does not meet these requirements.

- 4.4.2.2.7. **Approval of JMF2.** The Engineer will approve JMF2 within 1 working day if the mixture meets the requirements shown in Table 5 and Table 8. The asphalt binder content established for JMF2 is not required to be within any tolerance of the optimum asphalt binder content established for JMF1; however, mixture produced using JMF2 must meet the VMA requirements shown in Table 8. If the optimum asphalt binder content for JMF2 is more than 0.5% lower than the optimum asphalt binder content for JMF1, the Engineer may perform or require the Contractor to perform [Tex-226-F](#) on Lot 1 production to confirm the indirect tensile strength does not exceed 200 psi.

- 4.4.2.2.8. **Approval of Lot 1 Production.** The Engineer will authorize the Contractor to proceed with JMF2 for Lot 1 production after a passing Hamburg wheel test result on the trial batch is achieved from a laboratory listed on the MPL. The Contractor may proceed at their own risk with Lot 1 production without the results from the Hamburg wheel test on the trial batch.

If the Department-approved laboratory's sample from the trial batch fails the Hamburg wheel test, the Engineer will suspend production until further Hamburg wheel tests meet the specified values. The Engineer may require up to the entire subplot of any mixture failing the Hamburg wheel test be removed and replaced at the Contractor's expense.

- 4.4.2.2.9. **Approval of JMF3 and Subsequent JMF Changes.** JMF3 and subsequent JMF changes are approved if they meet the mixture requirements shown in Table 4 and Table 5, and the master gradation limits shown in Table 8, and they are within the operational tolerances of JMF2 shown in Table 11. The addition of a WMA additive to facilitate mixing or as a compaction aid does not require a new laboratory mixture design or trial batch. Current JMF changes that exceed the operational tolerances of JMF2 in accordance with Table 11 may require a new laboratory mixture design, trial batch, or both.

- 4.5. **Production Operations.** Perform a new trial batch when the plant or plant location is changed. All source changes for asphalt will require a passing Hamburg wheel test result from a laboratory listed on the MPL. The Contractor may proceed at their own risk with Lot 1 production without the results from the Hamburg wheel test on the trial batch. All aggregate source changes will require a new laboratory mixture design and

trial batch. Take corrective action and receive approval to proceed after any production suspension for noncompliance with the specification. Submit a new mix design and perform a new trial batch when the asphalt binder content of:

- any RAP stockpile used in the mix is more than 0.5% higher than the value shown in the mixture design report, or
- RAS stockpile used in the mix is more than 2.0% higher than the value shown in the mixture design report.

4.5.1. **Storage and Heating of Materials.** Do not heat the asphalt binder above the temperatures specified in Item 300, or outside the manufacturer's recommended values. Provide the Engineer with daily records of asphalt binder and HMA discharge temperatures (in legible and discernible increments) in accordance with Item 320, unless otherwise directed. Do not store mixture for a period long enough to affect the quality of the mixture, nor in any case longer than 12 hr. unless otherwise approved.

4.5.2. **Mixing and Discharge of Materials.** Notify the Engineer of the target discharge temperature and produce the mixture within 25°F of the target. Monitor the temperature of the material in the truck before shipping to ensure that it does not exceed the maximum production temperatures shown in Table 12. The Department will not pay for or allow placement of any mixture produced above the maximum production temperatures shown in Table 12.

**Table 12**  
**Max Production Temperature**

| High-Temperature Binder Grade <sup>1</sup> | Max Production Temperature (°F) |
|--|---------------------------------|
| PG 64                                      | 325 <sup>2</sup>                |
| PG 70                                      | 335 <sup>2</sup>                |
| PG 76                                      | 345 <sup>2</sup>                |

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.
2. The Max production temperature of WMA is 275°F.

Produce WMA within the target discharge temperature range of 215–275°F when WMA is required. Take corrective action anytime the discharge temperature of the WMA exceeds the target discharge range. The Engineer may suspend production operations if the Contractor's corrective action is not successful at controlling the production temperature within the target discharge range. Note that when WMA is produced, it may be necessary to adjust burners to ensure complete combustion such that no burner fuel residue remains in the mixture.

Control the mixing time and temperature so that substantially all moisture is removed from the mixture before discharging from the plant. Determine the moisture content, if requested, by oven-drying in accordance with [Tex-212-F](#), Part II, and verify that the mixture contains no more than 0.2% of moisture by weight. Obtain the sample immediately after discharging the mixture into the truck and perform the test promptly.

4.6. **Hauling Operations.** Clean all truck beds before use to ensure that mixture is not contaminated. Use a release agent listed on the MPL to coat the inside bed of the truck when necessary. Do not use diesel or any release agent not listed on the MPL.

Use equipment for hauling as defined in Section 341.4.7.3.3., "Hauling Equipment." Use other hauling equipment only when allowed.

4.7. **Placement Operations.** Collect haul tickets from each load of mixture delivered to the project and provide the Department's copy to the Engineer approximately every hour, or as directed. Use a handheld thermal camera or infrared thermometer, when a thermal imaging system is not used, to measure and record the internal temperature of the mixture as discharged from the truck or material transfer device (MTD) before or as the mix enters the paver. Measure the mixture temperature at a minimum frequency of one per ten trucks, or as approved. Include an approximate station number or Global Positioning System coordinates of the

location where the temperature was taken on each ticket. Ensure the mixture meets the temperature requirements shown in Table 12. Calculate the daily yield and cumulative yield for the specified lift and provide to the Engineer at the end of paving operations for each day unless otherwise directed. The Engineer may suspend production if the Contractor fails to produce and provide haul tickets and yield calculations by the end of paving operations for each day.

Prepare the surface by removing raised pavement markers and objectionable material such as moisture, dirt, sand, leaves, and other loose impediments from the surface before placing mixture. Remove vegetation from pavement edges. Place the mixture to meet the typical section requirements and produce a smooth, finished surface with a uniform appearance and texture. Offset longitudinal joints of successive courses of hot mix by at least 6 in. Place mixture so that longitudinal joints on the surface course coincide within 6 in. of lane lines, are not placed in the wheel path, or will not be covered with pavement markings, or as directed. Ensure that all finished surfaces will drain properly. Place the mixture at the rate or thickness shown on the plans. The Engineer will use the guidelines shown in Table 13 to determine the compacted lift thickness of each layer when multiple lifts are required. The thickness determined is based on the rate of 110 lb. per square yard for each inch of pavement, unless otherwise shown on the plans.

**Table 13**  
**Compacted Lift Thickness and Required Core Height**

| Mixture Type | Compacted Lift Thickness Guidelines |           | Min Untrimmed Core Height Eligible for Testing (in.) |
|--------------|-------------------------------------|-----------|--|
|              | Min (in.)                           | Max (in.) |  |
| DG-B         | 2.50                                | 5.00      | 1.75   |
| DG-C         | 2.00                                | 4.00      | 1.50   |
| DG-D         | 1.50                                | 3.00      | 1.25   |
| DG-F         | 1.25                                | 2.50      | 1.25   |

#### 4.7.1.

#### **Weather Conditions.**

##### 4.7.1.1.

**When Using a Thermal Imaging System.** Place mixture when the roadway surface is dry and the roadway surface temperature is at or above the temperatures shown in Table 14A, unless otherwise approved or as shown on the plans. Place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer. Provide output data from the thermal imaging system to demonstrate to the Engineer that no recurring severe thermal segregation exists in accordance with Section 341.4.7.3.1.2., "Thermal Imaging System."

**Table 14A**  
**Min Pavement Surface Temperatures**

| High-Temperature Binder Grade <sup>1</sup> | Min Pavement Surface Temperatures (°F) |                 |
|--|--|-----------------|
|  | Subsurface Layers                      | Surface Layers  |
| PG 64                                      | 35                                     | 40              |
| PG 70                                      | 45 <sup>2</sup>                        | 50 <sup>2</sup> |
| PG 76                                      | 45 <sup>2</sup>                        | 50 <sup>2</sup> |

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.
2. The Contractor may pave at temperatures 10°F lower than these values when a chemical WMA additive is used as a compaction aid in the mixture or when using WMA.

##### 4.7.1.2.

**When Not Using a Thermal Imaging System.** When using a thermal camera instead of the thermal imaging system, place mixture when the roadway surface temperature is at or above the temperatures shown in Table 14B, unless otherwise approved or as shown on the plans. Measure the roadway surface temperature using a handheld thermal camera or infrared thermometer. The Engineer may allow mixture placement to begin before the roadway surface reaches the required temperature if conditions are such that the roadway surface will reach the required temperature within 2 hr. of beginning placement operations. Place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer.

**Table 14B**  
**Min Pavement Surface Temperatures**

| High-Temperature Binder Grade <sup>1</sup> | Min Pavement Surface Temperatures (°F) |                 |
|--|--|-----------------|
|  | Subsurface Layers                      | Surface Layers  |
| PG 64                                      | 45                                     | 50              |
| PG 70                                      | 55 <sup>2</sup>                        | 60 <sup>2</sup> |
| PG 76                                      | 60 <sup>2</sup>                        | 60 <sup>2</sup> |

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.
2. The Contractor may pave at temperatures 10°F lower than these values when a chemical WMA additive is used as a compaction aid in the mixture, when using WMA, or when using a paving process with equipment that eliminates thermal segregation. In such cases, for each sublot and in the presence of the Engineer, use a handheld thermal camera operated in accordance with [Tex-244-F](#) to demonstrate to the satisfaction of the Engineer that the uncompacted mat has no more than 10°F of thermal segregation.

#### 4.7.2. **Tack Coat.**

4.7.2.1. **Application.** Clean the surface before placing the tack coat. The Engineer will set the rate between 0.04 and 0.10 gal. of residual asphalt per square yard of surface area. Apply a uniform tack coat at the specified rate unless otherwise directed. Apply the tack coat in a uniform manner to avoid streaks and other irregular patterns. Apply the tack coat to all surfaces that will come in contact with the subsequent HMA placement, unless otherwise directed. Apply adequate overlap of the tack coat in the longitudinal direction during placement of the mat to ensure bond of adjacent mats, unless otherwise directed. Allow adequate time for emulsion to break completely before placing any material. Prevent splattering of tack coat when placed adjacent to curb, gutter, and structures. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use, unless required in conformance with the manufacturer's recommendation for approved TRAIL product use, or when shown on the plans.

4.7.2.2. **Sampling.** The Engineer will obtain at least one sample of the tack coat binder per project per source in accordance with [Tex-500-C](#), Part III, and test it to verify compliance with Item 300. The Engineer will notify the Contractor when the sampling will occur and will witness the collection of the sample from the asphalt distributor immediately before use. Label the can with the corresponding lot and sublot numbers, producer, producer facility location, grade, district, date sampled, all applicable bills of lading (if available), and project information, including highway and control-section-job (CSJ) number. For emulsions, the Engineer may test as often as necessary to ensure the residual of the emulsion is greater than or equal to the specification requirement in Item 300.

4.7.3. **Lay-Down Operations.** Use the placement temperatures shown in Table 15 to establish the minimum placement temperature of the mixture delivered to the paving operation.

**Table 15**  
**Min Mixture Placement Temperature**

| <b>High-Temperature Binder Grade<sup>1</sup></b> | <b>Min Placement Temperature<sup>2,3,4</sup> (°F)</b> |
|--|---|
| PG 64  | 260   |
| PG 70  | 270   |
| PG 76  | 280   |

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.
2. The mixture temperature must be measured using a handheld thermal camera or infrared thermometer immediately before entering MTD or paver.
3. Min placement temperatures may be reduced 20°F if using a chemical WMA additive as a compaction aid, MTD with remixing capabilities, or paver hopper insert with remixing capabilities.
4. When using WMA, the minimum placement temperature is 215°F.

4.7.3.1. **Thermal Profile.** Use a handheld thermal camera or a thermal imaging system to obtain a continuous thermal profile in accordance with [Tex-244-F](#). Thermal profiles are not applicable in areas described in Section 341.4.9.3.1.4., "Miscellaneous Areas."

4.7.3.1.1. **Thermal Segregation.**

4.7.3.1.1.1. **Moderate.** Any areas that have a temperature differential greater than 25°F, but not exceeding 50°F.

4.7.3.1.1.2. **Severe.** Any areas that have a temperature differential greater than 50°F.

4.7.3.1.2. **Thermal Imaging System.** Review the output results when a thermal imaging system is used, and provide the automated report described in [Tex-244-F](#) to the Engineer daily, unless otherwise directed. Modify the paving process as necessary to eliminate any recurring (moderate or severe) thermal segregation identified by the thermal imaging system.

The Engineer may suspend paving operations if the Contractor cannot successfully modify the paving process to eliminate recurring severe thermal segregation. Density profiles are not required and not applicable when using a thermal imaging system.

Provide the Engineer with electronic copies of all daily data files that can be used with the thermal imaging system software to generate temperature profile plots daily or as requested.

4.7.3.1.3. **Thermal Camera.** Provide the Engineer with the thermal profile of every subplot within 1 working day of the completion of each lot. When requested by the Engineer, provide the thermal images generated using the thermal camera. Report the results of each thermal profile in accordance with Section 341.4.2., "Reporting and Responsibilities." The Engineer will use a handheld thermal camera to obtain a thermal profile at least once per project.

Take immediate corrective action to eliminate recurring moderate thermal segregation when a handheld thermal camera is used.

Suspend operations and take immediate corrective action to eliminate severe thermal segregation unless otherwise directed. Resume operations when the Engineer determines that subsequent production will meet the requirements of this Section. No production or placement payment adjustments greater than 1.000 will be paid for any subplot that contains severe thermal segregation. Evaluate areas with severe thermal segregation by performing density profiles in accordance with Section 341.4.9.3.3.3., "Segregation (Density Profile)." Remove and replace the material in any areas that have severe thermal segregation and a failing result for segregation (density profile), unless otherwise directed. The subplot in question may receive a production and placement payment adjustment greater than 1.000, if applicable, when the defective material is successfully removed and replaced.

- 4.7.3.2. **Windrow Operations.** Operate windrow pickup equipment so that when hot mix is placed in windrows, substantially all the mixture deposited on the roadbed is picked up and loaded into the paver.
- 4.7.3.3. **Hauling Equipment.** Use belly dump, live-bottom, or end dump trucks to haul and transfer mixture. Except for paving miscellaneous areas, end dump trucks are allowed only when used in conjunction with an MTD with remixing capability or when a thermal imaging system is used, unless otherwise approved.
- 4.7.3.4. **Screed Heaters.** Turn off screed heaters to prevent overheating of the mat if the paver stops for more than 5 min. The Engineer may evaluate the suspect area in accordance with Section 341.4.9.3.3.5., "Recovered Asphalt Dynamic Shear Rheometer (DSR)," if the screed heater remains on for more than 5 min. while the paver is stopped.
- 4.8. **Compaction.** Compact the pavement uniformly to contain between 3.8% and 8.5% in-place air voids. Take immediate corrective action to bring the operation within 3.8% and 8.5% when the in-place air voids exceed the range of these tolerances. The Engineer will allow paving to resume when the proposed corrective action is likely to yield between 3.8% and 8.5% in-place air voids.
- Obtain cores in areas placed under exempt production, as directed, at locations determined by the Engineer. The Engineer may test these cores and suspend operations or require removal and replacement if the in-place air voids are less than 2.7% or more than 9.9%. Areas defined in Section 341.4.9.3.1.4., "Miscellaneous Areas," are not subject to in-place air void determination.
- Furnish the type, size, and number of rollers necessary to ensure desired compaction. Use additional rollers as required to remove any roller marks. Use only water or an approved release agent on rollers, tamps, and other compaction equipment unless otherwise directed.
- Use the control strip method shown in [Tex-207-E](#), Part IV, on the first day of production to establish the rolling pattern that will produce the desired in-place air voids, unless otherwise directed.
- Use tamps to thoroughly compact the edges of the pavement along curbs, headers, and similar structures and in locations that will not allow thorough compaction using rollers. The Engineer may require rolling using a trench roller on widened areas, in trenches, and in other limited areas.
- Complete all compaction operations using breakdown rollers before the pavement temperature drops below 180°F, unless otherwise allowed. Compaction using a pneumatic or light finish roller operated in static mode is allowed for pavement temperatures above 160°F.
- Allow the compacted pavement to cool to 160°F or lower before opening to traffic, unless otherwise directed. Sprinkle the finished mat with water or limewater, when directed, to expedite opening the roadway to traffic.
- 4.9. **Acceptance Plan.** Payment adjustments for the material will be in accordance with Article 341.6., "Payment."
- Sample and test the hot mix on a lot and subplot basis. Suspend production if the production payment factor shown in Section 341.6.1., "Production Payment Adjustment Factors," or the placement payment factor shown in Section 341.6.2., "Placement Payment Adjustment Factors," for two consecutive lots is below 1.000. Resume production once test results or other information indicates to the satisfaction of the Engineer that the next material produced or placed will result in payment factors of at least 1.000.
- 4.9.1. **Referee Testing.** The Materials and Tests Division is the referee laboratory. The Contractor may request referee testing if a "remove and replace" condition is determined based on the Engineer's test results, or if the differences between Contractor and Engineer test results exceed the maximum allowable difference in accordance with Table 11 and the differences cannot be resolved. The Contractor may also request referee testing if the Engineer's test results require suspension of production and the Contractor's test results are within specification limits. Make the request within 5 working days after receiving test results and cores from the Engineer. Referee tests will be performed only on the subplot in question and only for the tests in question. Allow 10 working days from the time the referee laboratory receives the samples for test results to be

reported. The Department may require the Contractor to reimburse the Department for referee tests if more than three referee tests per project are required and the Engineer's test results are closer to the referee test results than the Contractor's test results.

The Materials and Tests Division will determine the laboratory-molded density based on the molded specific gravity and the maximum theoretical specific gravity of the referee sample. The in-place air voids will be determined based on the bulk specific gravity of the cores, as determined by the referee laboratory, and the Engineer's average maximum theoretical specific gravity for the lot. Except for "remove and replace" conditions, referee test results are final and will establish payment adjustment factors for the subplot in question. The Contractor may decline referee testing and accept the Engineer's test results when the placement payment adjustment factor for any subplot results in a "remove and replace" condition. Placement sublots subject to be removed and replaced will be further evaluated in accordance with Section 341.6.2.2., "Placement Sublots Subject to Removal and Replacement."

#### 4.9.2. **Production Acceptance.**

4.9.2.1. **Production Lot.** A production lot consists of four equal sublots. The default quantity for Lot 1 is 1,000 ton; however, when requested by the Contractor, the Engineer may increase the quantity for Lot 1 to no more than 4,000 ton. The Engineer will select subsequent lot sizes based on the anticipated daily production such that approximately three-four sublots are produced each day. The lot size will be between 1,000 ton and 4,000 ton. The Engineer may change the lot size before the Contractor begins any lot.

If the optimum asphalt binder content for JMF2 is more than 0.5% lower than the optimum asphalt binder content for JMF1, the Engineer may perform or require the Contractor to perform [Tex-226-F](#) on Lot 1 to confirm the indirect tensile strength does not exceed 200 psi. Take corrective action to bring the mixture within specification compliance if the indirect tensile strength exceeds 200 psi, unless otherwise directed.

4.9.2.1.1. **Incomplete Production Lots.** If a lot is begun but cannot be completed, such as on the last day of production or in other circumstances deemed appropriate, the Engineer may close the lot. Adjust the payment for the incomplete lot in accordance with Section 341.6.1., "Production Payment Adjustment Factors." Close all lots within 5 working days unless otherwise allowed.

#### 4.9.2.2. **Production Sampling.**

4.9.2.2.1. **Mixture Sampling.** The Engineer will perform or witness the sampling of production sublots from trucks at the plant in accordance with [Tex-222-F](#). The sampler will split each sample into three equal portions in accordance with [Tex-200-F](#) and label these portions as "Contractor," "Engineer," and "Referee." The Engineer will perform or witness the sample splitting and take immediate possession of the samples labeled "Engineer" and "Referee." The Engineer will maintain the custody of the samples labeled "Engineer" and "Referee" until the Department's testing is completed.

4.9.2.2.1.1. **Random Sample.** At the beginning of the project, the Engineer will select random numbers for all production sublots. Determine sample locations in accordance with [Tex-225-F](#). Take one sample for each subplot at the randomly selected location. The Engineer will perform or witness the sampling of production sublots.

4.9.2.2.1.2. **Blind Sample.** For one subplot per lot, the Engineer will sample, split, and test a "blind" production sample instead of the random sample collected by the Contractor. The location of the Engineer's "blind" sample will not be disclosed to the Contractor before sampling. The Engineer's "blind" sample may be randomly selected in accordance with [Tex-225-F](#) for any subplot or selected at the discretion of the Engineer. The Engineer may sample and test an additional blind sample when the random sampling process does not result in obtaining a sample.

For one subplot per lot, the Contractor must obtain from the Engineer a "blind" production sample collected by the Engineer. If desired, the Contractor may witness the collection of blind samples. Test either the "blind" or the random sample; however, referee testing for the subplot (if applicable) will be based on a comparison of results from the "blind" sample.



- 4.9.2.2.2. **Asphalt Binder Sampling.** The Engineer will witness the Contractor obtain a 1-qt. sample of the asphalt binder for each lot of mixture produced. The Contractor will notify the Engineer when the sampling will occur. Obtain the sample at approximately the same time the mixture random sample is obtained. Sample from a port located immediately upstream from the mixing drum or pug mill and upstream from the introduction of any additives in accordance with [Tex-500-C](#), Part II. Label the can with the corresponding lot and subplot numbers, producer name, producer facility, grade, District, date sampled, all applicable bills of lading (if available), and project information, including highway and CSJ number. The Engineer will retain these samples for 1 yr. The Engineer may also obtain independent samples. If obtaining an independent asphalt binder sample and upon request of the Contractor, the Engineer will split a sample of the asphalt binder with the Contractor.

At least once per project, the Engineer will collect split samples of each binder grade and source used. The Engineer will submit one split sample to the Materials and Tests Division to verify compliance with Item 300, and will retain the other split sample for 1 yr.

- 4.9.2.3. **Production Testing.** The Contractor and Engineer must perform production tests shown in Table 16. The Contractor has the option to verify the Engineer's test results on split samples provided by the Engineer. Determine compliance with operational tolerances shown in Table 11 for all sublots.

Take immediate corrective action if the Engineer's laboratory-molded density on any subplot is less than 95.0% or greater than 97.0% to bring the mixture within these tolerances. The Engineer may suspend operations if the Contractor's corrective actions do not produce acceptable results. The Engineer will allow production to resume when the proposed corrective action is likely to yield acceptable results.

The Engineer may allow alternate methods for determining the asphalt binder content and aggregate gradation if the aggregate mineralogy is such that [Tex-236-F](#), Part I does not yield reliable results. Provide evidence that results from [Tex-236-F](#), Part I are not reliable before requesting permission to use an alternate method unless otherwise directed. Use the applicable test procedure as directed if an alternate test method is allowed.



**Table 16**  
**Production and Placement Testing Frequency**

| Description  | Test Method  | Min Contractor Testing Frequency | Min Engineer Testing Frequency |
|--|--|----------------------------------|--------------------------------|
| Individual % retained on #8 sieve and larger                         | <a href="#">Tex-200-F</a><br>or<br><a href="#">Tex-236-F</a> | 1 per subplot                    | 1 per 12 sublots <sup>1</sup>  |
| Individual % retained on sieves smaller than #8 and larger than #200 |  |                                  |                                |
| % passing #200 sieve   |  |                                  |                                |
| Laboratory-molded density  | <a href="#">Tex-207-F</a>                                    | –                                | 1 per subplot <sup>1</sup>     |
| Laboratory-molded bulk specific gravity                              |  |                                  |                                |
| In-place air voids   |  |                                  |                                |
| VMA  | <a href="#">Tex-204-F</a>                                    |                                  |                                |
| Segregation (density profile)  | <a href="#">Tex-207-F</a> , Part V                           | 1 per subplot <sup>2</sup>       | 1 per project                  |
| Longitudinal joint density   | <a href="#">Tex-207-F</a> , Part VII                         | 1 per subplot <sup>3</sup>       | 1 per project                  |
| Moisture content   | <a href="#">Tex-212-F</a> , Part II                          | When directed                    | 1 per project                  |
| Theoretical maximum specific (Rice) gravity                          | <a href="#">Tex-227-F</a>                                    | –                                | 1 per subplot <sup>1</sup>     |
| Asphalt binder content   | <a href="#">Tex-236-F</a> , Part I                           | 1 per subplot                    | 1 per lot <sup>1</sup>         |
| Thermal profile  | <a href="#">Tex-244-F</a>                                    | 1 per subplot <sup>2</sup>       | 1 per project                  |
| Hamburg wheel test   | <a href="#">Tex-242-F</a>                                    | –                                |                                |
| Deleterious in RAS <sup>4</sup>                                      | <a href="#">Tex-217-F</a> , Part III                         | –                                |                                |
| Asphalt binder sampling and testing <sup>4,5</sup>                   | <a href="#">Tex-500-C</a> , Part II                          | –                                |                                |
| Tack coat sampling and testing                                       | <a href="#">Tex-500-C</a> , Part III                         | –                                |                                |
| Boil test <sup>6</sup>   | <a href="#">Tex-530-C</a>                                    | 1 per lot                        |                                |
| Shear bond strength test <sup>7</sup>                                | <a href="#">Tex-249-F</a>                                    | –                                |                                |

- For production defined in Section 341.4.9.4., "Exempt Production," the Engineer will perform one test per day if 100 ton or more is produced. For exempt production, no testing is required when < 100 ton is produced.
- To be performed in the presence of the Engineer when not using the thermal imaging system, unless otherwise approved.
- To be performed in the presence of the Engineer.
- Testing performed by the Materials and Tests Division or designated laboratory.
- Sampling performed by the Contractor. The Engineer will witness sampling and retain the samples for 1 yr.
- When shown on the plans.
- Testing performed by the Materials and Tests Division or District for informational purposes on a sample obtained by the Contractor within the first four lots of the project.

4.9.2.4. **Operational Tolerances.** Control the production process within the operational tolerances shown in Table 11. When production is suspended, the Engineer will allow production to resume when test results or other information indicates the next mixture produced will be within the operational tolerances.

4.9.2.4.1. **Gradation.** Suspend operation and take corrective action if any aggregate is retained on the maximum sieve size shown in Table 8. A subplot is defined as out of tolerance if either the Engineer's or the Contractor's test results are out of operational tolerance. Suspend production when test results for gradation exceed the operational tolerances shown in Table 11 for three consecutive sublots on the same sieve or four consecutive sublots on any sieve, unless otherwise directed. The consecutive sublots may be from more than one lot.

4.9.2.4.2. **Asphalt Binder Content.** A subplot is defined as out of operational tolerance if either the Engineer's or the Contractor's test results exceed the values shown in Table 11. No production or placement payment adjustments greater than 1.000 will be paid for any subplot that is out of operational tolerance for asphalt binder content. Suspend production and shipment of the mixture if the Engineer's or the Contractor's asphalt binder content deviates from the current JMF by more than 0.5% for any subplot.

4.9.2.4.3. **VMAs.** The Engineer will determine the VMA for every subplot. For sublots when the Engineer does not determine asphalt binder content, the Engineer will use the asphalt binder content results from QC testing performed by the Contractor to determine VMA.

Take immediate corrective action if the VMA value for any subplot is less than the minimum VMA requirement for production shown in Table 8. Suspend production and shipment of the mixture if the Engineer's VMA results on two consecutive sublots are below the minimum VMA requirement for production shown in

Table 8. No production or placement payment adjustments greater than 1.000 will be paid for any subplot that does not meet the minimum VMA requirement for production shown in Table 8 based on the Engineer's VMA determination.

Suspend production and shipment of the mixture if the Engineer's VMA result is more than 0.5% below the minimum VMA requirement for production shown in Table 8. In addition to suspending production, the Engineer may require removal and replacement or may allow the subplot to be left in place without payment.

- 4.9.2.4.4. **Hamburg Wheel Test.** The Engineer may perform a Hamburg wheel test on plant-produced mixture anytime during production. Suspend production until further Hamburg wheel tests meet the specified values when the production samples fail the Hamburg wheel test criteria shown in Table 10. The Engineer may require up to the entire subplot of any mixture failing the Hamburg wheel test to be removed and replaced at the Contractor's expense.

If the Department-approved laboratory's Hamburg wheel test on plant-produced mixture results in a "remove and replace" condition, the Contractor may request that the Materials and Tests Division determine the final disposition of the material in question by re-testing the failing material.

- 4.9.2.5. **Individual Loads of Hot Mix.** The Engineer may reject individual truckloads of hot mix. When a load of hot mix is rejected for reasons other than temperature, contamination, or excessive uncoated particles, the Contractor may request that the rejected load be tested. Make this request within 4 hr. of rejection. The Engineer will sample and test the mixture. If test results are within the operational tolerances shown in Table 11, payment will be made for the load. If test results are not within operational tolerances, no payment will be made for the load.

- 4.9.3. **Placement Acceptance.**

- 4.9.3.1. **Placement Lot.** A placement lot consists of four placement sublots. A placement subplot consists of the area placed during a production subplot.

- 4.9.3.1.1. **Lot 1 Placement.** Placement payment adjustments greater than 1.000 for Lot 1 will be in accordance with Section 341.6.2., "Placement Payment Adjustment Factors"; however, no placement adjustment less than 1.000 will be assessed for any subplot placed in Lot 1 when the in-place air voids are greater than or equal to 2.7% and less than or equal to 9.9%. Remove and replace any subplot with in-place air voids less than 2.7% or greater than 9.9%.

- 4.9.3.1.2. **Incomplete Placement Lots.** An incomplete placement lot consists of the area placed as described in Section 341.4.9.2.1.1., "Incomplete Production Lots," excluding areas defined in Section 341.4.9.3.1.4., "Miscellaneous Areas." Placement sampling is required if the random sample plan for production resulted in a sample being obtained from an incomplete production subplot.

- 4.9.3.1.3. **Shoulders, Ramps, Etc.** Shoulders, ramps, intersections, acceleration lanes, deceleration lanes, and turn lanes are subject to in-place air void determination and payment adjustments unless shown on the plans as not eligible for in-place air void determination. Intersections may be considered miscellaneous areas when determined by the Engineer.

- 4.9.3.1.4. **Miscellaneous Areas.** Miscellaneous areas include areas that typically involve significant handwork or discontinuous paving operations, such as temporary detours, driveways, mailbox turnouts, crossovers, gores, spot level-up areas, pavement repair sections less than 300 ft., and other similar areas. Temporary detours are subject to in-place air void determination when shown on the plans. Miscellaneous areas also include level-ups and thin overlays when the layer thickness shown on the plans is less than the minimum untrimmed core height eligible for testing in accordance with Table 13. The specified layer thickness is based on the rate of 110 lb. per square yard for each inch of pavement unless another rate is shown on the plans. When "Level Up" is listed as part of the bid item description, a payment adjustment factor of 1.000 will be assigned for all placement sublots as described in Article 341.6., "Payment." Miscellaneous areas are not eligible for random placement sampling locations. Compact miscellaneous areas in accordance with

Section 341.4.8., "Compaction." Miscellaneous areas are not subject to in-place air void determination, thermal profiles testing, segregation (density profiles), or longitudinal joint density evaluations.

- 4.9.3.2. **Placement Sampling.** The Engineer will select random numbers for all placement sublots at the beginning of the project. The Engineer will provide the Contractor with the placement random numbers only immediately after the subplot is completed. Mark the roadway location at the completion of each subplot and record the station number. Determine one random sample location for each placement subplot in accordance with [Tex-225-F](#). Adjust the random sample location by no more than necessary to achieve a 2-ft. clearance if the location is within 2 ft. of a joint or pavement edge.

Shoulders, ramps, intersections, acceleration lanes, deceleration lanes, and turn lanes are always eligible for selection as a random sample location; however, if a random sample location falls on one of these areas and the area is shown on the plans as not subject to in-place air void determination, cores will not be taken for the subplot and a 1.000 pay factor will be assigned to that subplot.

Provide the equipment and means to obtain and trim roadway cores onsite. Onsite is defined as in close proximity to where the cores are taken. Obtain the cores within 1 working day of the time the placement subplot is completed, unless otherwise approved. Obtain two 6-in. diameter cores side-by-side from within 1 ft. of the random location provided for the placement subplot. Mark the cores for identification, measure and record the untrimmed core height, and provide the information to the Engineer. The Engineer will witness the coring operation and measurement of the core thickness. Visually inspect each core and verify that the current paving layer is bonded to the underlying layer. Take corrective action if an adequate bond does not exist between the current and underlying layer to ensure that an adequate bond will be achieved during subsequent placement operations.

Trim the cores immediately after obtaining them from the roadway in accordance with [Tex-251-F](#) if the core heights meet the minimum untrimmed value in accordance with Table 13. Trim the cores onsite in the presence of the Engineer. Use a permanent marker or paint pen to record the lot and subplot numbers on each core, as well as the designation as Core A or Core B. The Engineer may require additional information to be marked on the core and may choose to sign or initial the core. The Engineer will take custody of the cores immediately after witnessing the trimming of the cores and will retain custody of the cores until the Department's testing is completed. Before turning the trimmed cores over to the Engineer, the Contractor may wrap the trimmed cores or secure them in a manner that will reduce the risk of possible damage occurring during transport by the Engineer. After testing, the Engineer will return the cores to the Contractor.

The Engineer may have the cores transported back to the Department's laboratory at the HMA plant via the Contractor's haul truck or other designated vehicle. In such cases where the cores will be out of the Engineer's possession during transport, the Engineer will use Department-provided security bags and the Protocol for Roadway Core Custody located on the Department's website to provide a secure means and process that protect the integrity of the cores during transport.

Decide whether to include the pair of cores in the air void determination for that subplot if the core height before trimming is less than the minimum untrimmed value shown in Table 13. Trim the cores in accordance with [Tex-251-F](#) before delivering to the Engineer if electing to have the cores included in the air void determination. If electing to not have the cores included in air void determination, inform the Engineer of the decision, and deliver untrimmed cores to the Engineer. The placement pay factor for the subplot will be 1.000 if cores will not be included in air void determination.

Instead of the Contractor trimming the cores onsite immediately after coring, the Engineer and the Contractor may mutually agree to have the trimming operations performed at an alternate location, such as a field laboratory or other similar location. In such cases, the Engineer will take possession of the cores immediately after they are obtained from the roadway and will retain custody of the cores until testing is completed. Either the Department or Contractor representative may perform trimming of the cores. The Engineer will witness all trimming operations in cases where the Contractor representative performs the trimming operation.

Dry the core holes and tack the sides and bottom immediately after obtaining the cores. Fill the hole with the same type of mixture and properly compact the mixture. Repair core holes using other methods when approved.

- 4.9.3.3. **Placement Testing.** Perform placement tests in accordance with Table 16. After the Engineer returns the cores, the Contractor may test the cores to verify the Engineer's test results for in-place air voids. The allowable differences between the Contractor's and Engineer's test results are shown in Table 11.

- 4.9.3.3.1. **In-Place Air Voids.** The Engineer will measure in-place air voids in accordance with [Tex-207-F](#) and [Tex-227-F](#). Before drying to a constant weight, cores may be pre-dried using a CoreDry or similar vacuum device to remove excess moisture. The Engineer will average the values obtained for all sublots in the production lot to determine the theoretical maximum specific gravity. The Engineer will use the average air void content for in-place air voids.

The Engineer will use the vacuum method to seal the core if required in accordance with [Tex-207-F](#). The Engineer will use the test results from the unsealed core to determine the placement payment adjustment factor if the sealed core yields a higher specific gravity than the unsealed core. After determining the in-place air void content, the Engineer will return the cores and provide test results to the Contractor.

- 4.9.3.3.2. **Informational Shear Bond Strength Testing.** The Engineer will select one random subplot within the first four lots of the project for shear bond strength testing. Obtain full-depth cores in accordance with [Tex-249-F](#) unless the HMA is being placed directly on concrete pavement. Label the cores with lot and subplot numbers and provide to the Engineer. Inspector must use pertinent Department form to document the CSJ number, producer of the tack coat, mix type, and shot rate. The Engineer will ship the cores to the Materials and Tests Division or District laboratory for shear bond strength testing. Results from these tests will not be used for specification compliance.

- 4.9.3.3.3. **Segregation (Density Profile).** Test for segregation using density profiles in accordance with [Tex-207-F](#), Part V. Density profiles are not required and are not applicable when using a thermal imaging system. Density profiles are not applicable in areas described in Section 341.4.9.3.1.4., "Miscellaneous Areas."

Perform at least one density profile per subplot. Perform additional density profiles when any of the following conditions occur, unless otherwise approved:

- areas that are identified by either the Contractor or the Engineer with severe thermal segregation,
- any visibly segregated areas that exist,
- the paver stops due to lack of material being delivered to the paving operations and the temperature of the uncompacted mat before the initial breakdown rolling is less than the temperatures shown in Table 17.

**Table 17**  
**Min Uncompacted Mat Temperature Requiring Segregation Profile<sup>1</sup>**

| <b>High-Temperature Binder Grade<sup>2</sup></b> | <b>Min Temperature of Uncompacted Mat Allowed Before Initial Breakdown Rolling<sup>3,4,5</sup> (°F)</b> |
|--|---|
| PG 64  | <250  |
| PG 70  | <260  |
| PG 76  | <270  |

1. Applicable only to paver stops that occur due to lack of material being delivered to the paving operations and when not using a thermal imaging system.
2. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.
3. The surface of the uncompacted mat must be measured using a handheld thermal camera or infrared thermometer.
4. Min uncompacted mat temperature requiring a segregation profile may be reduced 20°F if using a chemical WMA additive as a compaction aid, MTD with remixing capabilities, or paver hopper insert with remixing capabilities.
5. When using WMA, the Min uncompacted mat temperature requiring a segregation profile is 215°F.

Provide the Engineer with the density profile of every subplot in the lot within 1 working day of the completion of each lot. Report the results of each density profile in accordance with Section 341.4.2., "Reporting and Responsibilities."

The density profile is considered failing if it exceeds the tolerances shown in Table 18. When a thermal imaging system is not used, the Engineer will measure the density profile at least once per project. The Engineer's density profile results will be used when available. The Engineer may require the Contractor to remove and replace the area in question if the area fails the density profile and has surface irregularities as defined in Section 341.4.9.3.3.6., "Irregularities." The subplot in question may receive a production and placement payment adjustment greater than 1.000, if applicable, when the defective material is successfully removed and replaced.

Investigate density profile failures and take corrective actions during production and placement to eliminate the segregation. Suspend production if two consecutive density profiles fail unless otherwise approved. Resume production after the Engineer approves changes to production or placement methods.

**Table 18**  
**Segregation (Density Profile) Acceptance Criteria**

| <b>Mixture Type</b>  | <b>Max Allowable Density Range (highest to lowest, pcf)</b> | <b>Max Allowable Density Range (average to lowest, pcf)</b> |
|----------------------|---|---|
| DG-B                 | 8.0   | 5.0   |
| DG-C, DG-D, and DG-F | 6.0   | 3.0   |

#### 4.9.3.3.4. **Longitudinal Joint Density.**

4.9.3.3.4.1. **Informational Tests.** Perform joint density evaluations while establishing the rolling pattern and verify that the joint density is no more than 3.0 pcf below the density taken at or near the center of the mat. Adjust the rolling pattern, if needed, to achieve the desired joint density. Perform additional joint density evaluations, at least once per subplot, unless otherwise directed.

4.9.3.3.4.2. **Record Tests.** Perform a joint density evaluation for each subplot at each pavement edge that is or will become a longitudinal joint. Joint density evaluations are not applicable in areas described in Section 341.4.9.3.1.4., "Miscellaneous Areas." Determine the joint density in accordance with [Tex-207-F](#), Part VII. Record the joint density information and submit results on Department forms to the Engineer. The evaluation is considered failing if the joint density is more than 3.0 pcf below the density taken at the core random sample location and the correlated joint density is less than 90.0%. The Engineer will make independent joint density verification at least once per project and may make independent joint density

verifications at the random sample locations. The Engineer's joint density test results will be used when available.

Provide the Engineer with the joint density of every subplot in the lot within 1 working day of the completion of each lot. Report the results of each joint density in accordance with Section 341.4.2., "Reporting and Responsibilities."

Investigate joint density failures and take corrective actions during production and placement to improve the joint density. Suspend production if the evaluations on two consecutive sublots fail, unless otherwise approved. Resume production after the Engineer approves changes to production or placement methods.

- 4.9.3.3.5. **Recovered Asphalt Dynamic Shear Rheometer (DSR).** The Engineer may take production samples or cores from suspect areas of the project to determine recovered asphalt properties. Asphalt binders with an aging ratio greater than 3.5 do not meet the requirements for recovered asphalt properties and may be deemed defective when tested and evaluated by the Materials and Tests Division. The aging ratio is the DSR value of the extracted binder divided by the DSR value of the original unaged binder. Obtain DSR values in accordance with AASHTO T 315 at the specified high-temperature PG of the asphalt. The Engineer may require removal and replacement of the defective material at the Contractor's expense. The asphalt binder will be recovered for testing from production samples or cores in accordance with [Tex-211-F](#).

- 4.9.3.3.6. **Irregularities.** Identify and correct irregularities, including segregation, rutting, raveling, flushing, fat spots, mat slippage, irregular color, irregular texture, roller marks, gouges, streaks, uncoated aggregate particles, or broken aggregate particles. The Engineer may also identify irregularities, and in such cases, the Engineer will promptly notify the Contractor. If the Engineer determines that the irregularity will adversely affect pavement performance, the Engineer may require the Contractor to remove and replace (at the Contractor's expense) areas of the pavement that contain irregularities. The Engineer may also require the Contractor to remove and replace (at the Contractor's expense) areas where the mixture does not bond to the existing pavement.

If irregularities are detected, the Engineer may require the Contractor to immediately suspend operations or may allow the Contractor to continue operations for no more than 1 day while the Contractor is taking appropriate corrective action.

- 4.9.4. **Exempt Production.** The mixture may be deemed as exempt production when mutually agreed upon between the Engineer and the Contractor, or when shown on the plans. Exempt production may be used for the following conditions.
- Anticipated daily production is less than 500 ton.
  - Total production for the project is less than 5,000 ton.
  - Pavement repair sections are equal to or greater than 300 ft. For pavement repair sections less than 300 ft., refer to Section 341.4.9.3.1.4., "Miscellaneous Areas."

Exempt production is not eligible for referee testing. For exempt production, the Contractor is relieved of all production and placement QC and QA sampling and testing requirements, except for coring operations when required by the Engineer. When mutually agreed upon between the Engineer and the Contractor, production sampling will be allowed at the point of delivery. When 100 ton or more per day is produced, the Engineer must perform acceptance tests for production and placement in accordance with Table 16. If the specification requirements listed below are met, the production and placement pay factors are 1.000:

- produce, haul, place, and compact the mixture in compliance with the specification and as directed;
- control mixture production to yield a laboratory-molded density that is within  $\pm 1.0\%$  of the target laboratory-molded density as tested by the Engineer;
- compact the mixture in accordance with Section 341.4.8., "Compaction;"
- when a thermal imaging system is not used, the Engineer may perform segregation (density profiles) and thermal profiles in accordance with the specification; and
- all other specification requirements.

- 4.9.5. **Ride Quality.** Measure ride quality in accordance with Item 585, "Ride Quality for Pavement Surfaces," unless otherwise shown on the plans.

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## 5. MEASUREMENT

- 5.1. **Dense-Graded HMA.** Hot mix will be measured by the ton of composite hot mix, which includes asphalt, aggregate, and additives. Measure the weight on scales in accordance with Item 520, "Weighing and Measuring Equipment."
- 5.2. **Tack Coat.** Tack coat will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume in gallons from the calibrated distributor. The Engineer will witness all strapping operations for volume determination. All tack, including emulsions, will be measured by the gallon applied.

The Engineer may allow the use of a metering device to determine asphalt volume used and application rate if the device is accurate within 1.5% of the strapped volume.

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## 6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under Section 341.5.1., "Dense-Graded HMA," will be paid for at the unit price bid for "Dense-Graded Hot-Mix Asphalt" of the mixture type, SAC, and binder specified. These prices are full compensation for surface preparation, materials, placement, equipment, labor, tools, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under Section 341.5.2., "Tack Coat," will be paid for at the unit price bid for "Tack Coat" of the tack coat provided. These prices are full compensation for materials, placement, equipment, labor, tools, and incidentals. Payment adjustments will be applied as determined in accordance with this Item; however, a payment adjustment factor of 1.000 will be assigned for all placement sublots for level-ups only when "Level Up" is listed as part of the bid item description. A payment adjustment factor of 1.000 will be assigned to all production and placement sublots when "Exempt" is listed as part of the bid item description, and all testing requirements are met.

Payment for each subplot, including applicable payment adjustments greater than 1.000, will be paid only for sublots when the Contractor supplies the Engineer with the required documentation for production and placement QC and QA, thermal profiles, segregation density profiles, and longitudinal joint densities in accordance with Section 341.4.2., "Reporting and Responsibilities." When a thermal imaging system is used, documentation is not required for segregation density profiles on individual sublots; however, the thermal imaging system automated reports described in [Tex-244-F](#) are required.

Trial batches will not be paid for unless they are included in pavement work approved by the Department.

Payment adjustment for ride quality will be determined in accordance with Item 585.

- 6.1. **Production Payment Adjustment Factors.** The production payment adjustment factor is based on the laboratory-molded density using the Engineer's test results. The bulk specific gravities of the samples from each subplot will be divided by the Engineer's maximum theoretical specific gravity for the subplot. The individual sample densities for the subplot will be averaged to determine the production payment adjustment factor in accordance with Table 19 for each subplot, using the deviation from the target laboratory-molded density in accordance with Table 9. The production payment adjustment factor for completed lots will be the average of the payment adjustment factors for the four sublots sampled within that lot.

**Table 19**  
**Production Payment Adjustment Factors for Laboratory-Molded Density<sup>1</sup>**

| <b>Absolute Deviation from<br/>Target Laboratory-Molded Density</b> | <b>Production Payment Adjustment Factor<br/>(Target Laboratory-Molded Density)</b> |
|---|--|
| 0.0   | 1.050  |
| 0.1   | 1.050  |
| 0.2   | 1.050  |
| 0.3   | 1.044  |
| 0.4   | 1.038  |
| 0.5   | 1.031  |
| 0.6   | 1.025  |
| 0.7   | 1.019  |
| 0.8   | 1.013  |
| 0.9   | 1.006  |
| 1.0   | 1.000  |
| 1.1   | 0.965  |
| 1.2   | 0.930  |
| 1.3   | 0.895  |
| 1.4   | 0.860  |
| 1.5   | 0.825  |
| 1.6   | 0.790  |
| 1.7   | 0.755  |
| 1.8   | 0.720  |
| >1.8  | Remove and replace   |

1. If the Engineer's laboratory-molded density on any subplot is <95.0% or >97.0%, take immediate corrective action to bring the mixture within these tolerances. The Engineer may suspend operations if the Contractor's corrective actions do not produce acceptable results. The Engineer will allow production to resume when the proposed corrective action is likely to yield acceptable results.

- 6.1.1. **Payment for Incomplete Production Lots.** Production payment adjustments for incomplete lots, described under Section 341.4.9.2.1.1., "Incomplete Production Lots," will be calculated using the average production payment factors from all sublots sampled.

A production payment factor of 1.000 will be assigned to any lot when the random sampling plan did not result in collection of any samples within the first subplot.

- 6.1.2. **Production Sublots Subject to Removal and Replacement.** If after referee testing the laboratory-molded density for any subplot results in a "remove and replace" condition as shown in Table 19, the Engineer may require removal and replacement or may allow the subplot to be left in place without payment. The Engineer may also accept the subplot in accordance with Section 5.3.1., "Acceptance of Defective or Unauthorized Work." Replacement material meeting the requirements of this Item will be paid for in accordance with this Section.

- 6.2. **Placement Payment Adjustment Factors.** The placement payment adjustment factor is based on in-place air voids using the Engineer's test results. The bulk specific gravities of the cores from each subplot will be divided by the Engineer's average maximum theoretical specific gravity for the lot. The individual core densities for the subplot will be averaged to determine the placement payment adjustment factor in accordance with Table 20 for each subplot that requires in-place air void measurement. A placement payment adjustment factor of 1.000 will be assigned to the entire subplot when the random sample location falls in an area shown on the plans as not subject to in-place air void determination. A placement payment adjustment factor of 1.000 will be assigned to quantities placed in areas described in Section 341.4.9.3.1.4., "Miscellaneous Areas." The placement payment adjustment factor for completed lots will be the average of the placement payment adjustment factors for up to four sublots within that lot.



**Table 20**  
**Placement Payment Adjustment Factors for In-Place Air Voids**

| <b>In-Place Air Voids</b> | <b>Placement Pay Adjustment Factor</b> | <b>In-Place Air Voids</b> | <b>Placement Payment Adjustment Factor</b> |
|---------------------------|--|---------------------------|--|
| <2.7                      | Remove and replace                     | 6.4                       | 1.042                                      |
| 2.7                       | 0.710                                  | 6.5                       | 1.040                                      |
| 2.8                       | 0.740                                  | 6.6                       | 1.038                                      |
| 2.9                       | 0.770                                  | 6.7                       | 1.036                                      |
| 3.0                       | 0.800                                  | 6.8                       | 1.034                                      |
| 3.1                       | 0.830                                  | 6.9                       | 1.032                                      |
| 3.2                       | 0.860                                  | 7.0                       | 1.030                                      |
| 3.3                       | 0.890                                  | 7.1                       | 1.028                                      |
| 3.4                       | 0.920                                  | 7.2                       | 1.026                                      |
| 3.5                       | 0.950                                  | 7.3                       | 1.024                                      |
| 3.6                       | 0.980                                  | 7.4                       | 1.022                                      |
| 3.7                       | 0.998                                  | 7.5                       | 1.020                                      |
| 3.8                       | 1.002                                  | 7.6                       | 1.018                                      |
| 3.9                       | 1.006                                  | 7.7                       | 1.016                                      |
| 4.0                       | 1.010                                  | 7.8                       | 1.014                                      |
| 4.1                       | 1.014                                  | 7.9                       | 1.012                                      |
| 4.2                       | 1.018                                  | 8.0                       | 1.010                                      |
| 4.3                       | 1.022                                  | 8.1                       | 1.008                                      |
| 4.4                       | 1.026                                  | 8.2                       | 1.006                                      |
| 4.5                       | 1.030                                  | 8.3                       | 1.004                                      |
| 4.6                       | 1.034                                  | 8.4                       | 1.002                                      |
| 4.7                       | 1.038                                  | 8.5                       | 1.000                                      |
| 4.8                       | 1.042                                  | 8.6                       | 0.998                                      |
| 4.9                       | 1.046                                  | 8.7                       | 0.996                                      |
| 5.0                       | 1.050                                  | 8.8                       | 0.994                                      |
| 5.1                       | 1.050                                  | 8.9                       | 0.992                                      |
| 5.2                       | 1.050                                  | 9.0                       | 0.990                                      |
| 5.3                       | 1.050                                  | 9.1                       | 0.960                                      |
| 5.4                       | 1.050                                  | 9.2                       | 0.930                                      |
| 5.5                       | 1.050                                  | 9.3                       | 0.900                                      |
| 5.6                       | 1.050                                  | 9.4                       | 0.870                                      |
| 5.7                       | 1.050                                  | 9.5                       | 0.840                                      |
| 5.8                       | 1.050                                  | 9.6                       | 0.810                                      |
| 5.9                       | 1.050                                  | 9.7                       | 0.780                                      |
| 6.0                       | 1.050                                  | 9.8                       | 0.750                                      |
| 6.1                       | 1.048                                  | 9.9                       | 0.720                                      |
| 6.2                       | 1.046                                  | >9.9                      | Remove and replace                         |
| 6.3                       | 1.044                                  | —                         | —  |

- 6.2.1. **Payment for Incomplete Placement Lots.** Payment adjustments for incomplete placement lots described under Section 341.4.9.3.1.2., “Incomplete Placement Lots,” will be calculated using the average of the placement payment factors from all sublots sampled and sublots where the random location falls in an area shown on the plans as not eligible for in-place air void determination.

If the random sampling plan results in production samples, but not in placement samples, the random core location and placement adjustment factor for the subplot will be determined by applying the placement random number to the length of the subplot placed.

If the random sampling plan results in placement samples, but not in production samples, no placement adjustment factor will apply for that subplot placed.

A placement payment adjustment factor of 1.000 will be assigned to any lot when the random sampling plan did not result in collection of any production samples.

- 6.2.2. **Placement Sublots Subject to Removal and Replacement.** If after referee testing the placement payment adjustment factor for any subplot results in a “remove and replace” condition as shown in Table 20, the

Engineer will choose the location of two cores to be taken within 3 ft. of the original failing core location. The Contractor must obtain the cores in the presence of the Engineer. The Engineer will take immediate possession of the untrimmed cores and submit the untrimmed cores to the Materials and Tests Division, where they will be trimmed, if necessary, and tested for bulk specific gravity within 10 working days of receipt.

The bulk specific gravity of each core from each subplot will be divided by the Engineer's average maximum theoretical specific gravity for the lot. The individual core densities for the subplot will be averaged to determine the new payment adjustment factor of the subplot in question. If the new payment adjustment factor is 0.720 or greater, the new payment adjustment factor will apply to that subplot. If the new payment adjustment factor is less than 0.720, no payment will be made for the subplot. Remove and replace the failing subplot, or the Engineer may allow the subplot to be left in place without payment. The Engineer may also accept the subplot in accordance with Section 5.3.1., "Acceptance of Defective or Unauthorized Work." Replacement material meeting the requirements of this Item will be paid for in accordance with this Section.

- 6.3. **Total Adjusted Pay (TAP) Calculation.** TAP will be based on the applicable payment adjustment factors for production and placement for each lot.

$$TAP = (A+B)/2$$

where:

$A = \text{Bid price} \times \text{production lot quantity} \times \text{average payment adjustment factor for the production lot}$

$B = \text{Bid price} \times \text{placement lot quantity} \times \text{average payment adjustment factor for the placement lot} + (\text{bid price} \times \text{quantity placed in miscellaneous areas} \times 1.000)$

$\text{Production lot quantity} = \text{Quantity actually placed} - \text{quantity left in place without payment}$

$\text{Placement lot quantity} = \text{Quantity actually placed} - \text{quantity left in place without payment} - \text{quantity placed in miscellaneous areas}$

# Item 500

## Mobilization



### 1. DESCRIPTION

Establish and remove offices, plants, and facilities. Move personnel, equipment, and supplies to and from the project or the vicinity of the project site to begin work or complete work on Contract Items. Bonds and insurance are required for performing mobilization.

For Contracts with emergency mobilization, provide a person and method of contact available 24 hr. per day, 7 days per week, unless otherwise shown on the plans. The time of notice will be the transmission time of the written notice or notice provided orally by the Department's representative.

### 2. MEASUREMENT

This Item will be measured by the lump sum or each as the work progresses. Mobilization is calculated on the base bid only and will not be paid for separately on any additive alternate items added to the Contract.

### 3. PAYMENT

For this Item, the adjusted Contract amount will be calculated as the total Contract amount less the lump sum for mobilization. Material on hand will not be considered as a construction item earned when calculating mobilization payment. Except for Contracts with callout or emergency work, mobilization will be paid in partial payments as follows.

- Payment will be made upon presentation of a paid invoice for the payment or performance bonds and required insurance.
- Payment will be made upon verification of documented expenditures for plant and facility setup. The combined amount for all these facilities will be no more than 10% of the mobilization lump sum or 1% of the total Contract amount, whichever is less.
- When 1% of the adjusted Contract amount for construction Items is earned, 50% of the mobilization lump sum bid or 5% of the total Contract amount, whichever is less, will be paid. Previous payments under this Item will be deducted from this amount.
- When 5% of the adjusted Contract amount for construction Items is earned, 75% of the mobilization lump sum bid or 10% of the total Contract amount, whichever is less, will be paid. Previous payments under the Item will be deducted from this amount.
- When 10% of the adjusted Contract amount for construction Items is earned, 90% of the mobilization lump sum bid or 10% of the total Contract amount, whichever is less, will be paid. Previous payments under this Item will be deducted from this amount.
- Upon final acceptance, 97% of the mobilization lump sum bid will be paid. Previous payments under this Item will be deducted from this amount.
- Payment for the remainder of the lump sum bid for "Mobilization" will be made after all submittals are received, after final quantities have been determined, and when any separate vegetative establishment and maintenance, test, and performance periods provided for in the Contract have been successfully completed.

For projects with extended maintenance or performance periods, payment for the remainder of the lump sum bid for "Mobilization" will be made 6 mo. after final acceptance.

For Contracts with callout or emergency work, "Mobilization" will be paid as follows.

- Payment will be made upon presentation of a paid invoice for the payment of performance bonds and required insurance.
- Mobilization for callout work will be paid for each callout work request.
- Mobilization for emergency work will be paid for each emergency work request.

## Item 502

### Barricades, Signs, and Traffic Handling



#### 1. DESCRIPTION

Provide, install, move, replace, maintain, clean, and remove all traffic control devices shown on the plans and as directed.

Temporary work zone (TWZ) traffic control devices manufactured after December 31, 2019, must have been successfully tested to the crashworthiness requirements of the 2016 edition of the *AASHTO Manual for Assessing Safety Hardware* (MASH). An exception to the manufacture date applies when, based on the project's date of letting, a category of MASH-2016 compliant TWZ traffic control devices was not approved, or was not self-certified. In such case, devices that meet NCHRP-350 or MASH-2009 may be used.

Temporary work zone (TWZ) traffic control devices manufactured on or before December 31, 2019, must at a minimum have been successfully tested to the crashworthiness requirements of NCHRP-350 or MASH-2009. These devices may continue to be used throughout their normal service lives.

Such TWZ traffic control devices include:

- portable sign supports,
- barricades,
- portable traffic barriers designated exclusively for use in TWZs,
- crash cushions designated exclusively for use in TWZs,
- longitudinal channelizers, and
- truck-mounted attenuators (TMAs) and trailer attenuators (TAs).

Category I devices (i.e., lightweight devices), such as cones, tubular markers, and drums without lights or signs attached, may be self-certified by the vendor or provider, with documentation provided to the Department, or as shown on Department's Compliant Work Zone Traffic Control Device List.

#### 2. CONSTRUCTION

Comply with the requirements of Article 7.2., "Safety."

Implement the traffic control plan (TCP) shown on the plans.

Install traffic control devices straight and plumb. Make changes to the TCP only as approved. Minor adjustments to meet field conditions are allowed.

Submit Contractor-proposed TCP changes, signed and sealed by a licensed professional engineer, for approval. The Engineer may develop, sign, and seal Contractor-proposed changes. Changes must conform to guidelines established in the TMUTCD using approved products from the Department's Compliant Work Zone Traffic Control Device List.

Maintain traffic control devices by taking corrective action when notified. Corrective actions include, but are not limited to, cleaning, replacing, straightening, covering, and removing devices. Maintain the devices such that they are properly positioned and spaced, are legible, and have retroreflective characteristics that meet requirements day or night and in all weather conditions.

The Engineer may authorize or direct in writing the removal or relocation of project limit advance warning signs. When project limit advance warning signs are removed before final acceptance, provide traffic control in accordance with the TMUTCD for minor operations as approved.

Remove all traffic control devices upon completion of the work as shown on the plans or as directed.

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### 3. MEASUREMENT

"Barricades, Signs, and Traffic Handling" will be measured by the month. Law enforcement personnel with patrol vehicles will be measured by the hour for each person.

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### 4. PAYMENT

- 4.1. **Barricades, Signs, and Traffic Handling.** Except for Contracts with callout work and work orders, the work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Barricades, Signs, and Traffic Handling." This price is full compensation for installation, maintenance, adjustments, replacements, removal, materials, equipment, labor, tools, and incidentals.

When the plans establish pay items for particular work in the TCP, that work will be measured and paid for under pertinent Items.

TMA's and TA's will be paid for under Item 505, "Truck-Mounted Attenuator (TMA) and Trailer Attenuator (TA)." Portable changeable message signs will be paid for under Item 503, "Portable Changeable Message Sign." Portable traffic signals will be paid for under Item 510, "One-Way Traffic Control," unless otherwise shown on the plans.

In accordance with Section 7.2.3., "Safety Contingency," funds have been included in the project budget to improve the effectiveness of traffic handling and enhance safety during the course of this project.

- 4.1.1. **Initiation of Payment.** Payment for this Item will begin on the first estimate after barricades, signs, and traffic handling devices have been installed in accordance with the TCP.

- 4.1.2. **Paid Months.** Monthly payment will be made each succeeding month for this Item provided the barricades, signs, and traffic handling devices have been installed and maintained in accordance with the TCP until the Contract amount has been paid.

If, within the timeframe established by the Engineer, the Contractor fails to provide or properly maintain signs and barricades in compliance with the Contract requirements, as determined by the Engineer, the Contractor will be considered in noncompliance with this Item. No payment will be made for the months in question, and the total final payment quantity will be reduced by the number of months the Contractor was in noncompliance.

- 4.1.3. **Maximum Total Payment Before Acceptance.** The total payment for this Item will not exceed 10% of the total Contract amount before final acceptance in accordance with Article 5.12., "Final Acceptance." The remaining balance will be paid in accordance with Section 502.4.1.5., "Balance Due."

- 4.1.4. **Total Payment Quantity.** The quantity paid under this Item will not exceed the total quantity shown on the plans, except as modified by change order and as adjusted in accordance with Section 502.4.1.2., "Paid Months." An overrun of the plans quantity for this Item will not be allowed for approving designs; testing; material shortages; closed construction seasons; curing periods; establishment, performance, test, and maintenance periods; failure to complete the work in the number of months allotted; or delays caused directly or indirectly by Contract requirements.

- 4.1.5. **Balance Due.** The remaining unpaid months of barricades less non-compliance months will be paid on final acceptance of the project, if all work is complete and accepted in accordance with Article 5.12., "Final Acceptance."
- 4.1.6. **Contracts with Callout Work and Work Orders.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be subsidiary to pertinent Items, except for federally funded Contracts.
- 4.2. **Law Enforcement Personnel.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid by Contractor force account for "Law Enforcement Personnel." This price is full compensation for furnishing all labor, materials, supplies, equipment, patrol vehicles, fees, and incidentals necessary to complete the work as directed.

## Item 506

# Temporary Erosion, Sedimentation, and Environmental Controls



### 1. DESCRIPTION

Install, maintain, and remove erosion, sedimentation, and environmental control measures to prevent or reduce the discharge of pollutants and protect environmental resources in accordance with the Stormwater Pollution Prevention Plan (SWP3) and environmental layout shown on the plans. Comply with Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit (CGP) TXR150000 requirements. Control measures are defined as Best Management Practices (BMPs) used to prevent or reduce the discharge of pollutants and measures to protect environmental resources. Control measures include, but are not limited to, rock filter dams, temporary pipe slope drains, temporary paved flumes, construction exits, earthwork for erosion control, pipe, construction perimeter fence, sandbags, temporary sediment control fence, biodegradable erosion control logs, vertical tracking, temporary or permanent seeding, and other measures. Erosion and sediment control devices must be selected from the Erosion Control Approved Products List. Perform work in a manner to prevent degradation of receiving waters, protect environmental resources, facilitate project construction, and comply with applicable federal, state, and local regulations. Ensure the installation and maintenance of control measures are performed in conformance with the manufacturer's or designer's specifications.

### 2. MATERIALS

Furnish materials in accordance with the following.

- Item 161, "Compost"
- Item 432, "Riprap"
- Item 556, "Pipe Underdrains"

#### 2.1. Rock Filter Dams.

2.1.1. **Aggregate.** Furnish aggregate with approved hardness, durability, cleanliness, and resistance to crumbling, flaking, and eroding. Provide the following.

- **Types 1, 2, and 4 Rock Filter Dams.** Use 3–6-in. aggregate.
- **Type 3 Rock Filter Dams.** Use 4–8-in. aggregate.

2.1.2. **Wire.** Provide minimum 20-gauge galvanized wire for the steel wire mesh and tie wires for Types 2 and 3 rock filter dams. Type 4 dams require:

- a double-twisted, hexagonal weave with a nominal mesh opening of 2-1/2 × 3-1/4 in.,
- minimum 0.0866-in. steel wire for netting,
- minimum 0.1063-in. steel wire for selvages and corners, and
- minimum 0.0866 in. for binding or tie wire.

2.1.3. **Sandbag Material.** Furnish sandbags meeting Section 506.2.8., "Sandbags," except that any gradation of aggregate may be used to fill the sandbags.

2.2. **Temporary Pipe Slope Drains.** Provide corrugated metal pipe, polyvinyl chloride (PVC) pipe, flexible tubing, watertight connection bands, grommet materials, prefabricated fittings, and flared entrance sections as shown on the plans. Recycled and other materials meeting these requirements are allowed if approved.



Furnish concrete in accordance with Item 432.

- 2.3. **Temporary Paved Flumes.** Furnish asphalt concrete, hydraulic cement concrete, or other comparable non-erodible material as shown on the plans. Provide rock or rubble with a minimum diameter of 6 in. and a maximum volume of 1/2 cu. ft. for the construction of energy dissipaters.
- 2.4. **Construction Exits.** Provide materials as shown on the plans and in accordance with this Section.
- 2.4.1. **Rock Construction Exit.** Provide crushed aggregate for long- and short-term construction exits. Furnish aggregates that are clean, hard, durable, and free of adherent coatings such as salt, alkali, dirt, clay, loam, shale, soft or flaky materials, and organic and injurious matter. Use 4–8-in. aggregate for Type 1. Use 2–4-in. aggregate for Type 3.
- 2.4.2. **Timber Construction Exit.** Furnish No. 2 quality or better railroad ties and timbers for long-term construction exits, free of large and loose knots and treated to control rot. Fasten timbers using nuts and bolts or lag bolts, of at least 1/2 in. diameter, unless otherwise shown on the plans or allowed. Provide plywood or pressed wafer board at least 1/2 in. thick for short-term exits.
- 2.4.3. **Foundation Course.** Provide a foundation course consisting of flexible base, bituminous concrete, hydraulic cement concrete, or other materials as shown on the plans or directed.
- 2.5. **Embankment for Erosion Control.** Provide rock, loam, clay, topsoil, or other earth materials that will form a stable embankment to meet the intended use.
- 2.6. **Pipe.** Provide pipe outlet material in accordance with Item 556 and as shown on the plans.
- 2.7. **Construction Perimeter Fence.**
- 2.7.1. **Posts.** Provide essentially straight wood or steel posts that are at least 60 in. long. Furnish soft wood posts with a minimum diameter of 3 in. or use nominal 2 × 4-in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/5 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.25 lb. per foot.
- 2.7.2. **Fence.** Provide orange construction fencing as approved.
- 2.7.3. **Fence Wire.** Provide 14-gauge or larger galvanized smooth or twisted wire. Provide 16-gauge or larger tie wire.
- 2.7.4. **Flagging.** Provide brightly colored flagging that is fade-resistant and at least 3/4 in. wide to provide maximum visibility both day and night.
- 2.7.5. **Staples.** Provide staples with a crown at least 1/2 in. wide and legs at least 1/2 in. long.
- 2.7.6. **Used Materials.** Previously used materials meeting the applicable requirements may be used if approved.
- 2.8. **Sandbags.** Provide sandbag material of polypropylene, polyethylene, or polyamide woven fabric with a minimum unit weight of 4 oz. per square yard, a Mullen burst-strength exceeding 300 psi, and an ultraviolet (UV) stability exceeding 70%.
- Use natural coarse sand or manufactured sand meeting the gradation shown in Table 1 to fill sandbags. Filled sandbags must be 24–30 in. long, 16–18 in. wide, and 6–8 in. thick.

**Table 1**  
**Sand Gradation**

| Sieve Size | Retained (% by Weight) |
|------------|------------------------|
| #4         | Maximum 3%             |
| #100       | Minimum 80%            |
| #200       | Minimum 95%            |

Aggregate may be used instead of sand for situations where sandbags are not adjacent to traffic. The aggregate size must not exceed 3/8 in.

- 2.9. **Temporary Sediment Control Fence.** Provide a net-reinforced fence using woven geotextile fabric. Logos visible to the traveling public will not be allowed.
- 2.9.1. **Fabric.** Provide fabric materials in accordance with [DMS-6230](#), "Temporary Sediment Control Fence Fabric."
- 2.9.2. **Posts.** Provide essentially straight wood or steel posts with a minimum length of 48 in., unless otherwise shown on the plans. Furnish soft wood posts at least 3 in. in diameter or use nominal 2 × 4-in. boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 × 1-1/2 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.25 lb. per foot.
- 2.9.3. **Net Reinforcement.** Provide net reinforcement of at least 12.5-gauge (Standard Wire Gauge) galvanized welded wire mesh, with a maximum opening size of 2 × 4 in., at least 24 in. wide, unless otherwise shown on the plans.
- 2.9.4. **Staples.** Provide staples with a crown at least 3/4 in. wide and legs 1/2 in. long.
- 2.9.5. **Used Materials.** Use recycled material meeting the applicable requirements if approved.
- 2.10. **Biodegradable Erosion Control Logs.**
- 2.10.1. **Core Material.** Furnish core material that is biodegradable or recyclable. Use compost, mulch, aspen excelsior wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or any other acceptable material unless specifically shown on the plans. Permit no more than 5% of the material to escape from the containment mesh. Furnish compost in accordance with Item 161.
- 2.10.2. **Containment Mesh.** Furnish containment mesh that is 100% biodegradable, photodegradable, or recyclable, such as burlap, twine, UV photodegradable plastic, polyester, or any other acceptable material.
- Furnish biodegradable or photodegradable containment mesh when log will remain in place as part of a vegetative system.
- Furnish recyclable containment mesh for temporary installations.
- 2.10.3. **Size.** Furnish biodegradable erosion control logs with diameters as shown on the plans or as directed. Stuff containment mesh densely so logs do not deform.

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### 3. QUALIFICATIONS, TRAINING, AND EMPLOYEE REQUIREMENTS

- 3.1. **Contractor Responsible Person Environmental (CRPE) Qualifications and Responsibilities.** Provide and designate in writing at the preconstruction conference a CRPE and alternate CRPE who have overall responsibility for managing environmental compliance. The CRPE will implement stormwater and erosion control practices, oversee and observe stormwater control measure monitoring and management, oversee environmental compliance requirements, and monitor the project site daily and produce daily monitoring reports as long as there are BMPs in place or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES CGP TXR150000. Take required training in accordance with Section 7.7.4.4, "Training."

Maintain daily monitor reports and make them available within 24 hr. upon request. During time suspensions when work is not occurring or on Contract non-work days, daily inspections are not required unless a rain event has occurred. The CRPE will provide recommendations on how to improve the effectiveness of control measures. Attend the Department's preconstruction conference for the project.

Ensure training is completed in accordance with Section 7.7.4.4., "Training," by all applicable personnel before employees work on the project. Document, maintain, and make available within 24 hr. of a request, a list, signed by the CRPE, of all applicable Contractor and subcontractor employees who have completed the training. Include the employee's name, the training course name, and the date the employee completed the training.

- 3.2. **Contractor Superintendent Qualifications and Responsibilities.** Provide a superintendent who is competent, has experience with and knowledge of stormwater management, and is knowledgeable of the requirements and the conditions of the TPDES CGP TXR150000. The superintendent will manage and oversee the day-to-day operations and activities at the project site, work with the CRPE to provide effective stormwater management at the project site, represent and act on behalf of the Contractor, and attend the Department's preconstruction conference for the project. Take training as required in Section 7.7.4.4., "Training."

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## 4. CONSTRUCTION

- 4.1. **Contractor Responsibilities.** Implement the SWP3 for the project site in accordance with the plans and specifications, TPDES CGP TXR150000, and as directed. Coordinate stormwater management with all other work on the project. Develop and implement an SWP3 for project-specific material supply plants within and outside the Department's right of way in conformance with the specific or general stormwater permit requirements. Prevent water pollution from stormwater associated with construction activity from entering any surface water or private property on or adjacent to the project site.
- 4.2. **Implementation.** The CRPE, or alternate CRPE, must be accessible by telephone and able to respond to project-related stormwater management or other environmental emergencies 24 hr. per day.
- 4.2.1. **Commencement.** Implement the SWP3 as shown on the plans and as directed. Contractor-proposed recommendations for changes will be allowed as approved. Conform to the established guidelines in the TPDES CGP TXR150000 to make changes. Do not implement changes until approval has been received and changes have been incorporated into the plans. Minor adjustments to meet field conditions are allowed and will be recorded in the SWP3.
- 4.2.2. **Phasing.** Implement control measures before the commencement of activities that result in soil disturbance. Phase and minimize the soil disturbance to the areas shown on the plans. Coordinate temporary control measures with permanent control measures and all other work activities on the project to assure economical, effective, safe, and continuous water pollution prevention. Provide control measures that are appropriate to the construction means, methods, and sequencing allowed by the Contract. Exercise precaution throughout the life of the project to prevent pollution of ground waters and surface waters. Schedule and perform clearing and grubbing operations so that stabilization measures will follow immediately thereafter if project conditions permit. Bring all grading sections to final grade as soon as possible and implement temporary and permanent control measures at the earliest time possible. Implement temporary control measures when required by TPDES CGP TXR150000 or otherwise necessitated by project conditions.
- Do not prolong final grading and shaping. Preserve vegetation where possible throughout the project, and minimize clearing, grubbing, and excavation within stream banks, bed, and approach sections.
- 4.3. **General.**
- 4.3.1. **Temporary Alterations or Control Measure Removal.** Altering or removal of control measures is allowed when control measures are restored within the same working day.

- 4.3.2. **Stabilization.** Initiate stabilization for disturbed areas no more than 14 days after the construction activities in that portion of the site have temporarily or permanently ceased. Establish a uniform vegetative cover or use another stabilization practice in accordance with TPDES CGP TXR150000.
- 4.3.3. **Finished Work.** Remove and dispose of all temporary control measures upon acceptance of vegetative cover or other stabilization practice unless otherwise directed. Complete soil disturbing activities and establish a uniform perennial vegetative cover. A project will not be considered for acceptance until a vegetative cover of 70% density of existing adjacent undisturbed areas is obtained or equivalent permanent stabilization is obtained in accordance with TPDES CGP TXR150000. The Engineer may accept the work before vegetative cover of 70% density of existing adjacent undisturbed areas. An exception will be allowed in arid areas as defined in TPDES CGP TXR150000.
- 4.3.4. **Restricted Activities and Required Precautions.** Do not discharge onto the ground or into surface waters any pollutants such as chemicals, raw sewage, fuels, lubricants, coolants, hydraulic fluids, bitumens, or any other petroleum product. Operate and maintain equipment onsite to prevent actual or potential water pollution. Manage, control, and dispose of litter onsite such that no adverse impacts to water quality occur. Prevent dust from creating a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property. Wash out concrete trucks only as described in TPDES CGP TXR150000. Use appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water (i.e., dewatering). Immediately address chemical and hydrocarbon spills caused by the Contractor. Keep a spill kit onsite. Prevent discharges that would contribute to a violation of Edwards Aquifer Rules, water quality standards, the impairment of a listed water body, or other state or federal law.
- 4.4. **Installation, Maintenance, and Removal Work.** Perform work in accordance with the SWP3, in conformance with manufacturers' guidelines, and in accordance with TPDES CGP TXR150000. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until soil disturbing activities are completed and permanent erosion control features are in place, or the disturbed area has been adequately stabilized as approved.

The Department will inspect and document the condition of the control measures at the frequency shown on the plans and will provide the Construction SWP3 Field Inspection and Maintenance Reports to the Contractor. Make corrections as soon as possible before the next anticipated rain event or within 7 calendar days after being able to enter the worksite for each control measure. The only acceptable reason for not accomplishing the corrections within the timeframe specified is when site conditions are considered "too wet to work." Take immediate action if a correction is deemed critical as directed. When corrections are not made within the established timeframe, all work will cease on the project and time charges will continue while the control measures are brought into compliance. Commence work once the Engineer reviews and documents the project is in compliance. Commencing work does not release the Contractor of the liability for noncompliance with the SWP3, the plans, or TPDES CGP TXR150000.

The Engineer may limit the disturbed area if the Contractor cannot control soil erosion and sedimentation resulting from the Contractor's operations. Implement additional controls as directed.

Remove devices upon approval or as directed. Finish-grade and dress the area upon removal. Stabilize disturbed areas in accordance with TPDES CGP TXR150000, and as shown on the plans or directed. Materials removed are considered consumed by the project. Retain ownership of stockpiled material and remove it from the project when new installations or replacements are no longer required.

- 4.4.1. **Rock Filter Dams for Erosion Control.** Remove trees, brush, stumps, and other objectionable material that may interfere with the construction of rock filter dams. Place sandbags as a foundation when required or at the Contractor's option.

Place the aggregate to the lines, height, and slopes specified, without undue voids for Types 1, 2, 3, and 5. Place the aggregate on the mesh and then fold the mesh at the upstream side over the aggregate and secure it to itself on the downstream side using wire ties, or hog rings for Type 2 and Type 3, or as directed.

Place rock filter dams perpendicular to the flow of the stream or channel unless otherwise directed. Construct filter dams in accordance with the following criteria unless otherwise shown on the plans.

4.4.1.1.

**Type 1 (Non-Reinforced).**

- **Height.** At least 18 in. measured vertically from existing ground to top of filter dam.
- **Top Width.** At least 2 ft.
- **Slopes.** No steeper than 2:1.

4.4.1.2.

**Type 2 (Reinforced).**

- **Height.** At least 18 in. measured vertically from existing ground to top of filter dam.
- **Top Width.** At least 2 ft.
- **Slopes.** No steeper than 2:1.

4.4.1.3.

**Type 3 (Reinforced).**

- **Height.** At least 36 in. measured vertically from existing ground to top of filter dam.
- **Top Width.** At least 2 ft.
- **Slopes.** No steeper than 2:1.

4.4.1.4.

**Type 4 (Sack Gabions).** Unfold sack gabions and smooth out kinks and bends. Connect the sides by lacing in a single-loop-double-loop pattern on 4–5-in. spacing for vertical filling. Pull the end lacing rod at one end until tight, wrap around the end, and twist four times. Fill with stone at the filling end, pull the rod tight, cut the wire with approximately 6 in. remaining, and twist wires four times.

Place the sack flat in a filling trough, fill with stone, connect sides, and secure ends as described above for horizontal filling.

Lift and place without damaging the gabion. Shape sack gabions to existing contours.

4.4.1.5.

**Type 5.** Provide rock filter dams as shown on the plans.

4.4.2.

**Temporary Pipe Slope Drains.** Install pipe with a slope as shown on the plans or as directed. Construct embankment for the drainage system in 8-in. lifts to the required elevations. Hand-tamp the soil around and under the entrance section to the top of the embankment as shown on the plans or as directed. Form the top of the embankment or earth dike over the pipe slope drain at least 1 ft. higher than the top of the inlet pipe at all points. Secure the pipe with hold-downs or hold-down grommets spaced at most 10 ft. on center. Construct the energy dissipaters or sediment traps as shown on the plans or as directed. Construct the sediment trap using concrete or rubble riprap in accordance with Item 432, when shown on the plans.

4.4.3.

**Temporary Paved Flumes.** Construct paved flumes as shown on the plans or as directed. Provide excavation and embankment (including compaction of the subgrade) of material to the dimensions shown on the plans unless otherwise indicated. Install a rock or rubble riprap energy dissipater, constructed from the materials specified above, to a minimum depth of 9 in. at the flume outlet to the limits shown on the plans or as directed.

4.4.4.

**Construction Exits.** Prevent traffic from crossing or exiting the construction site or moving directly onto a public roadway, alley, sidewalk, parking area, or other right of way areas other than at the location of construction exits when tracking conditions exist. Construct exits for either long- or short-term use.

4.4.4.1.

**Long-Term.** Place the exit over a foundation course as required. Grade the foundation course or compacted subgrade to direct runoff from the construction exits to a sediment trap as shown on the plans or as directed. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed.

4.4.4.1.1.

**Type 1.** Construct to a depth of at least 8 in. using crushed aggregate as shown on the plans or as directed.

- 4.4.4.1.2. **Type 2.** Construct using railroad ties and timbers as shown on the plans or as directed.
- 4.4.4.2. **Short-Term.**
- 4.4.4.2.1. **Type 3.** Construct using crushed aggregate, plywood, or wafer board. This type of exit may be used for daily operations where long-term exits are not practical.
- 4.4.4.2.2. **Type 4.** Construct as shown on the plans or as directed.
- 4.4.5. **Earthwork for Erosion Control.** Perform excavation and embankment operations to minimize erosion and to remove collected sediments from other erosion control devices.
- 4.4.5.1. **Excavation and Embankment for Erosion Control Features.** Place earth dikes, swales, or combinations of both along the low crown of daily lift placement, or as directed, to prevent runoff spillover. Place swales and dikes at other locations as shown on the plans or as directed to prevent runoff spillover or to divert runoff. Construct cuts with the low end blocked with undisturbed earth to prevent erosion of hillsides. Construct sediment traps at drainage structures in conjunction with other erosion control measures as shown on the plans or as directed.
- Create a sediment basin, where required, providing 3,600 cu. ft. of storage per acre drained, or equivalent control measures for drainage locations that serve an area with 10 or more disturbed acres at one time, not including offsite areas.
- 4.4.5.2. **Excavation of Sediment and Debris.** Remove sediment and debris when accumulation affects the performance of the devices, after a rain, and when directed.
- 4.4.6. **Construction Perimeter Fence.** Construct, align, and locate fencing as shown on the plans or as directed.
- 4.4.6.1. **Installation of Posts.** Embed posts 18 in. deep or adequately anchor in rock, with a spacing of 8–10 ft.
- 4.4.6.2. **Wire Attachment.** Attach the top wire to the posts at least 3 ft. from the ground. Attach the lower wire midway between the ground and the top wire.
- 4.4.6.3. **Flag Attachment.** Attach flagging to both wire strands midway between each post. Use flagging at least 18 in. long. Tie flagging to the wire using a square knot.
- 4.4.7. **Sandbags for Erosion Control.** Construct a berm or dam of sandbags that will intercept sediment-laden stormwater runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Fill each bag with sand so that at least the top 6 in. of the bag is unfilled to allow for proper tying of the open end. Place the sandbags with their tied ends in the same direction. Offset subsequent rows of sandbags 1/2 the length of the preceding row. Place a single layer of sandbags downstream as a secondary debris trap. Place additional sandbags as necessary or as directed for supplementary support to berms or dams of sandbags or earth.
- 4.4.8. **Temporary Sediment Control Fence.** Provide temporary sediment control fence near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the fence into erosion control measures used to control sediment in areas of higher flow. Install the fence as shown on the plans, in accordance with this Section, or as directed.
- 4.4.8.1. **Installation of Posts.** Embed posts at least 18 in. deep or adequately anchor, if in rock, with a spacing of 6–8 ft., and install on a slight angle toward the runoff source.
- 4.4.8.2. **Fabric Anchoring.** Dig trenches along the uphill side of the fence to anchor 6–8 in. of fabric. Provide a minimum trench cross-section of 6 × 6 in. Place the fabric against the side of the trench and align approximately 2 in. of fabric along the bottom in the upstream direction. Backfill the trench, then hand-tamp.

4.4.8.3. **Fabric and Net Reinforcement Attachment.** Attach the reinforcement to wooden posts using staples, or to steel posts using T-clips, in at least four places equally spaced unless otherwise shown on the plans. Sewn vertical pockets may be used to attach reinforcement to end posts. Fasten the fabric to the top strand of reinforcement using hog rings or cord every 15 in. or less.

4.4.8.4. **Fabric and Net Splices.** Locate splices at a fence post with a minimum lap of 6 in. attached in at least six places equally spaced unless otherwise shown on the plans. Do not locate splices in concentrated flow areas.

Requirements for installation of used temporary sediment control fence include the following:

- fabric with minimal or no visible signs of biodegradation (weak fibers),
- fabric without excessive patching (more than one patch every 15–20 ft.),
- posts without bends, and
- backing without holes.

4.4.9. **Biodegradable Erosion Control Logs.** Install biodegradable erosion control logs near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the biodegradable erosion control logs into the erosion measures used to control sediment in areas of higher flow. Install, align, and locate the biodegradable erosion control logs as specified below, as shown on the plans, or as directed.

Secure biodegradable erosion control logs in a method adequate to prevent displacement resulting from normal rain events, to prevent damage to the logs, and as approved, such that flow is not allowed under the logs. Temporarily removing and replacing biodegradable erosion logs to facilitate daily work is allowed at the Contractor's expense.

4.4.10. **Vertical Tracking.** Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with a track undercarriage capable of producing a linear soil impression measuring at least 12 in. long × 2–4 in. wide × 1/2–2 in. deep. Do not exceed 12 in. between track impressions. Install continuous linear track impressions where the 12-in. length impressions are perpendicular to the slope. Vertical tracking is required on projects where soil disturbing activities have occurred, unless otherwise approved.

4.5. **Monitoring and Documentation.** Monitor the control measures daily as long as there are BMPs in place or soil disturbing activities are evident to ensure compliance with the SWP3 and TPDES CGP TXR150000. During time suspensions when work is not occurring or contract non-work days, daily inspections are not required unless a rain event has occurred. Monitoring will consist of, but is not limited to, observing, inspecting, and documenting site locations with control measures and discharge points to provide maintenance and inspection of controls in accordance with the SWP3. Keep written records of daily monitoring. Document in the daily monitoring report the control measure condition, the date of inspection, required corrective actions, the responsible person for making the corrections, and the date corrective actions were completed. Maintain records of all monitoring reports at the project site or at an approved place. Provide copies within 7 days. Together, the CRPE and an Engineer's representative will complete the Construction Stage Gate Checklist periodically as directed.

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## 5. MEASUREMENT

5.1. **Rock Filter Dams.** Installation or removal of rock filter dams will be measured by the foot or by the cubic yard. The measured volume will include sandbags, when used.

5.1.1. **Linear Measurement.** When rock filter dams are measured by the foot, measurement will be along the centerline of the top of the dam.

5.1.2. **Volume Measurement.** When rock filter dams are measured by the cubic yard, measurement will be based on the volume of rock computed by the method of average end areas.

5.1.2.1. **Installation.** Measurement will be made in final position.

- 5.1.2.2. **Removal.** Measurement will be made at the point of removal.
- 5.2. **Temporary Pipe Slope Drains.** Temporary pipe slope drains will be measured by the foot.
- 5.3. **Temporary Paved Flumes.** Temporary paved flumes will be measured by the square yard of surface area. The measured area will include the energy dissipater at the flume outlet.
- 5.4. **Construction Exits.** Construction exits will be measured by the square yard of surface area.
- 5.5. **Earthwork for Erosion and Sediment Control.**
- 5.5.1. **Equipment and Labor Measurement.** Equipment and labor used will be measured by the actual number of hours the equipment is operated and the labor is engaged in the work.
- 5.5.2. **Volume Measurement.**
- 5.5.2.1. **In Place.**
- 5.5.2.1.1. **Excavation.** Excavation will be measured by the cubic yard in its original position and the volume computed by the method of average end areas.
- 5.5.2.1.2. **Embankment.** Embankment will be measured by the cubic yard in its final position by the method of average end areas. The volume of embankment will be determined between:
- the original ground surfaces or the surface upon which the embankment is to be constructed for the feature and
  - the lines, grades, and slopes of the accepted embankment for the feature.
- 5.5.2.2. **In Vehicles.** Excavation and embankment quantities will be combined and paid for under "Earthwork (Erosion and Sediment Control, In Vehicle)." Excavation will be measured by the cubic yard in vehicles at the point of removal. Embankment will be measured by the cubic yard in vehicles measured at the point of delivery. Shrinkage or swelling factors will not be considered in determining the calculated quantities.
- 5.6. **Construction Perimeter Fence.** Construction perimeter fence will be measured by the foot.
- 5.7. **Sandbags for Erosion Control.** Sandbags will be measured as each sandbag or by the foot along the top of sandbag berms or dams.
- 5.8. **Temporary Sediment Control Fence.** Installation or removal of temporary sediment control fence will be measured by the foot.
- 5.9. **Biodegradable Erosion Control Logs.** Installation or removal of biodegradable erosion control logs will be measured by the foot along the centerline of the top of the control logs.
- 5.10. **Vertical Tracking.** Vertical tracking will not be measured or paid for directly, but will be subsidiary to this Item.

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## 6. PAYMENT

The following will not be paid for directly, but will be subsidiary to pertinent Items:

- erosion control measures for Contractor project-specific locations (PSLs) inside and outside the right of way (e.g., construction and haul roads, field offices, equipment and supply areas, plants, and material sources);
- removal of litter, unless a separate pay item is shown on the plans;
- repair to devices and features damaged by Contractor operations;



- added measures and maintenance needed due to negligence, carelessness, lack of maintenance, and failure to install permanent controls;
- removal and reinstallation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the device; and
- minor adjustments including but not limited to plumbing posts, reattaching fabric, minor grading to maintain slopes on an erosion embankment feature, or moving small numbers of sandbags.

Stabilization of disturbed areas will be paid for under pertinent Items except vertical tacking, which will be subsidiary.

Furnishing and installing pipe for outfalls associated with sediment traps and ponds will not be paid for directly, but will be subsidiary to the excavation and embankment under this Item.

- 6.1. **Rock Filter Dams.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows.

- 6.1.1. **Installation.** Installation will be paid for as "Rock Filter Dams (Install)" of the type and slope as specified. This price is full compensation for furnishing and operating equipment, finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

- 6.1.2. **Removal.** Removal will be paid for as "Rock Filter Dams (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

When the Engineer directs that the rock filter dam installation or portions thereof be replaced, payment will be made at the unit price bid for "Rock Filter Dams (Remove)" and for "Rock Filter Dams (Install)" of the type specified. This price is full compensation for furnishing and operating equipment, finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

- 6.2. **Temporary Pipe Slope Drains.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Temporary Pipe Slope Drains" of the size specified. This price is full compensation for furnishing materials, removal and disposal, furnishing and operating equipment, labor, tools, and incidentals.

Removal of temporary pipe slope drains will not be paid for directly, but will be subsidiary to the installation Item. When the Engineer directs that the pipe slope drain installation or portions thereof be replaced, payment will be made at the unit price bid for "Temporary Pipe Slope Drains" of the size specified, which is full compensation for the removal and reinstallation of the pipe drain.

Earthwork required for the pipe slope drain installation, including construction of the sediment trap, will be measured and paid for under "Earthwork for Erosion and Sediment Control."

Riprap concrete or stone, when used as an energy dissipater or as a stabilized sediment trap, will be measured and paid for in accordance with Item 432.

- 6.3. **Temporary Paved Flumes.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Temporary Paved Flume (Install)" or "Temporary Paved Flume (Remove)." This price is full compensation for furnishing and placing materials, removal and disposal, equipment, labor, tools, and incidentals.

When the Engineer directs that the paved flume installation or portions thereof be replaced, payment will be made at the unit prices bid for "Temporary Paved Flume (Remove)" and "Temporary Paved Flume (Install)." These prices are full compensation for the removal and replacement of the paved flume and for equipment, labor, tools, and incidentals.

Earthwork required for the paved flume installation, including construction of a sediment trap, will be measured and paid for under "Earthwork for Erosion and Sediment Control."

- 6.4. **Construction Exits.** Contractor-required construction exits from off right of way locations or on right of way PSLs will not be paid for directly, but will be subsidiary to pertinent Items.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for construction exits needed on right of way access to work areas required by the Department will be paid for at the unit price bid for "Construction Exits (Install)" of the type specified or "Construction Exits (Remove)." This price is full compensation for furnishing and placing materials, excavating, removal and disposal, cleaning vehicles, labor, tools, and incidentals.

When the Engineer directs that a construction exit or portion thereof be removed and replaced, payment will be made at the unit prices bid for "Construction Exit (Remove)" and "Construction Exit (Install)" of the type specified. These prices are full compensation for the removal and replacement of the construction exit and for equipment, labor, tools, and incidentals.

Construction of sediment traps used in conjunction with the construction exit will be measured and paid for under "Earthwork for Erosion and Sediment Control."

- 6.5. **Earthwork for Erosion and Sediment Control.**

- 6.5.1. **Initial Earthwork for Erosion and Sediment Control.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Excavation (Erosion and Sediment Control, In Place)," "Embankment (Erosion and Sediment Control, In Place)," "Excavation (Erosion and Sediment Control, In Vehicle)," "Embankment (Erosion and Sediment Control, In Vehicle)," or "Earthwork (Erosion and Sediment Control, In Vehicle)."

This price is full compensation for excavation and embankment, including hauling; disposal of material not used elsewhere on the project; embankments including furnishing material from approved sources and construction of erosion control features; and equipment, labor, tools, and incidentals.

Sprinkling and rolling required by this Item will not be paid for directly, but will be subsidiary to this Item.

- 6.5.2. **Maintenance Earthwork for Erosion and Sediment Control for Cleaning and Restoring Control Measures.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid under a Contractor Force Account Item from invoice provided to the Engineer.

This price is full compensation for excavation, embankment, and re-grading, including dewatering for removal of accumulated sediment, and the removal of accumulated sediment in various erosion control installations as directed, hauling, and disposal of material not used elsewhere on the project; excavation for construction of erosion control features; embankments, including furnishing material from approved sources and construction of erosion control features; and equipment, labor, tools, and incidentals.

Earthwork needed to remove and obliterate erosion control features will not be paid for directly, but will be subsidiary to pertinent Items unless otherwise shown on the plans.

Sprinkling and rolling required by this Item will not be paid for directly, but will be subsidiary to this Item.

- 6.6. **Construction Perimeter Fence.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Construction Perimeter Fence." This price is full compensation for furnishing and placing the fence; digging, fence posts, wire, and flagging; removal and disposal; and materials, equipment, labor, tools, and incidentals.

Removal of construction perimeter fence will not be paid for directly, but will be subsidiary to the installation Item. When the Engineer directs that the perimeter fence installation or portions thereof be removed and replaced, payment will be made at the unit price bid for "Construction Perimeter Fence," which is full compensation for the removal and reinstallation of the construction perimeter fence.

- 6.7. **Sandbags for Erosion Control.** Sandbags will be paid for at the unit price bid for “Sandbags for Erosion Control” (of the height specified when measurement is by the foot). This price is full compensation for materials, placing sandbags, removal and disposal, equipment, labor, tools, and incidentals.
- Removal of sandbags will not be paid for directly, but will be subsidiary to the installation Item. When the Engineer directs that the sandbag installation or portions thereof be replaced, payment will be made at the unit price bid for “Sandbags for Erosion Control,” which is full compensation for the reinstallation of the sandbags.
- 6.8. **Temporary Sediment Control Fence.** The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid as follows.
- 6.8.1. **Installation.** Installation will be paid for as “Temporary Sediment-Control Fence (Install).” This price is full compensation for furnishing and operating equipment, finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.
- 6.8.2. **Removal.** Removal will be paid for as “Temporary Sediment-Control Fence (Remove).” This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.
- 6.9. **Biodegradable Erosion Control Logs.** The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid as follows.
- 6.9.1. **Installation.** Installation will be paid for as “Biodegradable Erosion Control Logs (Install)” of the size specified. This price is full compensation for furnishing and operating equipment, finish backfill and grading, staking, proper disposal, labor, materials, tools, and incidentals.
- 6.9.2. **Removal.** Removal will be paid for as “Biodegradable Erosion Control Logs (Remove).” This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.
- 6.10. **Vertical Tracking.** Vertical tracking will not be measured or paid for directly, but will be subsidiary to this Item.

# Item 510

## One-Way Traffic Control



### 1. DESCRIPTION

Provide one-way traffic control using one of the methods shown on the plans.

### 2. WORK METHODS

- 2.1. **Flagger Control Method.** Furnish flaggers in accordance with Article 7.2., "Safety," on each approach to the activity area to control traffic. Furnish additional flaggers at all intersections, public driveways, and commercial driveways as determined by the Engineer. Furnish a STOP/SLOW paddle in conformance with the TMUTCD for each flagger. If desired, use automated flagger assistance devices if approved.
- 2.2. **Pilot Car Method.** Furnish a licensed driver and pilot vehicle with required signs attached. Furnish flaggers in accordance with Article 7.2. on each approach to the activity area to control traffic. Furnish additional flaggers at all intersections, public driveways, and commercial driveways as determined by the Engineer. Furnish STOP/SLOW paddles and signs in conformance with the TMUTCD. Instruct drivers to follow the pilot vehicle and to not pass the cars ahead.
- 2.3. **Portable Traffic Signal Method.** Furnish, operate, and maintain new or used portable traffic signal units. Assure used units are in good working condition and are approved before use. Approved units are on the Department's *Compliant Work Zone Traffic Control Device List*. Units will remain the property of the Contractor.

### 3. MEASUREMENT

When shown on the plans as a bid item, this Item will be measured as follows.

- 3.1. **Flagger Control Method.** By the actual number of hours flaggers are engaged in flagging activities. Each flagger will be measured separately.
- 3.2. **Pilot Car Method.** By the actual number of hours of use for the combination of two flaggers and pilot vehicle. Additional flaggers, when directed by the Engineer, will be measured by the flagger control method.
- 3.3. **Portable Traffic Signal Method.** By the month, including two units operated by a single controller set up and operational on the worksite.

### 4. PAYMENT

Unless otherwise shown on the plans, the work performed and materials furnished in accordance with this Item will not be paid for directly but will be subsidiary to pertinent Items.

When shown on the plans as a bid item, the work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for the method specified. This price is full compensation for furnishing and operating equipment, pilot car, pilot vehicle driver, flaggers, signs, labor, tools, and incidentals. Payment for "Portable Traffic Signal Units" and "Portable Traffic Signals" is full compensation for the units, setup, relocating, removing, replacing parts, batteries, fuel, oil, and incidentals.

Item 560

Mailbox Assemblies



|    |  |
|----|--|
| 1. | <p><b>DESCRIPTION</b></p> <p>Install, remove, temporarily relocate, or replace mailbox assemblies of the type specified.</p>   |
| 2. | <p><b>MATERIAL</b></p> <p>Furnish mailbox assemblies as shown on the plans. An assembly does not include the mailbox unless shown otherwise on the plans. Provide new mailbox assemblies for permanent installations.</p>  |
| 3. | <p><b>CONSTRUCTION</b></p> <p>Temporarily relocate mailbox assemblies as shown on the plans or as directed. Furnish and install approved mailbox assemblies and mount mailboxes on those assemblies. Maintain mailbox assemblies in a serviceable condition. Furnish and install additional mailbox assemblies as directed. Relocate mailbox and assemblies to permanent locations upon completion of construction work.</p>   |
| 4. | <p><b>MEASUREMENT</b></p> <p>This Item will be measured by each permanent mailbox assembly installed.</p>  |
| 5. | <p><b>PAYMENT</b></p> <p>The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Mailbox Installation (Single)," of the type specified; "Mailbox Installation (Double)," of the type specified; or "Mailbox Installation (Multiple)," of the type specified. This price is full compensation for installing mailboxes and reflectors in permanent locations, materials, equipment, labor, tools, and incidentals. Removing existing or installing and moving temporary mailbox assemblies will not be paid for directly, but will be subsidiary to pertinent Items.</p> |

# Item 644

## Small Roadside Sign Assemblies



### 1. DESCRIPTION

- 1.1. **Installation.** Furnish, fabricate, and erect small roadside sign assemblies or bridge-mounted clearance sign assemblies consisting of the signs, sign supports, foundations (when required), and associated mounting hardware.
- 1.2. **Relocation.** Relocate existing small roadside sign assemblies or bridge-mounted clearance sign assemblies and furnish and fabricate material as required.
- 1.3. **Removal.** Remove existing small roadside sign assemblies or bridge-mounted clearance sign assemblies.

### 2. MATERIALS

Furnish all materials unless otherwise shown on the plans. Furnish only new materials. Furnish and fabricate materials in accordance with the following Items and as shown on the plans.

- Item 421, "Hydraulic Cement Concrete"
- Item 440, "Reinforcement for Concrete"
- Item 441, "Steel Structures"
- Item 442, "Metal for Structures"
- Item 445, "Galvanizing"
- Item 636, "Signs"
- Item 656, "Foundations for Traffic Control Devices"

Use galvanized steel, stainless steel, dichromate sealed aluminum, or other materials shown on the plans for pipe, bolts, nuts, washers, lock washers, screws, and other sign assembly hardware. When dissimilar metals are used, select or insulate metals to prevent corrosion.

### 3. CONSTRUCTION

Construct foundations in accordance with Item 656. Plumb sign supports. Do not spring or rake posts to secure proper alignment. Use established safety practices when working near underground or overhead utilities. Consult the appropriate utility company before beginning work.

- 3.1. **Fabrication.** Fabricate sign supports in accordance with Item 441. Ensure all components fit properly.

Verify the length of each post for each sign before fabrication to meet field conditions and sign-mounting heights shown on the plans.

Hot-dip galvanize fabricated parts in accordance with Item 445. Punch or drill any holes in steel parts or members before galvanizing. Repair galvanizing for any steel part or member damaged during assembly, transit, or erection, or for any steel part or member welded, when permitted, after galvanizing. Perform all galvanizing repairs in accordance with Section 445.3.4., "Repairs."

- 3.2. **Installation.** Locate and install sign supports as shown on the plans, unless directed to shift the sign supports within design guidelines to secure a more desirable location or avoid conflict with utilities and underground appurtenances. Stake sign support locations for verification by the Engineer.

Install stub posts of the type, spacing, orientation, and projection shown on the plans. Remove and replace posts damaged during installation at the Contractor's expense.

Connect the upper post sections to the stub post sections as shown on the plans. Torque connection bolts as shown on the plans.

Attach signs to supports in conformance with the plans and pertinent Items.

- 3.3. **Relocation.** Reuse the existing signs as required unless otherwise shown on the plans. Furnish and install new stub posts in new foundations for relocated sign assemblies. Erect the new supports on the new stub posts and attach the existing signs to the supports in conformance with the plans and pertinent Items. Remove existing foundations to be abandoned in accordance with Section 644.3.4., "Removal."
- 3.4. **Removal.** Remove abandoned concrete foundations to 2 ft. below finished grade unless otherwise shown on the plans. Cut off and remove steel protruding from the remaining concrete. Backfill the remaining hole with material equal in composition and density to the surrounding area. Replace any surfacing with like material to equivalent condition.
- 3.5. **Handling and Storage.** Handle and store existing signs or portions of signs removed so they are not damaged. Store all signs to be reused off the ground and in a vertical position until erected. Prevent any damage to the various sign assembly components. Replace any portion of the sign damaged by the Contractor designated for reuse or salvage, including messages removed.
- Store all new signs off the ground and in a vertical position until erected. Store new sheet aluminum substrate signs in a weatherproof building. Extruded aluminum substrate signs may be stored outdoors.
- Stockpile all removed sign components that will be reused or become the property of the Department at designated locations. Accept ownership of unsalvageable materials and dispose of them in conformance with federal, state, and local regulations.
- 3.6. **Cleaning.** Wash the entire sign after installation using a biodegradable cleaning solution acceptable to the sign face materials manufacturer to remove dirt, grease, oil smears, streaks, finger marks, and other foreign materials.

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#### 4. MEASUREMENT

This Item will be measured as each small roadside assembly or bridge-mounted clearance sign assembly installed, removed, or relocated.

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#### 5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Install Small Roadside Sign Assemblies" of the type specified, "Install Bridge-Mounted Clearance Sign Assemblies" of the type specified, "Relocate Small Roadside Sign Assemblies" of the type specified, "Relocate Bridge-Mounted Clearance Sign Assemblies" of the type specified, "Remove Small Roadside Sign Assemblies," or "Remove Bridge-Mounted Clearance Sign Assemblies."

- 5.1. **Installation.** This price is full compensation for furnishing, fabricating, galvanizing, and erecting the supports; constructing foundations, including concrete (when required); furnishing complete signs, including sign connections and all hardware; attaching the signs to the supports; preparing and cleaning the signs; and materials, equipment, labor, tools, and incidentals.
- 5.2. **Relocation.** This price is full compensation for removing existing sign assemblies and related materials; furnishing and installing new stub posts and new sign supports; constructing foundations, including concrete (when required); new hardware; reinstallation of signs; preparing and cleaning the signs; salvaging; disposal

of unsalvageable materials; removing existing foundations, backfilling, and surface placement; and materials, equipment, labor, tools, and incidentals.

- 5.3. **Removal.** This price is full compensation for removing existing sign assemblies and related materials; salvaging; disposal of unsalvageable materials; removing existing foundations, backfilling, and surface placement; and materials, equipment, labor, tools, and incidentals.



# Item 666

## Retroreflectorized Pavement Markings



### 1. DESCRIPTION

Furnish and place retroreflectorized or non-retroreflectorized (shadow) pavement markings.

### 2. MATERIALS

- 2.1. **Type I Marking Materials (Thermoplastic).** Furnish in accordance with [DMS-8220](#), "Hot Applied Thermoplastic."
- 2.2. **Type II Marking Materials (Traffic Paint).** Furnish in accordance with [DMS-8200](#), "Traffic Paint."
- 2.3. **Type III Marking Materials (Multipolymer).** Furnish in accordance with [DMS-8230](#), "Multipolymer Pavement Markings."
- 2.4. **Glass Traffic Beads.** For Type I, Type II, and Type III pavement markings, furnish drop-on glass beads in accordance with [DMS-8290](#), "Glass Traffic Beads," to meet the specified retroreflective performance requirements for all permanent, longitudinal pavement markings.
- 2.5. **Labeling.** To sample material, use clearly marked containers that indicate material type, color, mass, manufacturer, and batch number.

### 3. EQUIPMENT

- 3.1. **General Requirements.** Use pavement marking equipment that:
  - is maintained in satisfactory condition;
  - meets or exceeds the requirements of the National Board of Fire Underwriters and the Texas Railroad Commission for this application;
  - applies beads by an automatic bead dispenser attached to the pavement marking equipment such that the beads are dispensed uniformly and almost instantly upon the marking as the marking is being applied to the road surface. The bead dispenser must have an automatic cut-off control, synchronized with the cut-off of the pavement marking equipment;
  - has an automatic cut-off device with manual operating capabilities to provide clean marking with square ends;
  - can produce the types and shapes of profiles specified; and
  - can provide continuous mixing and agitation of the pavement marking material. The use of pans, aprons, or similar appliances that the die overruns will not be permitted for longitudinal striping applications exceeding a project length of 2,000 ft., unless otherwise approved.

When placing multipolymer pavement markings (MPM), use equipment designed for pavement preparation and the application of selected type of MPM material.

Provide a handheld thermometer capable of measuring the temperature between 300°F and 450°F to measure the temperature of marking material in the field, when applying Type I material.

- 3.1.1. **Measuring Retroreflectivity.** Use a mobile retroreflectometer approved by the Materials and Tests Division and certified by the Texas A&M Transportation Institute (TTI) Mobile Retroreflectometer Certification Program.

Use a portable retroreflectometer that:

- uses 30-meter geometry and meets the requirements described in ASTM E1710;
- has either an internal Global Positioning System (GPS) or the ability to be linked with an external GPS with a minimum location accuracy of 16.5 ft., in accordance with the Circular Error Probability (CEP) method (CEP is the radius of the circle with its origin at a known position that encompasses 50% of the readings returned from the GPS instrument); and
- can record and export the GPS location and retroreflectivity reading for each measurement.

3.2.

**Material Placement Requirements.** Use equipment that can place:

- a minimum length of 30,000 ft. for 6-in. solid or broken non-profile markings per working day at the specified thickness, unless otherwise approved;
- a minimum length of 15,000 ft. of solid or broken profile pavement markings per working day at the specified thickness;
- linear non-profile markings up to 8 in. wide in a single pass;
- non-profile pavement markings other than solid or broken lines at an approved production rate;
- a centerline and no-passing barrier-line configuration (consisting of one broken line and two solid lines simultaneously) to the alignment, spacing, and thickness for non-profile pavement markings shown on the plans;
- solid and broken lines simultaneously;
- white line from both sides;
- lines with clean edges, reasonably square ends, uniform width with a tolerance of  $\pm 1/8$  in., and uniform thickness;
- skip lines between 10 and 10.5 ft., a stripe-to-gap ratio of 10 to 30, and a stripe-gap cycle between 39.5 ft. and 40.5 ft., automatically; and
- beads uniformly and almost instantly on the marking as the marking is applied.

For Type I markings, equipment must be capable of providing uniform heating of striping materials to temperatures exceeding 390°F (199°C). Ensure that the material is not heated to a temperature above the maximum temperature recommended by the manufacturer.

For Type I markings, equipment must be capable of maintaining the thermoplastic striping material in a plastic state in all mixing and conveying parts, including the line dispensing device, until applied.

---

## 4.

## CONSTRUCTION

Place markings before opening to traffic unless short-term or work zone markings are allowed.

4.1.

**General.** Obtain approval for the sequence of work and estimated daily production. Minimize interference to roadway operations when placing markings on roadways open to traffic. Use traffic control as shown on the plans or as approved. Protect all markings placed under open-traffic conditions from traffic damage and disfigurement. Replace markings when more than 5% of the markings are damaged or disfigured.

Establish guides to mark the lateral location of pavement markings as shown on the plans or as directed and have guide locations verified. Use material for guides that will not leave a permanent mark on the roadway.

Apply markings on completely dry pavement that passes the following tests.

- **Type I Marking Application.** Place a sample of Type I marking material on a piece of tarpaper placed on the pavement. Allow the material to cool to ambient temperature, then inspect the underside of the tarpaper in contact with the pavement. Pavement will be considered dry if there is no condensation on the tarpaper.

- **Type II and Type III Marking Application.** Place a 1-sq. ft. piece of clear plastic on the pavement and weigh down the edges. The pavement is considered dry if, when inspected after 15 min., no condensation has occurred on the underside of the plastic.

Apply markings:

- using personnel skilled and experienced in installation of pavement markings;
- that meet the requirements of [Tex-828-B](#);
- that meet minimum retroreflectivity requirements;
- using widths and colors shown on the plans;
- at locations shown on the plans;
- in proper alignment with the guides without deviating from the alignment more than 1 in. per 200 ft. of roadway or more than 2 in. maximum;
- without abrupt deviations;
- free of blisters and with no more than 5% holes or voids (percent by area);
- with uniform cross-section, density, and thickness;
- with clean and reasonably square ends; and
- that are retroreflectorized with drop-on glass beads.

Remove all applied markings that are not in alignment or sequence as shown on the plans or in accordance with the specifications at the Contractor's expense, in accordance with Item 677, "Eliminating Existing Pavement Markings and Markers," except for measurement and payment.

- 4.2. **Spot Striping.** Perform spot striping on a callout basis with a minimum callout quantity as shown on the plans.
- 4.3. **Surface Preparation.** Prepare surfaces in accordance with this Section unless otherwise shown on the plans.
  - 4.3.1. **Surface Cleaning for Pavement Marking Applications on New Asphalt Surfaces with No Existing Pavement Markings and for Retracing of Existing Pavement Markings on All Surfaces.** Use air blast or broom to clean the pavement surface to remove loose material unless otherwise shown on the plans. A sealer for Type I markings is not required unless otherwise shown on the plans. If cleaning is needed beyond what is specified, Engineer can use force account to compensate for the extra effort. This is mainly applied when the pavement is covered with thick layer of dirt or mud or there is grass growing on the pavement.
  - 4.3.2. **Surface Cleaning for All Concrete Surfaces and Asphalt Surfaces Only When Specified in the Plans (Excludes New Asphalt Surfaces with No Existing Pavement Markings and Retracing).** Clean surfaces in accordance with Item 678, "Pavement Surface Preparation for Markings," to remove curing membrane, dirt, grease, existing loose and flaking construction markings, and other forms of contamination.
  - 4.3.3. **Sealer for Type I Markings.** Apply a pavement sealer when shown on the plans. Pavement sealers are recommended for old asphalt surfaces (more than 3 yr. old) and for all concrete surfaces before placing Type I markings on locations that do not have existing markings. The pavement sealer may be either a Type II marking or an acrylic or epoxy sealer as recommended by the Type I marking manufacturer, unless otherwise shown on the plans. Follow the manufacturer's directions for application of acrylic or epoxy sealers. Clean the surface of sealer that becomes dirty after placement by washing or in accordance with Section 666.4.3.1., "Surface Cleaning for Pavement Marking Applications on New Asphalt Surfaces with No Existing Pavement Markings and for Retracing of Existing Pavement Markings on All Surfaces," as directed. Place the sealer in the same configuration and color (unless clear) as the Type I markings unless otherwise shown on the plans.
- 4.4. **Application.** Apply markings during favorable weather unless otherwise directed. If markings are placed at Contractor option when inclement weather is impending and the markings are damaged by subsequent precipitation, the Contractor is responsible for all required replacement costs.

- 4.4.1. **Type I Markings.** Place all Type I markings after the sealer cures. Apply within the temperature limits recommended by the material manufacturer. Flush the spray head if spray application operations cease for 5 min. or longer, by spraying marking material into a pan or similar container until the material being applied is at the recommended temperature.

Apply on clean, dry pavement passing the moisture test in accordance with Section 666.4.1., “General,” and with a surface temperature above 50°F when measured in accordance with [Tex-829-B](#).

The Engineer will measure thickness of markings in accordance with [Tex-854-B](#).

- 4.4.1.1. **Non-Profile Pavement Markings.** Apply Type I non-profile markings with a minimum thickness of:
- 0.100 in. (100 mils) for new markings and retracing water-based markings on surface treatments involving Item 316, “Seal Coat,”
  - 0.060 in. (60 mils) for retracing on thermoplastic pavement markings, or
  - 0.090 in. (90 mils) for all other Type I markings.

- 4.4.1.2. **Profile Pavement Markings.** Apply Type I profile markings with a minimum thickness of 0.090 in. (90 mils) for the longitudinal stripe portion.

In addition, at a longitudinal spacing shown on the plans, the markings must be profiled in a vertical manner such that the profile is transverse to the longitudinal marking direction. The profile must not be less than 0.30 in. (300 mils) nor greater than 0.41 in. (410 mils) in height when measured from the normal top surface plane of the base marking to the top of the raised profile marking. The transverse width of the profile must not be less than 5.25 in. and the longitudinal width not less than 2 in., when measured at the top surface plane of the profile bar. The profile may be either a one or two transverse bar profile. When the two transverse bar profile is used, the spacing between the bases of the profile bars must not exceed 0.50 in. The above dimensions for transverse bars are for 6-in. wide longitudinal marking.

The raised profile markings must be uniform in size, appearance, and spacing. When profile markings are applied in a two-step process, the raised profile markings must be applied first and then the stripe applied over them. The raised profile markings in a two-step process may be circular in shape. The circular profile markings must be uniform in diameter and the diameter must not be less than 5.25 in. The height of the apex must not be less than 0.30 in. (300 mils) nor greater than 0.41 in. (410 mils) when measured from the normal top surface of the base marking to the top of the raised profile marking.

- 4.4.1.3. **Type I All-Weather Pavement Markings.** Apply Type I all-weather markings to at least 100-mil film thickness.

- 4.4.2. **Type II Markings.** Apply on surfaces with a minimum surface temperature of 50°F when measured in accordance with [Tex-829-B](#). Apply at least 30 gal. per mile on concrete and asphalt surfaces and at least 33 gal. per mile on surface treatments for a solid 6-in. line. Adjust application rates proportionally for other widths. When Type II markings are used as a sealer for Type I markings, apply at least 22-1/2 gal. per mile using Type II drop-on beads.

Apply Type II all-weather markings to at least 25-mil wet film thickness.

- 4.4.3. **Type III Markings.** Apply in conformance with the manufacturer’s recommendations.

- 4.4.4. **Bead Coverage and Embedment.** Provide a uniform distribution of beads across the surface of the stripe with 40–60% bead embedment.

- 4.4.5. **Durability.** Provide markings that do not lose more than 5% of the striping material in any 1-ft. section of stripe during their performance period in accordance with Section 666.4.8., “Performance Period.” Measure the durability in accordance with ASTM D913.

- 4.5. **Retroreflectivity Requirements.** Retroreflectivity requirements are not required for Contracts with less than 20,000 total ft. of longitudinal pavement markings, callout work, black shadow markings, or work zone pavement markings. Retroreflectivity requirements are for dry conditions unless otherwise specified.
- 4.5.1. **Type I Markings.** All Type I markings, including profile markings, must meet the following minimum retroreflectivity values for all longitudinal edgeline, centerline, no-passing barrier line, and lane line markings.
- **White Markings (ASTM E1710).** 250 millicandelas per square meter per lux (mcd/m<sup>2</sup>/lx).
  - **Yellow Markings (ASTM E1710).** 175 mcd/m<sup>2</sup>/lx.
- Collect retroreflectivity measurement for markings applied on pavement surface other than seal coat after 10 days but not later than 30 days from the time of application. For markings applied on seal coat, measure retroreflectivity after 3 days but not later than 10 days from the time of application.
- 4.5.2. **Type I High-Performance Markings.** Type I high-performance markings must meet the following minimum retroreflectivity values for all longitudinal edgeline, centerline, no-passing barrier line, and lane line markings when measured any time after 30 days but not later than 60 days from the time of application.
- **White Markings (ASTM E1710).** 400 mcd/m<sup>2</sup>/lx.
  - **Yellow Markings (ASTM E1710).** 250 mcd/m<sup>2</sup>/lx.
- 4.5.3. **Type I All-Weather Markings.** Type I all-weather markings must meet the following minimum retroreflectivity values for all longitudinal edgeline, centerline, no-passing barrier line, and lane line markings when measured any time after 30 days but not later than 60 days from the time of application.
- **White Markings Dry (ASTM E1710).** 400 mcd/m<sup>2</sup>/lx.
  - **Yellow Markings Dry (ASTM E1710).** 250 mcd/m<sup>2</sup>/lx.
  - **White Markings Wet Continuous (ASTM E2832).** 150 mcd/m<sup>2</sup>/lx.
  - **Yellow Markings Wet Continuous (ASTM E2832).** 125 mcd/m<sup>2</sup>/lx.
- 4.5.4. **Type II Markings.** Type II markings must meet the following minimum retroreflectivity values for all longitudinal edgeline, centerline, no-passing barrier line, and lane line, markings.
- **White Markings.** 175 mcd/m<sup>2</sup>/lx.
  - **Yellow Markings.** 125 mcd/m<sup>2</sup>/lx.
- Collect retroreflectivity measurement for markings applied on pavement surface other than seal coat after 10 days but not later than 30 days from the time of application. For markings applied on seal coat, measure retroreflectivity after 3 days but not later than 10 days from the time of application.
- 4.5.5. **Type II All-Weather Markings.** Meet the following minimum retroreflectivity values for all longitudinal edgeline, centerline, no-passing barrier line, and lane line markings.
- **White Markings Dry (ASTM E1710).** 250 mcd/m<sup>2</sup>/lx.
  - **Yellow Markings Dry (ASTM E1710).** 150 mcd/m<sup>2</sup>/lx.
  - **White Markings Wet Continuous (ASTM E2832).** 100 mcd/m<sup>2</sup>/lx.
  - **Yellow Markings Wet Continuous (ASTM E2832).** 75 mcd/m<sup>2</sup>/lx.
- Collect retroreflectivity measurement for markings applied on pavement surface other than seal coat after 10 days but not later than 30 days from the time of application. For markings applied on seal coat, measure the retroreflectivity after 3 days but not later than 10 days from the time of application.
- 4.5.6. **Type III Markings.** Type III markings must meet the following minimum retroreflectivity values for all longitudinal edgeline, centerline, no-passing barrier line, and lane line markings when measured any time after 30 days but not later than 60 days from the time of application.
- **White Markings.** 400 mcd/m<sup>2</sup>/lx.
  - **Yellow Markings.** 250 mcd/m<sup>2</sup>/lx.

- 4.5.7. **Type III All-Weather Markings.** Type III all-weather markings must meet the following minimum retroreflectivity values for all longitudinal edgeline, centerline, no-passing barrier line, and lane line markings when measured any time after 30 days but not later than 60 days from the time of application.
- **White Markings Dry (ASTM 1710).** 400 mcd/m<sup>2</sup>/lx.
  - **Yellow Markings Dry (ASTM 1710).** 250 mcd/m<sup>2</sup>/lx.
  - **White Markings Wet Continuous (ASTM 2832).** 150 mcd/m<sup>2</sup>/lx.
  - **Yellow Markings Wet Continuous (ASTM 2832).** 125 mcd/m<sup>2</sup>/lx.
- 4.6. **Retroreflectivity Measurements.** Use a mobile retroreflectometer to measure the retroreflectivity of markings for Contracts with more than 50,000 total ft. of longitudinal pavement markings, unless otherwise shown on the plans. For Contracts between 20,000 and 50,000 total ft. of longitudinal pavement markings, mobile or portable retroreflectometers may be used at the Contractor's discretion. Coordinate with and obtain authorization from the Engineer before starting any retroreflectivity data collection.
- Use a portable retroreflectometer for measuring the wet continuous retroreflectivity in accordance with ASTM E2832. Notify the Department when wet retroreflectivity measurements are to be taken. The Department will observe the wet retroreflectivity readings.
- 4.6.1. **Mobile Retroreflectometer Measurements.** Provide mobile measurement averages for every 0.1 mi. unless otherwise specified or approved. Take measurements on each section of roadway for each series of markings (e.g., edgeline, center skip line, and each line of a double line) and for each direction of traffic flow. Measure each line in both directions for centerlines on two-way roadways (i.e., measure both double solid lines in both directions and measure all center skip lines in both directions). Furnish measurements in accordance with Item 667, "Mobile Retroreflectivity Data Collection for Pavement Markings," unless otherwise approved. The Engineer may require a field comparison check using a calibrated portable retroreflectometer for verification and to ensure accuracy. Use all equipment in conformance with the manufacturer's recommendations and directions. Inform the Engineer and TTI at least 24 hr. before taking any measurements.
- A marking meets the retroreflectivity requirements if:
- the combined average retroreflectivity measurement for a 1-mi. segment meets the minimum retroreflectivity values specified and no more than 30% of the retroreflectivity measurement values are below the minimum retroreflectivity requirements value within that 1-mi. segment; or
  - the combined average retroreflectivity measurement for a 1-mi. segment does not meet the minimum retroreflectivity values specified, but no more than 20% of the retroreflectivity measurements within that 1-mi. segment are below the minimum retroreflectivity requirement.
- The 1-mi. segment will start from the beginning of the data collection and end after a mile's worth of measurements have been taken. Each subsequent mile of measurements will be a new segment. Centerlines with two stripes (either solid or broken) will result in 2 mi. of data for each mile segment. Each centerline stripe must be tested for compliance as a stand-alone stripe.
- Restripe at the Contractor's expense if the markings fail retroreflectivity requirements. Take retroreflectivity measurements of all restriped markings following the time interval allowed based on the type of marking and the pavement surface for the latest application.
- For all Type I markings, if the restripe application does not meet minimum retroreflectivity requirements or the initial stripe combined with the restripe exceeds 0.180 in. (180 mils), the Engineer may require:
- removal of all existing markings,
  - a new application as initially specified, and
  - a repeat of the application process until minimum retroreflectivity requirements are met.

For all Type III markings, if the first application does not meet minimum retroreflectivity requirements, the Engineer may require removal of all existing markings, a new application as initially specified, and a repeat of the application process until minimum retroreflectivity requirements are met.

- 4.6.2. **Portable Retroreflectometer Measurements.** For non-all-weather markings, provide portable measurement averages for every 1.0 mi. unless otherwise specified or approved. Using a portable reflectometer, take at least 20 measurements for each 1-mi. section of roadway for each series of markings (e.g., edgeline, center skip line, and each line of a double line) and direction of traffic flow. Measure each line in both directions for centerlines on two-way roadways (i.e., measure both double solid lines in both directions and measure all center skip lines in both directions). The spacing between each measurement must be at least 100 ft. The Engineer may decrease the mileage frequency for measurements if the previous measurements provide satisfactory results. The Engineer may resume the original number of measurements if concerns arise.

For all-weather markings, take at least three measurements for each series of markings (e.g., edgeline, center skip line, and each line of a double line) and direction of traffic flow and average the three measurements for each marking. The spacing between each measurement must be at least 100 ft. If the average of the three measurements taken on an individual marking falls below the minimum acceptable retroreflectivity value, take at least six additional measurements on that individual marking and average them. These six additional measurements must also be spaced at least 100 ft. apart. If the average of these six measurements falls below the minimum acceptable retroreflectivity value, the marking does not meet the performance requirements.

Restripe at the Contractor's expense if the averages of these measurements fail. Retake portable retroreflectometer measurements of all restriped markings following the time interval allowed based on the type of marking and the pavement surface for the latest application.

- 4.7. **Traffic Control.** Provide traffic control, as required, when taking portable retroreflectivity measurements after marking application. For the minimum traffic control requirements on low-volume roadways (as shown on the plans), refer to "Temporary Road Closure" in Part 6 of the TMUTCD. For all other roadways, the minimum traffic control requirements will be as shown on the Traffic Control Plan (TCP) standard sheets TCP (3-1) and TCP (3-2). The lead vehicle will not be required on divided highways. The TCP and traffic control devices must meet the requirements listed in Item 502, "Barricades, Signs, and Traffic Handling." Time restrictions that apply during striping application will also apply during the retroreflectivity inspections, except when using the mobile retroreflectometer, unless otherwise shown on the plans or approved.

- 4.8. **Performance Period.** All longitudinal markings must meet the minimum retroreflectivity requirements within the timeframe specified. All markings must meet all other performance requirements in accordance with this Item for at least 30 calendar days after installation. Unless otherwise directed, remove pavement markings that fail to meet requirements and replace them at the Contractor's expense. Replace failing markings within 30 days of notification. All replacement markings must also meet all requirements in accordance with this Item for at least 30 calendar days after installation.

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## 5. MEASUREMENT

This Item will be measured by the foot; by each word, symbol, or shape; or by any other unit shown on the plans. Each stripe will be measured separately.

This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.

Acrylic or epoxy sealer, or Type II markings when used as a sealer for Type I markings, will be measured by the foot; by each word, symbol, or shape; or by any other unit shown on the plans.

Profile pavement markings will be measured as a marking consisting of both the pavement marking stripe and the raised profile, regardless of the installation method used.

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**6. PAYMENT**

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Pavement Sealer" of the size specified; "Pavement Sealer (Call Out)" of the size specified; "Retroreflectorized Pavement Markings" of the type, color, shape, width, size, and thickness specified; "Non-Retroreflectorized Shadow Pavement Markings" of the type, width, size, and thickness specified; "Type I High Performance Pavement Markings" of the color, width, size, and thickness specified; "All-Weather Pavement Markings" of the type, color, shape, width, and thickness specified; "Pavement Marking (Call Out)" of the type, color, width, size, and thickness specified; or "Retroreflectorized Profile Pavement Markings" of the color, shape, size, and width specified.

This price is full compensation for application of pavement markings, materials, equipment, labor, tools, and incidentals.

Surface cleaning for all concrete surfaces and asphalt surfaces only when shown on the plans (excludes new asphalt surfaces with no existing pavement markings and retracing) will be paid for under Item 678. Surface cleaning for pavement marking applications on new asphalt surfaces with no existing pavement markings and for retracing of existing pavement markings on all surfaces will not be paid for directly, but will be subsidiary to this Item. If cleaning is needed beyond regular brooming and blowing compressed air, the Engineer may use force account to compensate for the extra effort. This is mainly applied when the pavement is covered with a thick layer of dirt or mud or grass is growing on the pavement.

Surface preparation of any surface where pavement markings are being retraced, except for sealing, will not be paid for directly, but will be subsidiary to this Item.

If the Engineer requires that markings be placed in inclement weather, repair or replacement of markings damaged by the inclement weather will be paid for in addition to the original plans quantity.



Brazoria County will receive bids for ITB#25-29 Brazoria County Road and Drainage Improvements for CDBG-Set III / 30N-General Land Office-Contract Number 19-076-003-B352-CDBG-DR 2016 Flood Allocation until 11:00 a.m. C.S.T. on Thursday, May 1, 2025 at 237 E. Locust Street, Suite 406, Angleton, Texas 77515. Bids must be addressed to: Susan Serrano, Purchasing Director. The bids will be publicly opened and read aloud at 11:00 a.m. C.S.T. on Thursday, May 1, 2025 at 237 E. Locust Street, Suite 406, Angleton, Texas 77515. A pre-bid meeting is scheduled for Wednesday, April 16, 2025 at 2:00 p.m. in the conference room of the Purchasing Department at 237 E. Locust Street, Suite 406, Angleton, TX 77515. The pre-bid meeting will have an option to attend via Microsoft Teams. Meeting link is available on the Project Details page in Bonfire under "Important Events". Bonfire link: <https://brazoriacounty.bonfirehub.com/portal/?tab=login>. Opening will be available via Zoom. Meeting link is available on the Project Details page in Bonfire under "Important Events". Bonfire link: <https://brazoriacounty.bonfirehub.com/portal/?tab=login>

Bids are invited for items and quantities of work as shown below: Bidders are encouraged to submit unit pricing on all items; however, multiple contracts may be awarded for the work as follows:

- Construction for County Road 30 N (L.M.I)

Bid/Contract Documents, including Drawings and Technical Specifications can be found online through Bonfire at [brazoriacounty.bonfirehub.com/portal/?tab=login](https://brazoriacounty.bonfirehub.com/portal/?tab=login) or at the Brazoria County Purchasing Department at the address shown above.

A bid bond in the amount of 5 percent of the bid issued by an acceptable surety shall be submitted with each bid [for those contracts that exceed \$100,000].

The project to be constructed will be financed with assistance from the General Land Office (GLO) under the U.S. Department of Housing and Urban Development Community Development Block Grant - Disaster Recovery (CDBG-DR) program and is subject to all applicable Federal and State laws and regulations. Attention is called to the fact that not less than, the federally determined prevailing Davis-Bacon and Related Acts wage rate, as issued by the Department of Labor and contained in the contract documents, must be paid on this project. In addition, the successful bidder must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex, sexual orientation, gender identity, or national origin. Adherence to the Brazoria County Section 3 Policy is required for contracts and subcontracts in excess of \$100,000.00.

All contractors and subcontractors must be cleared (not suspended or debarred) prior to any formal action authorizing the award of a contract to the contractor. Minority Business Enterprises, Small Business Enterprises, Women Business Enterprises, and labor surplus area firms are encouraged to submit bids.

Brazoria County reserves the right to reject any or all bids or to waive any informalities in the bidding. Bids may be held by Brazoria County for a period not to exceed 60 days from the date of the bid opening for the purpose of reviewing the bids and investigating the bidder's qualifications prior to the contract award.

Brazoria County

Susan Serrano, Purchasing Director

# Authority to Use Grant Funds

U.S. Department of Housing  
and Urban Development  
Office of Community Planning  
and Development

**To:** (name & address of Grant Recipient & name & title of Chief Executive Officer)

**Copy To:** (name & address of SubRecipient)

We received your Request for Release of Funds and Certification, form HUD-7015.15 on

Your Request was for HUD/State Identification Number

All objections, if received, have been considered. And the minimum waiting period has transpired.  
You are hereby authorized to use funds provided to you under the above HUD/State Identification Number.  
File this form for proper record keeping, audit, and inspection purposes.

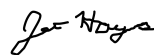
Typed Name of Authorizing Officer

Signature of Authorizing Officer

Date (mm/dd/yyyy)

Title of Authorizing Officer

X



**GEOTECHNICAL INVESTIGATION  
BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS  
BRAZORIA COUNTY, TEXAS**

REPORT NO. 1140260901

*Reported to:*

**COBB, FENDLEY & ASSOCIATES, INC.**

Pearland, Texas

*Submitted by:*

**GEOTEST ENGINEERING, INC.**

Houston, Texas

Key Map Nos. 758 C, G, L & Q  
760 X, Y & Z  
761 W, X & Y  
794 E, F, G, H, Y & Z  
795 E, F, G, W & X  
825 H  
826 A, B, C, E, F & G



# GEOTEST ENGINEERING, INC.

*Geotechnical Engineers & Materials Testing*

5600 Bintliff Drive

Houston, Texas 77036

Telephone: (713) 266-0588

Fax: (713) 266-2977

**Report No. 1140260901**

October 24, 2022

Mr. Brad Matlock, P.E.  
Principal  
Cobb, Fendley & Associates, Inc.  
1920 Country Place Parkway, Suite 400  
Pearland, TX 77584

**Reference: Geotechnical Investigation  
Brazoria County Road and Drainage Project  
Brazoria County, Texas**

Dear Mr. Matlock:

Presented herein is the final geotechnical investigation report for the referenced project. A draft report was submitted to you on December 23, 2021. This final report supersedes all previously submitted reports, transmittals, e-mails, etc. for the referenced project. This study was authorized on January 20, 2021, by Subconsultant Agreement for Professional services, by accepting our proposal No. 1140507099 dated July 27, 2020.

We appreciate this opportunity to be of service to you. Please call us when we can be of further assistance.

Sincerely,  
**GEOTEST ENGINEERING, INC.**  
TBPE Registration No.: F-410

*K. Naresh*

Naresh Kolli, P.E.  
Project Manager

NK\KMP\ego  
Copies Submitted: (1-pdf)  
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## **1.0 EXECUTIVE SUMMARY**

A geotechnical investigation was conducted in connection with the design and reconstruction of roadway and drainage improvements along various streets in Brazoria County, Texas.

The improvements will include mill and overlay, base repairs and total reconstruction of existing asphalt roadway. Based on the information provided to us, majority of the existing pavement will be reclaimed and used as base material after stabilization with cement. The project will also include improvements to the existing roadside ditches and culverts.

The scope of this study included, performing pavement cores at twenty-four (24) locations, drilling, and sampling a total of ninety-five (95) soil borings each to a depth of 5 feet, performing laboratory tests on samples recovered from the borings, performing engineering analyses to develop geotechnical recommendations for the proposed pavement rehabilitation, and preparing a geotechnical report.

The principal findings and conclusions developed from this investigation are summarized as follows:

- Based on the available information from U.S. Geological Survey (USGS) Maps and information contained in house relating to geologic faults, no known documented faults existing along the project alignments. Hence, a phase I geologic fault study is not recommended for the project.
- The existing pavement along the roadways as revealed by borings GB-1 through GB-95 and pavement cores C-1 through C-24 consists of 1.0 to 5.5 inches of asphalt over 6.0 to 22.0 inches of base material. The base material consisted of sand, stabilized sand, and compacted shell with gravel and shell fragments.



- The subsurface soils below the existing paving as revealed by borings GB-1 through GB-95 drilled along CR 25, CR 36, CR36A, CR 34, CR 611A, CR 611A, CR 611, CR 612, CR 518, CR 671, CR 670, and CR 30 consists of soft to hard dark gray, gray and brown, and reddish brown fat clay, fat clay with sand, lean clay, lean clay with sand, sandy lean clay, and silty clay to a depth of 5 feet, except in borings GB-6 through GB-9, GB-11, GB-13, and GB-14 where gray and brown silty sand and sandy silt to a depth of 2 feet. Fill material consisting of stiff to very stiff dark gray, gray and brown fat clay, fat clay with sand, silty clay, lean clay with sand, silt, shell fragments and roots to depths ranging from 2 to 5 feet in borings GB-1, GB-2, GB-4, GB-22, GB-26, GB-42, GB-52, GB-71, and GB-81A.
- No groundwater was encountered in all the borings drilled for this investigation.
- Details of pavement recommendations for roadway reconstruction along with subgrade preparation are provided in Section 8.3 of this report.
- All excavation and trenching operations for storm sewer should be in accordance with OSHA and Brazoria County Standards.
- Drainage improvement recommendations are provided in Section 8.4 of this report.

## 2.0 INTRODUCTION

### 2.1 Authorization

Brazoria County, the owner, selected Consultant Cobb, Fendley & Associates, Inc., (CobbFendley) to provide engineering services for the Brazoria County Road and Drainage Improvements project in Brazoria County, Texas. CobbFendley retained the service of Geotest Engineering, Inc. (Geotest) to provide geotechnical support for the aforementioned project. Geotest was authorized by Mr. Brad Matlock, P.E., Principal of CobbFendley on January 20, 2021, by Subconsultant Agreement for Professional services, by accepting our proposal No. 1140507099 dated July 27, 2020.

### 2.2 Background and Project Description

The project includes improvements to approximately 109,243 linear feet of road and drainage improvements in Brazoria County, Texas. The street limits and linear footage of proposed improvements included in the project are given below.

| Street  | Limits           |         | Approximate Length, feet |
|---------|------------------|---------|--------------------------|
|         | From             | To      |                          |
| CR 25   | CR 764B          | CR 18   | 15,880                   |
| CR 36   | CR 36A           | FM 521  | 22,350                   |
| CR 36A  | CR 36            | End     | 300                      |
| CR 34   | Harris Reservoir | FM 521  | 22,130                   |
| CR 611A | CR 611           | End     | 2,690                    |
| CR 611B | CR 611           | End     | 500                      |
| CR 611  | CR 30            | CR 611A | 5,640                    |
| CR 612  | CR 611           | End     | 1430                     |
| CR 518  | CR 611           | CR 670  | 3900                     |
| CR 671  | CR 611           | CR 670  | 4120                     |
| CR 670  | CR 30            | CR 518  | 2100                     |
| CR 30   | CR 611           | FM 521  | 21200                    |
| CR 30   | CR 670           | FM 521  | 7000                     |

The improvements will include mill and overlay, base repairs and total reconstruction of existing 2-lane asphalt roadway. The scope also includes the replacement of the pavement with flexible asphalt atop a suitable base material, possibly reclaimed and stabilized. The project will also include improvements to the existing roadside ditches and culverts. The site vicinity map is shown on Figure A-1 in Appendix A.

### **3.0 PURPOSE AND SCOPE OF WORK**

#### **3.1 Purpose**

The purposes of this investigation were to explore the subsurface conditions along the project alignments and to develop geotechnical recommendations pertinent to the design and reconstruction of proposed roadway and drainage improvements.

#### **3.2 Scope of Work**

The scope of this investigation consisted of the following tasks.

- Cored the existing pavement to determine the existing pavement section thickness.
- Drilled and sampled ninety-five (95) borings each to a depth of 5 feet.
- Performed laboratory tests, on selected representative soil samples, to determine the engineering properties of the soils and including grain size distribution curves on asphalt cores to evaluate the suitability of reclaimed material and to select design soil parameters.
- Perform engineering analyses to develop geotechnical recommendations including pavement thickness, asphalt overlay, suitability of reclaimed material and subgrade preparation, design recommendations for proposed culverts (if required) and construction considerations.
- Prepared a geotechnical report.

## **4.0 SITE EXPLORATION**

### **4.1 Physical Description**

The existing roadway is two-lane asphalt roadway with open ditch drainage. The project consists of approximately a total of 109,243 linear feet of road and drainage improvements in Brazoria County, Texas. The Harris reservoir is located to the west of CR 34, and Cow Creek crosses to the north end of CR 25 alignment.

### **4.2 Geology**

The geology of Brazoria County is characterized by two formations, the Beaumont and the Alluvium. These formations are a part of the fluvial and marine coastal complex resulting from the glacial cycles within Holocene/Pleistocene epoch. The lithology includes clay, silt and sand.

The Brazoria County Road and Drainage project lies within the Alluvium Formation. Alluvium and low terrace deposits along streams, sand, silt, clay, and gravel with variable layer thickness. These deposits of clay and silty, clayey fine to very fine quartz sand and shell sand accumulate on alternately dry and flooded barren flats 0.3 m below to 1 m above mean sea level.

### **4.3 Faults Review**

A review of information in the Geotest Library relating to known surface and subsurface geologic faults in the general area of the project area was undertaken. The available information consisted of U. S. Geological Survey and NASA maps, open file reports, and information contained in our files relating to geologic faults in this area.

Based on the available information from U.S. Geological Survey (USGS) Maps and information contained in house relating to geologic faults, no known documented faults existing along the project alignment. Hence, a phase I geologic fault study is not recommended for the project.

## **5.0 FIELD WORK**

### **5.1 Pavement Coring**

During field investigation, pavement coring was performed at ninety-five (95) borehole locations, and at twenty-four (24) locations to obtain the existing pavement thickness. The locations of the pavement cores are presented on Figures A-2.1 through A-2.3, Plan of Borings, in Appendix A. The summary of coring information is presented on Table B-1 in Appendix B.

### **5.2 Soil Borings and Sampling**

Subsurface conditions were explored by drilling a total of ninety-five (95) borings each to a depth of 5 feet. All borings were drilled using a truck mounted drill rig using dry-auger technique. The location of each of the borings is shown on the Plan of Borings presented on Figures A-2.1 through A-2.3 in Appendix A. No survey information is available for the borings drilled.

In general, samples were obtained continuously to the termination depth of 5 feet. Cohesive soils were obtained with a 3-inch thin-walled tube sampler in general accordance with ASTM D 1587. Each sample was removed from the sampler in the field, carefully examined and then logged by an experienced soils technician. Suitable portions of each sample were sealed and packaged for transportation to Geotest's Laboratory. The shear strength of cohesive soil samples was estimated using a pocket penetrometer in the field.

Detailed descriptions of the soils encountered in the borings are given on the boring logs presented on Figures C-1 through C-95 in Appendix A. A key to symbols and terms used on boring logs is given on Figure C-96 in Appendix A.

### 5.3 Piezometer Installation

No piezometers were installed for this investigation.

### 5.4 Borehole Completion

All borings were grouted with cement-bentonite grout after completion of drilling and obtaining water level measurements (if any).

### 5.5 Environmental Issues

Based on the field observation and visual examination of soils samples retrieved from the borings, Geotest did not observe any signs of environmental concern during the drilling of soil borings.

## **6.0 LABORATORY TESTING**

The laboratory testing program was designed to evaluate the pertinent physical properties and shear strength characteristics of the subsurface soils. Classification tests were performed on selected samples to aid in soil classification. All the tests were performed in accordance with ASTM Standards.

Moisture content (ASTM D2216) measurements were made on all samples to define the moisture profile at each boring location. The liquid and plastic limit tests (ASTM D4318), and percent passing No. 200 sieve (ASTM D1140) tests were performed on appropriate samples.

The results of all tests are tabulated or summarized on the boring logs presented on Figures C-1 through C-95 in Appendix A

Asphalt content, bulk density and sieve analyses tests were performed on the pavement cores recovered from the field. The report of HMAC results is presented on Figures D-1 and D-2 in Appendix D. The results of sieve analyses are presented on Figures D-3 and D-4 in Appendix D.



## **7.0 SUBSURFACE SOIL AND GROUNDWATER CONDITIONS**

### **7.1 Existing Pavement Section**

The existing pavement along CR 25 as revealed by borings GB-1 through GB-14 and pavement cores C-21 through C-24 consists of 1.75 to 4.0 inches of asphalt over 6.0 to 10.0 inches of base material.

The existing pavement along CR 36 as revealed by borings GB-15 through GB-33, and pavement cores C-16 through C-19 consists of 1.25 to 6.0 inches of asphalt over 6.0 to 14.5 inches of base material.

The existing pavement along CR 36A as revealed by boring GB-34 and pavement core C-20 consists of 1.0 to 3.0 inches of asphalt over 6.0 to 11.0 inches of base material.

The existing pavement along CR 34 as revealed by borings GB-35 through GB-53, and pavement cores C-12 through C-15 consists of 3.0 to 5.5 inches of asphalt over 6.0 to 10.0 inches of base material.

The existing pavement along CR 611A as revealed by borings GB-54 and GB-55, and pavement cores C-6 and C-7 consists of 1.25 to 3.0 inches of asphalt over 7.0 to 11.75 inches of base material.

The existing pavement along CR 611B as revealed by boring GB-56 consists of 3.0 inches of asphalt over 7.0 inches of base material.

The existing pavement along CR 611 as revealed by borings GB-57 through GB-61, and pavement core C-5 consists of 2.0 to 3.0 inches of asphalt over 6.0 to 22.0 inches of base material.

The existing pavement along CR 612 as revealed by boring GB-62 consists of 3.0 inches of asphalt over 5.0 inches of base material.

The existing pavement along CR 518 as revealed by borings GB-63 through GB-65, and pavement core C-8 consists of 3.0 to 4.0 inches of asphalt over 2.5 to 6.0 inches of base material.

The existing pavement along CR 671 as revealed by borings GB-66 through GB-69, and pavement core C-9 consists of 2.5 to 3.0 inches of asphalt over 7.0 to 11.0 inches of base material.

The existing pavement along CR 670 as revealed by borings GB-70 and GB-71 consists of 3.0 inches of asphalt over 6.0 to 7.0 inches of base material.

The existing pavement along CR 30 as revealed by borings GB-72 and GB-95, and pavement cores C-1 through C-4 consists of 2.5 to 6.5 inches of asphalt over 6.0 to 21.0 inches of base material.

The base material consists of sand, stabilized sand, and compacted shell with gravel and shell fragments.

| Street | Boring/Coring | Asphalt Thickness (inches) | Base  | Total thickness (inches) |
|--------|---------------|----------------------------|---|--------------------------|
| CR 25  | GB-1          | 3.0                        | 10.0-in. Dark Brown Sand w/gravel and shell fragments | 13.0                     |
|        | GB-2          | 4.0                        | 8.0-in. Brown Sand w/gravel and shell fragments       | 12.0                     |
|        | GB-3          | 3.0                        | 8.0-in. Dark Brown Sand w/gravel                      | 11.0                     |
|        | GB-4          | 3.5                        | 7.5-in. Dark Brown Cement Stabilized Sand w/gravel    | 11.0                     |
|        | GB-5          | 3.5                        | 8.5-in. Dark Brown Sand w/gravel and shell fragments  | 12.0                     |
|        | GB-6          | 3.0                        | 7.0-in. Gray Sand w/shell                             | 10.0                     |
|        | GB-7          | 3.5                        | 6.5-in. Gray Sand w/gravel and shell                  | 10.0                     |
|        | GB-8          | 4.0                        | 6.0-in. Gray Sand w/gravel and shell                  | 10.0                     |
|        | GB-9          | 3.5                        | 6.5-in. Gray Sand w/gravel and shell                  | 10.0                     |
|        | GB-10         | 4.0                        | 7.0-in. Gray Sand w/gravel and shell                  | 11.0                     |

| Street | Boring/Coring | Asphalt Thickness (inches) | Base   | Total thickness (inches) |
|--------|---------------|----------------------------|--|--------------------------|
| CR 25  | GB-11         | 3.5                        | 7.5-in. Gray Lime-Stabilized Sand w/gravel                       | 11.0                     |
|        | GB-12         | 3.0                        | 7.0-in. Gray Lime-Stabilized Sand w/gravel                       | 10.0                     |
|        | GB-13         | 3.0                        | 7.0-in. Gray Sand w/gravel                                       | 10.0                     |
|        | GB-14         | 3.5                        | 7.5-in. Gray Sand w/gravel and shell                             | 11.0                     |
|        | C-21          | 2.25                       | 11.75-in. Sand w/gravel, shell fragments                         | 14.0                     |
|        | C-22          | 2.25                       | 7.25-in. Stabilized Sand w/aggregate and shell                   | 10.0                     |
|        | C-23          | 1.75                       | 9.75-in. Stabilized Sand w/aggregate and shell                   | 11.0                     |
|        | C-24          | 2.0                        | 8.5-in. Stabilized Sand w/aggregates and shell                   | 10.5                     |
| CR 36  | GB-15         | 3.0                        | 8.0-in. Dark Brown Sand w/gravel                                 | 11.0                     |
|        | GB-16         | 3.0                        | 7.0-in. Dark Brown Sand w/gravel                                 | 10.0                     |
|        | GB-17         | 2.0                        | 5.0-in. Dark Brown Sand w/gravel                                 | 7.0                      |
|        | GB-18         | 4.0                        | 6.0-in. Gray Sand w/gravel                                       | 10.0                     |
|        | GB-19         | 3.0                        | 7.0-in. Brown Stabilized Sand w/gravel                           | 10.0                     |
|        | GB-20         | 3.0                        | 8.0-in. Brown Sand w/gravel                                      | 11.0                     |
|        | GB-21         | 3.0                        | 10.0-in. Dark Brown Sand w/gravel and shell                      | 13.0                     |
|        | GB-22         | 3.0                        | 12.0-in. Gray Lime-Stabilized Sand w/gravel                      | 15.0                     |
|        | GB-23         | 3.0                        | 11.0-in. Dark Brown Lime-Stabilized Sand w/gravel                | 14.0                     |
|        | GB-24         | 3.0                        | 10.0-in. Dark Brown Sand w/gravel and shell fragments            | 13.0                     |
|        | GB-25         | 3.0                        | 11.0-in. Dark Brown Stabilized Sand w/gravel and shell fragments | 14.0                     |
|        | GB-26         | 3.0                        | 9.0-in. Brown Stabilized Sand w/gravel and shell fragments       | 12.0                     |

| Street | Boring/Coring | Asphalt Thickness (inches) | Base   | Total thickness (inches) |
|--------|---------------|----------------------------|--|--------------------------|
| CR 36  | GB-27         | 6.0                        | 10.0-in. Dark Brown Stabilized Sand w/gravel and shell                   | 16.0                     |
|        | GB-28         | 6.0                        | 6.0-in. Dark Brown Sand w/gravel   | 12.0                     |
|        | GB-29         | 3.0                        | 11.0-in. Brown Stabilized Sand w/shell                                   | 14.0                     |
|        | GB-30         | 2.5                        | 7.5-in. Dark Brown Lime-Stabilized Sand w/gravel                         | 10.0                     |
|        | GB-31         | 2.5                        | 9.5-in. Brown and Gray Stabilized Sand w/gravel and shell fragments      | 12.0                     |
|        | GB-32         | 2.5                        | 7.5-in. Brown and Gray Lime-Stabilized Sand w/gravel and shell fragments | 10.0                     |
|        | GB-33         | 2.5                        | 6.5-in. Brown Sand w/gravel  | 9.0                      |
|        | C-16          | 3.0                        | 6.5-in. Sand w/aggregate and shell over 8-in compacted shell and gravel  | 17.5                     |
|        | C-17          | 3.25                       | 10.75-in. Sand w/aggregates & gravel, over compacted shell               | 14.0                     |
|        | C-18          | 4.0                        | 5.5-in. Sand w/aggregate, over 7.75-in Sand w/shell & gravel             | 17.25                    |
|        | C-19          | 1.25                       | 10.75-in. Stabilized sand w/gravel and shell fragments                   | 12.0                     |
| CR 36A | GB-34         | 3.0                        | 6.0-in. Stabilized Sand w/gravel   | 9.0                      |
|        | C-20          | 1.0                        | 11.0-in. Sand w/gravel   | 12.0                     |
| CR 34  | GB-35         | 3.0                        | 7.0-in. Brown Sand w/gravel  | 10.0                     |
|        | GB-36         | 3.0                        | 6.0-in. Gray Stabilized Sand w/gravel                                    | 9.0                      |
|        | GB-37         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel                                    | 10.0                     |
|        | GB-38         | 3.5                        | 6.5-in. Gray Stabilized Sand w/gravel and shell fragments                | 10.0                     |
|        | GB-39         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel and shell fragments                | 10.0                     |
|        | GB-40         | 4.0                        | 8.0-in. Gray Stabilized Sand w/gravel                                    | 12.0                     |

| Street | Boring/Coring | Asphalt Thickness (inches) | Base   | Total thickness (inches) |
|--------|---------------|----------------------------|--|--------------------------|
| CR 34  | GB-41         | 4.0                        | 8.0-in. Dark Brown Sand w/gravel and shell fragments | 12.0                     |
|        | GB-42         | 3.0                        | 7.0-in. Dark Brown Sand w/gravel and shell fragments | 10.0                     |
|        | GB-43         | 4.0                        | 6.0-in. Dark Brown Sand w/gravel                     | 10.0                     |
|        | GB-44         | 3.0                        | 7.0-in. Dark Brown Sand w/gravel                     | 10.0                     |
|        | GB-45         | 4.0                        | 7.0-in. Dark Brown Sand w/gravel                     | 11.0                     |
|        | GB-46         | 3.5                        | 6.5-in. Dark Brown Sand w/gravel and shell fragments | 10.0                     |
|        | GB-47         | 4.0                        | 7.0-in. Dark Brown Sand w/gravel and shell fragments | 11.0                     |
|        | GB-48         | 4.0                        | 6.0-in. Dark Brown Sand w/gravel                     | 10.0                     |
|        | GB-49         | 4.0                        | 6.0-in. Dark Brown Sand w/gravel and shell fragments | 10.0                     |
|        | GB-50         | 4.0                        | 7.0-in. Gray Sand w/gravel                           | 11.0                     |
|        | GB-51         | 3.0                        | 6.0-in. Brown Sand w/gravel and shell fragments      | 9.0                      |
|        | GB-52         | 3.0                        | 7.0-in. Dark Brown Sand w/gravel and shell fragments | 10.0                     |
|        | GB-53         | 3.0                        | 9.0-in. Dark Brown Sand w/gravel and shell           | 12.0                     |
|        | C-12          | 5.0                        | 9.0-in. Sand w/compacted shell and gravel            | 14.0                     |
|        | C-13          | 5.0                        | 6.5-in. Sand w/shell and gravel                      | 11.5                     |
|        | C-14          | 5.5                        | 7.5-in. Sand w/shell fragments and gravel            | 13.0                     |
|        | C-15          | 3.0                        | 10-in. Stabilized Sand w/compacted shell & gravel    | 13.0                     |

| Street  | Boring/Coring | Asphalt Thickness (inches) | Base  | Total thickness (inches) |
|---------|---------------|----------------------------|---|--------------------------|
| CR 611A | GB-54         | 3.0                        | 7.0-in. Gray Sand w/gravel                                | 10.0                     |
|         | GB-55         | 3.0                        | 9.0-in. Gray Stabilized Sand w/gravel                     | 12.0                     |
|         | C-6           | 1.5                        | 7.5-in. Stabilized sand w/aggregate, shell fragments      | 9.0                      |
|         | C-7           | 1.25                       | 11.75-in. Stabilized Sand w/aggregate, shell fragments    | 13.0                     |
| CR 611B | GB-56         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel                     | 10.0                     |
| CR 611  | GB-57         | 3.0                        | 6.0-in. Gray Stabilized Sand w/gravel                     | 9.0                      |
|         | GB-58         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel                     | 10.0                     |
|         | GB-59         | 2.0                        | 22.0-in. Gray Sand w/gravel, shell and clay lumps         | 24.0                     |
|         | GB-60         | 2.0                        | 8.0-in. Dark Brown Sand w/gravel and shell fragments      | 10.0                     |
|         | GB-61         | 2.0                        | 7.0-in. Dark Brown Sand w/gravel and shell fragments      | 9.0                      |
|         | C-5           | 2.0                        | 11.5-in. Sand w/gravel and shell fragments                | 13.5                     |
| CR 612  | GB-62         | 3.0                        | 5.0-in. Gray Stabilized Sand w/gravel                     | 8.0                      |
| CR 518  | GB-63         | 3.0                        | 4.0-in. Gray Stabilized Sand w/gravel and shell fragments | 7.0                      |
|         | GB-64         | 3.0                        | 4.0-in. Gray Stabilized Sand w/gravel and shell fragments | 7.0                      |
|         | GB-65         | 3.0                        | 6.0-in. Gray Stabilized Sand w/gravel and shell fragments | 9.0                      |
|         | C-8           | 4.0                        | 2.5-in. Sand w/compacted shell and gravel                 | 6.5                      |

| Street | Boring/Coring | Asphalt Thickness (inches) | Base   | Total thickness (inches) |
|--------|---------------|----------------------------|--|--------------------------|
| CR 671 | GB-66         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel and shell fragments        | 10.0                     |
|        | GB-67         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel and shell fragments        | 10.0                     |
|        | GB-68         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel and shell fragments        | 10.0                     |
|        | GB-69         | 3.0                        | 7.0-in. Gray Sand w/gravel and shell fragments                   | 10.0                     |
|        | C-9           | 2.5                        | 11.0-in. Sand w/compacted shell                                  | 13.5                     |
| CR 670 | GB-70         | 3.0                        | 6.0-in. Dark Brown Stabilized Sand w/gravel                      | 9.0                      |
|        | GB-71         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel and shell fragments        | 10.0                     |
| CR 30  | GB-72         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel and shell fragments        | 10.0                     |
|        | GB-73         | 3.0                        | 21.0-in. Gray Stabilized Sand w/gravel and shell                 | 24.0                     |
|        | GB-74         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel and shell fragments        | 10.0                     |
|        | GB-75         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel                            | 10.0                     |
|        | GB-76         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel                            | 10.0                     |
|        | GB-77         | 3.0                        | 7.0-in. Gray Stabilized Sand w/gravel                            | 10.0                     |
|        | GB-78         | 3.0                        | 6.0-in. Dark Brown Stabilized Sand w/gravel and shell fragments  | 9.0                      |
|        | GB-79         | 3.0                        | 6.0-in. Dark Brown Stabilized Sand w/gravel and shell fragments  | 9.0                      |
|        | GB-80         | 3.0                        | 21.0-in. Dark Gray Sand w/gravel, shell fragments and clay seams | 24.0                     |
|        | GB-81A        | 4.0                        | 6.0-in. Gray Sand w/gravel and limestone                         | 10.0                     |
|        | GB-82         | 3.0                        | 11.0-in. Gray Sand w/gravel and shell                            | 14.0                     |
|        | GB-83         | 3.0                        | 5.0-in. Brown Sand w/gravel and shell fragments                  | 8.0                      |
|        | GB-84         | 3.0                        | 12.0-in. Dark Brown Sand w/gravel and shell                      | 15.0                     |

| Street | Boring | Asphalt Thickness (inches) | Base   | Total thickness (inches) |
|--------|--------|----------------------------|--|--------------------------|
| CR 30  | GB-85  | 2.5                        | 6.5-in. Gray Sand w/gravel and shell fragments       | 9.0                      |
|        | GB-86  | 2.0                        | 7.0-in. Dark Brown Sand w/gravel                     | 9.0                      |
|        | GB-87  | 3.0                        | 6.0-in. Dark Brown Sand w/gravel                     | 9.0                      |
|        | GB-88  | 3.5                        | 12.5-in. Dark Brown Sand w/gravel and shell          | 10.0                     |
|        | GB-89  | 4.0                        | 6.0-in. Dark Gray Sand w/gravel and shell fragments  | 10.0                     |
|        | GB-90  | 3.0                        | 7.0-in. Dark Brown Sand w/gravel and shell fragments | 10.0                     |
|        | GB-91  | 3.5                        | 7.5-in. Dark Brown Sand w/gravel and shell fragments | 11.0                     |
|        | GB-92  | 3.0                        | 7.0-in. Dark Brown Sand w/gravel                     | 10.0                     |
|        | GB-93  | 3.0                        | 7.0-in. Dark Brown Sand w/gravel                     | 10.0                     |
|        | GB-94  | 4.0                        | 7.0-in. Dark Gray Sand w/gravel                      | 11.0                     |
|        | GB-95  | 4.0                        | 20.0-in. Dark Gray Sand w/gravel and shell           | 24.0                     |
|        | C-1    | 6.0                        | 6.5-in. Sand w/gravel                                | 12.5                     |
|        | C-2    | 6.5                        | 6.5-in. Sand w/gravel                                | 13.0                     |
|        | C-3    | 5.25                       | 7.75-in. Sand w/gravel                               | 13.0                     |
|        | C-4    | 4.5                        | 9.0-in. Sand w/gravel over compacted shell           | 13.5                     |
|        | C-10   | 3.0                        | 11.0-in. Sand w/shell fragments                      | 14.0                     |
|        | C-11   | 3.5                        | 10.5-in. Sand w/aggregate and shell                  | 14.0                     |

The photographs of the existing pavement cores are presented in Appendix E.

## 7.2 Soil Stratigraphy

The subsurface soils below the existing paving as revealed by borings GB-1 through GB-95 drilled along CR 25, CR 36, CR36A, CR 34, CR 611A, CR 611A, CR 611, CR 612, CR 518, CR 671, CR 670, and CR 30 consists of soft to hard dark gray, gray and brown, and reddish brown fat clay, fat clay with sand, lean clay, lean clay with sand, sandy lean clay, and silty clay to a depth of 5 feet, except in borings GB-6 through GB-9, GB-11, GB-13, and GB-14 where gray and brown silty sand and sandy silt to a depth of 2 feet. Fill material consisting of stiff to very stiff dark gray, gray and brown fat clay, fat clay with sand, silty clay, lean clay with sand, silt, shell fragments and roots to depths ranging from 2 to 5 feet in borings GB-1, GB-2, GB-4, GB-22, GB-26, GB-42, GB-52, GB-71, and GB-81A.



### 7.3 Soil Properties

The fat clay, and fat clays with sand are of high to very high plasticity with liquid limits ranging from 50 to 111 and plasticity indices ranging from 27 to 72. The lean clays, lean clays with sand, and sandy lean clays are of high plasticity with liquid limits ranging from 24 to 49 and the plasticity indices ranging from 8 to 28, and the silty clay is of low plasticity with liquid limits ranging from 26 to 27 and plasticity indices ranging from 2 to 5. The fines content (percent passing No. 200 sieve) of fat clay and lean clay ranges from 85.1 to 99.2 percent, and the fines content of fat clay with sand and lean clay with sand ranges from 70.7 to 84.3 percent, and the fines content of sandy lean clay ranges from 57.8 to 61.6 percent. The fines content of sandy silt was about 67.9 percent, and the fines content of silty sand was about 31.8 percent.

### 7.4 Water Level Conditions

No groundwater was encountered in all the borings drilled for this investigation. However, it should be noted that various environmental and man-made factors such as amount of precipitation, nearby subsurface construction activities, and change in area drainage can substantially influence the groundwater level.

## **8.0 GEOTECHNICAL RECOMMENDATIONS**

### **8.1 Engineering Methods and Assumptions**

The general assumptions used for the engineering analyses are described below.

- The pavement design is based on ASHTO Guide for Design of Pavement Structures, 1993 edition.
- The resilient modulus is estimated based on physical properties and strength characteristics of the natural subgrade soils.

More details of the methods and assumptions used for each of the geotechnical engineering analyses are discussed in the following sections.

### **8.2 Existing Pavement Evaluation – Field Visit Summary**

The existing pavement was evaluated by walking along the streets and visually observing the pavement condition and distress. The photographs taken during the field visit are presented in Appendix E. Further, the pavement condition assessment sheets are presented in Appendix E.

#### **CR 25**

Based on the observations made during field investigation along CR 25 (borings GB-1 to GB-14, and pavement cores C-21 through C-24) the following observations were made.

- The existing pavement along CR 25 included in the project is a two-lane asphalt pavement with ditches on both sides.
- The existing roadway is about 22 feet wide, with no sidewalks and no shoulders.
- The side slopes of the ditches were moderate slope with and without grass cover.

- The pavement conditions in general exhibited moderate localized edge failures, intermittent transverse cracks, and intermittent longitudinal cracks.
- The ride quality seemed good, and the cracks were sealed.

### CR 36

Based on the observations made during field investigation along CR 36 (borings GB-15 to GB-33, and pavement cores C-16 through C-19) the following observations were made.

- The existing pavement along CR 36 included in the project is a two-lane asphalt pavement with ditches on both sides.
- The existing roadway is about 20 feet wide, with no sidewalks and no shoulders.
- The side slopes of the ditches were moderate slope with grass cover.
- The pavement conditions in general exhibited slight to extreme intermittent edge failures, intermittent rutting, intermittent to prevalent alligator cracks, and prevalent longitudinal cracks.
- Most of the distresses are located between GB-16 and GB-18, and the poor ride quality is between GB-16 and GB-18 where majority rutting distress was located. Extreme longitudinal distresses were observed between GB-21 and GB-22. Intermittent and localized extreme patching was observed between GB-24 and GB-33.
- The ride quality seemed marginally good. The cracks were sealed in most areas from GB-24 to GB-33.

### CR 36A

Based on the observations made during field investigation along CR 36A (borings GB-16 and GB-34, and pavement core C-20) the following observations were made.

- The existing pavement along CR 25 included in the project is a two-lane asphalt pavement with ditches on both sides.
- The existing roadway is about 18 feet wide, with no sidewalks and no shoulders.
- The side slopes of the ditches were moderate slope with grass cover.
- The pavement conditions in general exhibited moderate intermittent edge failures, slight transverse cracks, and prevalent longitudinal cracks.
- The ride quality seemed poor, and the cracks were not sealed.

#### CR 34

Based on the observations made during field investigation along CR 34 (borings GB-35 to GB-53, and pavement cores C-12 through C-15) the following observations were made.

- The existing pavement along CR 25 included in the project is a two-lane asphalt pavement with ditches on both sides.
- The existing roadway is about 20 feet wide, with no sidewalks and no shoulders.
- The side slopes of the ditches were moderate slope without grass cover.
- The pavement conditions in general exhibited intermittent moderate to prevalent rutting, alligator cracks, and prevalent longitudinal cracks. Localized patching was observed between GB-42 and GB-46.
- The ride quality seemed marginal, and the cracks were sealed.

#### CR 611, CR 611A, CR 611B, CR 518 and CR 671

Based on the observations made during field investigation along CR 611, CR 611A, CR 611B, CR 518 and CR 671 (borings GB-54 to GB-71, and pavement cores C-5 through C-9) the following observations were made.

- The existing pavements included in the project is a two-lane asphalt pavement with ditches on both sides.

- The existing roadway is about 20 to 22 feet wide, with no sidewalks or shoulders.
- The side slopes of the ditches were moderate slope with grass cover along segments of CR 671, CR 611, CR 611, and unlined elsewhere.
- The pavement conditions in general exhibited moderate to extreme intermittent rutting, raveling, alligator cracking, patching, and prevalent longitudinal cracking. Water bleeding and ponding was observed along CR 611 at roadway crossing locations.
- The ride quality seemed poor, and the cracks were not sealed everywhere except CR 611 from borings GB-54 to GB-59, where cracks were sealed resulting in good riding quality.

### CR 30

Based on the observations made during field investigation along CR 30 (borings GB-72 to GB-95, and pavement cores C-1 through C-11) the following observations were made.

- The existing pavements included in the project is a two-lane asphalt pavement with ditches on both sides.
- The existing roadway is about 23 feet wide, with no sidewalks or shoulders.
- The side slopes of the ditches were moderate slope with grass lined between borings GB-78 and GB-95, and unlined elsewhere.
- The pavement conditions in general exhibited localized and intermittent moderate rutting, extreme localized alligator cracks, localized patching, and extreme prevalent longitudinal cracks.
- The ride quality seemed marginal, and the existing cracks were not sealed.

Minor surface distresses including raveling, weathering, and patching were also observed along the alignments. It appeared that the pavement was repaired in some areas and several joints were noticed near the existing driveways. Several pavement

failures were developed near the joints of the repaired section and existing pavement section.

### 8.3 Pavement Rehabilitation

Based on the observations made during our field investigation and data from field and laboratory tests, the pavement conditions along the project alignments exhibit severe edge failures, alligator cracking, longitudinal cracking, and surface distresses raveling and patching. Also, the existing pavement does not have a shoulder support and subgrade failures were observed at several locations. The proposed pavement improvements will include reclaim the existing pavement material, stabilize with cement, recompact and place a new asphalt surface.

#### 8.3.1 Pavement Design Method

Based on the existing pavement condition, the proposed rehabilitation method of recycling the existing pavement material should provide a sufficient bonding and strength as required for the base course. Further, the exposed clay subgrade is of high plasticity and has to be treated. The typical pavement section from Brazoria County was provided to us by CobbFendley. The pavement design was developed in accordance with the “AASHTO Guide for Design of Pavement Structures” 1993 edition.

#### 8.3.2 Design Parameters

Subgrade Soil Properties. Based on the laboratory test data obtained from the natural subgrade soils, the effective roadbed resilient modulus ( $M_R$ ) is estimated to be 1,941 psi.

Traffic Data. No traffic counts were available for this study.

Other Design Parameters. The average thickness of the pavement course/layers was utilized to determine effective structural number of the existing pavement for the

purpose of overlay design [asphalt concrete (AC) overlay of existing asphalt concrete (AC) pavements]. Other design parameters used in the development of flexible pavement structural number are given below:

Material Properties of Existing Asphalt Pavement:

Overall Standard Deviation ( $S_o$ ): 0.49

Reliability Level (R): 80%

Serviceability Index

Initial ( $P_o$ ): 4.2

Terminal ( $P_t$ ): 2.0

Layer, coefficient:

$a_1$ ,  $a_2$ ,  $a_3$  = layer coefficient for surface, base, and subbase course, respectively. Values of the layer coefficient for each pavement material are as follows:

$a_1$  = 0.30 for HMHL asphalt concrete surface

$a_2$  = 0.20 for Cement stabilized base

Drainage coefficient:

$m_2$ ,  $m_3$  = Drainage coefficient for base and subbase layers;  $m_2$  = 1.15 and  
 $m_3$  = 1.15 (based on a fair quality of drainage)

Full Depth Repair and Total Reconstruction Pavement Section Parameters

Overall Standard Deviation ( $S_o$ ): 0.45

Reliability Level (R): 80%

Serviceability Index

Initial ( $P_o$ ): 4.2

Terminal ( $P_t$ ): 2.0

Layer, coefficient:

$a_1$ ,  $a_2$ ,  $a_3$  = layer coefficient for surface, base, and subbase course, respectively. Values of the layer coefficient for each pavement material are as follows:

$a_1$  = 0.44 for HMHL asphalt concrete surface

$a_2$  = 0.34 for Asphalt concrete black base

= 0.20 for Cement stabilized base

= 0.17 for lime and fly ash stabilized base

$a_3$  = 0.11 for Lime stabilized soils

Drainage coefficient:

$m_2$ ,  $m_3$  = Drainage coefficient for base and subbase layers;  $m_2$  = 1.15 and

$m_3$  = 1.15 (based on a fair quality of drainage)

### 8.3.3 Recommended Pavement Section

The pavement rehabilitation can be done as per procedure given below.

- Pulverize the existing surface/base material to a minimum depth of 12 inches.
- Stabilize the stockpiled material with 5% cement and recompact to a minimum 10-inch base.
- Place the asphaltic concrete surface to a depth of approximately 2 inches in accordance with the TxDOT Item 340.

The recommended pavement section is given below.

| <u>Pavement Course</u>              | <u>Thickness<br/>(inches)</u> |
|-------------------------------------|-------------------------------|
| Asphaltic Concrete Surface (Type D) | 2.0                           |
| 5% Cement Stabilized Reclaimed Base | 10.0                          |



A geotextile fabric may be required between Asphalt surface course and cement stabilized base material to prevent any reflective cracking into the asphalt surface.

If a total reconstruction is planned in any of the roadways where a reclaimed base is not used the following pavement section is recommended.

| <b><u>Pavement Course</u></b> | <b><u>Thickness<br/>(inches)</u></b> |
|-------------------------------|--------------------------------------|
| Asphaltic Concrete Surface    | 2.0                                  |
| Black Base                    | 4.0                                  |
| 7% Lime Stabilized Subgrade   | 8.0                                  |

Subsequently, based on an equivalent structural number of 3.31 for the above pavement section, a reliability level of 80% and a terminal serviceability index of 2.0, a total traffic volume is estimated (back calculated) to be  $0.7 \times 10^5 - 18$  kips ESAL (W18) over a 10-year design period. If the traffic estimated is different than the above-mentioned traffic, flexible pavement section will need to be evaluated and revised.

Further, care should be taken prevent any ponding of water along the edge of the roadway and stabilization should be extended to a minimum of 1-foot on both sides of the roadway to provide additional edge support.

#### **8.3.4 Preparation of Pavement Subgrade**

Subgrade preparation for the total reconstruction areas should consist of demolition, stripping, proof-rolling and stabilization. The following procedures for subgrade are recommended:

1. After demolition, exposed surface should be proof-rolled. The purpose of the proof rolling operation is to identify any underlying zones or pockets of soft soils and to remove such weak materials.

2. Based on the borings, the subgrade support soils consist of stiff to hard fat clay, and lean clay. To accelerate the construction and provide a stable subgrade on which to construct the pavement section, it is recommended that the cohesive soil should be stabilized with 7% lime (by dry unit weight of soil) to a minimum depth of 8 inches. Following treatment, the subgrade material should be compacted to at least 95% of Standard Proctor maximum density in accordance with ASTM D698, at a moisture content within 3% the optimum moisture content.

#### 8.4 Select Fill

Should any select fill be required to raise the grade it should consist of lean clay or sandy lean clay with a liquid limit less than 40 and a plasticity index between 8 and 20. The select fill should be compacted at moisture content within three percent above optimum to reduce swelling potential of the compacted fill. The fill material should be placed in loose lifts not exceeding eight inches and should be compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. The shallow onsite fat clay soils are not suitable for select fill material unless stabilized with sufficient amount of lime.

#### 8.5 Drainage Improvements

The drainage improvements include improvements to the existing roadside ditches and culverts, the location and depths of which are unknown at the time of preparation of this report.

##### 8.5.1 General

Based on the borings drilled along CR 25, CR 36, CR36A, CR 34, CR 611A, CR 611B, CR 611, CR 612, CR 518, CR 671, CR 670, CR 30 roadside ditch alignment (less than 5 feet deep), the existing soil predominantly consists of soft to hard fat clay, fat clay with sand, lean clay, lean clay with sand, sandy lean clay, and silty clay to a depth of 5 feet, except in borings GB-6 through GB-9, GB-11, GB-13, and GB-14 drilled along CR 25 where gray and brown silty

sand and sandy silt to a depth of 2 feet.. Based on these soil conditions encountered, a side slope of 3(H):1(V) or flatter for the roadside ditches will be stable, except along CR 25. Along CR 25, the surficial cohesionless soils encountered may cause local slope failures including sloughing and erosion, hence these surficial cohesionless soils encountered, should be over excavated and replaced with select fill.

#### 8.5.2 Ditch Slope Protection and Erosion Control

Attention should be given for the erosion protection of the roadside ditches. Excessive erosion can cause substantial ground loss and progressive movement of soil that may cause roadside ditch slope failure. A properly installed and maintained grass cover can serve as a protection for the roadside ditch slope by reducing soil erosion. Furthermore, routine maintenance of the roadside ditch slope surface including removal of undesirable vegetation growth on or around the cover, repair minor cracks or spalling, regrade and repair eroded areas should also be performed on a regular basis to enhance the integrity of the roadside ditch slope.

## **9.0 PROVISIONS**

The description of subsurface conditions and the design information contained in this report are based on the test borings made at the time of drilling at specific locations. Some variation in soil conditions may, however, occur between test borings. Should any subsurface conditions other than those described in our boring logs be encountered, Geotest should be immediately notified so that further investigation and supplemental recommendations can be provided.

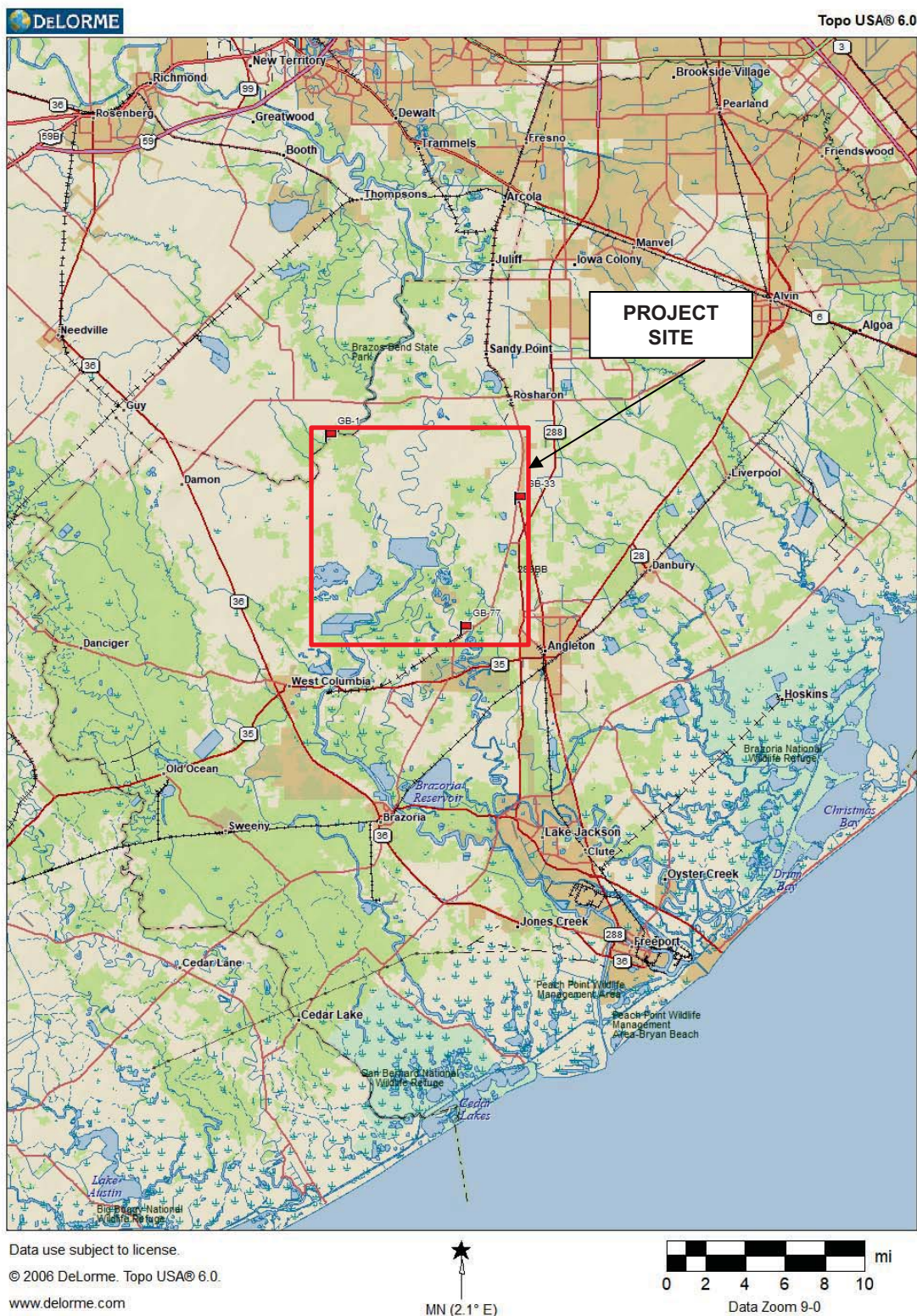
The depth of the groundwater level may vary with changes in environmental conditions such as frequency and magnitude of rainfall. The stratification lines on the log of borings represent the approximate boundaries between soil types. Transitions between soil types may be more gradual than depicted.

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## APPENDIX A

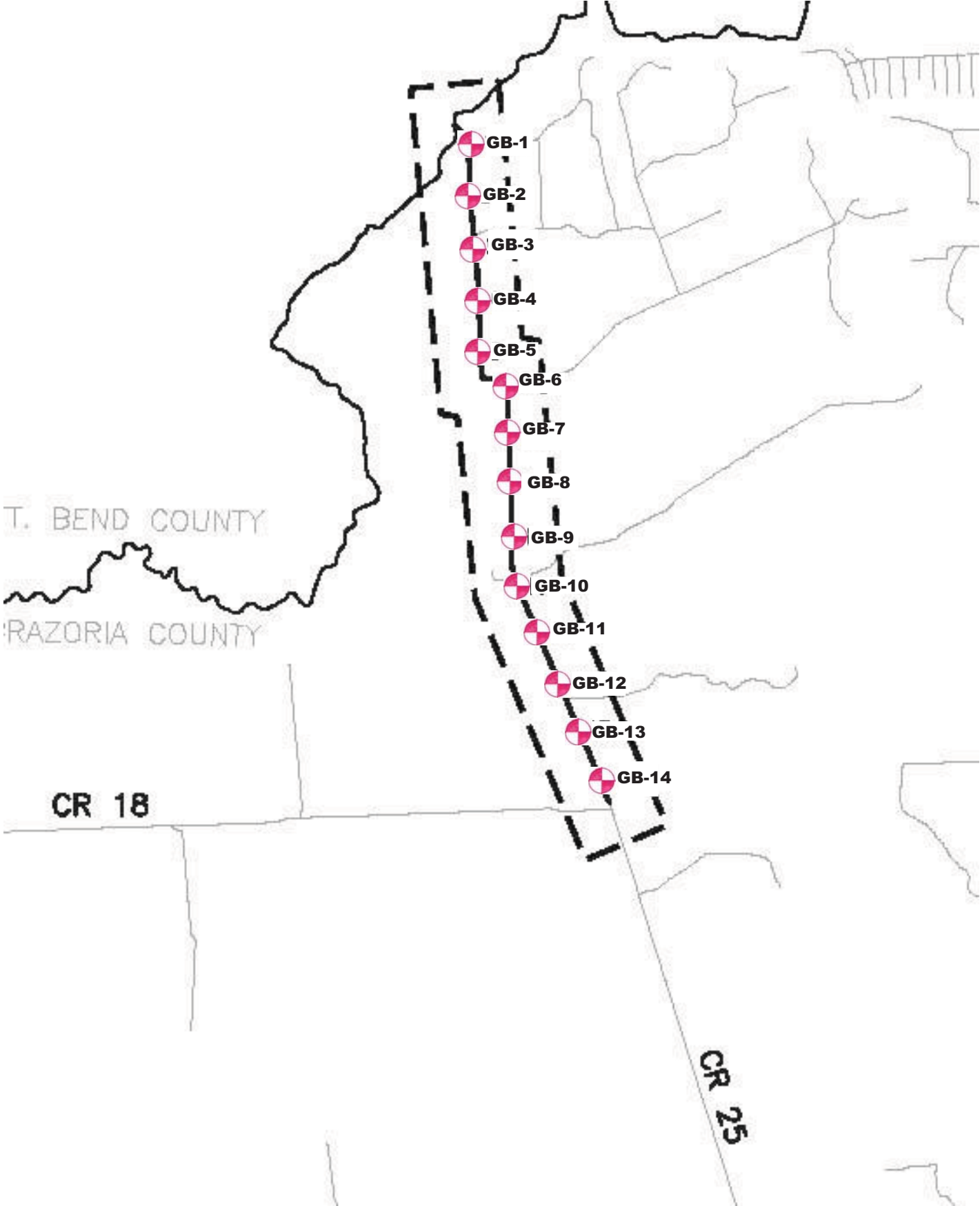
|                                 | <u>Figure</u>    |
|---------------------------------|------------------|
| Site Vicinity Map.....          | A-1              |
| Plan of Borings and Coring..... | A-2.1 thru A-2.3 |



BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS  
 BRAZORIA COUNTY, TEXAS  
 KEY MAP NO. 420 G, H & M

## SITE VICINITY MAP

FIGURE A-1




| LEGEND   | GEOTEST ENGINEERING, INC.   |
|--|---|
|  Boring | <p>BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS<br/>BRAZORIA COUNTY, TEXAS</p> <p><b>PLAN OF BORINGS</b></p> <p>0 1500 3000<br/>SCALE IN FEET</p> |

FIGURE A-2.1






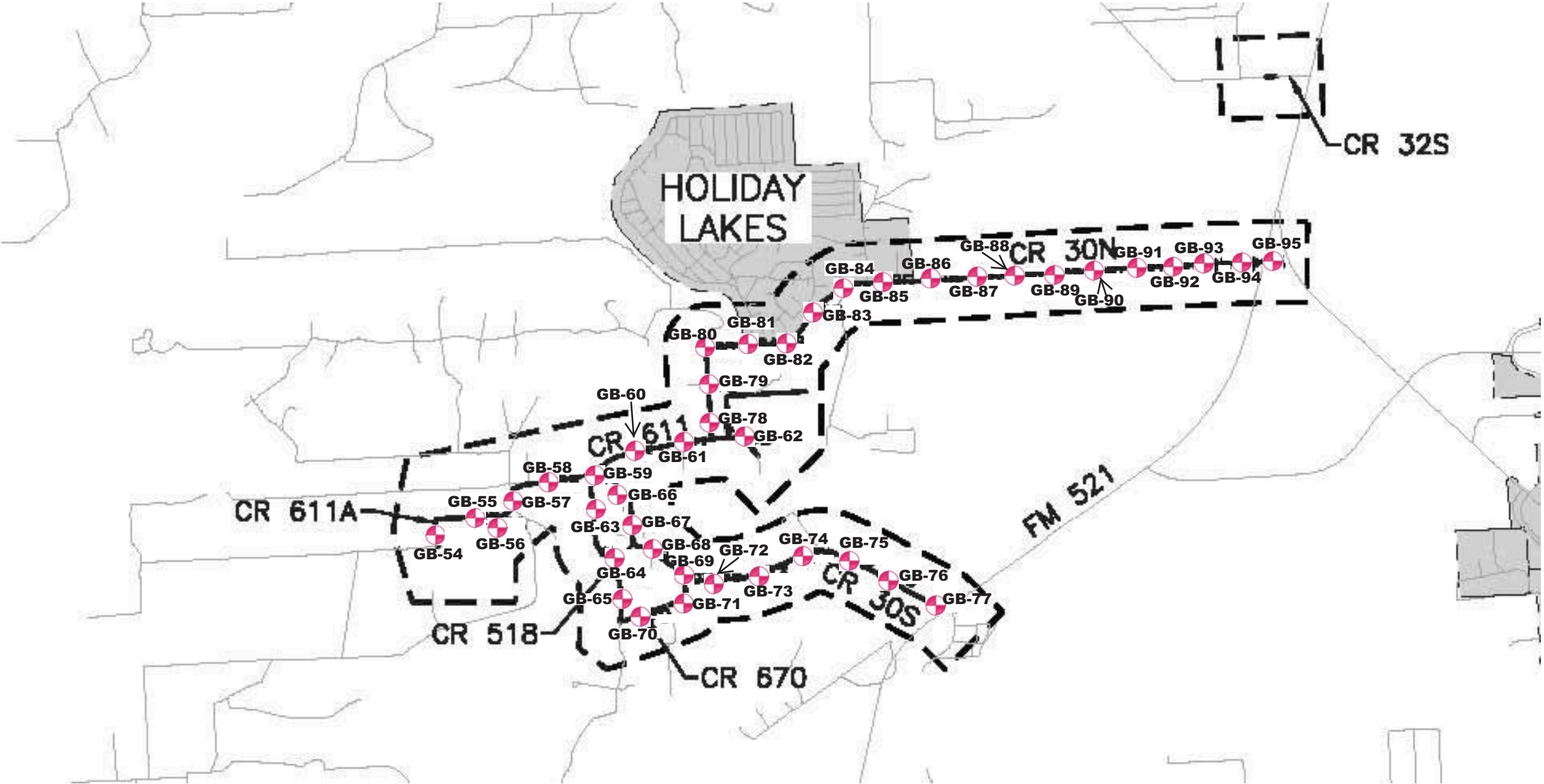
| LEGEND   | GEOTEST ENGINEERING, INC.   |
|--|---|
|  Boring | BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS<br>BRAZORIA COUNTY, TEXAS<br><br><b>PLAN OF BORINGS</b><br><div><div>015003000</div><div>SCALE IN FEET</div></div> |

FIGURE A-2.2






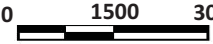
| LEGEND   | GEOTEST ENGINEERING, INC.  |
|--|--|
|  Boring | BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS<br>BRAZORIA COUNTY, TEXAS<br><br><b>PLAN OF BORINGS</b><br><br>SCALE IN FEET |

FIGURE A-2.3

## APPENDIX B

|                                 | <u>Figure</u> |
|---------------------------------|---------------|
| Summary of Pavement Coring..... | B-1           |

**TABLE B-1**

**SUMMARY OF BORING/CORING INFORMATION**

| Street | Boring | Asphalt Thickness (inches) | Base  | Total thickness (inches) |
|--------|--------|----------------------------|---|--------------------------|
| CR 25  | GB-1   | 3.0                        | 10.0-in Sand w/gravel and shell fragments     | 13.0                     |
|        | GB-2   | 4.0                        | 8.0-in Sand w/gravel and shell fragments      | 12.0                     |
|        | GB-3   | 3.0                        | 8.0-in Sand w/gravel                          | 11.0                     |
|        | GB-4   | 3.5                        | 7.5-in Stabilized Sand w/gravel               | 11.0                     |
|        | GB-5   | 3.5                        | 8.5-in Sand w/gravel and shell fragments      | 12.0                     |
|        | GB-6   | 3.0                        | 7.0-in Sand w/shell fragments                 | 10.0                     |
|        | GB-7   | 3.5                        | 6.5-in Sand w/gravel and shell fragments      | 10.0                     |
|        | GB-8   | 4.0                        | 6.0-in Sand w/grave and shell fragments       | 10.0                     |
|        | GB-9   | 3.5                        | 6.5-in Sand w/gravel and shell fragments      | 10.0                     |
|        | GB-10  | 4.0                        | 7.0-in Sand w/gravel and shell fragments      | 11.0                     |
|        | GB-11  | 3.5                        | 7.5-in Stabilized Sand w/gravel               | 11.0                     |
|        | GB-12  | 3.0                        | 7.0-in Stabilized Sand w/gravel               | 10.0                     |
|        | GB-13  | 3.0                        | 7.0-in Sand w/gravel                          | 10.0                     |
|        | GB-14  | 3.5                        | 7.5-in Sand w/gravel and shell fragments      | 11.0                     |
|        | C-21   | 2.25                       | 11.75-in Sand w/gravel, shell fragments       | 14.0                     |
|        | C-22   | 2.25                       | 7.25-in Stabilized Sand w/aggregate and shell | 10.0                     |
| CR 36  | C-23   | 1.75                       | 9.75-in Stabilized Sand w/aggregate and shell | 11.0                     |
|        | C-24   | 2.0                        | 8.5-in Stabilized Sand w/aggregates and shell | 10.5                     |
|        | GB-15  | 3.0                        | 8.0-in Sand w/gravel                          | 11.0                     |
|        | GB-16  | 3.0                        | 7.0-in sand w/gravel                          | 10.0                     |
|        | GB-17  | 2.0                        | 5.0-in Sand w/gravel                          | 7.0                      |
|        | GB-18  | 4.0                        | 6.0-in Sand w/gravel                          | 10.0                     |
|        | GB-19  | 3.0                        | 7.0-in Stabilized Sand w/gravel               | 10.0                     |
|        | GB-20  | 3.0                        | 8.0-in Sand w/gravel                          | 11.0                     |
|        | GB-21  | 3.0                        | 7.0-in Sand w/gravel over 3-in compacted sand | 13.0                     |

| Street | Boring | Asphalt Thickness (inches) | Base   | Total thickness (inches) |
|--------|--------|----------------------------|--|--------------------------|
| CR 36  | GB-22  | 3.0                        | 12.0-in Stabilized Sand w/gravel                                       | 15.0                     |
|        | GB-23  | 3.0                        | 11.0-in Stabilized Sand w/gravel                                       | 14.0                     |
|        | GB-24  | 3.0                        | 10.0-in Sand w/gravel and shell fragments                              | 13.0                     |
|        | GB-25  | 3.0                        | 11.0-in Stabilized Sand w/gravel and shell fragments                   | 14.0                     |
|        | GB-26  | 3.0                        | 9.0-in Stabilized Sand w/gravel and shell fragments                    | 12.0                     |
|        | GB-27  | 6.0                        | 6.0-in Stabilized Sand w/gravel over 4.0-in compacted shell            | 16.0                     |
|        | GB-28  | 6.0                        | 4.0-in Sand w/gravel over 2.0-in compacted shell                       | 12.0                     |
|        | GB-29  | 4.0                        | 11.0-in Stabilized Sand w/shell  | 15.0                     |
|        | GB-30  | 2.5                        | 7.5-in Stabilized Sand w/gravel  | 10.0                     |
|        | GB-31  | 2.5                        | 9.5-in Stabilized Sand w/gravel and shell fragments                    | 12.0                     |
|        | GB-32  | 2.5                        | 7.5-in Stabilized Sand w/gravel and shell fragments                    | 10.0                     |
|        | GB-33  | 2.5                        | 6.5-in Sand w/gravel   | 9.0                      |
|        | C-16   | 3.0                        | 6.5-in Sand w/aggregate and shell over 8-in compacted shell and gravel | 17.5                     |
|        | C-17   | 3.25                       | 10.75-in Sand w/aggregates & gravel, over compacted shell              | 14.0                     |
|        | C-18   | 4.0                        | 5.5-in Sand w/aggregate, over 7.75-in Sand w/shell & gravel            | 17.25                    |
|        | C-19   | 1.25                       | 10.75-in Stabilized sand w/gravel and shell fragments                  | 12.0                     |
| CR 36A | GB-34  | 3.0                        | 6.0-in Stabilized Sand w/gravel  | 9.0                      |
|        | C-20   | 1.0                        | 11.0-in Sand w/gravel  | 12.0                     |
| CR 34  | GB-35  | 3.0                        | 7.0-in Sand w/gravel   | 10.0                     |
|        | GB-36  | 3.0                        | 6.0-in Stabilized Sand w/gravel  | 9.0                      |
|        | GB-37  | 3.0                        | 7.0-in Stabilized Sand w/gravel  | 10.0                     |
|        | GB-38  | 3.5                        | 6.5-in Stabilized Sand w/gravel and shell fragments                    | 10.0                     |
|        | GB-39  | 3.0                        | 7.0-in Stabilized Sand w/gravel and shell fragments                    | 10.0                     |
|        | GB-40  | 4.0                        | 8.0-in Stabilized Sand w/gravel  | 12.0                     |
|        | GB-41  | 4.0                        | 8.0-in Sand w/gravel and shell fragments                               | 12.0                     |
|        | GB-42  | 3.0                        | 7.0-in Sand w/gravel and shell fragments                               | 10.0                     |

| Street  | Boring | Asphalt Thickness (inches) | Base  | Total thickness (inches) |
|---------|--------|----------------------------|---|--------------------------|
| CR 34   | GB-43  | 4.0                        | 6.0-in Sand w/gravel                                  | 10.0                     |
|         | GB-44  | 3.0                        | 7.0-in Sand w/gravel                                  | 10.0                     |
|         | GB-45  | 4.0                        | 7.0-in Sand w/gravel                                  | 11.0                     |
|         | GB-46  | 3.5                        | 6.5-in Sand w/gravel and shell fragments              | 10.0                     |
|         | GB-47  | 4.0                        | 7.0-Sand w/gravel and shell fragments                 | 11.0                     |
|         | GB-48  | 4.0                        | 6.0-in Sand w/gravel                                  | 10.0                     |
|         | GB-49  | 4.0                        | 6.0-in Sand w/gravel and shell fragments              | 10.0                     |
|         | GB-50  | 4.0                        | 7.0-in Sand w/gravel                                  | 11.0                     |
|         | GB-51  | 3.0                        | 6.0-in Sand w/gravel and shell fragments              | 9.0                      |
|         | GB-52  | 3.0                        | 7.0-in Sand w/gravel and shell fragments              | 10.0                     |
|         | GB-53  | 3.0                        | 7.0-in Sand w/gravel over 2.0-in Compacted shell      | 12.0                     |
|         | C-12   | 5.0                        | 9.0-in Sand w/compacted shell and gravel              | 14.0                     |
|         | C-13   | 5.0                        | 6.5-in Sand w/shell and gravel                        | 11.5                     |
|         | C-14   | 5.5                        | 7.5-in Sand w/shell fragments and gravel              | 13.0                     |
|         | C-15   | 3.0                        | 10-in Stabilized Sand w/compacted shell & gravel      | 13.0                     |
| CR 611A | GB-54  | 3.0                        | 7.0-in Sand w/gravel                                  | 10.0                     |
|         | GB-55  | 3.0                        | 9.0-Stabilized Sand w/gravel                          | 12.0                     |
|         | C-6    | 1.5                        | 7.5-in Stabilized sand w/aggregate, shell fragments   | 9.0                      |
|         | C-7    | 1.25                       | 11.75-in Stabilized Sand w/aggregate, shell fragments | 13.0                     |
| CR 611B | GB-56  | 3.0                        | 7.0-in Stabilized Sand                                | 10.0                     |
| CR 611  | GB-56  | 3.0                        | 7.0-in Stabilized Sand                                | 10.0                     |
|         | GB-57  | 3.0                        | 6.0-in Stabilized Sand w/gravel                       | 9.0                      |
|         | GB-58  | 3.0                        | 7.0-in Stabilized Sand w/gravel                       | 10.0                     |
|         | GB-59  | 2.0                        | 8.0-in Sand w/gravel over 14.0-in shell w/sand        | 24.0                     |
|         | GB-60  | 2.0                        | 8.0-in Sand w/gravel and shell fragments              | 10.0                     |
|         | GB-61  | 2.0                        | 7.0-in Sand w/gravel and shell fragments              | 9.0                      |
|         | C-5    | 2.0                        | 11.5-Sand w/gravel and shell fragments                | 13.5                     |

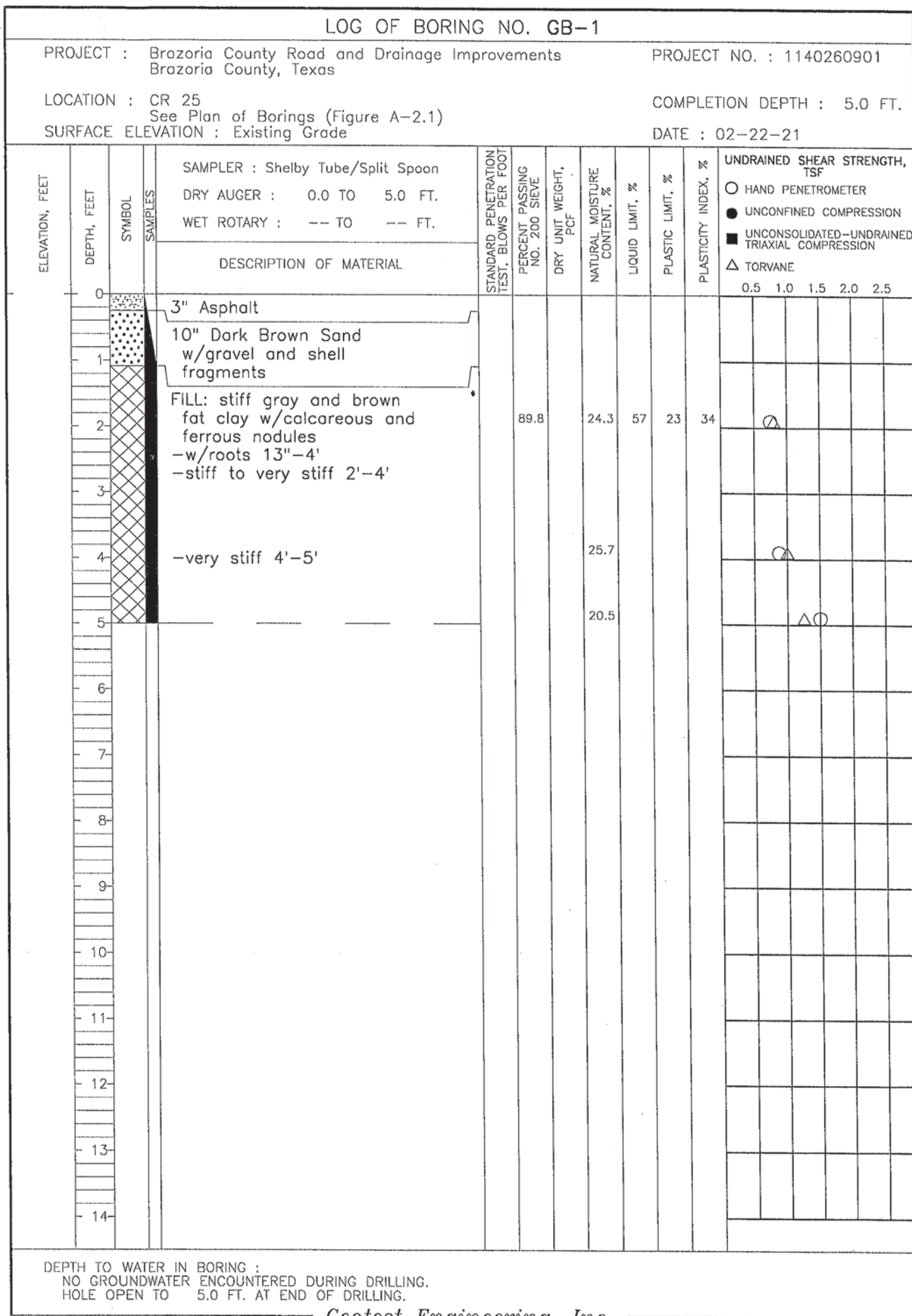
| Street | Boring | Asphalt Thickness (inches) | Base  | Total thickness (inches) |
|--------|--------|----------------------------|---|--------------------------|
| CR 612 | GB-62  | 3.0                        | 5.0-in Stabilized Sand w/gravel                             | 8.0                      |
| CR 518 | GB-63  | 3.0                        | 4.0-in Stabilized Sand w/gravel and shell fragments         | 7.0                      |
|        | GB-64  | 3.0                        | 4.0-in Stabilized Sand w/gravel and shell fragments         | 7.0                      |
|        | GB-65  | 3.0                        | 6.0-in Stabilized Sand w/gravel and shell fragments         | 9.0                      |
|        | C-8    | 4.0                        | 2.5-in Sand w/compacted shell and gravel                    | 6.5                      |
| CR 671 | GB-66  | 3.0                        | 7.0-in Stabilized Sand w/gravel and shell fragments         | 10.0                     |
|        | GB-67  | 3.0                        | 7.0-in Stabilized Sand w/gravel and shell fragments         | 10.0                     |
|        | GB-68  | 3.0                        | 7.0-in Stabilized Sand w/gravel and shell fragments         | 10.0                     |
|        | GB-69  | 3.0                        | 7.0-in Sand w/gravel and shell fragments                    | 10.0                     |
|        | C-9    | 2.5                        | 11.0-in Sand w/compacted shell                              | 13.5                     |
| CR 670 | GB-70  | 3.0                        | 6.0-in Stabilized Sand w/gravel                             | 9.0                      |
|        | GB-71  | 3.0                        | 7.0-in Stabilized sand w/gravel and shell fragments         | 10.0                     |
| CR 30  | GB-72  | 3.0                        | 7.0-in Stabilized sand w/gravel and shell fragments         | 10.0                     |
|        | GB-73  | 3.0                        | 7.0-in Stabilized sad w/gravel over 14.0-in compacted shell | 24.0                     |
|        | GB-74  | 3.0                        | 7.0-in Stabilized sand w/gravel and shell fragments         | 10.0                     |
|        | GB-75  | 3.0                        | 7.0-in Stabilized Sand w/gravel                             | 10.0                     |
|        | GB-76  | 3.0                        | 7.0-in Stabilized Sand w/gravel                             | 10.0                     |
|        | GB-77  | 3.0                        | 7.0-in Stabilized Sand w/gravel                             | 10.0                     |
|        | GB-78  | 3.0                        | 6.0-in Stabilized sand w/gravel and shell fragments         | 9.0                      |
|        | GB-79  | 3.0                        | 6.0-in Stabilized sand w/gravel and shell fragments         | 9.0                      |
|        | GB-80  | 3.0                        | 6.0-in Sand over 15-in Sand w/gravel and shell fragments    | 24.0                     |
|        | GB-81  | 4.0                        | 6.0-in Sand w/gravel and limestone                          | 10.0                     |
|        | GB-82  | 3.0                        | 6.0-in Sand w/gravel over 5.0-in compacted shell            | 14.0                     |
|        | GB-83  | 3.0                        | 5.0-in Sand w/gravel and shell fragments                    | 8.0                      |
|        | GB-84  | 3.0                        | 6.0-in Sand w/gravel over 6.0-in compacted shell            | 15.0                     |
|        | GB-85  | 2.5                        | 6.5-in Sand w/gravel and shell fragments                    | 9.0                      |
|        | GB-86  | 2.0                        | 7.0-in Sand w/gravel  | 9.0                      |
|        | GB-87  | 3.0                        | 6.0-in Sand w/gravel  | 9.0                      |

| Street | Boring | Asphalt Thickness (inches) | Base   | Total thickness (inches) |
|--------|--------|----------------------------|--|--------------------------|
| CR 30  | GB-88  | 3.5                        | 6.5-in Sand w/gravel over 6.0-in compacted shell | 10.0                     |
|        | GB-89  | 4.0                        | 6.0-in Sand w/gravel and shell fragments         | 10.0                     |
|        | GB-90  | 3.0                        | 7.0-in Sand w/gravel and shell fragments         | 10.0                     |
|        | GB-91  | 3.5                        | 7.5-in Sand w/gravel and shell fragments         | 11.0                     |
|        | GB-92  | 3.0                        | 7.0-in Sand w/gravel                             | 10.0                     |
|        | GB-93  | 3.0                        | 7.0-in Sand w/gravel                             | 10.0                     |
|        | GB-94  | 4.0                        | 7.0-in Sand w/gravel                             | 11.0                     |
|        | GB-95  | 4.0                        | 8.0-in Sand w/gravel over 12-in compacted shell  | 24.0                     |
|        | C-1    | 6.0                        | 6.5-in Sand w/gravel                             | 12.5                     |
|        | C-2    | 6.5                        | 6.5-in Sand w/gravel                             | 13.0                     |
|        | C-3    | 5.25                       | 7.75-in Sand w/gravel                            | 13.0                     |
|        | C-4    | 4.5                        | 9.0-in Sand w/gravel over compacted shell        | 13.5                     |
|        | C-10   | 3.0                        | 11.0-in Sand w/shell fragments                   | 14.0                     |
|        | C-11   | 3.5                        | 10.5-in Sand w/aggregate and shell               | 14.0                     |

## APPENDIX C

|   | <u>Figure</u> |
|---|---------------|
| Log of Borings .....                      | C-1 thru C-95 |
| Symbol and Terms Used on Boring Logs..... | C-96          |





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FIGURE C-1

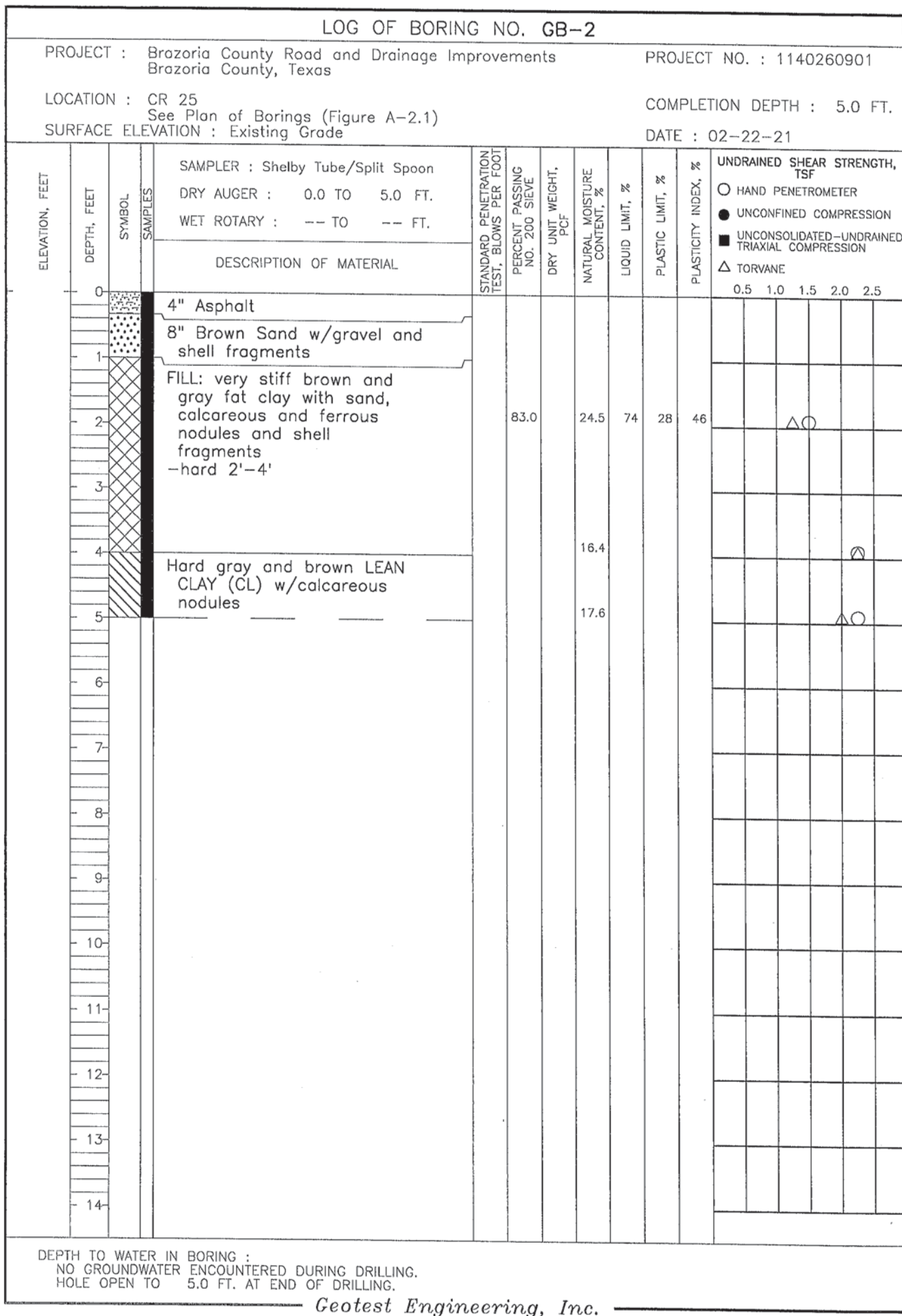
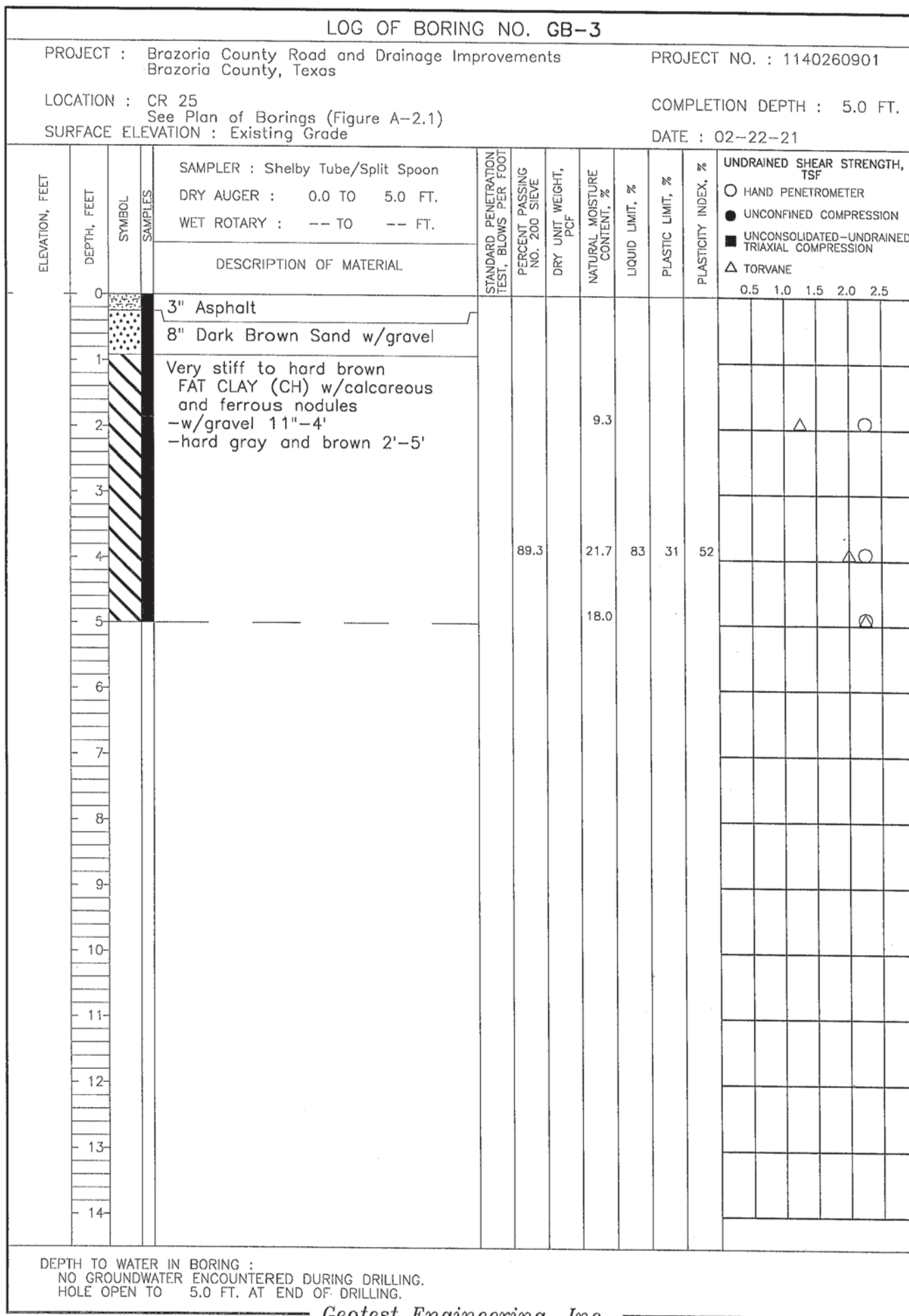
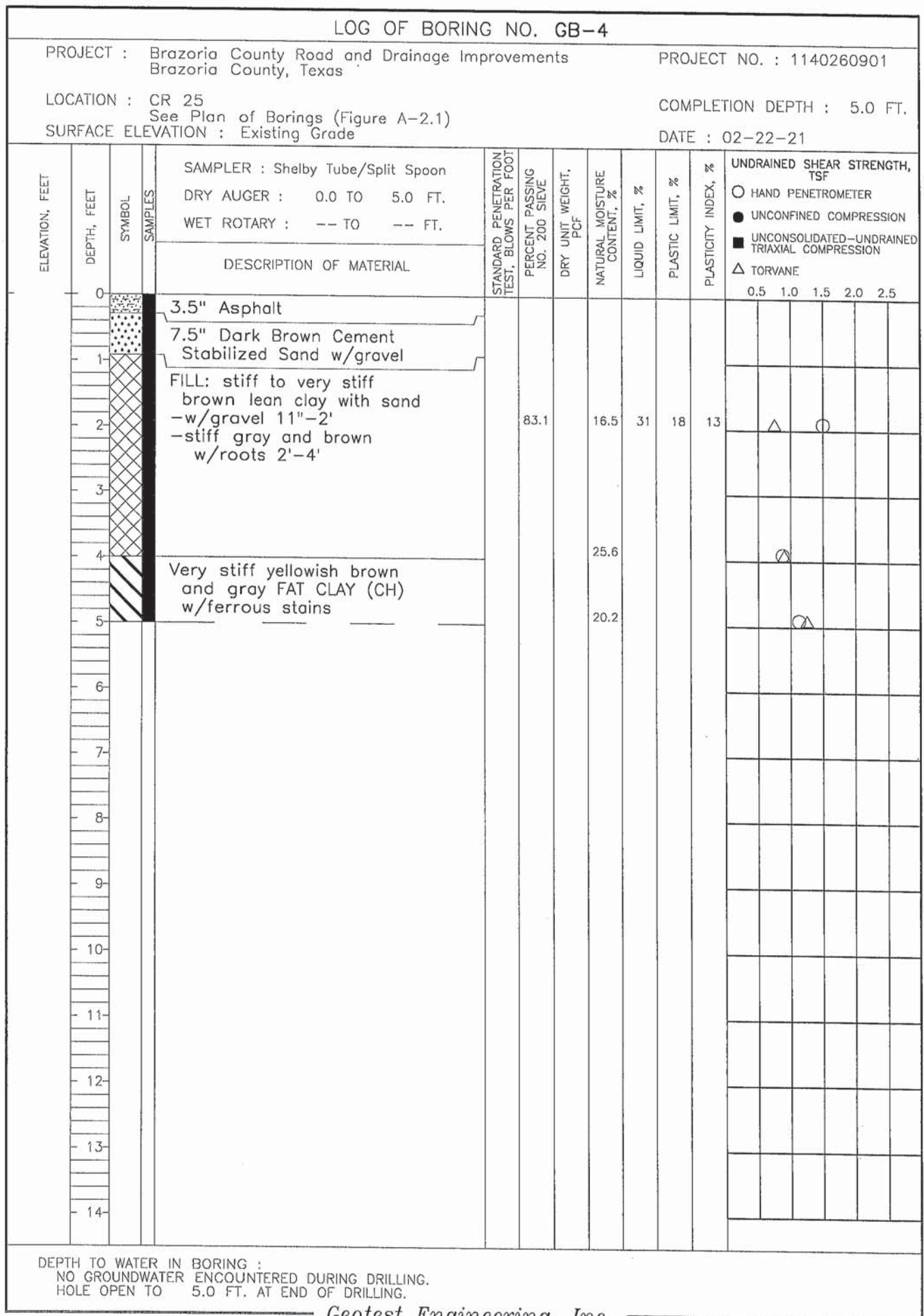


FIGURE C-2



Geotest Engineering, Inc.

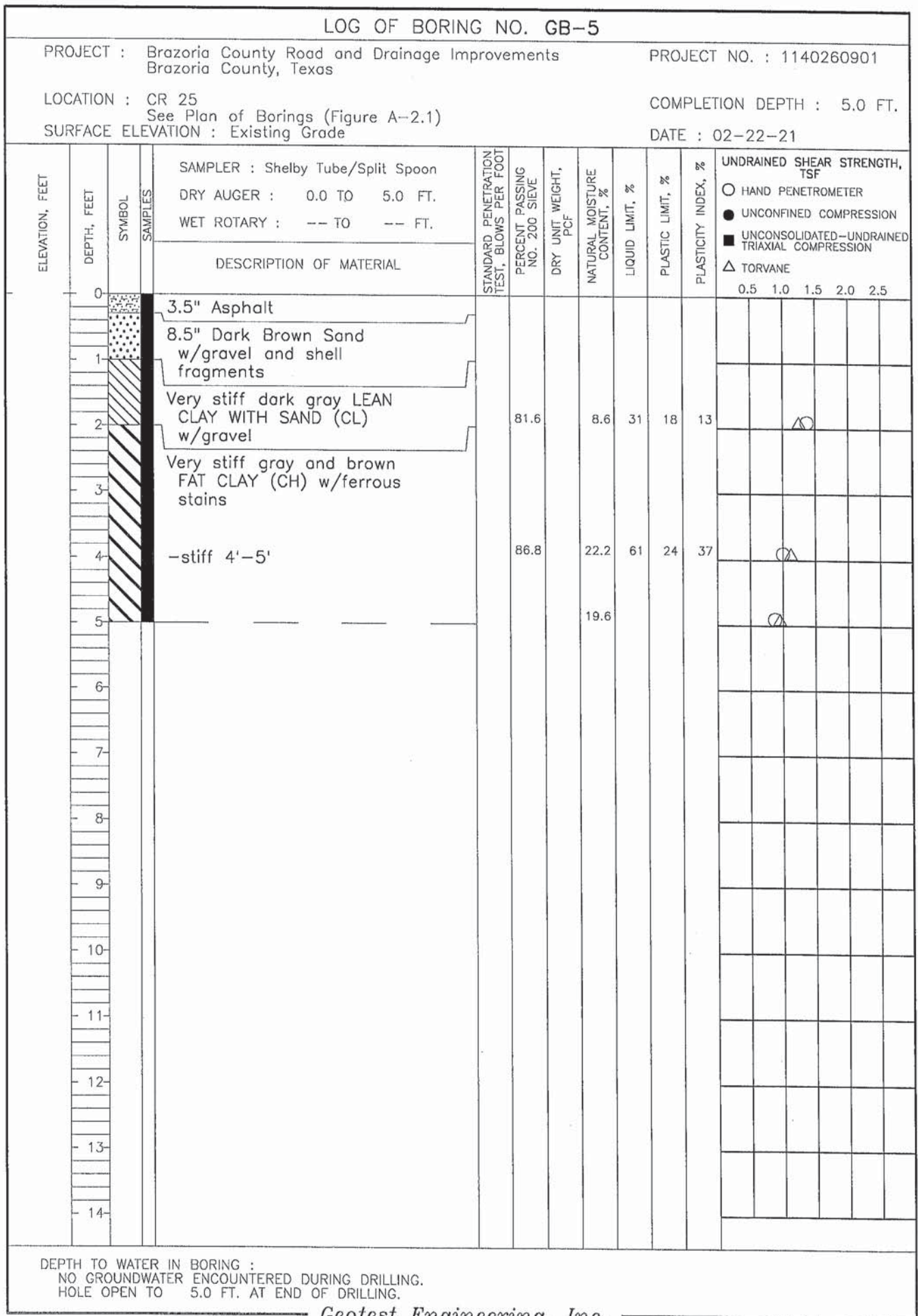
FIGURE C-3



Geotest Engineering, Inc.

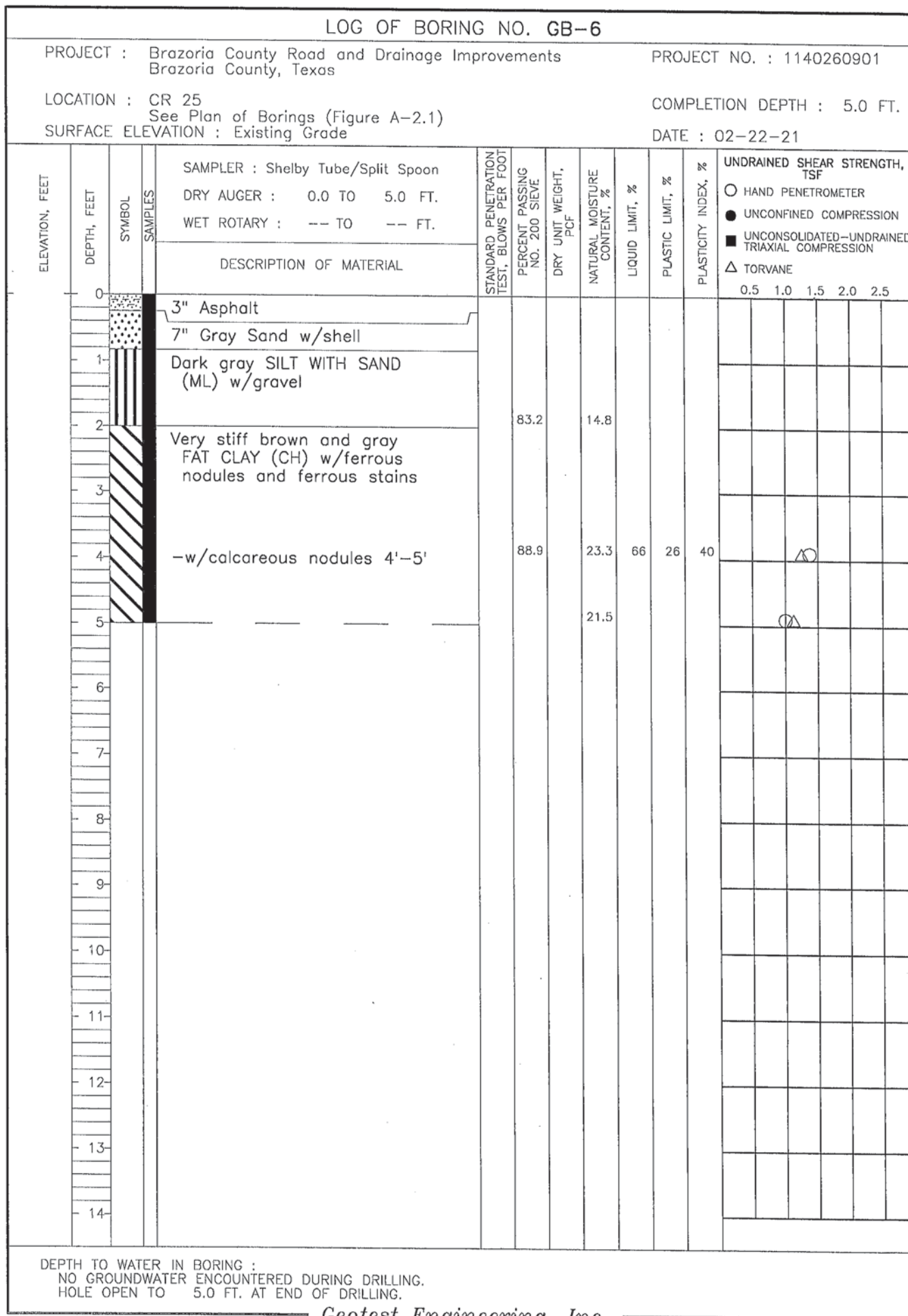
FIGURE C-4





Geotest Engineering, Inc.

FIGURE C-5



Geotest Engineering, Inc.

FIGURE C-6

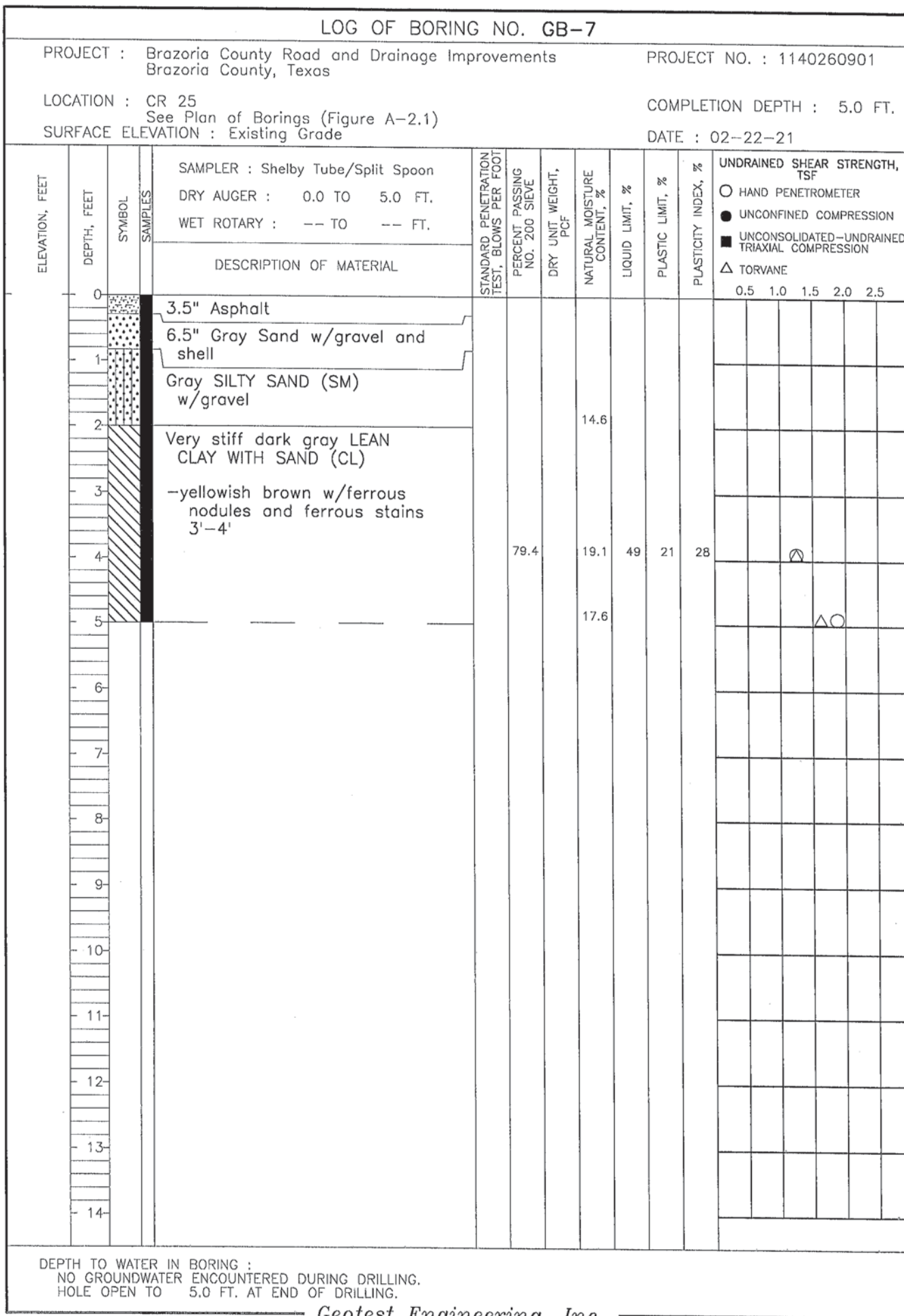


FIGURE C-7

# LOG OF BORING NO. GB-8

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 25  
See Plan of Borings (Figure A-2.1)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 02-22-21

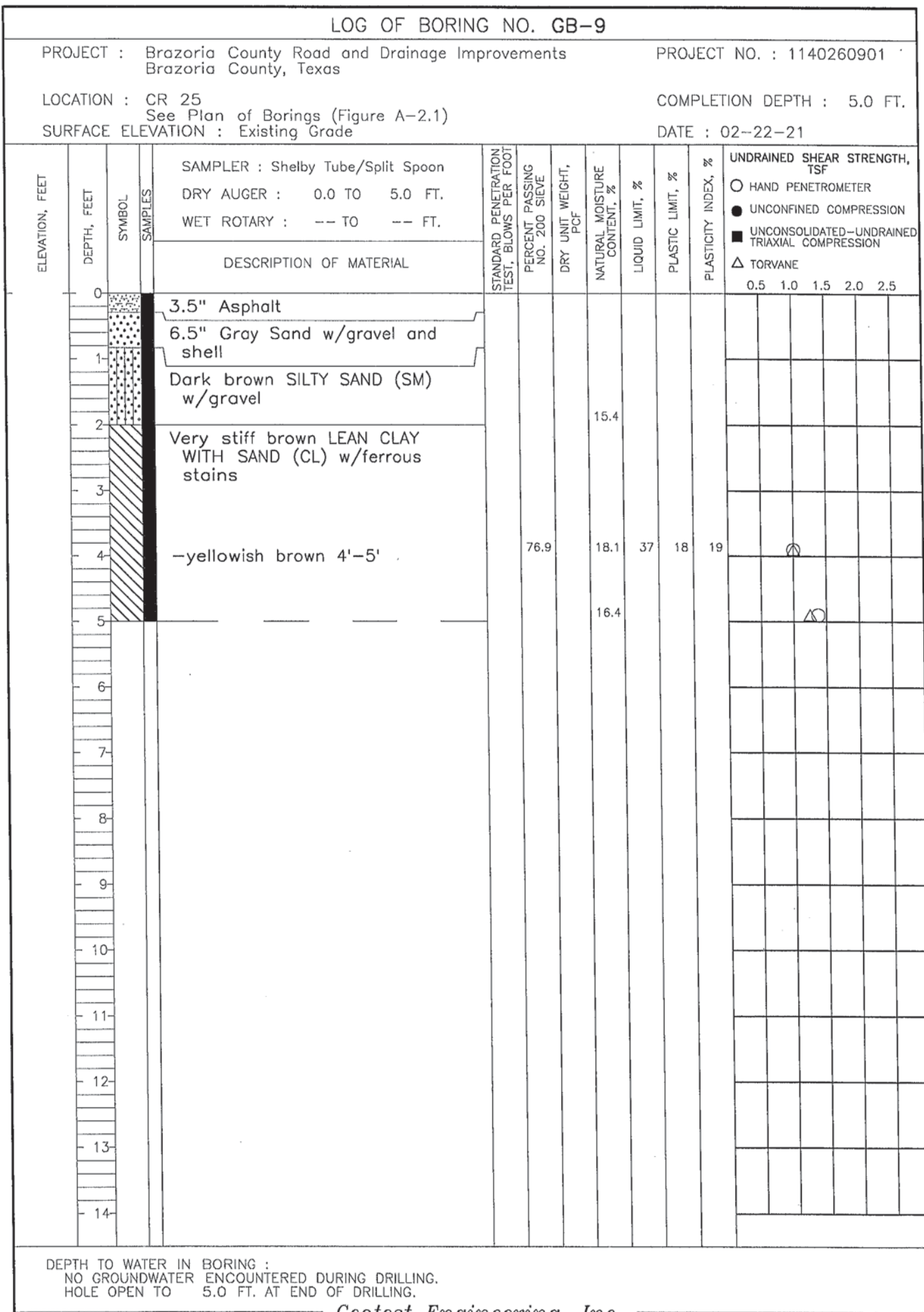
| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.             | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF   |     |     |     |     |     |  |
|-----------------|-------------|--------|---------|--|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|---|-----|-----|-----|-----|-----|--|
|                 |             |        |         | DESCRIPTION OF MATERIAL  |   |                               |                      |                             |                 |                  |                     | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 |  |
|                 | 0           |        |         | 4" Asphalt   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 1           |        |         | 6" Gray Sand w/gravel and shell  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 2           |        |         | Dark brown SILTY SAND (SM)   |   |                               |                      | 14.8                        |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 3           |        |         | Very stiff brown and gray LEAN CLAY WITH SAND (CL) w/ferrous nodules and ferrous stains and sand pockets |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 4           |        |         | -w/sand seams 4'-5'  |   | 83.0                          |                      | 18.3                        | 49              | 21               | 28                  |   |     | △   | ○   |     |     |  |
|                 | 5           |        |         |  |   |                               |                      | 19.3                        |                 |                  |                     |   |     | ⊗   |     |     |     |  |
|                 | 6           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 7           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 8           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 9           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 10          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 11          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 12          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 13          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 14          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

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FIGURE C-8





Geotest Engineering, Inc.

FIGURE C-9

# LOG OF BORING NO. GB-10

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 25  
See Plan of Borings (Figure A-2.1)

COMPLETION DEPTH : 5.0 FT.

SURFACE ELEVATION : Existing Grade

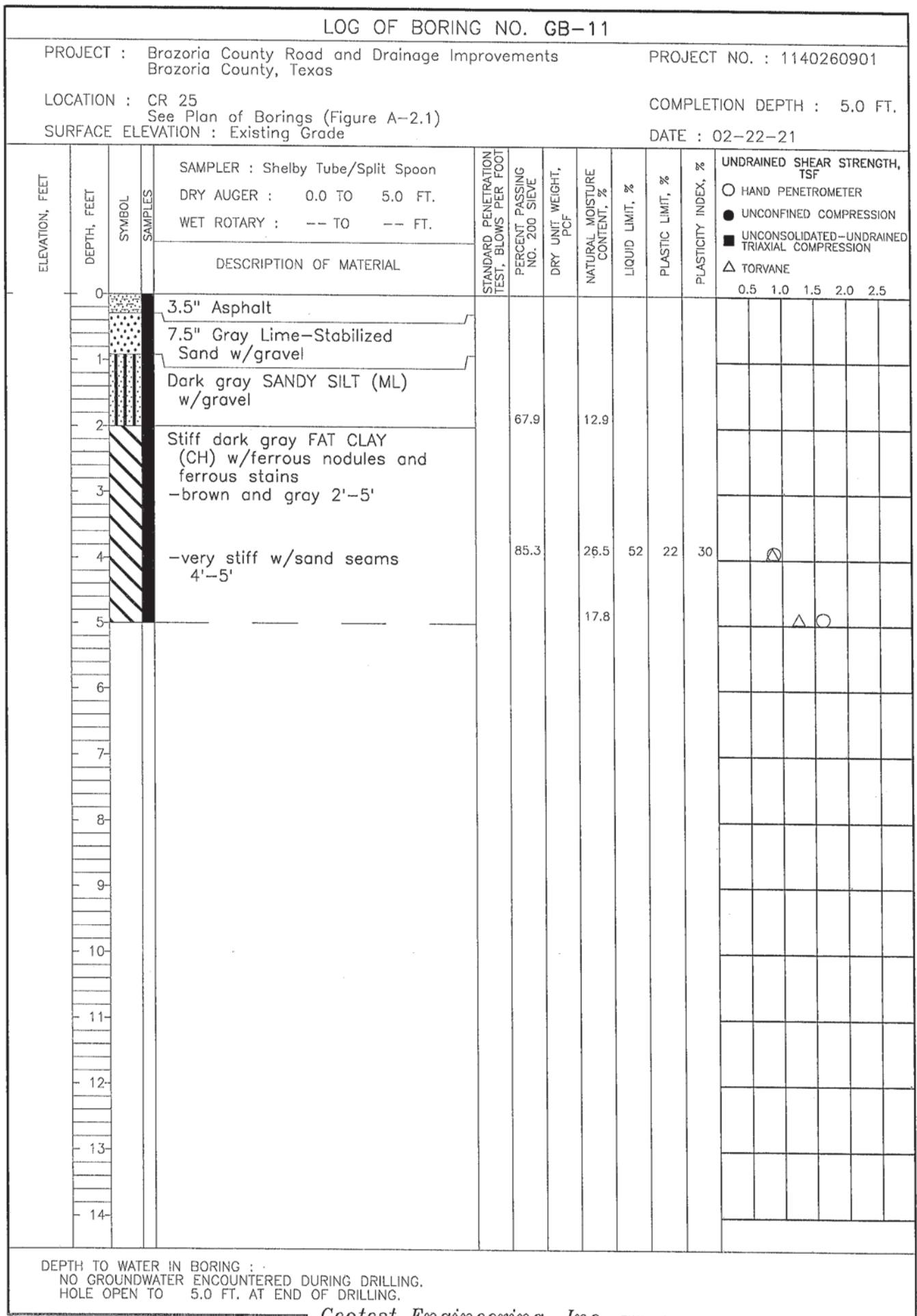
DATE : 02-22-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT. | DESCRIPTION OF MATERIAL  | STANDARD PENETRATION<br>TEST, BLOWS PER FOOT | PERCENT PASSING<br>NO. 200 SIEVE | DRY UNIT WEIGHT,<br>PCF | NATURAL MOISTURE<br>CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH,<br>TSF  |     |     |     |     |
|-----------------|-------------|--------|---------|--|--|--|----------------------------------|-------------------------|--------------------------------|-----------------|------------------|---------------------|---|-----|-----|-----|-----|
|                 |             |        |         |  |  |  |                                  |                         |                                |                 |                  |                     | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |     |     |     |     |
|                 |             |        |         |  |  |  |                                  |                         |                                |                 |                  |                     | 0.5   | 1.0 | 1.5 | 2.0 | 2.5 |
|                 | 0           |        |         |  | 4" Asphalt   |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 1           |        |         |  | 7" Gray Sand w/gravel and shell  |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 2           |        |         |  | Very stiff dark brown LEAN CLAY WITH SAND (CL)<br>-brown w/ferrous stains<br>2'-5' |  |                                  |                         | 13.6                           |                 |                  |                     |   |     |     |     |     |
|                 | 3           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 4           |        |         |  |  |  | 76.7                             |                         | 14.6                           | 39              | 19               | 20                  |   |     |     |     |     |
|                 | 5           |        |         |  |  |  |                                  |                         | 14.3                           |                 |                  |                     |   |     |     |     |     |
|                 | 6           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 7           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 8           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 9           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 10          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 11          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 12          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 13          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 14          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

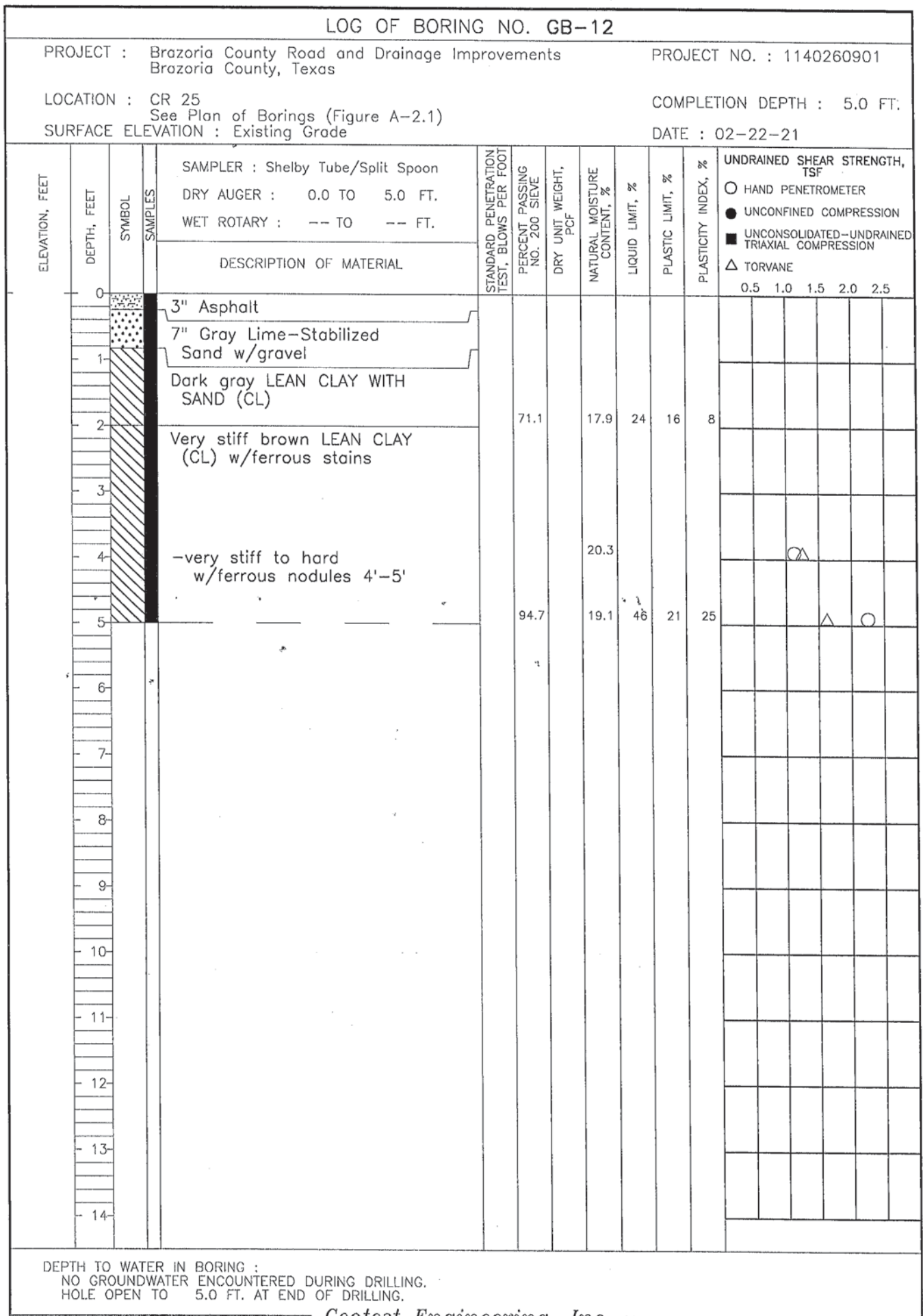
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FIGURE C-10



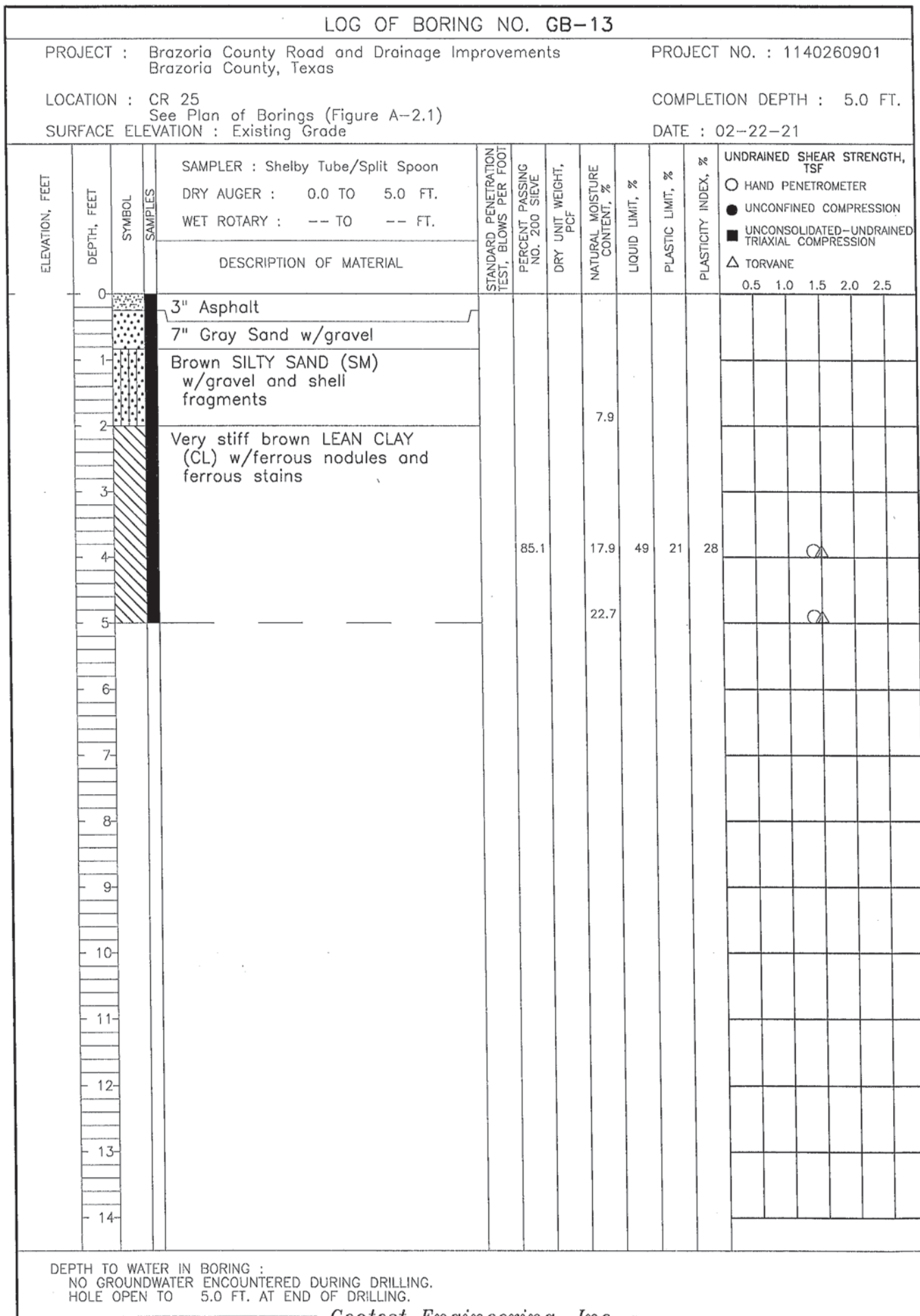
Geotest Engineering, Inc.

FIGURE C-11



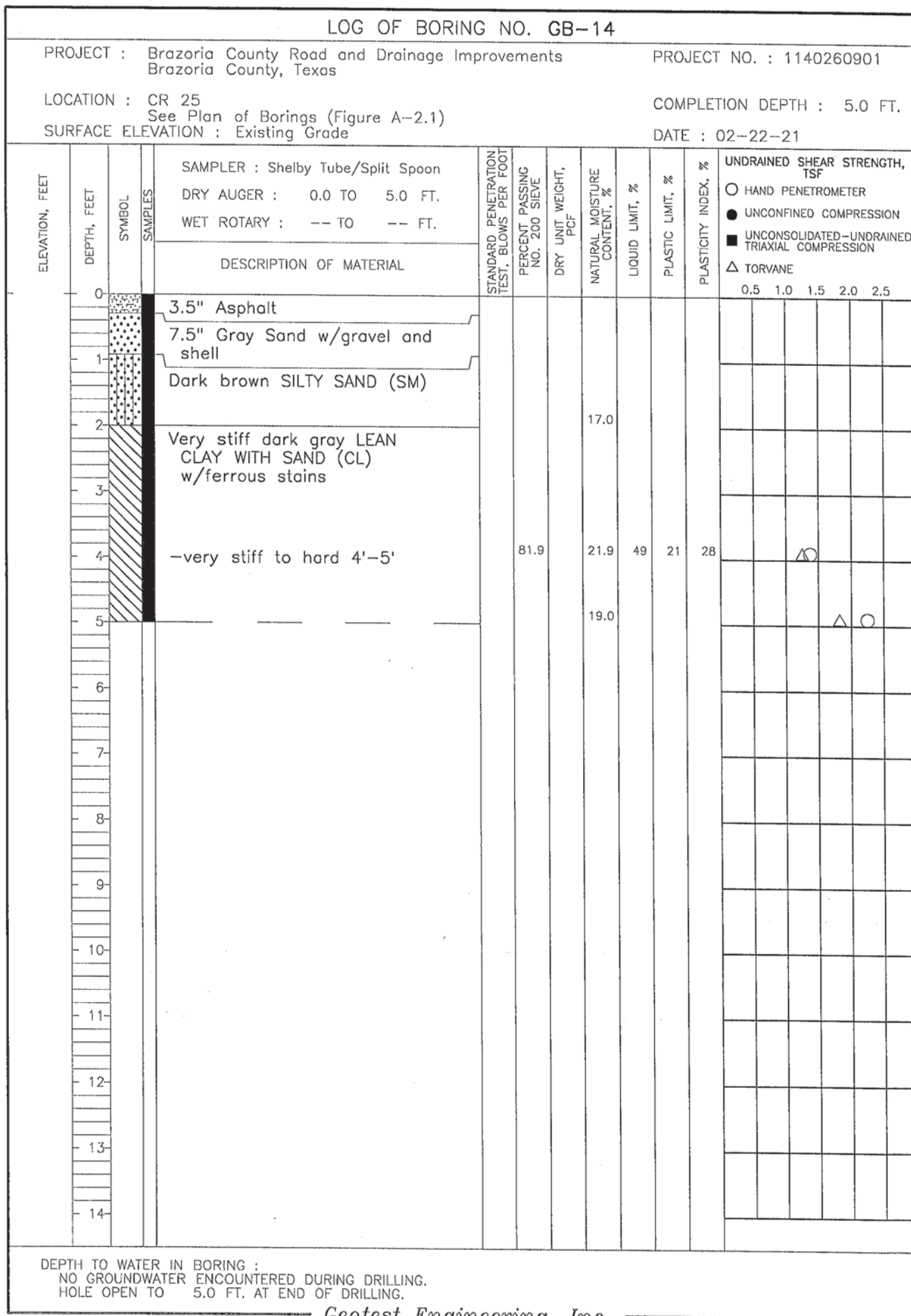
Geotest Engineering, Inc.

FIGURE C-12



Geotest Engineering, Inc.

FIGURE C-13



Geotest Engineering, Inc.

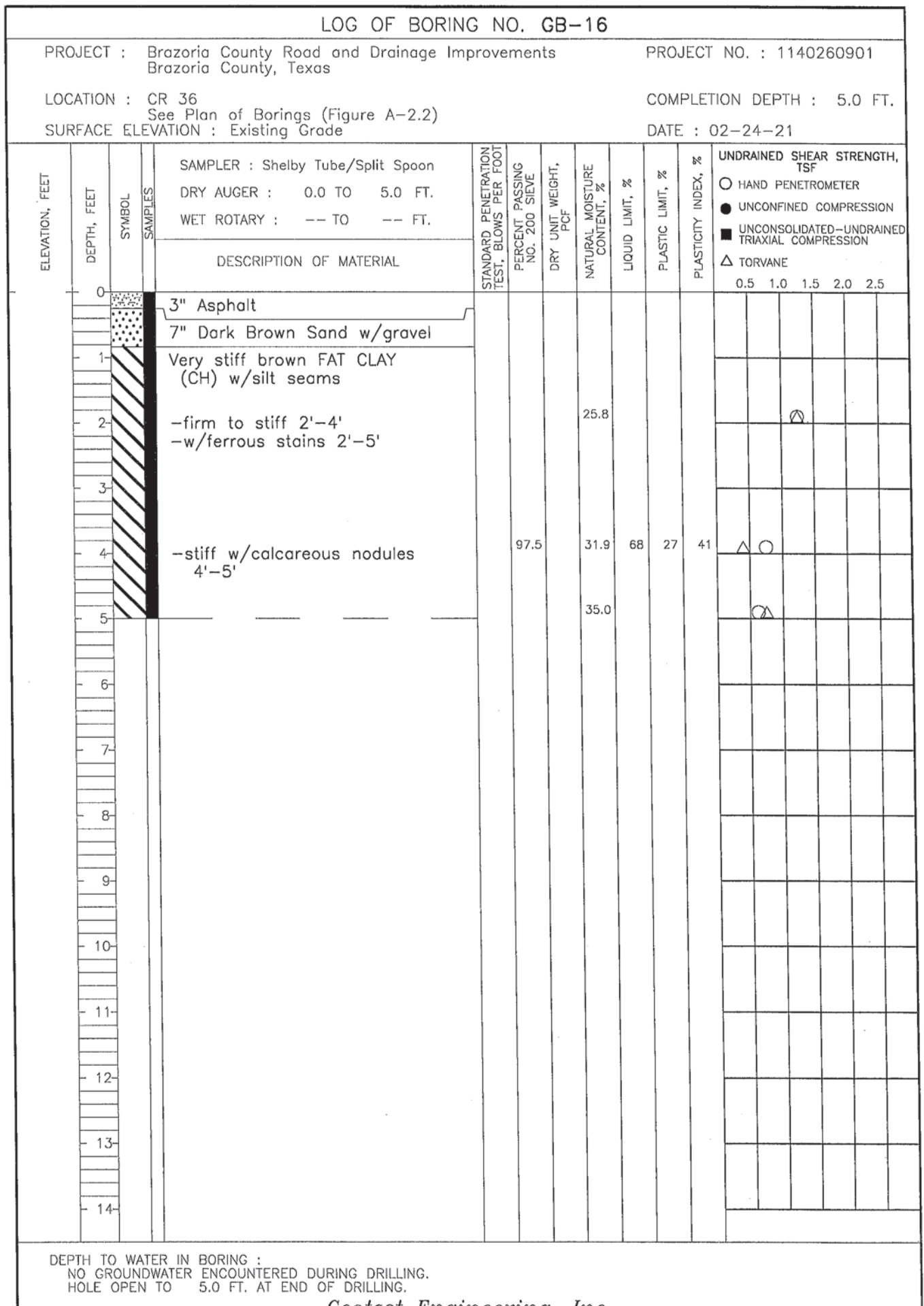
FIGURE C-14



| LOG OF BORING NO. GB-15  |             |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|--|-------------|--------|---------|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|
| PROJECT : Brazoria County Road and Drainage Improvements<br>Brazoria County, Texas |             |        |         |   |   | PROJECT NO. : 1140260901      |                      |                             |                 |                  |                     |                               |
| LOCATION : CR 36<br>See Plan of Borings (Figure A-2.2)                             |             |        |         |   |   | COMPLETION DEPTH : 5.0 FT.    |                      |                             |                 |                  |                     |                               |
| SURFACE ELEVATION : Existing Grade   |             |        |         |   |   | DATE : 02-24-21               |                      |                             |                 |                  |                     |                               |
| ELEVATION, FEET  | DEPTH, FEET | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL                                 | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |
|  | 0           |        |         | 3" Asphalt  |   |                               |                      |                             |                 |                  |                     |                               |
|  | 0.5         |        |         | 8" Dark Brown Sand w/gravel                             |   |                               |                      |                             |                 |                  |                     |                               |
|  | 1           |        |         | Very stiff dark gray FAT CLAY (CH) w/calcareous nodules |   |                               |                      |                             |                 |                  |                     |                               |
|  | 1.5         |        |         | -w/ferrous stains 11"-4'                                |   |                               |                      |                             |                 |                  |                     |                               |
|  | 2           |        |         | -brown 2'-5'  |   | 93.6                          |                      | 32.5                        | 86              | 32               | 54                  |                               |
|  | 2.5         |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 3           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 3.5         |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 4           |        |         | -stiff 4'-5'  |   |                               |                      | 28.3                        |                 |                  |                     |                               |
|  | 4.5         |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 5           |        |         |   |   |                               |                      | 32.4                        |                 |                  |                     |                               |
|  | 5.5         |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 6           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 6.5         |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 7           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 7.5         |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 8           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 8.5         |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 9           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 9.5         |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 10          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 10.5        |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 11          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 11.5        |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 12          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 12.5        |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 13          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 13.5        |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |
|  | 14          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |

DEPTH TO WATER IN BORING :  
 NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
 HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

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Geotest Engineering, Inc.

FIGURE C-16



# LOG OF BORING NO. CB-17

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 36  
See Plan of Borings (Figure A-2.2)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 02-24-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.                    | DESCRIPTION OF MATERIAL  | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |     |     |     |     |  |  |
|-----------------|-------------|--------|---------|---|--|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|-----|-----|-----|-----|--|--|
|                 |             |        |         | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |  |   |                               |                      |                             |                 |                  |                     | 0.5                           | 1.0 | 1.5 | 2.0 | 2.5 |  |  |
|                 | 0           |        |         |   | 2" Asphalt   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 |             |        |         |   | 5" Dark Brown Sand w/gravel  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 1           |        |         |   | Stiff brown FAT CLAY (CH)<br>w/calcareous and ferrous nodules and ferrous stains |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 2           |        |         |   |  |   |                               |                      | 43.5                        |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 3           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 4           |        |         |   |  |   | 97.9                          |                      | 37.2                        | 92              | 33               | 59                  |                               |     |     |     |     |  |  |
|                 | 5           |        |         |   |  |   |                               |                      | 38.5                        |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 6           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 7           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 8           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 9           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 10          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 11          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 12          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 13          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 14          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-17

# LOG OF BORING NO. GB-18

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 36  
See Plan of Borings (Figure A-2.2)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 02-24-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF   |  |  |  |  |
|-----------------|-------------|--------|---------|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|---|--|--|--|--|
|                 |             |        |         |   |   |                               |                      |                             |                 |                  |                     | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |  |  |  |  |
|                 | 0           |        |         | 4" Asphalt  |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |
|                 |             |        |         | 6" Gray Sand w/gravel   |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |
|                 | 1           |        |         | Very stiff gray and brown FAT CLAY (CH) w/silt seams -w/calcareous nodules 10"-2' |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |
|                 | 2           |        |         |   | 96.5                                      |                               |                      | 28.7                        | 59              | 25               | 34                  |   |  |  |  |  |
|                 | 3           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |
|                 | 4           |        |         |   |   |                               |                      | 31.2                        |                 |                  |                     |   |  |  |  |  |
|                 | 5           |        |         |   |   |                               |                      | 29.7                        |                 |                  |                     |   |  |  |  |  |
|                 | 6           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |
|                 | 7           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |
|                 | 8           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |
|                 | 9           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |
|                 | 10          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |
|                 | 11          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |
|                 | 12          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |
|                 | 13          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |
|                 | 14          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |  |  |  |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-18

# LOG OF BORING NO. GB-19

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 36  
See Plan of Borings (Figure A-2.2)  
SURFACE ELEVATION : Existing Grade

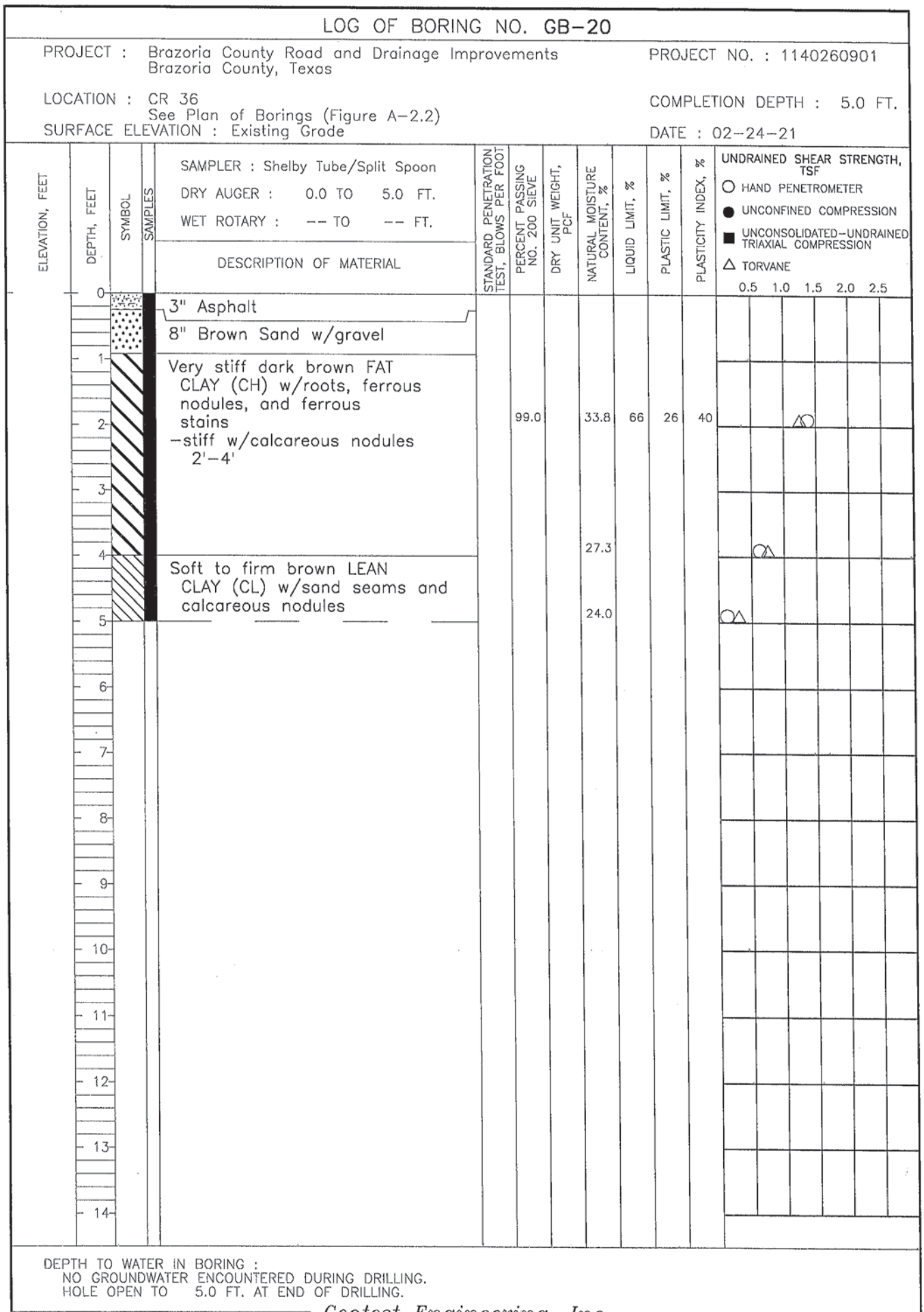
COMPLETION DEPTH : 5.0 FT.

DATE : 02-24-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL   | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF   |     |     |     |     |
|-----------------|-------------|--------|---------|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|---|-----|-----|-----|-----|
|                 |             |        |         |   |   |                               |                      |                             |                 |                  |                     | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |     |     |     |     |
|                 |             |        |         |   |   |                               |                      |                             |                 |                  |                     | 0.5   | 1.0 | 1.5 | 2.0 | 2.5 |
|                 | 0           |        |         | 3" Asphalt  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 1           |        |         | 7" Brown Stabilized Sand w/gravel   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 2           |        |         | Stiff to very stiff brown FAT CLAY (CH) w/ferrous nodules and ferrous stains -stiff 2'-4' | 96.3                                      |                               |                      | 35.4                        | 77              | 29               | 48                  |   | △   | ○   |     |     |
|                 | 3           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 4           |        |         | -w/calcareous nodules 4'-5'   |   |                               |                      | 34.2                        |                 |                  |                     |   | △   |     |     |     |
|                 | 5           |        |         |   |   |                               |                      | 28.5                        |                 |                  |                     |   | ○   | △   |     |     |
|                 | 6           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 7           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 8           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 9           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 10          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 11          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 12          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 13          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 14          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.



Geotest Engineering, Inc.

FIGURE C-20

# LOG OF BORING NO. GB-21

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 36  
See Plan of Borings (Figure A-2.2)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

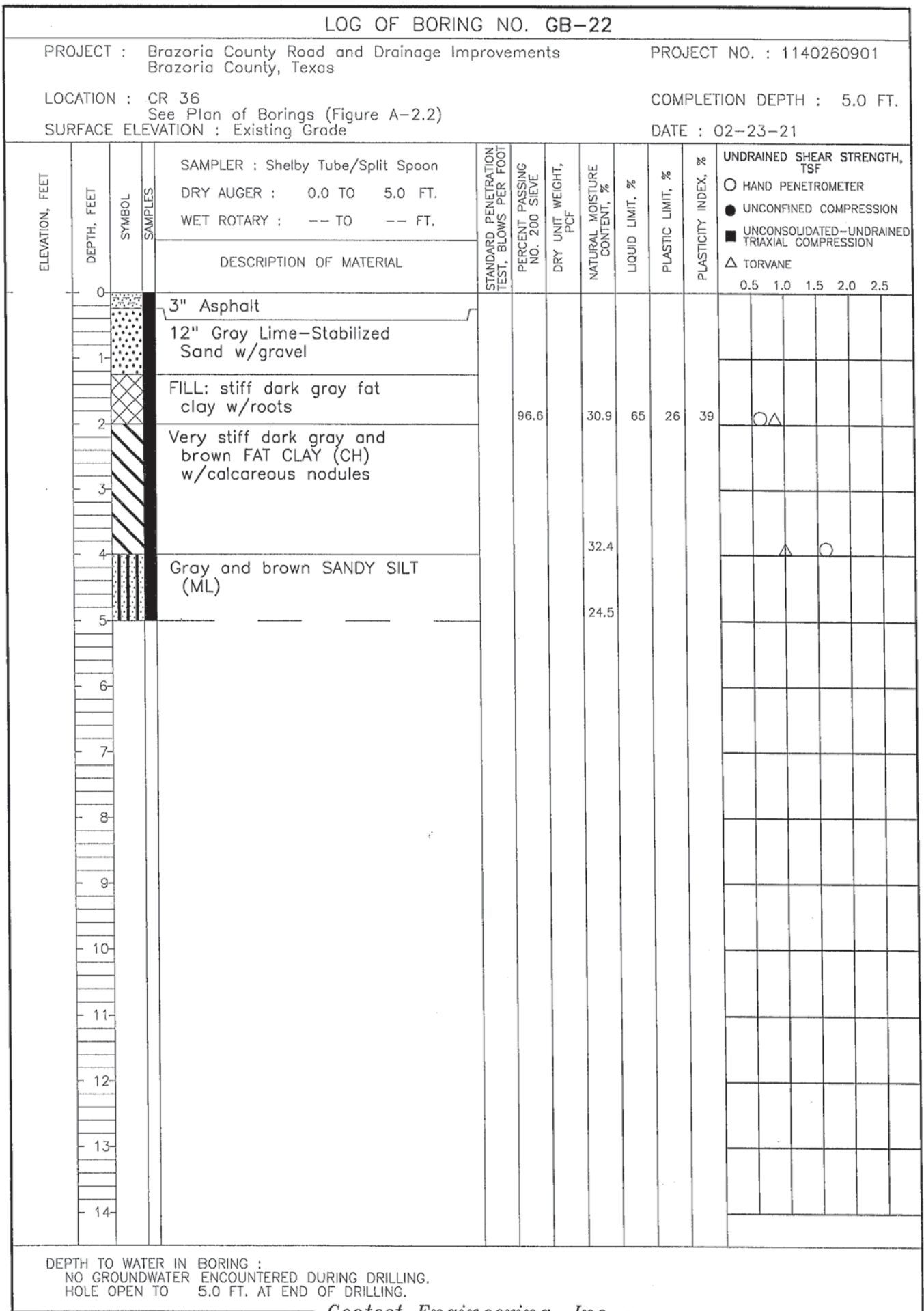
DATE : 02-23-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.                  | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF   |     |     |     |     |     |  |
|-----------------|-------------|--------|---------|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|---|-----|-----|-----|-----|-----|--|
|                 |             |        |         | DESCRIPTION OF MATERIAL   |   |                               |                      |                             |                 |                  |                     | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 |  |
|                 | 0           |        |         | 3" Asphalt  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 1           |        |         | 10" Dark Brown Sand w/gravel and shell  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 2           |        |         | Very stiff dark gray FAT CLAY (CH)<br>-w/ferrous nodules 13"-2'<br>-gray and brown w/calcareous nodules 2'-5' |   | 95.4                          |                      | 25.4                        | 67              | 26               | 41                  |   |     |     |     |     |     |  |
|                 | 3           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 4           |        |         | -stiff w/silt seams 4'-5'   |   |                               |                      | 20.8                        |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 5           |        |         |   |   |                               |                      | 24.6                        |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 6           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 7           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 8           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 9           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 10          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 11          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 12          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 13          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 14          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

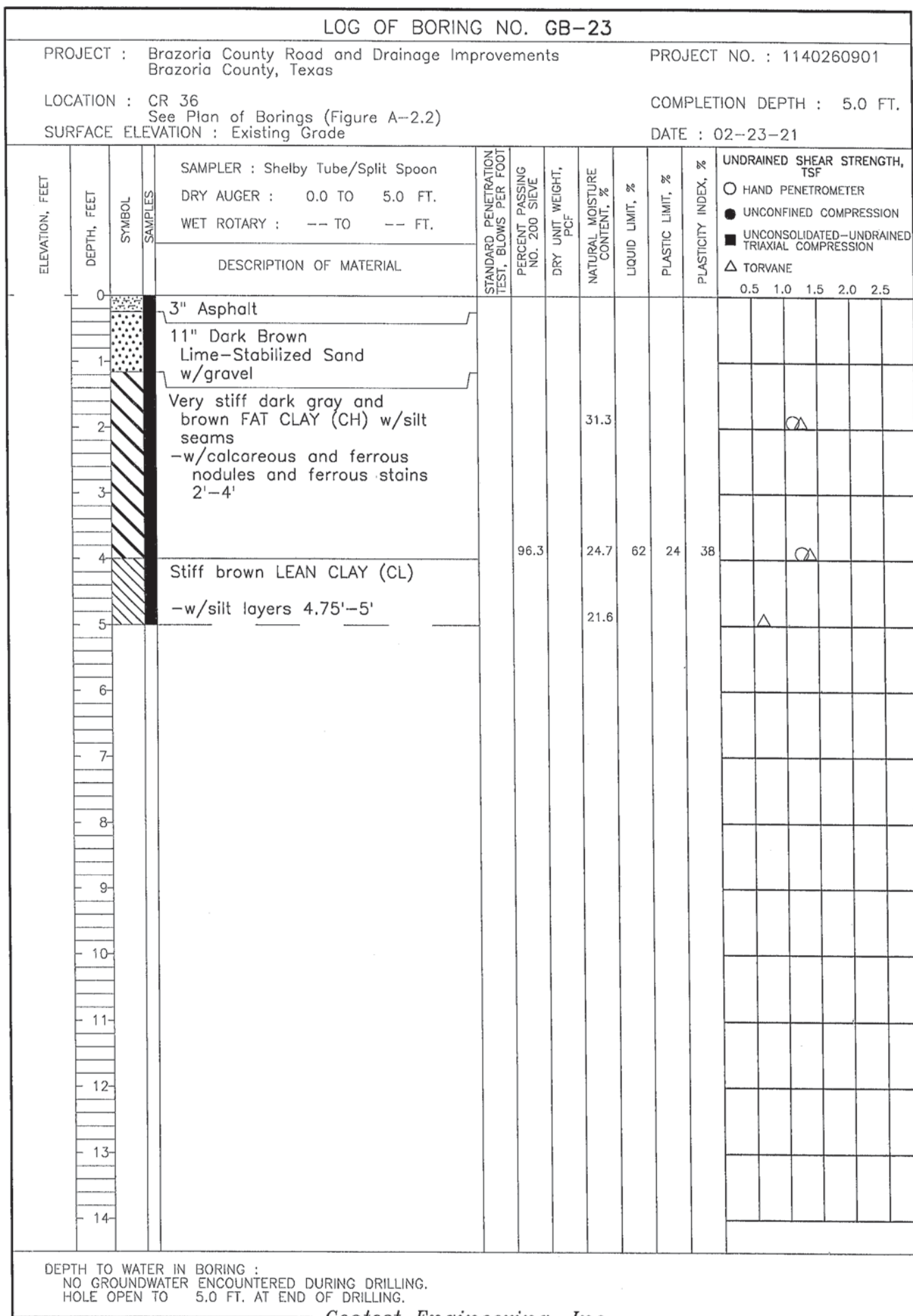
Geotest Engineering, Inc.





Geotest Engineering, Inc.

FIGURE C-22



Geotest Engineering, Inc.

FIGURE C-23

# LOG OF BORING NO. GB-24

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 36  
See Plan of Borings (Figure A-2.2)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 02-22-21

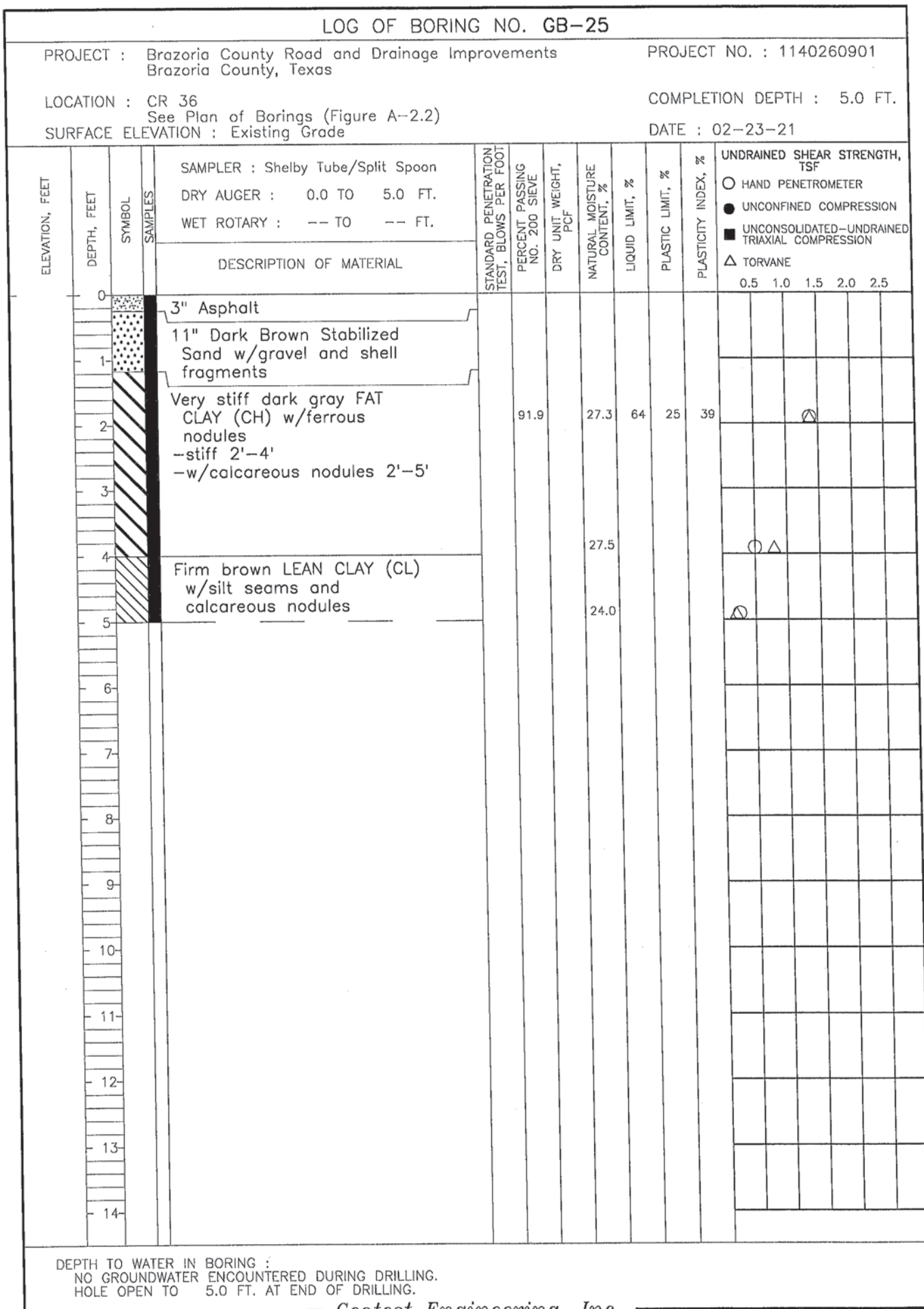
| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.                         | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF   |     |     |     |     |     |  |
|-----------------|-------------|--------|---------|--|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|---|-----|-----|-----|-----|-----|--|
|                 |             |        |         | DESCRIPTION OF MATERIAL  |   |                               |                      |                             |                 |                  |                     | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 |  |
|                 | 0           |        |         | 3" Asphalt   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 1           |        |         | 10" Dark Brown Sand w/gravel and shell fragments   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 2           |        |         | Very stiff dark gray FAT CLAY (CH) w/calcareous and ferrous nodules<br>-w/roots 13"-4'<br>-stiff reddish brown 2'-4' | 94.7                                      |                               |                      | 26.8                        | 50              | 21               | 29                  |   |     |     |     |     |     |  |
|                 | 3           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 4           |        |         | -firm to stiff w/siltstone fragments 4'-5'   |   |                               |                      | 25.9                        |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 5           |        |         |  |   |                               |                      | 23.2                        |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 6           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 7           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 8           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 9           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 10          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 11          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 12          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 13          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |
|                 | 14          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |     |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-24





Geotest Engineering, Inc.

FIGURE C-25

# LOG OF BORING NO. CB-26

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 36  
See Plan of Borings (Figure A-2.2)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

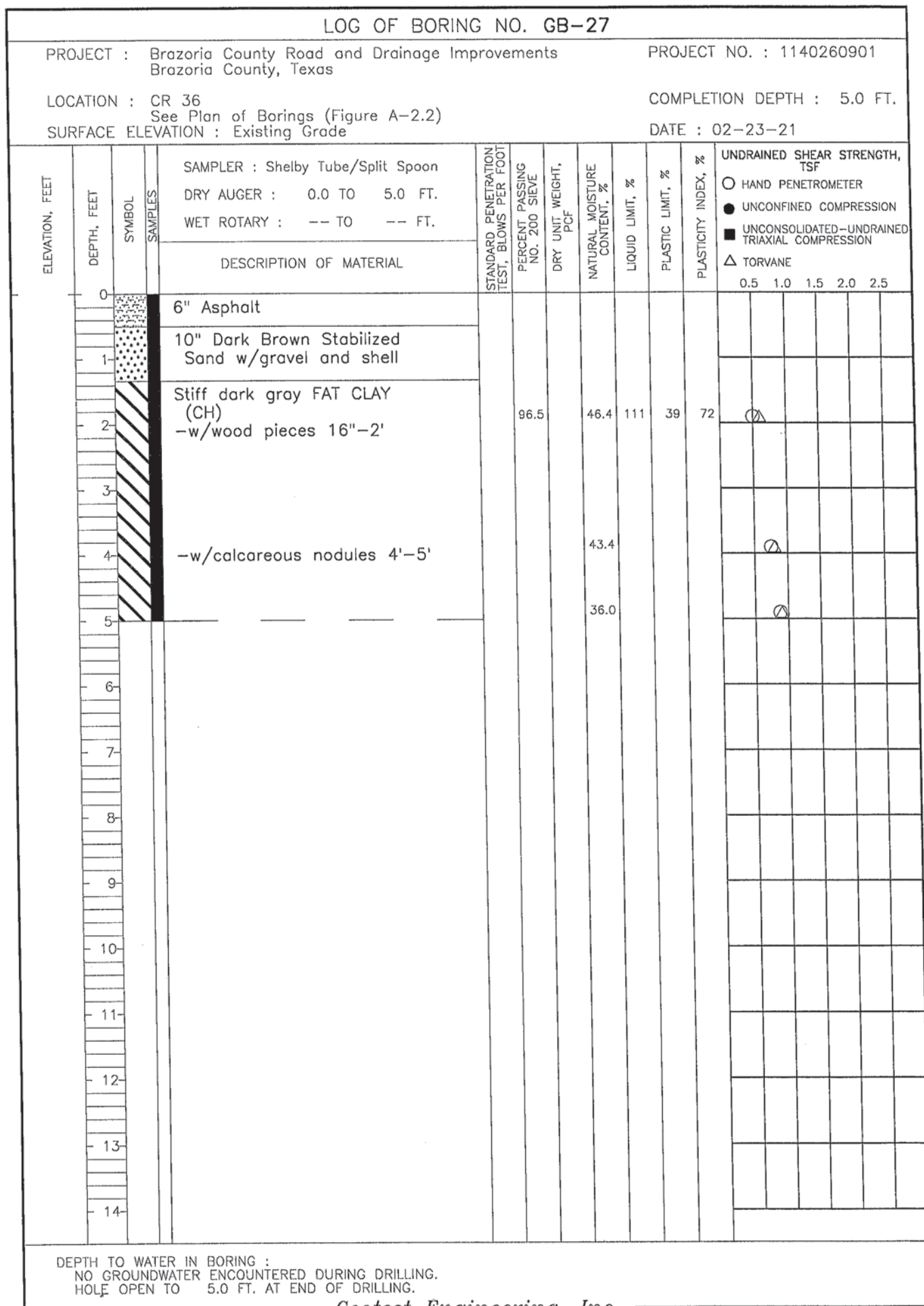
DATE : 02-23-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT. | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF  |     |     |     |     |     |  |  |
|-----------------|-------------|--------|---------|--|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|--|-----|-----|-----|-----|-----|--|--|
|                 |             |        |         | DESCRIPTION OF MATERIAL  |   |                               |                      |                             |                 |                  |                     | <div>○ HAND PENETROMETER</div> <div>● UNCONFINED COMPRESSION</div> <div>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION</div> <div>△ TORVANE</div> | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 |  |  |
|                 | 0           |        |         | 3" Asphalt   |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |  |  |
|                 | 1           |        |         | 9" Brown Stabilized Sand w/gravel and shell fragments  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |  |  |
|                 | 2           |        |         | FILL: very stiff to hard dark gray and brown silt  |   | 96.1                          |                      | 15.6                        | 26              | 24               | 2                   |  |     |     |     |     |     |  |  |
|                 | 3           |        |         | Soft brown SILTY CLAY (CL-ML) w/siltstone fragments  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |  |  |
|                 | 4           |        |         | -soft to firm 4'-5'  |   | 93.1                          |                      | 23.5                        | 27              | 22               | 5                   | △  |     |     |     |     |     |  |  |
|                 | 5           |        |         |  |   |                               |                      | 25.5                        |                 |                  |                     | △  |     |     |     |     |     |  |  |
|                 | 6           |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |  |  |
|                 | 7           |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |  |  |
|                 | 8           |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |  |  |
|                 | 9           |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |  |  |
|                 | 10          |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |  |  |
|                 | 11          |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |  |  |
|                 | 12          |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |  |  |
|                 | 13          |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |  |  |
|                 | 14          |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |  |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

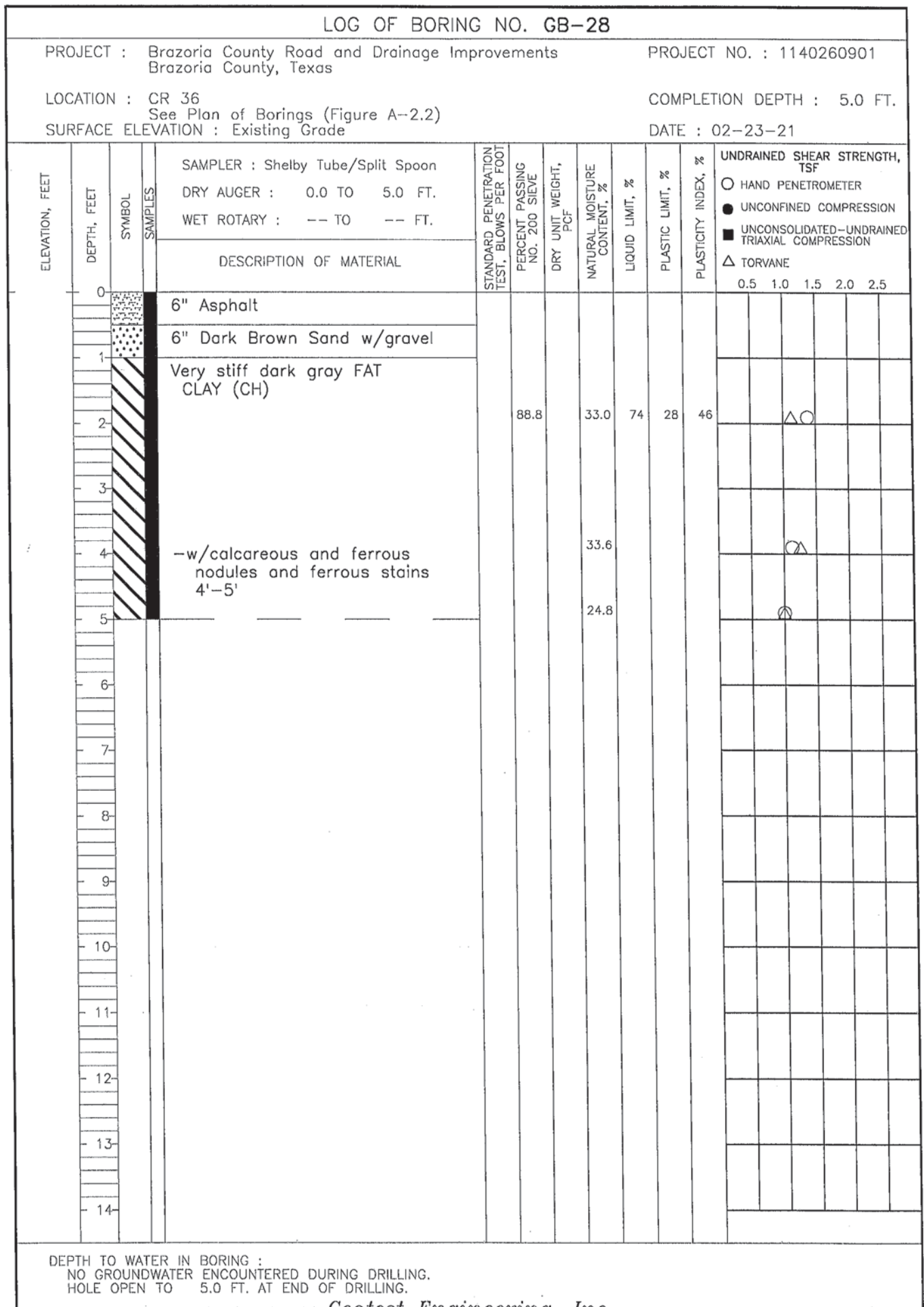
Geotest Engineering, Inc.

FIGURE C-26



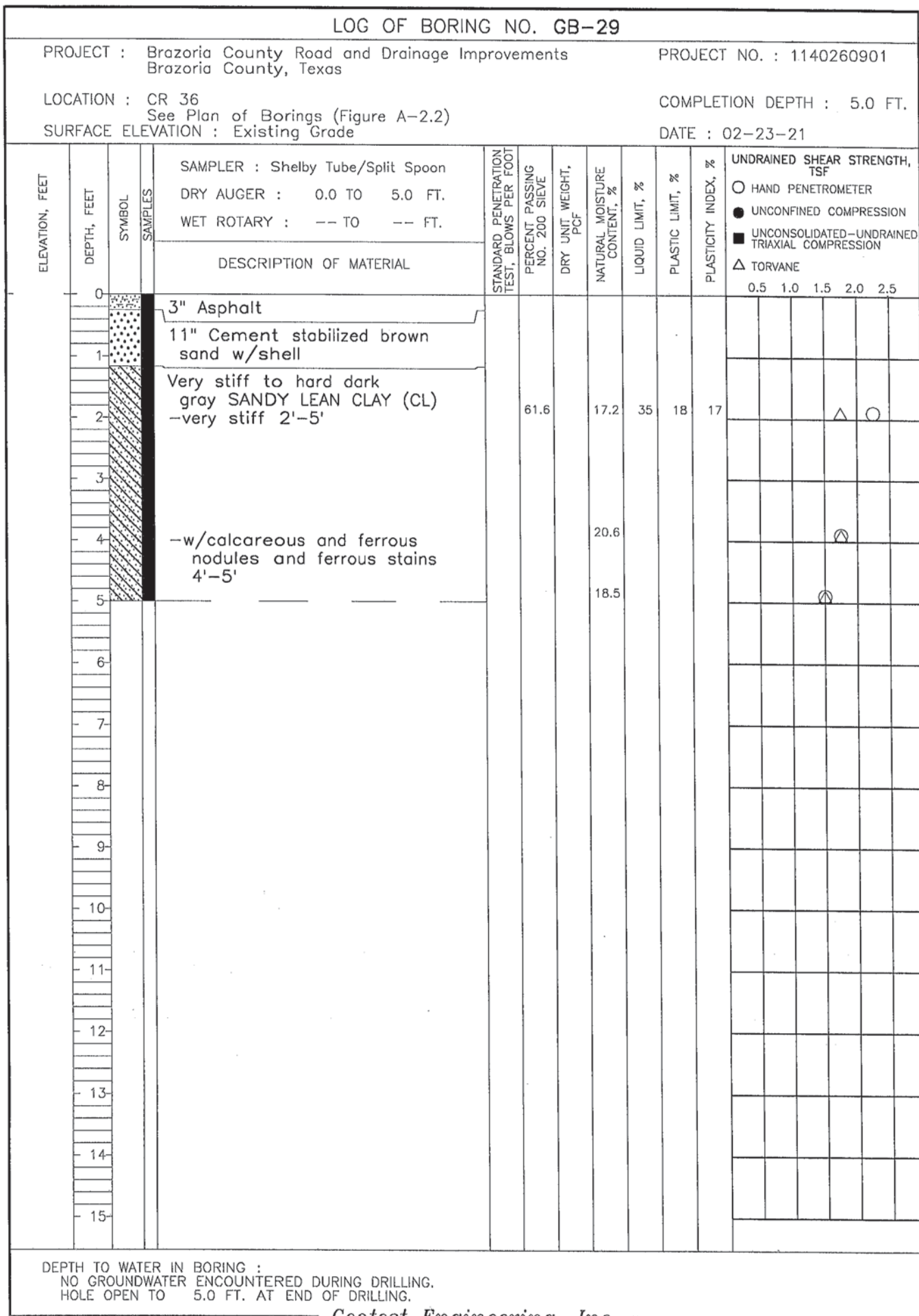
Geotest Engineering, Inc.

FIGURE C-27



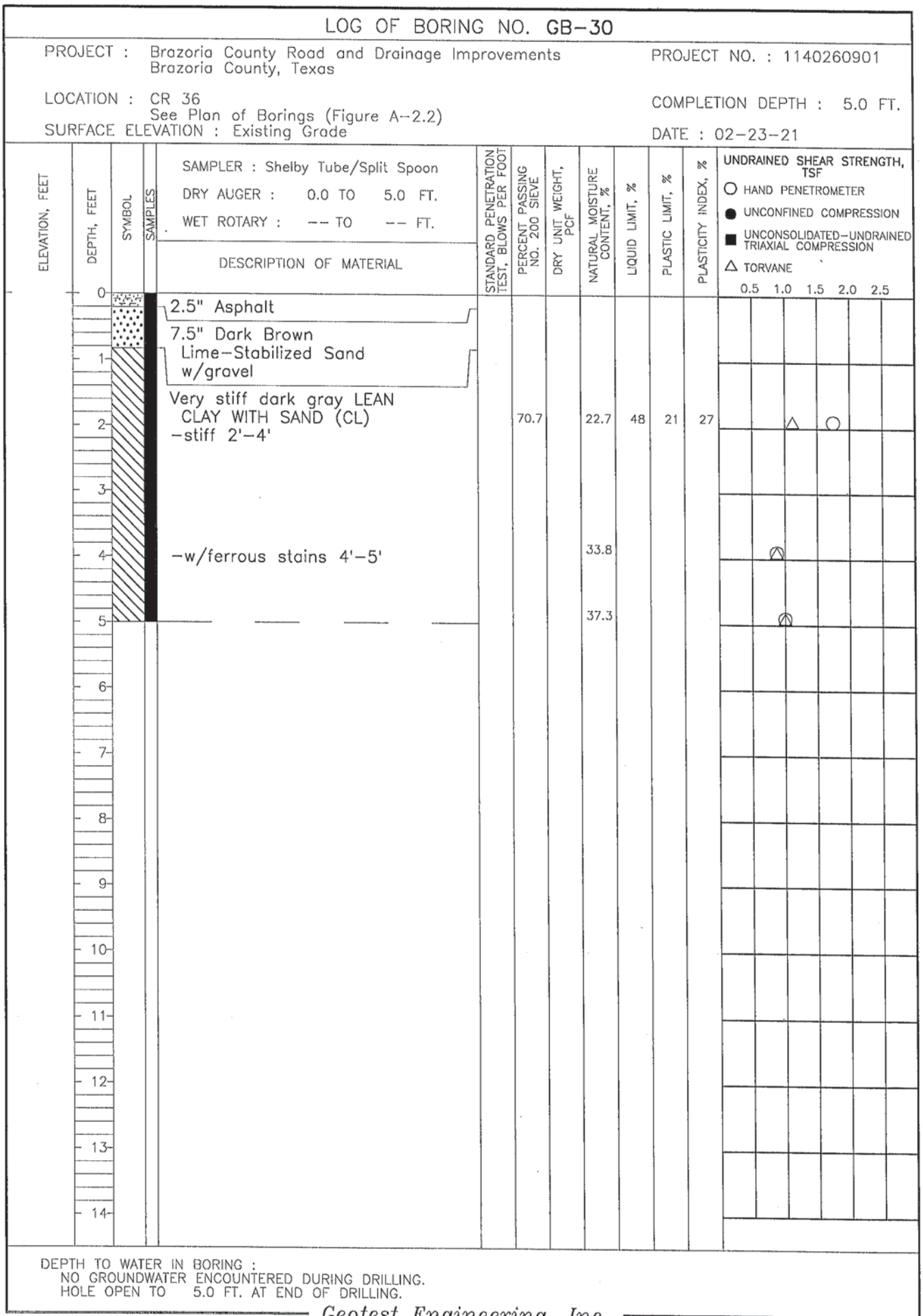
Geotest Engineering, Inc.

FIGURE C-28



Geotest Engineering, Inc.

FIGURE C-29



Geotest Engineering, Inc.

FIGURE C-30



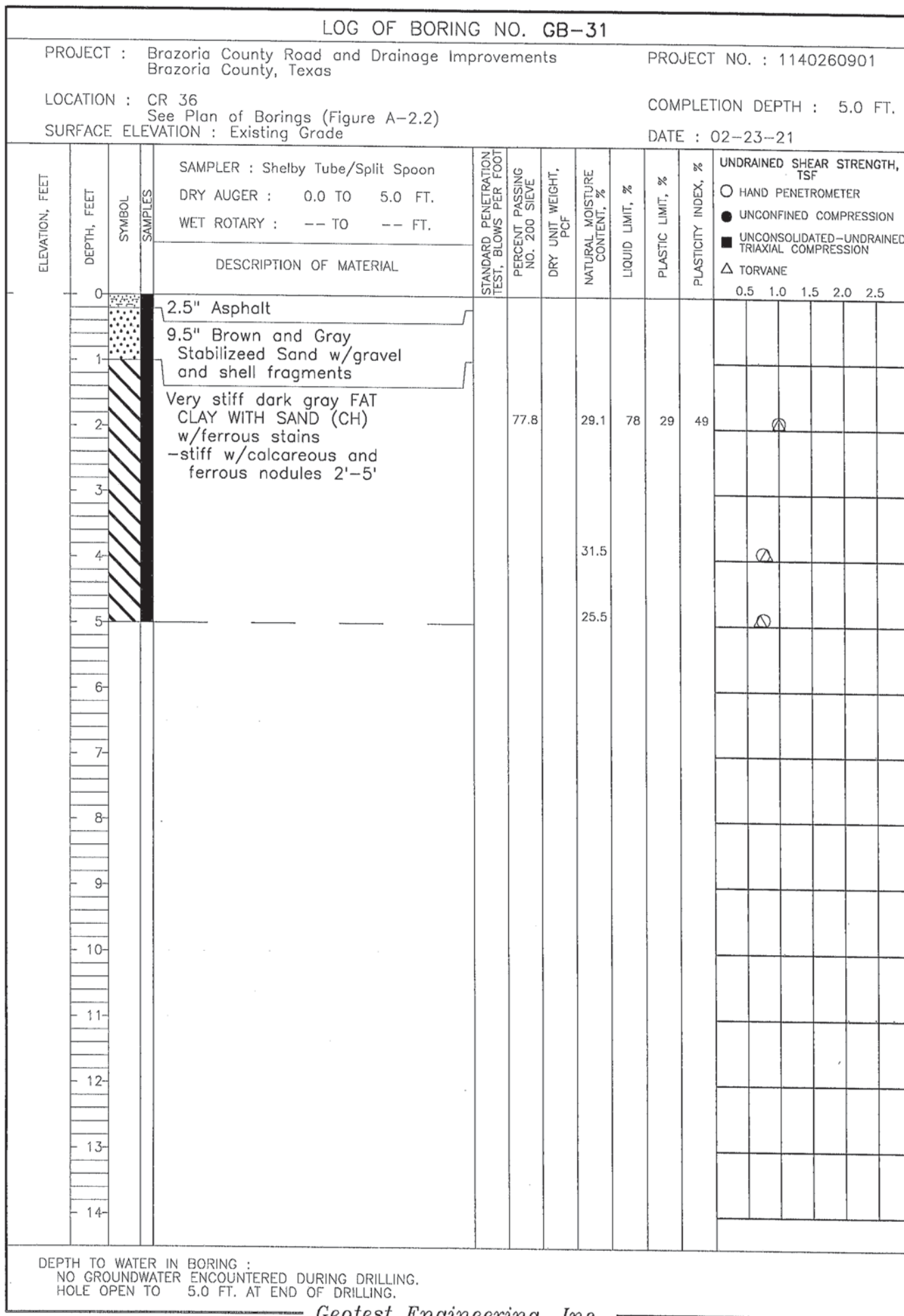
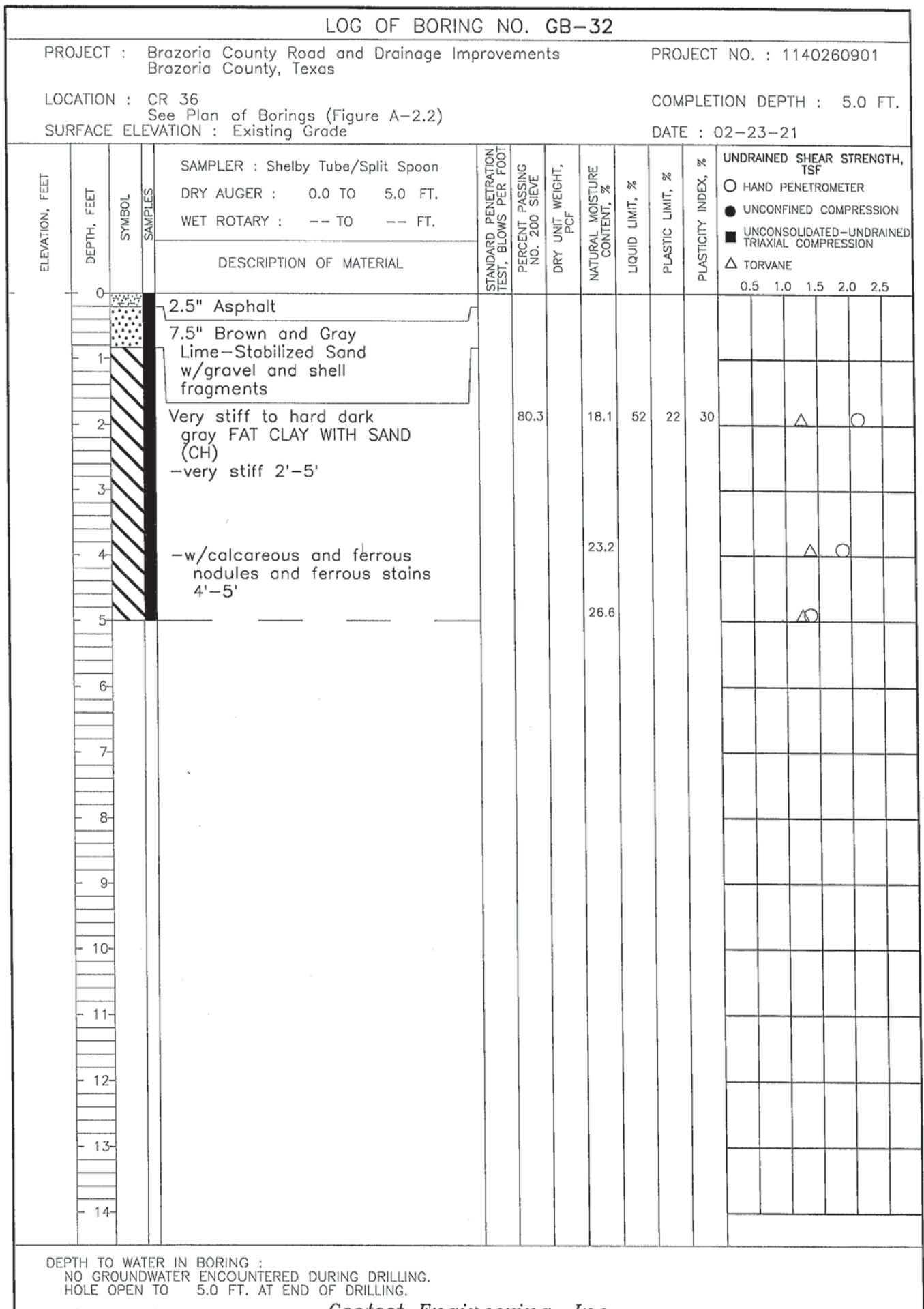


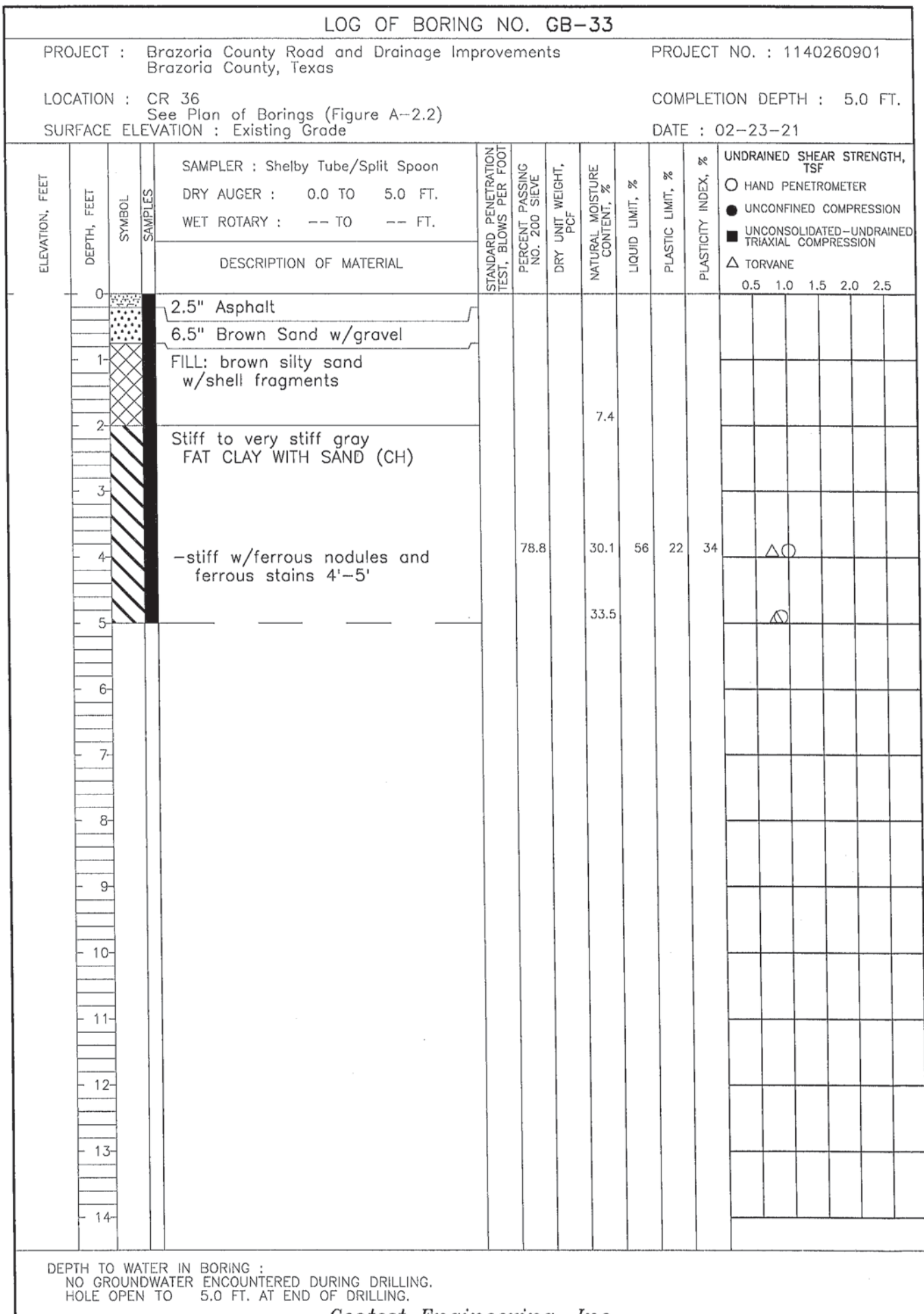
FIGURE C-31



Geotest Engineering, Inc.

FIGURE C-32





Geotest Engineering, Inc.

FIGURE C-33

# LOG OF BORING NO. GB-34

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 36A  
See Plan of Borings (Figure A-2.2)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

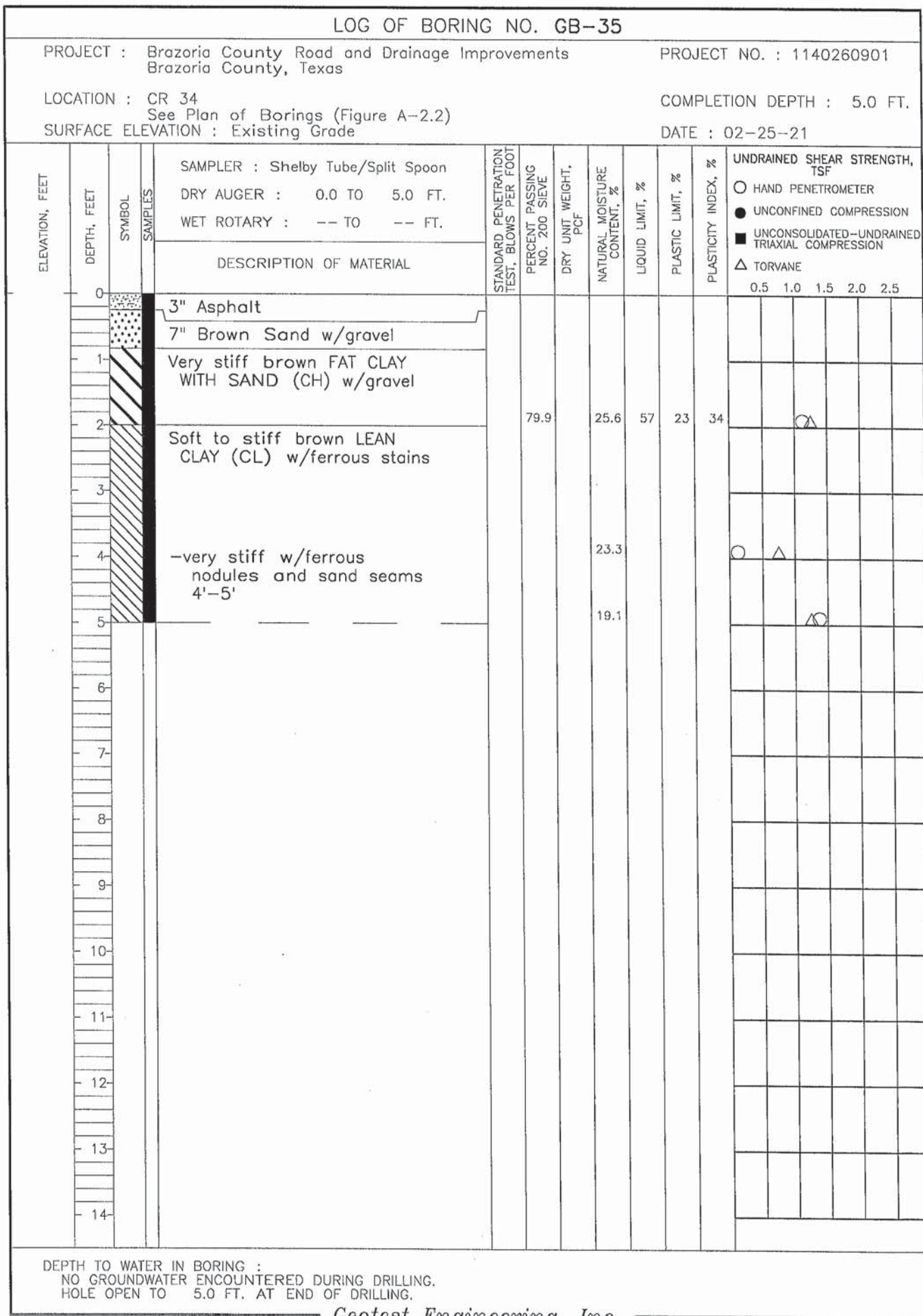
DATE : 02-24-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon      | STANDARD PENETRATION<br>TEST, BLOWS PER FOOT | PERCENT PASSING<br>NO. 200 SIEVE | DRY UNIT WEIGHT,<br>PCF | NATURAL MOISTURE<br>CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH,<br>TSF |                         |                     |                          |  |           |     |     |     |
|-----------------|-------------|--------|---------|--|--|----------------------------------|-------------------------|--------------------------------|-----------------|------------------|---------------------|----------------------------------|-------------------------|---------------------|--------------------------|--|-----------|-----|-----|-----|
|                 |             |        |         | DRY AUGER : 0.0 TO 5.0 FT.             |  |                                  |                         |                                |                 |                  |                     | WET ROTARY : -- TO -- FT.        | DESCRIPTION OF MATERIAL | ○ HAND PENETROMETER | ● UNCONFINED COMPRESSION | ■ UNCONSOLIDATED-UNDRAINED<br>TRIAxIAL COMPRESSION | △ TORVANE | 0.5 | 1.0 | 1.5 |
|                 | 0           |        |         | 3" Asphalt                             |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 |             |        |         | 6" Stabilized Sand w/gravel            |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 1           |        |         | Very stiff dark brown FAT<br>CLAY (CH) |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 |             |        |         | -w/ferrous nodules 9"-2'               |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 2           |        |         | -stiff w/calcareous nodules<br>2'-5'   |  | 91.0                             |                         | 28.6                           | 72              | 28               | 44                  |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 3           |        |         |  |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 4           |        |         |  |  |                                  |                         | 30.6                           |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 5           |        |         |  |  |                                  |                         | 33.5                           |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 6           |        |         |  |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 7           |        |         |  |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 8           |        |         |  |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 9           |        |         |  |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 10          |        |         |  |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 11          |        |         |  |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 12          |        |         |  |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 13          |        |         |  |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |
|                 | 14          |        |         |  |  |                                  |                         |                                |                 |                  |                     |                                  |                         |                     |                          |  |           |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-34



Geotest Engineering, Inc.

FIGURE C-35

# LOG OF BORING NO. GB-36

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 34  
See Plan of Borings (Figure A-2.2)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

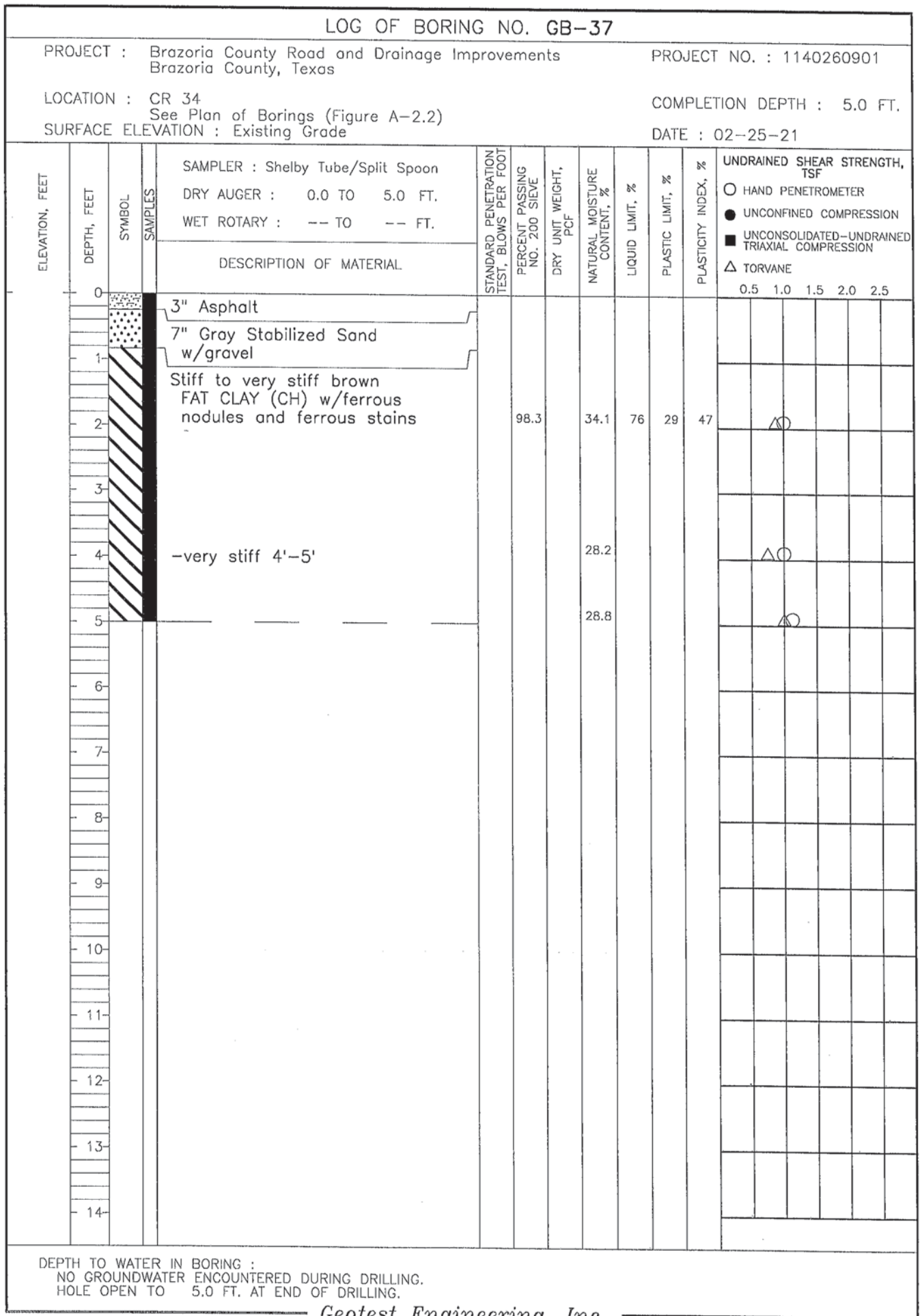
DATE : 02-25-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL  | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF   |     |     |     |     |
|-----------------|-------------|--------|---------|--|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|---|-----|-----|-----|-----|
|                 |             |        |         |  |   |                               |                      |                             |                 |                  |                     | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |     |     |     |     |
|                 |             |        |         |  |   |                               |                      |                             |                 |                  |                     | 0.5   | 1.0 | 1.5 | 2.0 | 2.5 |
|                 | 0           |        |         | 3" Asphalt   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 1           |        |         | 6" Gray Stabilized Sand w/gravel   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 2           |        |         | Very stiff gray FAT CLAY (CH) w/ferrous nodules, ferrous stains and sand seams<br>-stiff 2'-4' |   |                               |                      | 23.0                        |                 |                  |                     |   |     |     |     |     |
|                 | 3           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 4           |        |         | -stiff to very stiff w/calcareous nodules 4'-5'  |   | 93.3                          | 93                   | 30.7                        | 70              | 27               | 43                  |   |     |     |     |     |
|                 | 5           |        |         |  |   |                               |                      | 27.9                        |                 |                  |                     |   |     |     |     |     |
|                 | 6           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 7           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 8           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 9           |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 10          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 11          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 12          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 13          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 14          |        |         |  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.





Geotest Engineering, Inc.

FIGURE C-37

# LOG OF BORING NO. GB-38

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 34  
See Plan of Borings (Figure A-2.2)

COMPLETION DEPTH : 5.0 FT.

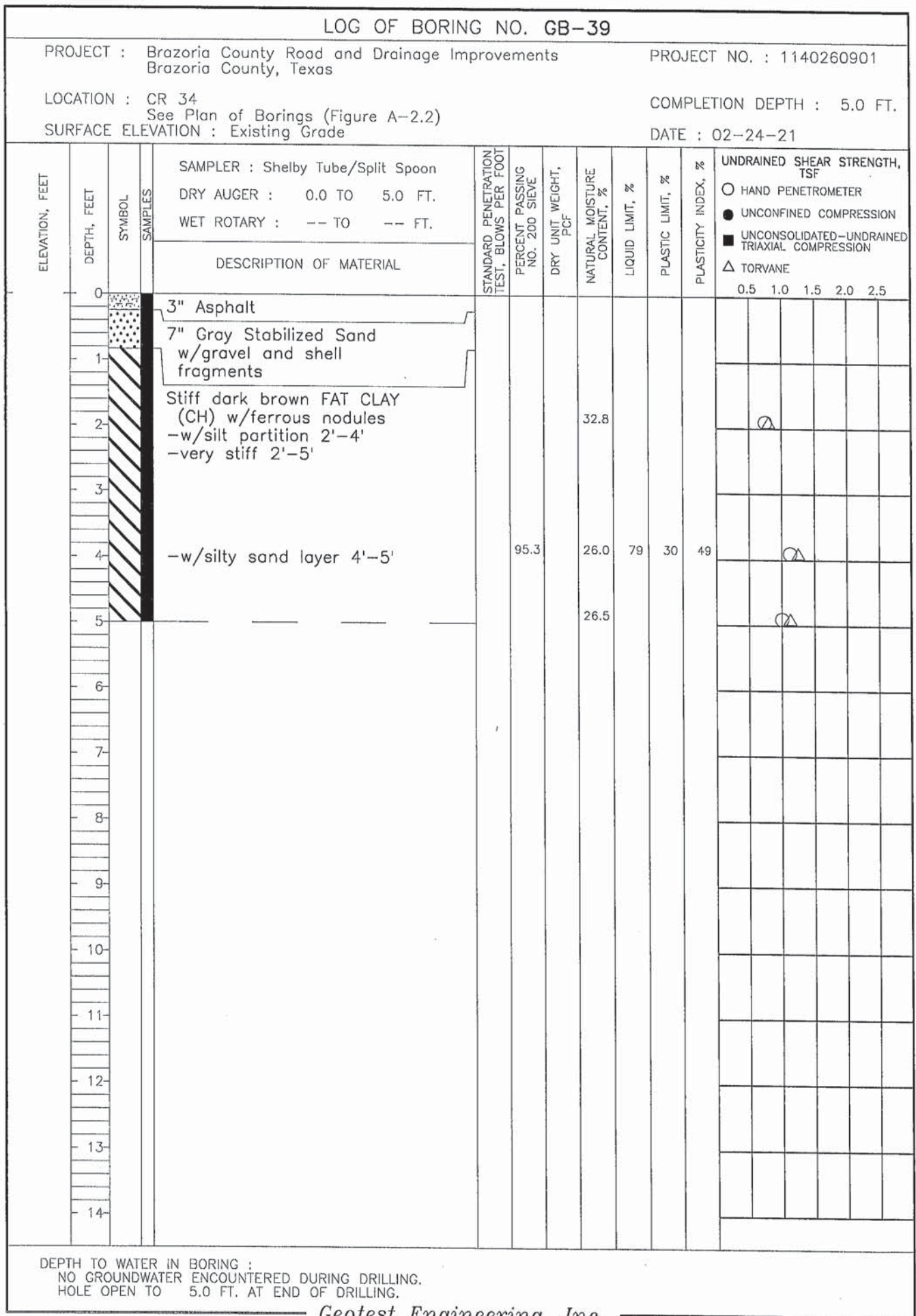
SURFACE ELEVATION : Existing Grade

DATE : 02-25-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT. | DESCRIPTION OF MATERIAL  | STANDARD PENETRATION<br>TEST, BLOWS PER FOOT | PERCENT PASSING<br>NO. 200 SIEVE | DRY UNIT WEIGHT,<br>PCF | NATURAL MOISTURE<br>CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH,<br>TSF<br>○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED<br>TRIAxIAL COMPRESSION<br>△ TORVANE |
|-----------------|-------------|--------|---------|--|--|--|----------------------------------|-------------------------|--------------------------------|-----------------|------------------|---------------------|--|
|                 |             |        |         |  |  |  |                                  |                         |                                |                 |                  |                     | 0.5 1.0 1.5 2.0 2.5  |
|                 | 0           |        |         |  | 3.5" Asphalt   |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 1           |        |         |  | 6.5" Gray Stabilized Sand<br>w/gravel and shell<br>fragments                     |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 2           |        |         |  | Very stiff brown FAT CLAY<br>(CH)<br>-firm to stiff 2'-4'<br>-w/silt seams 2'-5' | 95.4   |                                  |                         | 22.2                           | 60              | 25               | 35                  | △  |
|                 | 3           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 4           |        |         |  |  |  |                                  |                         | 26.8                           |                 |                  |                     | △  |
|                 | 5           |        |         |  |  |  |                                  |                         | 27.5                           |                 |                  |                     | △  |
|                 | 6           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 7           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 8           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 9           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 10          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 11          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 12          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 13          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 14          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.



Geotest Engineering, Inc.

FIGURE C-39

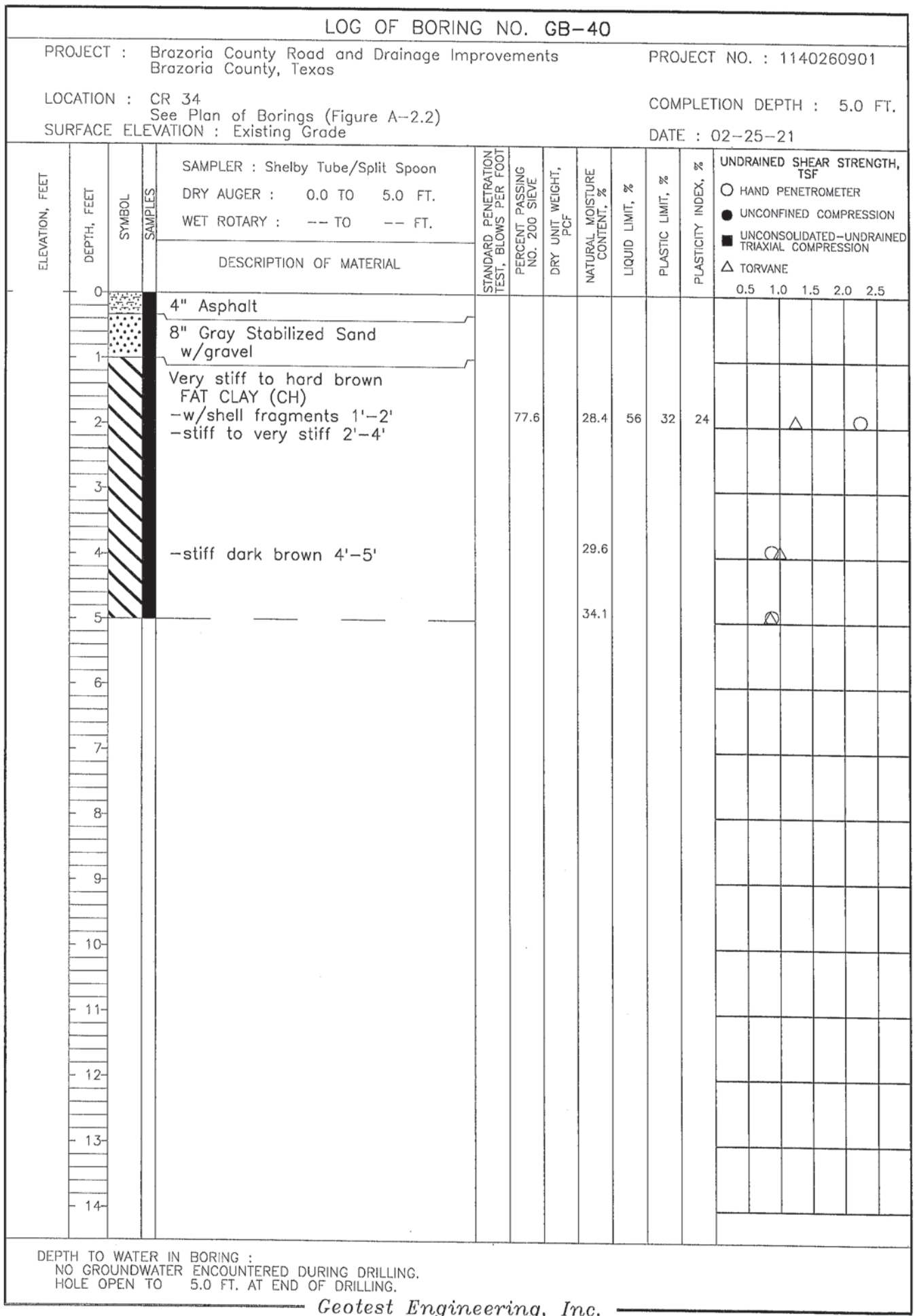


FIGURE C-40

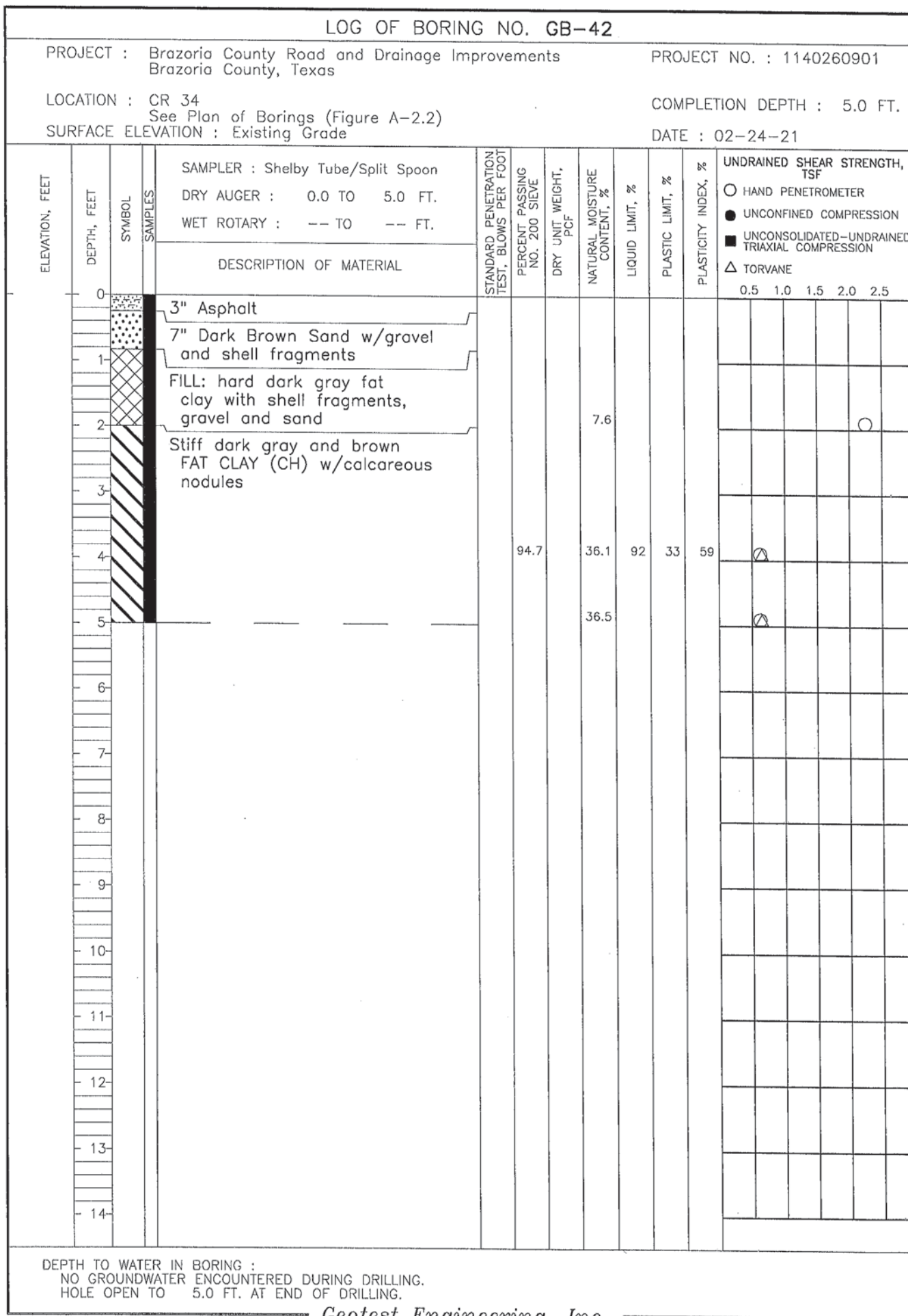


| LOG OF BORING NO. GB-41  |             |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
|--|-------------|--------|---------|--|--|--|----------------------------------|-------------------------|--------------------------------|-----------------|------------------|---------------------|---|--|--|--|--|--|--|
| PROJECT : Brazoria County Road and Drainage Improvements<br>Brazoria County, Texas |             |        |         |  |  | PROJECT NO. : 1140260901                     |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
| LOCATION : CR 34<br>See Plan of Borings (Figure A-2.2)                             |             |        |         |  |  | COMPLETION DEPTH : 5.0 FT.                   |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
| SURFACE ELEVATION : Existing Grade   |             |        |         |  |  | DATE : 02-24-21                              |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
| ELEVATION, FEET  | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT. | DESCRIPTION OF MATERIAL  | STANDARD PENETRATION<br>TEST, BLOWS PER FOOT | PERCENT PASSING<br>NO. 200 SIEVE | DRY UNIT WEIGHT,<br>PCF | NATURAL MOISTURE<br>CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH,<br>TSF  |  |  |  |  |  |  |
|  |             |        |         |  |  |  |                                  |                         |                                |                 |                  |                     | <div style="display: flex; justify-content: space-between; font-size: 0.8em;"> <span>○ HAND PENETROMETER</span> <span>● UNCONFINED COMPRESSION</span> <span>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION</span> <span>△ TORVANE</span> </div> <div style="display: flex; justify-content: space-between; font-size: 0.7em;"> <span>0.5</span> <span>1.0</span> <span>1.5</span> <span>2.0</span> <span>2.5</span> </div> |  |  |  |  |  |  |
|  | 0           | ▨      |         |  | 4" Asphalt   |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
|  | 1           | ▨      |         |  | 8" Dark Brown Sand w/gravel and shell fragments                          |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
|  | 2           | ▨      |         |  | Very stiff dark brown FAT CLAY (CH)<br>-stiff w/calcareous nodules 2'-5' | 94.3   |                                  |                         | 28.4                           | 77              | 29               | 48                  |   |  |  |  |  |  |  |
|  | 3           | ▨      |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
|  | 4           | ▨      |         |  |  |  |                                  |                         | 29.5                           |                 |                  |                     |   |  |  |  |  |  |  |
|  | 5           | ▨      |         |  |  |  |                                  |                         | 33.8                           |                 |                  |                     |   |  |  |  |  |  |  |
|  | 6           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
|  | 7           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
|  | 8           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
|  | 9           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
|  | 10          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
|  | 11          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
|  | 12          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
|  | 13          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |
|  | 14          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |   |  |  |  |  |  |  |

DEPTH TO WATER IN BORING :  
 NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
 HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

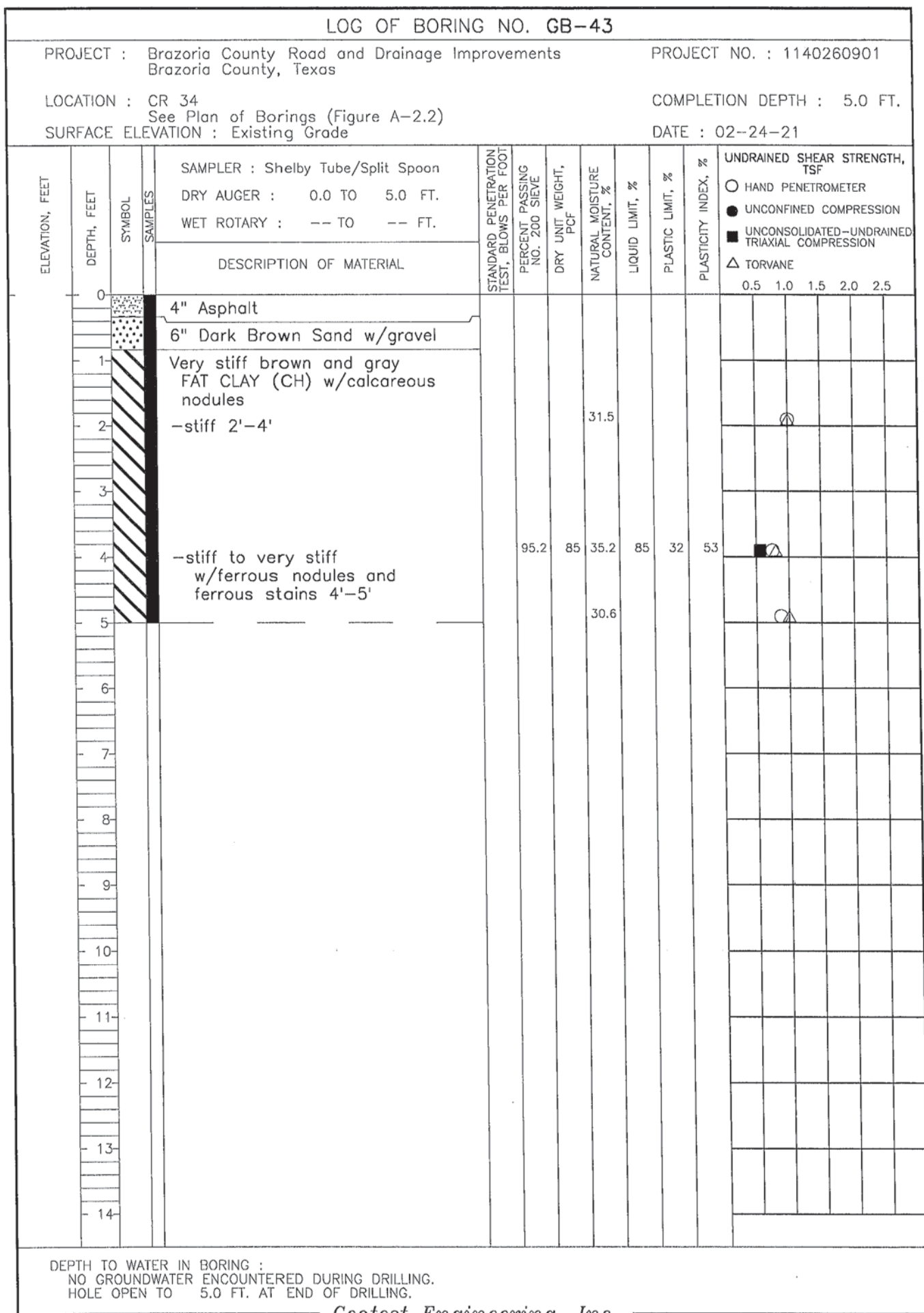
Geotest Engineering, Inc.

FIGURE C-41



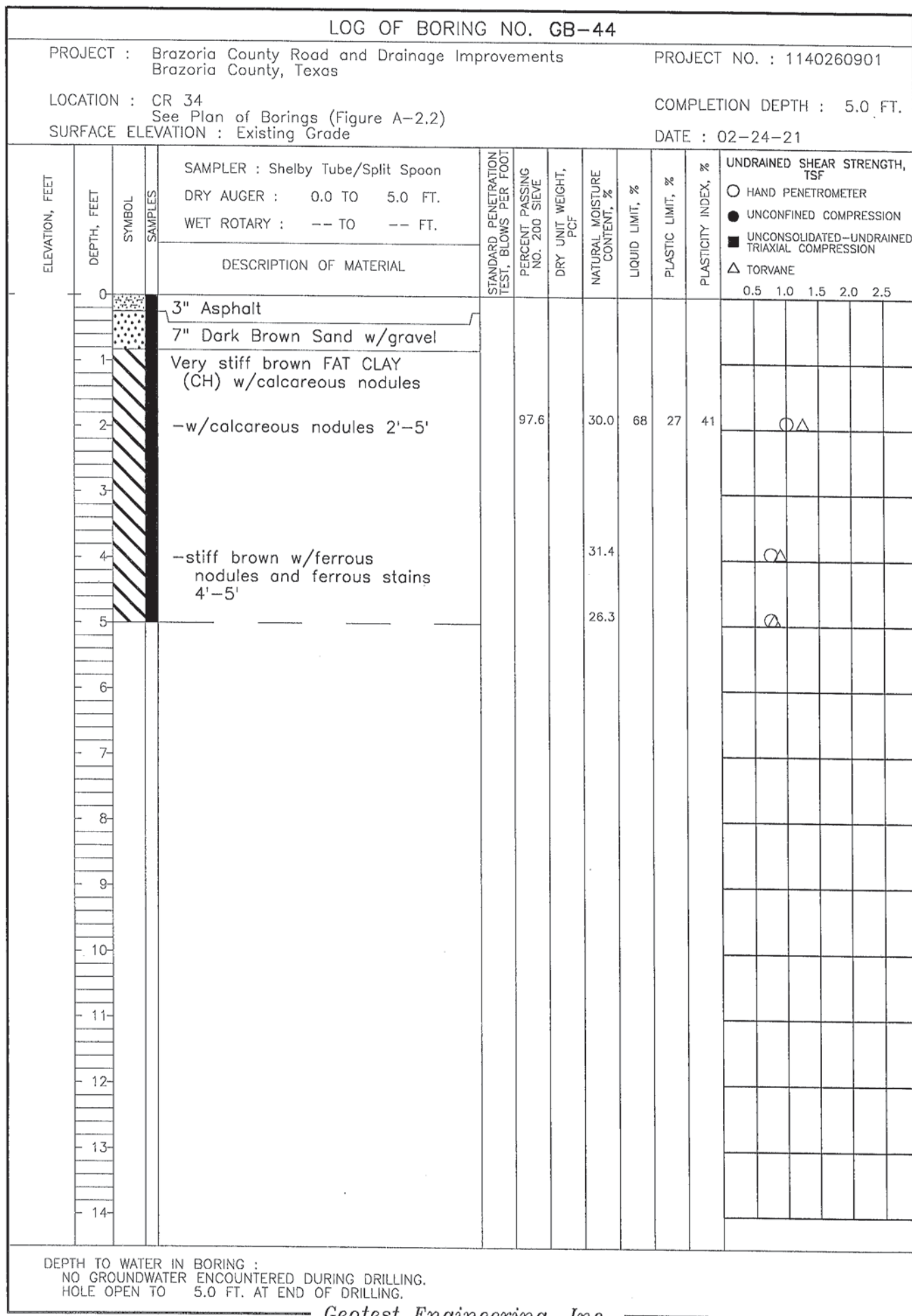
Geotest Engineering, Inc.

FIGURE C-42



Geotest Engineering, Inc.

FIGURE C-43



Geotest Engineering, Inc.

FIGURE C-44

# LOG OF BORING NO. GB-45

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 34  
See Plan of Borings (Figure A-2.2)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

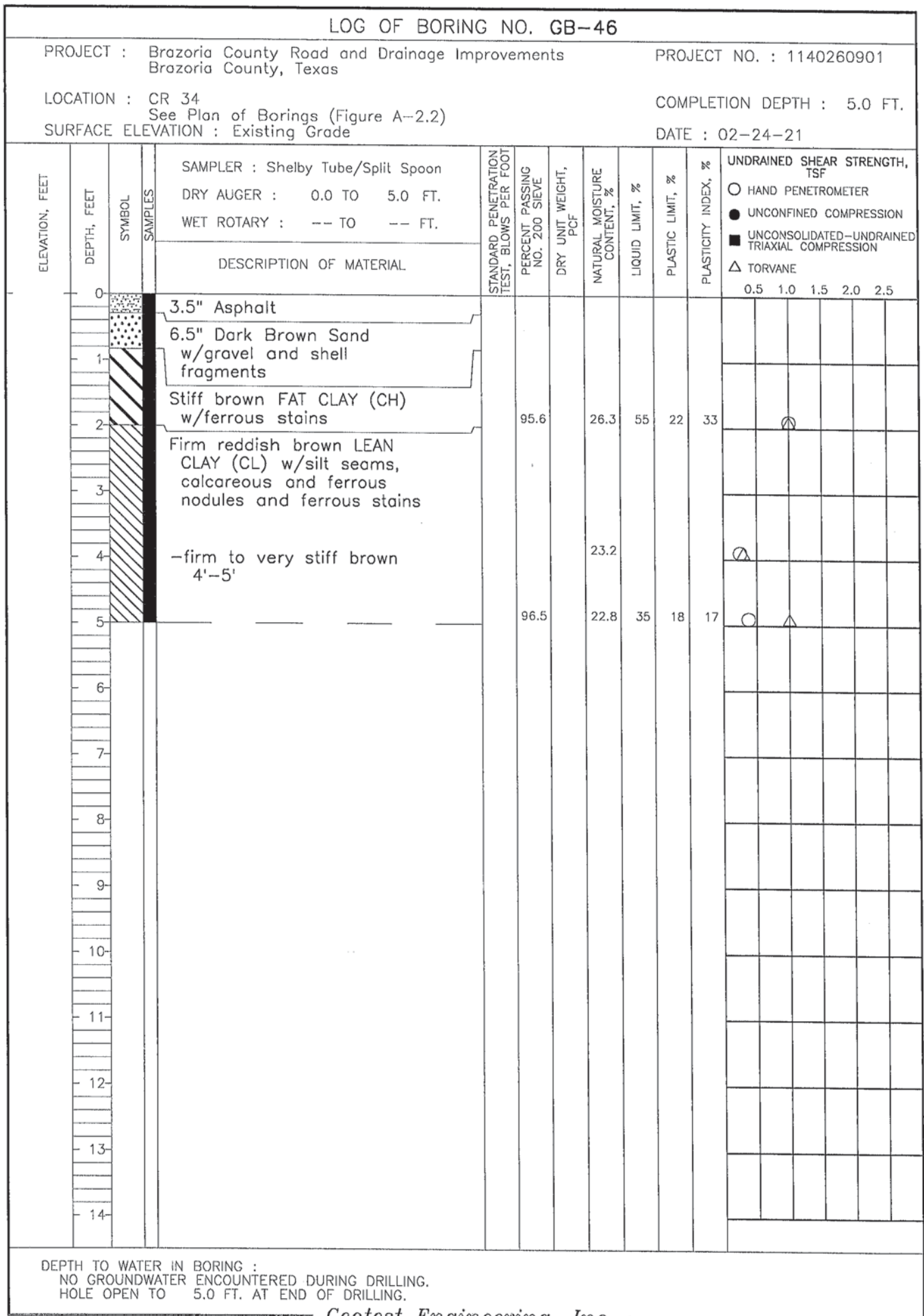
DATE : 02-24-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.                       | DESCRIPTION OF MATERIAL  | STANDARD PENETRATION<br>TEST, BLOWS PER FOOT | PERCENT PASSING<br>NO. 200 SIEVE | DRY UNIT WEIGHT,<br>PCF | NATURAL MOISTURE<br>CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH,<br>TSF |     |     |     |     |  |  |
|-----------------|-------------|--------|---------|--|--|--|----------------------------------|-------------------------|--------------------------------|-----------------|------------------|---------------------|----------------------------------|-----|-----|-----|-----|--|--|
|                 |             |        |         | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED<br>TRIAxIAL COMPRESSION<br>△ TORVANE |  |  |                                  |                         |                                |                 |                  |                     | 0.5                              | 1.0 | 1.5 | 2.0 | 2.5 |  |  |
|                 | 0           |        |         |  | 4" Asphalt   |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 |             |        |         |  | 7" Dark Brown Sand w/gravel  |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 | 1           |        |         |  | Very stiff dark gray FAT<br>CLAY (CH)<br>-w/shell fragments 11"-2'<br>-stiff w/calcareous and<br>ferrous nodules and<br>ferrous stains 2'-4' |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 | 2           |        |         |  |  |  | 98.0                             |                         | 32.1                           | 76              | 30               | 46                  |                                  |     |     |     |     |  |  |
|                 | 3           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 | 4           |        |         |  |  |  |                                  |                         | 25.9                           |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 | 5           |        |         |  | Firm reddish brown LEAN<br>CLAY (CL) w/silt seams and<br>ferrous stains  |  | 93.1                             |                         | 24.2                           | 36              | 18               | 18                  |                                  |     |     |     |     |  |  |
|                 | 6           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 | 7           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 | 8           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 | 9           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 | 10          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 | 11          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 | 12          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 | 13          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |
|                 | 14          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |     |     |     |     |  |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

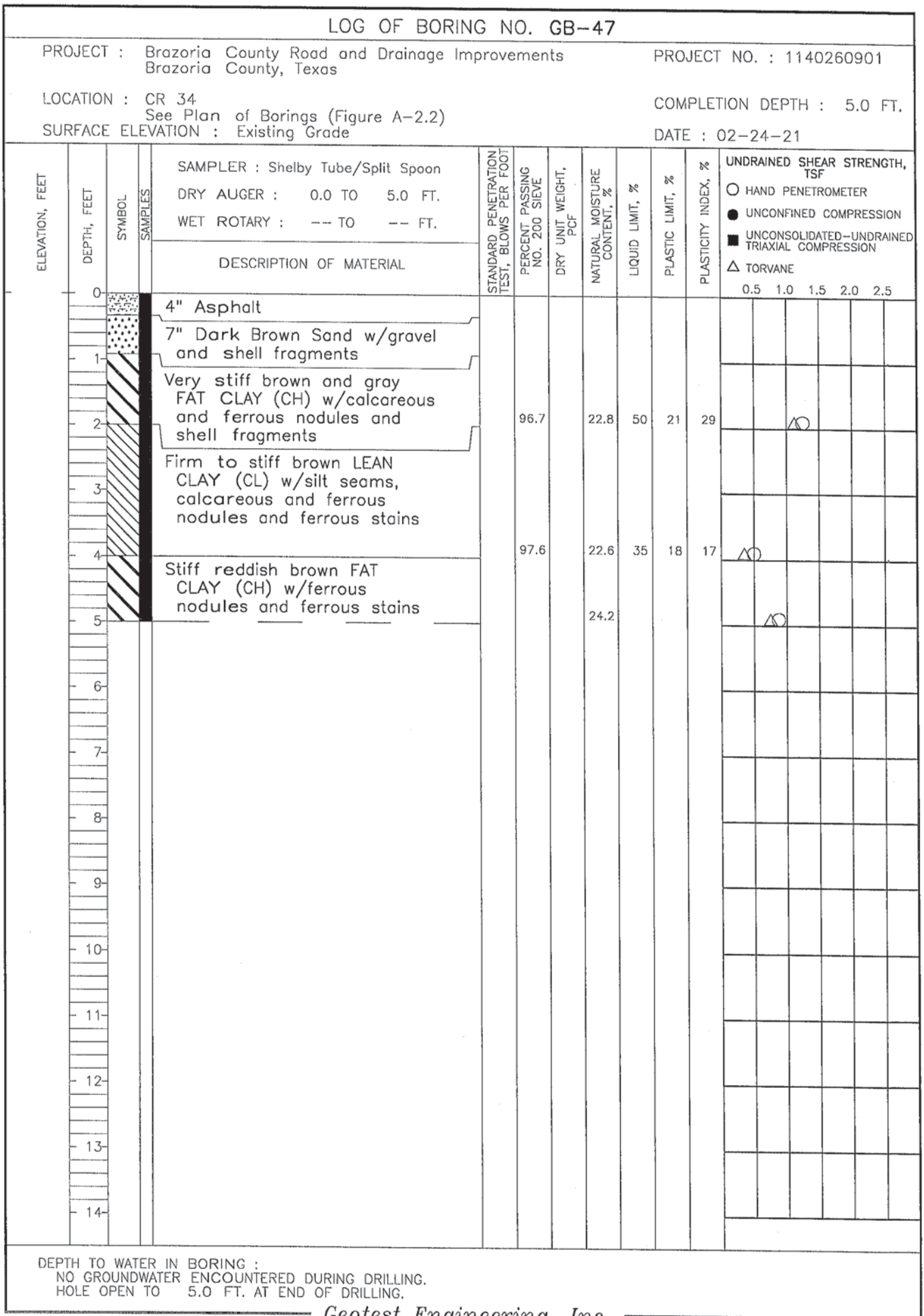
Geotest Engineering, Inc.





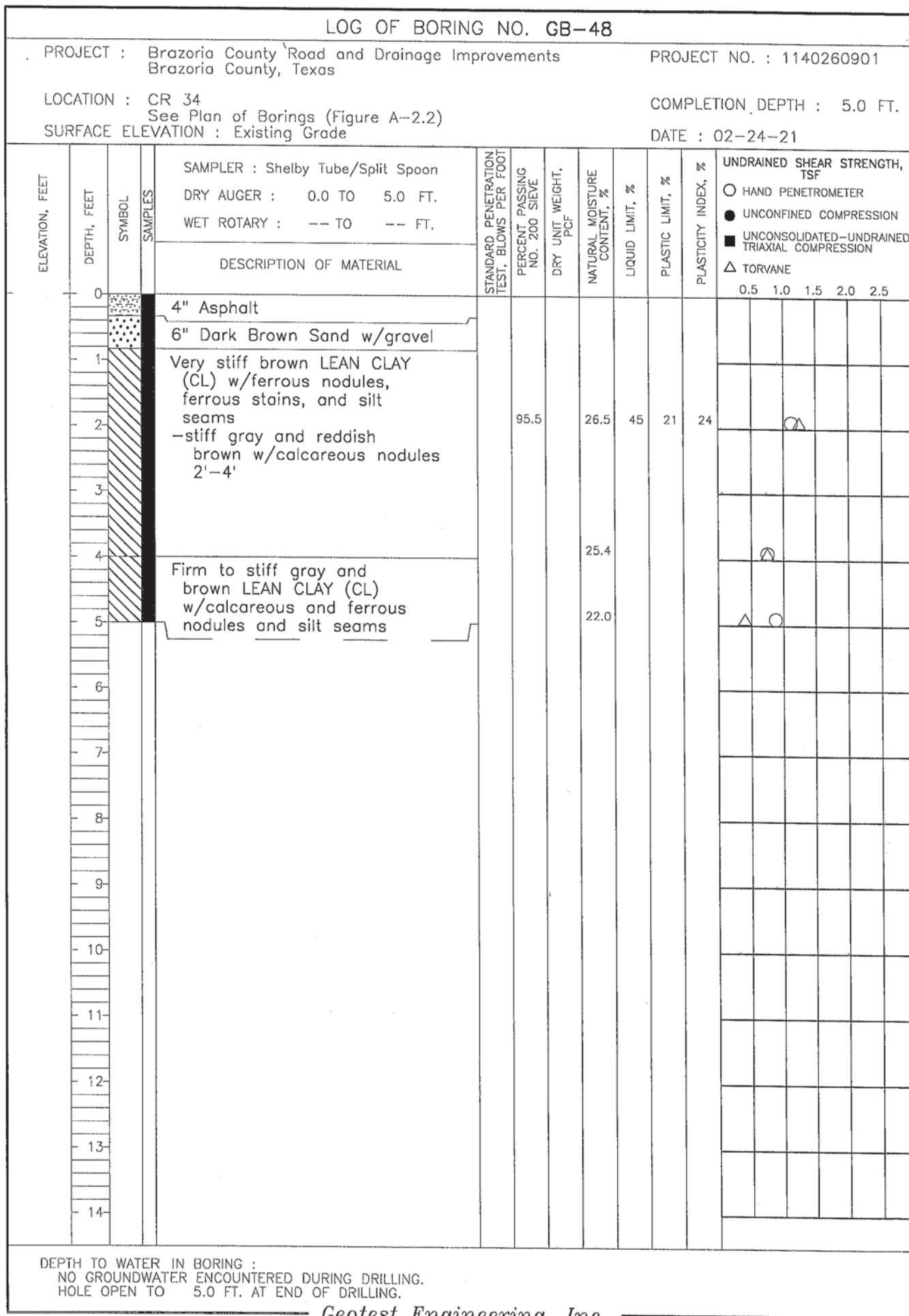
Geotest Engineering, Inc.

FIGURE C-46



Geotest Engineering, Inc.

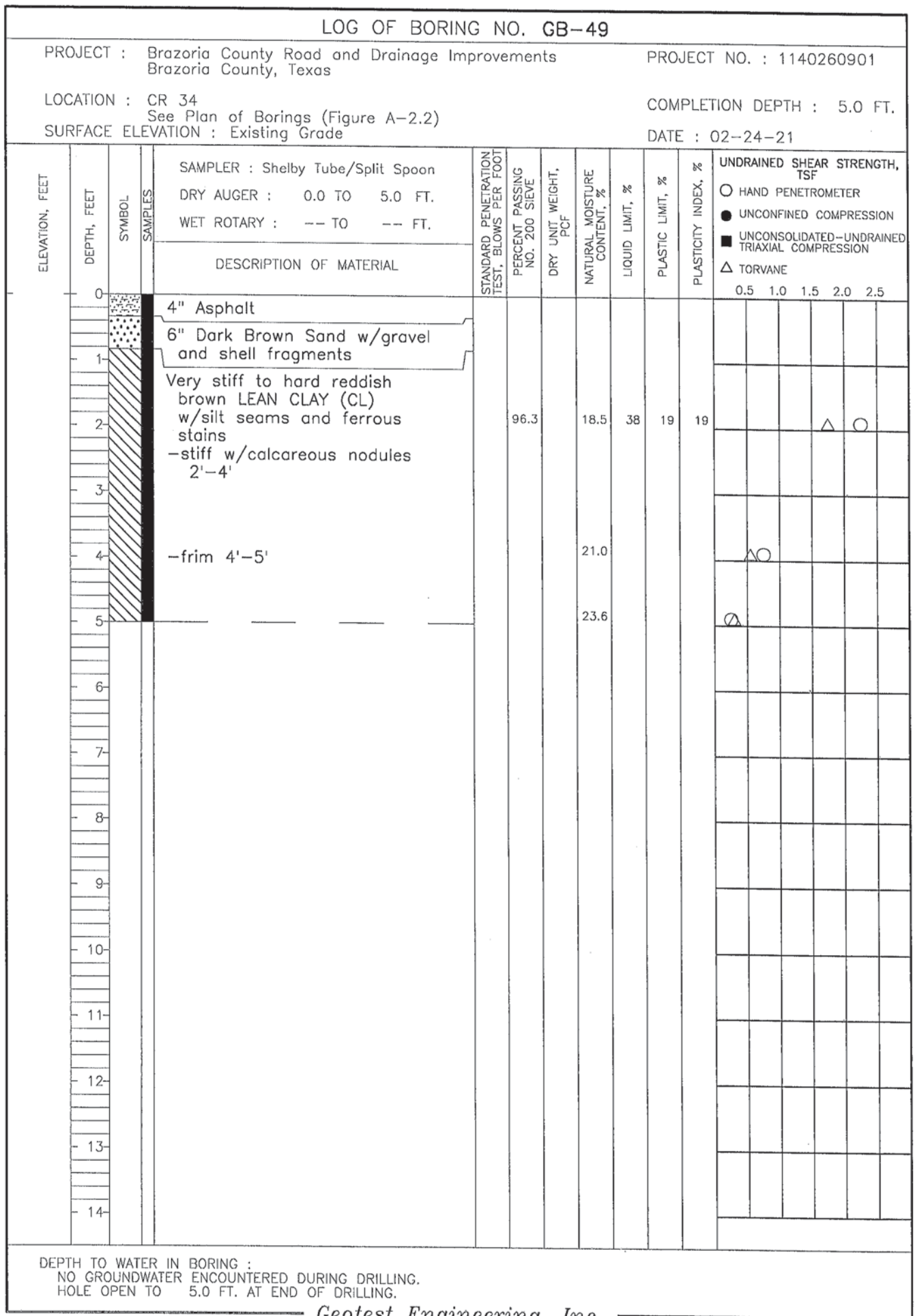
FIGURE C-47



Geotest Engineering, Inc.

FIGURE C-48





Geotest Engineering, Inc.

FIGURE C-49

# LOG OF BORING NO. GB-50

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 34  
See Plan of Borings (Figure A-2.2)

COMPLETION DEPTH : 5.0 FT.

SURFACE ELEVATION : Existing Grade

DATE : 02-24-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT. | STANDARD PENETRATION<br>TEST, BLOWS PER FOOT | PERCENT PASSING<br>NO. 200 SIEVE | DRY UNIT WEIGHT,<br>PCF | NATURAL MOISTURE<br>CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH,<br>TSF<br>○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED<br>TRIAXIAL COMPRESSION<br>△ TORVANE |
|-----------------|-------------|--------|---------|--|--|----------------------------------|-------------------------|--------------------------------|-----------------|------------------|---------------------|--|
|                 |             |        |         |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 0           |        |         | 4" Asphalt   |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 1           |        |         | 7" Gray Sand w/gravel  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 2           |        |         | Very stiff brown LEAN CLAY<br>(CL)<br>-w/shell fragments 11"-2'<br>-firm 2'-5'               | 96.5   |                                  |                         | 18.2                           | 33              | 18               | 15                  | △ ○  |
|                 | 3           |        |         |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 4           |        |         |  | 98.5   |                                  |                         | 22.8                           | 25              | 16               | 9                   | △  |
|                 | 5           |        |         |  |  |                                  |                         | 23.7                           |                 |                  |                     | △  |
|                 | 6           |        |         |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 7           |        |         |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 8           |        |         |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 9           |        |         |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 10          |        |         |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 11          |        |         |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 12          |        |         |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 13          |        |         |  |  |                                  |                         |                                |                 |                  |                     |  |
|                 | 14          |        |         |  |  |                                  |                         |                                |                 |                  |                     |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

# LOG OF BORING NO. GB-51

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 34  
See Plan of Borings (Figure A-2.2)

COMPLETION DEPTH : 5.0 FT.

SURFACE ELEVATION : Existing Grade

DATE : 02-24-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT. | DESCRIPTION OF MATERIAL  | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |                          |   |           |     |     |     |
|-----------------|-------------|--------|---------|--|--|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|--------------------------|---|-----------|-----|-----|-----|
|                 |             |        |         |  |  |   |                               |                      |                             |                 |                  |                     | ○ HAND PENETROMETER           | ● UNCONFINED COMPRESSION | ■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION | △ TORVANE | 0.5 | 1.0 | 1.5 |
|                 | 0           |        |         |  | 3" Asphalt   |   |                               |                      |                             |                 |                  |                     |                               |                          |   |           |     |     |     |
|                 | 1           |        |         |  | 6" Brown Sand w/gravel and shell fragments   |   |                               |                      |                             |                 |                  |                     |                               |                          |   |           |     |     |     |
|                 | 2           |        |         |  | Very stiff to hard brown LEAN CLAY (CL) w/silt seams, ferrous nodules and ferrous stains |   | 93.5                          |                      | 15.5                        | 43              | 20               | 23                  |                               |                          | △   |           |     | ○   |     |
|                 | 3           |        |         |  | Stiff reddish brown FAT CLAY (CH) w/ferrous nodules and ferrous stains                   |   |                               |                      |                             |                 |                  |                     |                               |                          |   |           |     |     |     |
|                 | 4           |        |         |  |  |   | 96.4                          |                      | 27.3                        | 62              | 24               | 38                  |                               |                          | ○△  |           |     |     |     |
|                 | 5           |        |         |  |  |   |                               |                      | 33.6                        |                 |                  |                     |                               |                          | ○△  |           |     |     |     |
|                 | 6           |        |         |  |  |   |                               |                      |                             |                 |                  |                     |                               |                          |   |           |     |     |     |
|                 | 7           |        |         |  |  |   |                               |                      |                             |                 |                  |                     |                               |                          |   |           |     |     |     |
|                 | 8           |        |         |  |  |   |                               |                      |                             |                 |                  |                     |                               |                          |   |           |     |     |     |
|                 | 9           |        |         |  |  |   |                               |                      |                             |                 |                  |                     |                               |                          |   |           |     |     |     |
|                 | 10          |        |         |  |  |   |                               |                      |                             |                 |                  |                     |                               |                          |   |           |     |     |     |
|                 | 11          |        |         |  |  |   |                               |                      |                             |                 |                  |                     |                               |                          |   |           |     |     |     |
|                 | 12          |        |         |  |  |   |                               |                      |                             |                 |                  |                     |                               |                          |   |           |     |     |     |
|                 | 13          |        |         |  |  |   |                               |                      |                             |                 |                  |                     |                               |                          |   |           |     |     |     |
|                 | 14          |        |         |  |  |   |                               |                      |                             |                 |                  |                     |                               |                          |   |           |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-51

# LOG OF BORING NO. GB-52

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 34  
See Plan of Borings (Figure A-2.2)

COMPLETION DEPTH : 5.0 FT.

SURFACE ELEVATION : Existing Grade

DATE : 02-24-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.                    | DESCRIPTION OF MATERIAL  | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |     |     |     |     |  |
|-----------------|-------------|--------|---------|---|--|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|-----|-----|-----|-----|--|
|                 |             |        |         | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |  |   |                               |                      |                             |                 |                  |                     | 0.5                           | 1.0 | 1.5 | 2.0 | 2.5 |  |
|                 | 0           |        |         |   | 3" Asphalt   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 1           |        |         |   | 7" Dark Brown Sand w/gravel and shell fragments  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 2           |        |         |   | FILL: very stiff to hard dark gray and brown lean clay with silt, sand seams and shell fragments | 93.6                                      |                               |                      | 16.8                        | 36              | 18               | 18                  |                               |     |     | △   | ○   |  |
|                 | 3           |        |         |   | Stiff dark gray FAT CLAY (CH) w/ferrous nodules  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 4           |        |         |   |  | 93.0                                      |                               |                      | 26.2                        | 59              | 23               | 36                  |                               | △   |     |     |     |  |
|                 | 5           |        |         |   |  |   |                               |                      | 28.9                        |                 |                  |                     |                               | △   |     |     |     |  |
|                 | 6           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 7           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 8           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 9           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 10          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 11          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 12          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 13          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 14          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-52

# LOG OF BORING NO. GB-53

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 34  
See Plan of Borings (Figure A-2.2)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 02-24-21

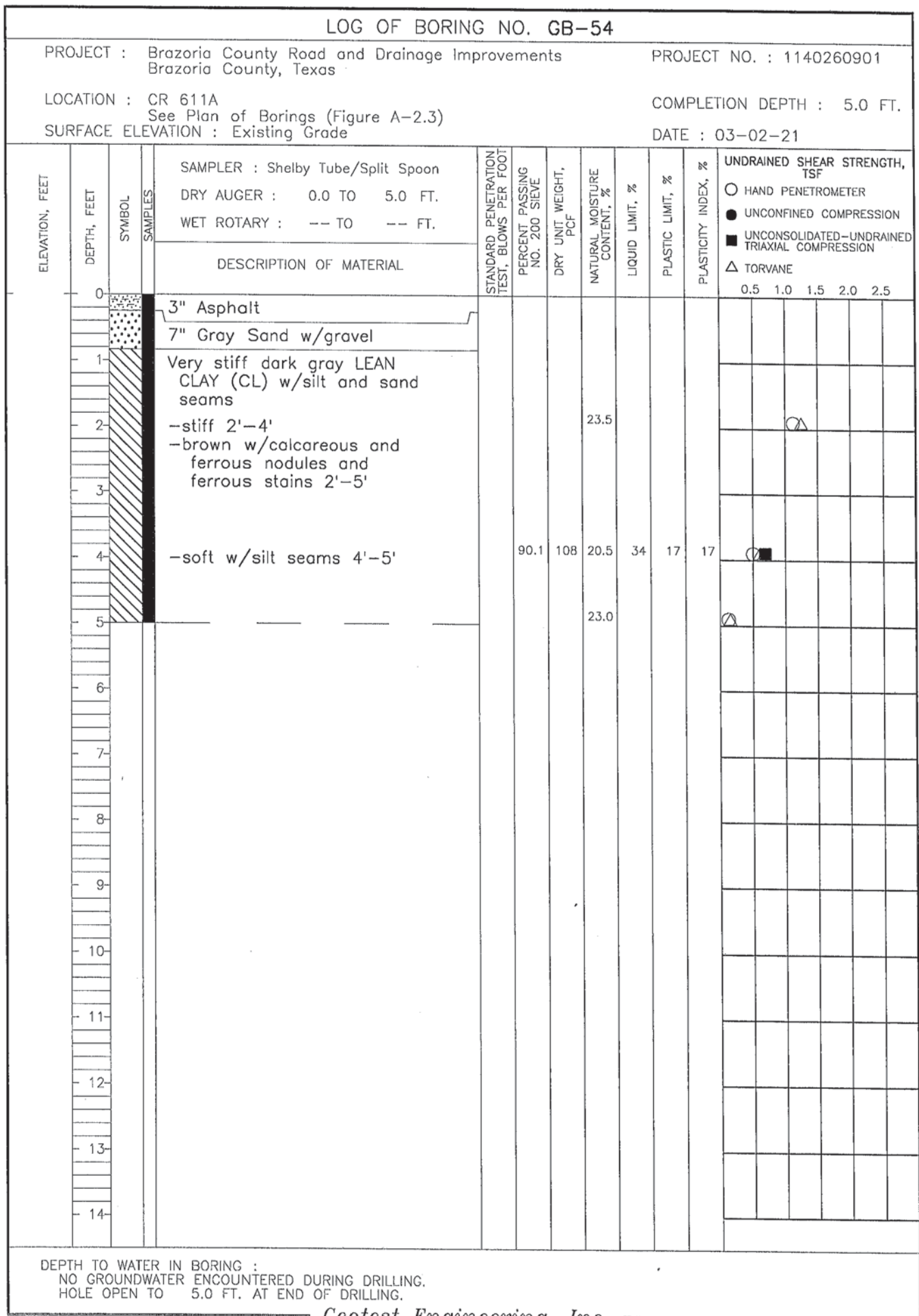
| ELEVATION, FEET | DEPTH, FEET | SYMBOL<br>SAMPLES | DESCRIPTION OF MATERIAL   | STANDARD PENETRATION<br>TEST, BLOWS PER FOOT | PERCENT PASSING<br>NO. 200 SIEVE | DRY UNIT WEIGHT,<br>PCF | NATURAL MOISTURE<br>CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH,<br>TSF  |     |     |     |     |
|-----------------|-------------|-------------------|---|--|----------------------------------|-------------------------|--------------------------------|-----------------|------------------|---------------------|---|-----|-----|-----|-----|
|                 |             |                   |   |  |                                  |                         |                                |                 |                  |                     | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |     |     |     |     |
|                 |             |                   |   |  |                                  |                         |                                |                 |                  |                     | 0.5   | 1.0 | 1.5 | 2.0 | 2.5 |
|                 | 0           |                   | 3" Asphalt  |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 1           |                   | 9" Dark Brown Sand w/gravel and shell   |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 2           |                   | Very stiff gray and dark brown FAT CLAY (CH) w/calcareous nodules -stiff 2'-4' -gray w/ferrous nodules and ferrous stains 2'-5' |  |                                  |                         | 24.3                           |                 |                  |                     |   |     |     |     |     |
|                 | 3           |                   |   |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 4           |                   |   |  | 88.3                             | 96                      | 29.5                           | 69              | 27               | 42                  |   |     |     |     |     |
|                 | 5           |                   |   |  |                                  |                         | 25.9                           |                 |                  |                     |   |     |     |     |     |
|                 | 6           |                   |   |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 7           |                   |   |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 8           |                   |   |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 9           |                   |   |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 10          |                   |   |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 11          |                   |   |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 12          |                   |   |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 13          |                   |   |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |
|                 | 14          |                   |   |  |                                  |                         |                                |                 |                  |                     |   |     |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

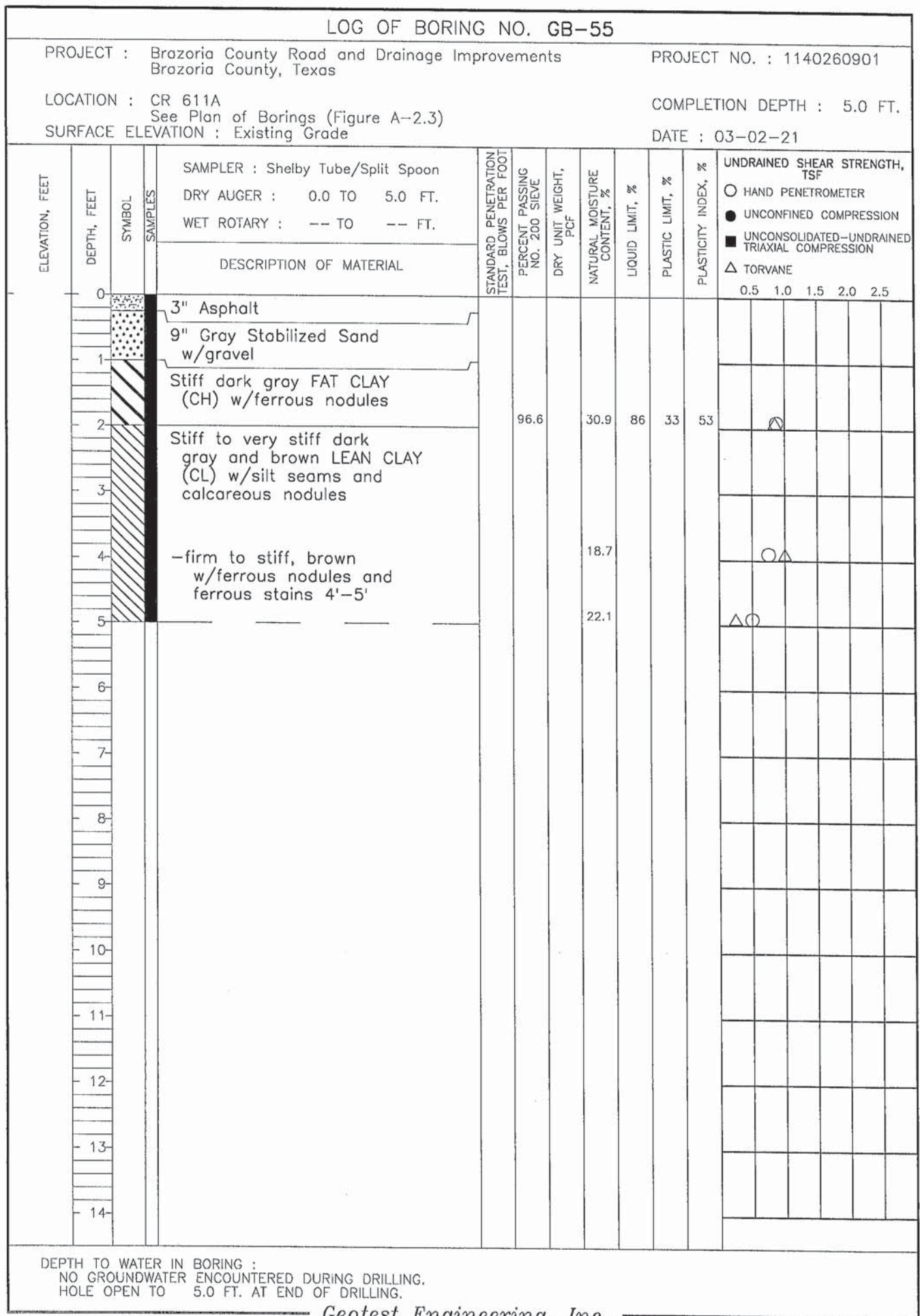
FIGURE C-53





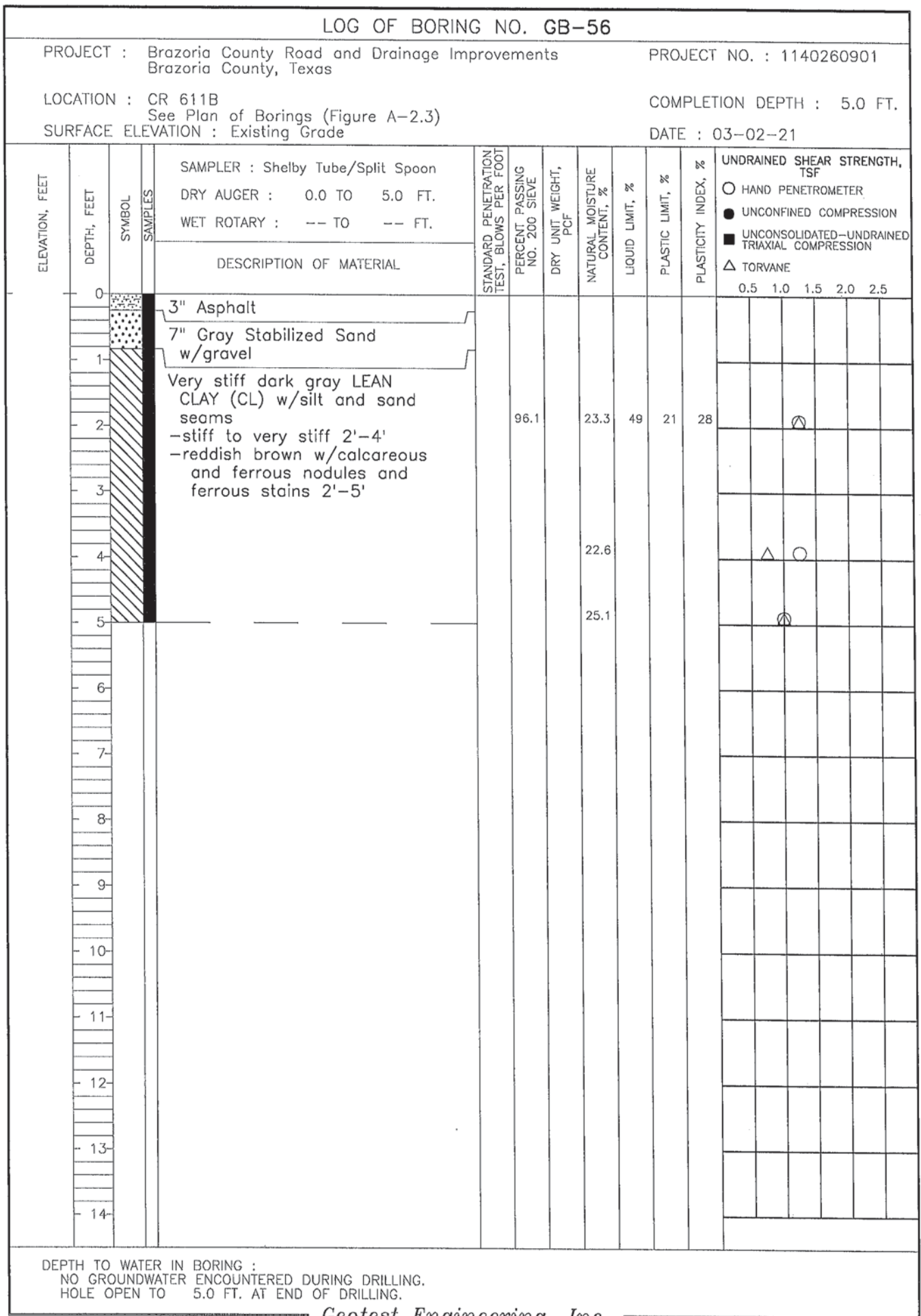
Geotest Engineering, Inc.

FIGURE C-54



Geotest Engineering, Inc.

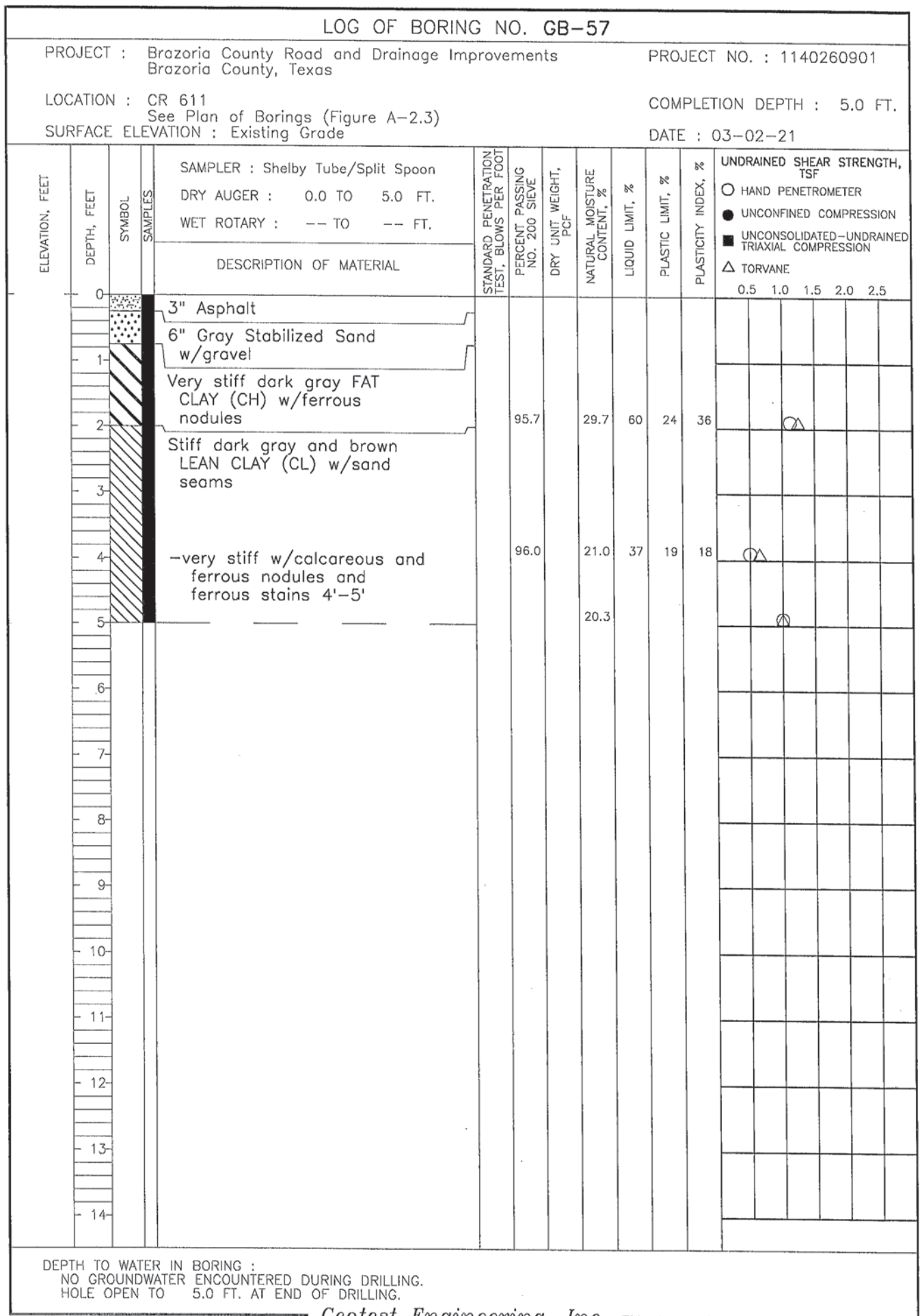
FIGURE C-55



Geotest Engineering, Inc.

FIGURE C-56





Geotest Engineering, Inc.

FIGURE C-57

# LOG OF BORING NO. GB-58

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 611  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

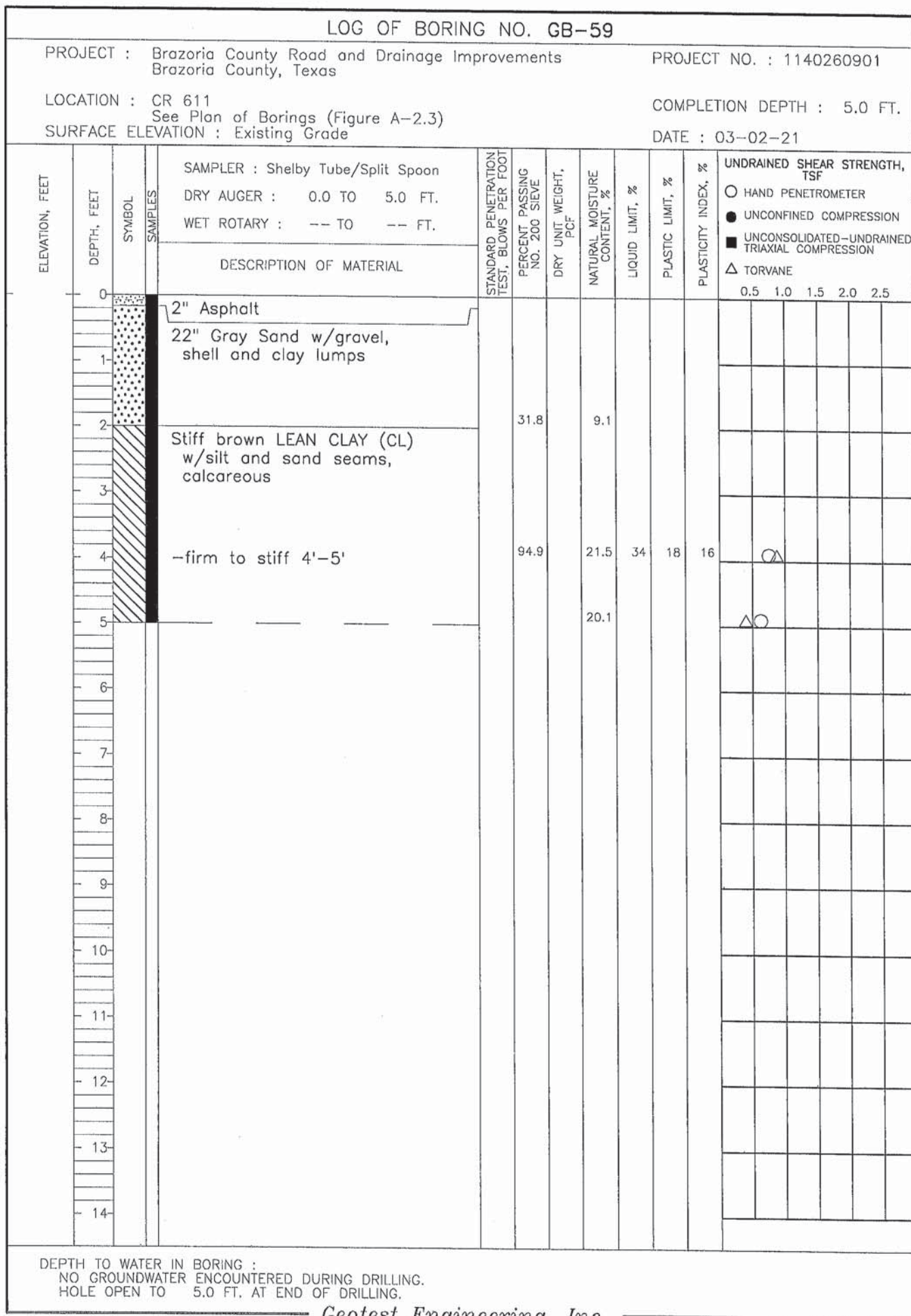
COMPLETION DEPTH : 5.0 FT.

DATE : 03-02-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT. | DESCRIPTION OF MATERIAL                                 | STANDARD PENETRATION<br>TEST, BLOWS PER FOOT | PERCENT PASSING<br>NO. 200 SIEVE | DRY UNIT WEIGHT,<br>PCF | NATURAL MOISTURE<br>CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH,<br>TSF |                          |  |           |  |
|-----------------|-------------|--------|---------|--|---|--|----------------------------------|-------------------------|--------------------------------|-----------------|------------------|---------------------|----------------------------------|--------------------------|--|-----------|--|
|                 |             |        |         |  |   |  |                                  |                         |                                |                 |                  |                     | ○ HAND PENETROMETER              | ● UNCONFINED COMPRESSION | ■ UNCONSOLIDATED-UNDRAINED<br>TRIAXIAL COMPRESSION | △ TORVANE |  |
|                 | 0           |        |         |  | 3" Asphalt  |  |                                  |                         |                                |                 |                  |                     |                                  |                          |  |           |  |
|                 | 1           |        |         |  | 7" Gray Stabilized Sand<br>w/gravel                     |  |                                  |                         |                                |                 |                  |                     |                                  |                          |  |           |  |
|                 | 2           |        |         |  | Very stiff dark gray LEAN<br>CLAY (CL)                  |  |                                  |                         |                                |                 |                  |                     |                                  |                          |  |           |  |
|                 | 3           |        |         |  | -soft 2'-4'   |  | 95.2                             |                         | 19.4                           | 44              | 21               | 23                  |                                  |                          |  |           |  |
|                 | 4           |        |         |  | -brown w/calcareous nodules<br>and ferrous stains 2'-5' |  |                                  |                         |                                |                 |                  |                     |                                  |                          |  |           |  |
|                 | 5           |        |         |  | -firm 4'-5'   |  |                                  |                         | 22.8                           |                 |                  |                     |                                  |                          |  |           |  |
|                 | 6           |        |         |  |   |  |                                  |                         | 21.0                           |                 |                  |                     |                                  |                          |  |           |  |
|                 | 7           |        |         |  |   |  |                                  |                         |                                |                 |                  |                     |                                  |                          |  |           |  |
|                 | 8           |        |         |  |   |  |                                  |                         |                                |                 |                  |                     |                                  |                          |  |           |  |
|                 | 9           |        |         |  |   |  |                                  |                         |                                |                 |                  |                     |                                  |                          |  |           |  |
|                 | 10          |        |         |  |   |  |                                  |                         |                                |                 |                  |                     |                                  |                          |  |           |  |
|                 | 11          |        |         |  |   |  |                                  |                         |                                |                 |                  |                     |                                  |                          |  |           |  |
|                 | 12          |        |         |  |   |  |                                  |                         |                                |                 |                  |                     |                                  |                          |  |           |  |
|                 | 13          |        |         |  |   |  |                                  |                         |                                |                 |                  |                     |                                  |                          |  |           |  |
|                 | 14          |        |         |  |   |  |                                  |                         |                                |                 |                  |                     |                                  |                          |  |           |  |

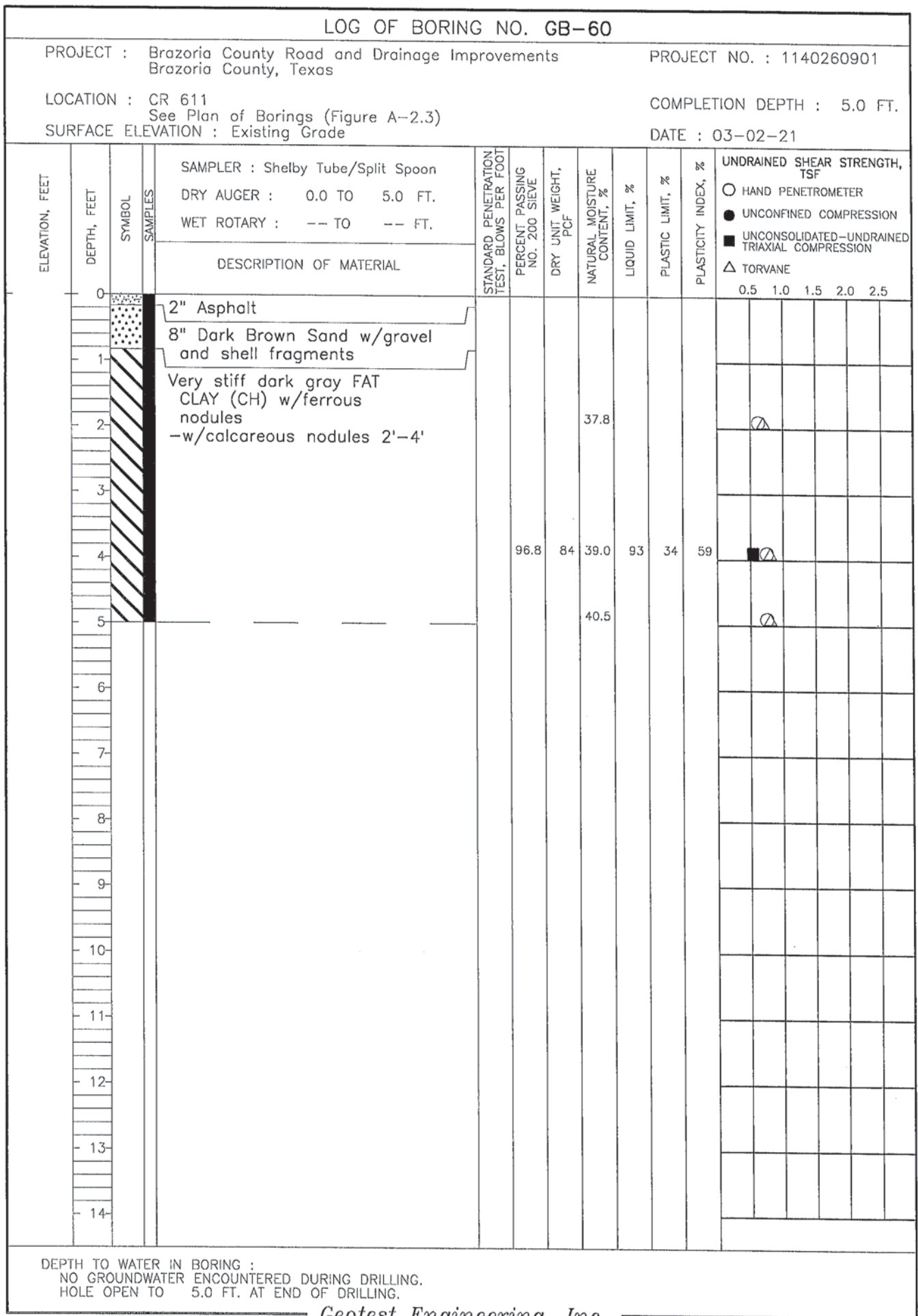
DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.



Geotest Engineering, Inc.

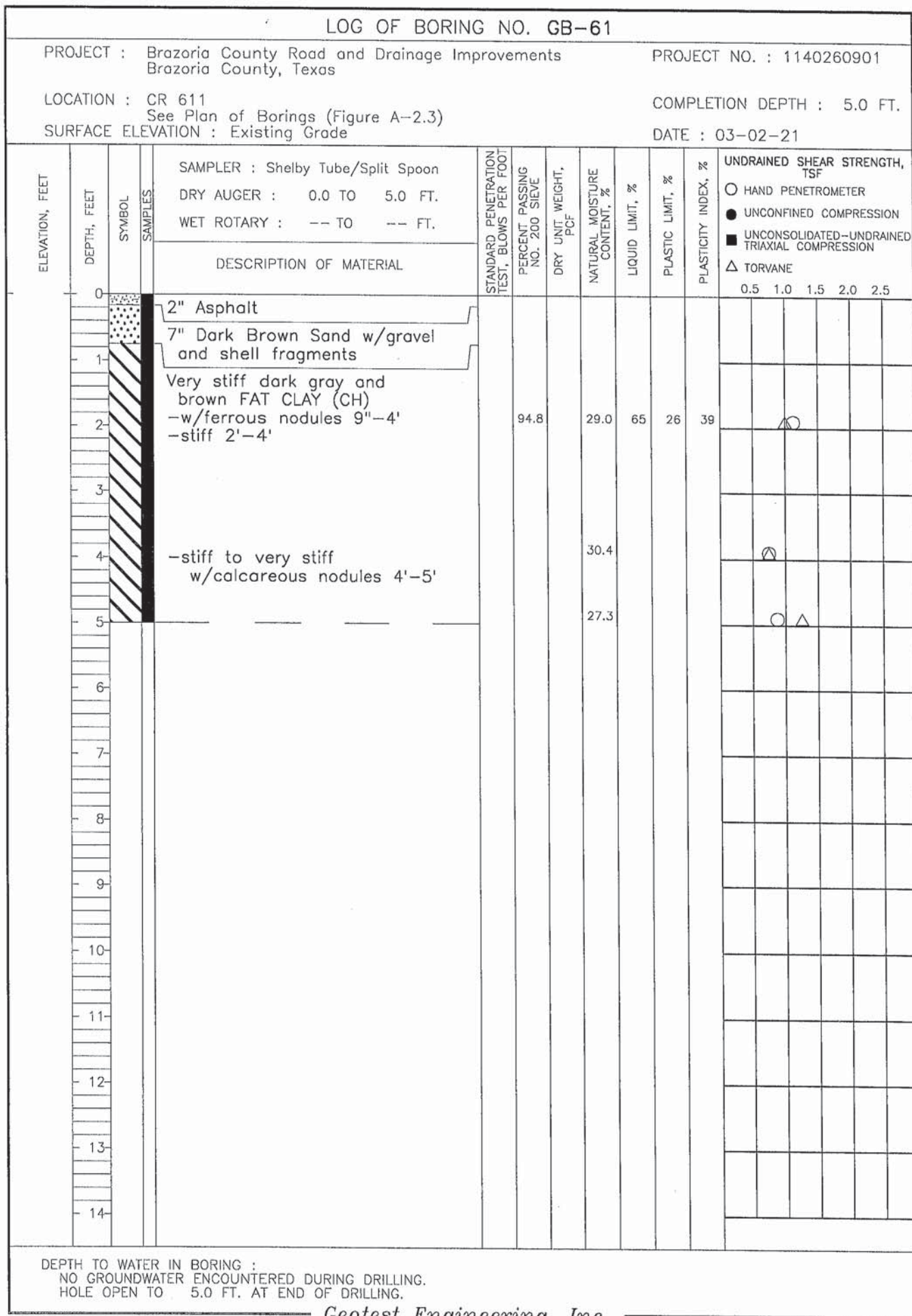
FIGURE C-59



Geotest Engineering, Inc.

FIGURE C-60





Geotest Engineering, Inc.

FIGURE C-61

# LOG OF BORING NO. GB-62

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 612  
See Plan of Borings (Figure A-2.3)

COMPLETION DEPTH : 5.0 FT.

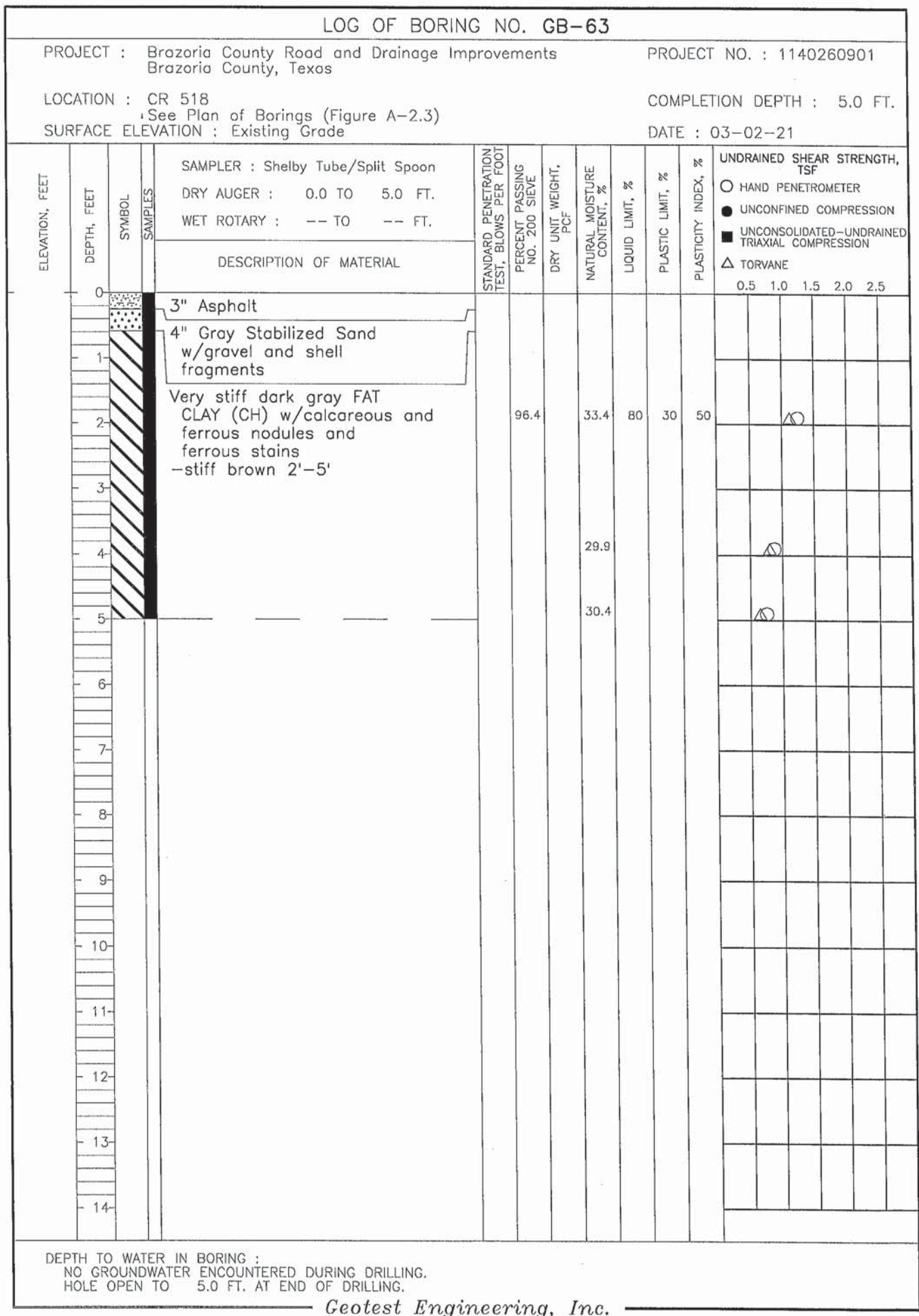
SURFACE ELEVATION : Existing Grade

DATE : 03-02-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon | DESCRIPTION OF MATERIAL  | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |                     |                          |   |           |     |     |     |
|-----------------|-------------|--------|---------|-----------------------------------|--|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|---------------------|--------------------------|---|-----------|-----|-----|-----|
|                 |             |        |         | DRY AUGER : 0.0 TO 5.0 FT.        |  |   |                               |                      |                             |                 |                  |                     | WET ROTARY : -- TO -- FT.     | ○ HAND PENETROMETER | ● UNCONFINED COMPRESSION | ■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION | △ TORVANE | 0.5 | 1.0 | 1.5 |
|                 | 0           |        |         |                                   | 3" Asphalt   |   |                               |                      |                             |                 |                  |                     |                               |                     |                          |   |           |     |     |     |
|                 | 1           |        |         |                                   | 5" Gray Stabilized Sand w/gravel   |   |                               |                      |                             |                 |                  |                     |                               |                     |                          |   |           |     |     |     |
|                 | 2           |        |         |                                   | Stiff dark gray and brown FAT CLAY (CH) w/calcareous and ferrous nodules |   |                               |                      | 27.4                        |                 |                  |                     | △                             |                     |                          |   |           |     |     |     |
|                 | 3           |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |                     |                          |   |           |     |     |     |
|                 | 4           |        |         |                                   |  | 92.2                                      | 101                           | 23.9                 | 55                          | 22              | 33               | ■                   | △                             |                     |                          |   |           |     |     |     |
|                 | 5           |        |         |                                   |  |   |                               |                      | 29.0                        |                 |                  |                     | △                             |                     |                          |   |           |     |     |     |
|                 | 6           |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |                     |                          |   |           |     |     |     |
|                 | 7           |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |                     |                          |   |           |     |     |     |
|                 | 8           |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |                     |                          |   |           |     |     |     |
|                 | 9           |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |                     |                          |   |           |     |     |     |
|                 | 10          |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |                     |                          |   |           |     |     |     |
|                 | 11          |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |                     |                          |   |           |     |     |     |
|                 | 12          |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |                     |                          |   |           |     |     |     |
|                 | 13          |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |                     |                          |   |           |     |     |     |
|                 | 14          |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |                     |                          |   |           |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

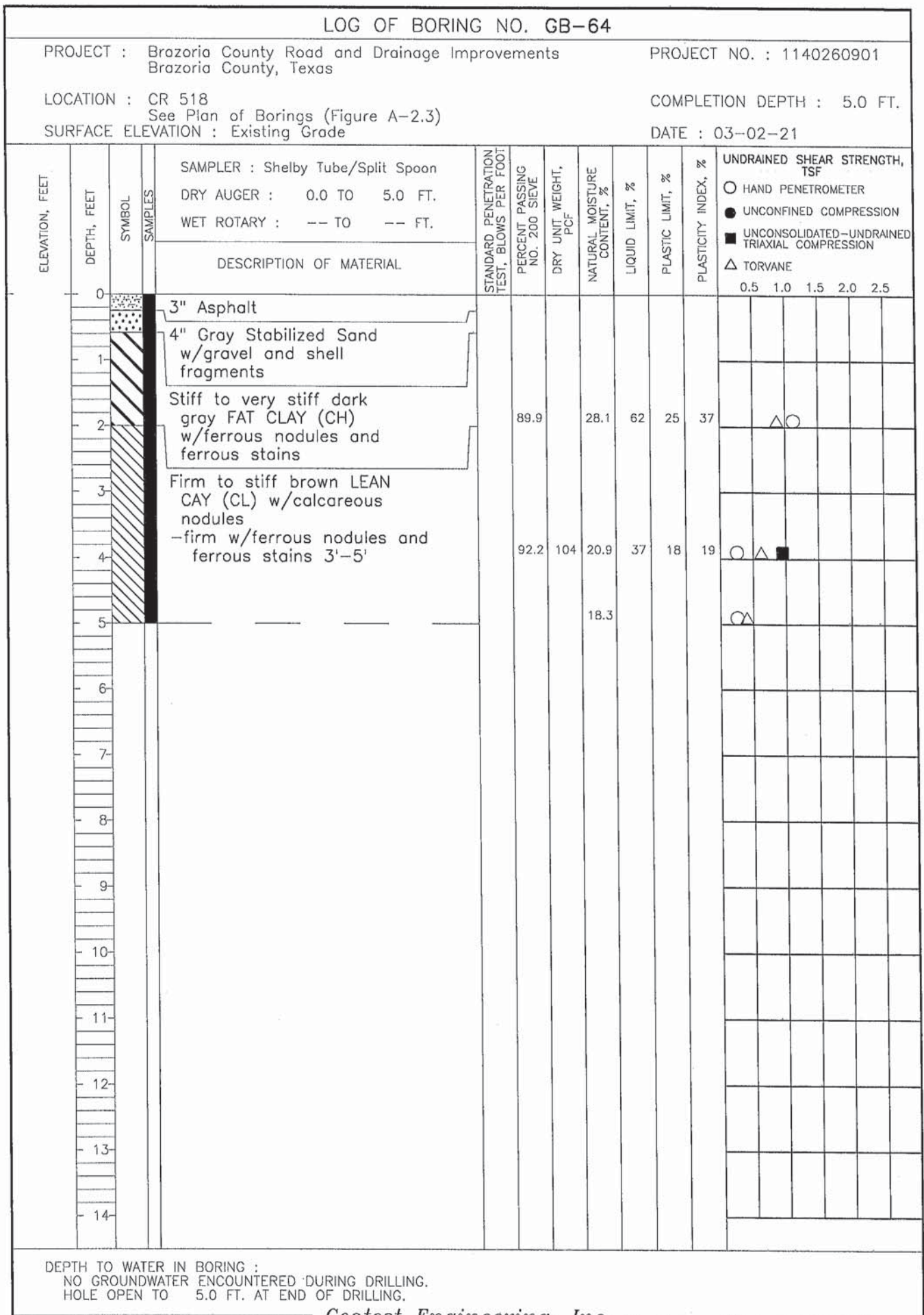
Geotest Engineering, Inc.



Geotest Engineering, Inc.

FIGURE C-63

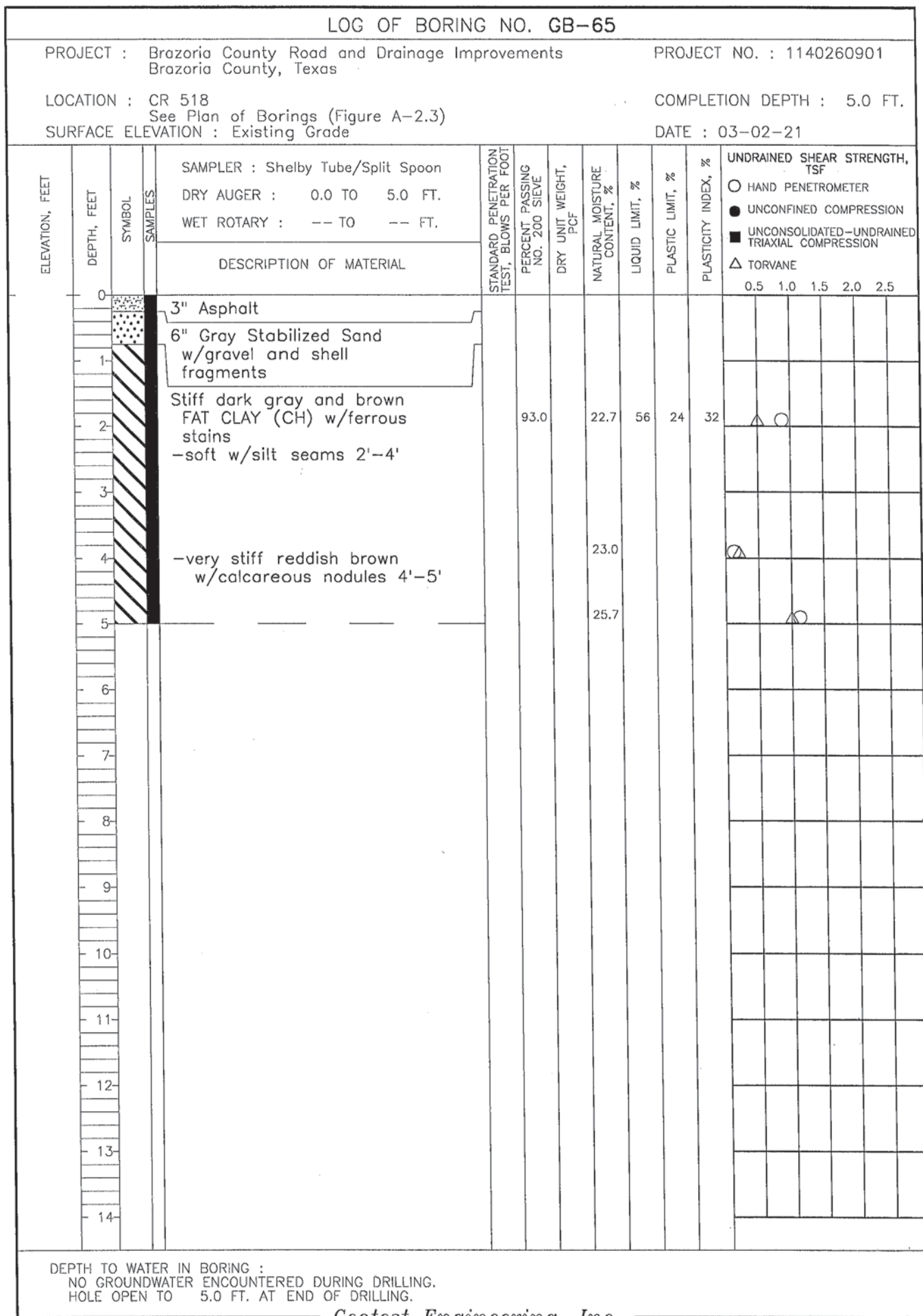




Geotest Engineering, Inc.

FIGURE C-64





Geotest Engineering, Inc.

FIGURE C-65

# LOG OF BORING NO. GB-66

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 671  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 03-02-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.                    | DESCRIPTION OF MATERIAL   | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |     |     |     |     |  |
|-----------------|-------------|--------|---------|---|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|-----|-----|-----|-----|--|
|                 |             |        |         | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |   |   |                               |                      |                             |                 |                  |                     | 0.5                           | 1.0 | 1.5 | 2.0 | 2.5 |  |
|                 | 0           |        |         |   | 3" Asphalt  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 1           |        |         |   | 7" Gray Stabilized Sand w/gravel and shell fragments                                |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 2           |        |         |   | Very stiff dark gray FAT CLAY (CH) w/ferrous nodules                                | 92.6                                      |                               |                      | 26.3                        | 60              | 24               | 36                  |                               |     | △   | ○   |     |  |
|                 | 3           |        |         |   | Firm gray and brown LEAN CLAY (CL) w/silt seams, ferrous nodules and ferrous stains |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 4           |        |         |   | -soft to firm 4'-5'   |   |                               |                      | 21.4                        |                 |                  |                     |                               |     | ○   |     |     |  |
|                 | 5           |        |         |   |   |   |                               |                      | 20.8                        |                 |                  |                     |                               |     | △   |     |     |  |
|                 | 6           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 7           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 8           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 9           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 10          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 11          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 12          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 13          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 14          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-66

# LOG OF BORING NO. GB-67

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 671  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

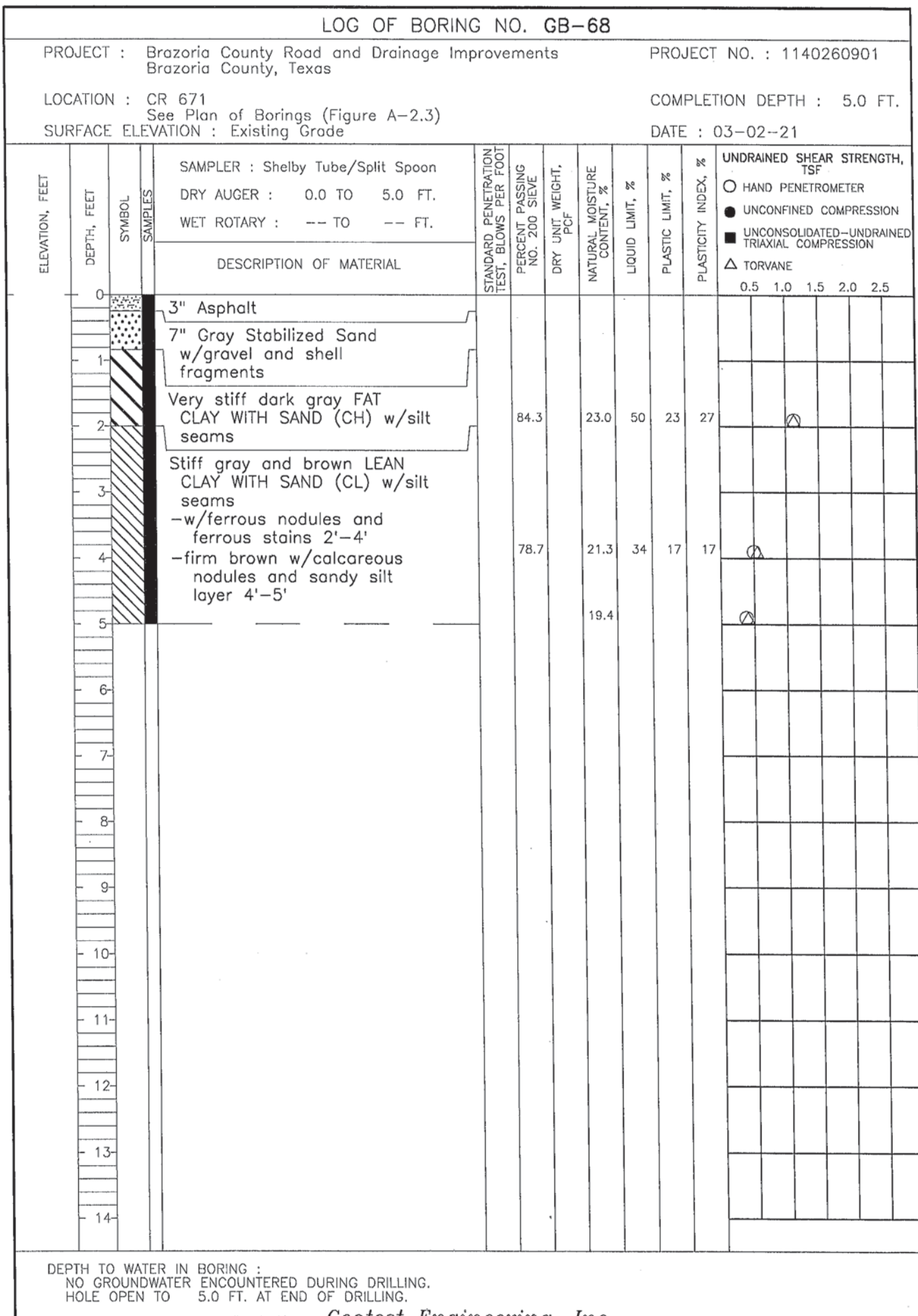
DATE : 03-02-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon | DESCRIPTION OF MATERIAL  | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |   |         |     |     |     |     |
|-----------------|-------------|--------|---------|-----------------------------------|--|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|---|---------|-----|-----|-----|-----|
|                 |             |        |         | DRY AUGER : 0.0 TO 5.0 FT.        |  |   |                               |                      |                             |                 |                  |                     | UNCONFINED COMPRESSION        | UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION | TORVANE | 0.5 | 1.0 | 1.5 | 2.0 |
|                 |             |        |         | WET ROTARY : -- TO -- FT.         |  |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 0           |        |         |                                   | 3" Asphalt   |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 1           |        |         |                                   | 7" Gray Stabilized Sand w/gravel and shell fragments                         |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 2           |        |         |                                   | Very stiff dark gray FAT CLAY (CH) w/silt seams and ferrous                  | 97.8                                      |                               |                      | 24.8                        | 54              | 23               | 31                  |                               |   |         |     |     |     |     |
|                 | 3           |        |         |                                   | Stiff to very stiff brown LEAN CLAY (CL) w/silt seams and calcareous nodules |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 4           |        |         |                                   | -w/ferrous stains 2'-4'<br>-soft w/sand seams 4'-5'                          | 96.4                                      |                               |                      | 21.9                        | 37              | 20               | 17                  |                               |   |         |     |     |     |     |
|                 | 5           |        |         |                                   |  |   |                               |                      | 22.6                        |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 6           |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 7           |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 8           |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 9           |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 10          |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 11          |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 12          |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 13          |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |
|                 | 14          |        |         |                                   |  |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

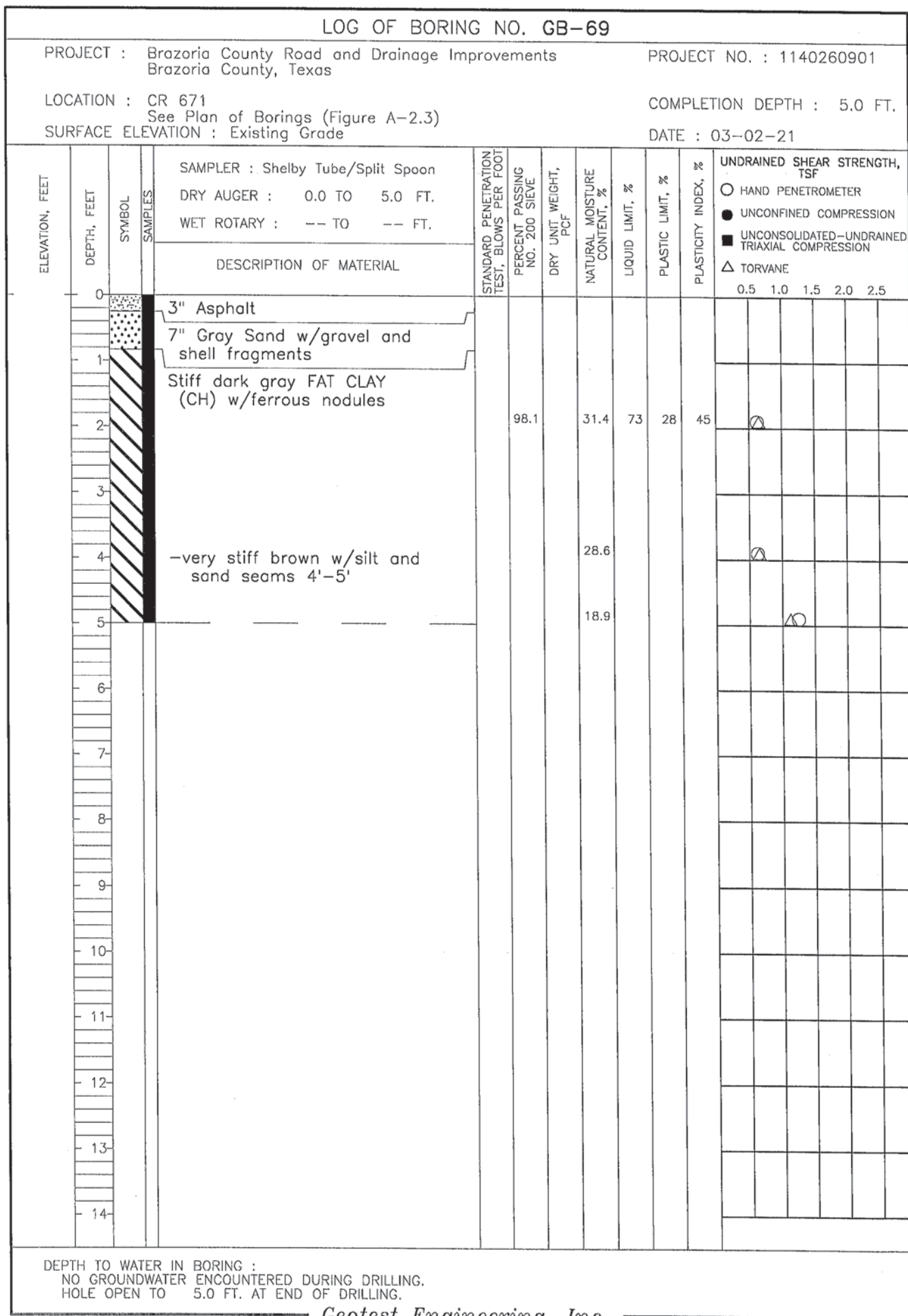
Geotest Engineering, Inc.

FIGURE C-67



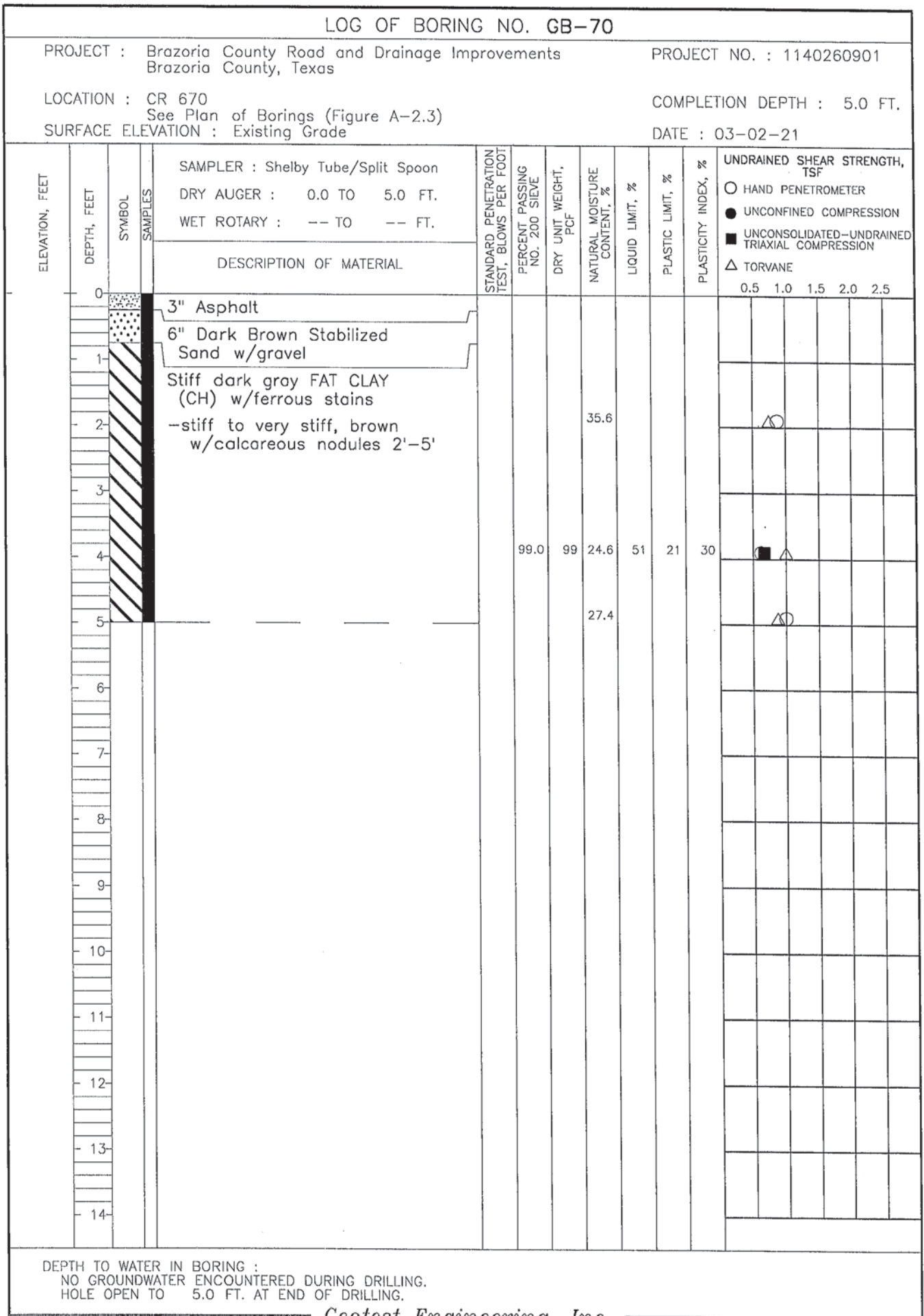
Geotest Engineering, Inc.

FIGURE C-68



Geotest Engineering, Inc.

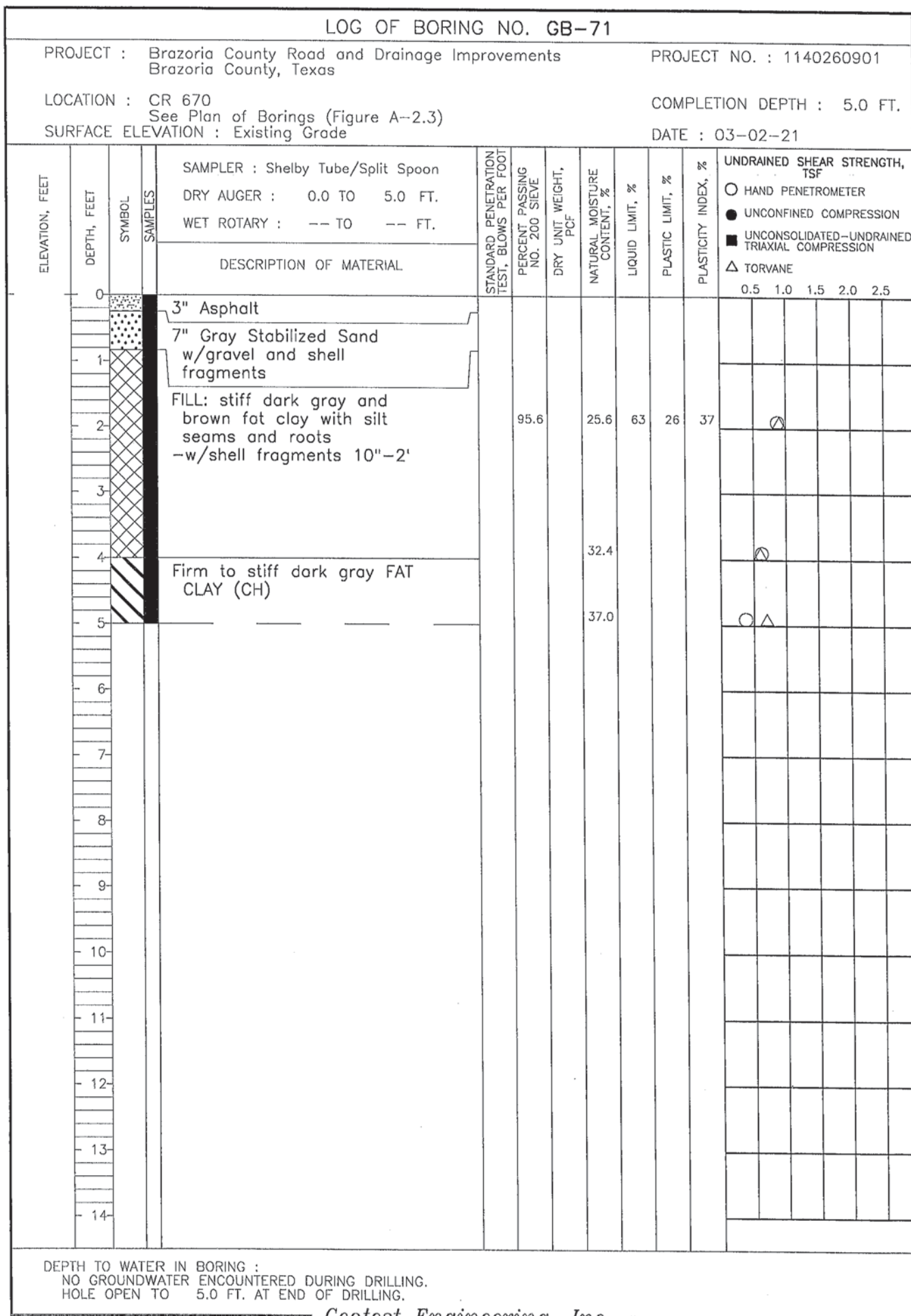
FIGURE C-69



Geotest Engineering, Inc.

FIGURE C-70





Geotest Engineering, Inc.

FIGURE C-71

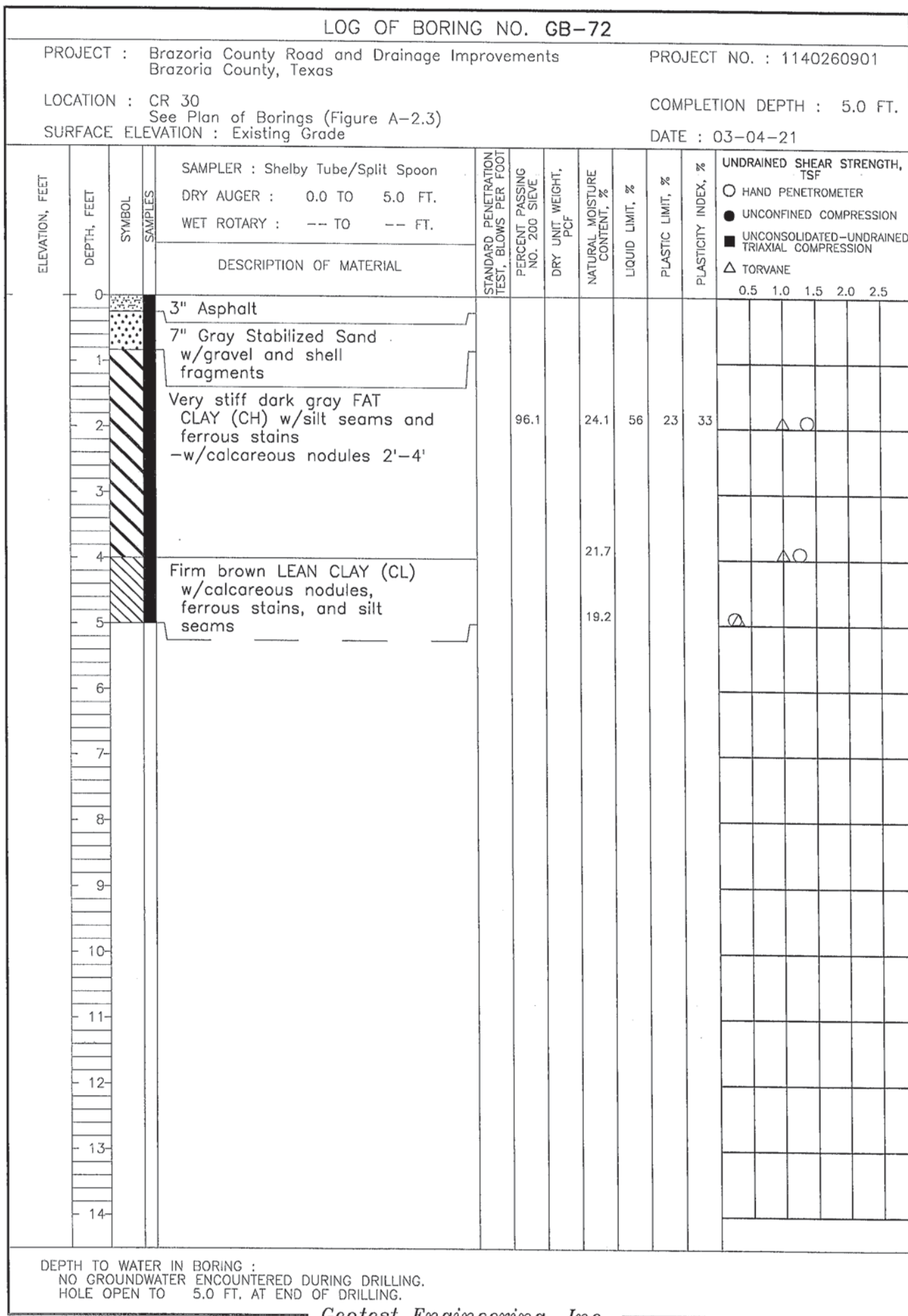


FIGURE C-72



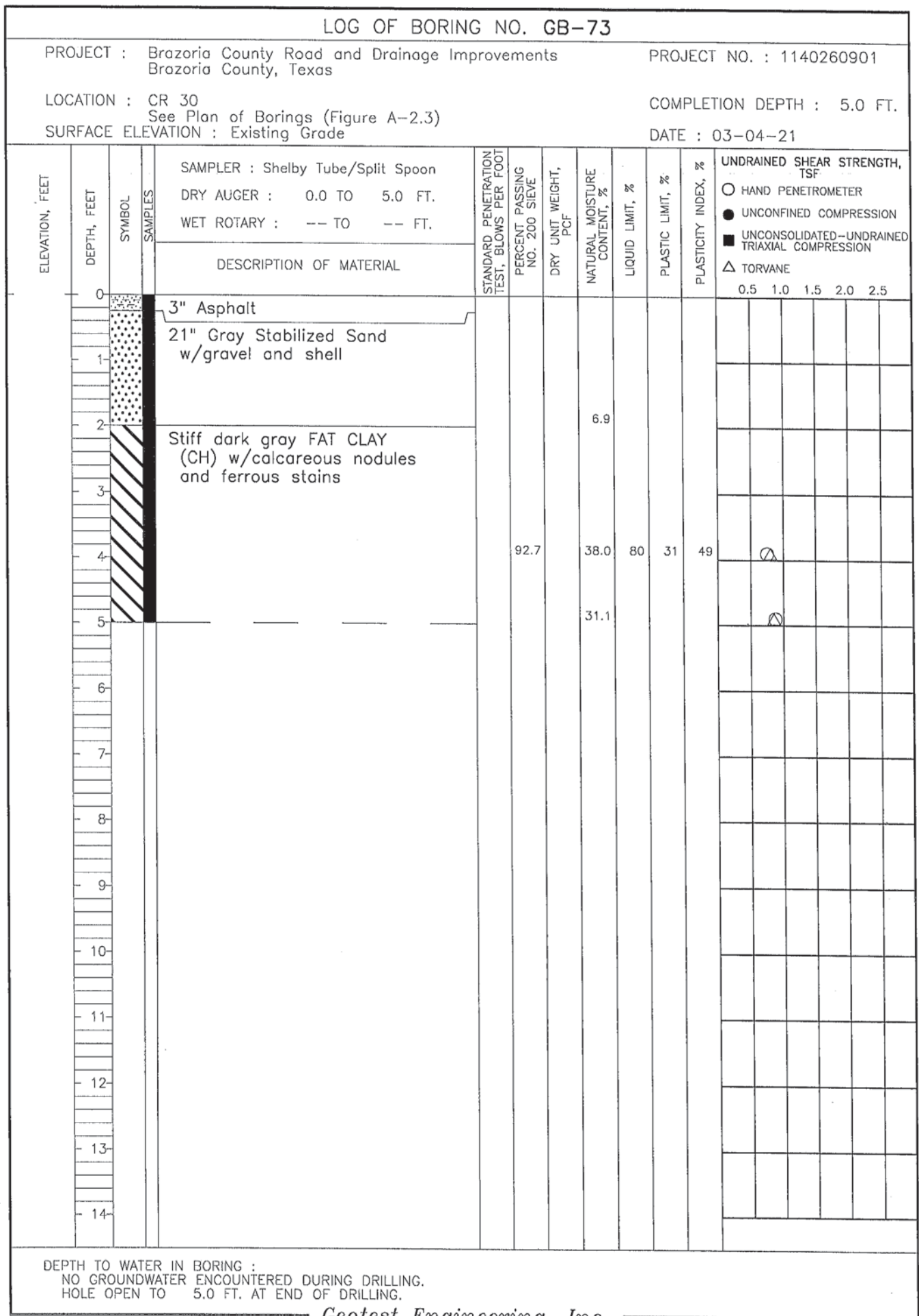


FIGURE C-73

# LOG OF BORING NO. CB-74

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 03-04-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.                    | DESCRIPTION OF MATERIAL   | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |     |     |     |     |  |
|-----------------|-------------|--------|---------|---|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|-----|-----|-----|-----|--|
|                 |             |        |         | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |   |   |                               |                      |                             |                 |                  |                     | 0.5                           | 1.0 | 1.5 | 2.0 | 2.5 |  |
|                 | 0           |        |         |   | 3" Asphalt  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 1           |        |         |   | 7" Gray Stabilized Sand w/gravel and shell fragments                |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 2           |        |         |   | Very stiff brown LEAN CLAY (CL) w/silt seams and calcareous nodules | 94.4                                      |                               |                      | 19.5                        | 46              | 21               | 25                  |                               |     | △   | ○   |     |  |
|                 | 3           |        |         |   | Firm to stiff brown FAT CLAY (CH)                                   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 4           |        |         |   | -very stiff w/calcareous nodules 4'-5'                              | 95.6                                      |                               |                      | 29.9                        | 51              | 22               | 29                  | ○                             | △   |     |     |     |  |
|                 | 5           |        |         |   |   |   |                               |                      | 31.3                        |                 |                  |                     |                               |     | ○   |     |     |  |
|                 | 6           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 7           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 8           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 9           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 10          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 11          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 12          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 13          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 14          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-74

# LOG OF BORING NO. GB-75

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 03-04-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL                                     | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF   |     |     |     |     |
|-----------------|-------------|--------|---------|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|---|-----|-----|-----|-----|
|                 |             |        |         |   |   |                               |                      |                             |                 |                  |                     | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |     |     |     |     |
|                 |             |        |         |   |   |                               |                      |                             |                 |                  |                     | 0.5   | 1.0 | 1.5 | 2.0 | 2.5 |
|                 | 0           |        |         | 3" Asphalt  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 1           |        |         | 7" Gray Stabilized Sand w/gravel                            |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 2           |        |         | Very stiff dark brown LEAN CLAY WITH SAND (CL) w/silt seams |   | 83.3                          |                      | 16.5                        | 38              | 19               | 19                  |   |     |     |     |     |
|                 | 3           |        |         | Stiff brown SANDY LEAN CLAY (CL) -w/silt seams 2'-4'        |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 4           |        |         | -soft w/silty sand layers 4'-5'                             |   |                               |                      | 32.1                        |                 |                  |                     |   |     |     |     |     |
|                 | 5           |        |         |   |   | 57.8                          |                      | 26.0                        | 29              | 17               | 12                  |   |     |     |     |     |
|                 | 6           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 7           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 8           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 9           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 10          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 11          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 12          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 13          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                 | 14          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-75

# LOG OF BORING NO. GB-76

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

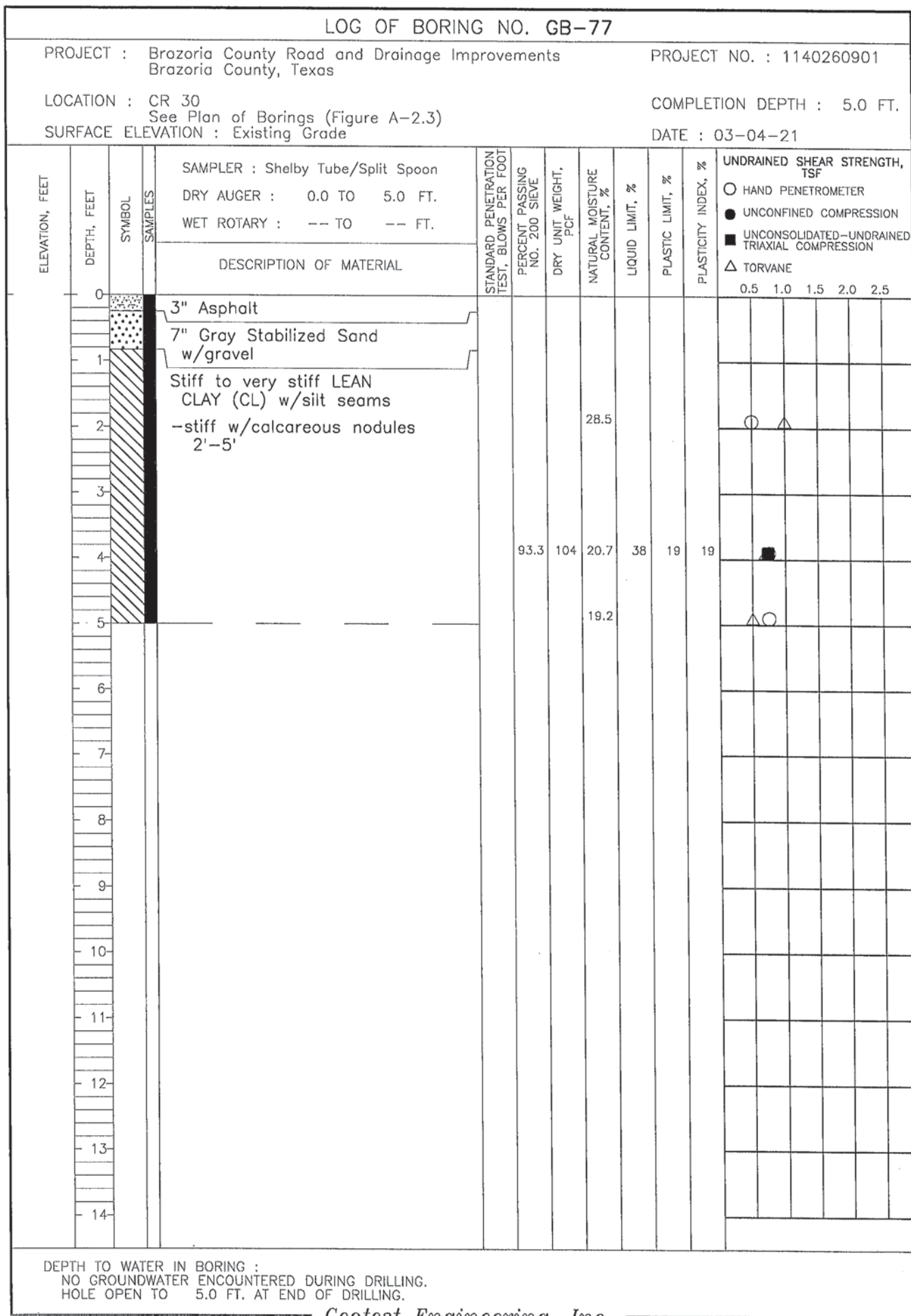
COMPLETION DEPTH : 5.0 FT.

DATE : 03-04-21

| ELEVATION, FEET. | DEPTH, FEET | SYMBOL | SAMPLES | DESCRIPTION OF MATERIAL                           | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF   |     |     |     |     |
|------------------|-------------|--------|---------|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|---|-----|-----|-----|-----|
|                  |             |        |         |   |   |                               |                      |                             |                 |                  |                     | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |     |     |     |     |
|                  |             |        |         |   |   |                               |                      |                             |                 |                  |                     | 0.5   | 1.0 | 1.5 | 2.0 | 2.5 |
|                  | 0           |        |         | 3" Asphalt  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                  | 1           |        |         | 7" Gray Stabilized Sand w/gravel                  |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                  | 2           |        |         | Very stiff dark brown LEAN CLAY (CL) w/silt seams |   | 93.8                          |                      | 19.6                        | 40              | 19               | 21                  |   |     |     |     |     |
|                  | 3           |        |         | Brown SILTY SAND (SM)                             |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                  | 4           |        |         | Stiff dark gray FAT CLAY (CH)                     |   |                               |                      | 29.7                        |                 |                  |                     |   |     |     |     |     |
|                  | 5           |        |         |   |   |                               |                      | 32.2                        |                 |                  |                     |   |     |     |     |     |
|                  | 6           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                  | 7           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                  | 8           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                  | 9           |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                  | 10          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                  | 11          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                  | 12          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                  | 13          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |
|                  | 14          |        |         |   |   |                               |                      |                             |                 |                  |                     |   |     |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

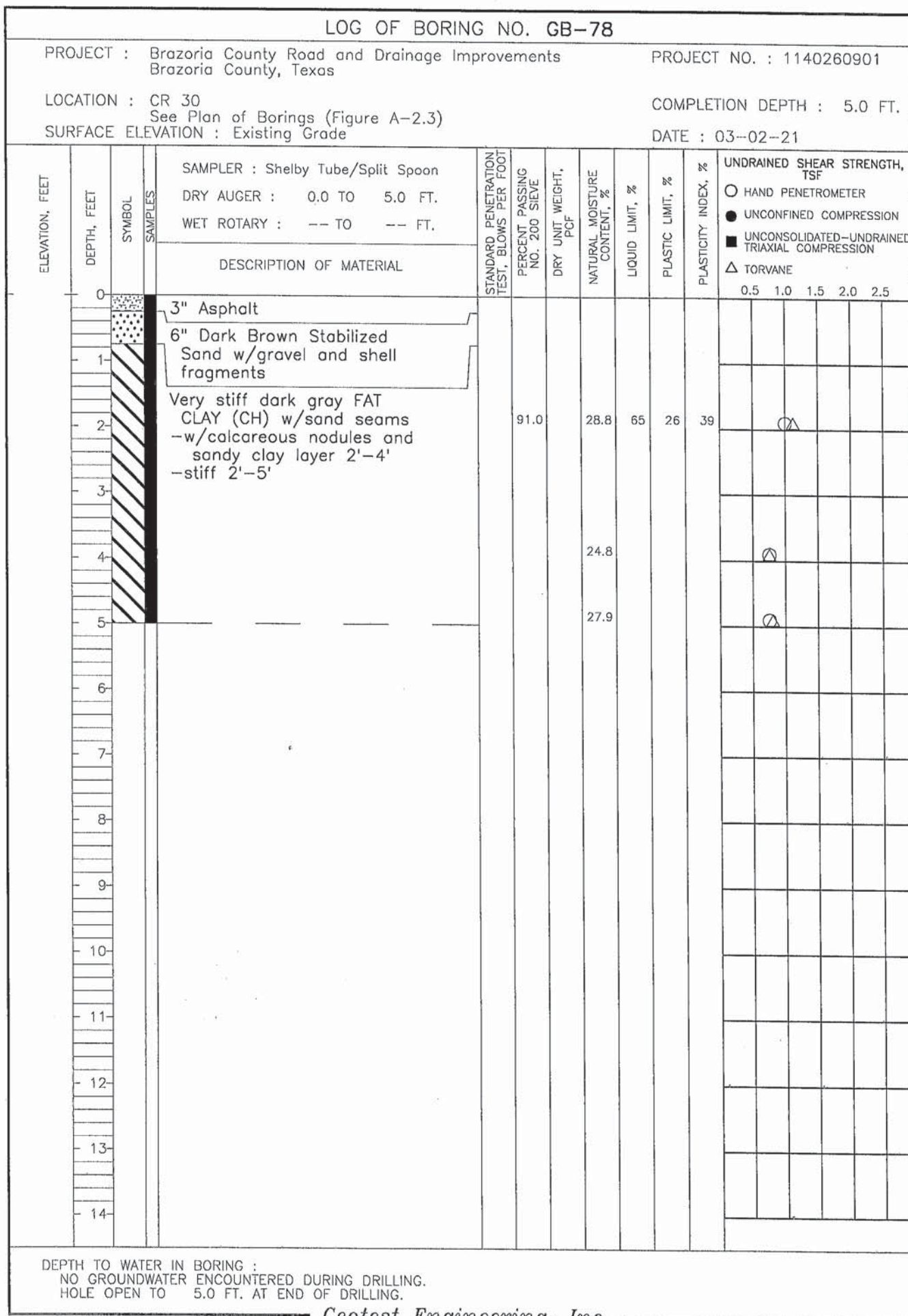
Geotest Engineering, Inc.



Geotest Engineering, Inc.

FIGURE C-77





Geotest Engineering, Inc.

FIGURE C-78

# LOG OF BORING NO. GB-79

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)

COMPLETION DEPTH : 5.0 FT.

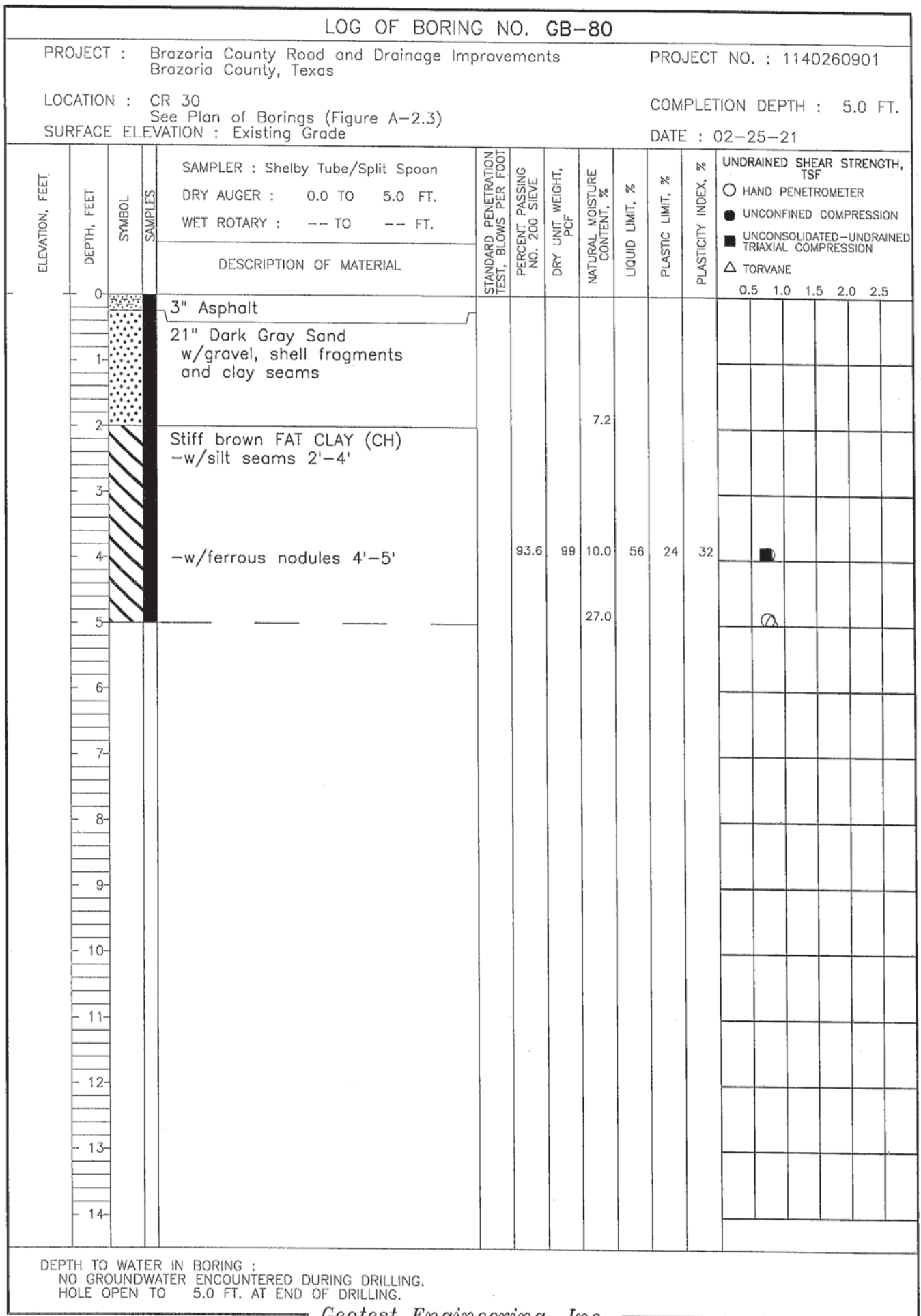
SURFACE ELEVATION : Existing Grade

DATE : 03-02-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon                             | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |   |         |     |     |     |     |     |
|-----------------|-------------|--------|---------|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|---|---------|-----|-----|-----|-----|-----|
|                 |             |        |         | DRY AUGER : 0.0 TO 5.0 FT.                                    |   |                               |                      |                             |                 |                  |                     | UNCONFINED COMPRESSION        | UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION | TORVANE | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 |
|                 |             |        |         | WET ROTARY : -- TO -- FT.                                     | DESCRIPTION OF MATERIAL                   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 0           |        |         | 3" Asphalt  |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 1           |        |         | 6" Dark Brown Stabilized Sand w/gravel and shell fragments    |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 2           |        |         | Very stiff dark gray LEAN CLAY WITH SAND (CL)<br>-stiff 2'-5' |   | 71.0                          |                      | 15.1                        | 33              | 18               | 15                  |                               |   |         |     |     |     |     |     |
|                 | 3           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 4           |        |         | -w/silt seams and ferrous stains 4'-5'                        |   |                               |                      | 16.7                        |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 5           |        |         |   |   |                               |                      | 18.6                        |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 6           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 7           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 8           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 9           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 10          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 11          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 12          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 13          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |
|                 | 14          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |         |     |     |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

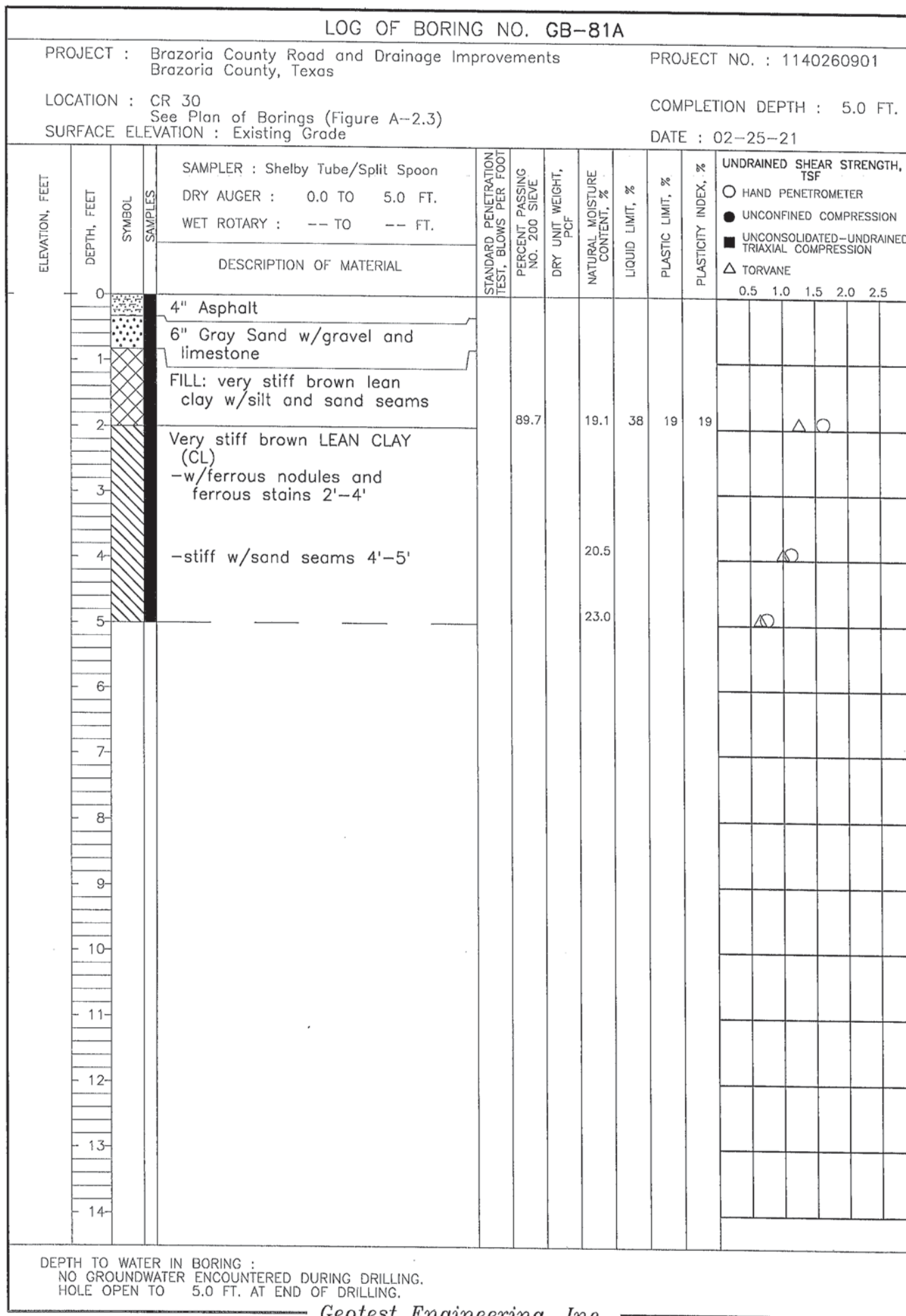
Geotest Engineering, Inc.



Geotest Engineering, Inc.

FIGURE C-80





Geotest Engineering, Inc.

FIGURE C-81

# LOG OF BORING NO. GB-82

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 02-25-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.                    | DESCRIPTION OF MATERIAL   | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |     |     |     |     |  |  |
|-----------------|-------------|--------|---------|---|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|-----|-----|-----|-----|--|--|
|                 |             |        |         | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |   |   |                               |                      |                             |                 |                  |                     | 0.5                           | 1.0 | 1.5 | 2.0 | 2.5 |  |  |
|                 | 0           |        |         |   | 3" Asphalt  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 1           |        |         |   | 11" Gray Sand w/gravel and shell                                |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 2           |        |         |   | Very stiff brown and gray FAT CLAY (CH)<br>-reddish brown 2'-5' |   | 99.2                          |                      | 33.5                        | 63              | 25               | 38                  |                               |     |     |     |     |  |  |
|                 | 3           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 4           |        |         |   | -w/silt seams 4'-5'   |   |                               |                      | 28.5                        |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 5           |        |         |   |   |   |                               |                      | 26.9                        |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 6           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 7           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 8           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 9           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 10          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 11          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 12          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 13          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |
|                 | 14          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

# LOG OF BORING NO. GB-83

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)

COMPLETION DEPTH : 5.0 FT.

SURFACE ELEVATION : Existing Grade

DATE : 02-25-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.                    | DESCRIPTION OF MATERIAL   | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |     |     |     |     |  |
|-----------------|-------------|--------|---------|---|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|-----|-----|-----|-----|--|
|                 |             |        |         | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |   |   |                               |                      |                             |                 |                  |                     | 0.5                           | 1.0 | 1.5 | 2.0 | 2.5 |  |
|                 | 0           |        |         |   | 3" Asphalt  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 1           |        |         |   | 5" Brown Sand w/gravel and shell fragments                                  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 2           |        |         |   | Very stiff to hard brown LEAN CLAY (CL) w/silt seams<br>-w/sand seams 8"-4' |   |                               |                      | 15.8                        |                 |                  |                     |                               | △   |     | ○   |     |  |
|                 | 3           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 4           |        |         |   | -stiff to very stiff 4'-5'  | 98.1                                      |                               |                      | 14.2                        | 33              | 18               | 15                  |                               | △   |     | ○   |     |  |
|                 | 5           |        |         |   |   |   |                               |                      | 21.2                        |                 |                  |                     |                               | △   | ○   |     |     |  |
|                 | 6           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 7           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 8           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 9           |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 10          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 11          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 12          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 13          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 14          |        |         |   |   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

# LOG OF BORING NO. GB-84

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 02-25-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT. | DESCRIPTION OF MATERIAL                                  | STANDARD PENETRATION<br>TEST, BLOWS PER FOOT | PERCENT PASSING<br>NO. 200 SIEVE | DRY UNIT WEIGHT,<br>PCF | NATURAL MOISTURE<br>CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH,<br>TSF | <ul style="list-style-type: none"> <li>○ HAND PENETROMETER</li> <li>● UNCONFINED COMPRESSION</li> <li>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION</li> <li>△ TORVANE</li> </ul> |
|-----------------|-------------|--------|---------|--|--|--|----------------------------------|-------------------------|--------------------------------|-----------------|------------------|---------------------|----------------------------------|---|
|                 |             |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |   |
|                 | 0           |        |         |  | 3" Asphalt   |  |                                  |                         |                                |                 |                  |                     |                                  |   |
|                 | 1           |        |         |  | 12" Dark Brown Sand w/gravel and shell                   |  |                                  |                         |                                |                 |                  |                     |                                  |   |
|                 | 2           |        |         |  | Stiff brown FAT CLAY (CH) w/silt seams -very stiff 2'-5' | 96.6   |                                  |                         | 27.5                           | 69              | 28               | 41                  | ○                                |   |
|                 | 3           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |   |
|                 | 4           |        |         |  |  |  |                                  |                         | 24.2                           |                 |                  |                     | ○                                |   |
|                 | 5           |        |         |  |  |  |                                  |                         | 30.0                           |                 |                  |                     | ○                                |   |
|                 | 6           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |   |
|                 | 7           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |   |
|                 | 8           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |   |
|                 | 9           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |   |
|                 | 10          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |   |
|                 | 11          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |   |
|                 | 12          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |   |
|                 | 13          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |   |
|                 | 14          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |   |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-84

# LOG OF BORING NO. GB-85

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 02-25-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT. | DESCRIPTION OF MATERIAL  | STANDARD PENETRATION<br>TEST, BLOWS PER FOOT | PERCENT PASSING<br>NO. 200 SIEVE | DRY UNIT WEIGHT,<br>PCF | NATURAL MOISTURE<br>CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH,<br>TSF |
|-----------------|-------------|--------|---------|--|--|--|----------------------------------|-------------------------|--------------------------------|-----------------|------------------|---------------------|----------------------------------|
|                 |             |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |
|                 | 0           |        |         |  | 2.5" Asphalt   |  |                                  |                         |                                |                 |                  |                     |                                  |
|                 | 1           |        |         |  | 6.5" Gray Sand w/gravel and<br>shell fragments                 |  |                                  |                         |                                |                 |                  |                     |                                  |
|                 | 2           |        |         |  | Very stiff dark brown FAT<br>CLAY (CH) w/calcareous<br>nodules | 96.8   |                                  |                         | 33.7                           | 72              | 29               | 43                  | ⊙                                |
|                 | 3           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |
|                 | 4           |        |         |  | -w/calcareous nodules 4'-5'                                    |  |                                  |                         | 28.9                           |                 |                  |                     | ⊙                                |
|                 | 5           |        |         |  |  |  |                                  |                         | 29.7                           |                 |                  |                     | ⊙                                |
|                 | 6           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |
|                 | 7           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |
|                 | 8           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |
|                 | 9           |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |
|                 | 10          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |
|                 | 11          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |
|                 | 12          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |
|                 | 13          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |
|                 | 14          |        |         |  |  |  |                                  |                         |                                |                 |                  |                     |                                  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-85

# LOG OF BORING NO. GB-86

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 02-25-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon   | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |   |     |     |     |     |     |
|-----------------|-------------|--------|---------|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|---|-----|-----|-----|-----|-----|
|                 |             |        |         | DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.                           |   |                               |                      |                             |                 |                  |                     | DESCRIPTION OF MATERIAL       | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 |
|                 | 0           |        |         | 2" Asphalt  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 |             |        |         | 7" Dark Brown Sand w/gravel   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 1           |        |         | Very stiff dark gray and brown FAT CLAY (CH) w/calcareous nodules<br>-stiff 2'-5' |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 2           |        |         |   | 94.4                                      | 37.0                          | 84                   | 32                          | 52              |                  |                     |                               |   |     |     |     |     |     |
|                 | 3           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 4           |        |         |   | 37.9                                      |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 5           |        |         |   | 37.9                                      |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 6           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 7           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 8           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 9           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 10          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 11          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 12          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 13          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 14          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.



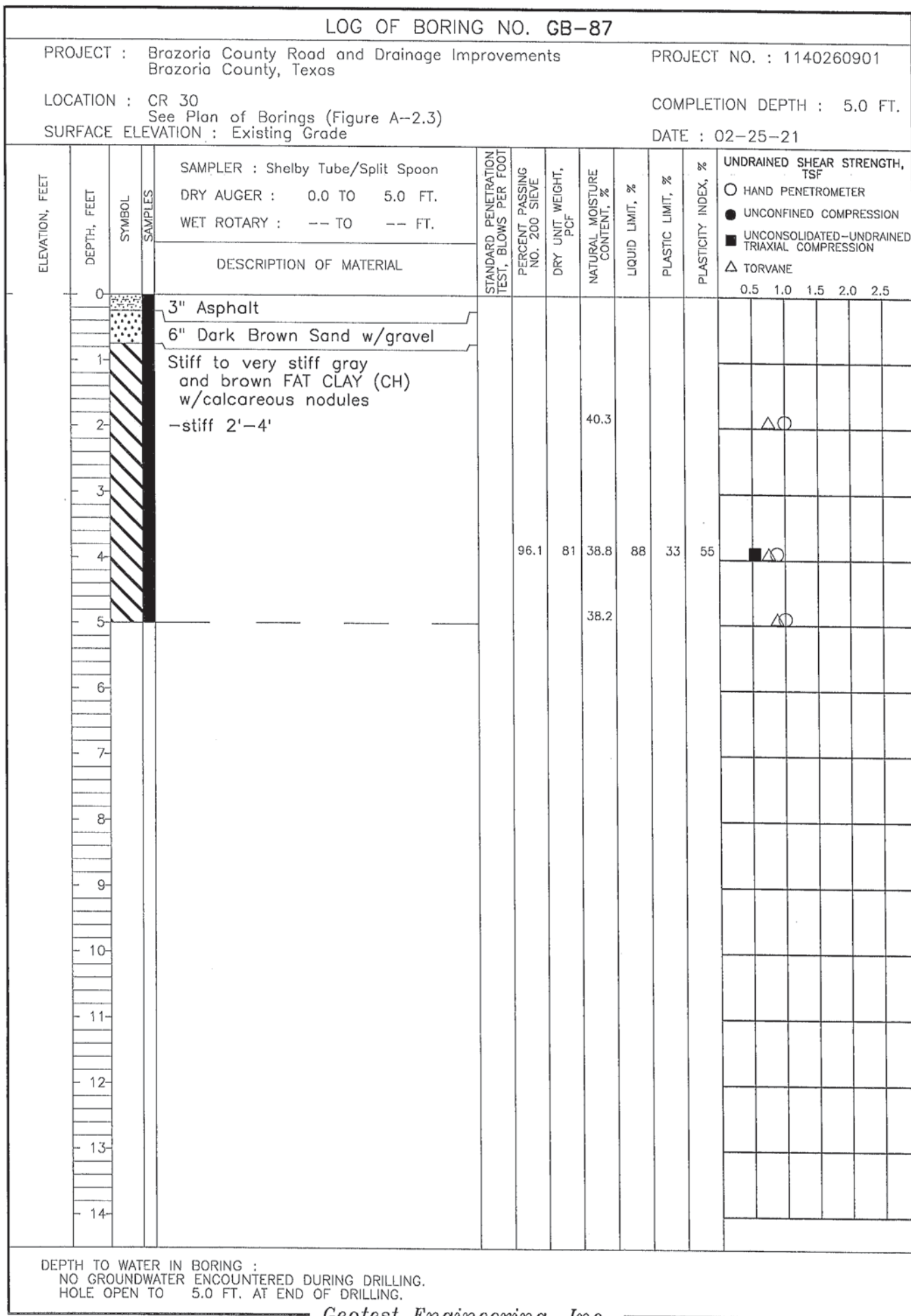
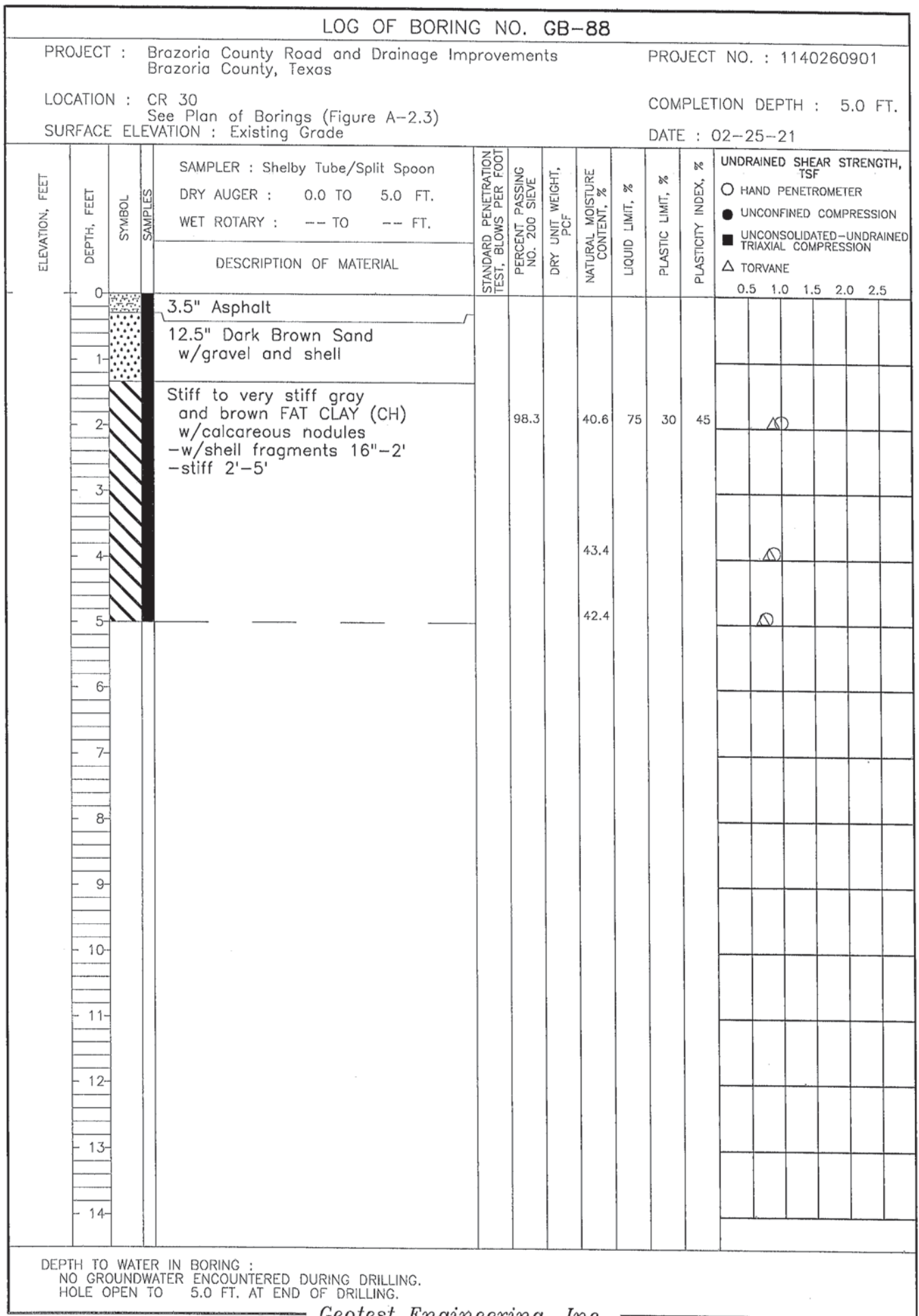


FIGURE C-87



Geotest Engineering, Inc.

FIGURE C-88



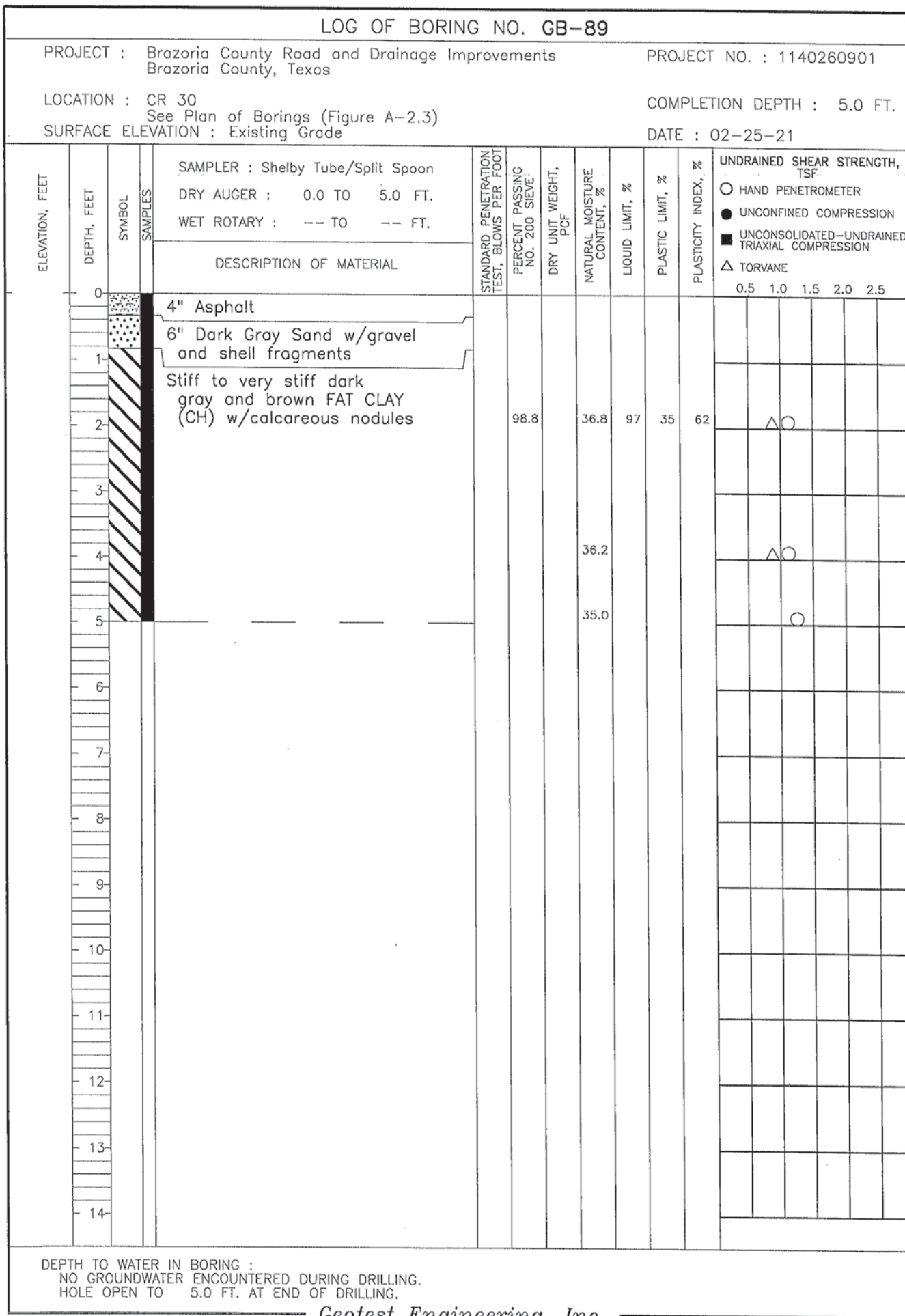
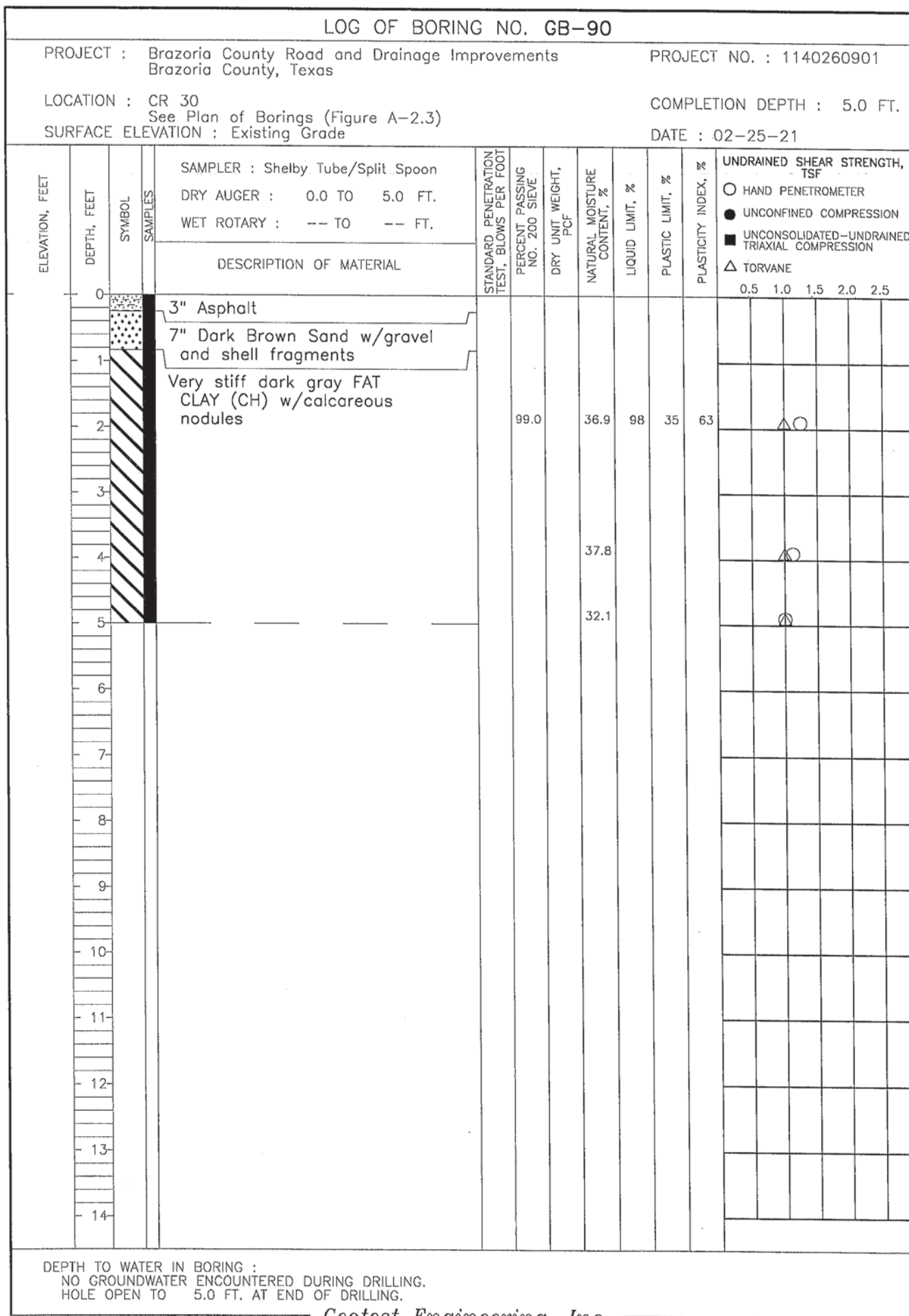


FIGURE C-89



Geotest Engineering, Inc.

FIGURE C-90

# LOG OF BORING NO. CB-91

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 02-25-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.                    | DESCRIPTION OF MATERIAL  | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |     |     |     |     |  |
|-----------------|-------------|--------|---------|---|--|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|-----|-----|-----|-----|--|
|                 |             |        |         | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE |  |   |                               |                      |                             |                 |                  |                     | 0.5                           | 1.0 | 1.5 | 2.0 | 2.5 |  |
|                 | 0           |        |         |   | 3.5" Asphalt   |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 1           |        |         |   | 7.5" Dark Brown Sand w/gravel and shell fragments  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 2           |        |         |   | Stiff to very stiff dark gray and brown FAT CLAY (CH) w/calcareous nodules and ferrous stains -stiff 2'-5' |   |                               |                      | 37.3                        |                 |                  |                     | △○                            |     |     |     |     |  |
|                 | 3           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 4           |        |         |   | -w/gravel 4'-5'  |   | 95.7                          |                      | 41.3                        | 98              | 34               | 64                  | △○                            |     |     |     |     |  |
|                 | 5           |        |         |   |  |   |                               |                      | 30.7                        |                 |                  |                     | △○                            |     |     |     |     |  |
|                 | 6           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 7           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 8           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 9           |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 10          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 11          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 12          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 13          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |
|                 | 14          |        |         |   |  |   |                               |                      |                             |                 |                  |                     |                               |     |     |     |     |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

# LOG OF BORING NO. GB-92

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 02-25-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon<br>DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT. | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF  |     |     |     |     |     |
|-----------------|-------------|--------|---------|--|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|--|-----|-----|-----|-----|-----|
|                 |             |        |         | DESCRIPTION OF MATERIAL  |   |                               |                      |                             |                 |                  |                     | <div>○ HAND PENETROMETER</div> <div>● UNCONFINED COMPRESSION</div> <div>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION</div> <div>△ TORVANE</div> | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 |
|                 | 0           |        |         | 3" Asphalt   |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |
|                 |             |        |         | 7" Dark Brown Sand w/gravel  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |
|                 | 1           |        |         | Stiff dark gray and brown FAT CLAY (CH) w/calcareous nodules                                 |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |
|                 | 2           |        |         |  | 96.0                                      |                               |                      | 34.2                        | 87              | 36               | 51                  | △  |     |     |     |     |     |
|                 | 3           |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |
|                 | 4           |        |         |  |   |                               |                      | 41.2                        |                 |                  |                     | △  |     |     |     |     |     |
|                 | 5           |        |         |  |   |                               |                      | 46.2                        |                 |                  |                     | △  |     |     |     |     |     |
|                 | 6           |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |
|                 | 7           |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |
|                 | 8           |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |
|                 | 9           |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |
|                 | 10          |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |
|                 | 11          |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |
|                 | 12          |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |
|                 | 13          |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |
|                 | 14          |        |         |  |   |                               |                      |                             |                 |                  |                     |  |     |     |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-92

# LOG OF BORING NO. GB-93

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

COMPLETION DEPTH : 5.0 FT.

DATE : 02-25-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon                                | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |   |     |     |     |     |     |
|-----------------|-------------|--------|---------|--|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|---|-----|-----|-----|-----|-----|
|                 |             |        |         | DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.          |   |                               |                      |                             |                 |                  |                     | DESCRIPTION OF MATERIAL       | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 |
|                 | 0           |        |         | 3" Asphalt   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 |             |        |         | 7" Dark Brown Sand w/gravel                                      |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 1           |        |         | Very stiff dark gray FAT CLAY (CH)                               |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 2           |        |         | -stiff w/calcareous and ferrous nodules and ferrous stains 2'-5' |   | 90.0                          |                      | 35.8                        | 84              | 30               | 54                  |                               |   |     |     |     |     |     |
|                 | 3           |        |         |  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 4           |        |         |  |   |                               |                      | 27.9                        |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 5           |        |         |  |   |                               |                      | 27.5                        |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 6           |        |         |  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 7           |        |         |  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 8           |        |         |  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 9           |        |         |  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 10          |        |         |  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 11          |        |         |  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 12          |        |         |  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 13          |        |         |  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |
|                 | 14          |        |         |  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

FIGURE C-93



# LOG OF BORING NO. CB-94

PROJECT : Brazoria County Road and Drainage Improvements  
Brazoria County, Texas

PROJECT NO. : 1140260901

LOCATION : CR 30  
See Plan of Borings (Figure A-2.3)  
SURFACE ELEVATION : Existing Grade

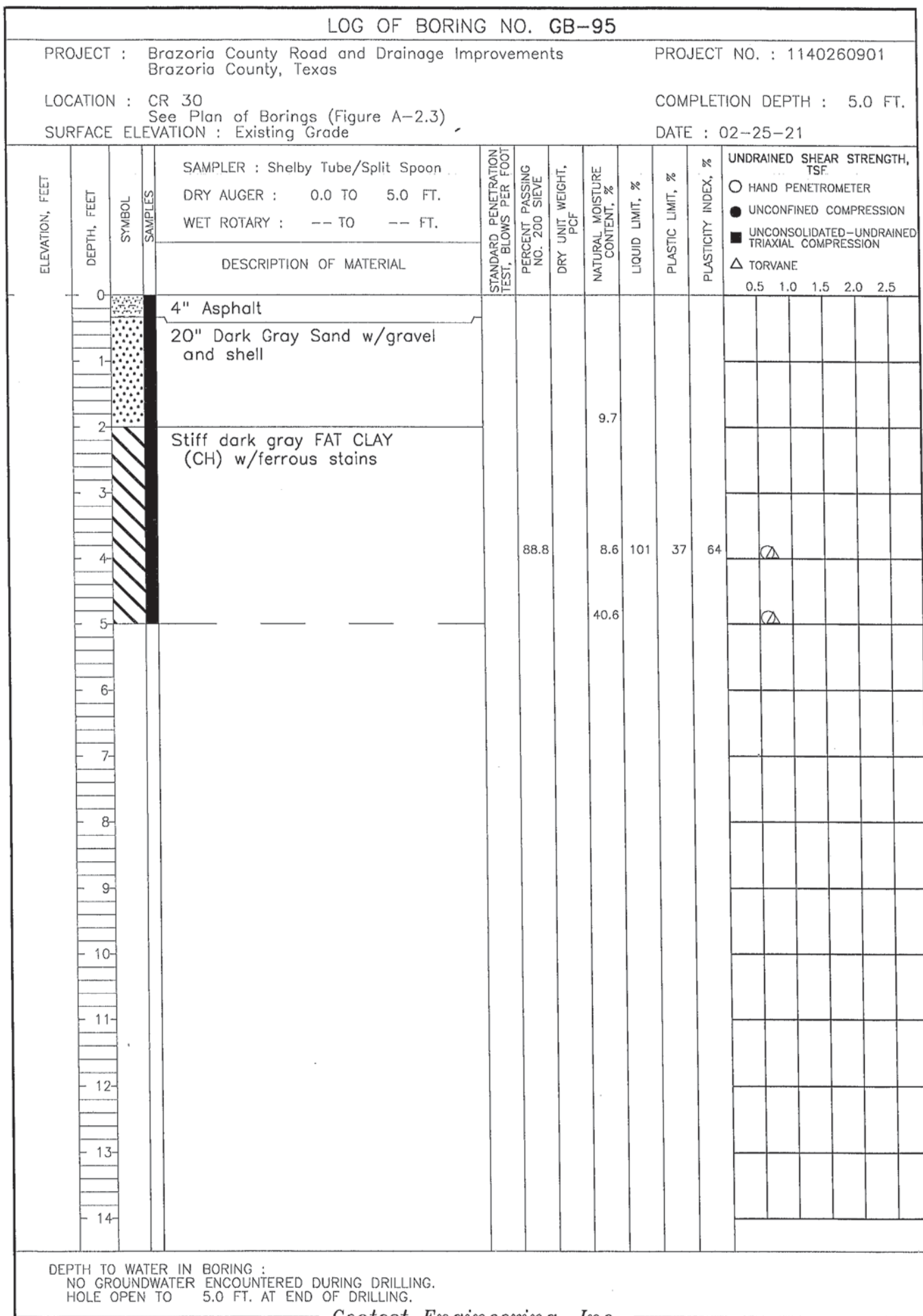
COMPLETION DEPTH : 5.0 FT.

DATE : 02-25-21

| ELEVATION, FEET | DEPTH, FEET | SYMBOL | SAMPLES | SAMPLER : Shelby Tube/Split Spoon   | STANDARD PENETRATION TEST, BLOWS PER FOOT | PERCENT PASSING NO. 200 SIEVE | DRY UNIT WEIGHT, PCF | NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | UNDRAINED SHEAR STRENGTH, TSF |   |     |     |     |     |     |  |  |
|-----------------|-------------|--------|---------|---|---|-------------------------------|----------------------|-----------------------------|-----------------|------------------|---------------------|-------------------------------|---|-----|-----|-----|-----|-----|--|--|
|                 |             |        |         | DRY AUGER : 0.0 TO 5.0 FT.<br>WET ROTARY : -- TO -- FT.   |   |                               |                      |                             |                 |                  |                     | DESCRIPTION OF MATERIAL       | ○ HAND PENETROMETER<br>● UNCONFINED COMPRESSION<br>■ UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION<br>△ TORVANE | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 |  |  |
|                 | 0           |        |         | 4" Asphalt  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 |             |        |         | 7" Dark Gray Sand w/gravel  |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 1           |        |         | Very stiff dark gray FAT CLAY (CH) w/ferrous nodules and ferrous stains -stiff gray and brown 2'-5' |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 2           |        |         |   |   |                               |                      |                             | 32.0            |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 3           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 4           |        |         |   |   | 86.4                          | 90                   | 32.0                        | 85              | 27               | 58                  |                               |   |     |     |     |     |     |  |  |
|                 | 5           |        |         |   |   |                               |                      | 35.8                        |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 6           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 7           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 8           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 9           |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 10          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 11          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 12          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 13          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |
|                 | 14          |        |         |   |   |                               |                      |                             |                 |                  |                     |                               |   |     |     |     |     |     |  |  |

DEPTH TO WATER IN BORING :  
NO GROUNDWATER ENCOUNTERED DURING DRILLING.  
HOLE OPEN TO 5.0 FT. AT END OF DRILLING.

Geotest Engineering, Inc.

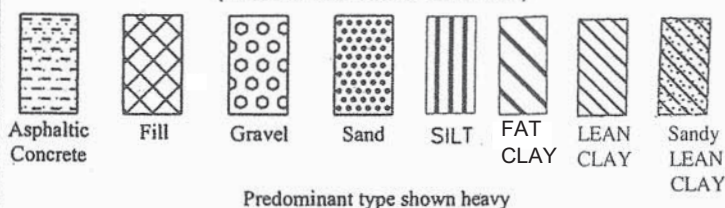


Geotest Engineering, Inc.

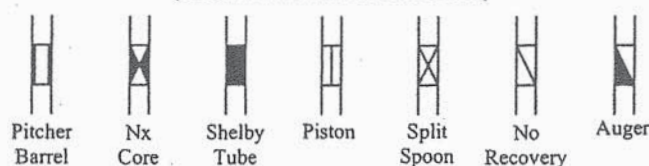
FIGURE C-95

## SYMBOLS AND TERMS USED ON BORING LOGS

### SOIL TYPES (SHOWN IN SYMBOL COLUMN)



### SAMPLER TYPES (SHOWN IN SAMPLES COLUMN)



## TERMS DESCRIBING CONSISTENCY OR CONDITION

| Basic Soil Type | Density or Consistency | Standard Penetration Resistance, <sup>(1)</sup> Blows/ft. | Compressive Strength ( $q_u$ ), <sup>(2)</sup> Tons/sq. ft. | Undrained Shear Strength, Tons/sq. ft. |
|-----------------|------------------------|---|---|--|
| Cohesionless    | Very loose             | Less than 4   | Not applicable  | Not applicable                         |
|                 | Loose                  | 4 to <10  | Not applicable  | Not applicable                         |
|                 | Medium dense           | 10 to <30   | Not applicable  | Not applicable                         |
|                 | Dense                  | 30 to <50   | Not applicable  | Not applicable                         |
|                 | Very dense             | 50 or greater   | Not applicable  | Not applicable                         |
| Cohesive        | Very soft              | Less than 2   | Less than 0.25  | Less than 0.125                        |
|                 | Soft                   | 2 to <4   | 0.25 to <0.5  | 0.125 to <0.25                         |
|                 | Firm/Medium stiff      | 4 to <8   | 0.5 to <1.0   | 0.25 to <0.5                           |
|                 | Stiff                  | 8 to <15  | 1.0 to <2.0   | 0.5 to <1.0                            |
|                 | Very stiff             | 15 to <30   | 2.0 to <4.0   | 1.0 to <2.0                            |
|                 | Hard                   | 30 or greater   | 4 or greater  | 2 or greater                           |

(1) Number of blows from 140-lb. weight falling 30-in. to drive 2-in. OD, 1-3/8-in. ID, split barrel sampler (ASTM D1586)

(2)  $q_u$  may also be approximated using a pocket penetrometer

## TERMS CHARACTERIZING SOIL STRUCTURE

Parting: -paper thin in size

Seam: -1/8" to 3" thick

Layer: -greater than 3"

Slickensided

- having inclined planes of weakness that are slick and glossy in appearance.

Fissured

- containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.

Laminated

- composed of thin layers of varying color and texture.

Interbedded

- composed of alternate layers of different soil types.

Calcareous

- containing appreciable quantities of calcium carbonate.

Well graded

- having wide range in grain sizes and substantial amounts of all intermediate particle sizes.

Poorly graded

- predominantly of one grain size, or having a range of sizes with some intermediate size missing.

Flocculated

- pertaining to cohesive soils that exhibit a loose knit or flakey structure.



## **APPENDIX D**

|                               | <u>Figure</u> |
|-------------------------------|---------------|
| Report of HMAC Results.....   | D-1 and D-2   |
| Report of Sieve Analyses..... | D-3 and D-4   |

GEOTEST ENGINEERING, INC.  
5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

**REPORT OF HOT-MIX ASPHALT TEST RESULTS**  
(TxDOT, 201F, 206F, 207F, 208F, 210F)

|          |   |         |            |
|----------|---|---------|------------|
| Project: | Brazoria Road and Drainage Improvements Project | Job No: | 1140260901 |
| Client:  | CobbFendley                                     | Date:   | 05-01-2021 |

**ASPHALT CONCRETE MIXTURE DESIGN**

| Description:                                    | Aggregate Type   |             |                               |                            |            |     | Asphalt Type              |
|---|------------------|-------------|-------------------------------|----------------------------|------------|-----|---------------------------|
| SAMPLE A<br>(GB-1 thru GB-53)                   | R.A.P            | "D/F " Rock | "F" Rock                      | Screenings                 | River Sand |     | Surface - D               |
| % by weight                                     | N/A              | N/A         | N/A                           | N/A                        | N/A        |     |                           |
| EXTRACTION, GRADATION & LABORATORY TEST RESULTS |                  |             |                               |                            |            |     |                           |
| Percent Retained by Weight                      |                  |             |                               | Percent Passing by Weight  |            |     |                           |
| U.S. Sieve Size                                 | Percent Retained |             | Job-Mix<br>Tolerance<br>(+/-) | JMF based Grading<br>Bands | Cumulative | JMF | Master Gradation<br>Bands |
| Retained  | Individual       | JMF Ind.    |                               |                            |            |     |                           |
| 3/4"  | 0                |             |                               |                            | 100        |     |                           |
| 1/2"  | 0                |             |                               |                            | 100        |     |                           |
| 3/8"  | 2.2              |             |                               |                            | 97.8       |     |                           |
| #4  | 29.2             |             |                               |                            | 68.6       |     |                           |
| #8  | 26.2             |             |                               |                            | 42.4       |     |                           |
| #30   | 11.8             |             |                               |                            | 30.6       |     |                           |
| #50   | 7.7              |             |                               |                            | 22.9       |     |                           |
| #200  | 20.8             |             |                               |                            | 2.2        |     |                           |
| Pan   | 2.2              |             |                               |                            |            |     |                           |
| Asphalt (%)                                     | 4.6              |             |                               |                            |            |     |                           |
| HVEEM Stability                                 | 44               |             |                               |                            |            |     |                           |
| Max. Dens. (pcf)                                | 155.4            |             |                               |                            |            |     |                           |
| Lab. Dens. (pcf)                                | 142.8            |             |                               |                            |            |     |                           |
| Lab. Dens. (%)                                  | 91.9             |             |                               |                            |            |     |                           |

FIGURE D-1

GEOTEST ENGINEERING, INC.  
5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

**REPORT OF HOT-MIX ASPHALT TEST RESULTS**  
(TxDOT, 201F, 206F, 207F, 208F, 210F)

|          |   |         |            |
|----------|---|---------|------------|
| Project: | Brazoria Road and Drainage Improvements Project | Job No: | 1140260901 |
| Client:  | CobbFendley                                     | Date:   | 05-01-2021 |

**ASPHALT CONCRETE MIXTURE DESIGN**

| Description:                                    | Aggregate Type   |             |                               |                            |                           |     |                           | Asphalt Type |
|---|------------------|-------------|-------------------------------|----------------------------|---------------------------|-----|---------------------------|--------------|
| SAMPLE B<br>(GB-54 thru GB-95)                  | R.A.P            | "D/F " Rock | "F" Rock                      | Screenings                 | River Sand                |     |                           | Surface - D  |
| % by weight                                     | N/A              | N/A         | N/A                           | N/A                        | N/A                       |     |                           |              |
| EXTRACTION, GRADATION & LABORATORY TEST RESULTS |                  |             |                               |                            |                           |     |                           |              |
| Percent Retained by Weight                      |                  |             |                               |                            | Percent Passing by Weight |     |                           |              |
| U.S. Sieve Size                                 | Percent Retained |             | Job-Mix<br>Tolerance<br>(+/-) | JMF based Grading<br>Bands | Cumulative                | JMF | Master Gradation<br>Bands |              |
| Retained  | Individual       | JMF Ind.    |                               |                            |                           |     |                           |              |
| 3/4"  | 0                |             |                               |                            | 100                       |     |                           |              |
| 1/2"  | 0                |             |                               |                            | 100                       |     |                           |              |
| 3/8"  | 3.1              |             |                               |                            | 96.9                      |     |                           |              |
| #4  | 27.0             |             |                               |                            | 69.9                      |     |                           |              |
| #8  | 30.6             |             |                               |                            | 39.3                      |     |                           |              |
| #30   | 12.3             |             |                               |                            | 26.9                      |     |                           |              |
| #50   | 10.0             |             |                               |                            | 17.0                      |     |                           |              |
| #200  | 15.0             |             |                               |                            | 2.0                       |     |                           |              |
| Pan   | 2.0              |             |                               |                            |                           |     |                           |              |
| Asphalt (%)                                     | 4.8              |             |                               |                            |                           |     |                           |              |
| HVEEM Stability                                 | 43               |             |                               |                            |                           |     |                           |              |
| Max. Dens. (pcf)                                | 153.3            |             |                               |                            |                           |     |                           |              |
| Lab. Dens. (pcf)                                | 143.1            |             |                               |                            |                           |     |                           |              |
| Lab. Dens. (%)                                  | 93.4             |             |                               |                            |                           |     |                           |              |

FIGURE D-2

**REPORT OF SIEVE ANALYSIS**

Project: Brazoria County Road and Drainage improvements project

Job No.: 1140260901

Description: Sand, gravel and shell base mix  
Location: Sample A (GB-1 thru GB-53)  
Specification: ASTM C136

| Sieve Size | Cumulative<br>Percent Passing | Required Percent<br>Passing |
|------------|-------------------------------|-----------------------------|
| 1 3/4"     | 100                           | 100                         |
| 1 1/2"     | 100                           | 95-100                      |
| 1"         | 96                            | 85-97                       |
| 7/8"       | 92                            |                             |
| 3/8"       | 72                            |                             |
| #4         | 51                            |                             |
| #40        | 18                            | 10-30                       |
| #200       | 1.4                           | <5                          |

\* Does not meet the standard.

## REPORT OF SIEVE ANALYSIS

Project: Brazoria County Road and Drainage improvements project

Job No.: 1140260901

Description: Sand, gravel and shell base mix  
Location: Sample B (GB-54 thru GB-95)  
Specification: ASTM C136

| Sieve Size | Cumulative<br>Percent Passing | Required Percent<br>Passing |
|------------|-------------------------------|-----------------------------|
| 1 3/4"     | 100                           | 100                         |
| 1 1/2"     | 98                            | 95-100                      |
| 1"         | 93                            | 85-97                       |
| 7/8"       | 89                            |                             |
| 3/8"       | 67                            |                             |
| #4         | 45                            |                             |
| #40        | 14                            | 10-30                       |
| #200       | 1.3                           | <5                          |

\* Does not meet the standard.

## APPENDIX E

|  | <u>Figure</u>  |
|--|----------------|
| Pavement Condition Survey .....            | E-1 thru E-25  |
| Photographs of the Existing Pavement ..... | E-26 thru E-36 |



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

## Pavement Condition Survey

Job No. 1140260901

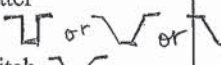
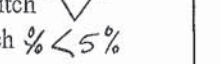

|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>County Rd 671</u>      | from: <u>GB-66</u>             | to: <u>GB-69</u>     |
| 2) Direction of survey: <u>S</u>      | Cores No. (s) <u>C-9</u>       |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-68</u>      |                      |
| 4) Length of roadway: <u>3200'</u>    | 5) Width of roadway: <u>20</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>L</u> |
| # of Sides                            | # of Sides                     | # of Sides <u>2</u>  |

### Type of Distress

|                   | Edge | Rutting   | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|------|-----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      |      | <u>E</u>  | <u>E</u>  |          | <u>E</u>  |            | <u>E</u>     | <u>E</u> |
| 11) Extent        |      | <u>I</u>  | <u>L</u>  |          | <u>I</u>  |            | <u>P</u>     | <u>I</u> |
| 12) Cracks Sealed |      | <u>No</u> |           |          |           |            |              |          |
| 13) Ride Quality  |      | <u>P</u>  |           |          |           |            |              |          |

Comments: \_\_\_\_\_

### Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch  or  |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch    |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

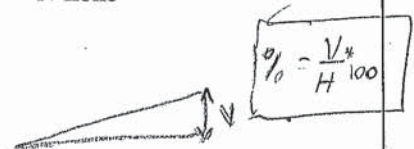


FIGURE E-1



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

# Pavement Condition Survey

Job No. 1140260901

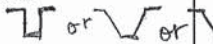

|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>County Rd 518</u>      | from: <u>GB-63</u>             | to: <u>GB-65</u>     |
| 2) Direction of survey: <u>S</u>      | Cores No. (s) <u>C-8</u>       |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-64</u>      |                      |
| 4) Length of roadway: <u>2500'</u>    | 5) Width of roadway: <u>20</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>U</u> |
| # of Sides <u></u>                    | # of Sides <u></u>             | # of Sides <u>2</u>  |

## Type of Distress

|                   | Edge    | Rutting   | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|---------|-----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u></u> | <u>M</u>  | <u>E</u>  | <u></u>  | <u>M</u>  | <u></u>    | <u>E</u>     | <u>E</u> |
| 11) Extent        | <u></u> | <u>I</u>  | <u>I</u>  | <u></u>  | <u>I</u>  | <u></u>    | <u>P</u>     | <u>P</u> |
| 12) Cracks Sealed | <u></u> | <u>No</u> | <u></u>   | <u></u>  | <u></u>   | <u></u>    | <u></u>      | <u></u>  |
| 13) Ride Quality  | <u></u> | <u>P</u>  | <u></u>   | <u></u>  | <u></u>   | <u></u>    | <u></u>      | <u></u>  |

Comments:

## Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

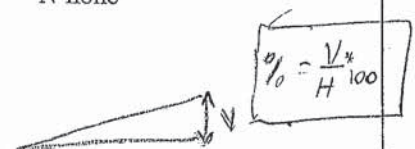


FIGURE E-2





GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

# Pavement Condition Survey

Job No. 1140260901

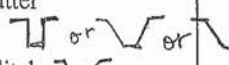
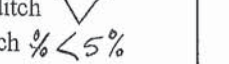
|                                       |                                 |                      |
|---------------------------------------|---------------------------------|----------------------|
| 1) Roadway: <u>County Rd 611</u>      | from: <u>GB-59</u>              | to: <u>GB-62</u>     |
| 2) Direction of survey: <u>W</u>      | Cores No. (s) <u>C-5</u>        |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-59</u>       |                      |
| 4) Length of roadway: <u>3900'</u>    | 5) Width of roadway: <u>22'</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                 |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>           | 9) Drainage <u>L</u> |
| # of Sides                            | # of Sides                      | # of Sides <u>2</u>  |

## Type of Distress

|                   | Edge | Rutting   | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|------|-----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      |      | <u>E</u>  |           | <u>M</u> | <u>M</u>  |            | <u>M</u>     | <u>S</u> |
| 11) Extent        |      | <u>I</u>  |           | <u>I</u> | <u>I</u>  |            | <u>P</u>     | <u>L</u> |
| 12) Cracks Sealed |      | <u>No</u> |           |          |           |            |              |          |
| 13) Ride Quality  |      | <u>P</u>  |           |          |           |            |              |          |

Comments: water Bleeding, road crossing a Swamp.

## Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

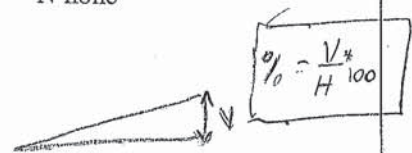


FIGURE E-3



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

# Pavement Condition Survey

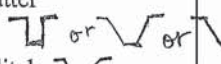
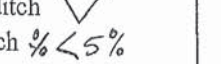

Job No. 1140260901

|                                       |                                 |                      |
|---------------------------------------|---------------------------------|----------------------|
| 1) Roadway: <u>County Rd 611</u>      | from: <u>GB-57</u>              | to: <u>GB-59</u>     |
| 2) Direction of survey: <u>W</u>      | Cores No. (s) <u>C-6</u>        |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-57</u>       |                      |
| 4) Length of roadway: <u>2400'</u>    | 5) Width of roadway: <u>20'</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                 |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>           | 9) Drainage <u>U</u> |
| # of Sides                            | # of Sides                      | # of Sides <u>2</u>  |

|                   | Edge     | Rutting   | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|----------|-----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u>S</u> | <u>M</u>  | <u>S</u>  |          | <u>S</u>  |            | <u>M</u>     | <u>M</u> |
| 11) Extent        | <u>L</u> | <u>I</u>  | <u>P</u>  |          | <u>I</u>  |            | <u>I</u>     | <u>L</u> |
| 12) Cracks Sealed |          | <u>No</u> |           |          |           |            |              |          |
| 13) Ride Quality  |          | <u>M.</u> |           |          |           |            |              |          |

Comments:

## Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch  or  |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch    |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

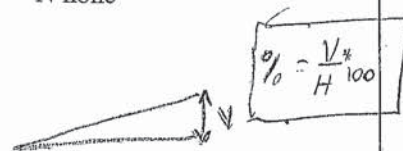


FIGURE E-4



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

## Pavement Condition Survey

Job No. 1140260901



|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>County Rd 611A</u>     | from: <u>GB-54</u>             | to: <u>GB-57</u>     |
| 2) Direction of survey: <u>S</u>      | Cores No. (s)                  | <u>C-7</u>           |
| 3) Type of surface material: <u>R</u> | Location (s)                   | <u>GB-55</u>         |
| 4) Length of roadway: <u>2600'</u>    | 5) Width of roadway: <u>20</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>L</u> |
| # of Sides                            | # of Sides                     | # of Sides <u>2</u>  |

## Type of Distress

|                   | Edge     | Rutting   | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|----------|-----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u>M</u> |           | <u>S</u>  |          |           | <u>S</u>   | <u>M</u>     |          |
| 11) Extent        | <u>L</u> |           | <u>P</u>  |          |           | <u>I</u>   | <u>P</u>     |          |
| 12) Cracks Sealed |          | <u>No</u> |           |          |           |            |              |          |
| 13) Ride Quality  |          | <u>G</u>  |           |          |           |            |              |          |

Comments:

## Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

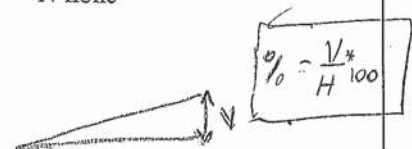


FIGURE E-5





GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

## Pavement Condition Survey

Job No. 1140260901




|                                       |                                 |                      |
|---------------------------------------|---------------------------------|----------------------|
| 1) Roadway: <u>County Rd 30</u>       | from: <u>GB-91</u>              | to: <u>GB-95</u>     |
| 2) Direction of survey: <u>S W</u>    | Cores No. (s) <u>C-1</u>        |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-91</u>       |                      |
| 4) Length of roadway: <u>3000'</u>    | 5) Width of roadway: <u>23'</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                 |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>           | 9) Drainage <u>N</u> |
| # of Sides <u></u>                    | # of Sides <u></u>              | # of Sides <u>2</u>  |

### Type of Distress

|                   | Edge    | Rutting   | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|---------|-----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u></u> | <u>M</u>  | <u></u>   | <u></u>  | <u>S</u>  | <u></u>    | <u>M</u>     | <u></u>  |
| 11) Extent        | <u></u> | <u>L</u>  | <u></u>   | <u></u>  | <u>L</u>  | <u></u>    | <u>I</u>     | <u></u>  |
| 12) Cracks Sealed | <u></u> | <u>No</u> | <u></u>   | <u></u>  | <u></u>   | <u></u>    | <u></u>      | <u></u>  |
| 13) Ride Quality  | <u></u> | <u>M</u>  | <u></u>   | <u></u>  | <u></u>   | <u></u>    | <u></u>      | <u></u>  |

Comments:

### Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch  or  |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch    |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

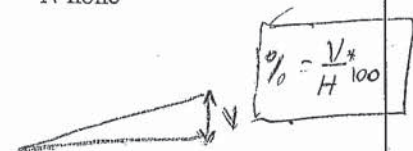


FIGURE E-6



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

# Pavement Condition Survey

Job No. 1140260901

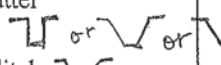
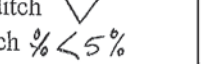

|                                       |                                 |                      |
|---------------------------------------|---------------------------------|----------------------|
| 1) Roadway: <u>County Rd 30</u>       | from: <u>GB-85</u>              | to: <u>GB-91</u>     |
| 2) Direction of survey: <u>W</u>      | Cores No. (s)                   | <u>C-2</u>           |
| 3) Type of surface material: <u>R</u> | Location (s)                    | <u>GB-87</u>         |
| 4) Length of roadway: <u>6300'</u>    | 5) Width of roadway: <u>23'</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                 |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>           | 9) Drainage <u>L</u> |
| # of Sides                            | # of Sides                      | # of Sides <u>1</u>  |

## Type of Distress

|                   | Edge | Rutting  | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|------|----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      |      | <u>M</u> |           |          | <u>E</u>  |            | <u>M</u>     | <u>M</u> |
| 11) Extent        |      | <u>I</u> |           |          | <u>L</u>  |            | <u>P</u>     | <u>L</u> |
| 12) Cracks Sealed |      |          |           |          |           |            |              |          |
| 13) Ride Quality  |      | <u>M</u> |           |          |           |            |              |          |

Comments:

## Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch  or  |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch    |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

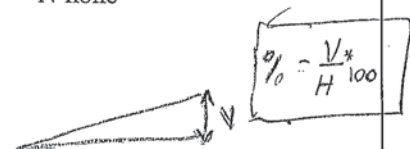


FIGURE E-7



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

### Pavement Condition Survey

Job No. 1140260901

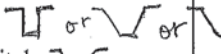
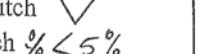
|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>Sim's Rd.</u>          | from: <u>GB-80</u>             | to: <u>GB+85</u>     |
| 2) Direction of survey: <u>W</u>      | Cores No. (s) <u>C-3</u>       |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-83</u>      |                      |
| 4) Length of roadway: <u>5000'</u>    | 5) Width of roadway: <u>23</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>V</u> |
| # of Sides <u></u>                    | # of Sides <u></u>             | # of Sides <u>2</u>  |

### Type of Distress

|                   | Edge | Rutting     | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|------|-------------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      |      | <u>M</u>    | <u>E</u>  |          | <u>M</u>  |            | <u>E</u>     |          |
| 11) Extent        |      | <u>I</u>    | <u>I</u>  |          | <u>I</u>  |            | <u>P</u>     |          |
| 12) Cracks Sealed |      | <u>Yes</u>  |           |          |           |            |              |          |
| 13) Ride Quality  |      | <u>Poor</u> |           |          |           |            |              |          |

Comments: \_\_\_\_\_

### Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

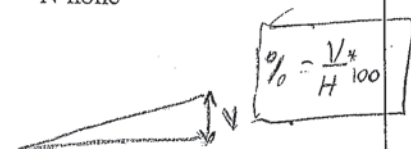


FIGURE E-8



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

# Pavement Condition Survey

Job No. 1140260901

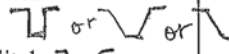
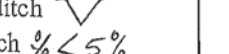
|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>Sims Rd.</u>           | from: <u>GB-78</u>             | to: <u>GB-80</u>     |
| 2) Direction of survey: <u>N</u>      | Cores No. (s)                  | <u>C-4</u>           |
| 3) Type of surface material: <u>R</u> | Location (s)                   | <u>GB-79</u>         |
| 4) Length of roadway: <u>2000'</u>    | 5) Width of roadway: <u>23</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>L</u> |
| # of Sides                            | # of Sides                     | # of Sides <u>2</u>  |

## Type of Distress

|                   | Edge | Rutting   | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|------|-----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      |      | <u>M</u>  |           |          | <u>M</u>  |            | <u>M</u>     | <u>M</u> |
| 11) Extent        |      | <u>L</u>  |           |          | <u>I</u>  |            | <u>P</u>     | <u>L</u> |
| 12) Cracks Sealed |      | <u>No</u> |           |          |           |            |              |          |
| 13) Ride Quality  |      | <u>M</u>  |           |          |           |            |              |          |

Comments:

## Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

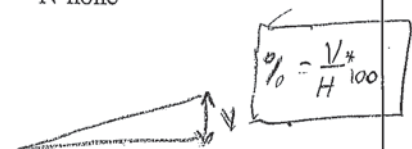


FIGURE E-9





GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

## Pavement Condition Survey

Job No. 1140260901

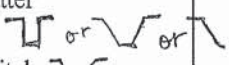
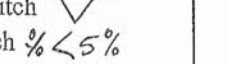

|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>County Rd 34</u>       | from: <u>GB-35</u>             | to: <u>GB-38</u>     |
| 2) Direction of survey: <u>S</u>      | Cores No. (s) <u>C-15</u>      |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-38</u>      |                      |
| 4) Length of roadway: <u>3600'</u>    | 5) Width of roadway: <u>20</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>U</u> |
| # of Sides <u></u>                    | # of Sides <u></u>             | # of Sides <u>2</u>  |

### Type of Distress

|                   | Edge    | Rutting   | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|---------|-----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u></u> | <u>M</u>  | <u></u>   | <u></u>  | <u>M</u>  | <u></u>    | <u>M</u>     | <u></u>  |
| 11) Extent        | <u></u> | <u>I</u>  | <u></u>   | <u></u>  | <u>I</u>  | <u></u>    | <u>P</u>     | <u></u>  |
| 12) Cracks Sealed | <u></u> | <u>No</u> | <u></u>   | <u></u>  | <u></u>   | <u></u>    | <u></u>      | <u></u>  |
| 13) Ride Quality  | <u></u> | <u>M</u>  | <u></u>   | <u></u>  | <u></u>   | <u></u>    | <u></u>      | <u></u>  |

Comments:

### Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch  or  |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch    |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

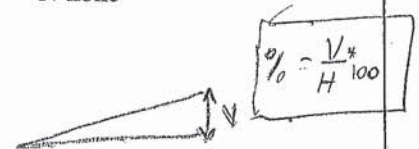


FIGURE E-10





GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

### Pavement Condition Survey

Job No. 1140260901

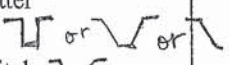
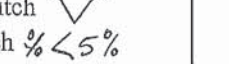

|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>County Rd 34</u>       | from: <u>GB-38</u>             | to: <u>GB-42</u>     |
| 2) Direction of survey: <u>* W</u>    | Cores No. (s) <u>C-14</u>      |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-42</u>      |                      |
| 4) Length of roadway: <u>4800'</u>    | 5) Width of roadway: <u>20</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>U</u> |
| # of Sides                            | # of Sides                     | # of Sides <u>2</u>  |

### Type of Distress

|                   | Edge | Rutting    | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|------|------------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      |      | <u>M</u>   |           |          | <u>M</u>  |            | <u>E</u>     |          |
| 11) Extent        |      | <u>I</u>   |           |          | <u>I</u>  |            | <u>P</u>     |          |
| 12) Cracks Sealed |      | <u>Yes</u> |           |          |           |            |              |          |
| 13) Ride Quality  |      | <u>M</u>   |           |          |           |            |              |          |

Comments:

### Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch  or  |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch    |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

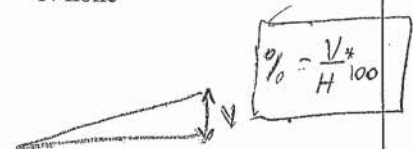


FIGURE E-11



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

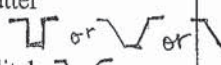

## Pavement Condition Survey

Job No. 1140260901

|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>County Rd 34</u>       | from: <u>GB-42</u>             | to: <u>GB-46</u>     |
| 2) Direction of survey: <u>W</u>      | Cores No. (s) <u>C-13</u>      |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-46</u>      |                      |
| 4) Length of roadway: <u>4800'</u>    | 5) Width of roadway: <u>20</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>L</u> |
| # of Sides                            | # of Sides                     | # of Sides <u>2</u>  |

|                   | Edge | Rutting     | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|------|-------------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      |      | <u>M</u>    |           |          | <u>M</u>  |            | <u>E</u>     | <u>M</u> |
| 11) Extent        |      | <u>P</u>    |           |          | <u>I</u>  |            | <u>P</u>     | <u>L</u> |
| 12) Cracks Sealed |      | <u>Yes.</u> |           |          |           |            |              |          |
| 13) Ride Quality  |      | <u>P</u>    |           |          |           |            |              |          |

Comments:

| Descriptions           |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

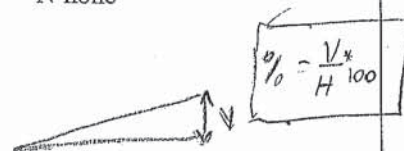


FIGURE E-12



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

### Pavement Condition Survey

Job No. 1140260901

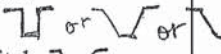
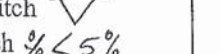
|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>County Rd 34</u>       | from: <u>GB-46</u>             | to: <u>GB-50</u>     |
| 2) Direction of survey: <u>S</u>      | Cores No. (s) <u>C-12</u>      |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-50</u>      |                      |
| 4) Length of roadway: <u>4700'</u>    | 5) Width of roadway: <u>20</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>L</u> |
| # of Sides <u></u>                    | # of Sides <u></u>             | # of Sides <u>2</u>  |

### Type of Distress

|                   | Edge | Rutting   | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|------|-----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      |      | <u>M.</u> |           |          | <u>S</u>  |            | <u>M</u>     |          |
| 11) Extent        |      | <u>L.</u> |           |          | <u>L</u>  |            | <u>P</u>     |          |
| 12) Cracks Sealed |      | <u>No</u> |           |          |           |            |              |          |
| 13) Ride Quality  |      | <u>M.</u> |           |          |           |            |              |          |

Comments: \_\_\_\_\_

### Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

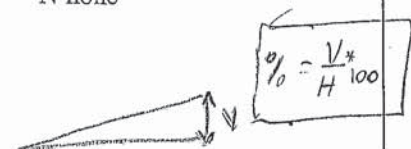


FIGURE E-13





GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

## Pavement Condition Survey

Job No. 1140260901

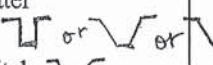

|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>County Rd 34</u>       | from: <u>GB-50</u>             | to: <u>GB-53</u>     |
| 2) Direction of survey: <u>S</u>      | Cores No. (s) <u>C-12</u>      |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-50</u>      |                      |
| 4) Length of roadway: <u>3500'</u>    | 5) Width of roadway: <u>20</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>U</u> |
| # of Sides <u></u>                    | # of Sides <u></u>             | # of Sides <u>2</u>  |

### Type of Distress

|                   | Edge    | Rutting   | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|---------|-----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u></u> | <u>M</u>  | <u></u>   | <u></u>  | <u>M</u>  | <u></u>    | <u>M</u>     | <u>M</u> |
| 11) Extent        | <u></u> | <u>I</u>  | <u></u>   | <u></u>  | <u>I</u>  | <u></u>    | <u>I</u>     | <u>L</u> |
| 12) Cracks Sealed |         | <u>No</u> |           |          |           |            |              |          |
| 13) Ride Quality  |         | <u>M</u>  |           |          |           |            |              |          |

Comments:

### Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

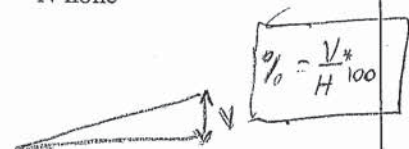


FIGURE E-14



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

### Pavement Condition Survey

Job No. 1140260901

|                                       |                                 |                      |
|---------------------------------------|---------------------------------|----------------------|
| 1) Roadway: <u>County Rd 36 A</u>     | from: <u>GB-16</u>              | to: <u>GB-34</u>     |
| 2) Direction of survey: <u>S</u>      | Cores No. (s) <u>C-20</u>       |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-34</u>       |                      |
| 4) Length of roadway: <u>1400'</u>    | 5) Width of roadway: <u>18'</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                 |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>           | 9) Drainage <u>L</u> |
| # of Sides                            | # of Sides                      | # of Sides <u>2</u>  |

### Type of Distress

|                   | Edge     | Rutting     | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|----------|-------------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u>M</u> | <u>S</u>    |           |          |           |            | <u>M</u>     |          |
| 11) Extent        | <u>I</u> | <u>I</u>    |           |          |           |            | <u>P</u>     |          |
| 12) Cracks Sealed |          | <u>None</u> |           |          |           |            |              |          |
| 13) Ride Quality  |          |             |           |          |           |            |              |          |

Comments: Longitudinal distress along edges of the road.

### Descriptions

|                        |                             |                  |              |                   |
|------------------------|-----------------------------|------------------|--------------|-------------------|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage       |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch   |
|                        | O-other                     | N-none           |              | O-other           |
|                        |                             |                  |              | N-none            |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |                   |
| S-slight               | L-localized                 | G-good           |              |                   |
| M-moderate             | I-intermittent              | M-marginal       |              |                   |
| E-extreme              | P-prevalent                 | P-poor           |              |                   |

FIGURE E-15



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

### Pavement Condition Survey

Job No. 1140260901

|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>County Rd 36</u>       | from: <u>GB-16</u>             | to: <u>GB-20</u>     |
| 2) Direction of survey: <u>E W</u>    | Cores No. (s) <u>C-19</u>      |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>CB-16</u>      |                      |
| 4) Length of roadway: <u>4400</u>     | 5) Width of roadway: <u>30</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>L</u> |
| # of Sides                            | # of Sides                     | # of Sides <u>2</u>  |

### Type of Distress

|                   | Edge     | Rutting   | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|----------|-----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u>E</u> | <u>E</u>  |           |          | <u>E</u>  |            | <u>E</u>     |          |
| 11) Extent        | <u>I</u> | <u>I</u>  |           |          | <u>P</u>  |            | <u>P</u>     |          |
| 12) Cracks Sealed |          | <u>No</u> |           |          |           |            |              |          |
| 13) Ride Quality  |          | <u>P</u>  |           |          |           |            |              |          |

Comments: Most of the distress are located Between GB-16 & GB-19  
the poor ride quality is between GB-16 & GB-18 where most of the rutting  
distress is located.

### Descriptions

|                        |                             |                  |              |                   |
|------------------------|-----------------------------|------------------|--------------|-------------------|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage       |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch   |
|                        | O-other                     | N-none           |              | O-other           |
|                        |                             |                  |              | N-none            |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |                   |
| S-slight               | L-localized                 | G-good           |              |                   |
| M-moderate             | I-intermittent              | M-marginal       |              |                   |
| E-extreme              | P-prevalent                 | P-poor           |              |                   |



GEOTEST ENGINEERING, INC.  
5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

### Pavement Condition Survey

Job No. 1140260901

|                                       |                                     |   |
|---------------------------------------|-------------------------------------|---|
| 1) Roadway: <u>County Rd 36</u>       | from: <u>GB-20</u>                  | to: <u>GB-24</u>                            |
| 2) Direction of survey: <u>W</u>      | Cores No. (s) <u>C-18</u>           |   |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-20</u>           |   |
| 4) Length of roadway: <u>4400</u>     | 5) Width of roadway: <u>20</u>      |   |
| 6) No. of lanes: <u>2</u>             |                                     |   |
| 7) Shoulders <u>N</u><br># of Sides   | 8) Sidewalks <u>N</u><br># of Sides | 9) Drainage <u>L</u><br># of Sides <u>2</u> |

| Type of Distress  |             |           |          |           |            |              |          |
|-------------------|-------------|-----------|----------|-----------|------------|--------------|----------|
| Edge              | Rutting     | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
| 10) Severity      | <u>S</u>    |           |          | <u>M</u>  |            | <u>S</u>     |          |
| 11) Extent        | <u>I</u>    |           |          | <u>I</u>  |            | <u>P</u>     |          |
| 12) Cracks Sealed | <u>None</u> |           |          |           |            |              |          |
| 13) Ride Quality  | <u>M</u>    |           |          |           |            |              |          |

Comments: Rutting distress located along alligator distress  
Extreme Longitudinal distress between GB-21 & GB-22.

| Descriptions           |                             |                  |              |                   |
|------------------------|-----------------------------|------------------|--------------|-------------------|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage       |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch   |
|                        | O-other                     | N-none           |              | O-other           |
|                        |                             |                  |              | N-none            |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |                   |
| S-slight               | L-localized                 | G-good           |              |                   |
| M-moderate             | I-intermittent              | M-marginal       |              |                   |
| E-extreme              | P-prevalent                 | P-poor           |              |                   |

FIGURE E-17



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

### Pavement Condition Survey

Job No. 1140260901

|                                       |                                 |                      |
|---------------------------------------|---------------------------------|----------------------|
| 1) Roadway: <u>County Rd 36</u>       | from: <u>GB-24</u>              | to: <u>GB-29</u>     |
| 2) Direction of survey: <u>W</u>      | Cores No. (s) <u>C-17</u>       |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-24</u>       |                      |
| 4) Length of roadway: <u>4400 ft.</u> | 5) Width of roadway: <u>20'</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                 |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>           | 9) Drainage <u>L</u> |
| # of Sides                            | # of Sides                      | # of Sides <u>2</u>  |

### Type of Distress

|                   | Edge     | Rutting    | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|----------|------------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u>E</u> | <u>M</u>   |           |          | <u>M</u>  |            | <u>E</u>     | <u>E</u> |
| 11) Extent        | <u>L</u> | <u>L</u>   |           |          | <u>L</u>  |            | <u>I</u>     | <u>I</u> |
| 12) Cracks Sealed |          | <u>Yes</u> |           |          |           |            |              |          |
| 13) Ride Quality  |          | <u>M</u>   |           |          |           |            |              |          |

Comments: Longitudinal distress along edges of the road.

### Descriptions

|                        |                             |                  |              |                   |
|------------------------|-----------------------------|------------------|--------------|-------------------|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage       |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch   |
|                        | O-other                     | N-none           |              | O-other           |
|                        |                             |                  |              | N-none            |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |                   |
| S-slight               | L-localized                 | G-good           |              |                   |
| M-moderate             | I-intermittent              | M-marginal       |              |                   |
| E-extreme              | P-prevalent                 | P-poor           |              |                   |

FIGURE E-18





GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

# Pavement Condition Survey

Job No. 1140260901

|                                       |                                 |                      |
|---------------------------------------|---------------------------------|----------------------|
| 1) Roadway: <u>County Rd 36</u>       | from: <u>GB-29</u>              | to: <u>GB-33</u>     |
| 2) Direction of survey: <u>W</u>      | Cores No. (s) <u>C-16</u>       |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-29</u>       |                      |
| 4) Length of roadway: <u>4400 ft.</u> | 5) Width of roadway: <u>20'</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                 |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>           | 9) Drainage <u>L</u> |
| # of Sides                            | # of Sides                      | # of Sides <u>2</u>  |

## Type of Distress

|                   | Edge | Rutting    | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|------|------------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      |      | <u>M</u>   |           |          |           | <u>S</u>   | <u>E</u>     | <u>E</u> |
| 11) Extent        |      | <u>I</u>   |           |          |           | <u>L</u>   | <u>I</u>     | <u>L</u> |
| 12) Cracks Sealed |      | <u>Yes</u> |           |          |           |            |              |          |
| 13) Ride Quality  |      | <u>M.</u>  |           |          |           |            |              |          |

Comments: Rutting distress alongside Longitudinal distress

## Descriptions

|                        |                             |                  |              |                   |
|------------------------|-----------------------------|------------------|--------------|-------------------|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage       |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch   |
|                        | O-other                     | N-none           |              | O-other           |
|                        |                             |                  |              | N-none            |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |                   |
| S-slight               | L-localized                 | G-good           |              |                   |
| M-moderate             | I-intermittent              | M-marginal       |              |                   |
| E-extreme              | P-prevalent                 | P-poor           |              |                   |

FIGURE E-19



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

### Pavement Condition Survey

Job No. 1140260901

|   |   |   |
|---|---|---|
| 1) Roadway: <u>County Rd 85</u>                   | from: <u>GB-1</u>                                 | to: <u>GB-4</u>                             |
| 2) Direction of survey: <u>S</u>                  | Cores No. (s) <u>C-81</u>                         |   |
| 3) Type of surface material: <u>R</u>             | Location (s) <u>Brazoria</u>                      |   |
| 4) Length of roadway: <u>3500ft</u>               | 5) Width of roadway: <u>22'</u>                   |   |
| 6) No. of lanes: <u>2</u>                         |   |   |
| 7) Shoulders <u>N</u><br># of Sides <u>      </u> | 8) Sidewalks <u>N</u><br># of Sides <u>      </u> | 9) Drainage <u>U</u><br># of Sides <u>2</u> |

### Type of Distress

|                   | Edge     | Rutting    | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|----------|------------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u>M</u> |            | <u>E</u>  |          | <u>M</u>  |            | <u>M</u>     |          |
| 11) Extent        | <u>I</u> |            | <u>L</u>  |          | <u>L</u>  |            | <u>I</u>     |          |
| 12) Cracks Sealed |          | <u>Yes</u> |           |          |           |            |              |          |
| 13) Ride Quality  |          | <u>M.</u>  |           |          |           |            |              |          |

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Descriptions

|                        |                             |                  |              |                   |
|------------------------|-----------------------------|------------------|--------------|-------------------|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage       |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch   |
|                        | O-other                     | N-none           |              | O-other           |
|                        |                             |                  |              | N-none            |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |                   |
| S-slight               | L-localized                 | G-good           |              |                   |
| M-moderate             | I-intermittent              | M-marginal       |              |                   |
| E-extreme              | P-prevalent                 | P-poor           |              |                   |

FIGURE E-20



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

## Pavement Condition Survey

Job No. 1140260901

|                                       |                       |                 |
|---------------------------------------|-----------------------|-----------------|
| 1) Roadway: <u>County Rd 85</u>       | from: <u>GB-4</u>     | to: <u>GB-7</u> |
| 2) Direction of survey: <u>S</u>      | Cores No. (s)         | <u>C-22</u>     |
| 3) Type of surface material: <u>R</u> | Location (s)          |                 |
| 4) Length of roadway: <u>3500 ft.</u> | 5) Width of roadway:  |                 |
| 6) No. of lanes: <u>2</u>             |                       |                 |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u> | 9) Drainage     |
| # of Sides                            | # of Sides            | # of Sides      |

### Type of Distress

|                   | Edge     | Rutting    | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|----------|------------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u>S</u> |            |           |          |           |            | <u>S</u>     |          |
| 11) Extent        | <u>L</u> |            |           |          |           |            | <u>I</u>     |          |
| 12) Cracks Sealed |          | <u>Yes</u> |           |          |           |            |              |          |
| 13) Ride Quality  |          | <u>G</u>   |           |          |           |            |              |          |

Comments: \_\_\_\_\_

### Descriptions

|                        |                             |                  |              |                   |
|------------------------|-----------------------------|------------------|--------------|-------------------|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage       |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch   |
|                        | O-other                     | N-none           |              | O-other           |
|                        |                             |                  |              | N-none            |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |                   |
| S-slight               | L-localized                 | G-good           |              |                   |
| M-moderate             | I-intermittent              | M-marginal       |              |                   |
| E-extreme              | P-prevalent                 | P-poor           |              |                   |

FIGURE E-21



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

## Pavement Condition Survey

Job No. 1140260901

|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>County Rd 25</u>       | from: <u>GB-7</u>              | to: <u>GB-10</u>     |
| 2) Direction of survey: <u>S</u>      | Cores No. (s) <u>C-23</u>      |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-10</u>      |                      |
| 4) Length of roadway: <u>3500 ft</u>  | 5) Width of roadway: <u>22</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>U</u> |
| # of Sides <u></u>                    | # of Sides <u></u>             | # of Sides <u>2</u>  |

### Type of Distress

|                   | Edge     | Rutting    | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|----------|------------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u>S</u> |            |           |          |           |            | <u>M</u>     |          |
| 11) Extent        | <u>L</u> |            |           |          |           |            | <u>I</u>     |          |
| 12) Cracks Sealed |          | <u>Yes</u> |           |          |           |            |              |          |
| 13) Ride Quality  |          | <u>G</u>   |           |          |           |            |              |          |

Comments: \_\_\_\_\_

### Descriptions

|                        |                             |                  |              |                   |
|------------------------|-----------------------------|------------------|--------------|-------------------|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage       |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch   |
|                        | O-other                     | N-none           |              | O-other           |
|                        |                             |                  |              | N-none            |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |                   |
| S-slight               | L-localized                 | G-good           |              |                   |
| M-moderate             | I-intermittent              | M-marginal       |              |                   |
| E-extreme              | P-prevalent                 | P-poor           |              |                   |

FIGURE E-22





GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

## Pavement Condition Survey

Job No. 1140260901

|                                       |                                |                      |
|---------------------------------------|--------------------------------|----------------------|
| 1) Roadway: <u>County Rd 85</u>       | from: <u>GB-10</u>             | to: <u>GB-14</u>     |
| 2) Direction of survey: <u>S</u>      | Cores No. (s)                  | <u>C-24</u>          |
| 3) Type of surface material: <u>R</u> | Location (s)                   | <u>GB-14</u>         |
| 4) Length of roadway: <u>1200ft.</u>  | 5) Width of roadway: <u>22</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>          | 9) Drainage <u>U</u> |
| # of Sides                            | # of Sides                     | # of Sides <u>2</u>  |

### Type of Distress

|                   | Edge     | Rutting    | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|----------|------------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      | <u>M</u> |            |           |          |           | <u>M</u>   | <u>M</u>     |          |
| 11) Extent        | <u>L</u> |            |           |          |           | <u>I</u>   | <u>I</u>     |          |
| 12) Cracks Sealed |          | <u>Yes</u> |           |          |           |            |              |          |
| 13) Ride Quality  |          | <u>G</u>   |           |          |           |            |              |          |

Comments: \_\_\_\_\_

### Descriptions

|                        |                             |                  |              |                   |
|------------------------|-----------------------------|------------------|--------------|-------------------|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage       |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch     |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch  |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch   |
|                        | O-other                     | N-none           |              | O-other           |
|                        |                             |                  |              | N-none            |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |                   |
| S-slight               | L-localized                 | G-good           |              |                   |
| M-moderate             | I-intermittent              | M-marginal       |              |                   |
| E-extreme              | P-prevalent                 | P-poor           |              |                   |

FIGURE E-23



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

# Pavement Condition Survey

Job No. 1140260901

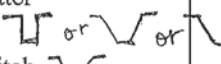
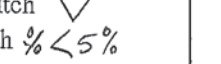

|                                       |                                 |                      |
|---------------------------------------|---------------------------------|----------------------|
| 1) Roadway: <u>County Rd 30</u>       | from: <u>GB-74</u>              | to: <u>GB-77</u>     |
| 2) Direction of survey: <u>W</u>      | Cores No. (s) <u>C-11</u>       |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-76</u>       |                      |
| 4) Length of roadway: <u>3600'</u>    | 5) Width of roadway: <u>20'</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                 |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>           | 9) Drainage <u>U</u> |
| # of Sides <u></u>                    | # of Sides <u></u>              | # of Sides <u>2</u>  |

## Type of Distress

|                   | Edge | Rutting   | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|------|-----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      |      | <u>M</u>  |           |          | <u>E</u>  |            | <u>M</u>     | <u>E</u> |
| 11) Extent        |      | <u>I</u>  |           |          | <u>I</u>  |            | <u>P</u>     | <u>I</u> |
| 12) Cracks Sealed |      | <u>No</u> |           |          |           |            |              |          |
| 13) Ride Quality  |      | <u>M.</u> |           |          |           |            |              |          |

Comments: \_\_\_\_\_

## Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch  or  |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch    |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

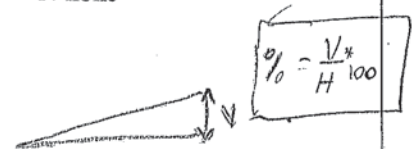


FIGURE E-24



GEOTEST ENGINEERING, INC.

5600 Bintliff Drive Houston, Texas 77036 Tel. (713) 266-0588

# Pavement Condition Survey

Job No. 1140260901

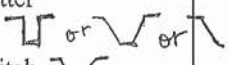
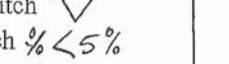

|                                       |                                 |                      |
|---------------------------------------|---------------------------------|----------------------|
| 1) Roadway: <u>County Rd 30</u>       | from: <u>GB-72</u>              | to: <u>GB-74</u>     |
| 2) Direction of survey: <u>W</u>      | Cores No. (s) <u>C-10</u>       |                      |
| 3) Type of surface material: <u>R</u> | Location (s) <u>GB-73</u>       |                      |
| 4) Length of roadway: <u>2300'</u>    | 5) Width of roadway: <u>21'</u> |                      |
| 6) No. of lanes: <u>2</u>             |                                 |                      |
| 7) Shoulders <u>N</u>                 | 8) Sidewalks <u>N</u>           | 9) Drainage <u>L</u> |
| # of Sides                            | # of Sides                      | # of Sides <u>2</u>  |

## Type of Distress

|                   | Edge | Rutting  | Ravelling | Bleeding | Alligator | Transverse | Longitudinal | Patching |
|-------------------|------|----------|-----------|----------|-----------|------------|--------------|----------|
| 10) Severity      |      | <u>M</u> | <u>E</u>  |          | <u>E</u>  |            | <u>E</u>     | <u>E</u> |
| 11) Extent        |      | <u>P</u> | <u>L</u>  |          | <u>I</u>  |            | <u>P</u>     | <u>P</u> |
| 12) Cracks Sealed |      | <u>N</u> |           |          |           |            |              |          |
| 13) Ride Quality  |      | <u>M</u> |           |          |           |            |              |          |

Comments:

## Descriptions

|                        |                             |                  |              |  |
|------------------------|-----------------------------|------------------|--------------|--|
| 2) Direction of survey | 3) Type of surface material | 7) Shoulders     | 8) Sidewalks | 9) Drainage  |
| N-north                | F-flexible                  | A-asphalt        | A-abutted    | C-curb and gutter  |
| S-south                | R-rigid                     | C-concrete       | D-detached   | L-lined ditch  or  |
| E-east                 | C-composite                 | G-gravel         | O-other      | V-V-shaped ditch    |
| W-west                 | G-gravel                    | O-other          | N-none       | U-unlined ditch $\% < 5\%$   |
|                        | O-other                     | N-none           |              | O-other  |
|                        |                             |                  |              | N-none   |
| 10) Severity           | 11) Extent                  | 13) Ride Quality |              |  |
| S-slight               | L-localized                 | G-good           |              |  |
| M-moderate             | I-intermittent              | M-marginal       |              |  |
| E-extreme              | P-prevalent                 | P-poor           |              |  |

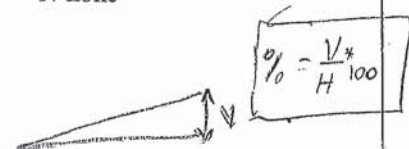


FIGURE E-25





Edge Cracking with patching due to subgrade failure along CR 25 near boring GB-1



Minor Edge Cracking and patching along CR 25 near boring GB-6



Existing roadway and ditch with minor distresses along CR 25 near boring GB-10.



Minor transverse cracks with patching along CR 25 near boring GB-12



Fatigue and Edge Cracking along existing roadway along CR 36 near boring GB-15



Longitudinal cracks on the onset of alligator cracking on the longitudinal joints near GB-17 along CR 36





Moderate to severe edge cracking with pavement settlement near boring GB-19 along CR 36



Minor longitudinal edge cracking with polished aggregate along CR 36 pavement near GB-25



Moderate to severe longitudinal cracking with visible overlay layers near boring GB-28 along CR 36



Deep longitudinal Cracks along the edges of the road with no edge support near GB-30 along CR 36



Only Minor distresses were observed along CR-36A Near boring GB-34



Minor longitudinal cracks and rutting along wheel path near boring GB -35 along CR-34





Transverse crack along CR 34 before the bridge crossing location near boring GB-40



Longitudinal cracks with raveling and visible settlement of pavement along CR 34 near GB-41



Existing roadway and ditch with longitudinal cracks along CR 34 near boring GB-46.



Existing driveway joints did not show any visible joint failures along CR 34 near boring GB-51



Block cracking along CR 611A near GB-54 which is a combination of longitudinal and fatigue cracks.



Minor longitudinal cracks along CR 611A near GB-55 with minor pavement stripping.





Block cracking along CR 611B near boring GB-56



Existing ditch and roadway along CR 611 near boring GB-57 with no to minimal distresses



Longitudinal and fatigue cracks along CR 611 near boring GB-61 with elevated pavement shoulders



Minor distresses with loss of subgrade support along the edges of CR 612 near boring GB-62



Severe alligator cracks and potholes repaired along CR 518 near boring GB-63



Severe polished aggregate with minor bleeding on half width of pavement near GB-64 along CR 518





Minor distresses with pavement settlement with lack of edge support near boring GB-66 along CR 671



Minor joint and edge cracking near driveway intersection along CR 671 pavement near GB-68



Severe alligator cracks and potholes repaired and patched near boring GB-69 along CR 671



Severe fatigue & longitudinal cracks with visible potholes, repair patches near GB-70 along CR 670



Fatigue and joint cracks at overlay sections of pavement along CR-30 near boring GB-72



Longitudinal cracks near overlay section of pavement along CR 30 near boring GB -74

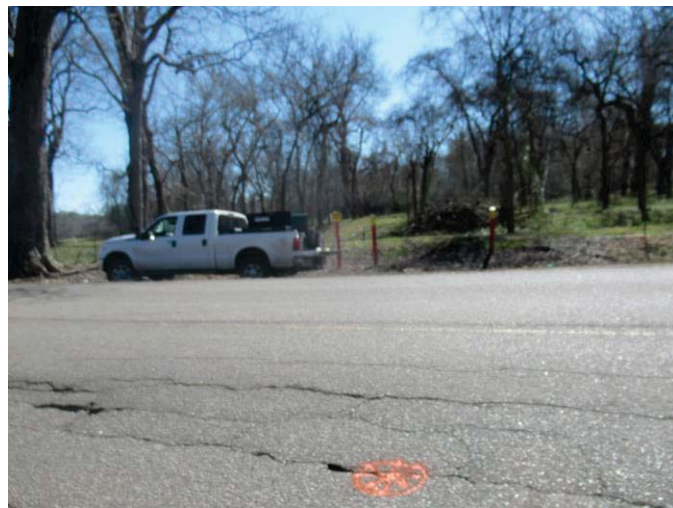




Moderate to severe alligator cracks along CR 30 near boring GB-GB-77A



Longitudinal cracks with rutting along wheel path on the horizontal curvet along CR 30 near GB-80



Severe longitudinal cracks with potholes/slippage along CR 30 near boring GB-84



Severe fatigue and edge cracks due to lack of edge support/subgrade settlement along CR 30 near boring GB-85



Severe longitudinal crack seen near GB-86 along CR 30 causing moisture infiltration & roughness.



Longitudinal and edge cracking along CR 30 near GB-88 with settlement due to loss of subgrade.





Longitudinal cracks on the onset of alligator (fatigue) cracking along CR 30 near boring GB-GB-93



Minor fatigue cracks with edge settlement along CR 30 near boring GB-95

#### PICTURES OF PAVEMENT CORES



Pavement Core C-1 along CR 30



Pavement Core C-2 along CR 30



Pavement Core C-3 along Sims Road



Pavement Core C-4 along Sims Road



PICTURES OF PAVEMENT CORES



Pavement Core C-5 along CR611



Pavement Core C-6 along CR 611A



Pavement Core C-7 along CR 611A



Pavement Core C-8 along CR 518



Pavement Core C-9 along CR 611



Pavement Core C-10 along CR 30



PICTURES OF PAVEMENT CORES



Pavement Core C-11 along CR 30



Pavement Core C-12 along CR 34



Pavement Core C-13 along CR 34



Pavement Core C-14 along CR 34



Pavement Core C-15 along CR 34



Pavement Core C-16 along CR36



PICTURES OF PAVEMENT CORES



Pavement Core C-17 along CR 36



Pavement Core C-18 along CR 36



Pavement Core C-19 along CR 36



Pavement Core C-20 along CR 36A



Pavement Core C-21 along CR 25



Pavement Core C-22 along CR 25



PICTURES OF PAVEMENT CORES



Pavement Core C-23 along CR 25



Pavement Core C-24 along CR 25

|  |   |   |
|--|---|---|
|  |   | activities are not subject to their jurisdiction and that no permit is required.  |
| <b>Wild and Scenic Rivers</b><br><br>Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c) | Yes    No<br><input type="checkbox"/> <input checked="" type="checkbox"/> | Neither Oyster Creek nor Bastrop Bayou are Wild and Scenic Rivers. Project activities would not impact Wild and Scenic Rivers.                |
| <b>ENVIRONMENTAL JUSTICE</b>   |   |   |
| <b>Environmental Justice</b><br><br>Executive Order 12898  | Yes    No<br><input type="checkbox"/> <input checked="" type="checkbox"/> | The proposed project activities are not anticipated to result in disproportionate, adverse effects to minority and/or low-income populations. |

**Field Inspection** (Date and completed by): July 24, 2019 by Jeff Casbeer, RPS

**Summary of Findings and Conclusions:** Both Oyster Creek and Bastrop Bayou were visited on July 24, 2019. Inspections were performed from public access points (roadway crossings) and photographs were taken at each accessible crossing (see attached). No environmental issues were observed.

### **Mitigation Measures and Conditions [40 CFR 1505.2(c)]**

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

| Law, Authority, or Factor       | Mitigation Measure  |
|---------------------------------|---|
| Explosive and Flammable Hazards | Barge refueling locations and methods will be designated to prevent fuel and other material spills in the waterways.  |
| Noise Abatement and Control     | Provisions will be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls. |

### **Determination:**

- ☐ This categorically excluded activity/project converts to **EXEMPT** per Section 58.34(a)(12), because it does not require any mitigation for compliance with any listed statutes or authorities, nor requires any formal permit or license; **Funds may be committed and drawn down after certification of this part** for this (now) EXEMPT project; OR

**BRAZORIA COUNTY ENGINEERING DEPARTMENT  
BRAZORIA COUNTY, TEXAS  
CONSTRUCTION PLANS FOR  
BRAZORIA COUNTY ROAD AND DRAINAGE  
IMPROVEMENTS FOR CDBG  
SET III  
CR 30 N (LMI)**

**JAY BURRIDGE**

**COMMISSIONER**

PRECINCT 1

**COMMISSIONERS COURT**

**STACY L. ADAMS**

**COMMISSIONER**

PRECINCT 3

**L.M. "MATT" SEBESTA, JR.**

**COUNTY JUDGE**

**RYAN CADE**

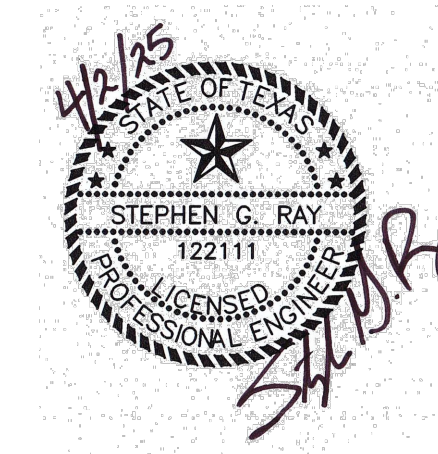
**COMMISSIONER**

PRECINCT 2

DAVID LINDER


**COMMISSIONER**

PRECINCT 4



## BRAZORIA COUNTY ENGINEERING

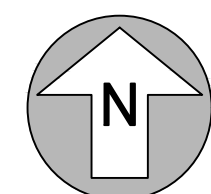



**Cobb Engineering**  
 TBPELS Engineering Firm No. 274  
 Land Surveying Firm No. 10046700  
 4424 W SAM HOUSTON PARKWAY N, SUITE 600  
 Houston, Texas 77041  
 713.462.3242 | fax 713.462.3262  
[www.cobbfendley.com](http://www.cobbfendley.com)

**APRIL 2025**

**MATT HANKS, J.D., P.E.**  
**COUNTY ENGINEER**

DATE \_\_\_\_\_




0                      10000'                      20000'

SCALE: 1" = 10000'

VICINITY MAP



| SHEET NO. | SHEET INDEX  |
|-----------|--|
| 1         | COVER  |
| 2         | SHEET INDEX  |
| 3         | GENERAL NOTES  |
| 4         | OVERALL PROJECT MAP                                    |
| 5         | BORE LAYOUT  |
| 6         | CR 30 N STA 0+00 TO STA 48+00                          |
| 7         | CR 30N STA 48+00 TO STA 98+00                          |
| 8         | CR 30N STA 98+00 TO STA 151+00                         |
| 9         | CR 30N STA 151+00 TO STA 167+79                        |
| 10        | TRAFFIC CONTROL PLAN                                   |
| 11        | PAVEMENT MARKING LAYOUT                                |
| 12        | POTENTIAL MAILBOX CONFLICTS                            |
| 13        | DRIVEWAY DETAIL  |
| 14        | TCP 2-2 ONE-LANE TWO-WAY TRAFFIC CONTROL               |
| 15        | TCP 7-1 DETAILS FOR SURFACING OPERATIONS               |
| 16        | BC(1)-21 GENERAL NOTES                                 |
| 17        | BC(2)-21 PROJECT LIMIT                                 |
| 18        | BC(3)-21 WORK ZONE SPEED LIMIT                         |
| 19        | BC(4)-21 TEMPORARY SIGN NOTES                          |
| 20        | BC(5)-21 TYPICAL SIGN SUPPORT                          |
| 21        | BC(6)-21 PCMS  |
| 22        | BC(7)-21 ARROW PANEL ETC                               |
| 23        | BC(8)-21 CHANNELIZING DEVICES                          |
| 24        | BC(9)-21 CHANNELIZING DEVICES                          |
| 25        | BC(10)-21 CHANNELIZING DEVICES                         |
| 26        | BC(11)-21 PAVEMENT MARKING                             |
| 27        | BC(12)-21 PAVEMENT MARKING                             |
| 28        | FGA-15 FLOOD GAUGE ASSEMBLY                            |
| 29        | MBP(1)-22 MAILBOX SIDE ROAD PLACEMENT AND TURNOUTS     |
| 30        | MB(1)-21 MAILBOX MOUNTING AND ASSEMBLY                 |
| 31        | MB(2)-21 XL AND LOCABLE ARCHITECTURAL MAILBOX ASSEMBLY |
| 32        | MB(3)-21 MAILBOX SUPPORT AND FOUNDATION                |
| 33        | MB(4)-21 NIGP PARTS LIST AND COMPATIBILITY             |
| 34        | TE(HMAC)-11  |
| 35        | PM(1)-22   |

| NO.   | DATE | REVISIONS          |
|---|------|--------------------|
|   |      |                    |
|   |      |                    |
|   |      |                    |
| <div><div><div>42/25</div><div></div></div><div><div><div><div>CobbFendley</div><div>TBPELS Engineering Firm No. F-274</div><div>Land Surveying Firm No. 10046700</div><div>4424 W South Houston Parkway N, Suite 600</div><div>Houston, Texas 77041</div><div>713.462.3242   fax 713.462.3262</div><div>www.cobbfendley.com</div></div></div></div></div> |      |                    |
| BRAZORIA COUNTY ENGINEERING   |      |                    |
| BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG SET III   |      |                    |
| SHEET INDEX   |      |                    |
| SUBMITTED: 4/2/2025   |      | DESIGNED BY: SGR   |
| SCALE: N/A  |      | DRAWN BY: JS       |
| DATE: 4/2/2025  |      | SHEET No.: 2 OF 35 |
| SURVEY BY: CFA  |      | DWG. No:           |
| F B No.: -  |      |                    |

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CONSTRUCTION NOTES:

- REMOVE GRASS AND DIRT ALONG BOTH EXISTING EDGES OF PAVEMENT NECESSARY TO ESTABLISH A TOTAL CROSS SECTIONAL BASE WIDTH OF PROPOSED PAVEMENT PLUS 18" ON BOTH SIDES OF THE ROAD, UNLESS SHOWN OTHERWISE. (SEE TYPICAL SECTIONS)
2. PULVERIZE 13" DEEP OF EXISTING HMAC/BASE ROADWAY FROM CENTERLINE TO THE EDGE OF EXISTING PAVEMENT.
3. SPREAD MATERIALS FROM EXISTING CENTERLINE TO LANE WIDTH SPECIFIED IN TYPICAL SECTIONS.
  - 3.1. WHERE CONCRETE DRIVEWAYS PREVENT THE PULVERIZATION OF EXISTING ROADWAY, SAWCUT AND REMOVE CONCRETE DRIVEWAY AT PROPOSED ROADWAY WIDTH.
4. ELEVATIONS OF ROAD CENTERLINE SHALL NOT CHANGE, UNLESS SPECIFICALLY INDICATED ON THE PROPOSED ROADWAY SECTION.
5. LIMITS OF PAYMENT FOR HMAC SHALL BE LIMITED TO FINAL WIDTH SHOWN ON CROSS SECTIONS. ADDITIONAL WIDTH TO ACCOMMODATE LANE STRIPING AND TAPERED SAFETY EDGE TO BE CONSTRUCTED BEYOND EDGE OF FINAL SURFACE WIDTH, SHALL BE INCIDENTAL TO PAVEMENT ITEMS USED.
6. MIX CEMENT AND STABILIZE THE BASE DEPTH SHOWN IN TYPICAL SECTIONS, PER GEOTECHNICAL RECOMMENDATIONS.
  - 6.1. CONTRACTOR TO SEAL STABILIZED BASE W/ TRACKLESS TACK COAT.
7. LAY 1.5" HMAC LEVEL COURSE AND 1.5" HMAC SURFACE COURSE AT 3.5" INITIAL TOTAL DEPTH TO ACHIEVE FINAL COMPACTED DEPTH OF 3", TO LANE WIDTH SPECIFIED IN TYPICAL SECTIONS.
  - 7.1. FEATHER DRIVEWAYS FROM EDGE OF ASPHALT TO EXISTING AS NECESSARY, USE OF EXCESS MATERIAL IS ALLOWED FOR DRIVEWAYS.
  - 7.2. DRIVEWAYS WITH EXTREME ELEVATION DIFFERENCE SHALL BE ADDRESSED AS DIRECTED BY THE FIELD ENGINEER.
8. "SHOULDER UP" WITH BLADE USING EXCESS MATERIAL.
9. REPEAT FOR OPPOSITE SIDE OF ROADWAY.
10. STRIPE ROADWAY WITH EDGE AND CENTERLINE STRIPES.
  - 10.1. CONTRACTOR MAY ELECT TO DELAY STRIPING UNTIL ALL PHASES OF WORK ARE COMPLETE. IF THE CONTRACTOR DELAYS STRIPING, THEN THE FOLLOWING CONDITIONS MUST BE MET:
    - 10.1.1. PROJECT SIGNED WITH "NO ROAD STRIPE" SIGNS.
    - 10.1.2. SIGNS SHALL BE CONSIDERED SUBSIDIARY AND SHALL BE PLACED AT NO COST TO THE COUNTY.
    - 10.1.3. SIGNS SHALL BE PLACED WHERE AND IN THE QUANTITY DETERMINED NECESSARY BY THE ENGINEER.
11. CONTRACTOR SHALL ONLY PULVERIZE, TREAT, MIX AND SEAL LIMITS OF BASE THAT CAN BE ASPHALTED WITHIN A REASONABLE TIME. ANY STABILIZED SEGMENTS LEFT UNSEALED (BY TACK COAT OR ASPHALT) OUTSIDE ALLOWABLE TIME WILL BE SUBJECT TO RETESTING AND POSSIBLE REWORK AT THE CONTRACTOR'S EXPENSE.

GENERAL NOTES:

1. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE BEGINNING CONSTRUCTION.
2. THE CONTRACTOR SHALL NOTIFY BRAZORIA COUNTY ENGINEERING DEPARTMENT AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION.
3. THE CONTRACTOR SHALL REMOVE CONSTRUCTION DEBRIS AND SWEEP STREETS/ROADWAYS AT THE CLOSE OF EACH WORKDAY AS DIRECTED BY THE ENGINEER.
4. THE CONTRACTOR SHALL RESTORE THE CONDITION OF THE ROADWAY AND/OR ROW TO EQUAL OR BETTER THAN THE CONDITION PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR STAGING AREA SHALL BE DETERMINED BY THE CONTRACTOR WITH WRITTEN CONCURRENCE BY THE ENGINEER PRIOR TO STARTING CONSTRUCTION.
6. THE CONTRACTOR SHALL NOTIFY ALL PROPERTY OWNERS A MINIMUM OF 24 HOURS PRIOR TO BLOCKING DRIVEWAYS.
7. THE CONTRACTOR SHALL REMOVE AND REPLACE OR RECONSTRUCT EXISTING FENCES, POSTS, PLANTERS, TRASH CONTAINERS, CULVERTS, ETC. PER THE CONTRACT AS NECESSARY TO COMPLETE CONSTRUCTION. ANY ITEM DAMAGED DURING CONSTRUCTION BY THE CONTRACTOR SHALL BE REPLACED WITH EQUAL OR BETTER AT NO CHARGE TO THE COUNTY. TREES, BUSHES, SHRUBBERY, AND OTHER DAMAGED PLANTINGS ARE TO BE REPLACED IN KIND (SIZE AND SPECIES) WITHIN 72 HOURS OF REMOVAL AND TO BE WATERED IN THOROUGHLY. AT NO ADDITIONAL CHARGE TO THE COUNTY.
8. ANY MAILBOXES REQUIRING REMOVAL SHALL BE RELOCATED SO THAT MAIL SERVICE IS NOT INTERRUPTED.
9. THE CONTRACTOR SHALL, PRIOR TO COMMENCING WORK, IDENTIFY ALL MAILBOXES WITHIN 2' OF THE BASE WORK AREA AS IDENTIFIED IN THE MAILBOX CONFLICTS DETAILS (SHEET 12).
  - 9.1. CONTRACTOR SHALL INFORM RESIDENT IN WRITING OF THE NEED TO RELOCATE THE MAILBOX 14 DAYS PRIOR TO CONSTRUCTION.
  - 9.2. THE CONTRACTOR SHALL CAREFULLY MOVE DECORATIVE OR BRICK MAILBOXES OUT OF THE WORK AREA WHEN REQUESTED TO DO SO BY THE RESIDENT/OWNER.
  - 9.3. CONTRACTOR SHALL PROVIDE NEW MAILBOX PER PLANS AND SPECIFICATIONS.
10. PAVED SURFACES, PAVEMENT MARKERS AND MARKINGS SHALL BE PROTECTED FROM DAMAGE BY TRACKED EQUIPMENT.

1. IRON RODS DISTURBED DURING CONSTRUCTION ARE TO BE REPLACED BY A REGISTERED PUBLIC LAND SURVEYOR. THE CONTRACTOR SHALL NOTIFY BRAZORIA COUNTY ENGINEER OF SUCH DISTURBANCE WITHIN 24 HOURS. THE CONTRACTOR SHALL REPLACE THE IRON RODS AT NO COST TO THE COUNTY.
12. CONTRACTOR SHALL PROVIDE CONSTRUCTION STAKING AND SET SITE VERTICAL BENCHMARK & EXISTING ROADWAY SURVEY DATA PRIOR TO COMMENCING ANY WORK FOR TESTING AND INSPECTION. WORK SHALL BE SUBSIDIARY TO PREPARING R.O.W.
13. CLEAN-UP IS REQUIRED FOR THE PROJECT LIMITS AND DURATION REGARDLESS OF THE CONTRACTOR'S SCOPE OF ACTIVITIES WITHIN THE PROJECT.
14. THE REMOVAL OF ANY ABANDONED UTILITIES REQUIRED SHALL BE INCIDENTAL AND NO SEPARATE PAYMENT SHALL BE MADE.
15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO STOCKPILE NECESSARY MATERIALS ON-SITE AT NO ADDITIONAL EXPENSE TO BRAZORIA COUNTY. ALL ROADWAY, AND CHANNEL EXCAVATION, IF SUITABLE, NEEDS TO BE USED BEFORE BORROW IS BROUGHT ON-SITE.
16. ALL EXCESS MATERIALS NOT USED AT PROJECT LOCATIONS SHALL STOCKPILED AT THE APPROVED PROJECT SITE. STOCKPILED MATERIAL SHALL BE CONSIDERED THE PROPERTY OF BRAZORIA COUNTY. CONTRACTOR SHALL CONTACT THE COUNTY FOR MATERIAL PICK UP.
17. ALL WORK SHALL BE COMPLETED IN SUBSTANTIAL CONFORMANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR THE CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES FOR THE BID ITEMS THAT ARE INCLUDED IN THESE PROJECT DOCUMENTS. METHOD OF MEASUREMENT SHALL BE SHOWN IN THE BID DOCUMENTS AND BASIS OF PAYMENT SHALL BE ALL INCLUSIVE FOR ALL WORK REQUIRED TO COMPLETE THE ITEM. WORK PERFORMED THAT IS LISTED TO BE PAID UNDER OTHER BID ITEMS SHALL BE CONSIDERED SUBSIDIARY IF THOSE ITEMS ARE NOT INCLUDED IN THESE BID DOCUMENTS.
18. ASPHALT SAWCUT AT INTERSECTING STREETS AND DRIVEWAYS IS INCIDENTAL TO PREPARING R.O.W.
19. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL PERMITTING REQUIREMENTS.
20. NOTICE OF INTENT AND OTHER REQUIRED ENVIRONMENTAL PERMITS SHALL BE INCIDENTAL TO TXDOT BID ITEM 0506.
21. MITIGATION: ENDANGERED SPECIES – INDUSTRY SPECIFIC MITIGATION MEASURES WILL BE APPLIED TO RETURN THE AREA TO ITS ORIGINAL CONDITION AND PRECAUTIONS TAKEN TO MAINTAIN MINIMAL DISTURBANCE WITHIN THE CONSTRUCTION AREA INCLUDING BEST MANAGEMENT PRACTICES TO PREVENT CONSTRUCTION RUNOFF THROUGH BERMING AND SILT FENCING INSTALLED TO PREVENT UNINTENDED CAPTURE OF ANY SPECIES.
  - 21.1. MITIGATION MEASURES WILL INCLUDE CHECKING SITES FOR NESTS PRIOR TO CONSTRUCTION AVOIDING CONSTRUCTION DISTURBANCE FROM A MINIMUM ZONE OF 100 METERS SURROUNDING ANY RAPTOR NEST FEBRUARY 1 THROUGH JULY 15.
  - 21.2. CLEARING VEGETATED AREAS FOR CONSTRUCTION BETWEEN MARCH TO AUGUST WILL INCLUDE ANEXAMINATION PRIOR TO CONSTRUCTION TO ENSURE THAT NO NESTS WITH EGGS OR YOUNG WILL BE DISTURBED BY CONSTRUCTION.
  - 21.3. IF ANY NESTS ARE DISCOVERED IN VEGETATION OR BARE GROUND WITHIN AT LEAST 25 FEET OF OCCUPIED NESTS AVOID DISTURBANCE UNTIL THE EGGS HAVE HATCHED AND THE YOUNG HAVE FLEDGED.
  - 21.4. OPEN TRENCHES WILL BE MONITORED AND COVERED AFTER HOURS AND ANY SPECIES FOUND WILL BE PROVIDED AVAILABILITY TO LEAVE THE AREA.
  - 21.5. ACCORDING TO ENGINEERING PLANS, SOIL STABILIZATION AND USE OF MATS DURING CONSTRUCTION WILL PREVENT EROSION AND RUNOFF AND/OR REVEGETATION OF DISTURBED AREAS WILL BE HANDLED THROUGH SEED STABILIZATION MATERIALS CONSISTENT WITH AREA RECOMMENDED NATIVE PLANTS AND GRASSES BUT THAT AVOID INVASIVE PLANTS.
- 21.6. EXAMINE SITE PRIOR TO CONSTRUCTION ACTIVITIES FOR MIGRATORY BIRD TREATY ACT (MBTA) COMPLIANCE AND MONITOR DAILY TO PREVENT ACCIDENTAL CAPTURE OF SPECIES ONSITE; IF WILDLIFE IS ENCOUNTERED, STOP CONSTRUCTION TO ALLOW WILDLIFE TO VACATE SITE, IF ACCIDENTAL CAPTURE CONTACT TPWD. CONSTRUCTION WORKERS SHOULD BE AWARE THAT IN ANY EVENT, IF CONSTRUCTION WORKERS IDENTIFY OR ENCOUNTER THREATENED OR ENDANGERED SPECIES DURING CONSTRUCTION, THEY SHOULD CEASE CONSTRUCTION IMMEDIATELY AND CONTACT TEXAS PARKS & WILDLIFE FOR FURTHER DIRECTION.
22. WETLANDS – THRESHOLDS OF IMPACTS WILL BE UNDER APPLICABLE PCNS; HOWEVER, IF PCN WILL BE EXCEEDED, COORDINATION WITH THE USACE WILL OCCUR AND A PROJECT RE-EVALUATION WILL BE CONDUCTED.
23. HISTORIC PRESERVATION – NO HISTORIC PROPERTIES ARE PRESENT OR AFFECTED BY THE PROJECT AS PROPOSED. HOWEVER, IF HISTORIC PROPERTIES ARE DISCOVERED OR UNANTICIPATED EFFECTS ON HISTORIC PROPERTIES ARE FOUND, WORK SHOULD CEASE IN THE IMMEDIATE AREA; WORK CAN CONTINUE WHERE NO HISTORIC PROPERTIES ARE PRESENT. PLEASE CONTACT THE THC & ARCHEOLOGY'S HISTORY PROGRAMS DIVISION AT 512-463-5883 AND TGLG TO CONSULT ON FURTHER ACTIONS THAT MAY BE NECESSARY TO PROTECT HISTORIC PROPERTIES.
24. FLOODPLAIN – THE PROJECT ACTIVITIES SHOULD USE BEST MANAGEMENT PRACTICES TO RETURN THE CONSTRUCTION AREA TO PRE CONSTRUCTION CONTOURS AND NATURAL VALUES TO ENSURE NO IMPACT TO FLOODPLAIN IN THE AREA.

## TRAFFIC CONTROL

1. THE CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE MOST RECENT EDITION OF THE TEXAS MANUAL ON TRAFFIC CONTROL DEVICES AND AN APPROVED TRAFFIC CONTROL PLAN.
2. THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC (AS NOTED IN THE TRAFFIC CONTROL PLANS) AT ALL TIMES EXCEPT DURING FLAGGING OPERATIONS OR PROVIDE DETOURS AROUND THE CONSTRUCTION SITE.
3. TRAFFIC CONTROL FOR THE CONTRACT IS REQUIRED FOR THE ENTIRE DURATION OF THE PROJECT. PAYMENT FOR THE TRAFFIC CONTROL THAT IS PROPERLY INSTALLED FOR LESS THAN A FULL MONTH SHALL BE BASED ON PERCENTAGE BASIS OF THE TIME INSTALLED.
4. CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL HANDLING OUTLINED HEREIN SHALL BE THE CONTRACTOR USE AS A GUIDE ONLY. IF THE CONTRACTOR CHOOSES TO USE A DIFFERENT METHOD, THEY SHALL PREPARE AND SUBMIT THE PLAN TO THE COUNTY FOR APPROVAL 10 WORKING DAYS PRIOR TO IMPLEMENTATION. THE PLAN SHALL BE DRAWN AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER AND SHALL BECOME PART OF THE PROJECT DOCUMENTS.

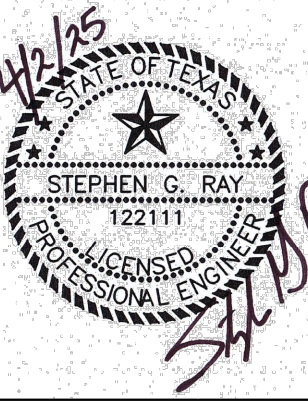

## UTILITIES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING THE APPROPRIATE UTILITY "ONE CALLS" AND LOCATE REQUESTED TO HAVE KNOWN UTILITIES IDENTIFIED.
2. WARNING: OVERHEAD ELECTRICAL LINES  
  
OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE FORBIDS ACTIONS THAT ACCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES, SPECIFICALLY:
  - ANY ACTIVITY WHERE PERSON OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE HIGH VOLTAGE LINES; AND
  - OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN 10 FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES.

PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL CENTERPOINT ENERGY AT (713) 207-2222.

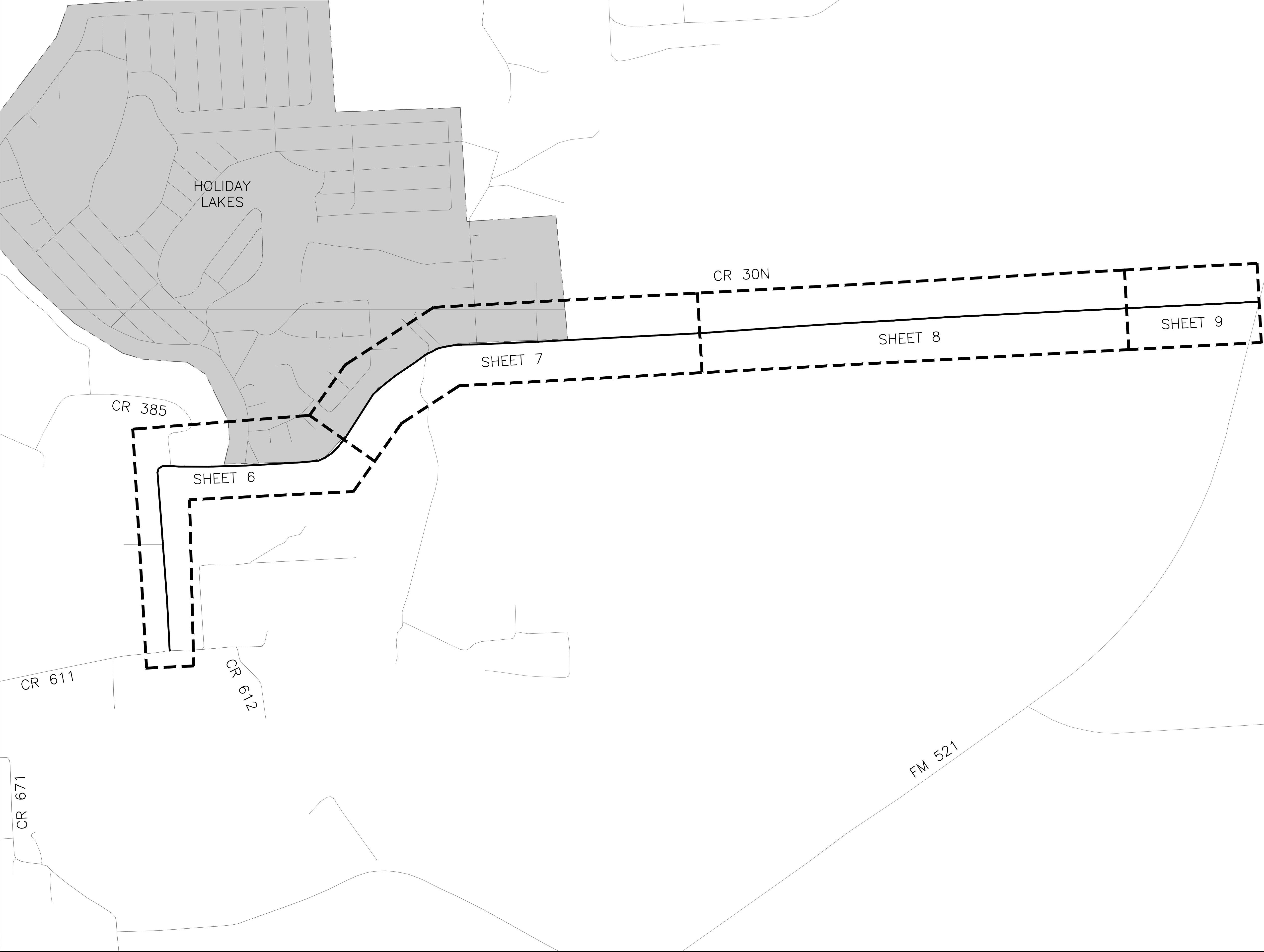
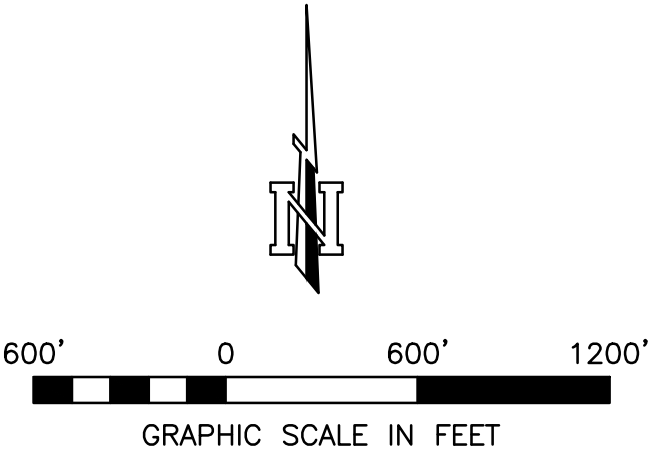
## SPECIAL PROVISIONS

1. TXDOT BID ITEM 305 - EXISTING ASPHALT SHALL BE REMOVED TO DEPTHS SHOWN IN THE PLANS AND SALVAGED TO BE USED AS RAP MATERIAL IN TXDOT BID ITEM 3076.
2. WHERE DITCH REGRADEING IS PROPOSED, CONTRACTOR TO SURVEY FURTHEMOST UPTHEAM AND DOWNSTREAM FLOWLINES, INCLUDING DRIVEWAY CULVERTS AND ROAD CROSS PIPES AND PROVIDE ELEVATIONS TO ENGINEER FOR REVIEW DURING CONSTRUCTION.
3. TXDOT BIT ITEM 3076 - USE OF RAP IS PERMITTED IN ACCORDANCE WITH TXDOT SPECIAL SPECIFICATION 3076.

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| NO.   | DATE               | REVISIONS |
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| BRAZORIA COUNTY ENGINEERING   |                    |           |
| BRAZORIA COUNTY ROAD AND<br>DRAINAGE IMPROVEMENTS FOR CDBG<br>SET III   |                    |           |
| GENERAL NOTES   |                    |           |
| SUBMITTED: 4/2/2025   | DESIGNED BY: SGR   |           |
| SCALE: N/A  | DRAWN BY: JS       |           |
| DATE: 4/2/2025  | SHEET No.: 3 OF 35 |           |
| SURVEY BY: CFA  | DWG. No:           |           |
| F B No.: —  |                    |           |



| COUNTY ROAD | LIMITS | LENGTH |       | SCOPE OF WORK  |
|-------------|--------|--------|-------|----------------|
|             |        | FEET   | MILES |                |
| CR 30N      | ENTIRE | 16,266 | 3.08  | RECONSTRUCTION |



| NO. | DATE | REVISIONS |
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BRAZORIA COUNTY ENGINEERING

BRAZORIA COUNTY ROAD AND  
DRAINAGE IMPROVEMENTS FOR CDBG  
SET III

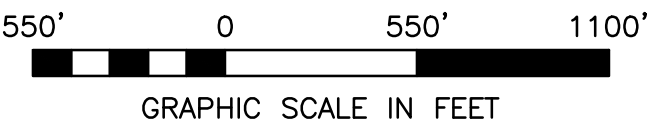
OVERALL PROJECT MAP

|                     |                    |
|---------------------|--------------------|
| SUBMITTED: 4/2/2025 | DESIGNED BY: SGR   |
| SCALE: 1" = 600'    | DRAWN BY: JS       |
| DATE: 4/2/2025      | SHEET No.: 4 OF 35 |
| SURVEY BY: CFA      | DWG. No:           |
| F B No.: -          |                    |

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| BORING NO. | ASPHALT<br>(INCHES) | BASE<br>(INCHES) |
|------------|---------------------|------------------|
| 78         | 3                   | 6                |
| 79         | 3                   | 6                |
| 80         | 3                   | 21               |
| 81         | 4                   | 6                |
| 82         | 3                   | 11               |
| 83         | 3                   | 5                |
| 84         | 3                   | 12               |
| 85         | 2.5                 | 6.5              |
| 86         | 2                   | 7                |
| 87         | 3                   | 6                |
| 88         | 3.5                 | 6.5              |
| 89         | 4                   | 6                |
| 90         | 3                   | 7                |
| 91         | 3.5                 | 7.5              |
| 92         | 3                   | 7                |
| 93         | 3                   | 7                |
| 94         | 4                   | 7                |
| 95         | 4                   | 20               |

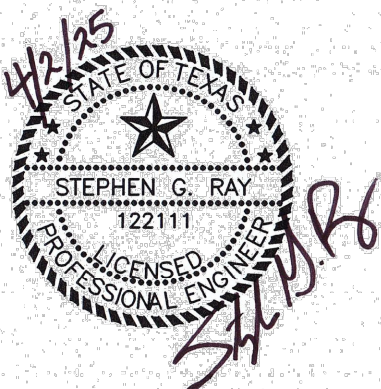


LEGEND

- ◆ BORE LOCATIONS  
(REFER TO GEOTECHNICAL  
REPORT FOR BORE LOGS)

| NO. | DATE | REVISIONS |
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BRAZORIA COUNTY ENGINEERING

BRAZORIA COUNTY ROAD AND  
DRAINAGE IMPROVEMENTS FOR CDBG  
SET III

BORE LAYOUT

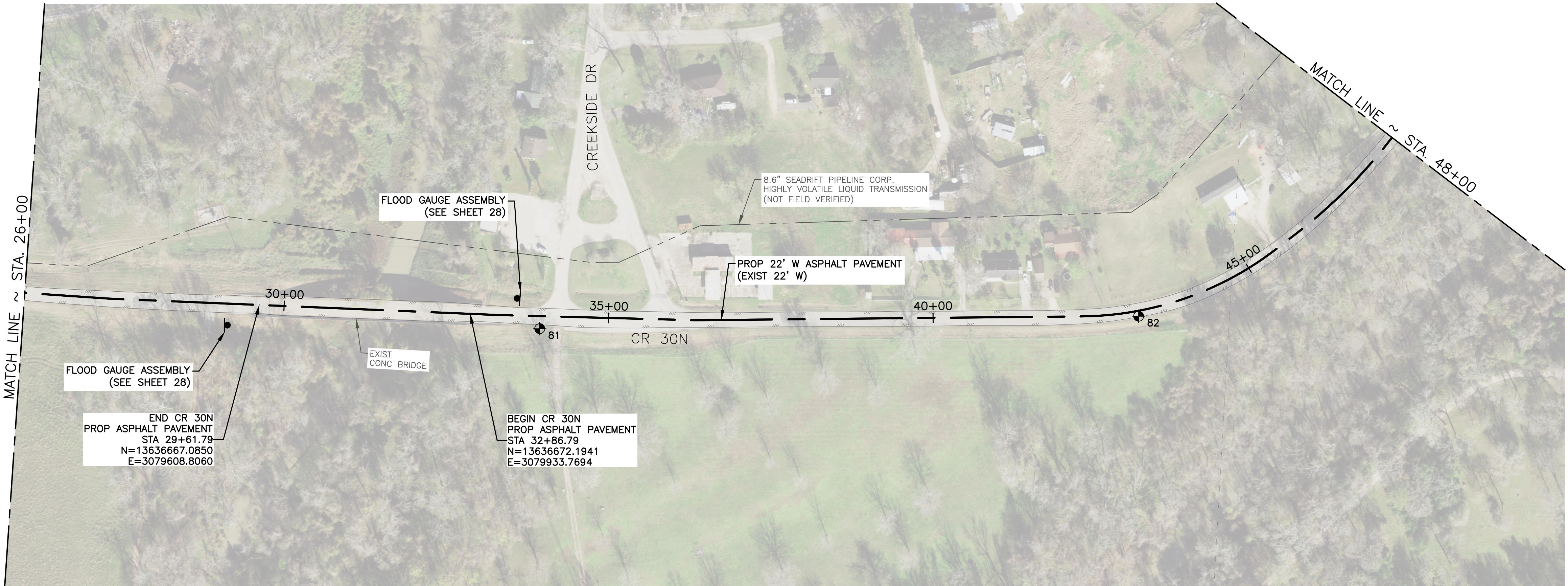
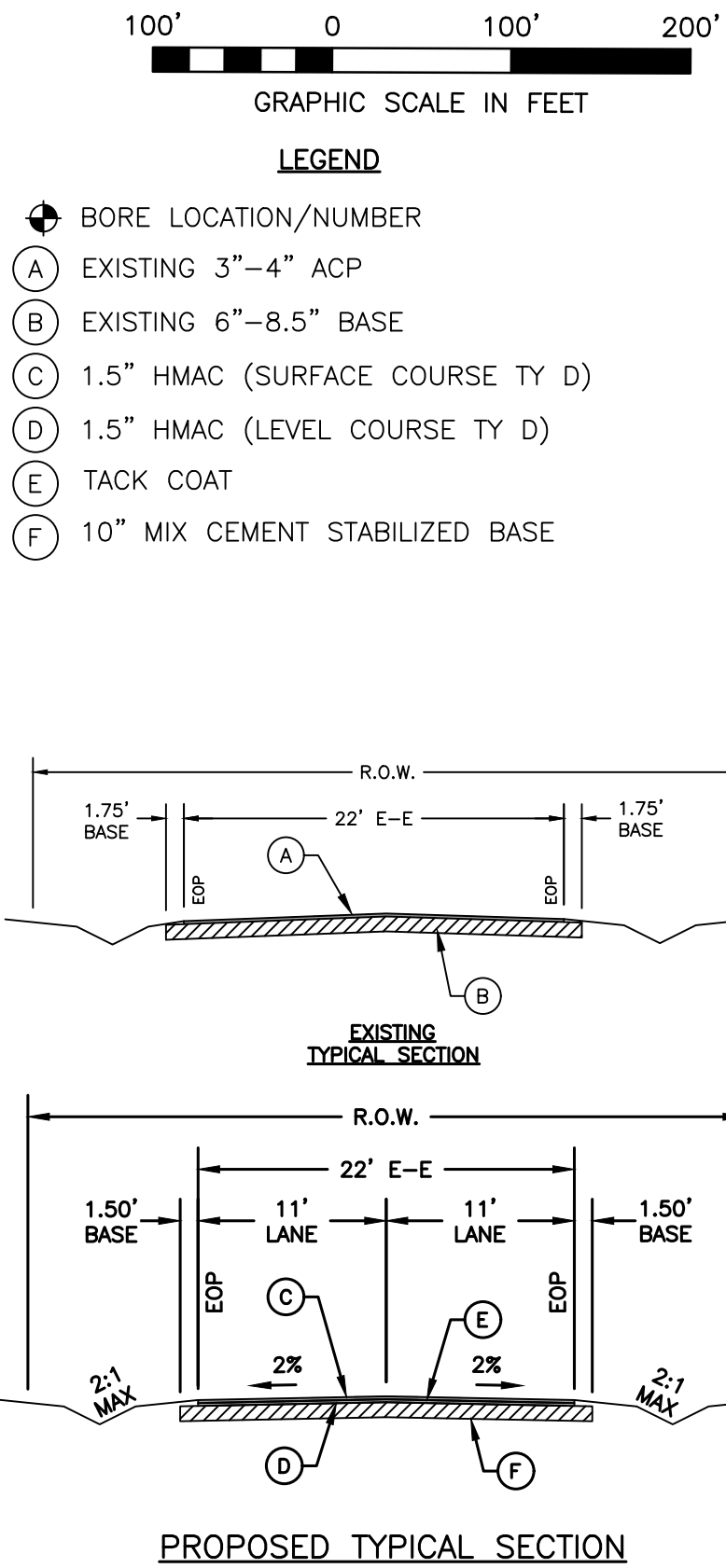
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| SUBMITTED: 4/2/2025 | DESIGNED BY: SGR   |
| SCALE: 1" = 550'    | DRAWN BY: JS       |
| DATE: 4/2/2025      | SHEET No.: 5 OF 35 |
| SURVEY BY: CFA      | DWG. No:           |
| F B No.: -          |                    |

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COUNTY ROAD 30 NORTH



COUNTY ROAD 30 NORTH

| NO. | DATE | REVISIONS |
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BRAZORIA COUNTY ENGINEERING

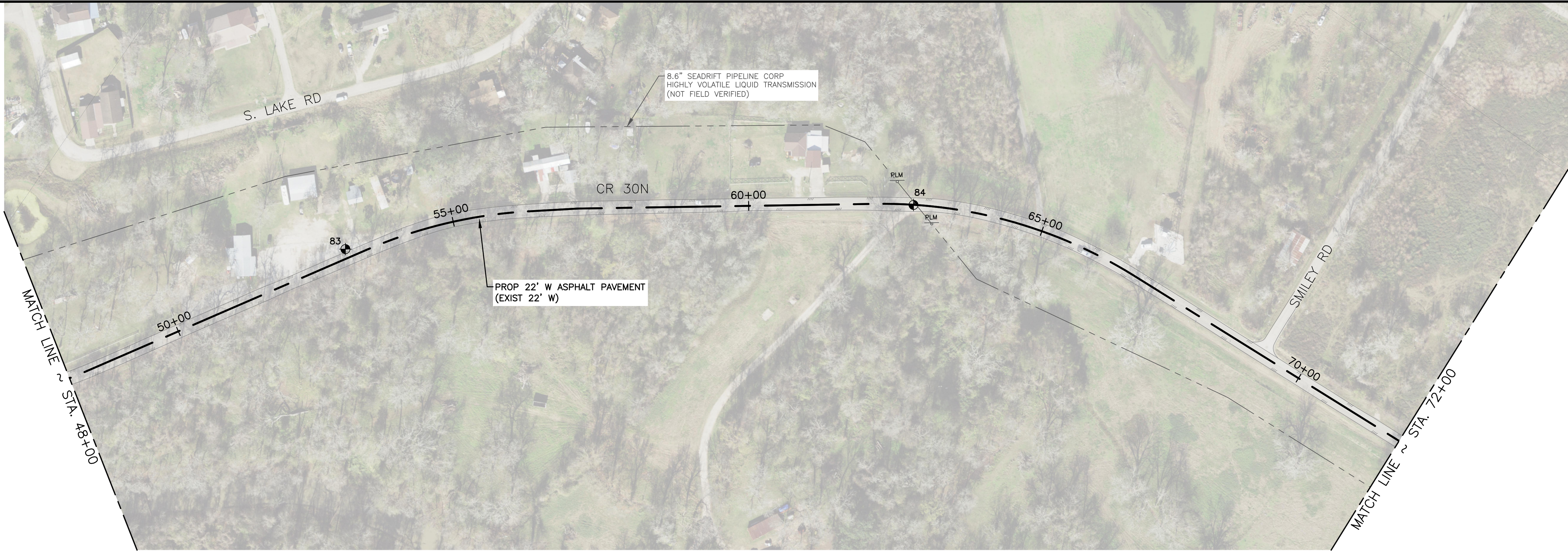
BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG SET III

PLAN CR 30 N  
STA 0+00 TO STA 48+00

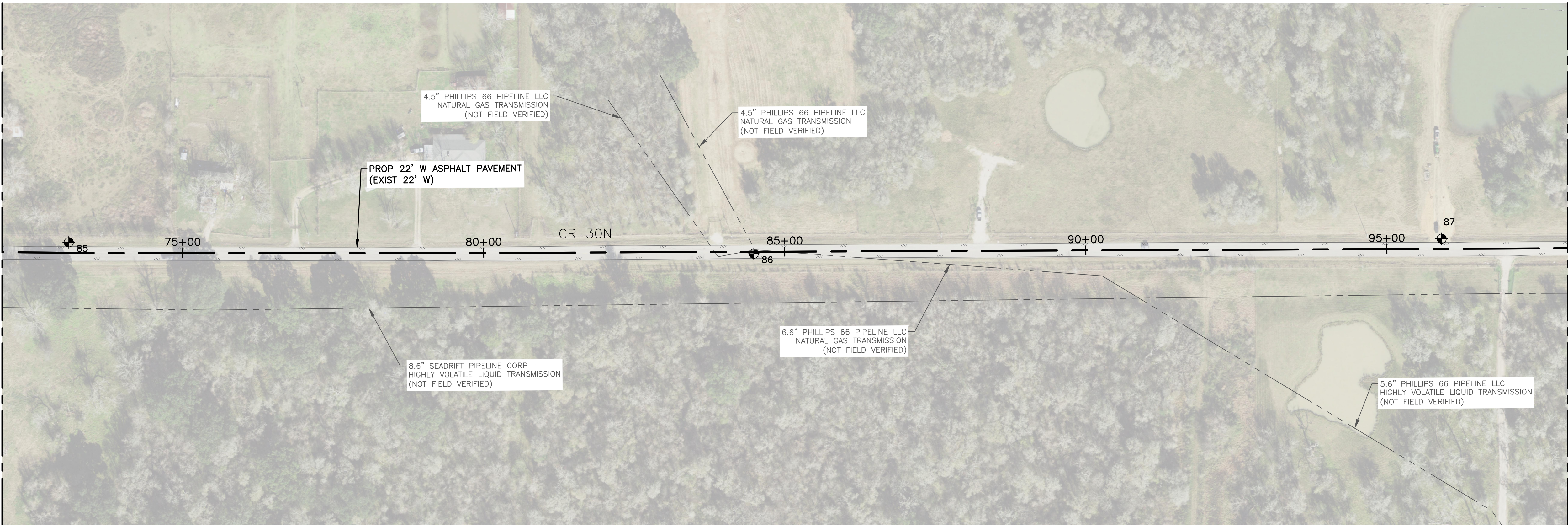
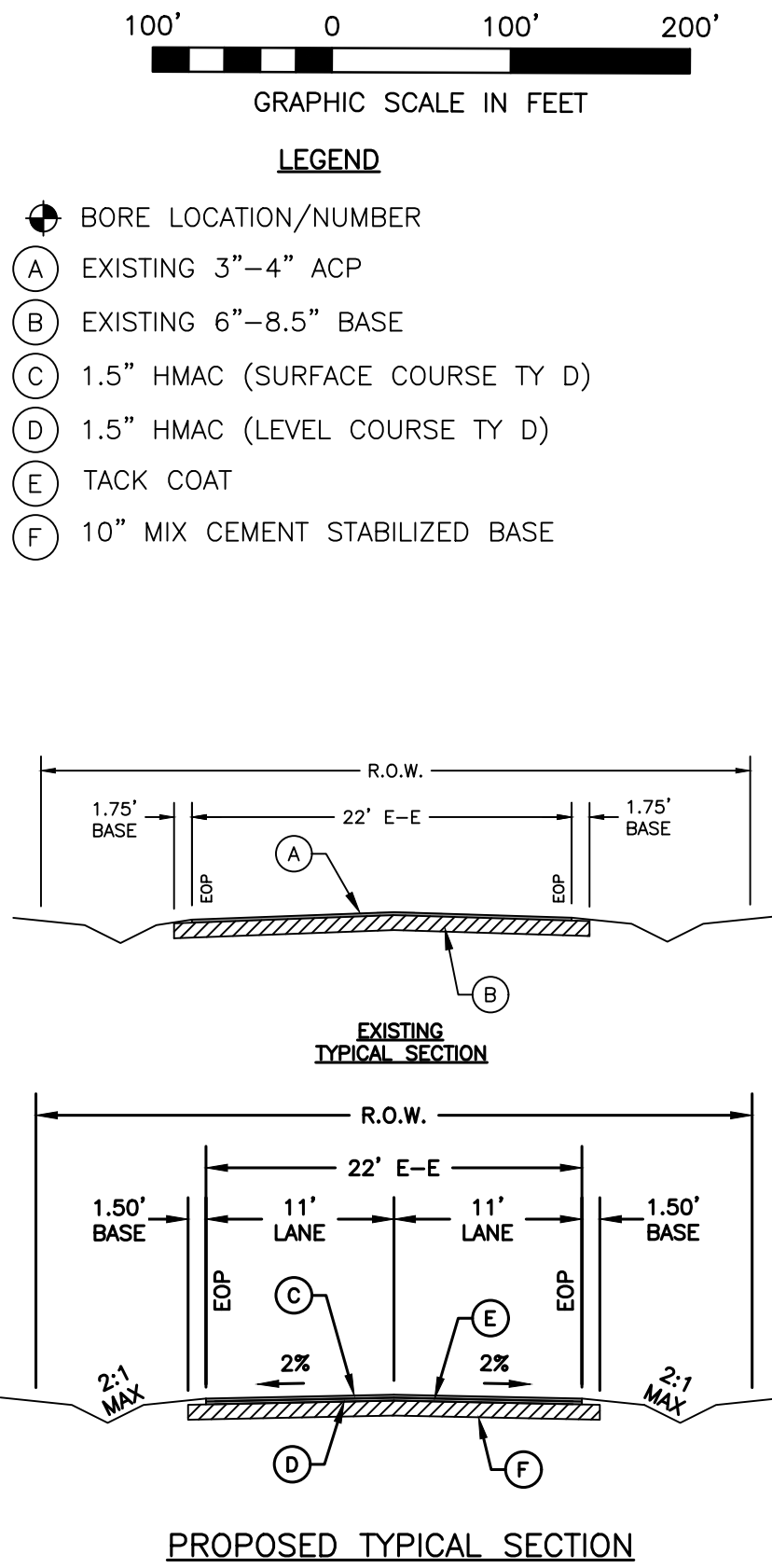
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| SUBMITTED: 4/2/2025 | DESIGNED BY: SGR   |
| SCALE: 1" = 100'    | DRAWN BY: AA       |
| DATE: 4/2/2025      | SHEET No.: 6 OF 35 |
| SURVEY BY: CFA      | DWG. No:           |
| F B No.: -          |                    |

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COUNTY ROAD 30 NORTH



COUNTY ROAD 30 NORTH

| NO. | DATE | REVISIONS |
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BRAZORIA COUNTY ENGINEERING

BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG SET III

CR 30 NORTH PLAN  
STA 48+00 TO STA 98+00

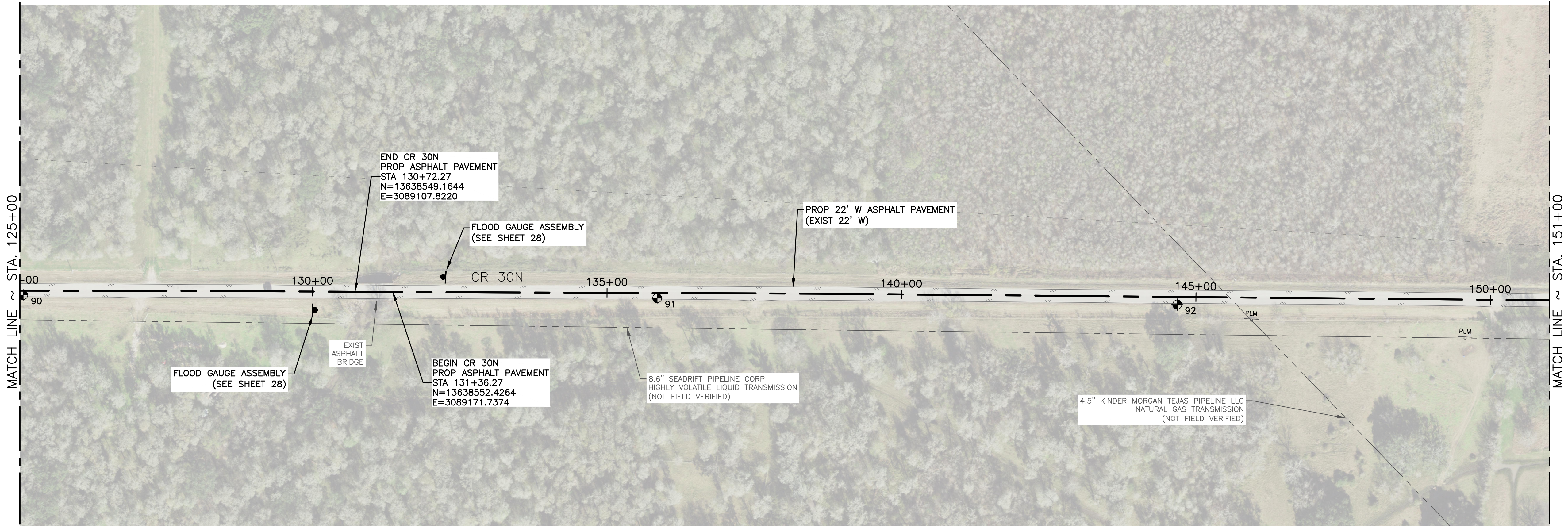
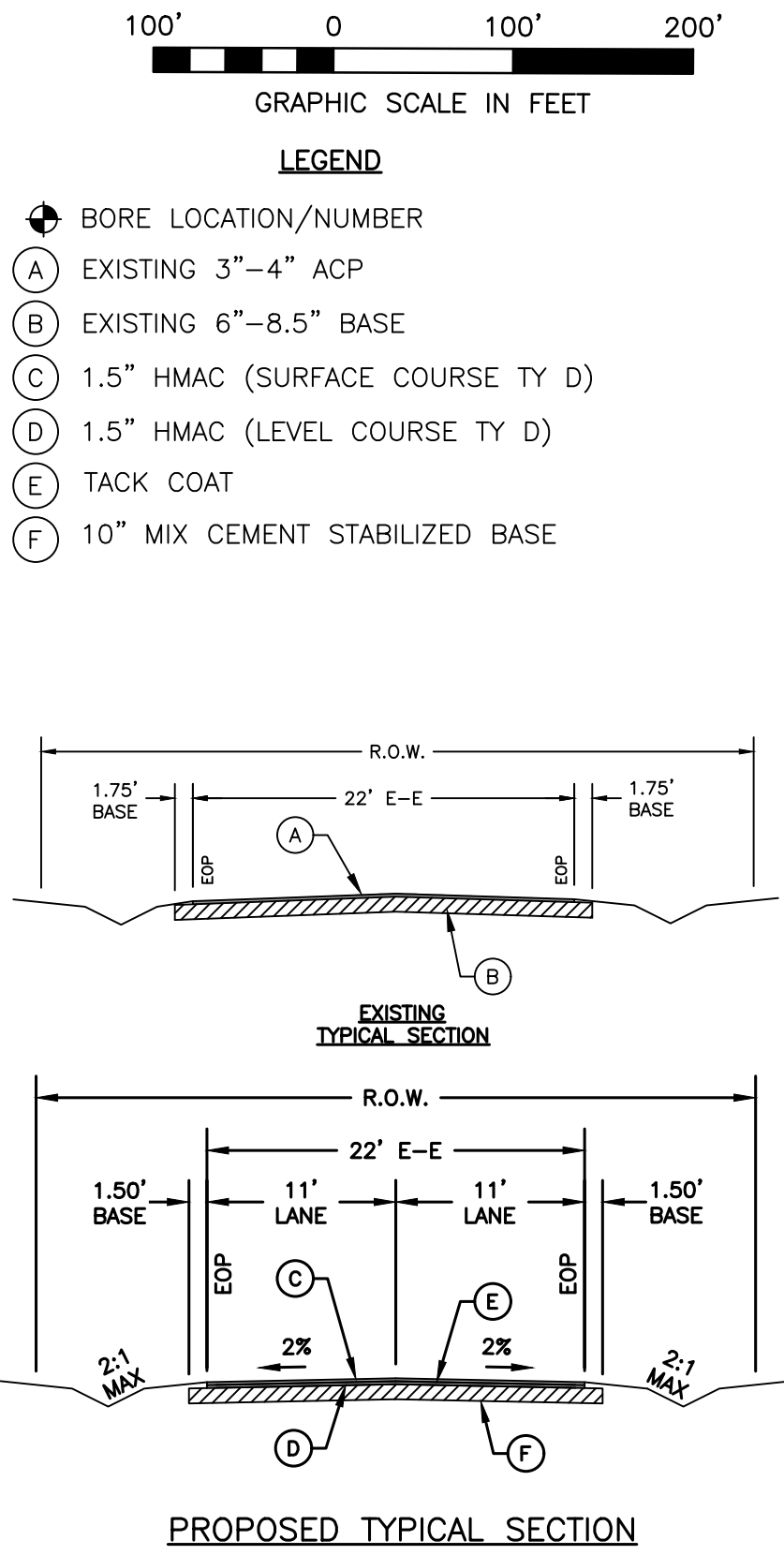
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| SUBMITTED: 4/2/2025 | DESIGNED BY: SGR   |
| SCALE: 1" = 100'    | DRAWN BY: AA       |
| DATE: 4/2/2025      | SHEET No.: 7 OF 35 |
| SURVEY BY: CFA      | DWG. No:           |
| F B No.: -          |                    |

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COUNTY ROAD 30 NORTH



COUNTY ROAD 30 NORTH

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BRAZORIA COUNTY ENGINEERING

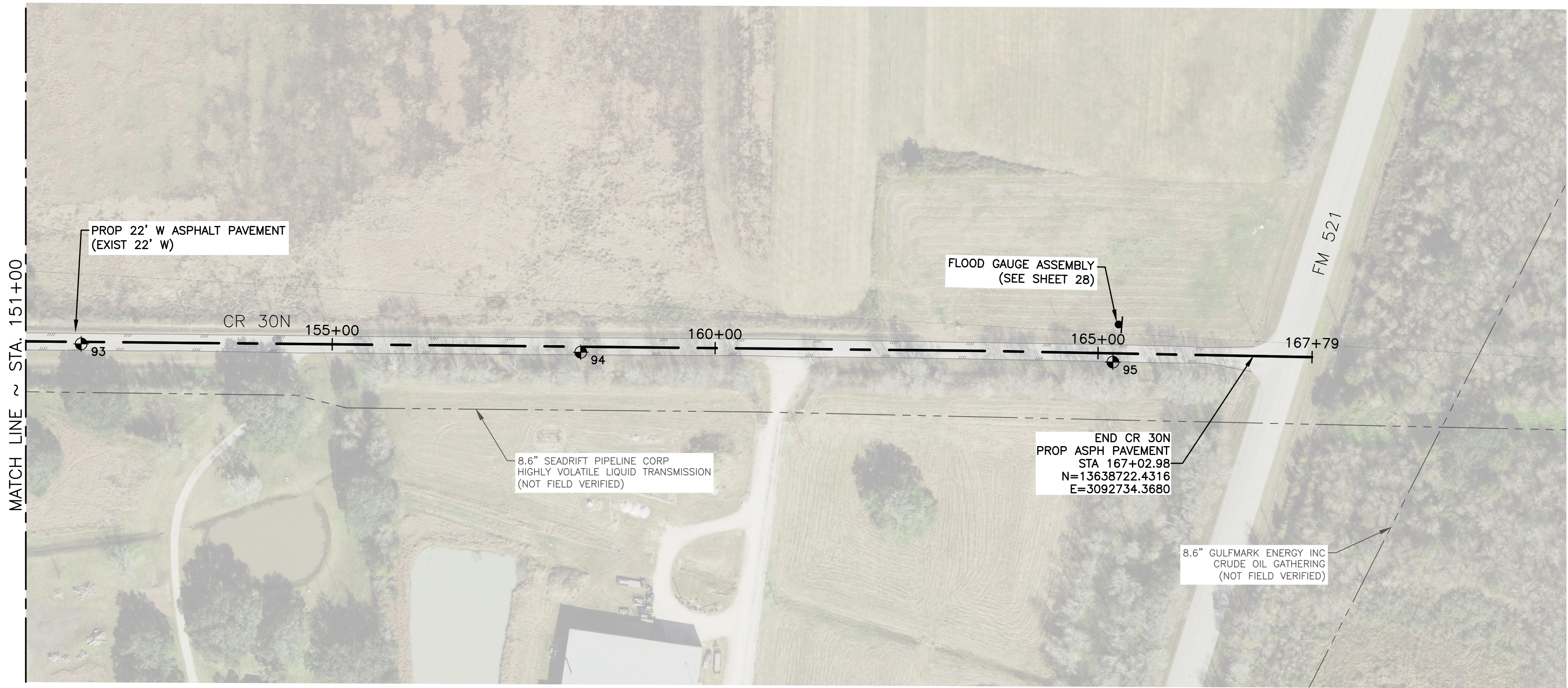
BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG SET III

PLAN CR 30N  
STA 98+00 TO STA 151+00

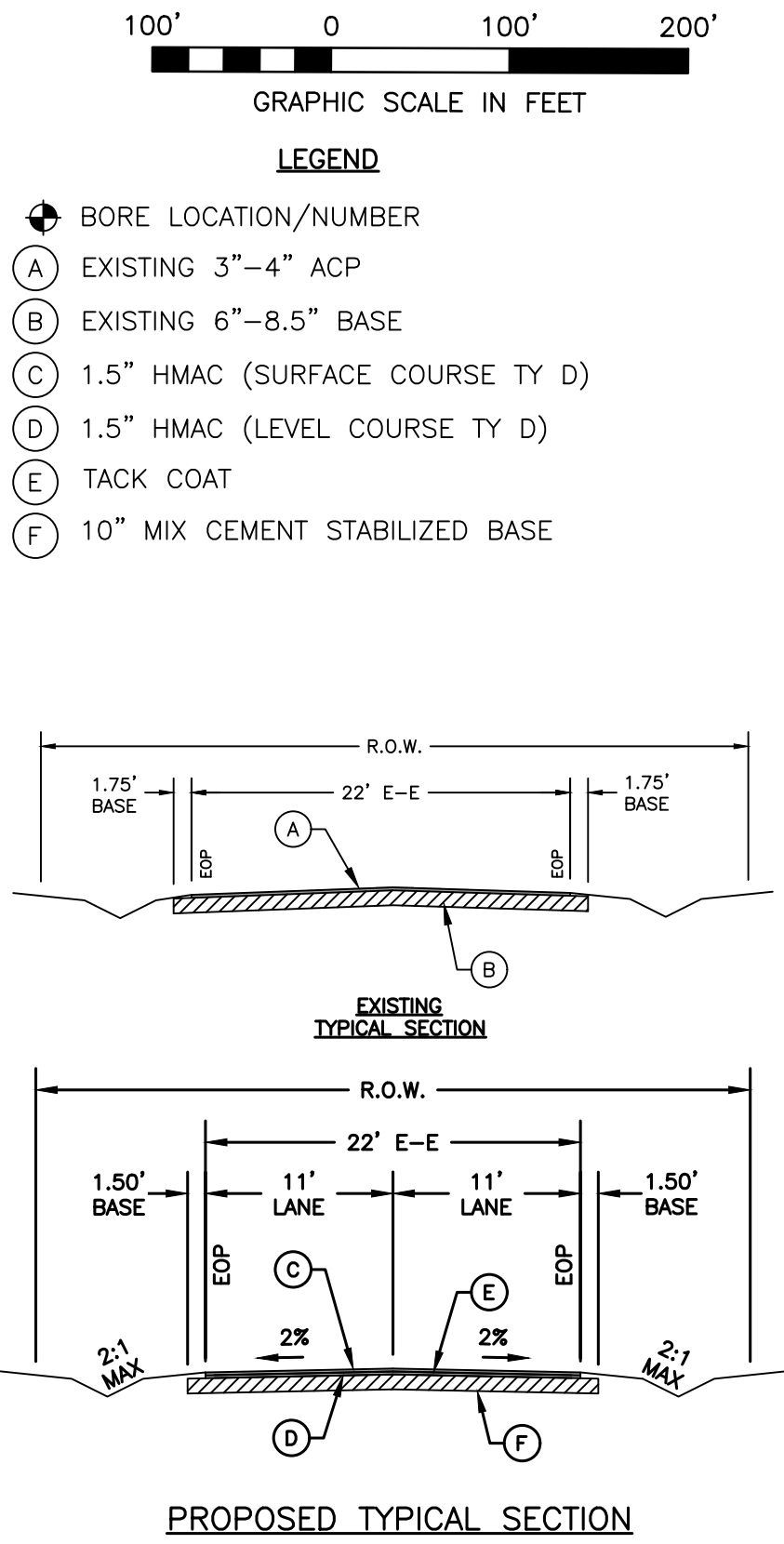
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| SUBMITTED: 4/2/2025 | DESIGNED BY: SGR   |
| SCALE: 1" = 100'    | DRAWN BY: AA       |
| DATE: 4/2/2025      | SHEET No.: 8 OF 35 |
| SURVEY BY: CFA      | DWG. No.:          |
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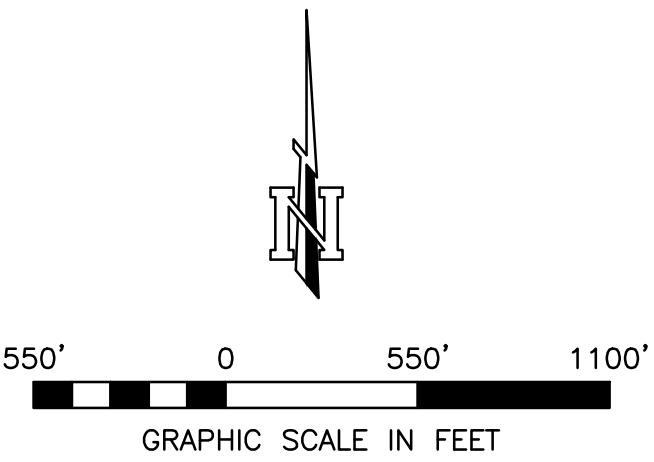


COUNTY ROAD 30 NORTH



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| PLAN CR 30 N<br>STA 151+00 TO STA 167+79   |      |                    |
| SUBMITTED: 4/2/2025  |      | DESIGNED BY: SGR   |
| SCALE: 1" = 100'   |      | DRAWN BY: AA       |
| DATE: 4/2/2025   |      | SHEET No.: 9 OF 35 |
| SURVEY BY: CFA   |      | DWG. No:           |
| F B No.: -   |      |                    |





- LEGEND**
- PHASE I WORK AREA
  - PHASE II WORK AREA
  - TEMP TRAFFIC CONTROL SIGN

- NOTES**
- CONTRACTOR TO REFERENCE SHEETS 16 THROUGH 27 FOR BARRICADE AND CONSTRUCTION WORK ZONE TEMPORARY SIGNAGE AND PAVEMENT MARKINGS.
  - CONTRACTOR TO COORDINATE DRIVEWAY CLOSURES WITH PROPERTY OWNERS PRIOR TO CLOSING DRIVEWAY.
  - ACCESS TO ALL PROPERTIES SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT CONSTRUCTION.
  - CONTRACTOR SHALL OPEN AND MAINTAIN TWO WAY TRAFFIC OPERATION AT NIGHT AND AT ANY TIME THERE IS NO FLAGGING OPERATION PRESENT.

**PHASE I: (EASTBOUND WORK)**

- INITIATE ADVANCE WORK ZONE SIGNAGE FOR THE SECTION OF WORK.
- INSTALL TRAFFIC CONTROL SIGNS, CHANNELIZING DEVICES AND BARRICADES ALLOWING FOR ONE LANE TRAFFIC CONFIGURATION ON THE EXISTING LANE USING FLAGGING OPERATION ON SHEET 14. BARRELS SHALL BE USED TO CHANNELIZE THE WORK AREA FROM THE SINGLE LANE TRAVEL WAY DURING CONSTRUCTION.
- PREPARE RIGHT OF WAY AND RELOCATE ANY MAILBOXES WITHIN LIMITS OF CONSTRUCTION ZONE.
- PULVERIZE AND STABILIZE CR 30N AS DESCRIBED IN THE CONSTRUCTION NOTES.
- LAY ASPHALT ON STABILIZED BASE PER PLANS.
- "SHOULDER UP" AGAINST PAVEMENT EDGE USING EXCESS MATERIAL.
- PLACE WORK ZONE PAVEMENT MARKINGS IN ACCORDANCE WITH TXDOT STANDARDS.

**PHASE II: (WESTBOUND WORK)**

- RECONFIGURE TRAFFIC CONTROL SIGNS, CHANNELIZING DEVICES AND BARRICADES ALLOWING FOR ONE LANE TRAFFIC CONFIGURATION ON THE LANE USING FLAGGING OPERATION AS SHOWN ON SHEET 14. BARRELS SHALL BE USED TO CHANNELIZE THE WORK AREA FROM THE SINGLE LANE TRAVEL WAY DURING CONSTRUCTION.
- PREPARE RIGHT OF WAY AND RELOCATE ANY MAILBOXES WITHIN LIMITS OF CONSTRUCTION ZONE.
- PULVERIZE AND STABILIZE CR 30N AS DESCRIBED IN THE CONSTRUCTION NOTES.
- LAY ASPHALT ON STABILIZED BASE PER PLANS.
- "SHOULDER UP" AGAINST PAVEMENT EDGE USING EXCESS MATERIAL.
- PLACE WORK ZONE PAVEMENT MARKINGS IN ACCORDANCE WITH TXDOT STANDARDS.

**PHASE III:**

- RELOCATE ANY MOVED MAILBOXES TO THE ORIGINAL LOCATION. SEE SHEET 12 FOR POTENTIAL MAILBOX CONFLICTS.
- SHIFT TRAFFIC AS NECESSARY TO PLACE FINAL STRIPING. USE OF FLAGGING OPERATION IS ALLOWED.
- REMOVE REMAINING TRAFFIC CONTROL DEVICES.



R20-3T

1



G20-10T

2



CW20-1D

3

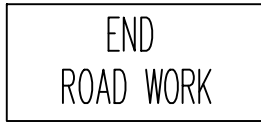


WB-11



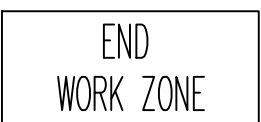
G20-5aP

4



G20-2A

5

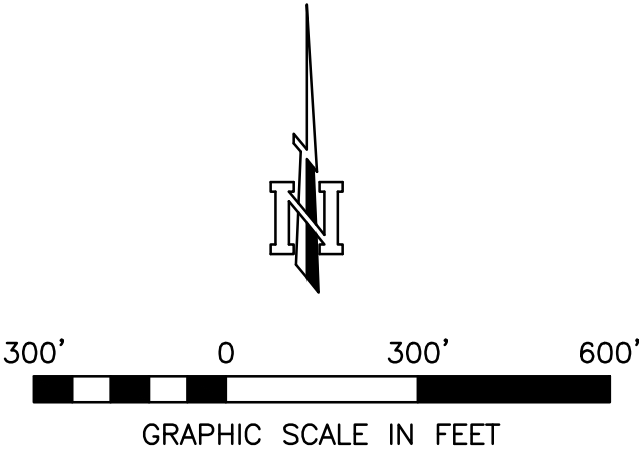
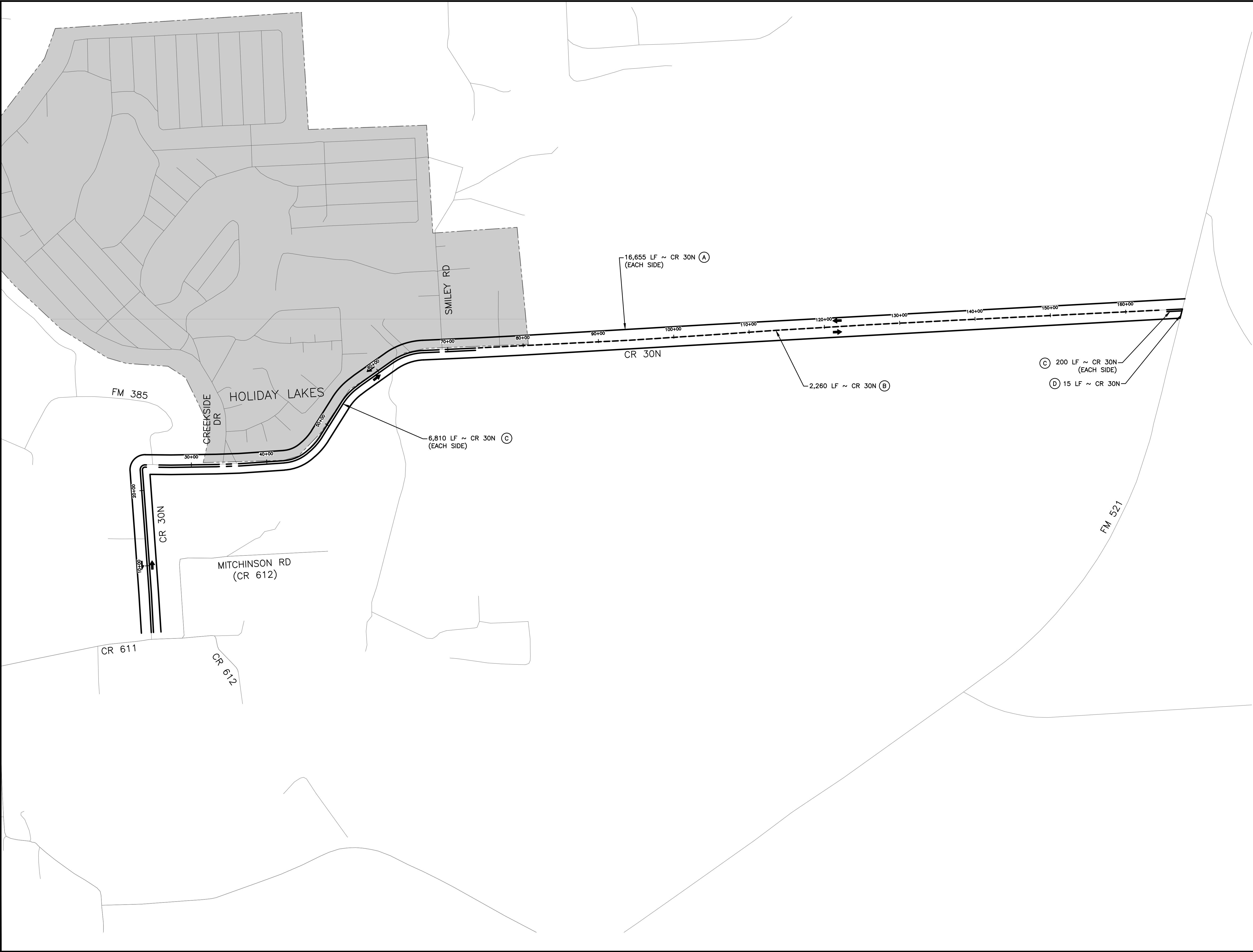


G20-2bT

6

| NO.  | DATE | REVISIONS           |
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| BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG SET III  |      |                     |
| TRAFFIC CONTROL PLAN   |      |                     |
| SUBMITTED: 4/2/2025  |      | DESIGNED BY: SGR    |
| SCALE: 1" = 550'   |      | DRAWN BY: AA        |
| DATE: 4/2/2025   |      | SHEET No.: 10 OF 35 |
| SURVEY BY: CFA   |      | DWG. No:            |
| F B No.: -   |      |                     |

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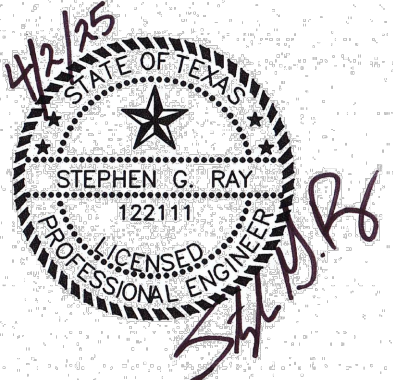
LEGEND

- (A) REFL PAV MRK TY I (W) 4" (SLD)
- (B) REFL PAV MRK TY I (Y) 4" (BRK)
- (C) REFL PAV MRK TY I (Y) 4" (SLD)
- (D) REFL PAV MRK TY I (W) 24" (SLD)

NOTES

- REFER TO SHEET 35 FOR STRIPING NOTES AND STANDARD DETAILS.

| NO. | DATE | REVISIONS |
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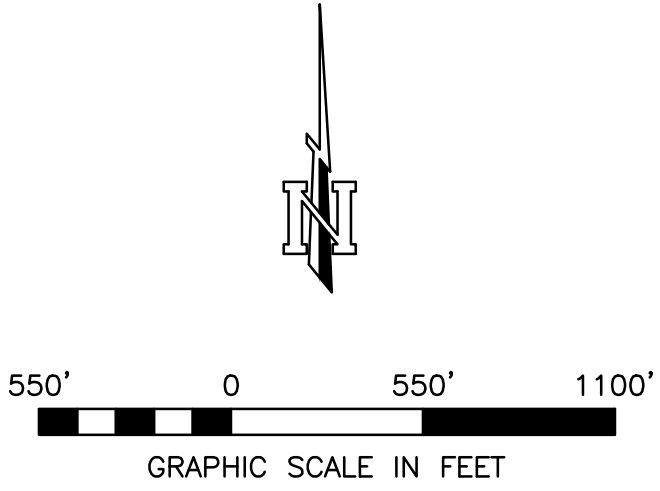
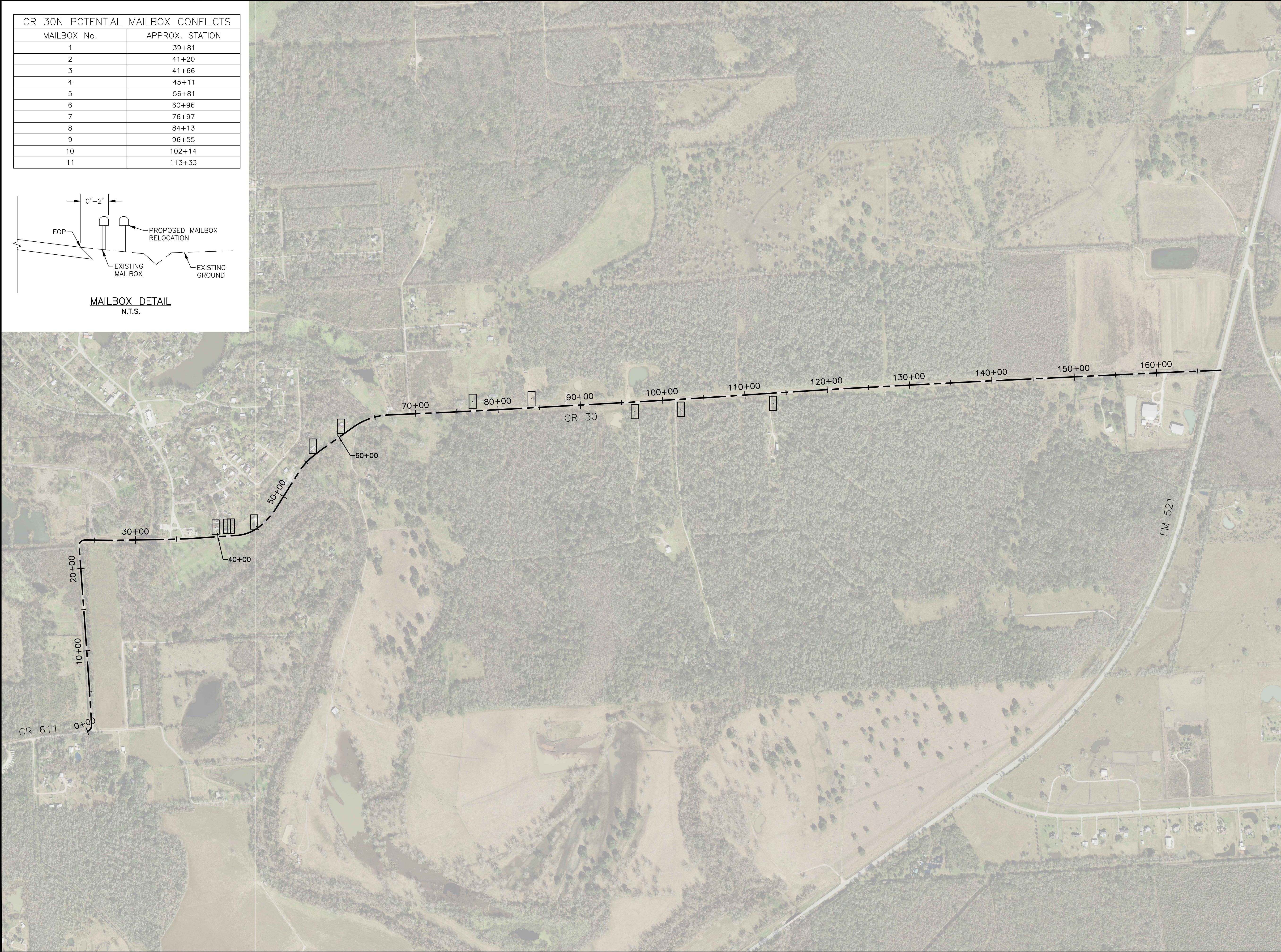
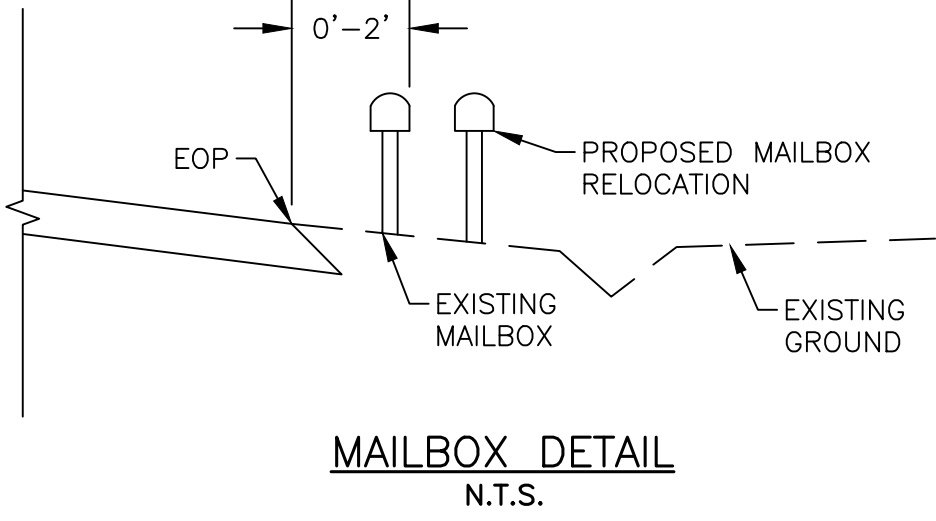
BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG SET III

PAVEMENT MARKING LAYOUT

|                     |                     |
|---------------------|---------------------|
| SUBMITTED: 4/2/2025 | DESIGNED BY: SGR    |
| SCALE: 1" = 300'    | DRAWN BY: AA        |
| DATE: 4/2/2025      | SHEET No.: 11 OF 35 |
| SURVEY BY: CFA      | DWG. No:            |
| F B No.: -          |                     |



| CR 30N POTENTIAL MAILBOX CONFLICTS |                 |
|------------------------------------|-----------------|
| MAILBOX No.                        | APPROX. STATION |
| 1                                  | 39+81           |
| 2                                  | 41+20           |
| 3                                  | 41+66           |
| 4                                  | 45+11           |
| 5                                  | 56+81           |
| 6                                  | 60+96           |
| 7                                  | 76+97           |
| 8                                  | 84+13           |
| 9                                  | 96+55           |
| 10                                 | 102+14          |
| 11                                 | 113+33          |



LEGEND

□ POTENTIAL MAILBOX TO BE RELOCATED

NOTES:

1. CONTRACTOR TO FIELD VERIFY MAILBOX STATION FOR RELOCATION.

| NO. | DATE | REVISIONS |
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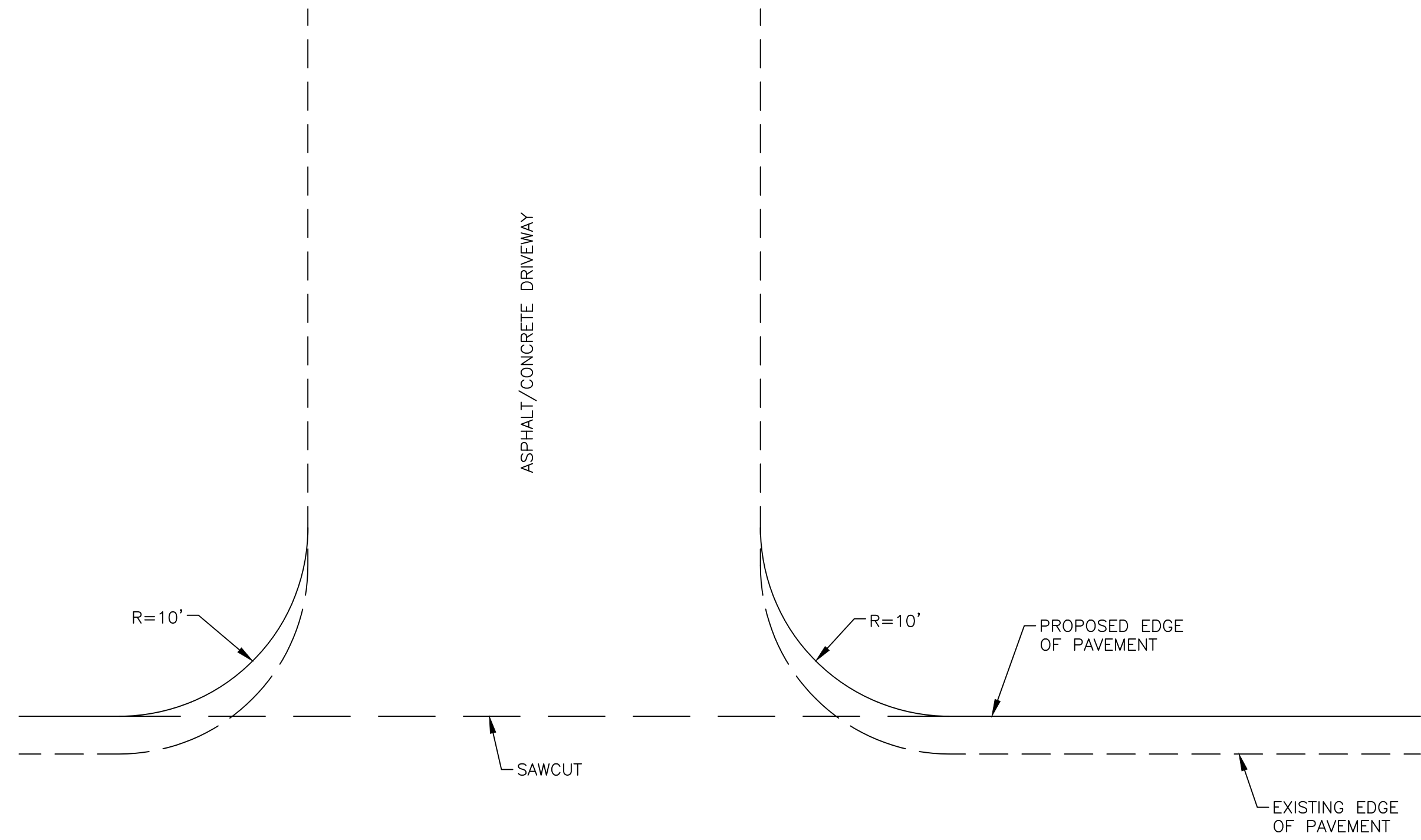
BRAZORIA COUNTY ROAD AND DRAINAGE IMPROVEMENTS FOR CDBG SET III

POTENTIAL MAILBOX CONFLICTS

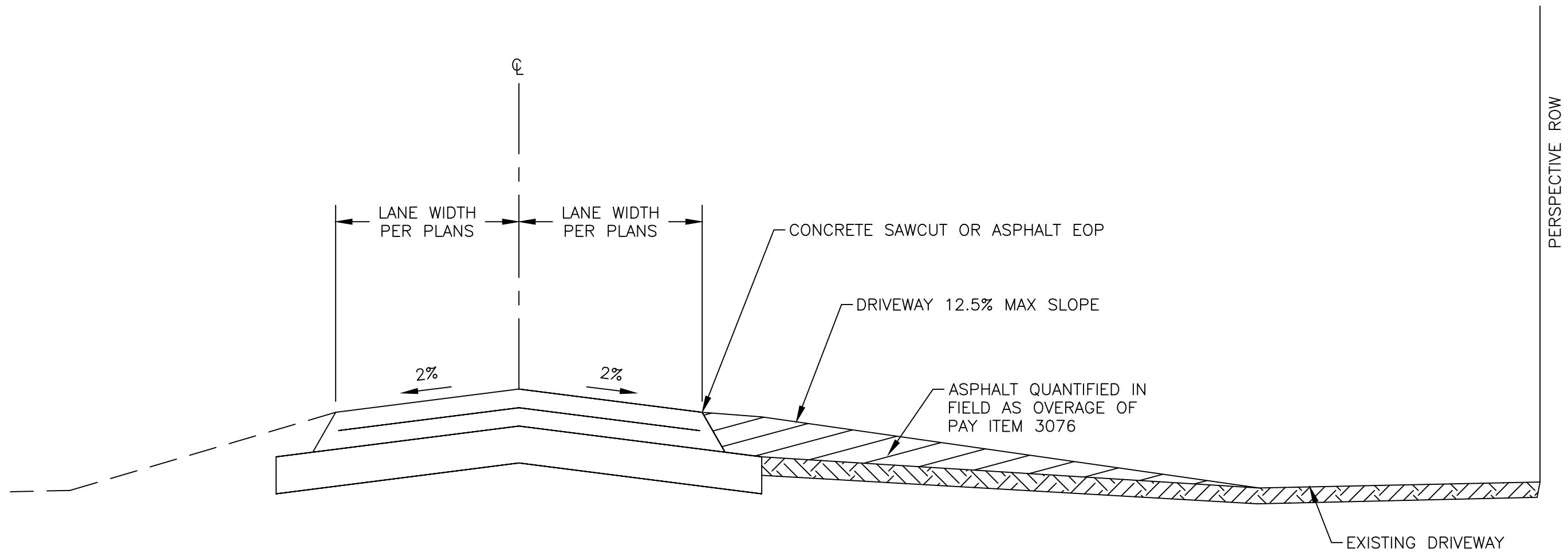
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| SUBMITTED: 4/2/2025 | DESIGNED BY: SGR    |
| SCALE: 1" = 550'    | DRAWN BY: JS        |
| DATE: 4/2/2025      | SHEET No.: 12 OF 35 |
| SURVEY BY: CFA      | DWG. No:            |
| F B No.: -          |                     |

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DRIVEWAY DETAIL – PLAN



DRIVEWAY DETAIL – SECTION

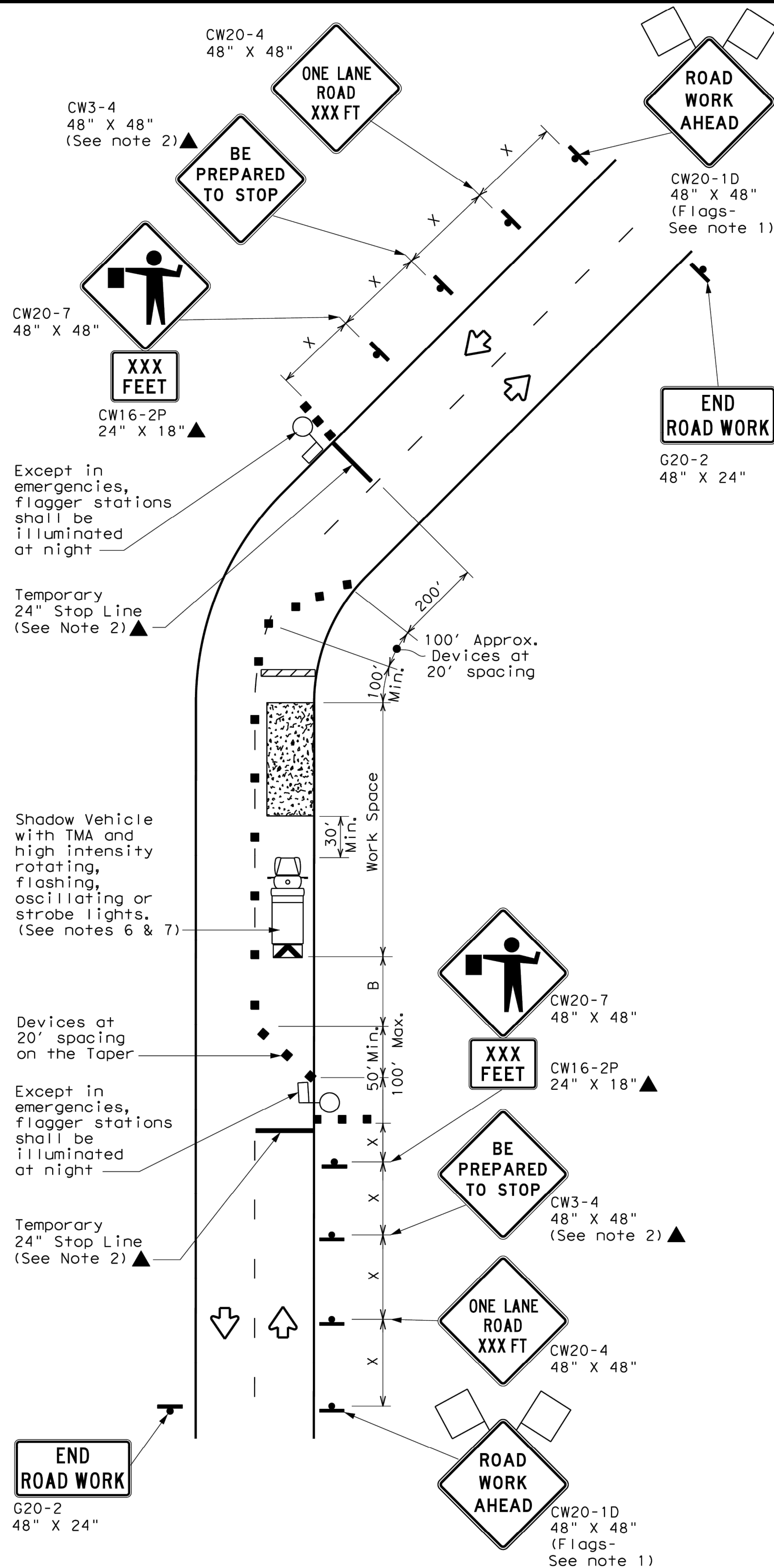
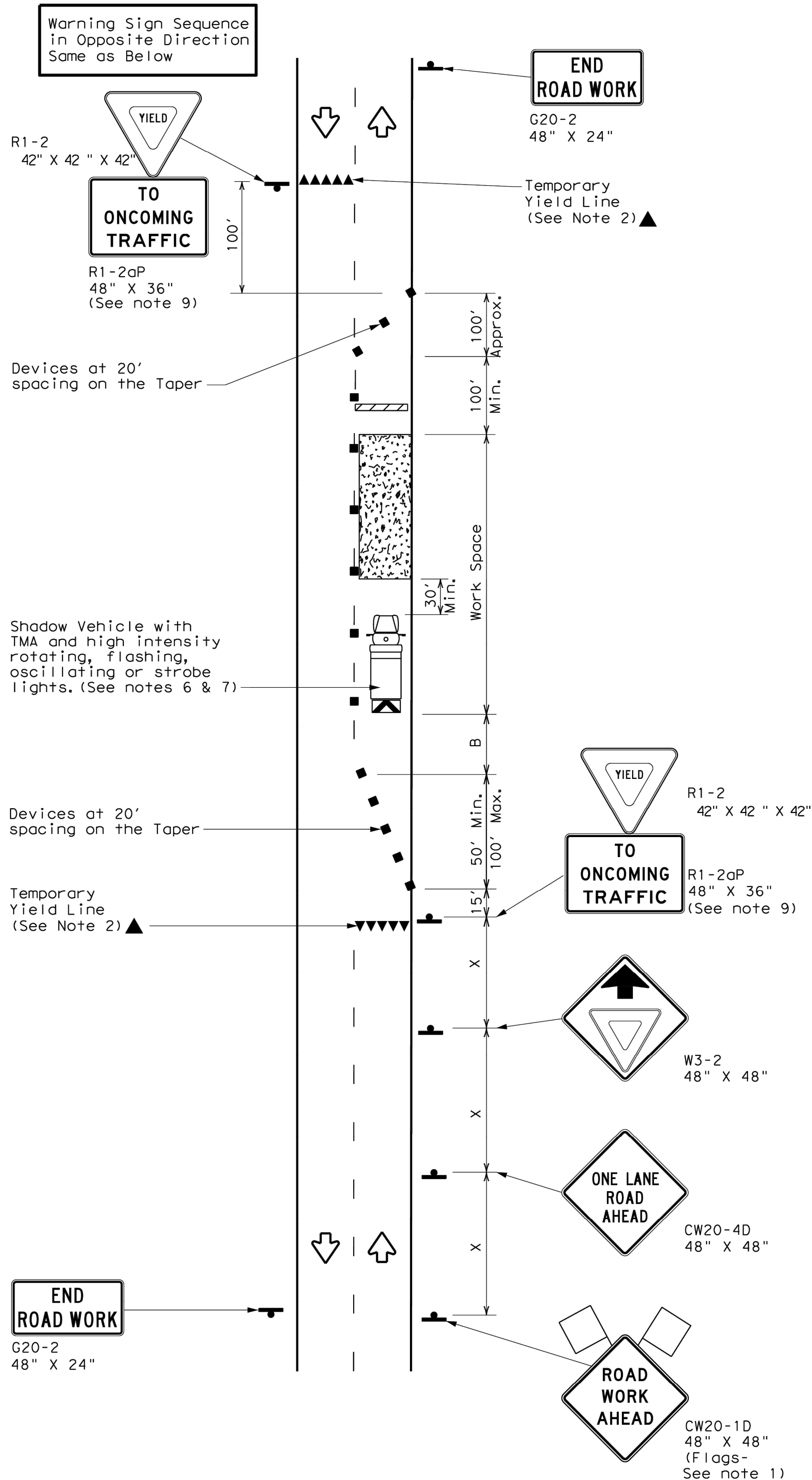
- NOTES:
1. CONCRETE DRIVEWAYS THAT EXTEND INTO THE BASE WORK AREA SHALL BE SAWCUT AT THE BASE WORK LINE AND REMOVED SUCH THAT DRIVEWAYS MAY BE TIED IN CORRECTLY. SAWCUT SHALL BE SUBSIDIARY TO ITEM 110.
  2. ASPHALT DRIVEWAYS CAN BE MIXED INTO THE BASE WORK AT THE CONTRACTOR'S DISCRETION.

| NO.   | DATE | REVISIONS           |
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| <div><div><div><div><div><div></div><div><div><span><span></span></span></div><div><div>4/2/25</div></div></div></div><div>STATE OF TEXAS</div><div>STEPHEN C. RAY</div><div>122111</div><div>PROFESSIONAL ENGINEER</div></div></div></div></div>   |      |                     |
| <div><div><div><div><div><span></span></div><div><div>CobbFendley</div></div></div></div><div>TBPELS Engineering Firm No. F-274</div><div>Land Surveying Firm No. 10046700</div><div>4424 W South Houston Parkway N, Suite 600</div><div>Houston, Texas 77041</div><div>713.462.3242   fax 713.462.3262</div><div>www.cobbfendley.com</div></div></div> |      |                     |
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| DRIVEWAY DETAIL   |      |                     |
| SUBMITTED: 4/2/2025   |      | DESIGNED BY: SGR    |
| SCALE: N/A  |      | DRAWN BY: JS        |
| DATE: 4/2/2025  |      | SHEET No.: 13 OF 35 |
| SURVEY BY: CFA  |      | DWG. No:            |
| F B No.: –  |      |                     |



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DATE: FILE:



| LEGEND |                                      |  |   |  |  |  |  |  |
|--------|--------------------------------------|--|---|--|--|--|--|--|
|        | Type 3 Barricade                     |  | Channelizing Devices                    |  |  |  |  |  |
|        | Heavy Work Vehicle                   |  | Truck Mounted Attenuator (TMA)          |  |  |  |  |  |
|        | Trailer Mounted Flashing Arrow Board |  | Portable Changeable Message Sign (PCMS) |  |  |  |  |  |
|        | Sign                                 |  | Traffic Flow                            |  |  |  |  |  |
|        | Flag                                 |  | Flagger                                 |  |  |  |  |  |

| Posted Speed * | Formula               | Minimum Desirable Taper Lengths ** |            |            | Suggested Maximum Spacing of Channelizing Devices |              | Minimum Sign Spacing "X" Distance | Suggested Longitudinal Buffer Space "B" | Stopping Sight Distance |
|----------------|-----------------------|------------------------------------|------------|------------|---|--------------|-----------------------------------|---|-------------------------|
| 30             | $L = \frac{WS^2}{60}$ | 10' Offset                         | 11' Offset | 12' Offset | On a Taper  | On a Tangent | 120'                              | 90'                                     | 200'                    |
| 35             |                       | 205'                               | 225'       | 245'       | 35'   | 70'          | 160'                              | 120'                                    | 250'                    |
| 40             |                       | 265'                               | 295'       | 320'       | 40'   | 80'          | 240'                              | 155'                                    | 305'                    |
| 45             | L = WS                | 450'                               | 495'       | 540'       | 45'   | 90'          | 320'                              | 195'                                    | 360'                    |
| 50             |                       | 500'                               | 550'       | 600'       | 50'   | 100'         | 400'                              | 240'                                    | 425'                    |
| 55             |                       | 550'                               | 605'       | 660'       | 55'   | 110'         | 500'                              | 295'                                    | 495'                    |
| 60             |                       | 600'                               | 660'       | 720'       | 60'   | 120'         | 600'                              | 350'                                    | 570'                    |
| 65             |                       | 650'                               | 715'       | 780'       | 65'   | 130'         | 700'                              | 410'                                    | 645'                    |
| 70             |                       | 700'                               | 770'       | 840'       | 70'   | 140'         | 800'                              | 475'                                    | 730'                    |
| 75             |                       | 750'                               | 825'       | 900'       | 75'   | 150'         | 900'                              | 540'                                    | 820'                    |

\* Conventional Roads Only  
\*\* Taper lengths have been rounded off.  
L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

| TYPICAL USAGE |                |                       |                              |                      |
|---------------|----------------|-----------------------|------------------------------|----------------------|
| MOBILE        | SHORT DURATION | SHORT TERM STATIONARY | INTERMEDIATE TERM STATIONARY | LONG TERM STATIONARY |
|               | ✓              | ✓                     | ✓                            |                      |

#### GENERAL NOTES

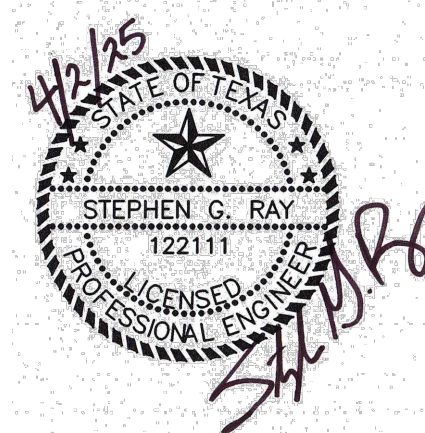
- Flags attached to signs where shown, are REQUIRED.
- All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
- The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4 "ONE LANE ROAD XXX FT" sign, but proper sign spacing shall be maintained.
- Flaggers should use two-way radios or other methods of communication to control traffic.
- Length of work space should be based on the ability of flaggers to communicate.
- A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
- Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect a wider work space.

#### TCP (2-2a)

- The R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work space should be no longer than one half city block. In rural areas, roadways with less than 2000 ADT, work space should be no longer than 400 feet.
- The R1-2aP "YIELD TO ONCOMING TRAFFIC" sign shall be placed on a support at a 7 foot minimum mounting height.

#### TCP (2-2b)

- Channelizing devices on the center line may be omitted when a pilot car is leading traffic and approved by the Engineer.
- If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain stopping sight distance to the flagger and a queue of stopped vehicles. (See table above).
- Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

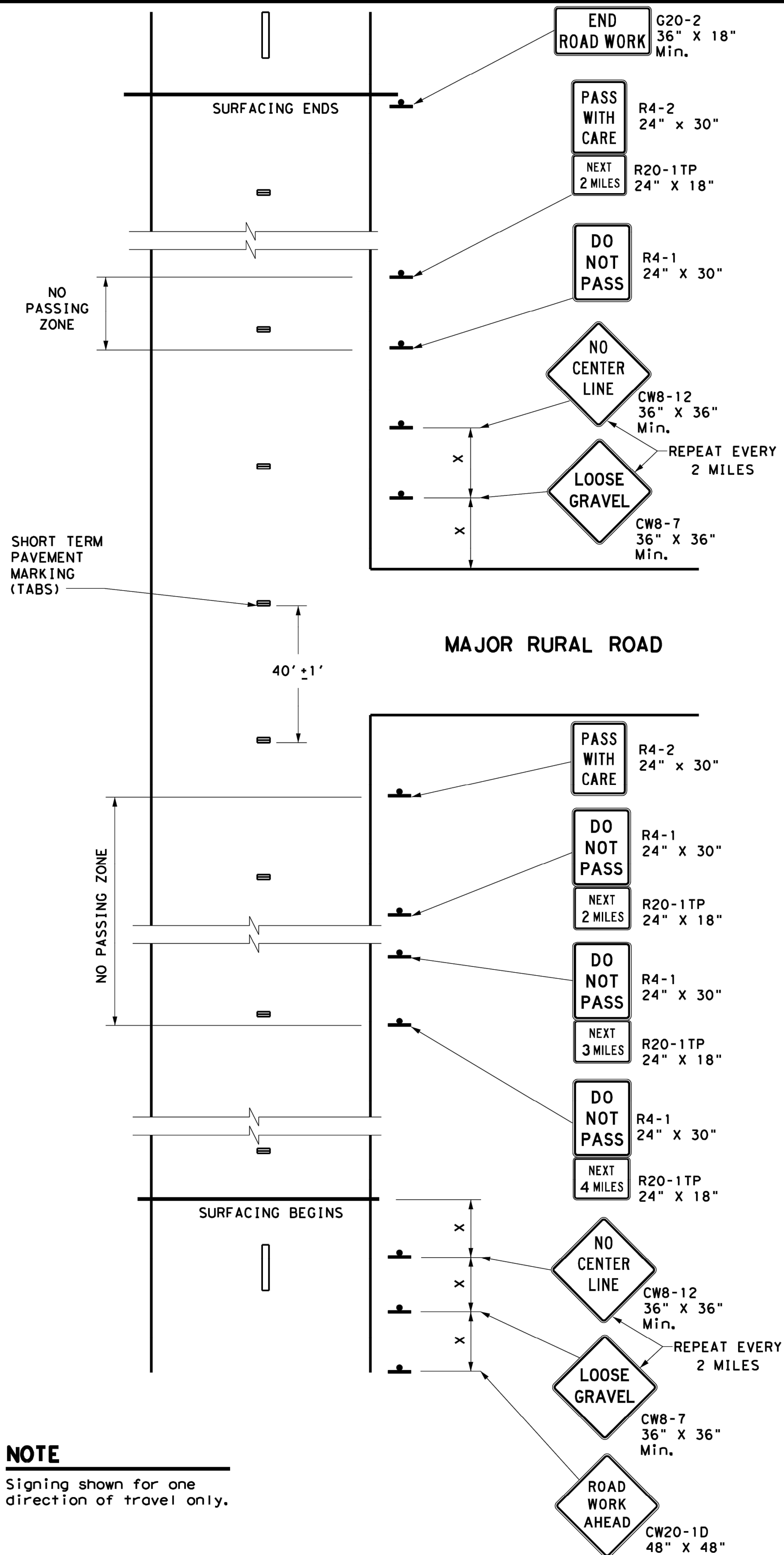


|   |      |                                      |     |  |  |
|---|------|--------------------------------------|-----|--|--|
|   |      | Traffic Operations Division Standard |     |  |  |
| TRAFFIC CONTROL PLAN<br>ONE-LANE TWO-WAY<br>TRAFFIC CONTROL |      |                                      |     |  |  |
| TCP (2-2) - 18  |      |                                      |     |  |  |
| FILE: tcp2-2-18.dgn   | DN:  | CK:                                  | DW: |  |  |
| © TxDOT December 1985                                       | CONT | SECT                                 | JOB |  |  |
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| 8-95 3-03   |      | SHEET NO.                            |     |  |  |
| 1-97 2-12   |      | 14 OF 35                             |     |  |  |
| 4-98 2-18   |      |                                      |     |  |  |



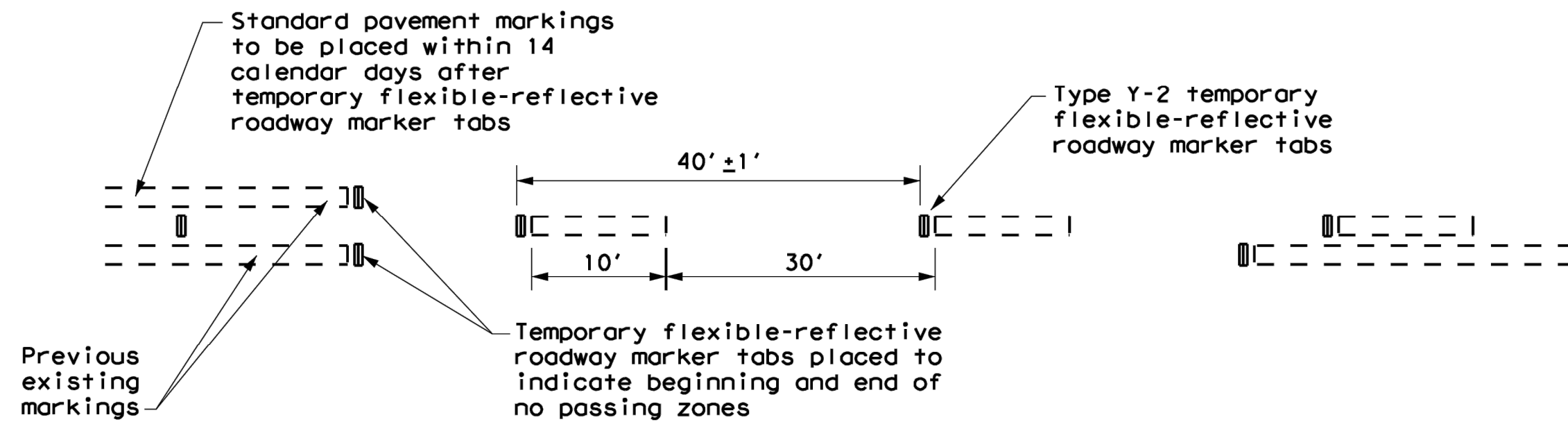
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**NOTE**  
Signing shown for one direction of travel only.

## NO PASSING ZONES ON TWO-LANE TWO-WAY ROADS



## TABS ON CENTERLINES OF TWO-LANE TWO-WAY ROADS

For seal coat, micro-surface or similar operations

### "DO NOT PASS" SIGN (R4-1) and NO-PASSING ZONES

- Prior to the beginning of construction, all currently striped no-passing zones shall be signed with the DO NOT PASS (R4-1) signs and PASS WITH CARE (R4-2) signs placed at the beginning and end of each zone for each direction of travel except as otherwise provided herein. Signs marking these individual no-passing zones need not be covered prior to construction if the signs supplement the existing pavement markings.
- At the discretion of the Engineer, in areas of numerous no-passing zones, several zones may be combined as a single zone. If passing is to be prohibited over one or more lengthy sections, a DO NOT PASS sign and a NEXT XX MILES (R20-1TP) plaque may be used at the beginning of such zones. The DO NOT PASS sign and the NEXT XX MILES plaque should be repeated every mile to the end of the no-passing zone. In areas where there is considerable distance between no-passing zones, the end of the no-passing zone may be signed with a PASS WITH CARE sign and a NEXT XX MILES plaque.
- Depending on traffic volumes and length of sections, it may be desirable to prohibit passing throughout the project to prevent damage to windshield and lights. The DO NOT PASS sign and NEXT XX MILES plaque should be used and repeated as often as necessary for this purpose. Where several existing zones are to be combined into one individual no-passing zone, the sign at the beginning of the zone should be covered until the surfacing operation has passed this location so as not to have the DO NOT PASS sign conflict with the existing pavement markings. Also, unless one days operation completes the entire length of such combined zones, appropriate DO NOT PASS and PASS WITH CARE signs should be placed at the beginning and end of the no-passing zones where the surfacing operation has stopped for the day.
- R4-1 and R4-2 are to remain in place until standard pavement markings are installed.

### "NO CENTER LINE" SIGN (CW8-12)

- Center line markings are yellow pavement markings that delineate the separation of travel lanes that have opposite directions of travel on a roadway. Divided highways do not typically have center line markings.
- At the time construction activity obliterates the existing center line markings (low volume roads may not have an existing centerline), a NO CENTER LINE (CW8-12) sign should be erected at the beginning of the work area, at approximately 2 mile intervals within the work area, beyond major intersections and other locations deemed necessary by the Engineer.
- The NO CENTER LINE signs are to remain in place until standard pavement markings are installed.

### "LOOSE GRAVEL" SIGN (CW8-7)

- When construction begins, a LOOSE GRAVEL (CW8-7) sign should be erected at each end of the work area and repeated at intervals of approximately 2 miles in rural areas and closer in urban areas.
- The LOOSE GRAVEL signs are to remain in place until the condition no longer exists.

### PAVEMENT MARKINGS

- Temporary markings for surfacing projects shall be Temporary Flexible-reflective Roadway Marker Tabs unless otherwise approved by the Engineer. Tabs are to be installed to provide true alignment for striping crews or as directed by the Engineer. Tabs will be placed at the spacing indicated. Tabs should be applied to the pavement no more than two (2) days before the surfacing is applied. After the surfacing is rolled and swept, the cover over the reflective strip shall be removed.
- Tabs shall not be used to simulate edge lines.
- Tab placement for overlay/inlay operations shall be as shown on the WZ(STPM) standard sheet.

### COORDINATION OF SIGN LOCATIONS

- The location of warning signs at the beginning and end of a work area are to be coordinated with other signing typically shown on the Barricade and Construction Standards for project limits to ensure adequate sign spacing.
- Where possible the ROAD WORK AHEAD (CW20-1D), LOOSE GRAVEL (CW8-7), and NO CENTER LINE (CW8-12) signs should be placed in the sequence shown following the OBEY WARNING SIGNS STATE LAW (R20-3T) and the TRAFFIC FINES DOUBLE (R20-5T) sign, and one "X" sign spacing prior to the CONTRACTOR (G20-6T) sign typically located at or near the limits of surfacing. LOOSE GRAVEL and NO CENTER LINE signs will then be repeated as described above.

| Posted Speed * | Minimum Sign Spacing "x" Distance |
|----------------|-----------------------------------|
| 30             | 120'                              |
| 35             | 160'                              |
| 40             | 240'                              |
| 45             | 320'                              |
| 50             | 400'                              |
| 55             | 500'                              |
| 60             | 600'                              |
| 65             | 700'                              |
| 70             | 800'                              |
| 75             | 900'                              |

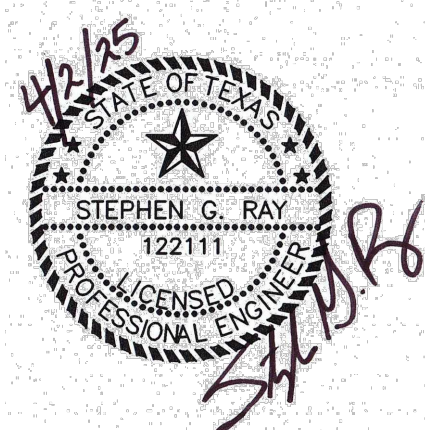
\* Conventional Roads Only

### TYPICAL USAGE

| MOBILE | SHORT DURATION | SHORT TERM STATIONARY | INTERMEDIATE TERM STATIONARY | LONG TERM STATIONARY |
|--------|----------------|-----------------------|------------------------------|----------------------|
|        |                |                       | ✓                            | ✓                    |

### GENERAL NOTES

- The traffic control devices detailed on this sheet will be furnished and erected as directed by the Engineer on sections of roadway where tabs must be placed prior to the surfacing operation which will cover or obliterate the existing pavement markings.
- The devices shown on this sheet are to be used to supplement those required by the BC Standards or others required elsewhere in the plans.
- Signs shall be erected as detailed on the BC Standards or the Compliant Work Zone Traffic Control Devices List (CWZTCD) on supports approved for Long-Term / Intermediate-Term Work Zone Sign Supports.
- When surfacing operations take place on divided highways, freeways or expressways, the size of diamond shaped construction warning signs shall be 48" x 48".
- Signs on divided highways, freeways and expressways will be placed on both right and left sides of the roadway based on roadway conditions as directed by the Engineer.



|   |           |                                      |                    |
|---|-----------|--------------------------------------|--------------------|
|   |           | Traffic Operations Division Standard |                    |
| <b>TRAFFIC CONTROL DETAILS FOR SURFACING OPERATIONS</b> |           |                                      |                    |
| <b>TCP (7-1) - 13</b>                                   |           |                                      |                    |
| FILE: tcp7-1.dgn  | DN: TxDOT | CK: TxDOT                            | DW: TxDOT          |
| © TxDOT March 1991                                      | CONT SECT | JOB                                  | HIGHWAY            |
| 4-92 4-98 1-97 7-13                                     | DIST      | COUNTY                               | SHEET NO. 15 OF 35 |



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BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

1.

The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2.

The development and design of the Traffic Control Plan (TCP) is the responsibility of the Engineer.
3.

The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.
4.

The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.
5.

Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.
6.

When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.
7.

The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.
8.

All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.
9.

The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.
10.

Where highway construction or maintenance work is being undertaken, other than mobile operations as defined by the Texas Manual on Uniform Traffic Control Devices, CSJ limit signs are required. CSJ limit signs are shown on BC(2). The OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits. For mobile operations, CSJ limit signs are not required.
11.

Traffic control devices should be in place only while work is actually in progress or a definite need exists.
12.

The Engineer has the final decision on the location of all traffic control devices.
13.

Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

WORKER SAFETY NOTES:

1.

Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel," or equivalent revisions, and labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.
2.

Except in emergency situations, flagger stations shall be illuminated when flagging is used at night.

COMPLIANT WORKZONE TRAFFIC CONTROL DEVICES

1.

Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources.
2.

Work zone traffic control devices shall be compliant with the Manual for Assessing safety Hardware (MASH).

|  |
|--|
| THE DOCUMENTS BELOW CAN BE FOUND ON-LINE AT<br><a href="http://www.txdot.gov">http://www.txdot.gov</a> |
| COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICES LIST (CWZTCD)  |
| DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS)   |
| MATERIAL PRODUCER LIST (MPL)   |
| ROADWAY DESIGN MANUAL - SEE "MANUALS (ONLINE MANUALS)"   |
| STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD)   |
| TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)   |
| TRAFFIC ENGINEERING STANDARD SHEETS  |



SHEET 1 OF 12

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION  
GENERAL NOTES  
AND REQUIREMENTS

BC(1)-21

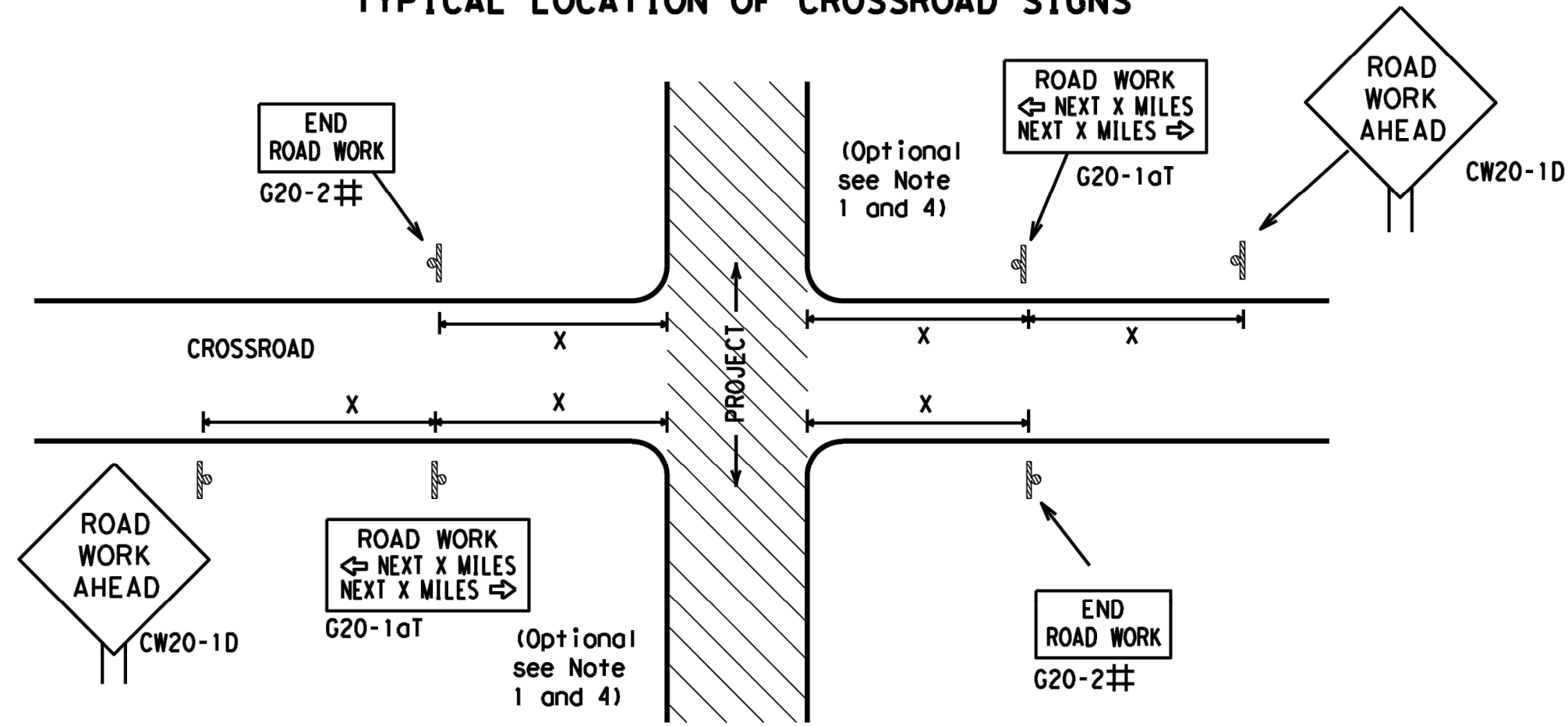
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| FILE:     | bc-21.dgn     | DN:  | TxDOT  | CK: | TxDOT   | DW: | TxDOT     | CK:      | TxDOT |
| © TxDOT   | November 2002 | CONT | SECT   | JOB | HIGHWAY |     |           |          |       |
| REVISIONS |               |      |        |     |         |     |           |          |       |
| 4-03      | 7-13          |      |        |     |         |     |           |          |       |
| 9-07      | 8-14          |      |        |     |         |     |           |          |       |
| 5-10      | 5-21          |      |        |     |         |     |           |          |       |
|           |               | DIST | COUNTY |     |         |     | SHEET NO. |          |       |
|           |               |      |        |     |         |     |           | 16 OF 35 |       |



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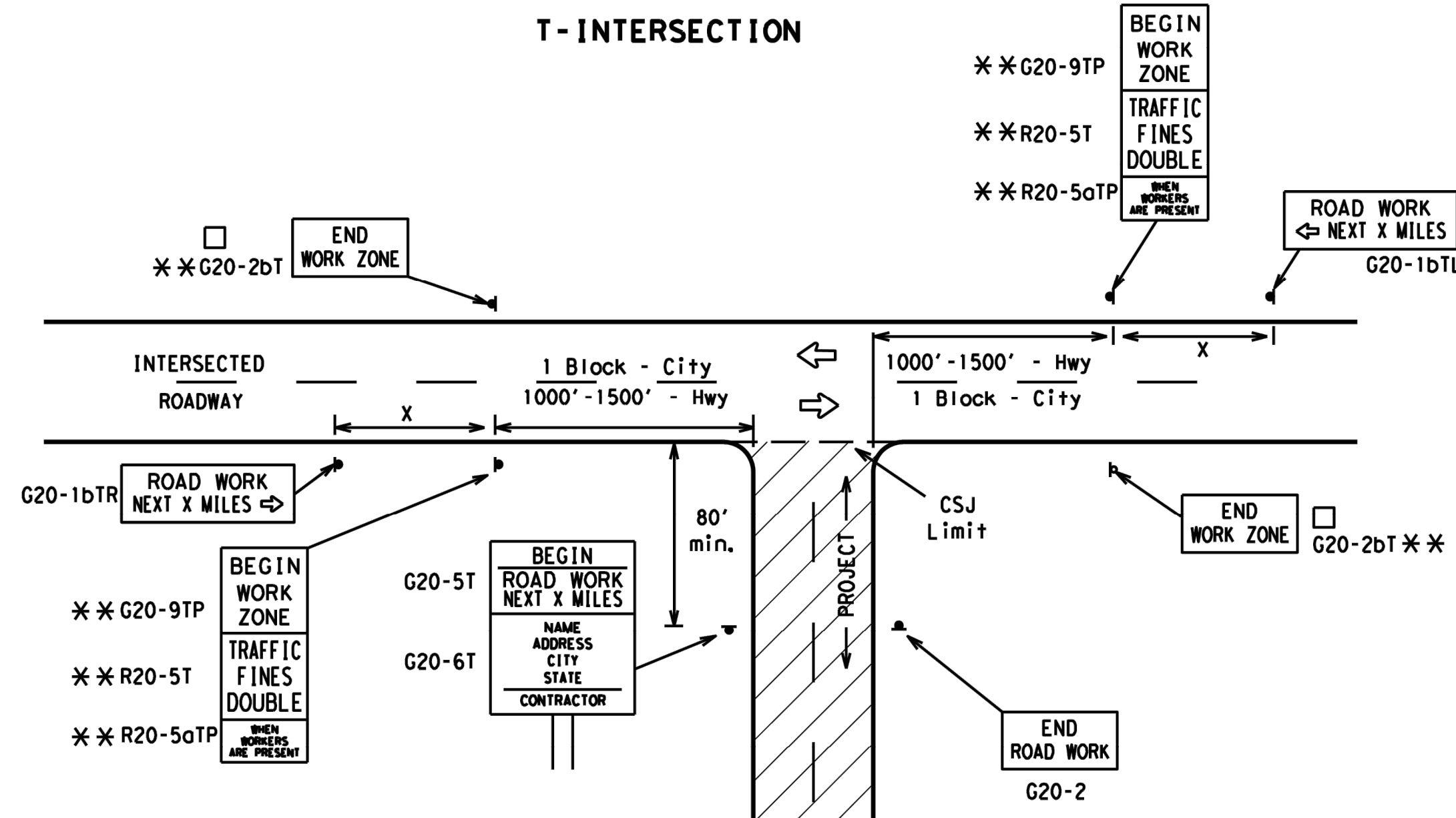
### TYPICAL LOCATION OF CROSSROAD SIGNS



## May be mounted on back of "ROAD WORK AHEAD" (CW20-1D) sign with approval of Engineer. (See note 2 below)

1. The typical minimum signing on a crossroad approach should be a "ROAD WORK AHEAD" (CW20-1D) sign and a (G20-2) "END ROAD WORK" sign, unless noted otherwise in plans.
2. The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" "END ROAD WORK" (G20-2) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume as per TMUTCD Part 5. This information shall be shown in the plans.
3. Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
4. The "ROAD WORK NEXT X MILES" (G20-1aT) sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

### T-INTERSECTION



### CSJ LIMITS AT T-INTERSECTION

1. The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
2. If construction closes the road at a T-intersection, the Contractor shall place the "CONTRACTOR NAME" (G20-6T) sign behind the Type 3 Barricades for the road closure (see BC(10) also). The "ROAD WORK NEXT X MILES" left arrow (G20-1bTL) and "ROAD WORK NEXT X MILES" right arrow (G20-1bTR) signs shall be replaced by the detour signing called for in the plans.

### TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING<sup>L5,6</sup>

| Sign Number or Series                 | SIZE              |                    | SPACING          |   |
|---------------------------------------|-------------------|--------------------|------------------|---|
|                                       | Conventional Road | Expressway/Freeway | Posted Speed MPH | Sign $\Delta$ Spacing "x" Feet (Apprx.) |
| CW20 <sup>4</sup>                     | 48" x 48"         | 48" x 48"          | 30               | 120                                     |
| CW21                                  |                   |                    | 35               | 160                                     |
| CW22                                  |                   |                    | 40               | 240                                     |
| CW23                                  |                   |                    | 45               | 320                                     |
| CW25                                  |                   |                    | 50               | 400                                     |
| CW1, CW2, CW7, CW8, CW9, CW11, CW14   | 36" x 36"         | 48" x 48"          | 55               | 500 <sup>2</sup>                        |
| CW3, CW4, CW5, CW6, CW8-3, CW10, CW12 | 48" x 48"         | 48" x 48"          | 60               | 600 <sup>2</sup>                        |
|                                       |                   |                    | 65               | 700 <sup>2</sup>                        |
|                                       |                   |                    | 70               | 800 <sup>2</sup>                        |
|                                       |                   |                    | 75               | 900 <sup>2</sup>                        |
| *                                     |                   |                    | 80               | 1000 <sup>2</sup>                       |
|                                       |                   |                    | *                | *                                       |

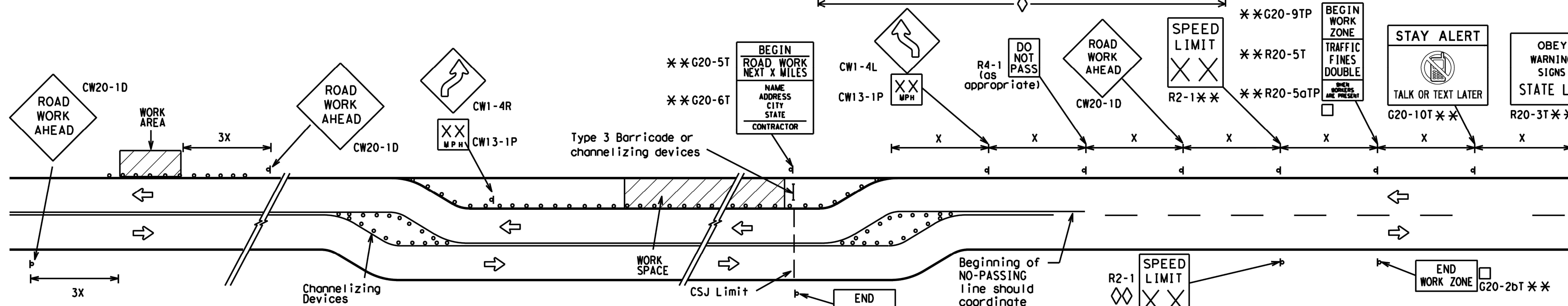
\* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

$\Delta$  Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

### GENERAL NOTES

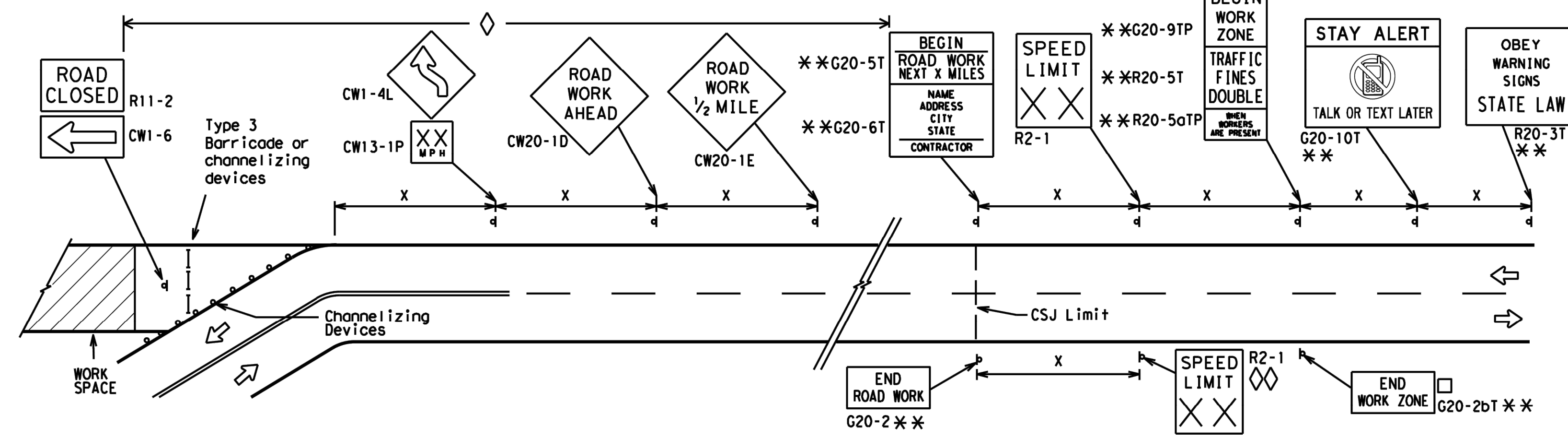
1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 1/2 mile or more advance warning.
4. 36" x 36" "ROAD WORK AHEAD" (CW20-1D) signs may be used on low volume crossroads at the discretion of the Engineer as per TMUTCD Part 5. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

### WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



When extended distances occur between minimal work spaces, the Engineer/Inspector should ensure additional "ROAD WORK AHEAD" (CW20-1D) signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

### SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS



### NOTES

The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and "BEGIN ROAD WORK NEXT X MILES" (G20-5T) sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.

- The "BEGIN WORK ZONE" (G20-9TP) and "END WORK ZONE" (G20-2bT) shall be used as shown on the sample layout when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a part of the work zone lying outside the CSJ Limits where traffic fines may double if workers are present.

\*\* CSJ limit signing is required for highway construction and maintenance work, with the exception of mobile operations.

$\diamond$  Area for placement of "ROAD WORK AHEAD" (CW20-1D) sign and other signs or devices as called for on the Traffic Control Plan.

$\diamond\diamond$  Contractor will install a regulatory speed limit sign at the end of the work zone.

### LEGEND

|       |   |
|-------|---|
| —     | Type 3 Barricade  |
| ○ ○ ○ | Channelizing Devices  |
| —     | Sign  |
| X     | See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements. |

SHEET 2 OF 12



## BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC (2) - 21

|                       |           |           |           |           |
|-----------------------|-----------|-----------|-----------|-----------|
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| © TxDOT November 2002 | CONT      | SECT      | JOB       | HIGHWAY   |
| REVISIONS             |           |           |           |           |
| 9-07 8-14             |           |           |           |           |
| 7-13 5-21             |           |           |           |           |
|                       | DIST      | COUNTY    |           | SHEET NO. |
|                       |           |           |           | 17 OF 35  |



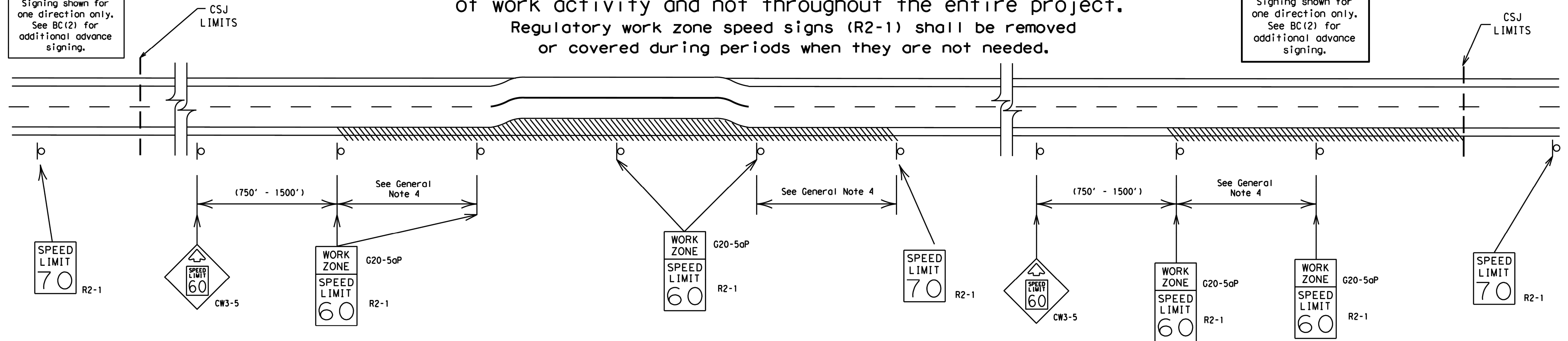
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Signing shown for  
one direction only.  
See BC(2) for  
additional advance  
signing.

Signing shown for  
one direction only.  
See BC(2) for  
additional advance  
signing.



## LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

Long/Intermediate Term Work Zone Speed Limit signs, when approved as described above, should be posted and visible to the motorist when work activity is present. Work activity may also be defined as a change in the roadway that requires a reduced speed for motorists to safely negotiate the work area, including:

- a) rough road or damaged pavement surface
- b) substantial alteration of roadway geometrics (diversions)
- c) construction detours
- d) grade
- e) width
- f) other conditions readily apparent to the driver

## SHORT TERM WORK ZONE SPEED LIMITS

Short Term Work Zone Speed Limit signs should be posted and visible to the motorists only when work activity is present. When work activity is not present, signs shall be removed or covered.  
(See Removing or Covering on BC(4)).

1. Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
2. Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
3. Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
4. Frequency of work zone speed limit signs should be:

|                    |                |
|--------------------|----------------|
| 40 mph and greater | 0.2 to 2 miles |
| 35 mph and less    | 0.2 to 1 mile  |
5. Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
6. Fabrication, erection and maintenance of the "ADVANCE SPEED LIMIT" (CW3-5) sign, "WORK ZONE" (G20-5aP) plaque and the "SPEED LIMIT" (R2-1) signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
7. Turning signs from view, laying signs over or down will not be allowed, unless as otherwise noted under "REMOVING OR COVERING" on BC(4).
8. Techniques that may help reduce traffic speeds include but are not limited to:
  - A. Law enforcement.
  - B. Flagger stationed next to sign.
  - C. Portable changeable message sign (PCMS).
  - D. Low-power (drone) radar transmitter.
  - E. Speed monitor trailers or signs.
9. Speeds shown on details above are for illustration only.  
Work Zone Speed Limits should only be posted as approved for each project.
10. For more specific guidance concerning the type of work, work zone conditions and factors impacting allowable regulatory construction speed zone reduction see TxDOT form #1204 in the TxDOT e-form system.



|  |  |
|--|--|
|  <p><b>Texas Department of Transportation</b></p> | <p><b>Traffic<br/>Safety<br/>Division<br/>Standard</b></p> |
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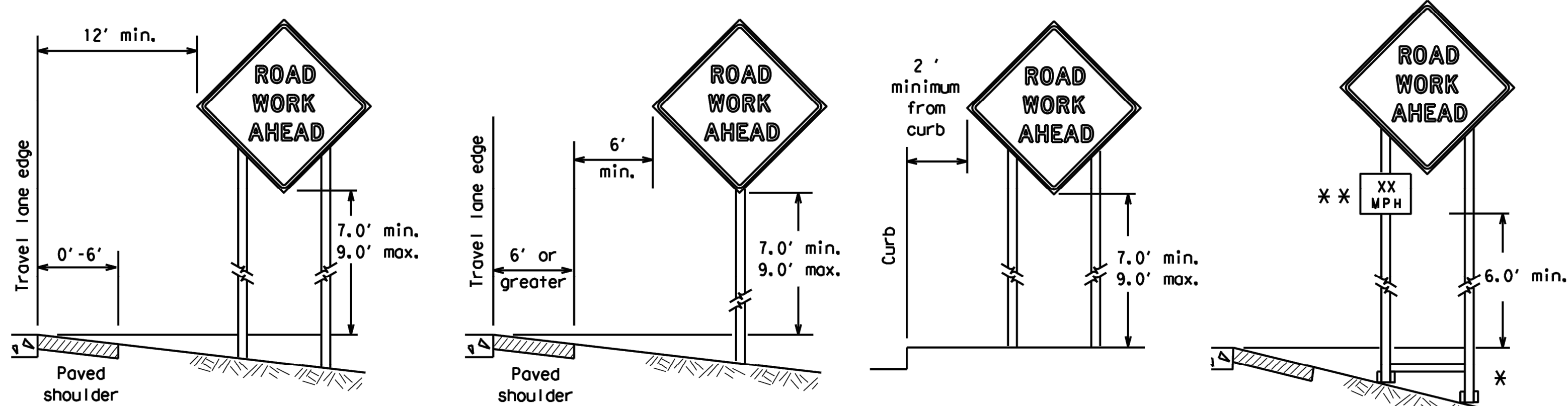
**BC (3) - 21**

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| 7-13 5-21            |  |           |  |           |  |           | 18 OF 35  |           |  |



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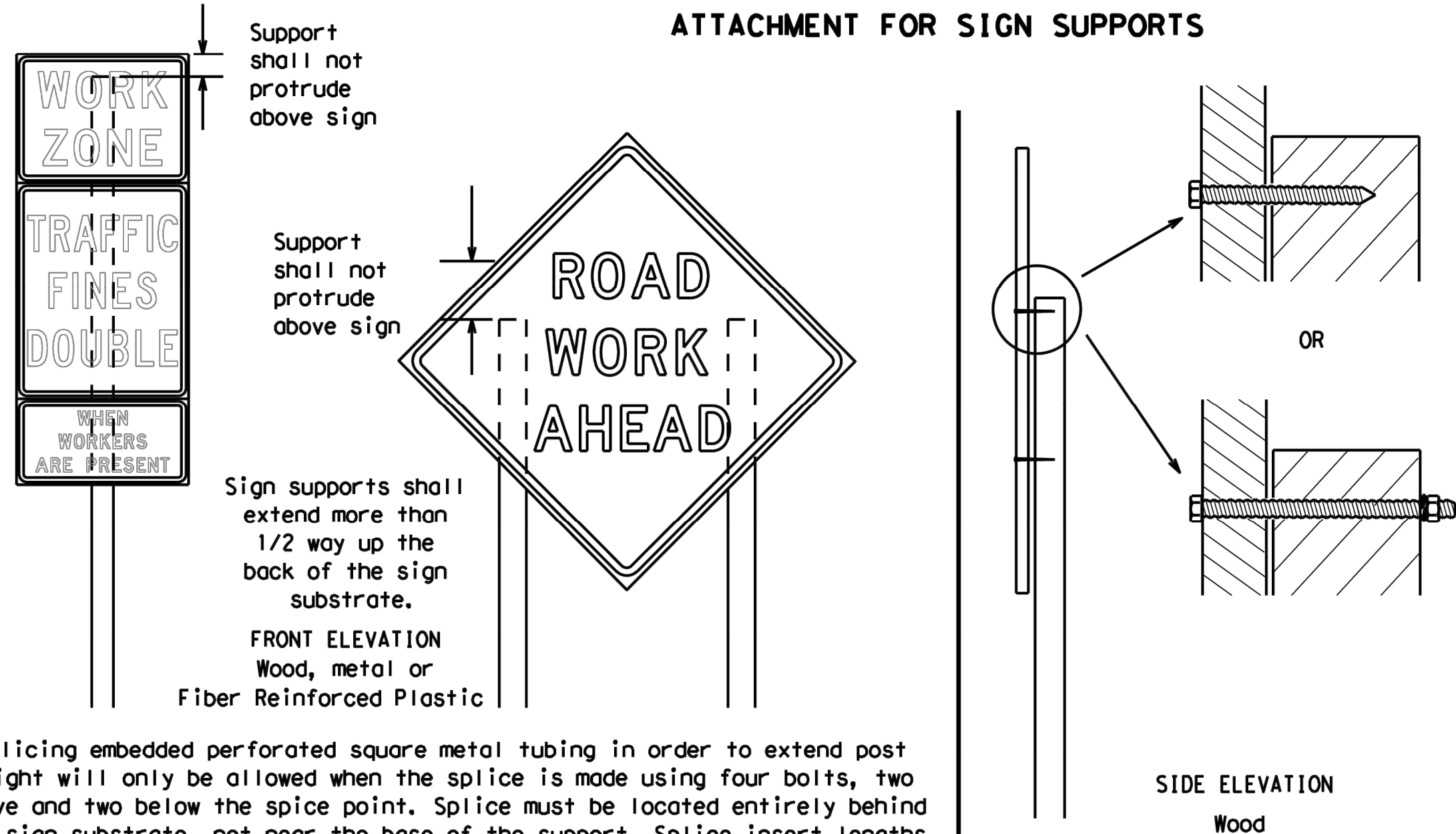
### TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



\* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

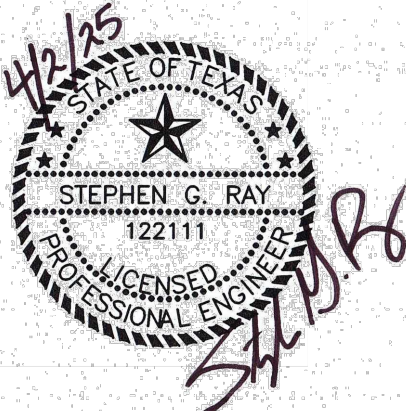
\*\* When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

### ATTACHMENT FOR SIGN SUPPORTS



Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

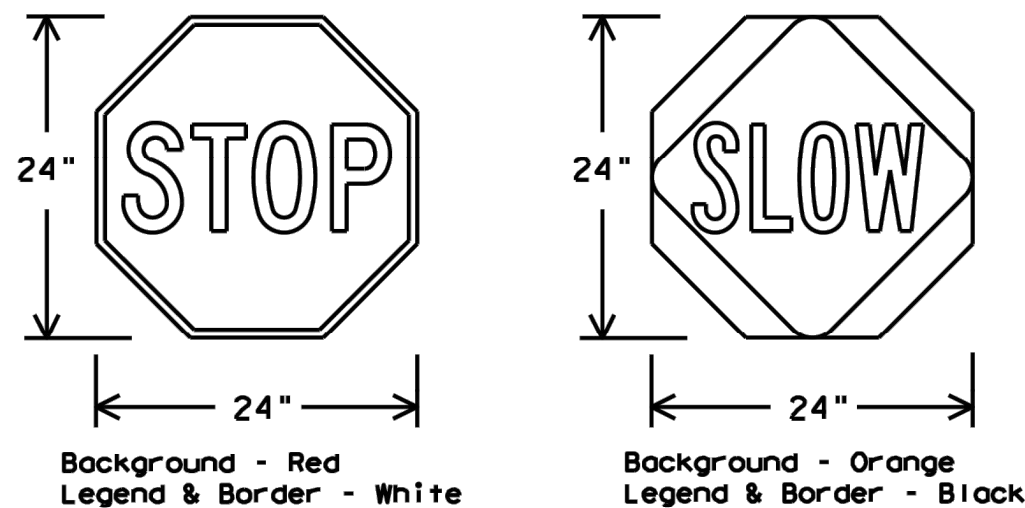
Nails shall NOT be allowed. Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.



Splicing embedded perforated square metal tubing in order to extend post height will only be allowed when the splice is made using four bolts, two above and two below the splice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same gauge material.

### STOP/SLOW PADDLES

1. STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24".
2. STOP/SLOW paddles shall be retroreflectORIZED when used at night.
3. STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
4. Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



| SHEETING REQUIREMENTS (WHEN USED AT NIGHT) |        |  |
|--|--------|--|
| USAGE                                      | COLOR  | SIGN FACE MATERIAL                               |
| BACKGROUND                                 | RED    | TYPE B OR C SHEETING                             |
| BACKGROUND                                 | ORANGE | TYPE B <sub>FL</sub> OR C <sub>FL</sub> SHEETING |
| LEGEND & BORDER                            | WHITE  | TYPE B OR C SHEETING                             |
| LEGEND & BORDER                            | BLACK  | ACRYLIC NON-REFLECTIVE FILM                      |

### CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

1. Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, specific service (LOGO), or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
2. When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition. For details for covering large guide signs see the TS-CD standard.
3. When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
4. If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
5. If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC standard sheets, TLRs standard sheets or the CWZTCD list. The signs shall meet the required mounting heights shown on the BC, or the SMD standard sheets during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
6. Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

### GENERAL NOTES FOR WORK ZONE SIGNS

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
5. The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
6. The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD) for small roadside signs. Supports for temporary large roadside signs shall meet the requirements detailed on the Temporary Large Roadside Signs (TLRS) standard sheets. The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
7. The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
8. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
9. The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.

### DURATION OF WORK (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)

1. The types of sign supports, sign mounting height, the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
  - a. Long-term stationary - work that occupies a location more than 3 days.
  - b. Intermediate-term stationary - work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
  - c. Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
  - d. Short, duration - work that occupies a location up to 1 hour.
  - e. Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

### SIGN MOUNTING HEIGHT

1. The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
2. The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
3. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
4. Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday or raised to appropriate Long-term/Intermediate sign height.
5. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

### SIZE OF SIGNS

1. The Contractor shall furnish the sign sizes shown on BC (2) unless otherwise shown in the plans or as directed by the Engineer.

### SIGN SUBSTRATES

1. The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
2. "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
3. All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

### REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
2. White sheeting, meeting the requirements of DMS-8300 Type A, shall be used for signs with a white background.
3. Orange sheeting, meeting the requirements of DMS-8300 Type B<sub>FL</sub> or Type C<sub>FL</sub>, shall be used for rigid signs with orange backgrounds.

### SIGN LETTERS

1. All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

### REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
2. Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
3. Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
4. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
5. Burlap shall NOT be used to cover signs.
6. Duct tape or other adhesive material shall NOT be affixed to a sign face.
7. Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

### SIGN SUPPORT WEIGHTS

1. Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand should be used.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as fire inner tubes) shall NOT be used.
6. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
7. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

### FLAGS ON SIGNS

1. Flags may be used to draw attention to warning signs. When used, the flag shall be 16 inches square or larger and shall be orange or fluorescent red-orange in color. Flags shall not be allowed to cover any portion of the sign face.

SHEET 4 OF 12



## BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

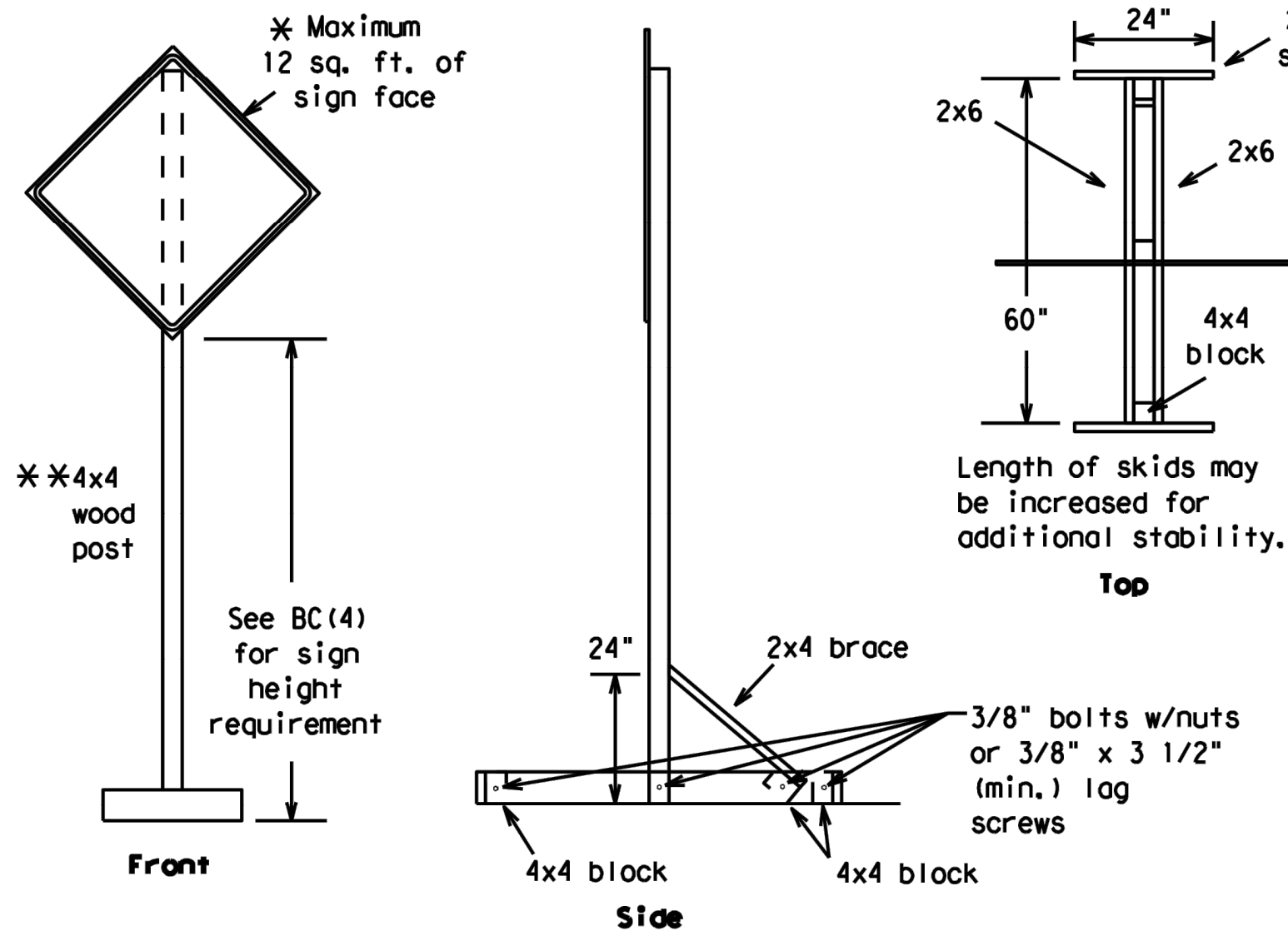
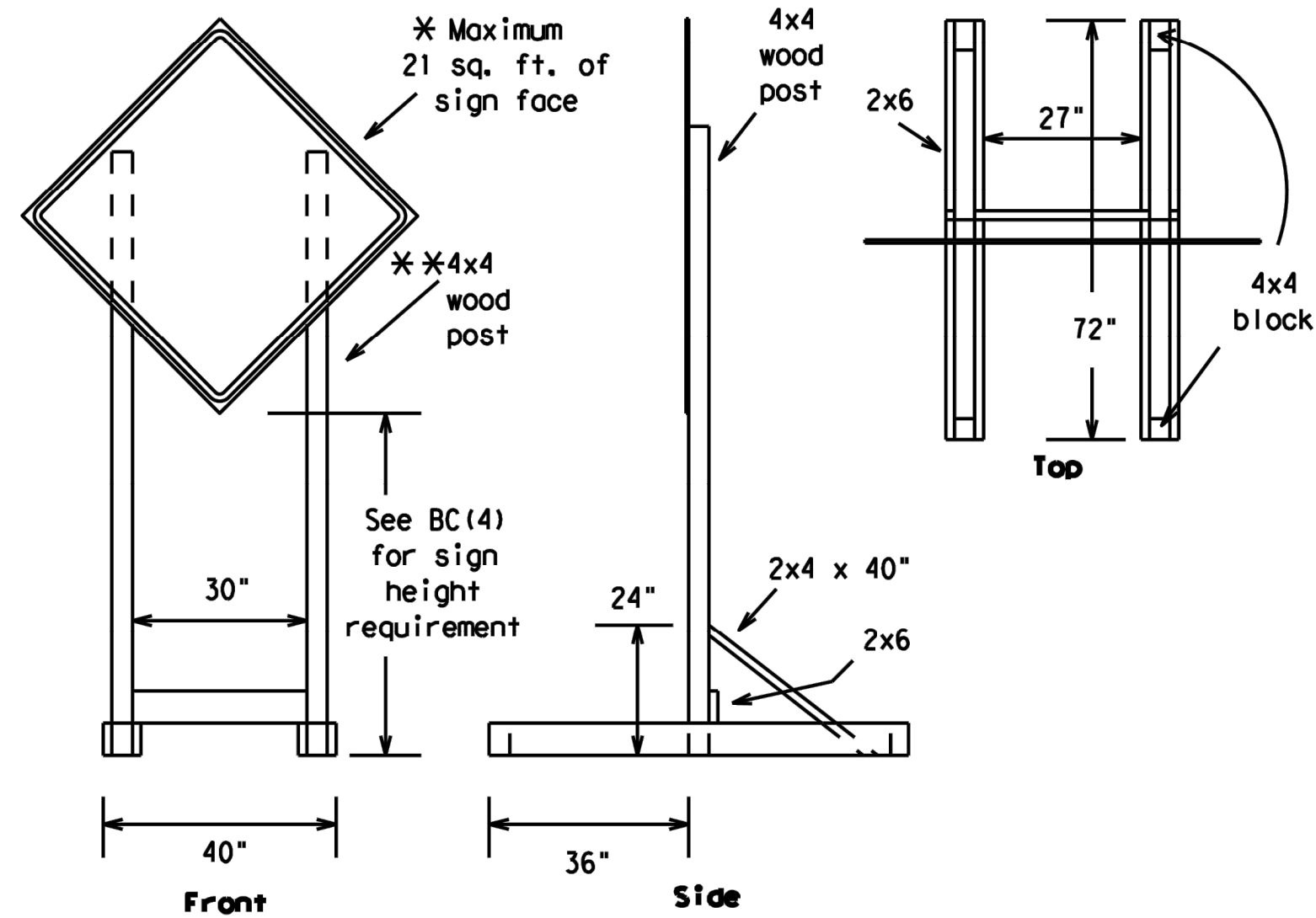
BC (4) - 21

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| © TxDOT   | November 2002 | CONT | SECT  | JOB    |       |     | HIGHWAY |           |       |
| REVISIONS |               |      |       |        |       |     |         |           |       |
| 9-07      | 8-14          | DIST |       | COUNTY |       |     |         | SHEET NO. |       |
| 7-13      | 5-21          |      |       |        |       |     |         | 19 OF 35  |       |



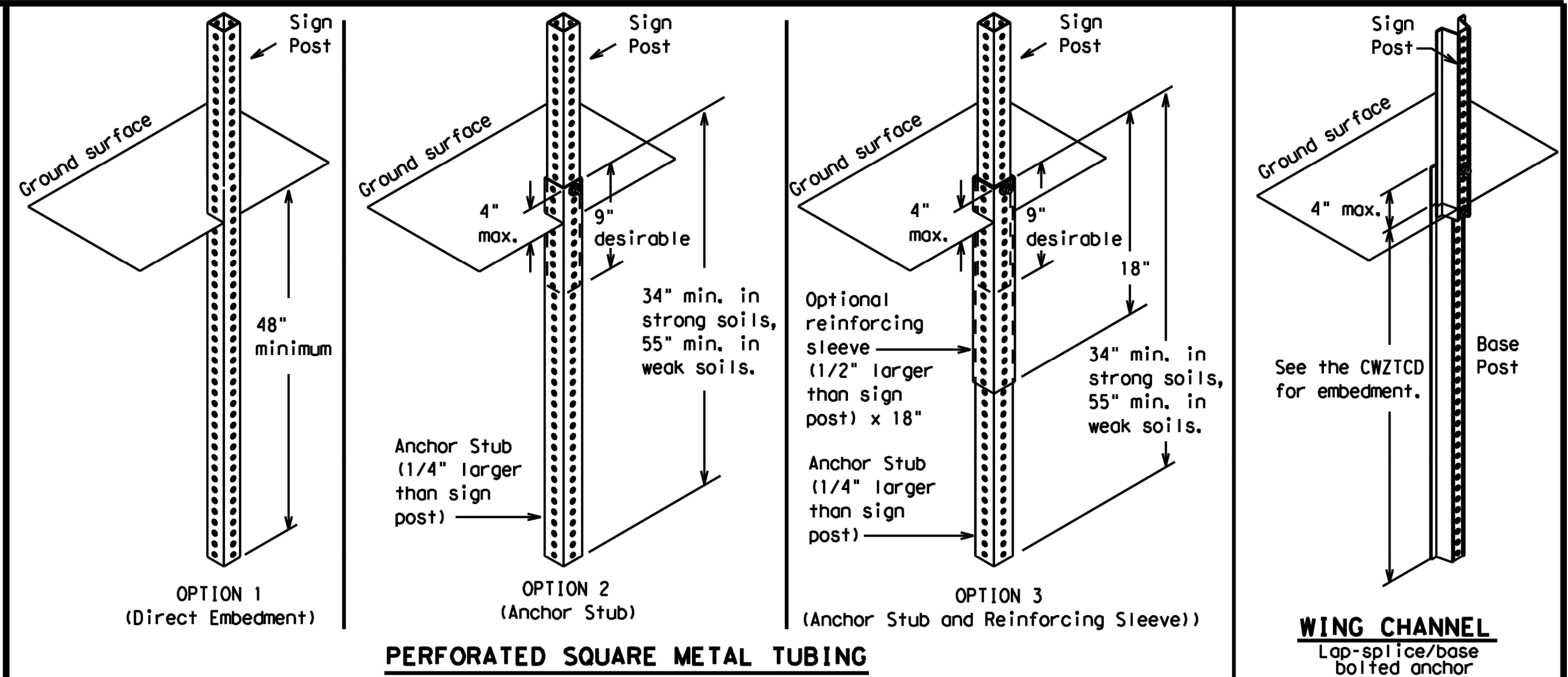
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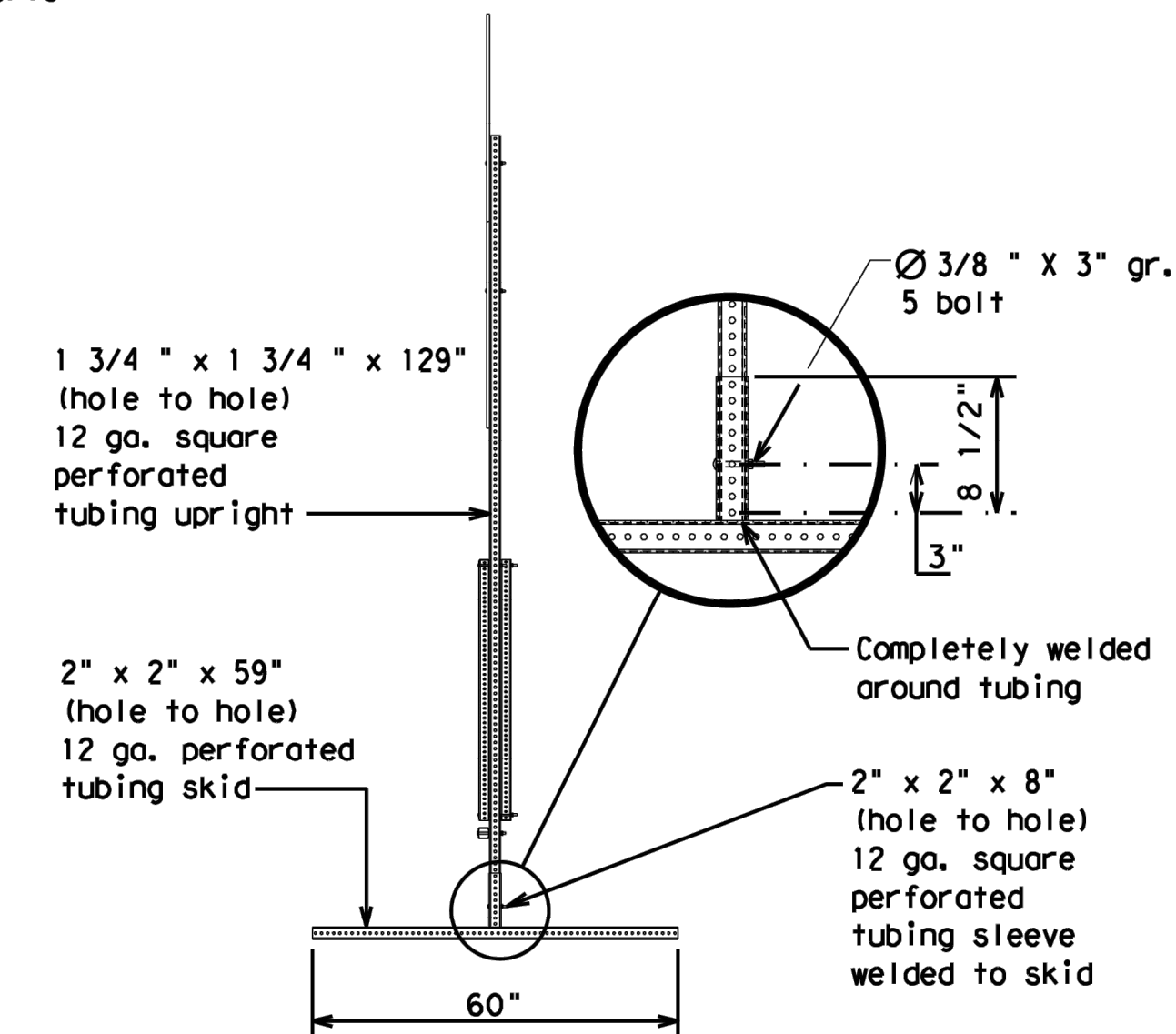
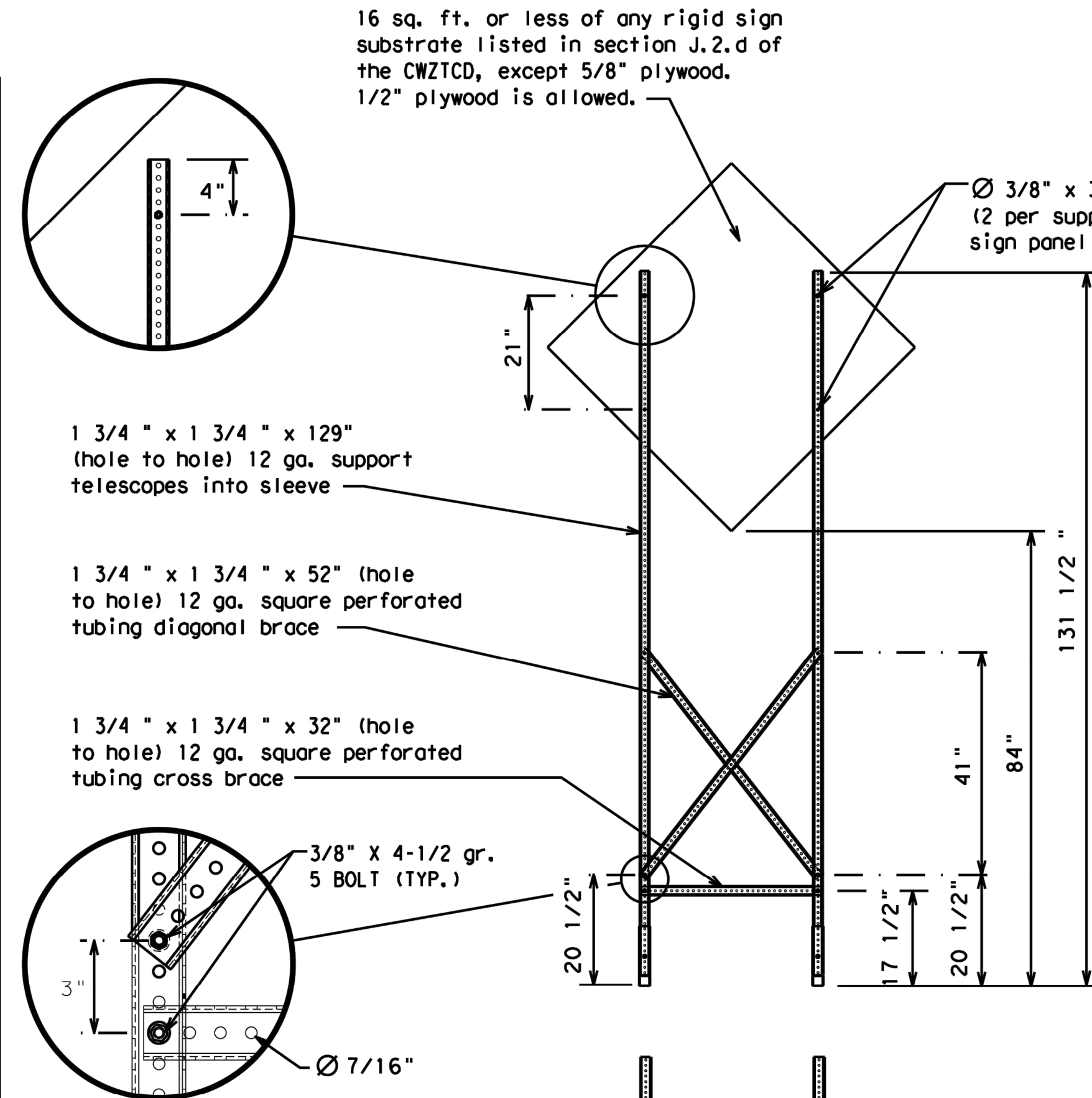
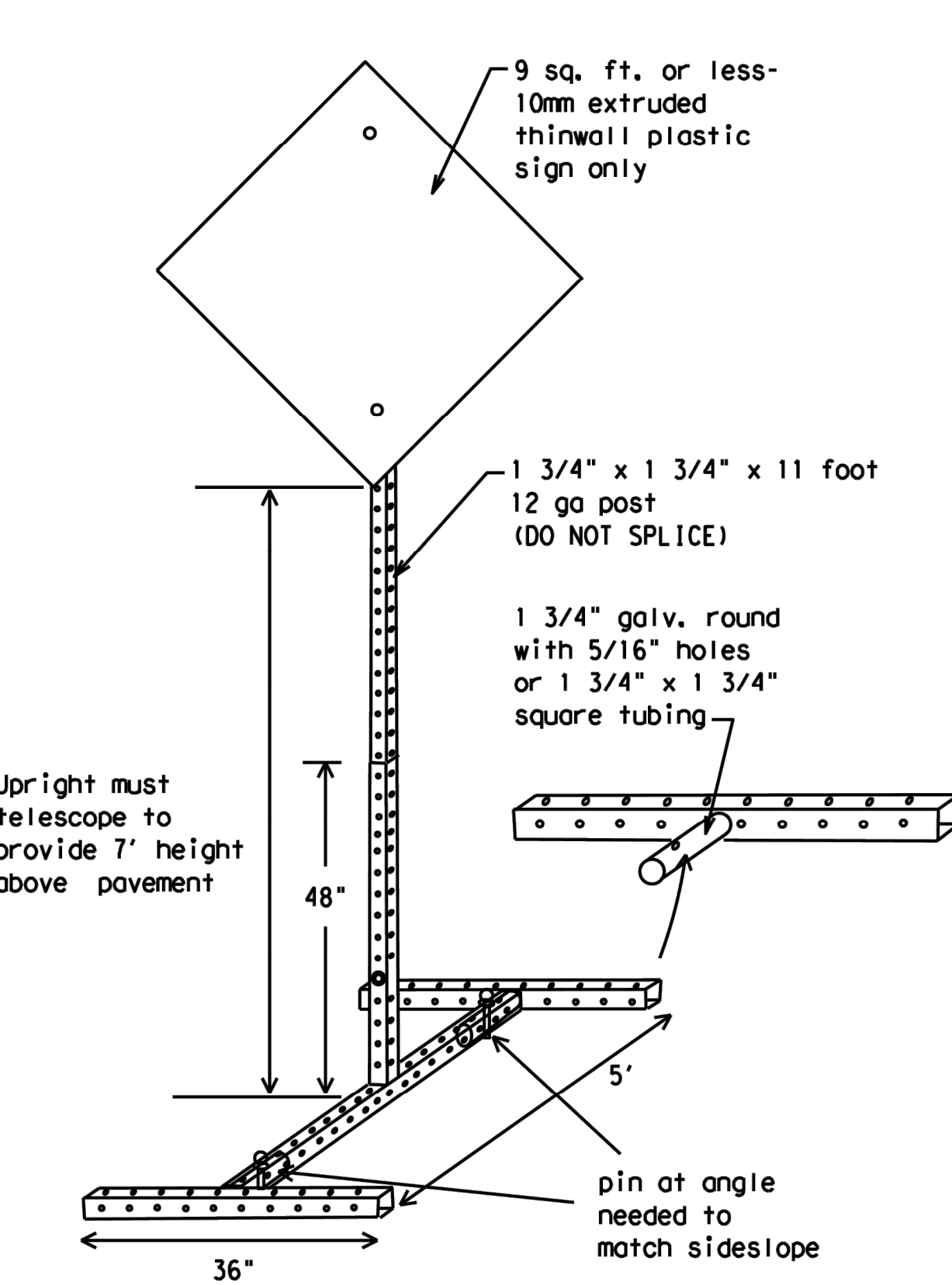
### SKID MOUNTED WOOD SIGN SUPPORTS

\* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS



### GROUND MOUNTED SIGN SUPPORTS

Refer to the CWZTCD and the manufacturer's installation procedure for each type sign support. The maximum sign square footage shall adhere to the manufacturer's recommendation. Two post installations can be used for larger signs.



### WEDGE ANCHORS

Both steel and plastic Wedge Anchor Systems as shown on the SMD Standard Sheets may be used as temporary sign supports for signs up to 10 square feet of sign face. They may be set in concrete or in sturdy soils if approved by the Engineer. (See web address for "Traffic Engineering Standard Sheets" on BC(1)).

### OTHER DESIGNS

MORE DETAILS OF APPROVED LONG/INTERMEDIATE AND SHORT TERM SUPPORTS CAN BE FOUND ON THE CWZTCD LIST. SEE BC(1) FOR WEBSITE LOCATION.

### GENERAL NOTES

1. Nails may be used in the assembly of wooden sign supports, but 3/8" bolts with nuts or 3/8" x 3 1/2" lag screws must be used on every joint for final connection.
2. No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
3. When project is completed, all sign supports and foundations shall be removed from the project site. This will be considered subsidiary to Item 502.

- \* See BC(4) for definition of "Work Duration."
- \*\* Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.
- ☐ See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

SHEET 5 OF 12



## BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC (5) - 21

|         |               |      |        |     |           |         |       |           |          |
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| 9-07    | 8-14          |      |        |     |           |         |       |           |          |
| 7-13    | 5-21          |      |        |     |           |         |       |           |          |
|         |               | DIST | COUNTY |     |           |         |       | SHEET NO. | 20 OF 35 |





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DATE:  
FILE:

WHEN NOT IN USE, REMOVE THE PCMS FROM THE RIGHT-OF-WAY OR PLACE THE PCMS BEHIND BARRIER OR GUARDRAIL WITH SIGN PANEL TURNED PARALLEL TO TRAFFIC

PORTABLE CHANGEABLE MESSAGE SIGNS

1. The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
2. Messages on PCMS should contain no more than 8 words (about four to eight characters per word), not including simple words such as "TO," "FOR," "AT," etc.
3. Messages should consist of a single phase, or two phases that alternate. Three-phase messages are not allowed. Each phase of the message should convey a single thought, and must be understood by itself.
4. Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
5. Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
6. When in use, the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
7. The message term "WEEKEND" should be used only if the work is to start on Saturday morning and end by Sunday evening at midnight. Actual days and hours of work should be displayed on the PCMS if work is to begin on Friday evening and/or continue into Monday morning.
8. The Engineer/Inspector may select one of two options which are available for displaying a two-phase message on a PCMS. Each phase may be displayed for either four seconds each or for three seconds each.
9. Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
10. Do not present redundant information on a two-phase message; i.e., keeping two lines of the message the same and changing the third line.
11. Do not use the word "Danger" in message.
12. Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
13. Do not display messages that scroll horizontally or vertically across the face of the sign.
14. The following table lists abbreviated words and two-word phrases that are acceptable for use on a PCMS. Both words in a phrase must be displayed together. Words or phrases not on this list should not be abbreviated, unless shown in the TMUTCD.
15. PCMS character height should be at least 18 inches for trailer mounted units. They should be visible from at least 1/2 (.5) mile and the text should be legible from at least 600 feet at night and 800 feet in daylight. Truck mounted units must have a character height of 10 inches and must be legible from at least 400 feet.
16. Each line of text should be centered on the message board rather than left or right justified.
17. If disabled, the PCMS should default to an illegible display that will not alarm motorists and will only be used to alert workers that the PCMS has malfunctioned. A pattern such as a series of horizontal solid bars is appropriate.

| WORD OR PHRASE     | ABBREVIATION |
|--------------------|--------------|
| Access Road        | ACCS RD      |
| Alternate          | ALT          |
| Avenue             | AVE          |
| Best Route         | BEST RTE     |
| Boulevard          | BLVD         |
| Bridge             | BRDG         |
| Cannot             | CANT         |
| Center             | CTR          |
| Construction Ahead | CONST AHD    |
| CROSSING           | XING         |
| Detour Route       | DETOUR RTE   |
| Do Not             | DONT         |
| East               | E            |
| Eastbound          | (route) E    |
| Emergency          | EMER         |
| Emergency Vehicle  | EMER VEH     |
| Entrance, Enter    | ENT          |
| Express Lane       | EXP LN       |
| Expressway         | EXPWY        |
| XXXX Feet          | XXXX FT      |
| Fog Ahead          | FOG AHD      |
| Freeway            | FRWY, FWY    |
| Freeway Blocked    | FWY BLKD     |
| Friday             | FRI          |
| Hazardous Driving  | HAZ DRIVING  |
| Hazardous Material | HAZMAT       |
| High-Occupancy     | HOV          |
| Vehicle            | HWY          |
| Highway            | HR, HRS      |
| Hour(s)            | HR, HRS      |
| Information        | INFO         |
| It Is              | ITS          |
| Junction           | JCT          |
| Left               | LFT          |
| Left Lane          | LFT LN       |
| Lane Closed        | LN CLOSED    |
| Lower Level        | LWR LEVEL    |
| Maintenance        | MAINT        |

Roadway designation \* IH-number, US-number, SH-number, FM-number

| WORD OR PHRASE | ABBREVIATION |
|----------------|--------------|
| Major          | MAJ          |
| Miles          | MI           |
| Miles Per Hour | MPH          |
| Minor          | MNR          |
| Monday         | MON          |
| Normal         | NORM         |
| North          | N            |
| Northbound     | (route) N    |
| Parking        | PKING        |
| Road           | RD           |
| Right Lane     | RT LN        |
| Saturday       | SAT          |
| Service Road   | SERV RD      |
| Shoulder       | SHLDR        |
| Slippery       | SLIP         |
| South          | S            |
| Southbound     | (route) S    |
| Speed          | SPD          |
| Street         | ST           |
| Sunday         | SUN          |
| Telephone      | PHONE        |
| Temporary      | TEMP         |
| Thursday       | THURS        |
| To Downtown    | TO DWNTN     |
| Traffic        | TRAF         |
| Travelers      | TRVLRS       |
| Tuesday        | TUES         |
| Time Minutes   | TIME MIN     |
| Upper Level    | UPR LEVEL    |
| Vehicles (s)   | VEH, VEHS    |
| Warning        | WARN         |
| Wednesday      | WED          |
| Weight Limit   | WT LIMIT     |
| West           | W            |
| Westbound      | (route) W    |
| Wet Pavement   | WET PVMT     |
| Will Not       | WONT         |

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

(The Engineer may approve other messages not specifically covered here.)

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

|                             |
|-----------------------------|
| FREEWAY<br>CLOSED<br>X MILE |
| ROAD<br>CLOSED<br>AT SH XXX |
| ROAD<br>CLSD AT<br>FM XXXX  |
| RIGHT X<br>LANES<br>CLOSED  |
| CENTER<br>LANE<br>CLOSED    |
| NIGHT<br>LANE<br>CLOSURES   |
| VARIOUS<br>LANES<br>CLOSED  |
| EXIT<br>CLOSED              |
| MALL<br>DRIVEWAY<br>CLOSED  |
| XXXXXXXX<br>BLVD<br>CLOSED  |

Other Condition List

|                                |
|--------------------------------|
| FRONTAGE<br>ROAD<br>CLOSED     |
| SHOULDER<br>CLOSED<br>XXX FT   |
| RIGHT LN<br>CLOSED<br>XXX FT   |
| RIGHT X<br>LANES<br>OPEN       |
| DAYTIME<br>LANE<br>CLOSURES    |
| I-XX SOUTH<br>EXIT<br>CLOSED   |
| EXIT XXX<br>CLOSED<br>X MILE   |
| RIGHT LN<br>TO BE<br>CLOSED    |
| X LANES<br>CLOSED<br>TUE - FRI |

|                                |
|--------------------------------|
| ROADWORK<br>XXX FT             |
| FLAGGER<br>XXXX FT             |
| RIGHT LN<br>NARROWS<br>XXXX FT |
| MERGING<br>TRAFFIC<br>XXXX FT  |
| LOOSE<br>GRAVEL<br>XXXX FT     |
| DETOUR<br>X MILE               |
| ROADWORK<br>PAST<br>SH XXXX    |
| BUMP<br>XXXX FT                |
| TRAFFIC<br>SIGNAL<br>XXXX FT   |

|                               |
|-------------------------------|
| ROAD<br>REPAIRS<br>XXXX FT    |
| LANE<br>NARROWS<br>XXXX FT    |
| TWO-WAY<br>TRAFFIC<br>XX MILE |
| CONST<br>TRAFFIC<br>XXX FT    |
| UNEVEN<br>LANES<br>XXXX FT    |
| ROUGH<br>ROAD<br>XXXX FT      |
| ROADWORK<br>NEXT<br>FRI-SUN   |
| US XXX<br>EXIT<br>X MILES     |
| LANES<br>SHIFT                |

\* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

APPLICATION GUIDELINES

1. Only 1 or 2 phases are to be used on a PCMS.
2. The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
3. A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
4. A Location Phase is necessary only if a distance or location is not included in the first phase selected.
5. If two PCMS are used in sequence, they must be separated by a minimum of 1000 ft. Each PCMS shall be limited to two phases, and should be understandable by themselves.
6. For advance notice, when the current date is within seven days of the actual work date, calendar days should be replaced with days of the week. Advance notification should typically be for no more than one week prior to the work.

PCMS SIGNS WITHIN THE R.O.W. SHALL BE BEHIND GUARDRAIL OR CONCRETE BARRIER OR SHALL HAVE A MINIMUM OF FOUR (4) PLASTIC DRUMS PLACED PERPENDICULAR TO TRAFFIC ON THE UPSTREAM SIDE OF THE PCMS, WHEN EXPOSED TO ONE DIRECTION OF TRAFFIC. WHEN EXPOSED TO TWO WAY TRAFFIC, THE FOUR DRUMS SHOULD BE PLACED WITH ONE DRUM AT EACH OF THE FOUR CORNERS OF THE UNIT.

FULL MATRIX PCMS SIGNS

1. When Full Matrix PCMS signs are used, the character height and legibility/visibility requirements shall be maintained as listed in Note 15 under "PORTABLE CHANGEABLE MESSAGE SIGNS" above.
2. When symbol signs, such as the "Flagger Symbol" (CW20-7) are represented graphically on the Full Matrix PCMS sign and, with the approval of the Engineer, it shall maintain the legibility/visibility requirement listed above.
3. When symbol signs are represented graphically on the Full Matrix PCMS, they shall only supplement the use of the static sign represented, and shall not substitute for, or replace that sign.
4. A full matrix PCMS may be used to simulate a flashing arrow board provided it meets the visibility, flash rate and dimming requirements on BC(7), for the same size arrow.

Phase 2: Possible Component Lists

Action to Take/Effect on Travel List

|                            |
|----------------------------|
| MERGE<br>RIGHT             |
| DETOUR<br>NEXT<br>X EXITS  |
| USE<br>EXIT XXX            |
| STAY ON<br>US XXX<br>SOUTH |
| TRUCKS<br>USE<br>US XXX N  |
| WATCH<br>FOR<br>TRUCKS     |
| EXPECT<br>DELAYS           |
| REDUCE<br>SPEED<br>XXX FT  |
| USE<br>OTHER<br>ROUTES     |
| STAY<br>IN<br>LANE         |

|                            |
|----------------------------|
| FORM<br>X LINES<br>RIGHT   |
| USE<br>XXXXX<br>RD EXIT    |
| USE EXIT<br>I-XX<br>NORTH  |
| USE<br>I-XX E<br>TO I-XX N |
| WATCH<br>FOR<br>TRUCKS     |
| EXPECT<br>DELAYS           |
| END<br>SHOULDER<br>USE     |
| WATCH<br>FOR<br>WORKERS    |

Location List

|                                |
|--------------------------------|
| AT<br>FM XXXX                  |
| BEFORE<br>RAILROAD<br>CROSSING |
| NEXT<br>X<br>MILES             |
| PAST<br>US XXX<br>EXIT         |
| XXXXXXXX<br>TO<br>XXXXXXXX     |
| US XXX<br>TO<br>FM XXXX        |

Warning List

|                             |
|-----------------------------|
| SPEED<br>LIMIT<br>XX MPH    |
| MAXIMUM<br>SPEED<br>XX MPH  |
| MINIMUM<br>SPEED<br>XX MPH  |
| ADVISORY<br>SPEED<br>XX MPH |
| RIGHT<br>LANE<br>EXIT       |
| USE<br>CAUTION              |
| DRIVE<br>SAFELY             |
| DRIVE<br>WITH<br>CARE       |

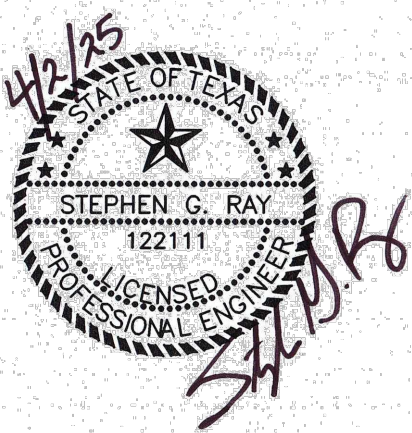
\*\* Advance Notice List

|                             |
|-----------------------------|
| TUE-FRI<br>XX AM-<br>X PM   |
| APR XX-<br>XX<br>X PM-X AM  |
| BEGINS<br>MONDAY            |
| BEGINS<br>MAY XX            |
| MAY X-X<br>XX PM -<br>XX AM |
| NEXT<br>FRI-SUN             |
| XX AM<br>TO<br>XX PM        |
| NEXT<br>TUE<br>AUG XX       |
| TONIGHT<br>XX PM-<br>XX AM  |

\*\* See Application Guidelines Note 6.

WORDING ALTERNATIVES

1. The words RIGHT, LEFT and ALL can be interchanged as appropriate.
2. Roadway designations IH, US, SH, FM and LP can be interchanged as appropriate.
3. EAST, WEST, NORTH and SOUTH (or abbreviations E, W, N and S) can be interchanged as appropriate.
4. Highway names and numbers replaced as appropriate.
5. ROAD, HIGHWAY and FREEWAY can be interchanged as needed.
6. AHEAD may be used instead of distances if necessary.
7. FT and MI, MILE and MILES interchanged as appropriate.
8. AT, BEFORE and PAST interchanged as needed.
9. Distances or AHEAD can be eliminated from the message if a location phase is used.



SHEET 6 OF 12



Texas Department of Transportation



Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

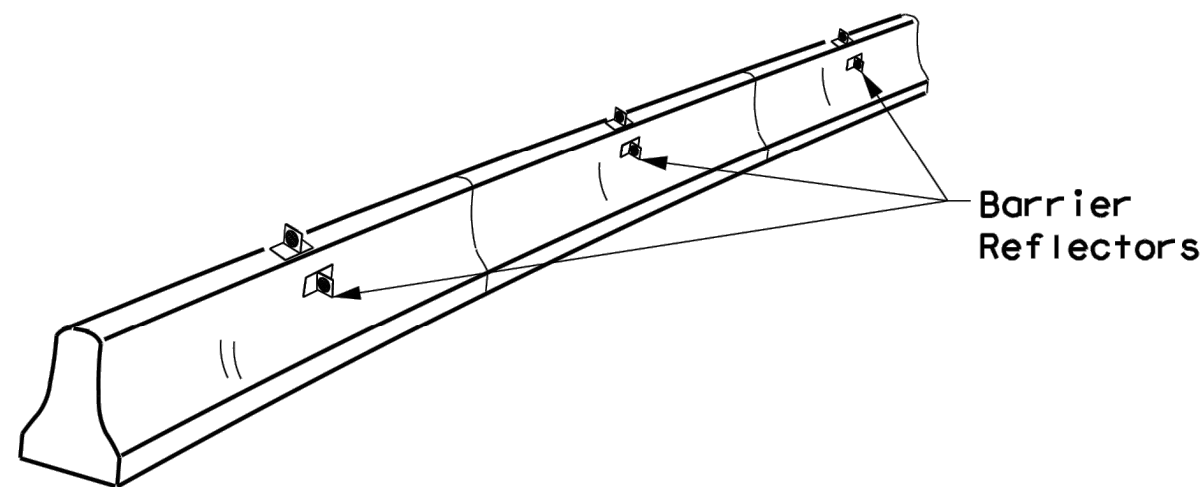
BC (6) - 21

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| © TxDOT | November 2002 | CONT | SECT   | JOB       | HIGHWAY |     |       |     |       |
|         | REVISIONS     |      |        |           |         |     |       |     |       |
| 9-07    | 8-14          |      |        |           |         |     |       |     |       |
| 7-13    | 5-21          |      |        |           |         |     |       |     |       |
|         |               | DIST | COUNTY | SHEET NO. |         |     |       |     |       |
|         |               |      |        | 21 OF 35  |         |     |       |     |       |



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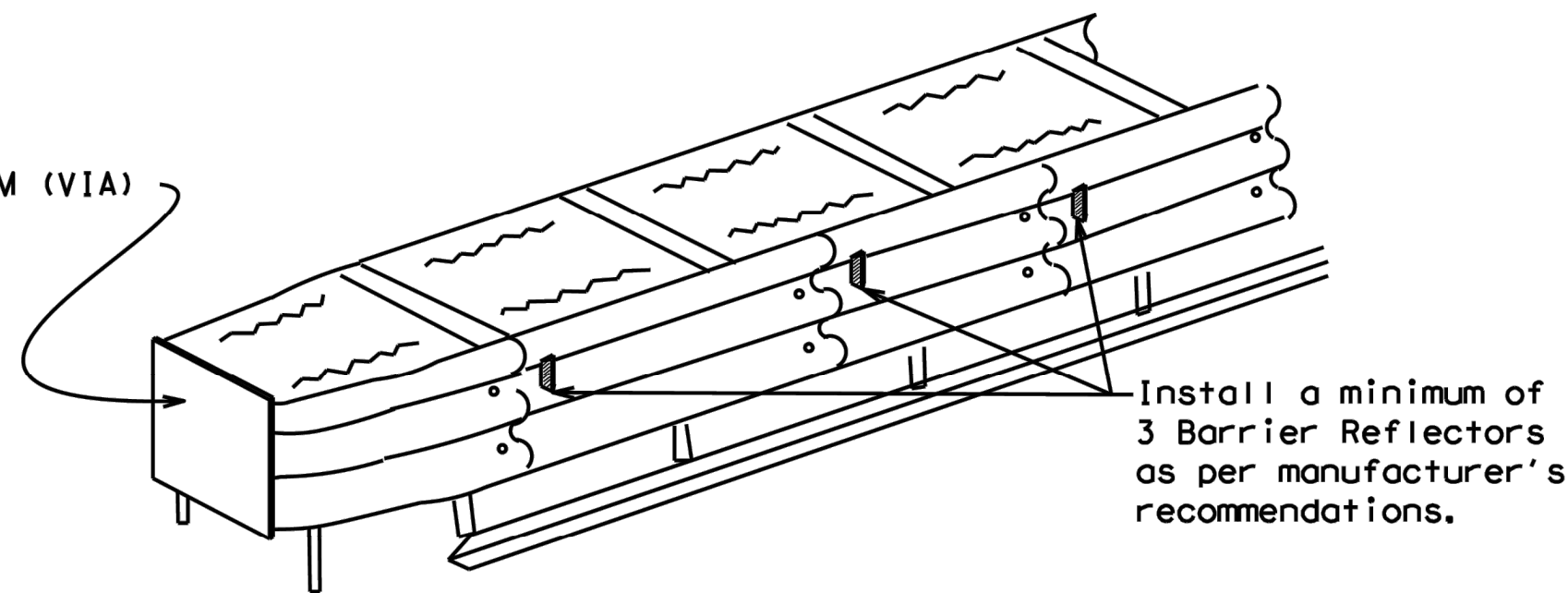
- Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
- Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 512.



#### CONCRETE TRAFFIC BARRIER (CTB)

- Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
- Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (Bi-Directional) while the reflectors on each side of the barrier shall have one yellow reflective face, as shown in the detail above.
- When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
- Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented.
- Maximum spacing of Barrier Reflectors is forty (40) feet.
- Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
- Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
- Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
- Single slope barriers shall be delineated as shown on the above detail.

See D & OM (VIA)



#### LOW PROFILE CONCRETE BARRIER (LPCB)

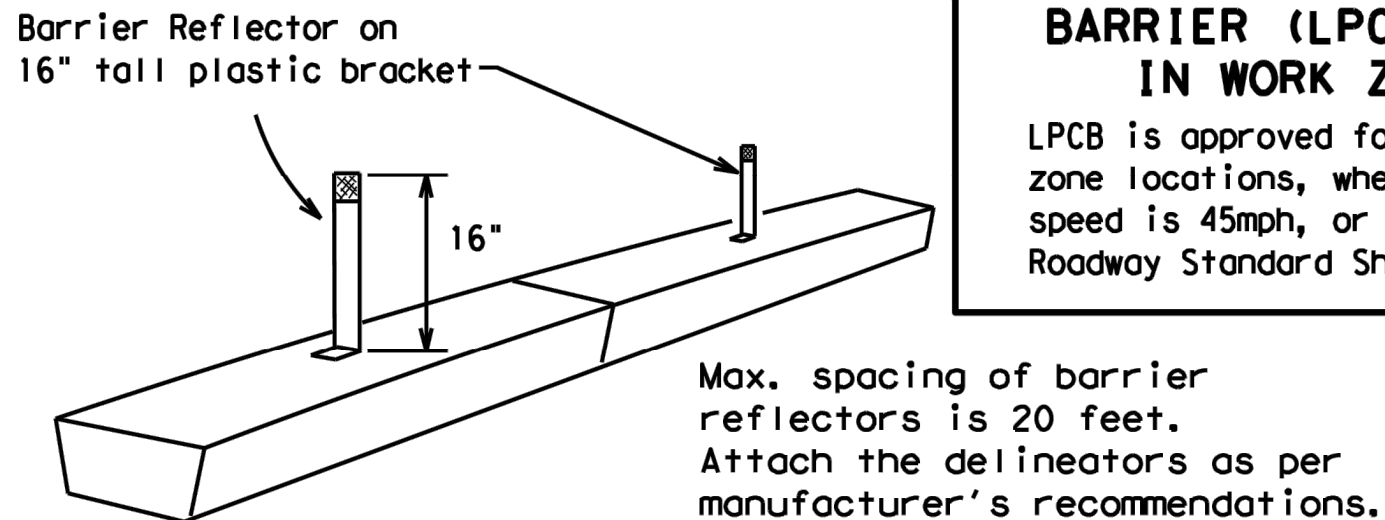
#### DELINEATION OF END TREATMENTS

##### END TREATMENTS FOR CTB'S USED IN WORK ZONES

End treatments used on CTB's in work zones shall meet the appropriate crashworthy standards as defined in the Manual for Assessing Safety Hardware (MASH). Refer to the CWZTCD List for approved end treatments and manufacturers.

#### LOW PROFILE CONCRETE BARRIER (LPCB) USED IN WORK ZONES

LPCB is approved for use in work zone locations, where the posted speed is 45mph, or less. See Roadway Standard Sheet LPCB.



### BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS

#### WARNING LIGHTS

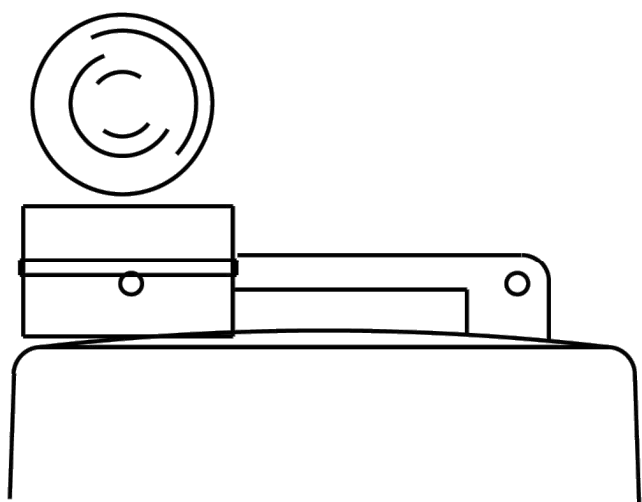
- Warning lights shall meet the requirements of the TMUTCD.
- Warning lights shall NOT be installed on barricades.
- Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "FL". The Type A Warning Lights shall not be used with signs manufactured with Type B<sub>FL</sub> or C<sub>FL</sub> Sheeting meeting the requirements of Departmental Material Specification DMS-8300.
- Type-C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
- The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
- When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
- When used to delineate curves, Type-C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.
- The location of warning lights and warning reflectors on drums shall be as shown elsewhere in the plans.

#### WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

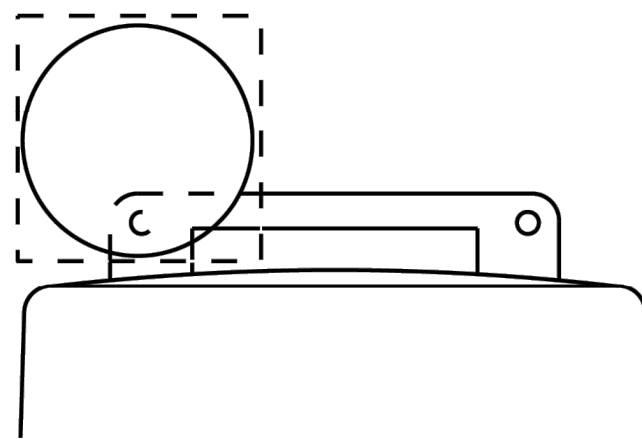
- Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
- Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
- A series of sequential flashing warning lights placed on channelizing devices to form a merging taper may be used for delineation. If used, the successive flashing of the sequential warning lights should occur from the beginning of the taper to the end of the merging taper in order to identify the desired vehicle path. The rate of flashing for each light shall be 65 flashes per minute, plus or minus 10 flashes.
- Type C and D steady-burn warning lights are intended to be used in a series to delineate the edge of the travel lane on detours, on lane changes, on lane closures, and on other similar conditions.
- Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
- Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
- The maximum spacing for warning lights on drums should be identical to the channelizing device spacing.

#### WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS

- A warning reflector or approved substitute may be mounted on a plastic drum as a substitute for a Type C, steady burn warning light at the discretion of the Contractor unless otherwise noted in the plans.
- The warning reflector shall be yellow in color and shall be manufactured using a sign substrate approved for use with plastic drums listed on the CWZTCD.
- The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
- Round reflectors shall be fully reflectorized, including the area where attached to the drum.
- Square substrates must have a minimum of 30 square inches of reflectorized sheeting. They do not have to be reflectorized where it attaches to the drum.
- The side of the warning reflector facing approaching traffic shall have sheeting meeting the color and retroreflectivity requirements for DMS 8300-Type B or Type C.
- When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
- The warning reflector should be located on the side of the handle nearest approaching traffic.
- The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.



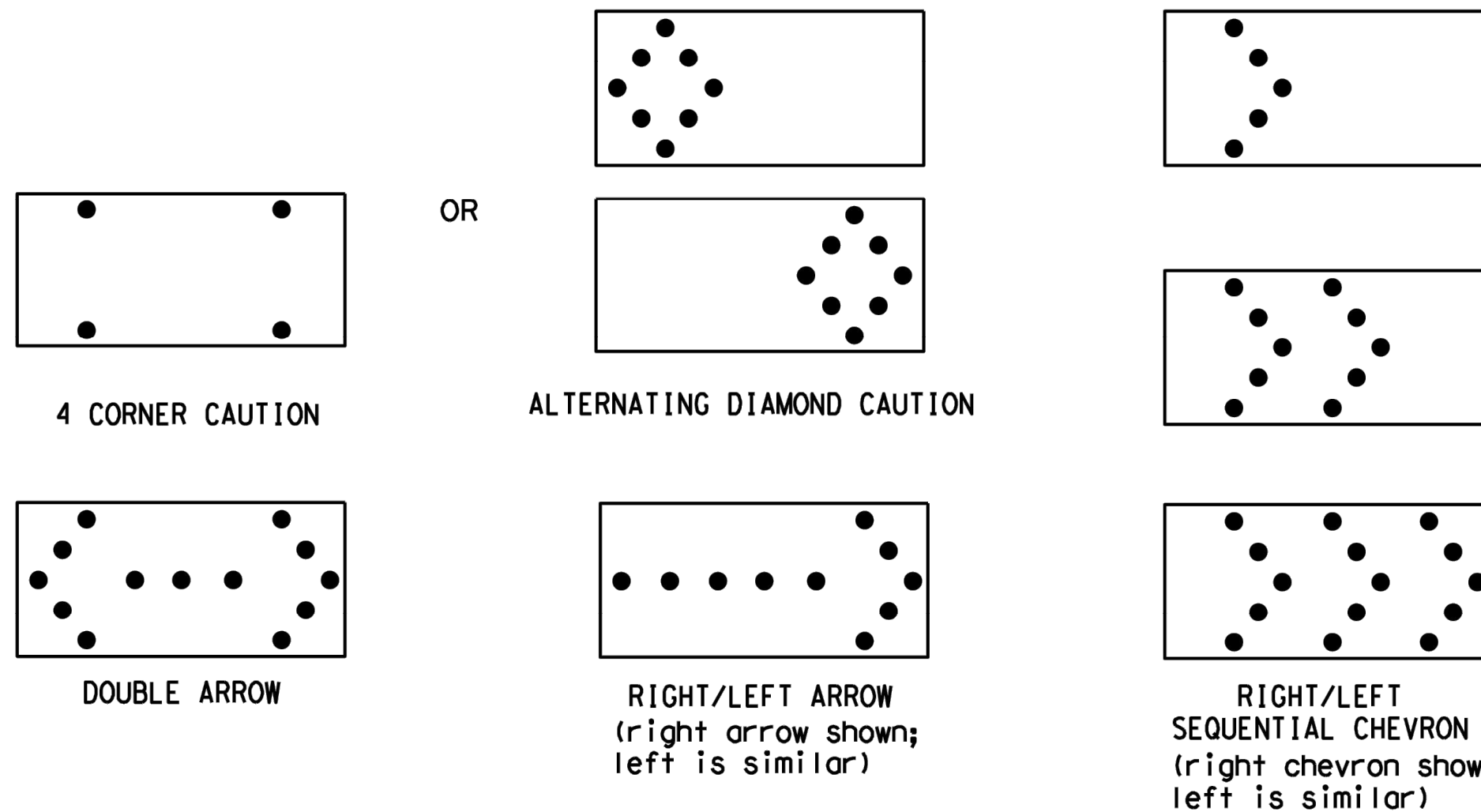
Type C Warning Light or approved substitute mounted on a drum adjacent to the travel way.



Warning reflector may be round or square. Must have a yellow reflective surface area of at least 30 square inches

Arrow Boards may be located behind channelizing devices in place for a shoulder taper or merging taper, otherwise they shall be delineated with four (4) channelizing devices placed perpendicular to traffic on the upstream side of traffic.

- The Flashing Arrow Board should be used for all lane closures on multi-lane roadways, or slow moving maintenance or construction activities on the travel lanes.
- Flashing Arrow Boards should not be used on two-lane, two-way roadways, detours, diversions or work on shoulders unless the "CAUTION" display (see detail below) is used.
- The Engineer/Inspector shall choose all appropriate signs, barricades and/or other traffic control devices that should be used in conjunction with the Flashing Arrow Board.
- The Flashing Arrow Board should be able to display the following symbols:



- The "CAUTION" display consists of four corner lamps flashing simultaneously, or the Alternating Diamond Caution mode as shown.
- The straight line caution display is NOT ALLOWED.
- The Flashing Arrow Board shall be capable of minimum 50 percent dimming from rated lamp voltage. The flashing rate of the lamps shall not be less than 25 nor more than 40 flashes per minute.
- Minimum lamp "on time" shall be approximately 50 percent for the flashing arrow and equal intervals of 25 percent for each sequential phase of the flashing chevron.
- The sequential arrow display is NOT ALLOWED.
- The flashing arrow display is the TxDOT standard; however, the sequential chevron display may be used during daylight operations.
- The Flashing Arrow Board shall be mounted on a vehicle, trailer or other suitable support.
- A Flashing Arrow Board SHALL NOT BE USED to laterally shift traffic.
- A full matrix PCMS may be used to simulate a Flashing Arrow Board provided it meets visibility, flash rate and dimming requirements on this sheet for the same size arrow.
- Minimum mounting height of trailer mounted Arrow Boards should be 7 feet from roadway to bottom of panel.

| REQUIREMENTS |              |                               |                             |
|--------------|--------------|-------------------------------|-----------------------------|
| TYPE         | MINIMUM SIZE | MINIMUM NUMBER OF PANEL LAMPS | MINIMUM VISIBILITY DISTANCE |
| B            | 30 x 60      | 13                            | 3/4 mile                    |
| C            | 48 x 96      | 15                            | 1 mile                      |

**ATTENTION**  
Flashing Arrow Boards shall be equipped with automatic dimming devices.

WHEN NOT IN USE, REMOVE THE ARROW BOARD FROM THE RIGHT-OF-WAY OR PLACE THE ARROW BOARD BEHIND CONCRETE TRAFFIC BARRIER OR GUARDRAIL.

### FLASHING ARROW BOARDS

SHEET 7 OF 12

#### TRUCK-MOUNTED ATTENUATORS

- Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the Manual for Assessing Safety Hardware (MASH).
- Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
- Refer to the CWZTCD for a list of approved TMAs.
- TMAs are required on freeways unless otherwise noted in the plans.
- A TMA should be used anytime that it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the work performance.
- The only reason a TMA should not be required is when a work area is spread down the roadway and the work crew is an extended distance from the TMA.



### BARRICADE AND CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING LIGHTS & ATTENUATOR

#### BC(7)-21

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| 9-07                  | 8-14 | DIST      |           | COUNTY    | SHEET NO. |
| 7-13                  | 5-21 |           |           |           | 22 OF 35  |

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**DISCLAIMER:**

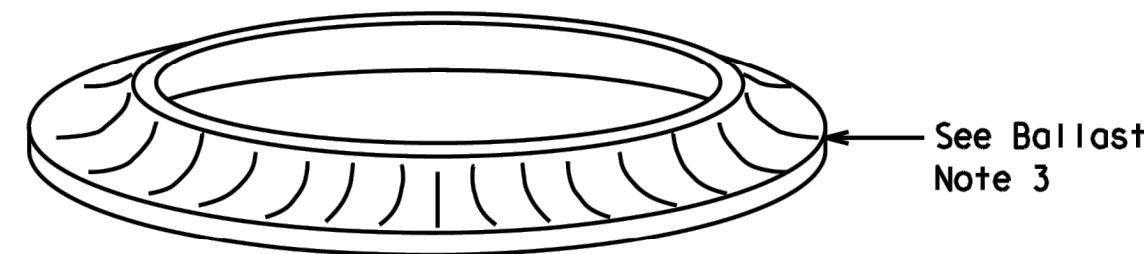
1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections, one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

Pre-qualified plastic drums shall meet the following requirements:

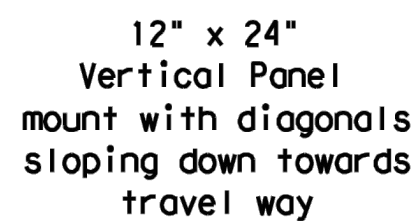
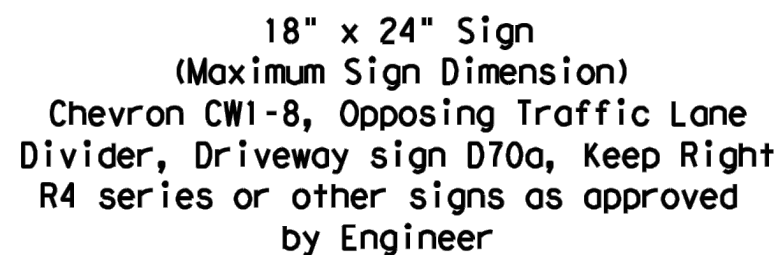
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.



1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. Refer to W2(BTS-2) for Pedestrian Control requirements for Sidewalk Diversions, Sidewalk Detours and Crosswalk Closures.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a Detectable Pedestrian Barricade shall be placed across the full width of the closed sidewalk instead of a Type 3 Barricade.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades should use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.



## SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B<sub>FL</sub> or Type C<sub>FL</sub> Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A or Type B. Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations, they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

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|  <b>Texas Department of Transportation</b> | <b>Traffic<br/>Safety<br/>Division<br/>Standard</b> |
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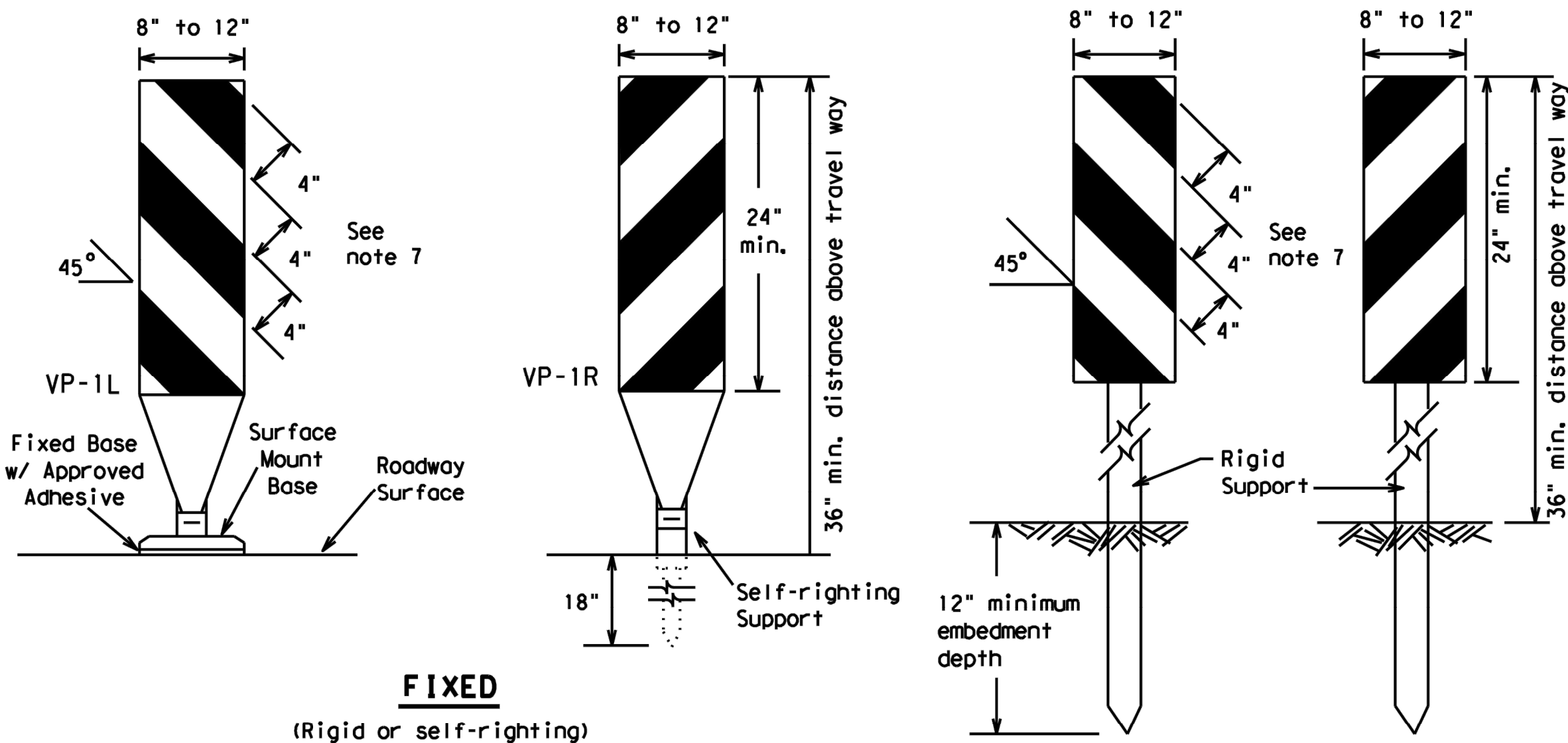
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| 4-03                  | 8-14 | DIST      |           | COUNTY    | SHEET NO. |
| 9-07                  | 5-21 |           |           |           | 23 OF 35  |
| 7-13                  |      |           |           |           |           |

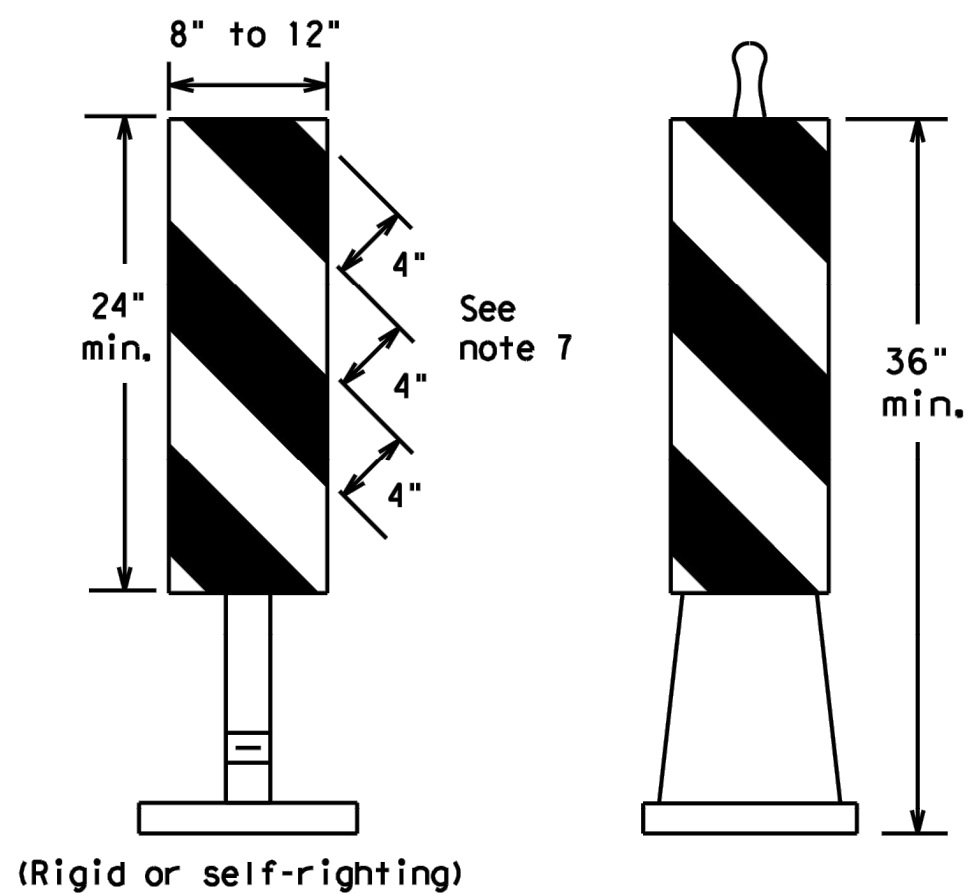


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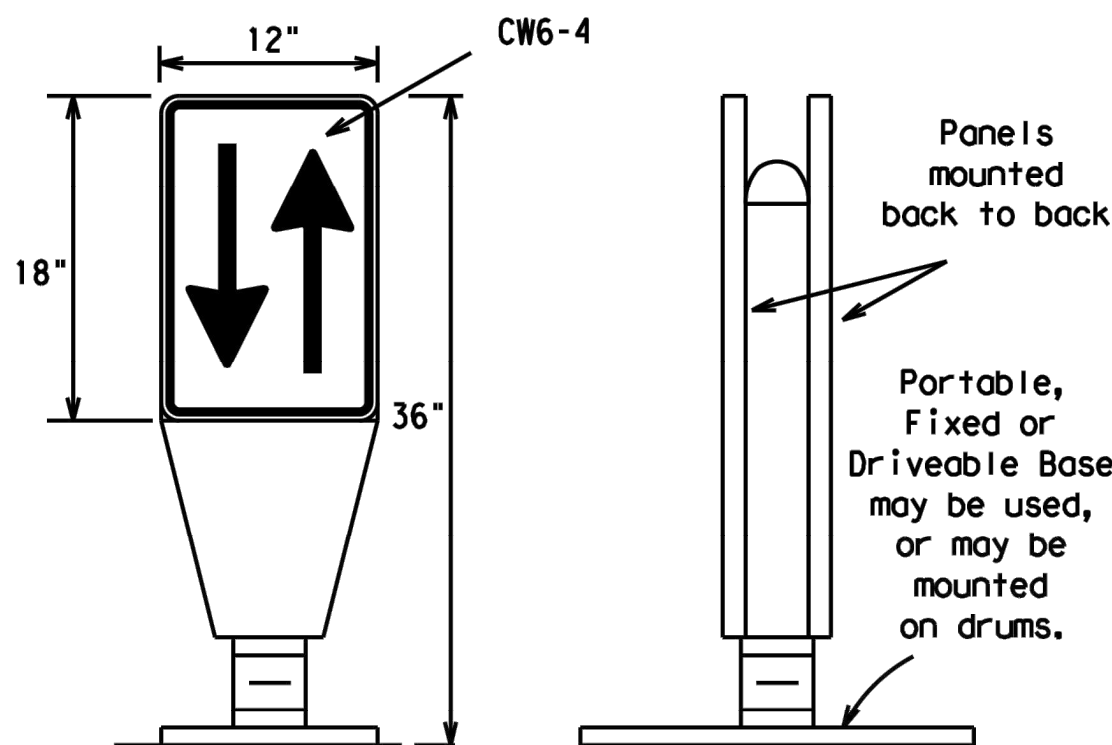
**FIXED**  
(Rigid or self-righting)



**PORTABLE**

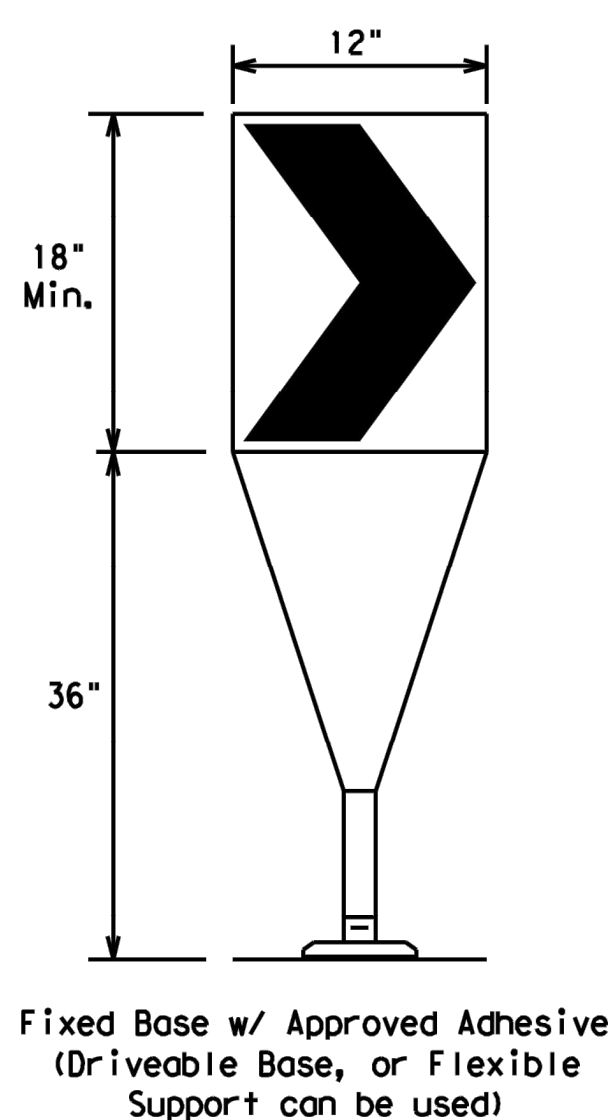
### VERTICAL PANELS (VPs)

1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual for additional requirements on the use VP's for drop-offs.
3. VP's should be mounted back to back if used at the edge of cuts adjacent to two-way two lane roadways. Stripes are to be reflective orange and reflective white and should always slope downward toward the travel lane.
4. VP's used on expressways and freeways or other high speed roadways, may have more than 270 square inches of retroreflective area facing traffic.
5. Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
6. Sheeting for the VP's shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
7. Where the height of reflective material on the vertical panel is 36 inches or greater, a panel stripe of 6 inches shall be used.



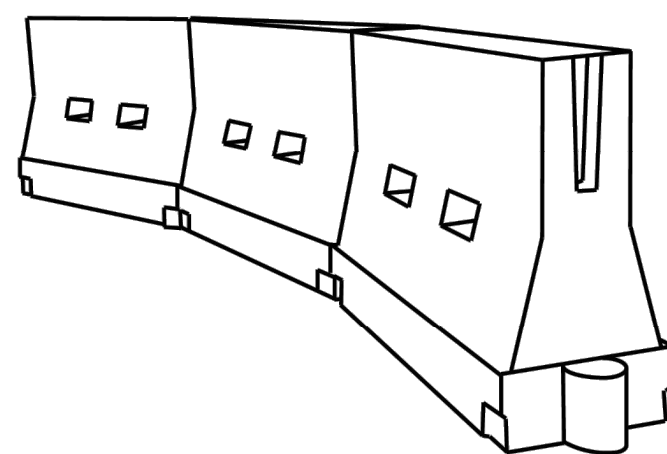
### OPPOSING TRAFFIC LANE DIVIDERS (OTLD)

1. Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
2. The OTLD may be used in combination with 42" cones or VPs.
3. Spacing between the OTLD shall not exceed 500 feet. 42" cones or VPs placed between the OTLD's should not exceed 100 foot spacing.
4. The OTLD shall be orange with a black non-reflective legend. Sheeting for the OTLD shall be retroreflective Type B<sub>FL</sub> or Type C<sub>FL</sub> conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.



1. The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
2. Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
3. Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
4. To be effective, the chevron should be visible for at least 500 feet.
5. Chevrons shall be orange with a black nonreflective legend. Sheeting for the chevron shall be retroreflective Type B<sub>FL</sub> or Type C<sub>FL</sub> conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.
6. For Long Term Stationary use on tapers or transitions on freeways and divided highways, self-righting chevrons may be used to supplement plastic drums but not to replace plastic drums.

### CHEVRONS



### LONGITUDINAL CHANNELIZING DEVICES (LCD)

1. LCDs are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. They are not designed to contain or redirect a vehicle on impact.
2. LCDs may be used instead of a line of cones or drums.
3. LCDs shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. LCDs should not be used to provide positive protection for obstacles, pedestrians or workers.
5. LCDs shall be supplemented with retroreflective delineation as required for temporary barriers on BC(7) when placed roughly parallel to the travel lanes.
6. LCDs used as barricades placed perpendicular to traffic should have at least one row of reflective sheeting meeting the requirements for barricade rails as shown on BC(10). Place reflective sheeting near the top of the LCD along the full length of the device.

### WATER BALLASTED SYSTEMS USED AS BARRIERS

1. Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate Manual for Assessing Safety Hardware (MASH) crashworthiness requirements based on roadway speed and barrier application.
2. Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
3. Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
5. When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to a point outside the clear zone.

If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long canes and the top of the unit shall not be less than 32 inches in height.

### HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS

### GENERAL NOTES

1. Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
3. Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
4. The Contractor shall maintain devices in a clean condition and replace damaged, nonreflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
5. Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh a minimum of 30 lbs.
6. Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
7. The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.

| Posted Speed | Formula               | Minimum Desirable Taper Lengths * * |            |            | Suggested Maximum Spacing of Channelizing Devices |              |
|--------------|-----------------------|-------------------------------------|------------|------------|---|--------------|
|              |                       | 10' Offset                          | 11' Offset | 12' Offset | On a Taper  | On a Tangent |
| 30           | $L = \frac{WS^2}{60}$ | 150'                                | 165'       | 180'       | 30'   | 60'          |
| 35           |                       | 205'                                | 225'       | 245'       | 35'   | 70'          |
| 40           |                       | 265'                                | 295'       | 320'       | 40'   | 80'          |
| 45           | L = WS                | 450'                                | 495'       | 540'       | 45'   | 90'          |
| 50           |                       | 500'                                | 550'       | 600'       | 50'   | 100'         |
| 55           |                       | 550'                                | 605'       | 660'       | 55'   | 110'         |
| 60           |                       | 600'                                | 660'       | 720'       | 60'   | 120'         |
| 65           |                       | 650'                                | 715'       | 780'       | 65'   | 130'         |
| 70           |                       | 700'                                | 770'       | 840'       | 70'   | 140'         |
| 75           |                       | 750'                                | 825'       | 900'       | 75'   | 150'         |
| 80           |                       | 800'                                | 880'       | 960'       | 80'   | 160'         |

\* \*\*Taper lengths have been rounded off.  
L=Length of Taper (FT.) W=Width of Offset (FT.)  
S=Posted Speed (MPH)

### SUGGESTED MAXIMUM SPACING OF CHANNELIZING DEVICES AND MINIMUM DESIRABLE TAPER LENGTHS

SHEET 9 OF 12



## BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC (9) - 21

|           |               |      |       |        |       |     |         |           |       |
|-----------|---------------|------|-------|--------|-------|-----|---------|-----------|-------|
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| © TxDOT   | November 2002 | CONT | SECT  | JOB    |       |     | HIGHWAY |           |       |
| REVISIONS |               |      |       |        |       |     |         |           |       |
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| 7-13      | 5-21          |      |       |        |       |     |         | 24 OF 35  |       |



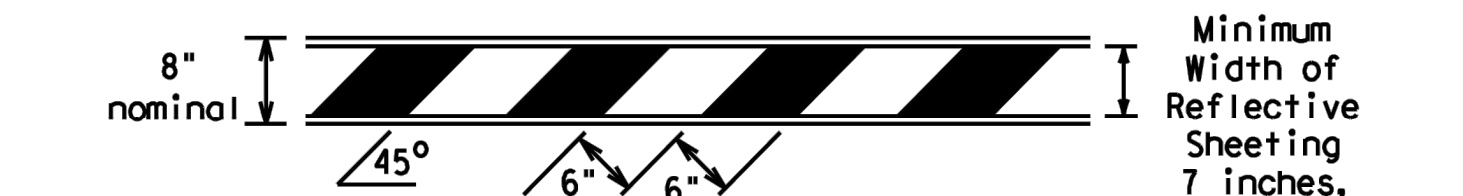
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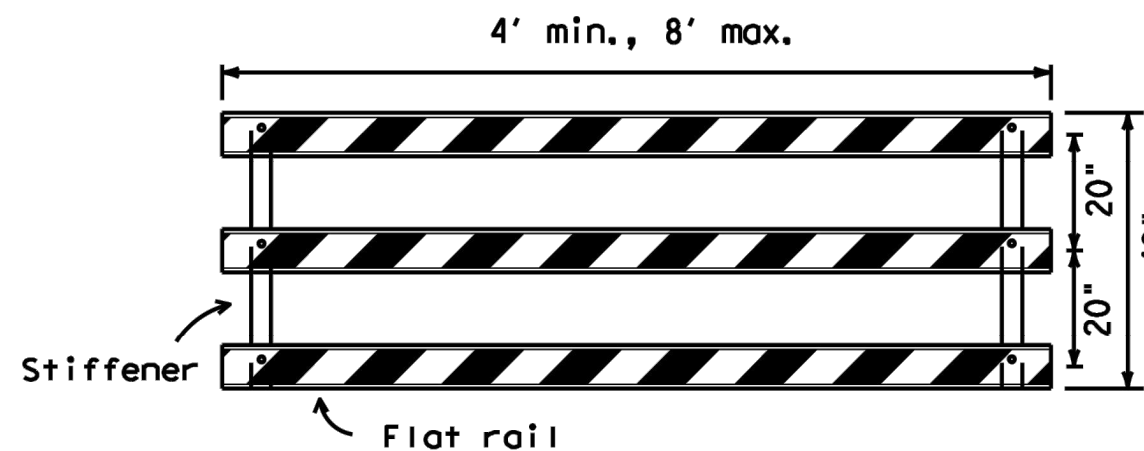
### TYPE 3 BARRICADES

1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type 3 Barricades and a list of all materials used in the construction of Type 3 Barricades.
2. Type 3 Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road, striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

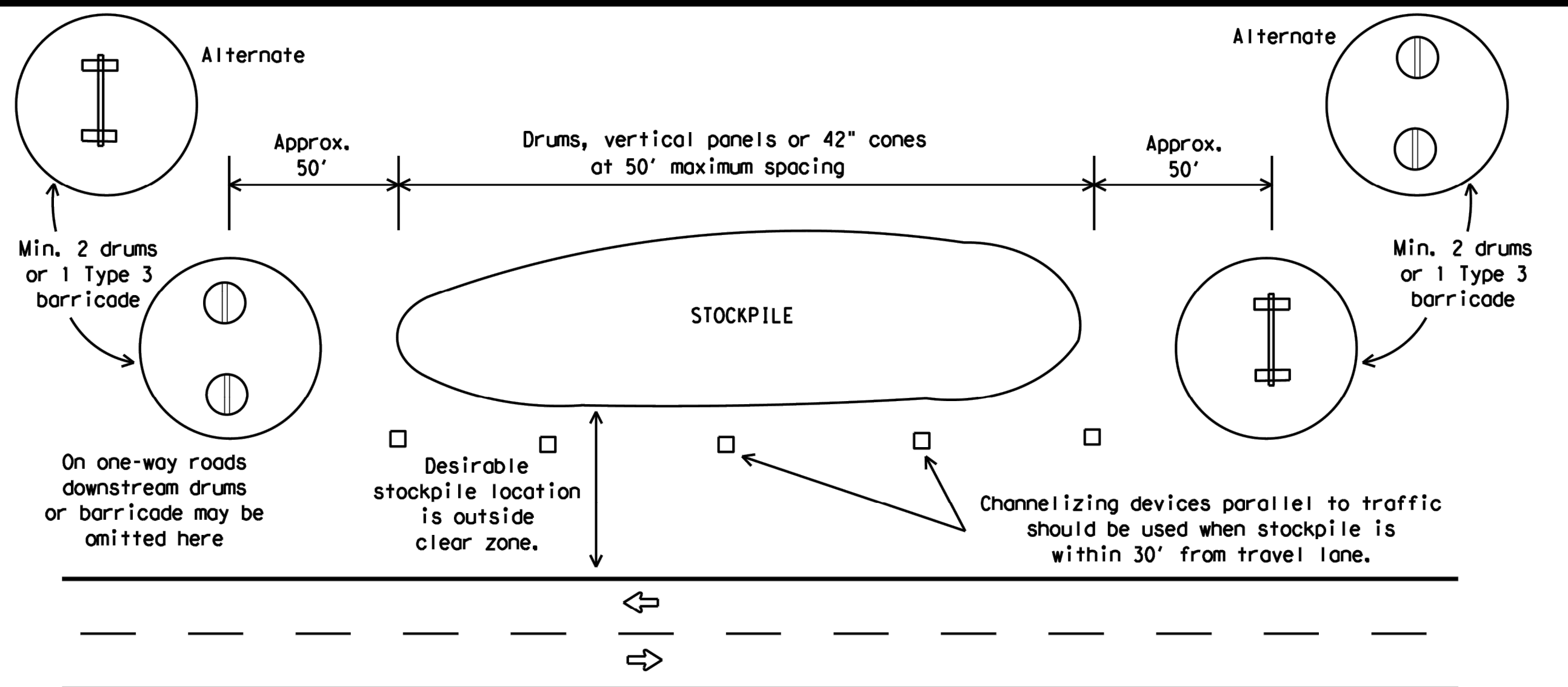
Barricades shall NOT be used as a sign support.



### TYPICAL STRIPING DETAIL FOR BARRICADE RAIL

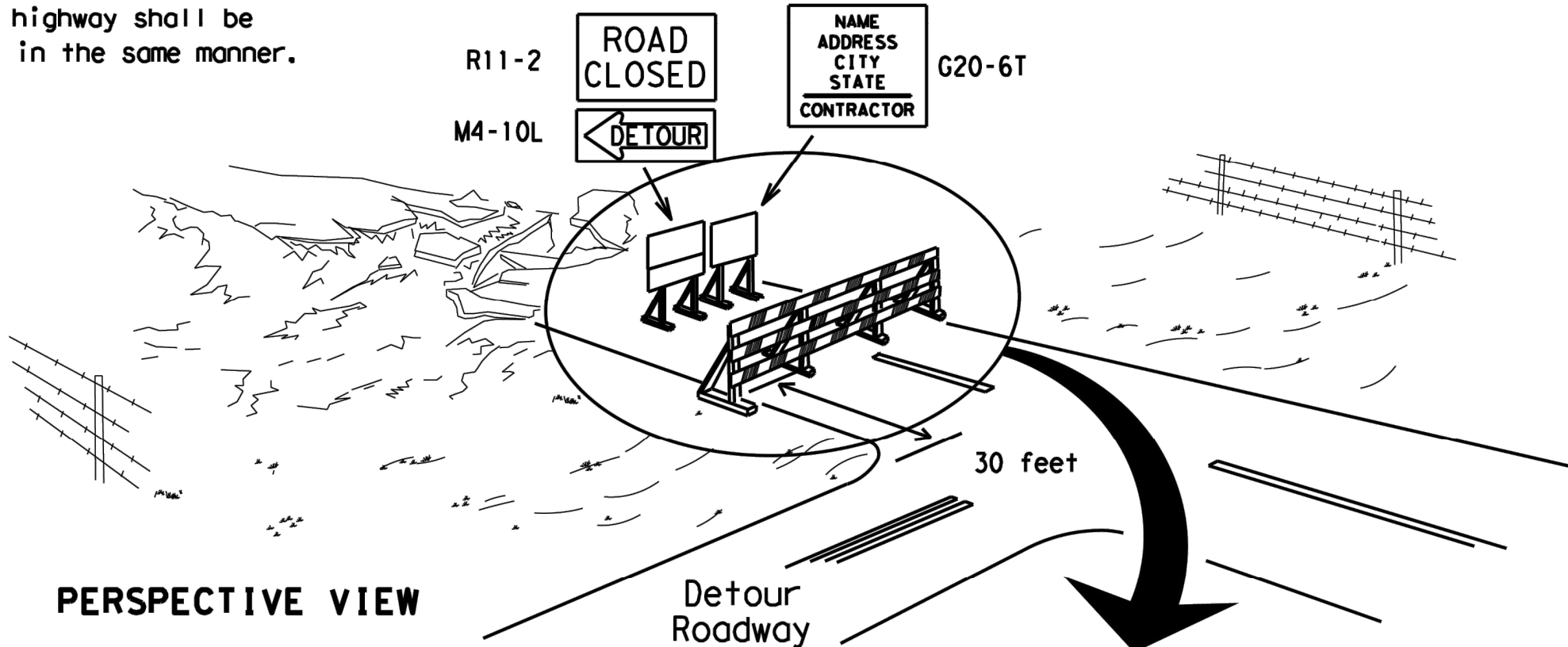


### TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES



### TRAFFIC CONTROL FOR MATERIAL STOCKPILES

Each roadway of a divided highway shall be barricaded in the same manner.



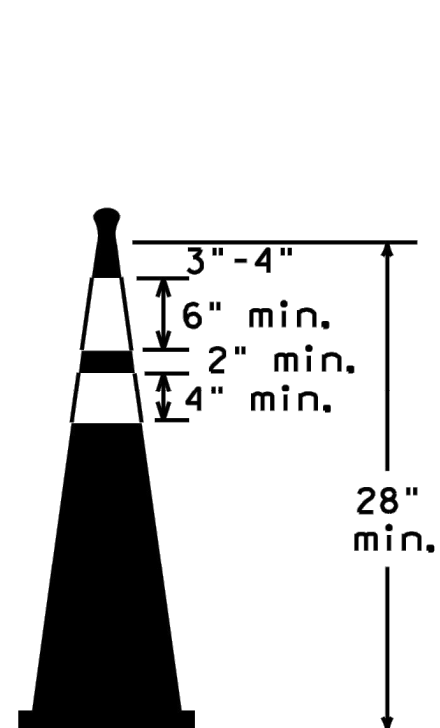
### PERSPECTIVE VIEW

The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic. Barricade striping should slant downward in the direction of detour.

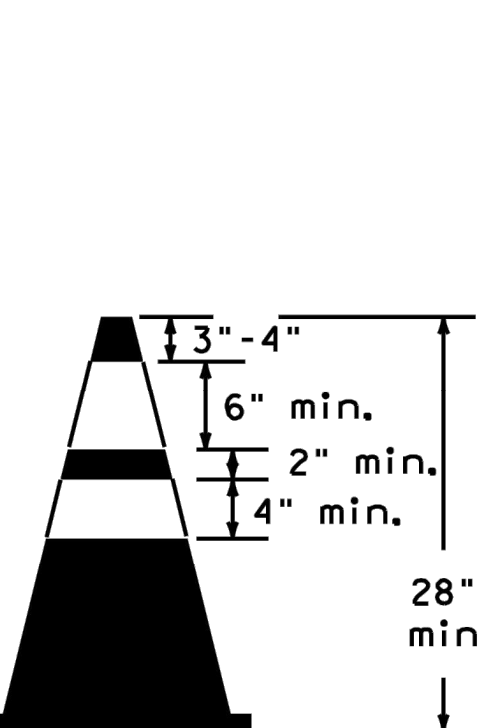
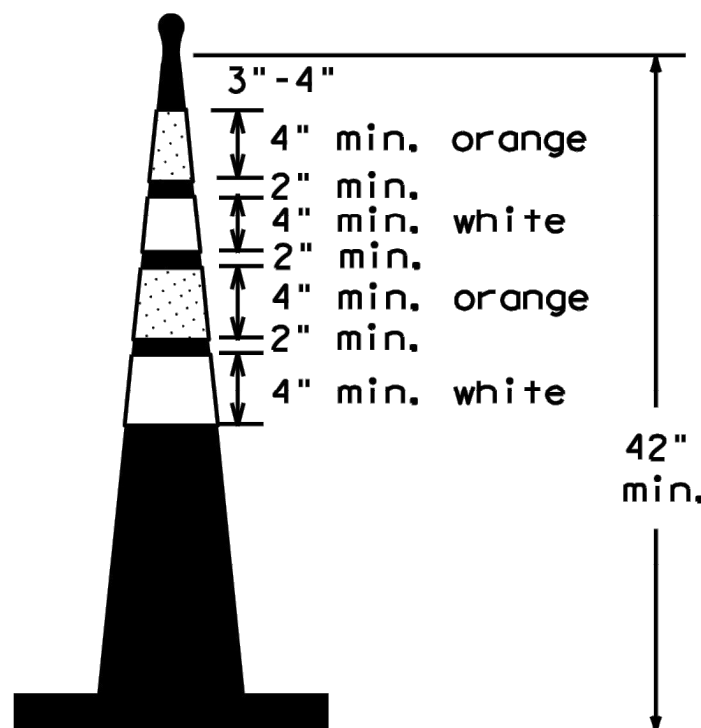
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

### PLAN VIEW

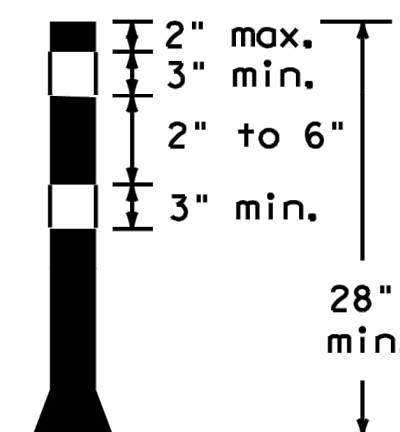
### TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



### Two-Piece cones



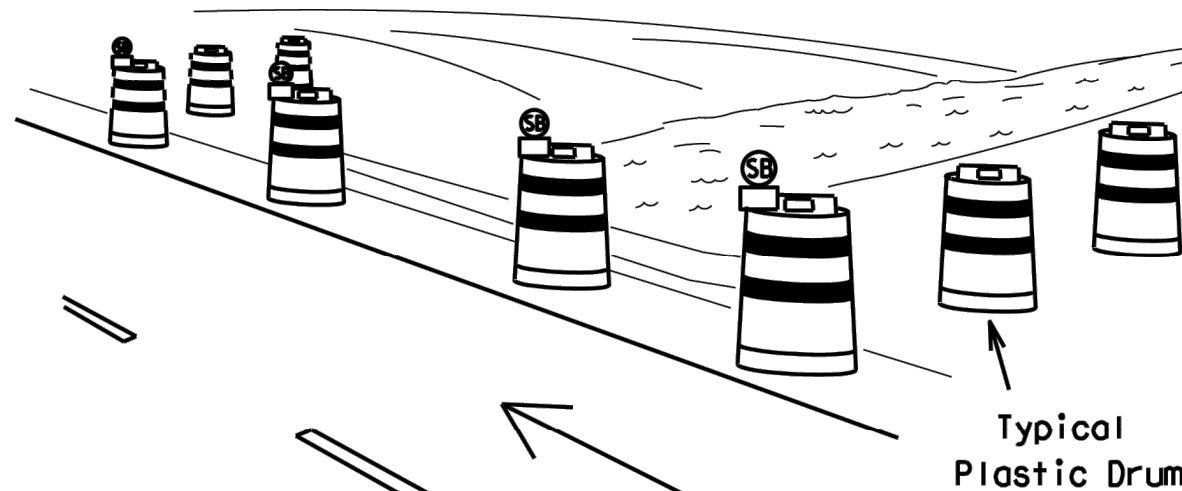
### One-Piece cones



### Tubular Marker

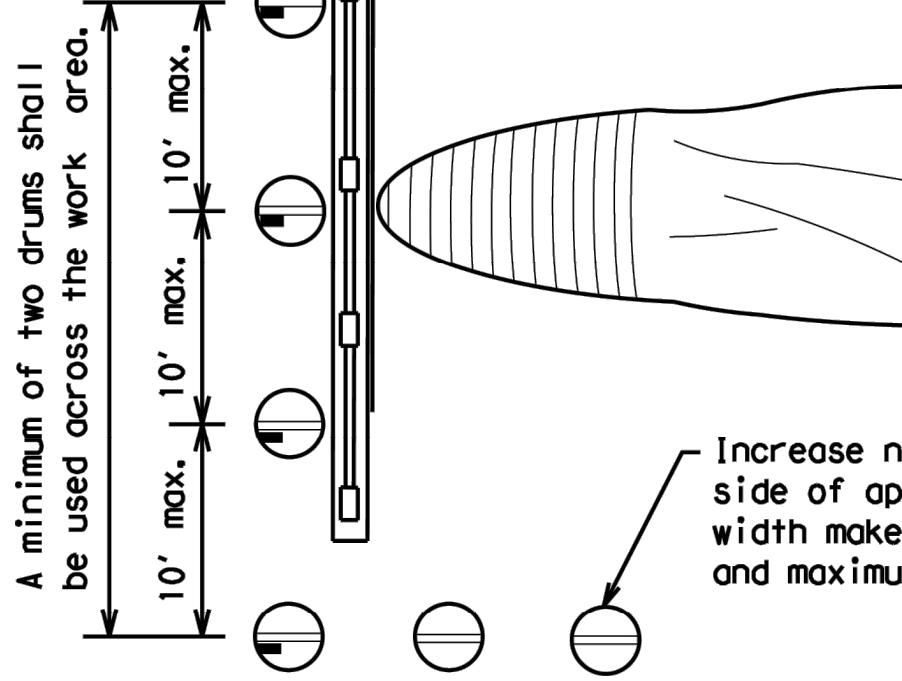
28" Cones shall have a minimum weight of 9 1/2 lbs.  
42" 2-piece cones shall have a minimum weight of 30 lbs. including base.

1. Traffic cones and tubular markers shall be predominantly orange, and meet the height and weight requirements shown above.
2. One-piece cones have the body and base of the cone molded in one consolidated unit. Two-piece cones have a cone shaped body and a separate rubber base, or ballast, that is added to keep the device upright and in place.
3. Two-piece cones may have a handle or loop extending up to 8" above the minimum height shown, in order to aid in retrieving the device.
4. Cones or tubular markers shall have white or white and orange reflective bands as shown above. The reflective bands shall have a smooth, sealed outer surface and meet the requirements of Departmental Material Specification DMS-8300 Type A or Type B.
5. 28" cones and tubular markers are generally suitable for short duration and short-term stationary work as defined on BC(4). These should not be used for intermediate-term or long-term stationary work unless personnel is on-site to maintain them in their proper upright position.
6. 42" two-piece cones, vertical panels or drums are suitable for all work zone durations.
7. Cones or tubular markers used on each project should be of the same size and shape.



### PERSPECTIVE VIEW

These drums are not required on one-way roadway



### PLAN VIEW

### CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS

1. Where positive redirection capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder width is greater than 12 feet, steady-burn lights may be omitted if drums are used.
5. Drums must extend the length of the culvert widening.

### LEGEND

|  |   |
|--|---|
|  | Plastic drum  |
|  | Plastic drum with steady burn light or yellow warning reflector |
|  | Steady burn warning light or yellow warning reflector           |

### SHEET 10 OF 12



### BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

### BC(10)-21

|                       |           |           |           |           |
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|                       | DIST      | COUNTY    |           | SHEET NO. |
|                       |           |           |           | 25 OF 35  |



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WORK ZONE PAVEMENT MARKINGS

GENERAL

1. The Contractor shall be responsible for maintaining work zone and existing pavement markings, in accordance with the standard specifications and special provisions, on all roadways open to traffic within the CSJ limits unless otherwise stated in the plans.
2. Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
3. Additional supplemental pavement marking details may be found in the plans or specifications.
4. Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
5. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard Plan Sheet WZ(STPM).
6. When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs at the beginning of sections where passing is permitted.
7. All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

1. Raised pavement markers are to be placed according to the patterns on BC(12).
2. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and Departmental Material Specification DMS-4200 or DMS-4300.

PREFABRICATED PAVEMENT MARKINGS

1. Removable prefabricated pavement markings shall meet the requirements of DMS-8241.
2. Non-removable prefabricated pavement markings (foil back) shall meet the requirements of DMS-8240.

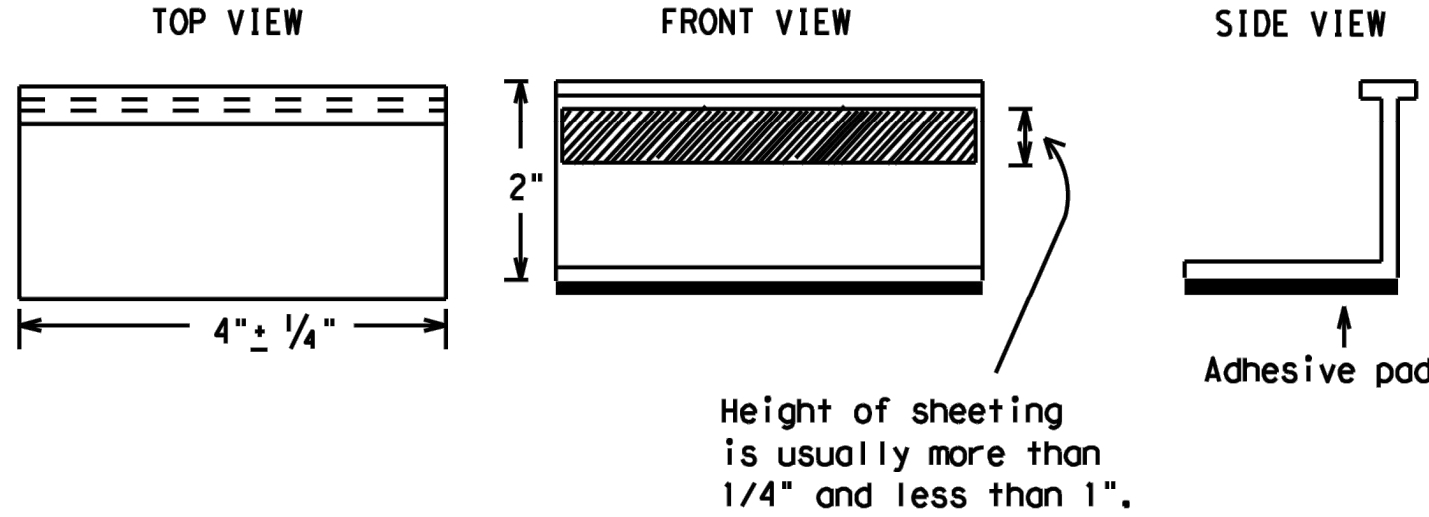
MAINTAINING WORK ZONE PAVEMENT MARKINGS

1. The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
2. Work zone pavement markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections as required by Form 599.
3. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 160 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics.
4. Markings failing to meet this criteria within the first 30 days after placement shall be replaced at the expense of the Contractor as per Specification Item 662.

REMOVAL OF PAVEMENT MARKINGS

1. Pavement markings that are no longer applicable, could create confusion or direct a motorist toward or into the closed portion of the roadway shall be removed or obliterated before the roadway is opened to traffic.
2. The above shall not apply to detours in place for less than three days, where flaggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route.
3. Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernable marking. This shall be by any method approved by TxDOT Specification Item 677 for "Eliminating Existing Pavement Markings and Markers".
4. The removal of pavement markings may require resurfacing or seal coating portions of the roadway as described in Item 677.
5. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used.
6. Blast cleaning may be used but will not be required unless specifically shown in the plans.
7. Over-painting of the markings SHALL NOT BE permitted.
8. Removal of raised pavement markers shall be as directed by the Engineer.
9. Removal of existing pavement markings and markers will be paid for directly in accordance with Item 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS," unless otherwise stated in the plans.
10. Black-out marking tape may be used to cover conflicting existing markings for periods less than two weeks when approved by the Engineer.

Temporary Flexible-Reflective  
Roadway Marker Tabs



STAPLES OR NAILS SHALL NOT BE USED TO SECURE  
TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER  
TABS TO THE PAVEMENT SURFACE

1. Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of DMS-8242.
2. Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.
  - A. Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Pavement Section to determine specification compliance.
  - B. Select five (5) tabs and perform the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with the front and rear tires at a speed of 35 to 40 miles per hour, four (4) times in each direction. No more than one (1) out of the five (5) reflective surfaces shall be lost or displaced as a result of this test.
3. Small design variances may be noted between tab manufacturers.
4. See Standard Sheet WZ(STPM) for tab placement on new pavements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

RAISED PAVEMENT MARKERS USED AS GUIDEMARKS


1. Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
2. All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
3. Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:  
YELLOW - (two amber reflective surfaces with yellow body).  
WHITE - (one silver reflective surface with white body).

| DEPARTMENTAL MATERIAL SPECIFICATIONS                 |          |
|--|----------|
| PAVEMENT MARKERS (REFLECTORIZED)                     | DMS-4200 |
| TRAFFIC BUTTONS                                      | DMS-4300 |
| EPOXY AND ADHESIVES                                  | DMS-6100 |
| BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS             | DMS-6130 |
| PERMANENT PREFABRICATED PAVEMENT MARKINGS            | DMS-8240 |
| TEMPORARY REMOVABLE, PREFABRICATED PAVEMENT MARKINGS | DMS-8241 |
| TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS   | DMS-8242 |

A list of prequalified reflective raised pavement markers, non-reflective traffic buttons, roadway marker tabs and other pavement markings can be found at the Material Producer List web address shown on BC(1).

SHEET 11 OF 12



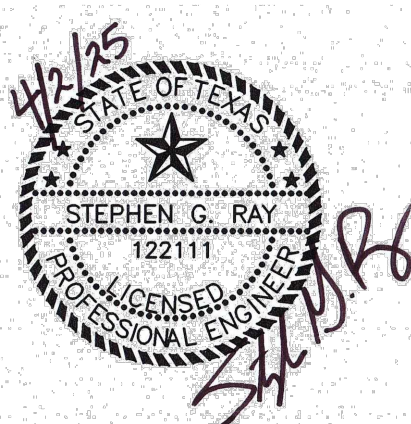
Texas Department of Transportation

Traffic  
Safety  
Division  
Standard

BARRICADE AND CONSTRUCTION  
PAVEMENT MARKINGS

BC(11)-21

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| 11-02     | 8-14          |      |       |        |         |           |       | 26 OF 35 |       |

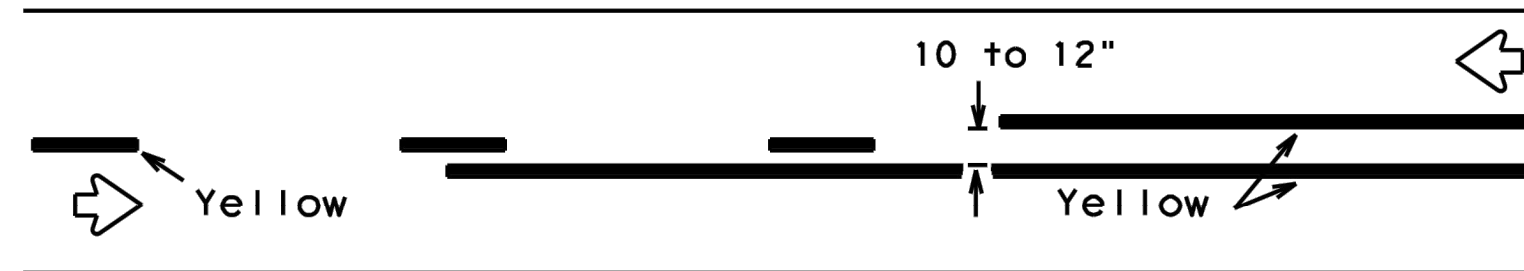




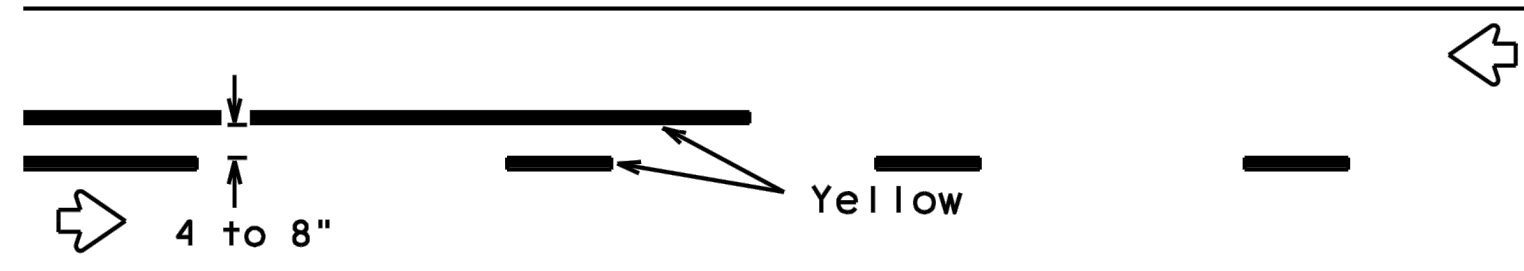
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## PAVEMENT MARKING PATTERNS

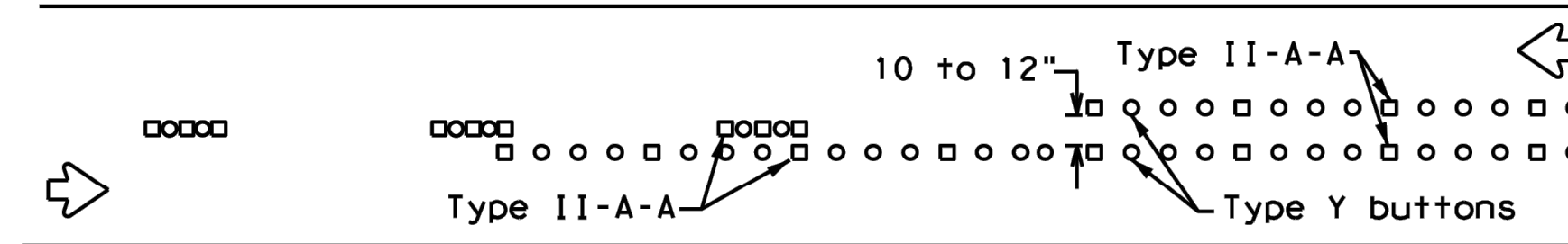


REFLECTORIZED PAVEMENT MARKINGS - PATTERN A

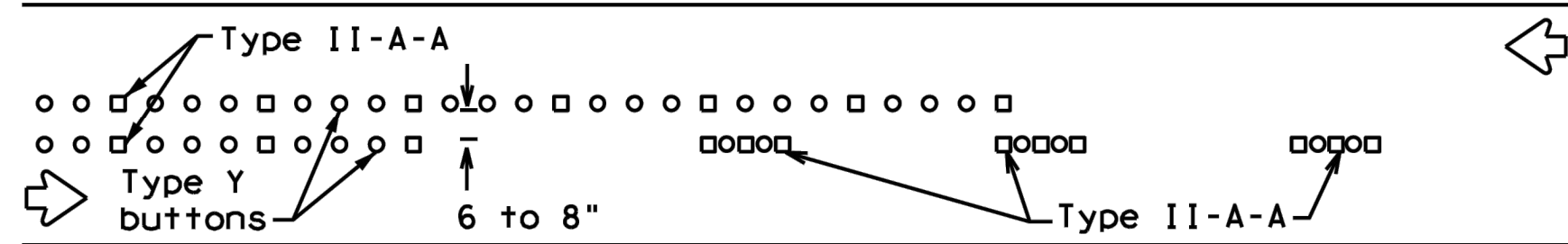


REFLECTORIZED PAVEMENT MARKINGS - PATTERN B

Pattern A is the TxDOT Standard, however Pattern B may be used if approved by the Engineer. Prefabricated markings may be substituted for reflectORIZED pavement markings.

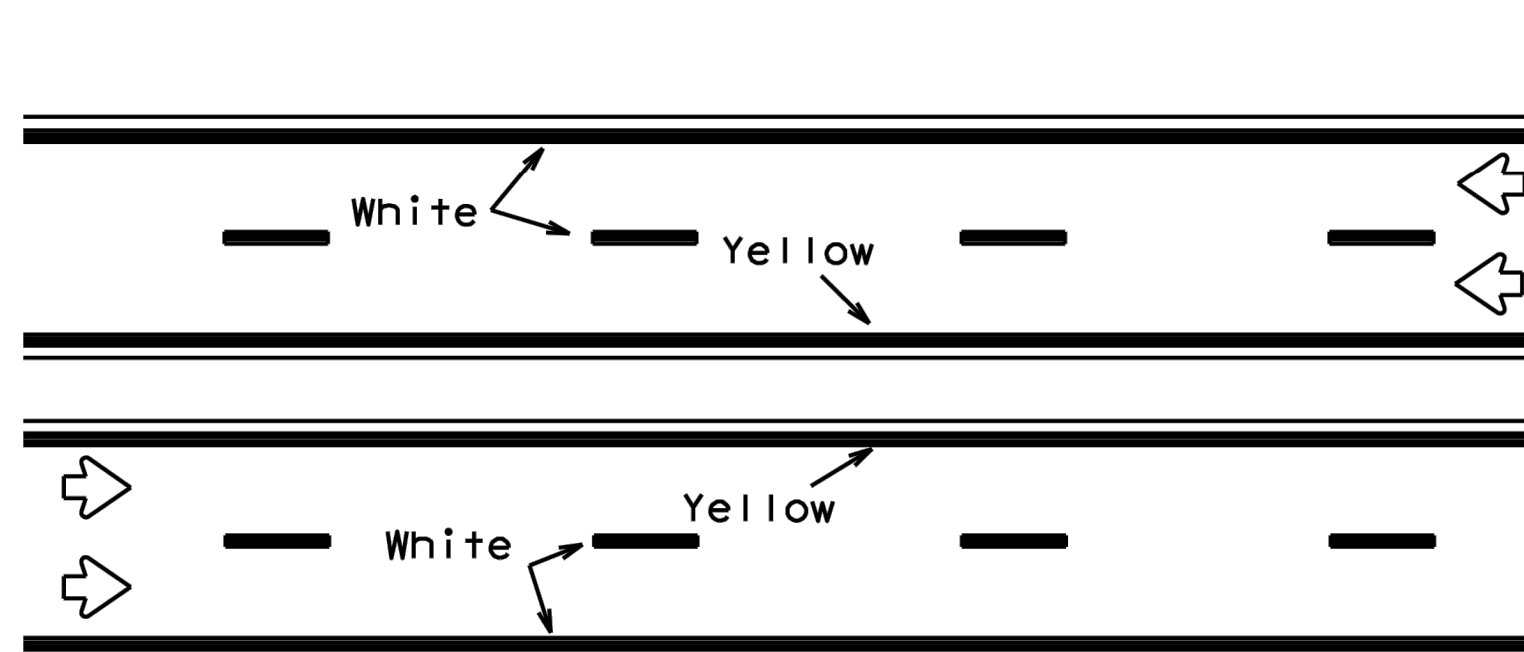


RAISED PAVEMENT MARKERS - PATTERN A



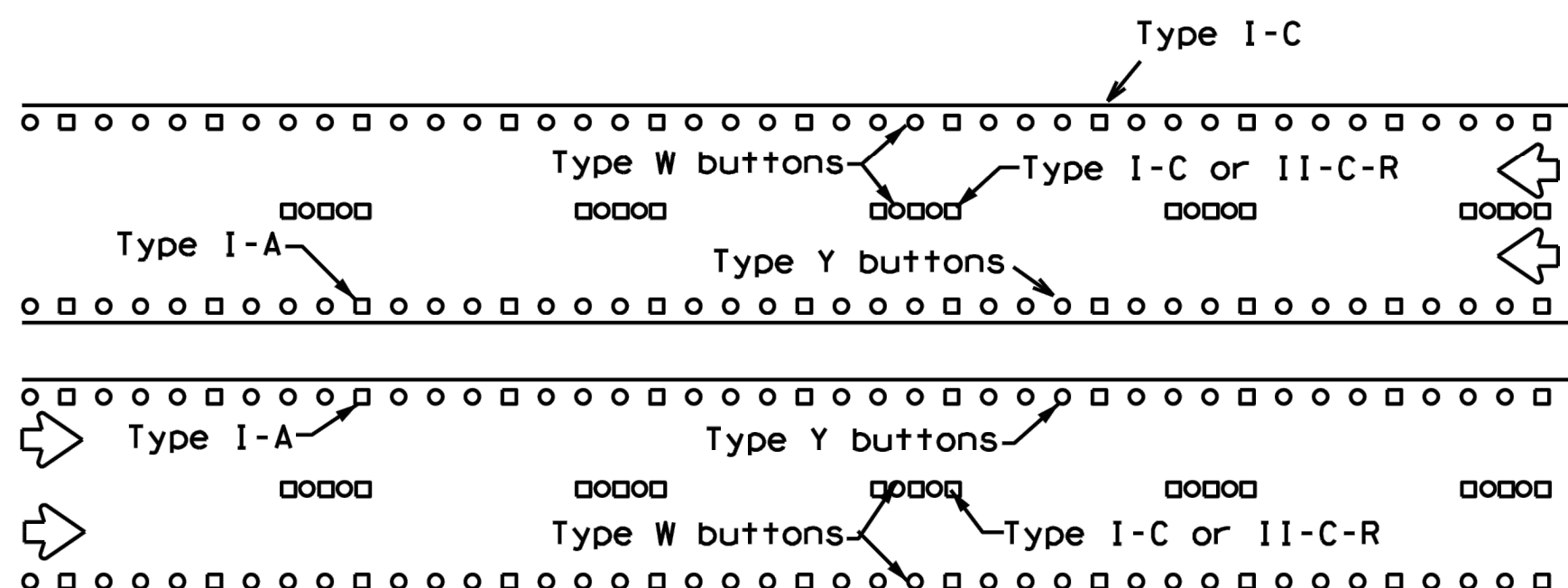
RAISED PAVEMENT MARKERS - PATTERN B

## CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO-LANE, TWO-WAY HIGHWAYS



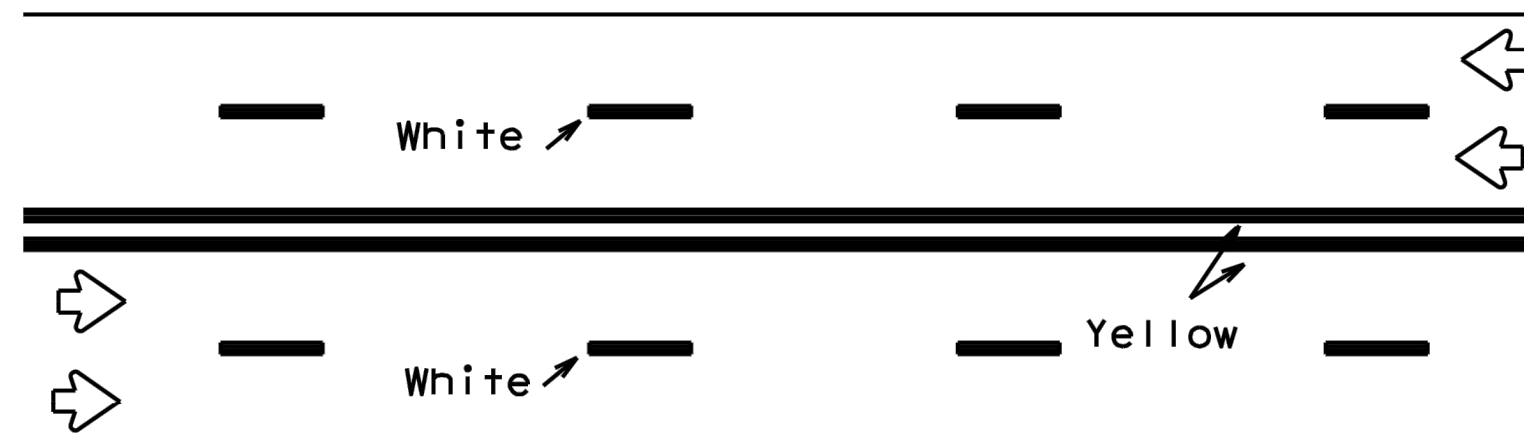
REFLECTORIZED PAVEMENT MARKINGS

Prefabricated markings may be substituted for reflectORIZED pavement markings.



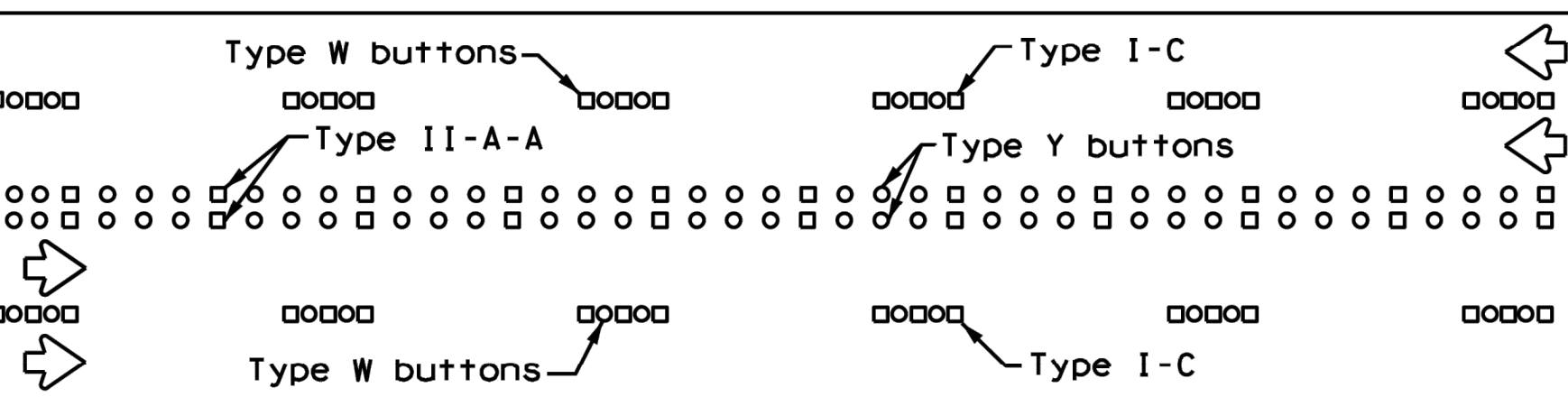
RAISED PAVEMENT MARKERS

## EDGE & LANE LINES FOR DIVIDED HIGHWAY



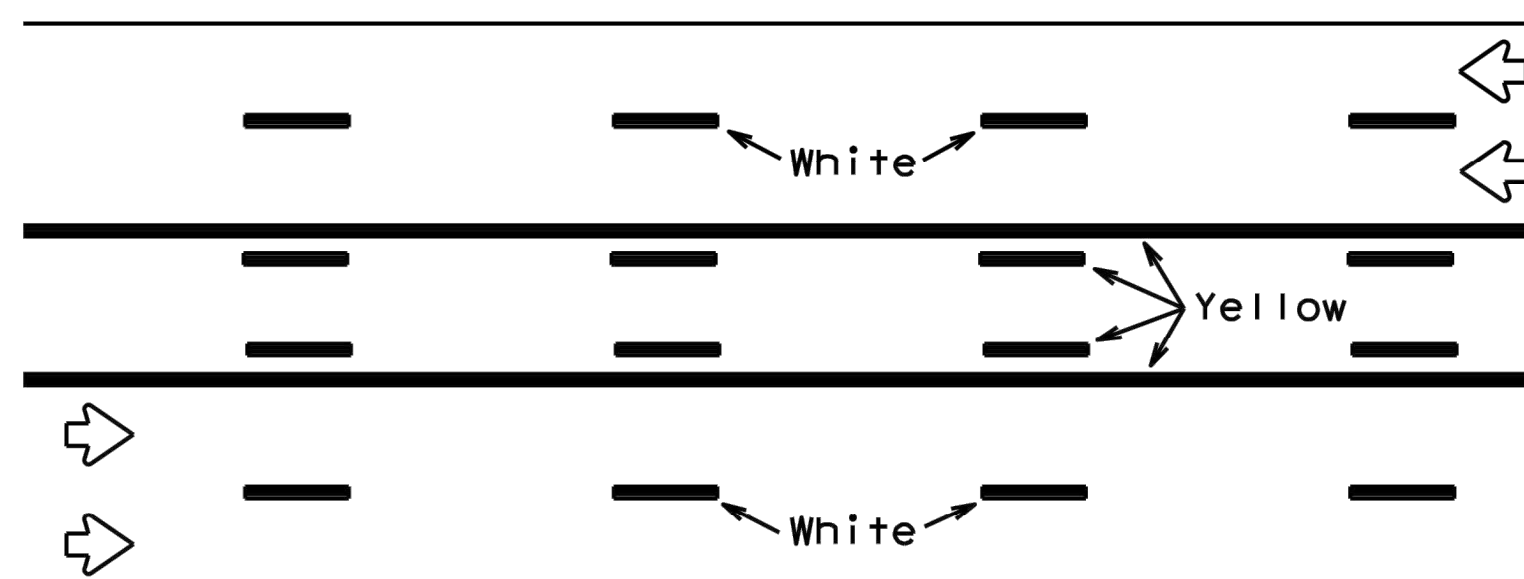
REFLECTORIZED PAVEMENT MARKINGS

Prefabricated markings may be substituted for reflectORIZED pavement markings.



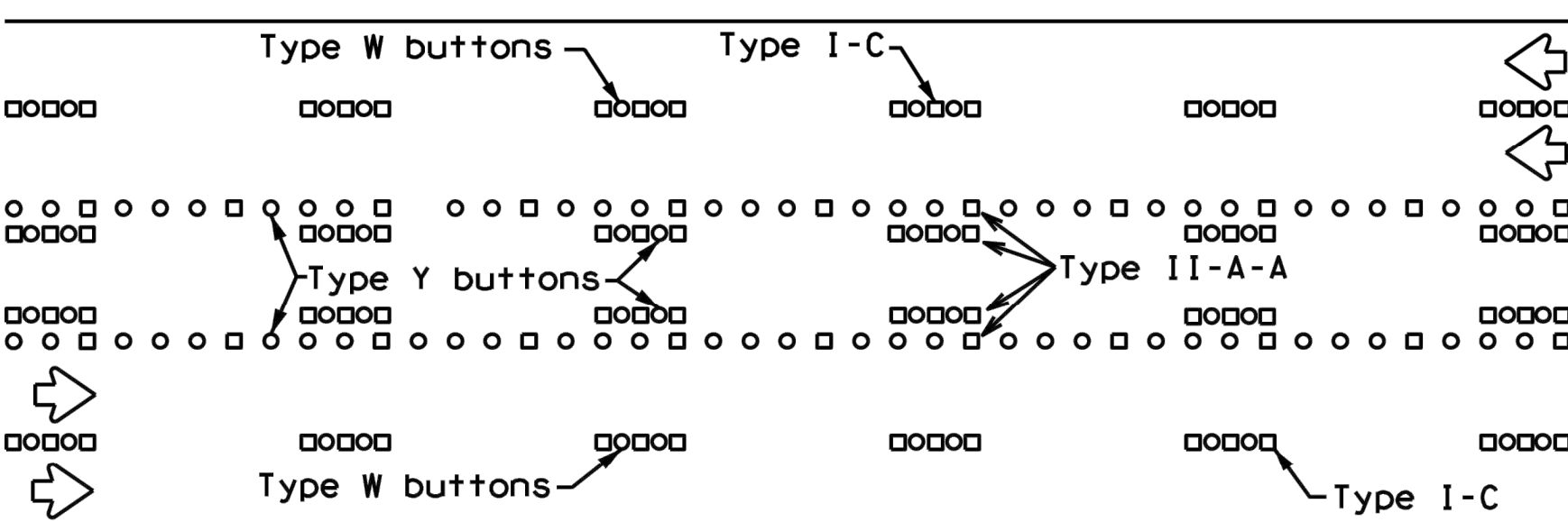
RAISED PAVEMENT MARKERS

## LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS

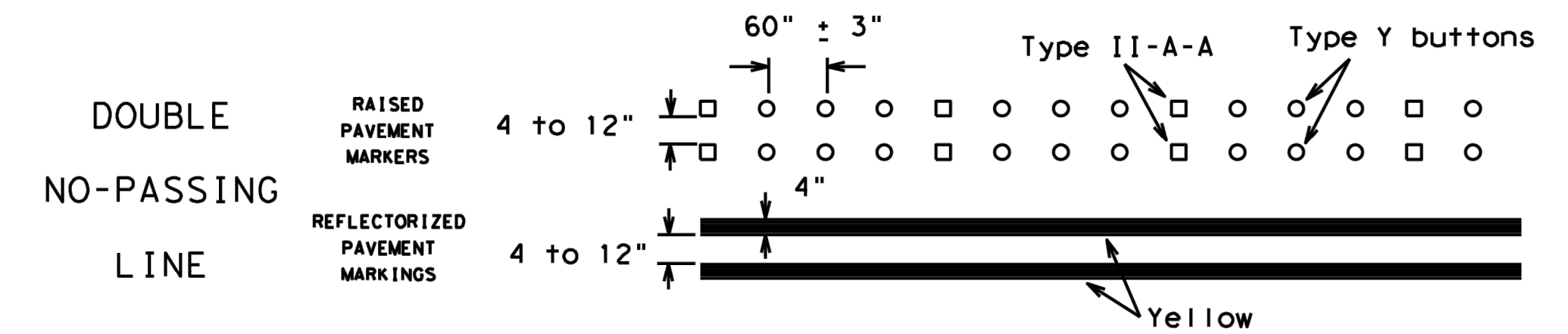
Prefabricated markings may be substituted for reflectORIZED pavement markings.



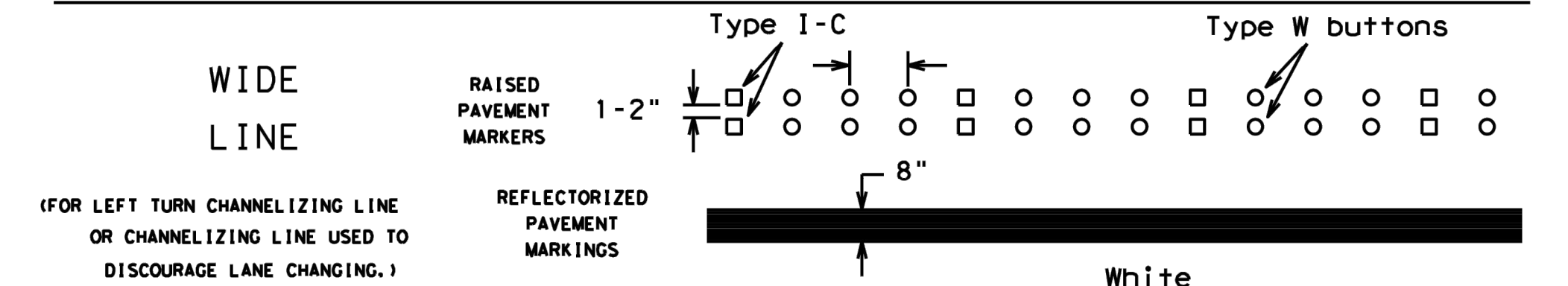
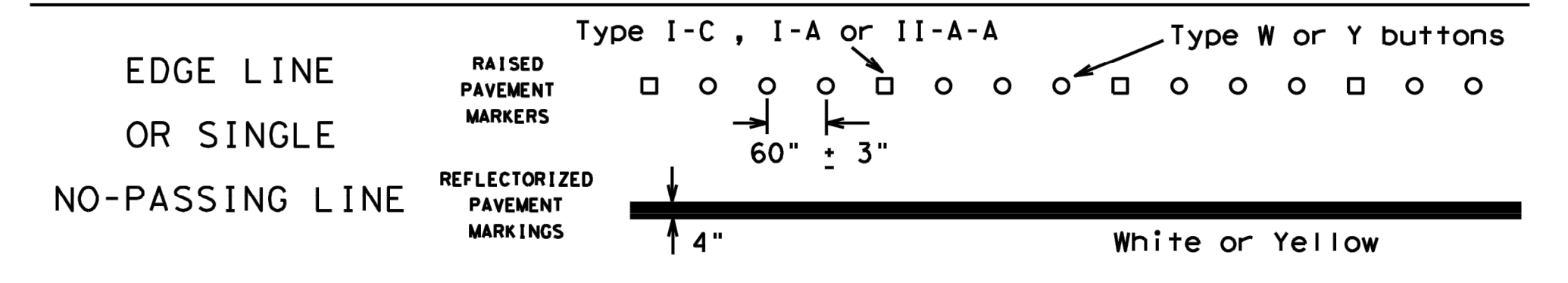
RAISED PAVEMENT MARKERS

## TWO-WAY LEFT TURN LANE

## STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

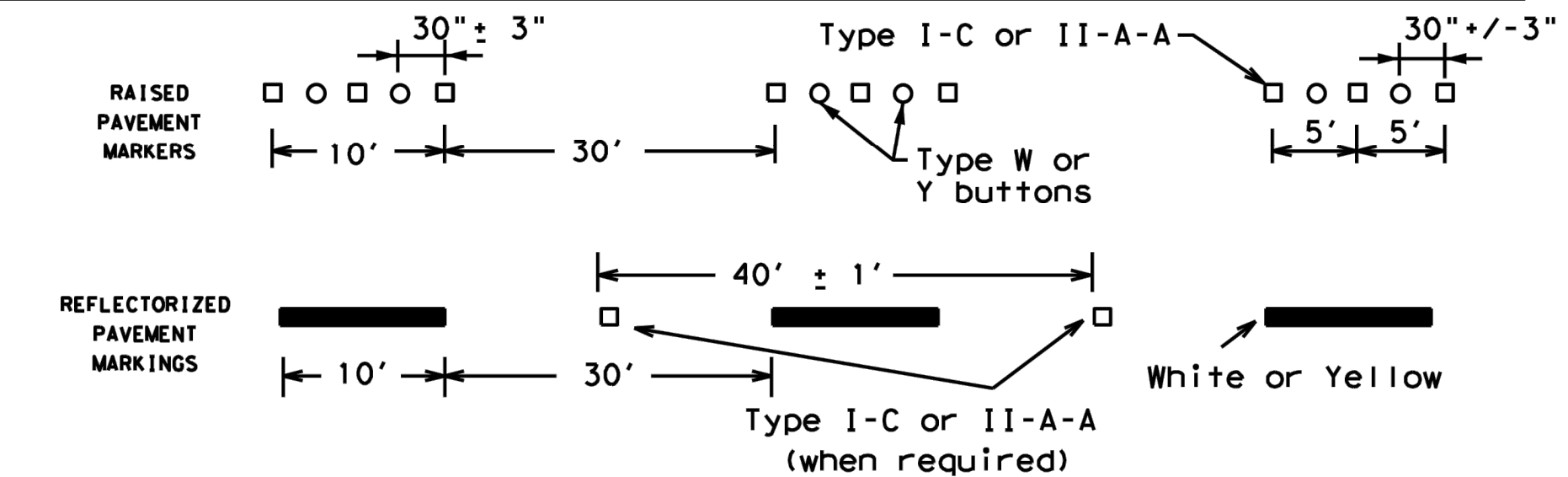


## SOLID LINES

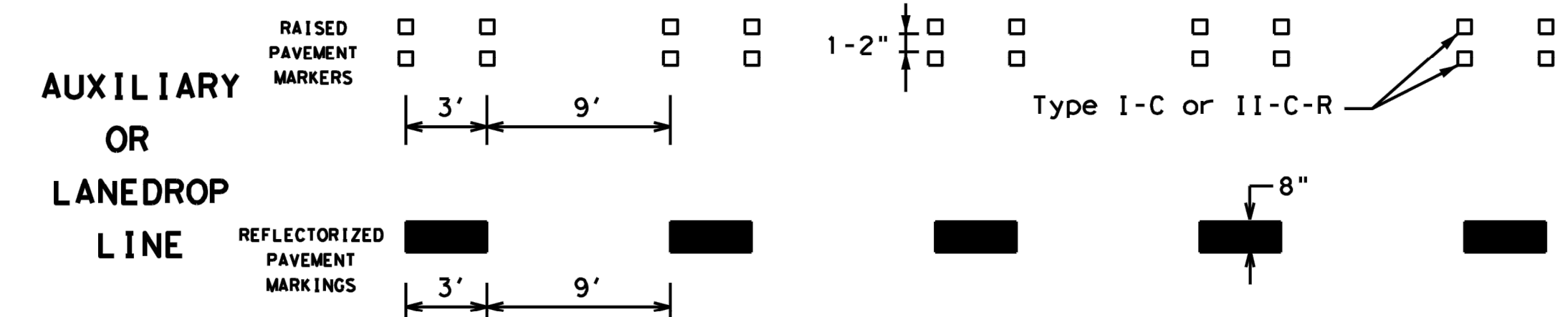


(FOR LEFT TURN CHANNELIZING LINE OR CHANNELIZING LINE USED TO DISCOURAGE LANE CHANGING.)

## CENTER LINE OR LANE LINE

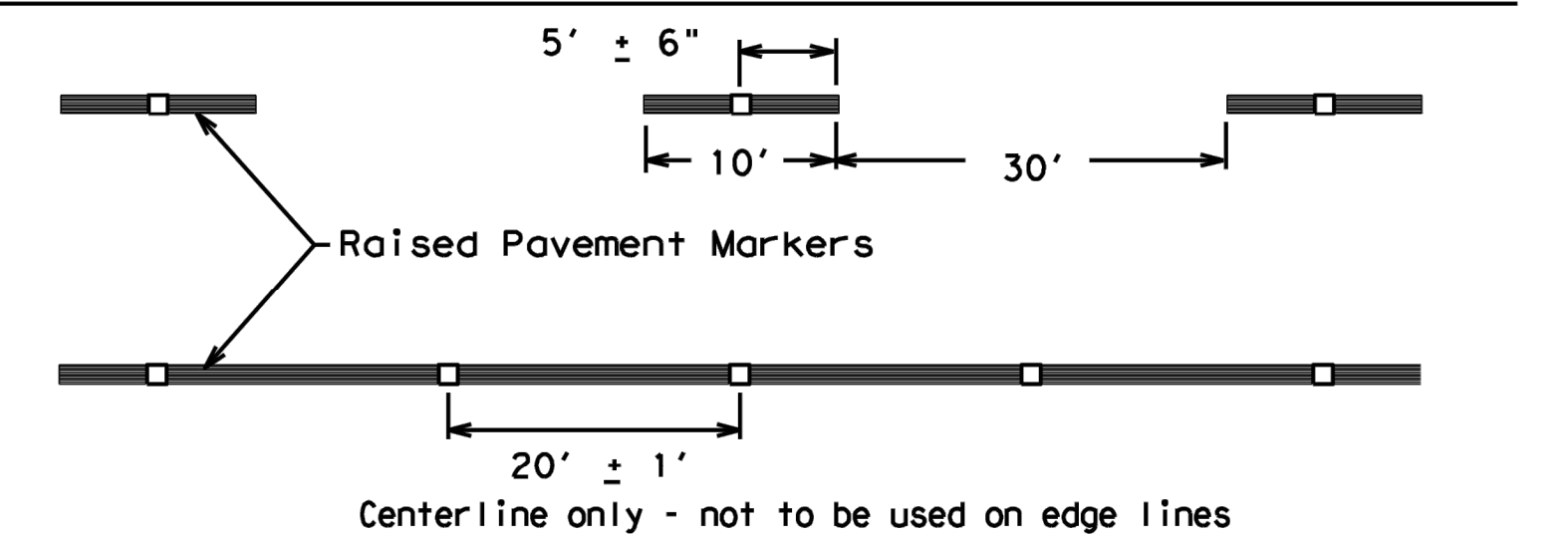


## BROKEN LINES



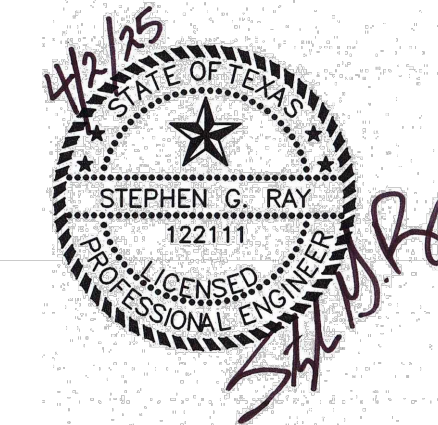
## REMOVABLE MARKINGS WITH RAISED PAVEMENT MARKERS

If raised pavement markers are used to supplement REMOVABLE markings, the markers shall be applied to the top of the tape at the approximate mid length of tape used for broken lines or at 20 foot spacing for solid lines. This allows an easier removal of raised pavement markers and tape.



SHEET 12 OF 12

Raised pavement markers used as standard pavement markings shall be from the approved products list and meet the requirements of Item 672 "RAISED PAVEMENT MARKERS."



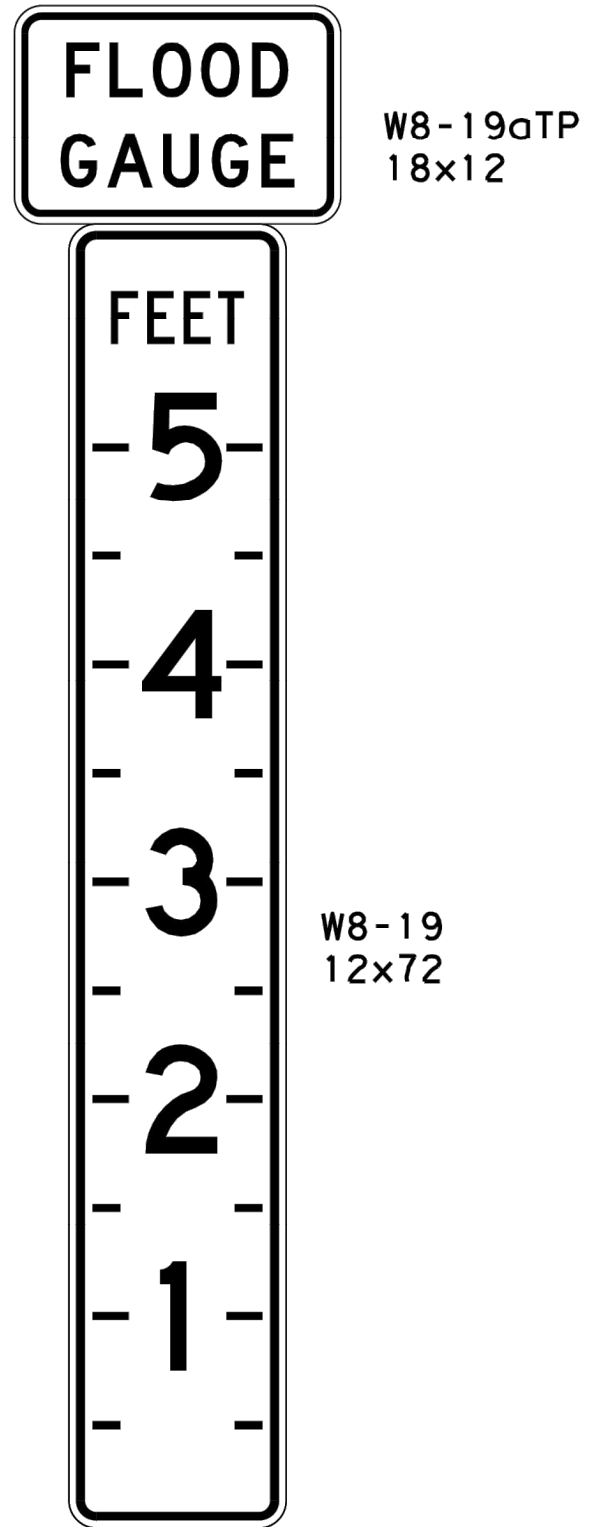
**Texas Department of Transportation**  
**BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS**  
**BC (12) - 21**

|                       |           |           |           |           |
|-----------------------|-----------|-----------|-----------|-----------|
| FILE: bc-21.dgn       | DN: TxDOT | CK: TxDOT | DW: TxDOT | CK: TxDOT |
| © TxDOT February 1998 | CONT      | SECT      | JOB       | HIGHWAY   |
| 1-97 9-07 5-21        |           |           |           |           |
| 2-98 7-13             |           |           |           |           |
| 11-02 8-14            |           |           |           |           |
|                       | DIST      | COUNTY    |           | SHEET NO. |
|                       |           |           |           | 27 OF 35  |



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DATE:  
FILE:



| DEPARTMENTAL MATERIAL SPECIFICATIONS |          |
|--------------------------------------|----------|
| ALUMINUM SIGN BLANKS                 | DMS-7110 |
| SIGN FACE MATERIALS                  | DMS-8300 |

| ALUMINUM SIGN BLANKS THICKNESS |                   |
|--------------------------------|-------------------|
| Square Feet                    | Minimum Thickness |
| Less than 7.5                  | 0.080             |
| 7.5 to 15                      | 0.100             |
| Greater than 15                | 0.125             |

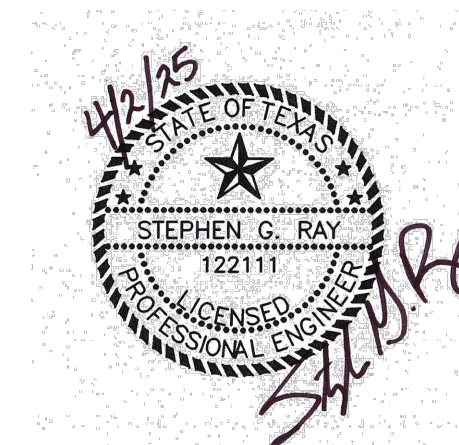
| SHEETING REQUIREMENTS |                    |   |
|-----------------------|--------------------|---|
| USAGE                 | COLOR              | SIGN FACE MATERIAL                              |
| BACKGROUND            | FLUORESCENT YELLOW | TYPE B <sub>FL</sub> & C <sub>FL</sub> SHEETING |
| LEGEND & BORDERS      | BLACK              | ACRYLIC NON-REFLECTIVE FILM                     |

## GENERAL NOTES

- Each flood gauge assembly shall consist of the FLOOD GAUGE sign (W8-19aTP) and DEPTH MARKER (W8-19). Two assemblies should be erected, one along each approach, at the low water crossing location on the right side of the roadway.
- The flood gauge assembly should be of sufficient height to register depth of water to a minimum of five (5) Feet above the lowest travel lane pavement surface. Actual height of depth marker required for each location is shown elsewhere in the plans, but should not be in excess of ten (10) feet.
- The flood gauge assembly should be located not more than ten (10) feet from the pavement edge. Consideration should be given to placement with regard to the following factors:
  - Accurate register of depth of water over roadway.
  - Daytime and nighttime visibility of the flood gauge assembly along roadway approaches.
  - Outside the main flow of water during both normal and flood conditions.
- In areas where flood conditions would likely obscure the flood gauge assembly, a second pair of gauges, one on each approach, registering depths greater than shown on the first flood gauge assembly, is recommended.
- The Engineer will approve all flood gauge assembly locations before installation.
- The alphabets and lateral spacing between letters and numerals shall conform with the Texas "Manual on Uniform Traffic Control Devices for Streets and Highways", latest edition, and any approved changes thereto. Lateral Spacing of text shall provide a balanced appearance. All materials shall conform to Department Specifications.
- FLOOD GAUGE signs and depth marker shall be mounted in accordance with Standard SMD (series). The recommended mounting is three (3) inch fiberglass reinforced pipe (FRP) pipe as shown on Standard SMD (GEN) and SMD (FRP). ROAD MAY FLOOD sign (W8-18) along the approach roadway may be required in areas where rainfall causes frequent roadway flooding.

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

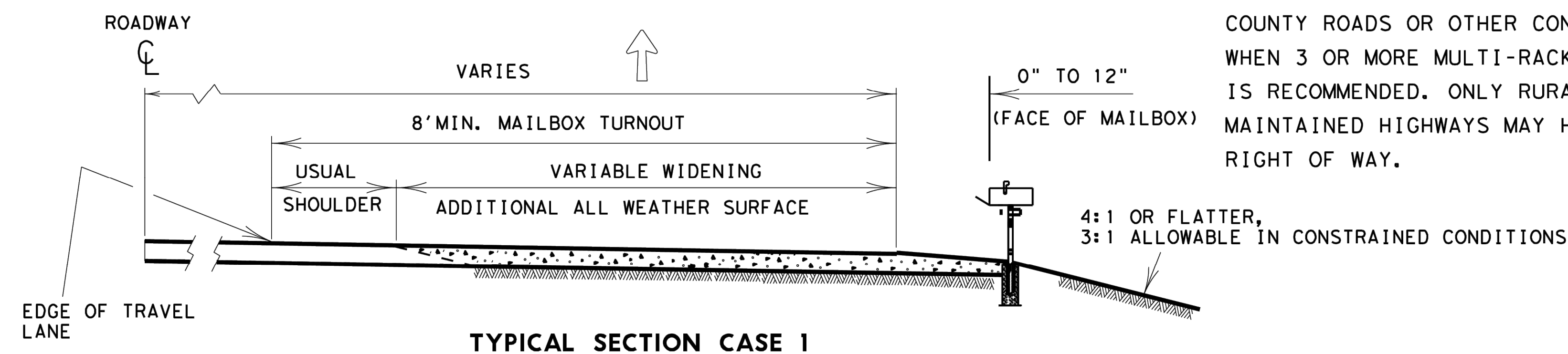
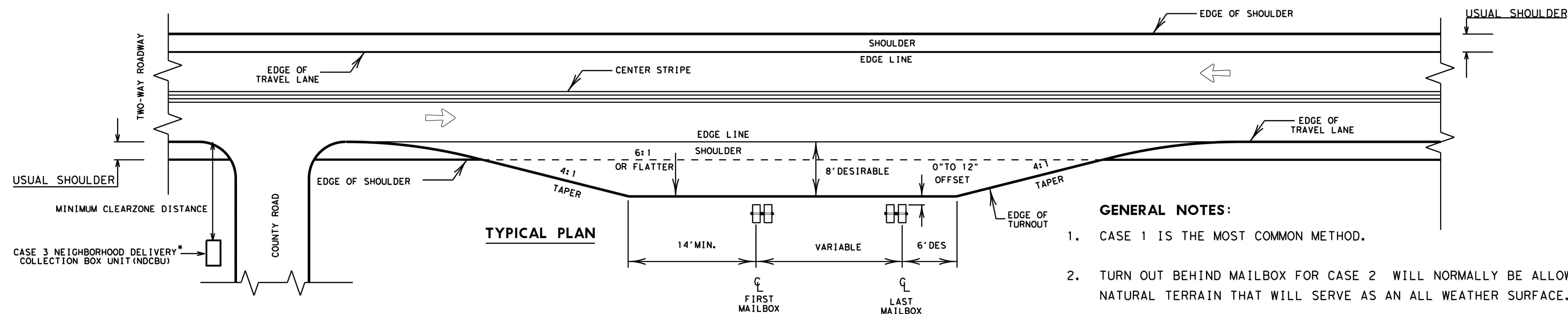
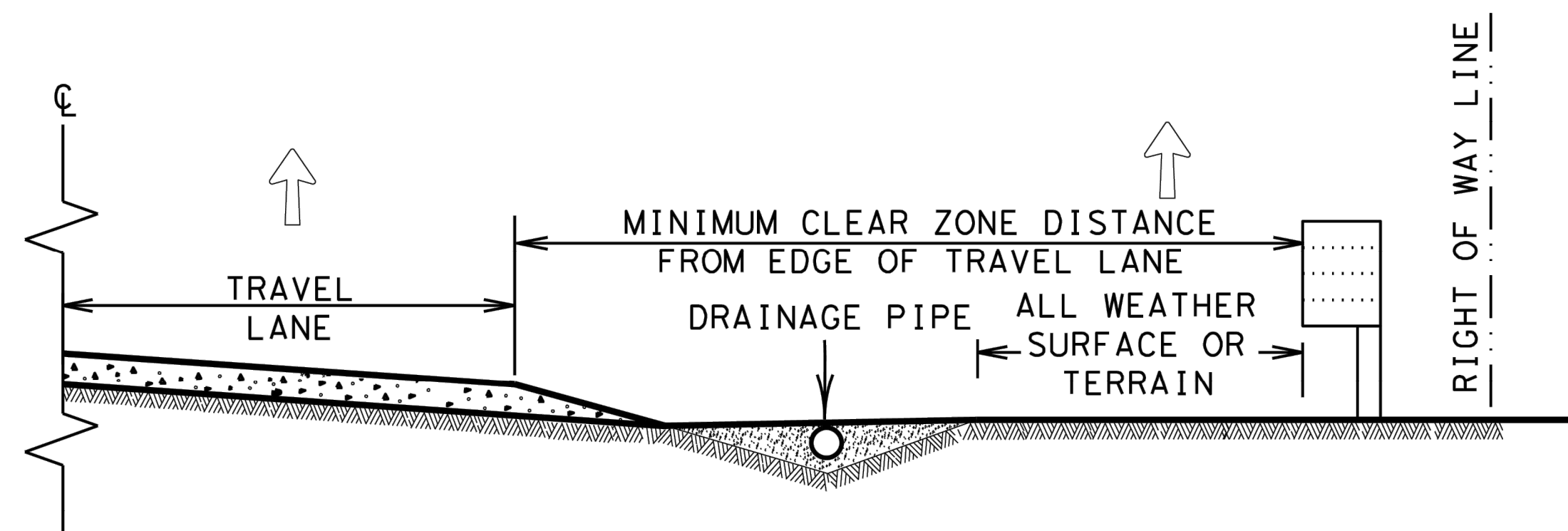
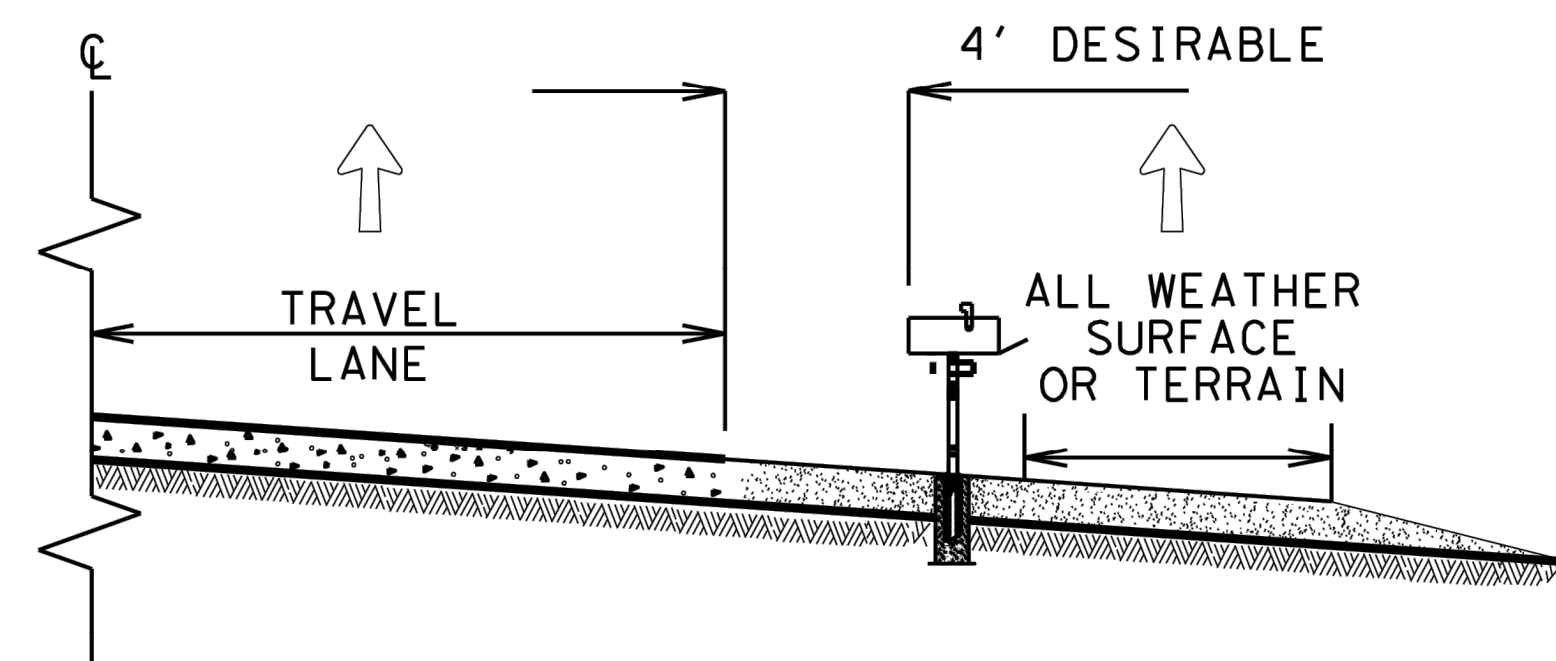
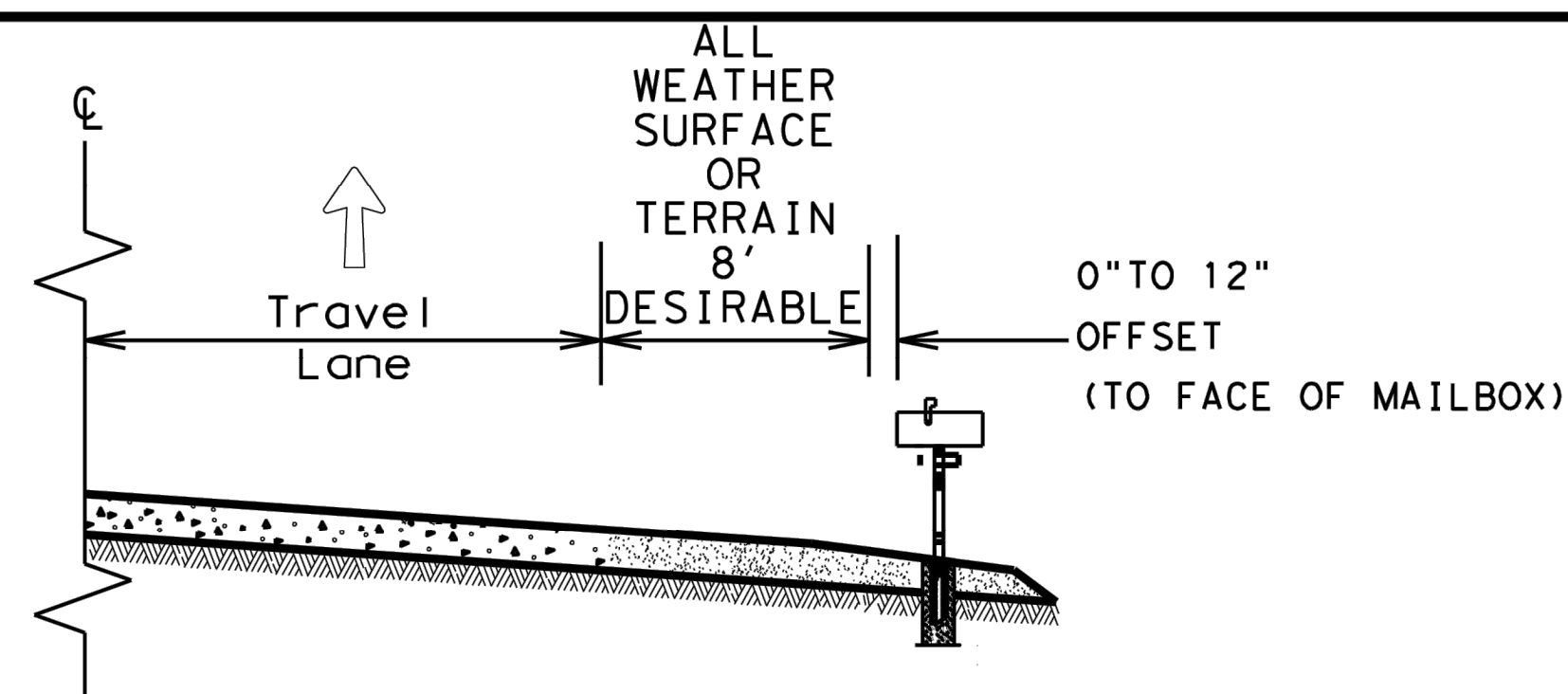
<http://www.txdot.gov/>



|                                 |            |   |           |
|---------------------------------|------------|---|-----------|
|                                 |            | Traffic<br>Operations<br>Division<br>Standard |           |
| <b>FLOOD GAUGE<br/>ASSEMBLY</b> |            |   |           |
| <b>FGA-15</b>                   |            |   |           |
| FILE#                           | fga-15.dgn | DN#   | TxDOT     |
| ©                               | TxDOT      | January 1997                                  | REVISIONS |
| 3-15                            |            | DIST  | COUNTY    |
|                                 |            | SHEET NO.                                     |           |
|                                 |            | 28 OF 35                                      |           |



DATE: \_\_\_\_\_  
FILE: \_\_\_\_\_



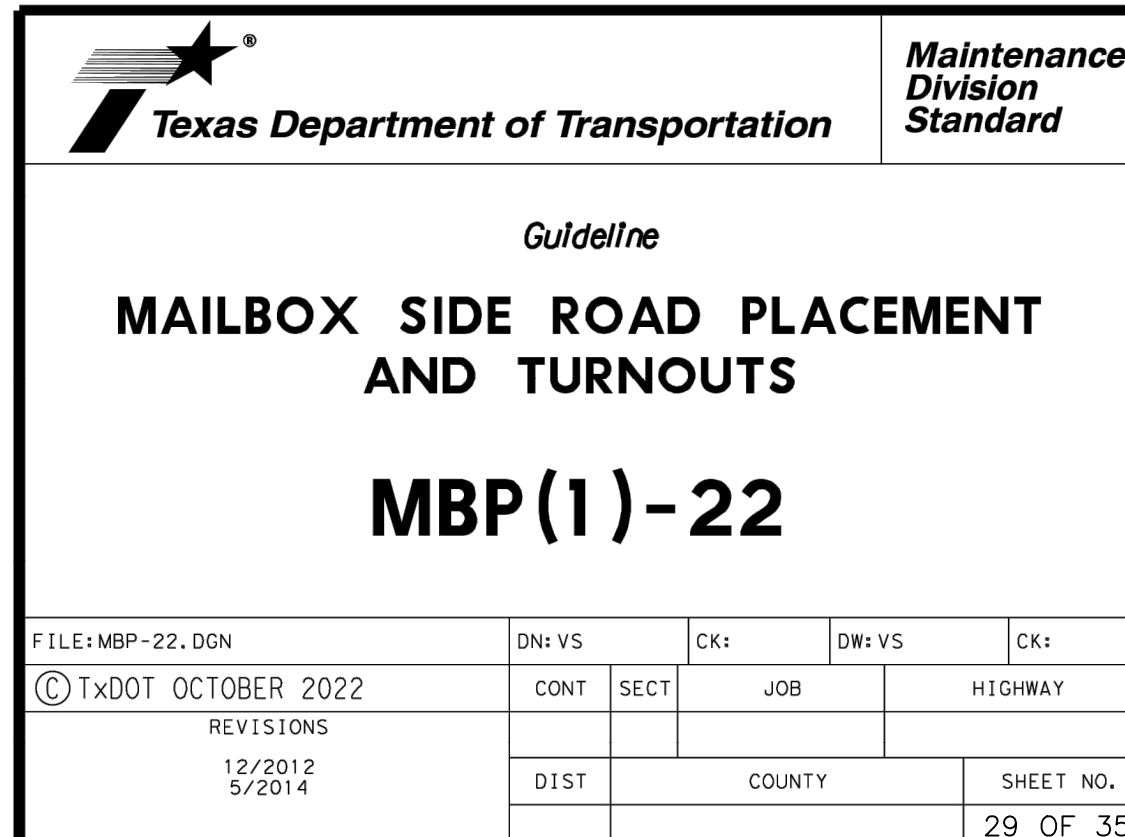
- GENERAL NOTES:**

1. CASE 1 IS THE MOST COMMON METHOD.
2. TURN OUT BEHIND MAILBOX FOR CASE 2 WILL NORMALLY BE ALLOWED FOR NATURAL TERRAIN THAT WILL SERVE AS AN ALL WEATHER SURFACE.
3. ALL WEATHER DRIVEWAYS FOR CASE 3 MAILBOXES LOCATED AT THE RIGHT OF WAY LINE SHOULD NORMALLY BE PLACED IN CONJUNCTION WITH COUNTY ROADS OR OTHER CONNECTING COMMUNITY ROADS OR STREETS. WHEN 3 OR MORE MULTI-RACKS ARE ANTICIPATED, THE USE OF AN NDCBU IS RECOMMENDED. ONLY RURAL PATRONS LOCATED ON STATE MAINTAINED HIGHWAYS MAY HAVE A MAILBOX OR NDCBU SLOT ON TXDOT RIGHT OF WAY.

\* NDCBU MAY BE INSTALLED ON COUNTY ROAD ROW WITH APPROVAL OF COUNTY.

 MAIL DELIVERY VEHICLE TRAVEL DIRECTION

**SHEET 1 OF 2**

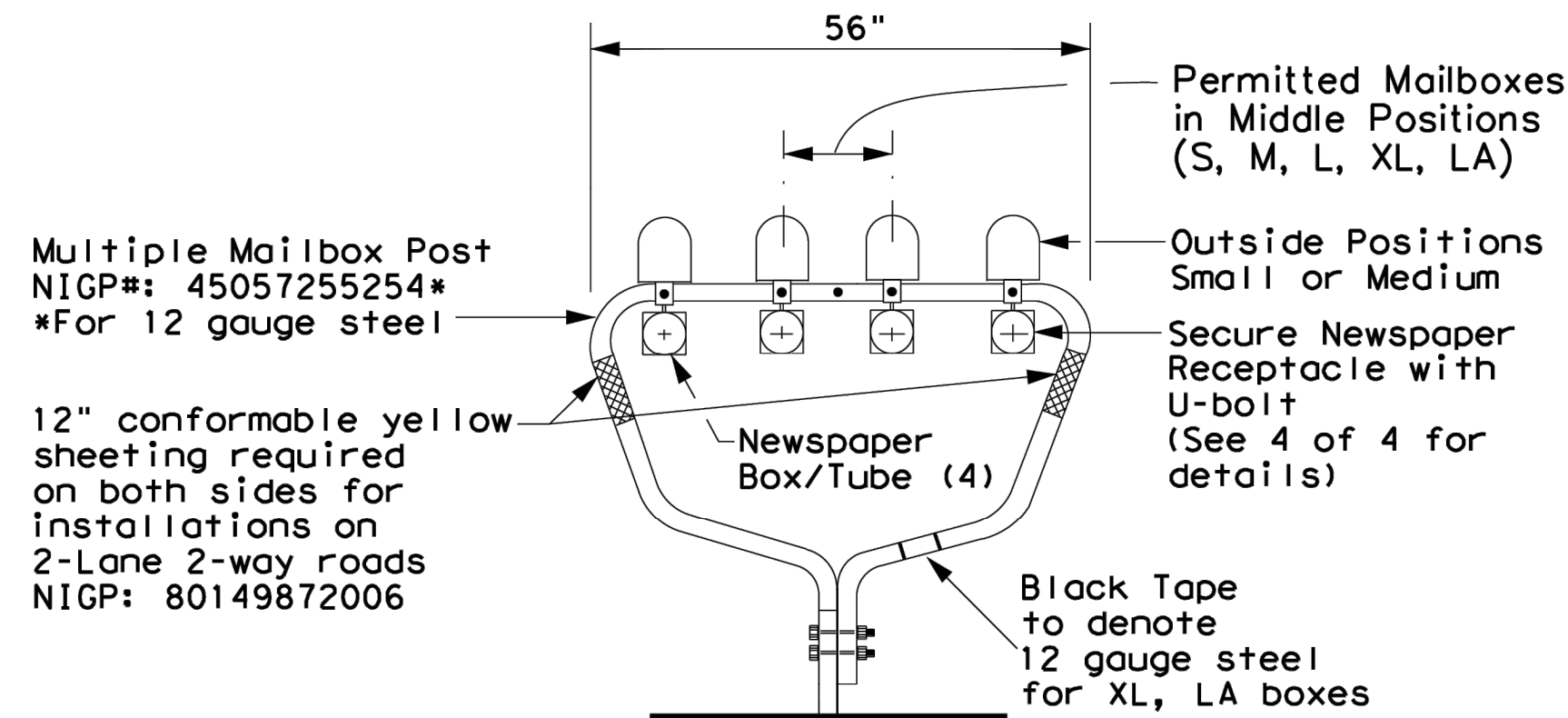




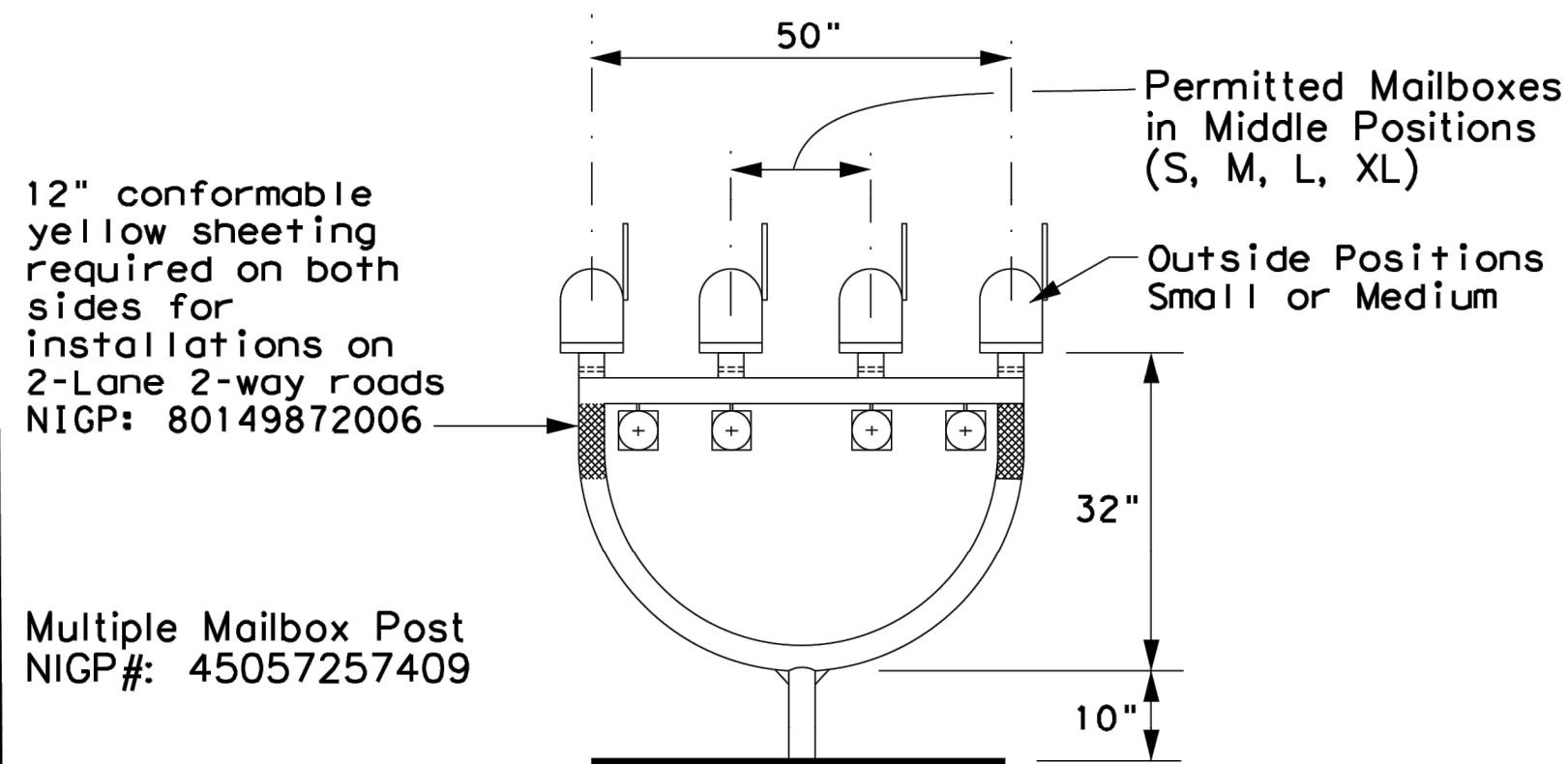
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DATE: FILE:

## TYPE 1 - MULTIPLE



## TYPE 4 - MULTIPLE



## MAILBOX SIZES

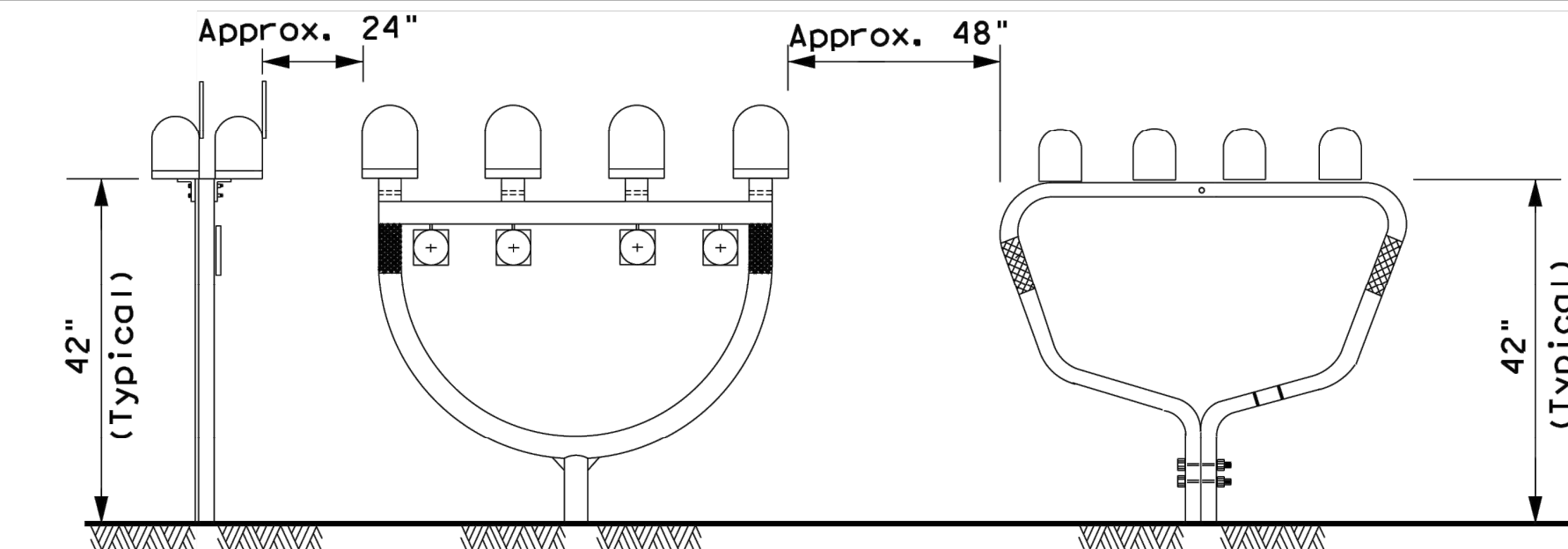
| MAILBOX SIZE | TYPICAL DIMENSIONS |         |           | MAX ** |
|--------------|--------------------|---------|-----------|--------|
|              | LENGTH             | WIDTH   | HEIGHT    |        |
| SMALL        | 19 1/2"            | 6"      | 7"        | 6 LBS  |
| MEDIUM       | 22 1/2" *          | 8" *    | 11 1/2" * | 8 LBS  |
| LARGE        | 23 1/2"            | 11 1/2" | 13 1/2"   | 11 LBS |
| EXTRA LARGE  | 18"                | 14"     | 12"       | 13 LBS |
| LOCKABLE     | 18"                | 11 1/2" | 15"       | 23 LBS |

\* See Note 1.  
\*\* Excluding Molded Plastic on 4 X 4 Post

### GENERAL NOTES:

- Dimensions shown (length, width, and height) are typical, not maximums. However, anytime a medium size mailbox is mounted on a single/double mount or on the outside position on a multi mount, the dimensions shown are maximums.
- Mailboxes shall be made of light weight sheet metal or light weight plastic. Heavy steel, cast iron or decorative mailboxes shall not be used on the state highway system.

## TYPICAL INSTALLATION MEASUREMENTS

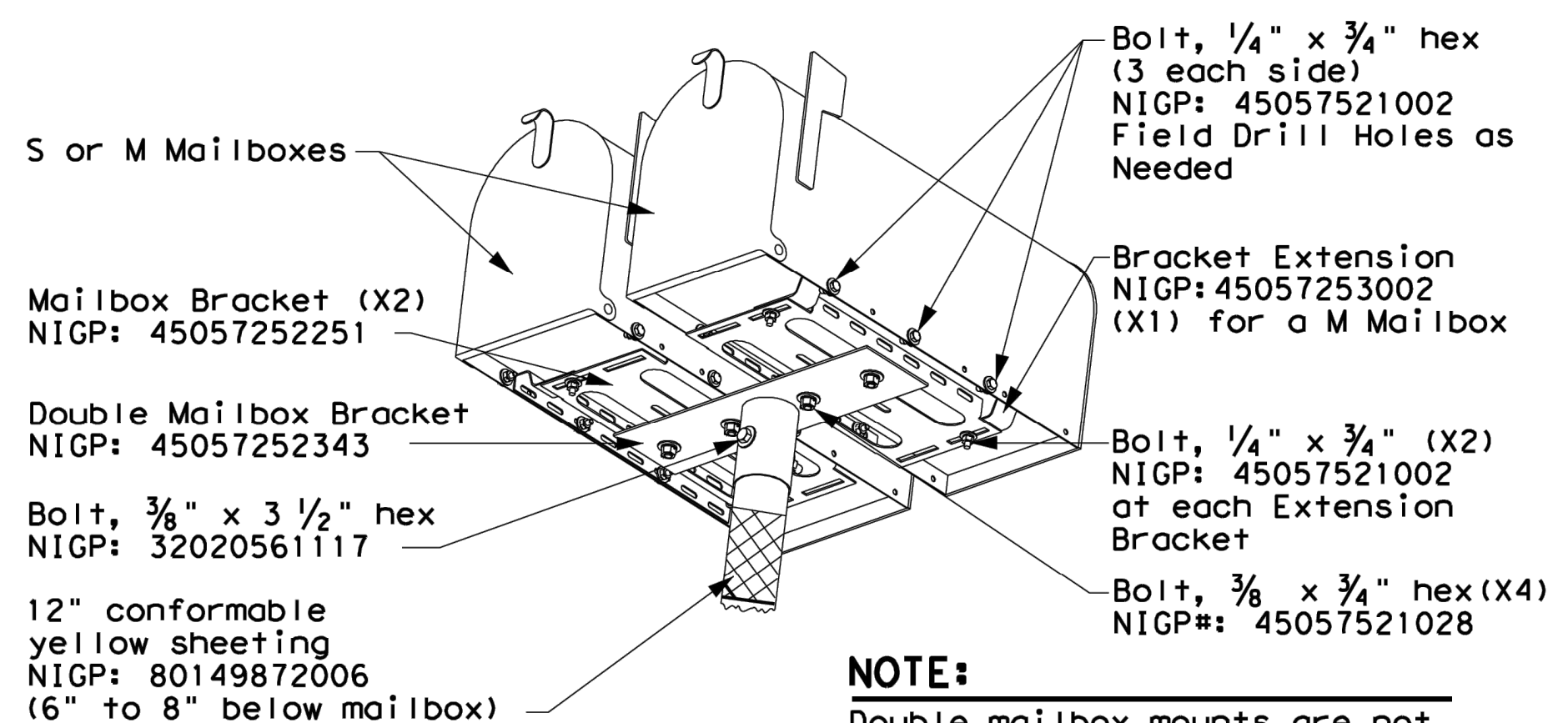
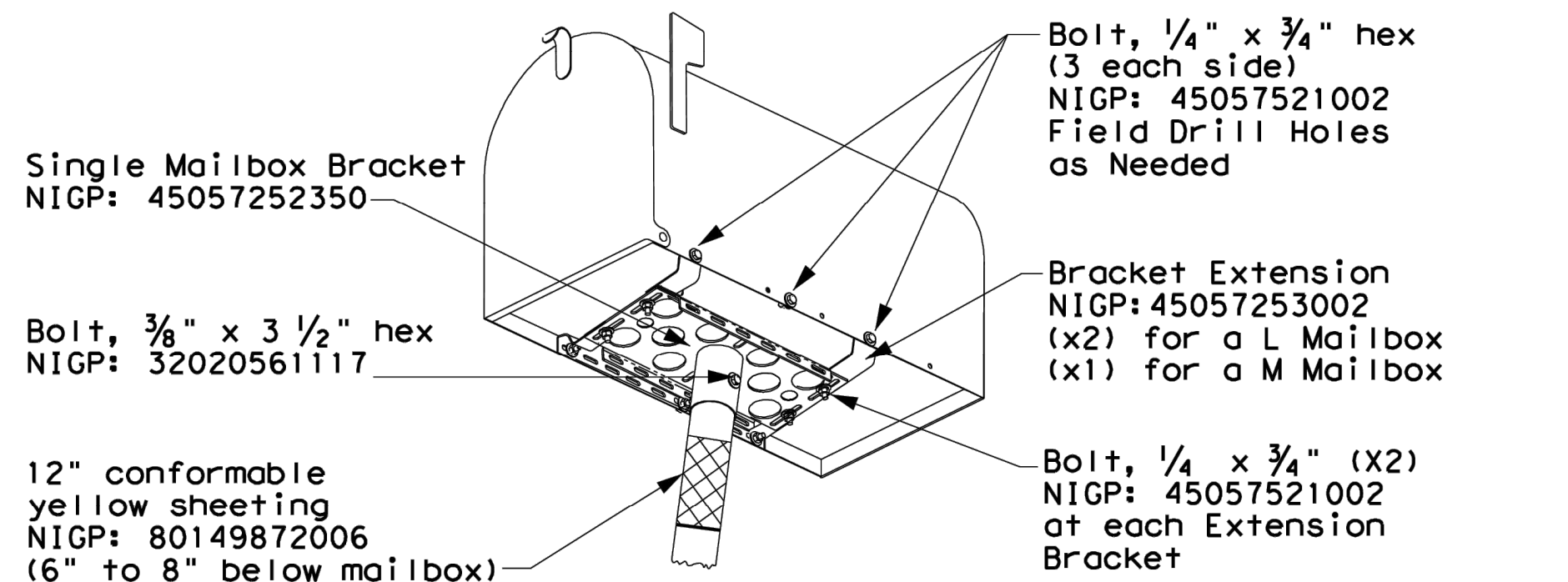


### NOTE:

Mailbox installations in sidewalk areas shall be in accordance with the latest TxDOT Design Standard sheets PED-Pedestrian Facilities Curb Ramps.



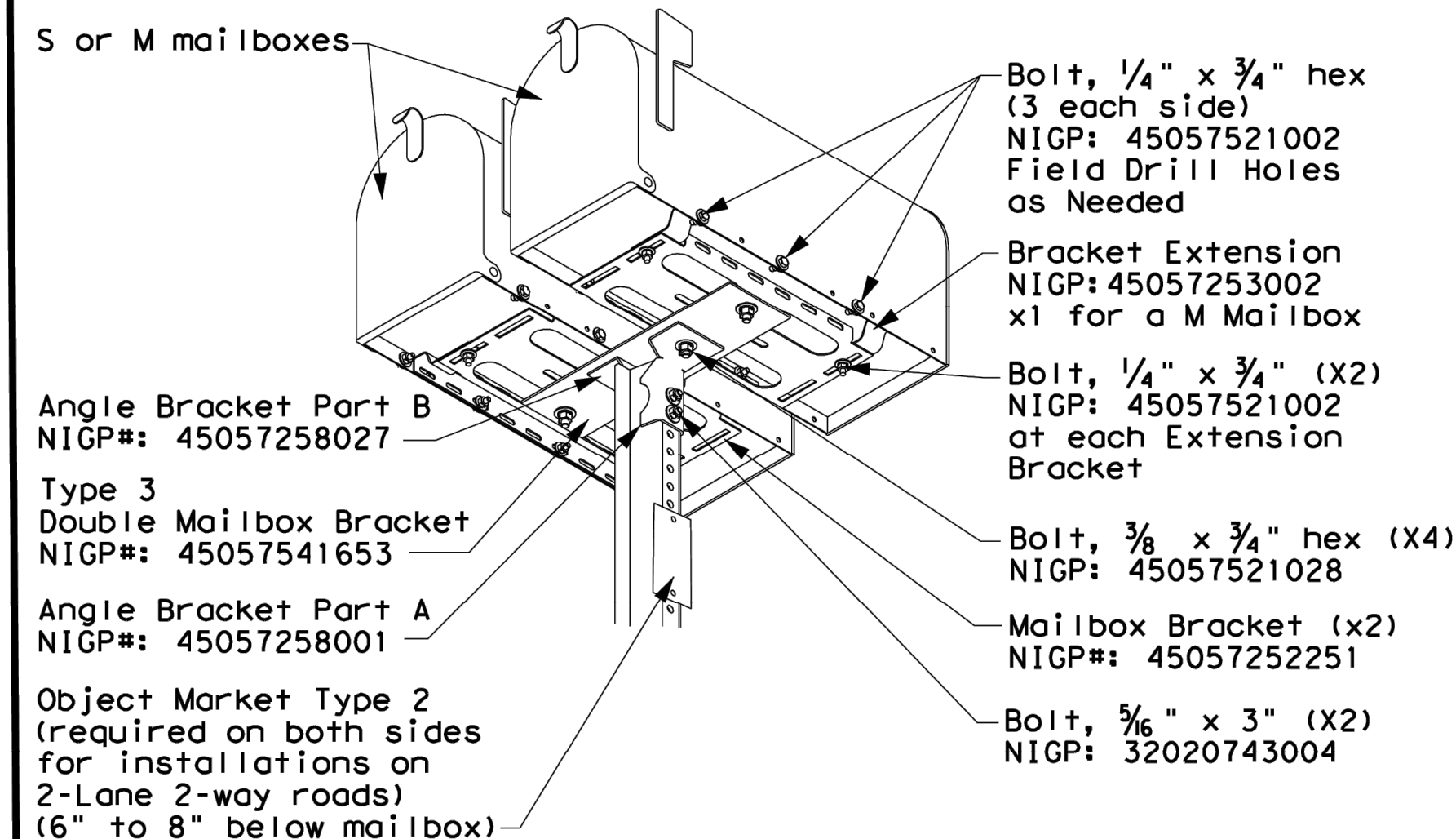
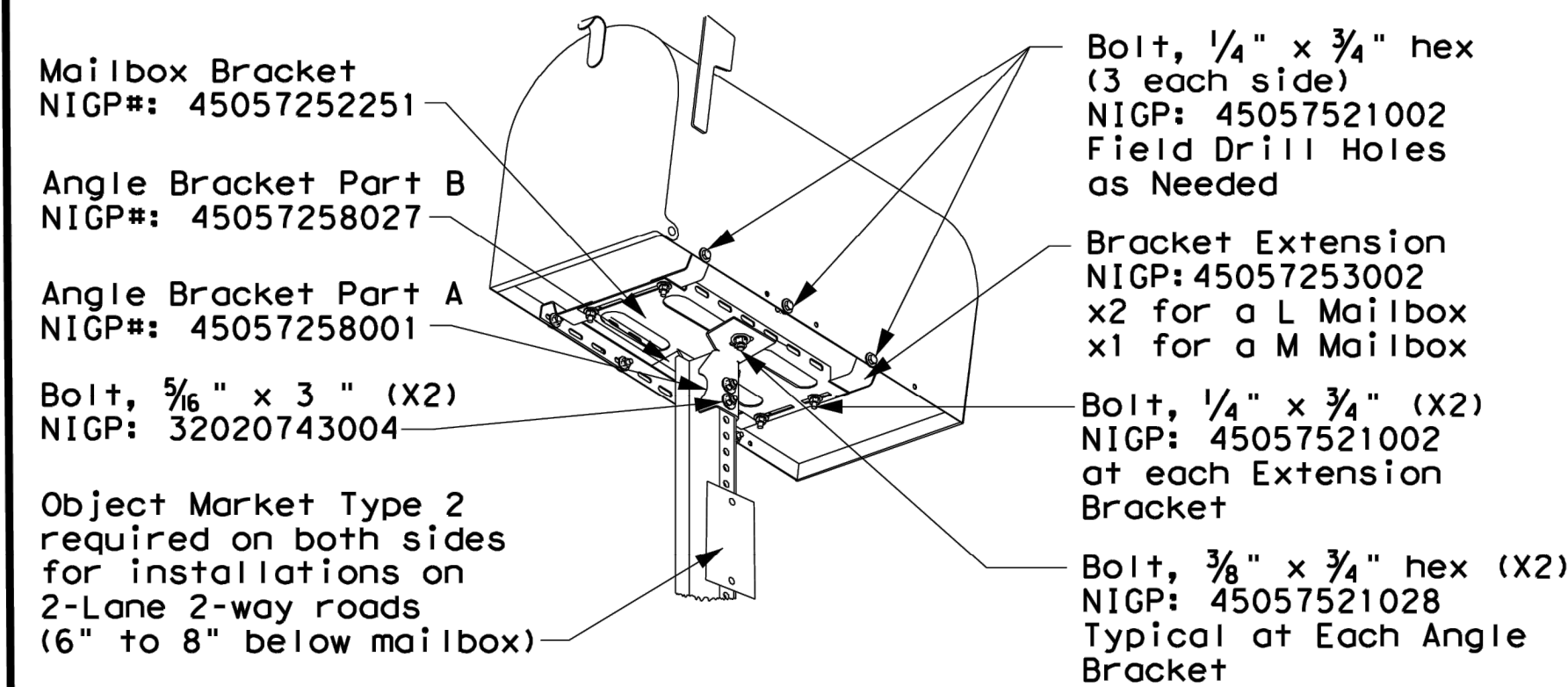
## TYPE 2 and 4 - SINGLE/DOUBLE



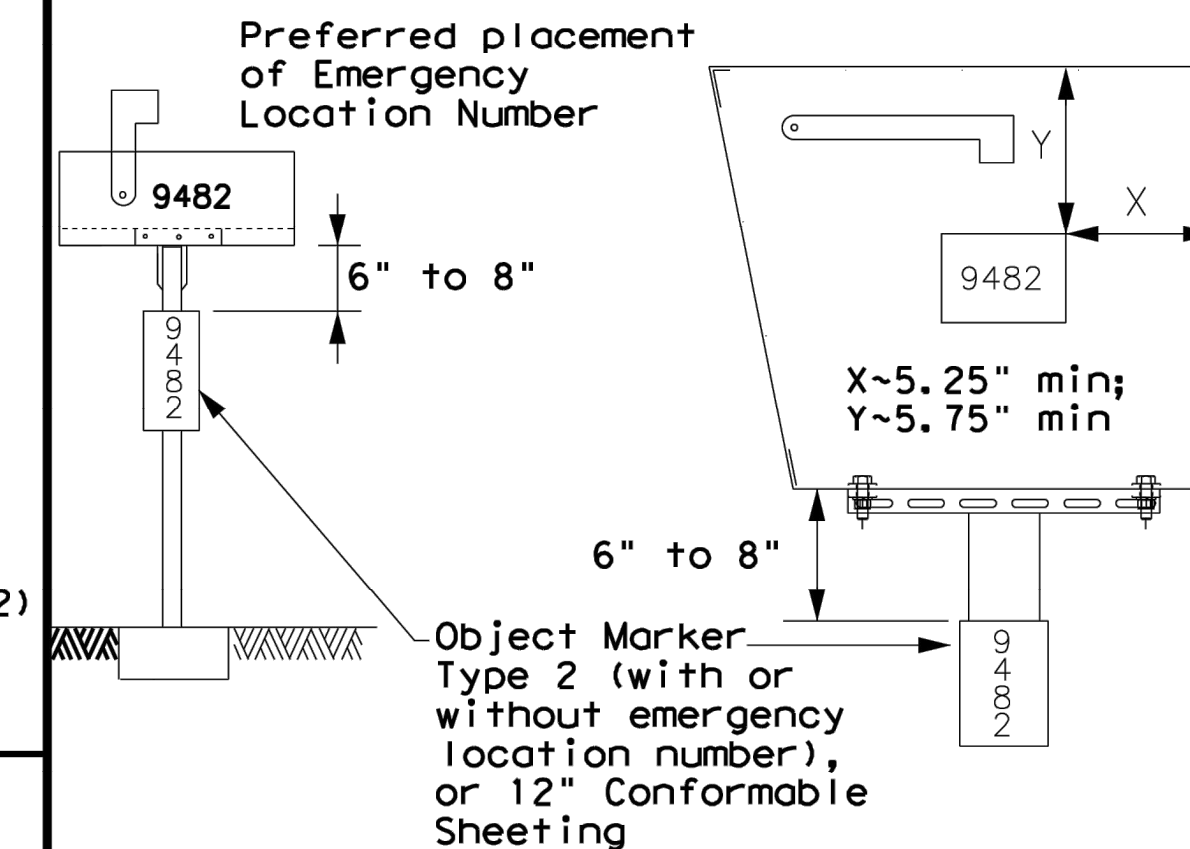
### NOTE:

Double mailbox mounts are not allowed with a type 4 multiple mailbox installation

## TYPE 3 - SINGLE/DOUBLE



## PLACEMENT OF EMERGENCY LOCATION NUMBER

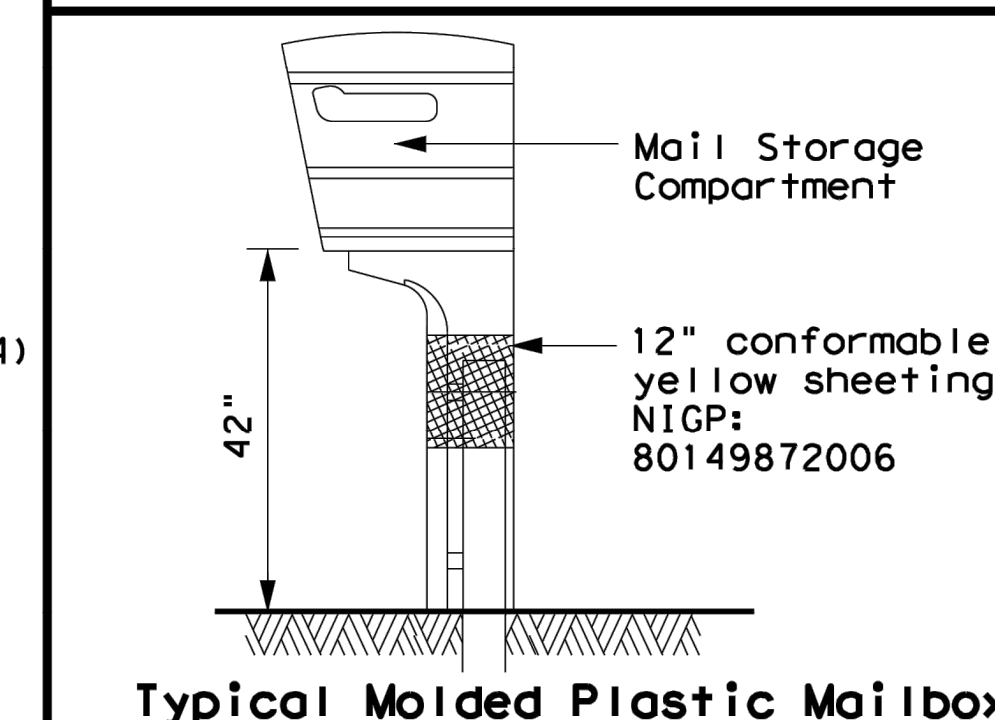


### NOTES:

- Location numbers are provided by homeowner. Minimum size 1" height.
- Location number is typically placed on the mailbox in a contrasting color.
- Black numbers may be placed on the Type 2 object marker if the numbers cannot be placed on the mailbox.
- Alternatively, a green or blue plate with white numbers attached may be mounted below the object marker. Other contrasting color configuration, as approved, may be used.
- See 3 of 4 for Foundation details.
- See 4 of 4 for Hardware details.

SHEET 1 OF 4

## TYPE 5



Maintenance Division Standard

## MAILBOX MOUNTING AND ASSEMBLY

### MB(1)-21

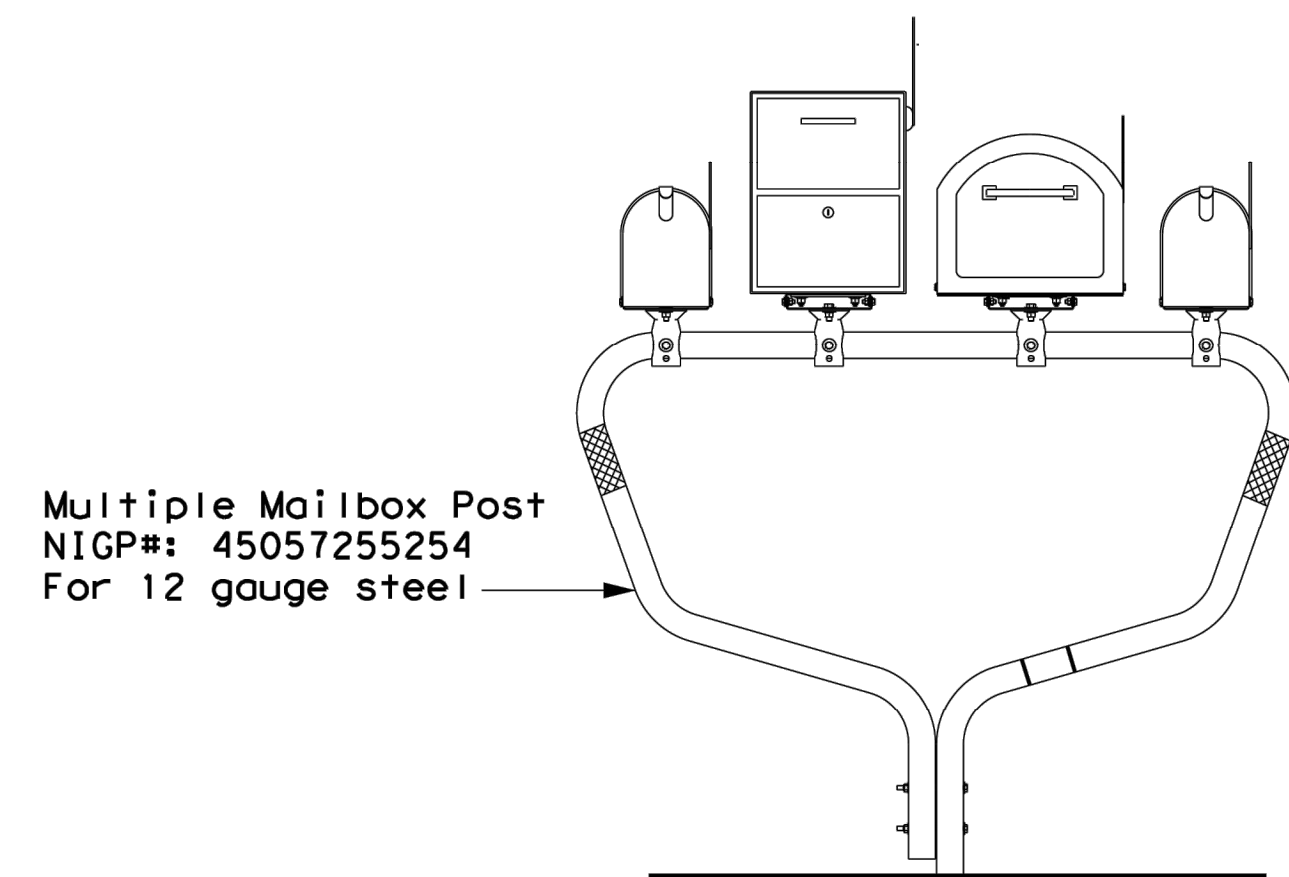
|                       |  |           |      |           |           |           |
|-----------------------|--|-----------|------|-----------|-----------|-----------|
| FILE: MB-21.dgn       |  | DN: TxDOT |      | CK: TxDOT | DW: TxDOT | CK: TxDOT |
| © TxDOT March 2004    |  | CONT      | SECT | JOB       |           | HIGHWAY   |
| REVISIONS             |  |           |      |           |           |           |
| 2/2005 11/2009 4/2015 |  |           |      |           |           |           |
| 6/2005 1/2011         |  |           |      |           |           |           |
| 11/2006 7/2014        |  |           |      |           |           |           |
| DIST                  |  | COUNTY    |      |           |           | SHEET NO. |
|                       |  |           |      |           |           | 30 OF 35  |



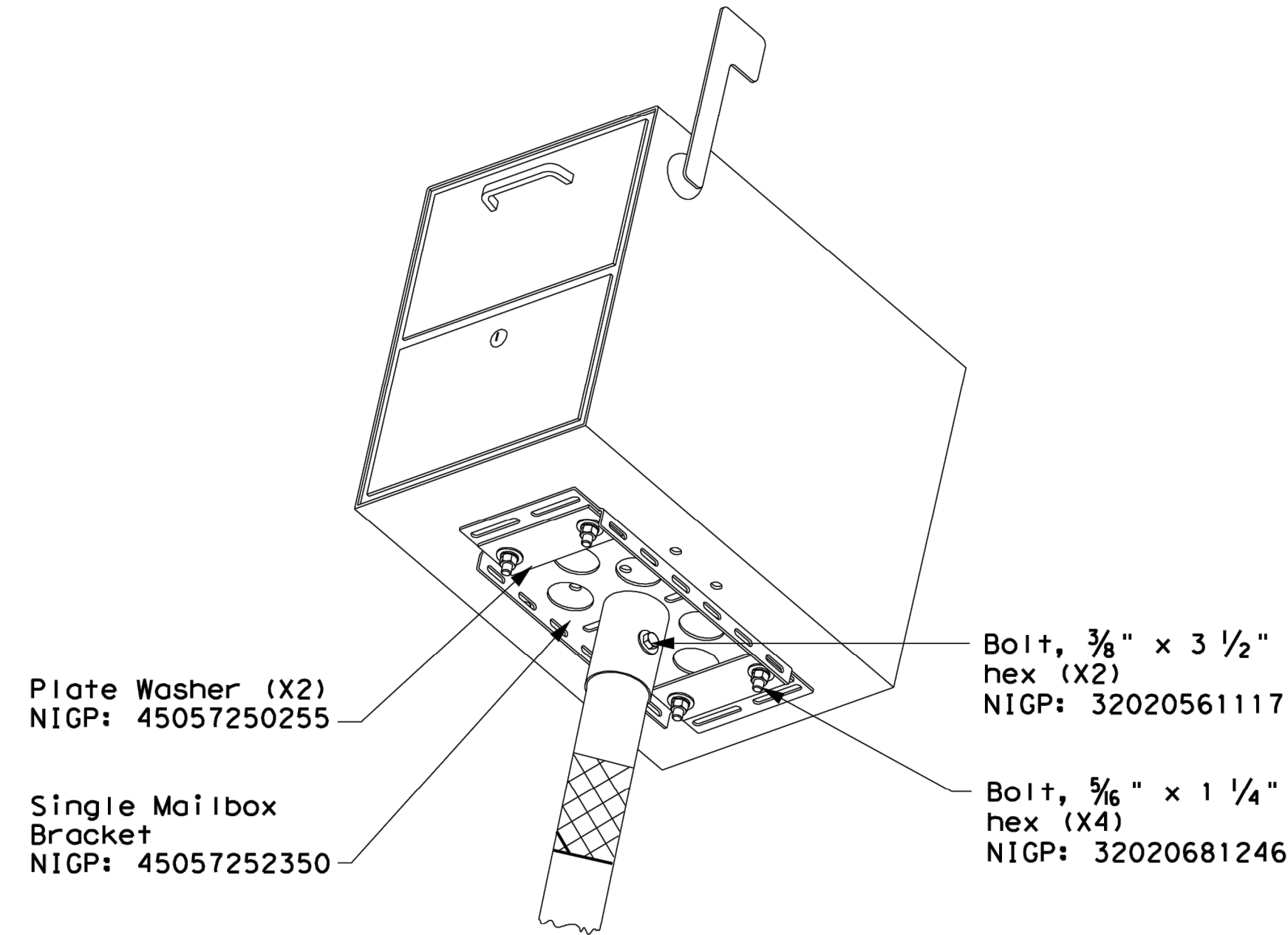
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FILE:

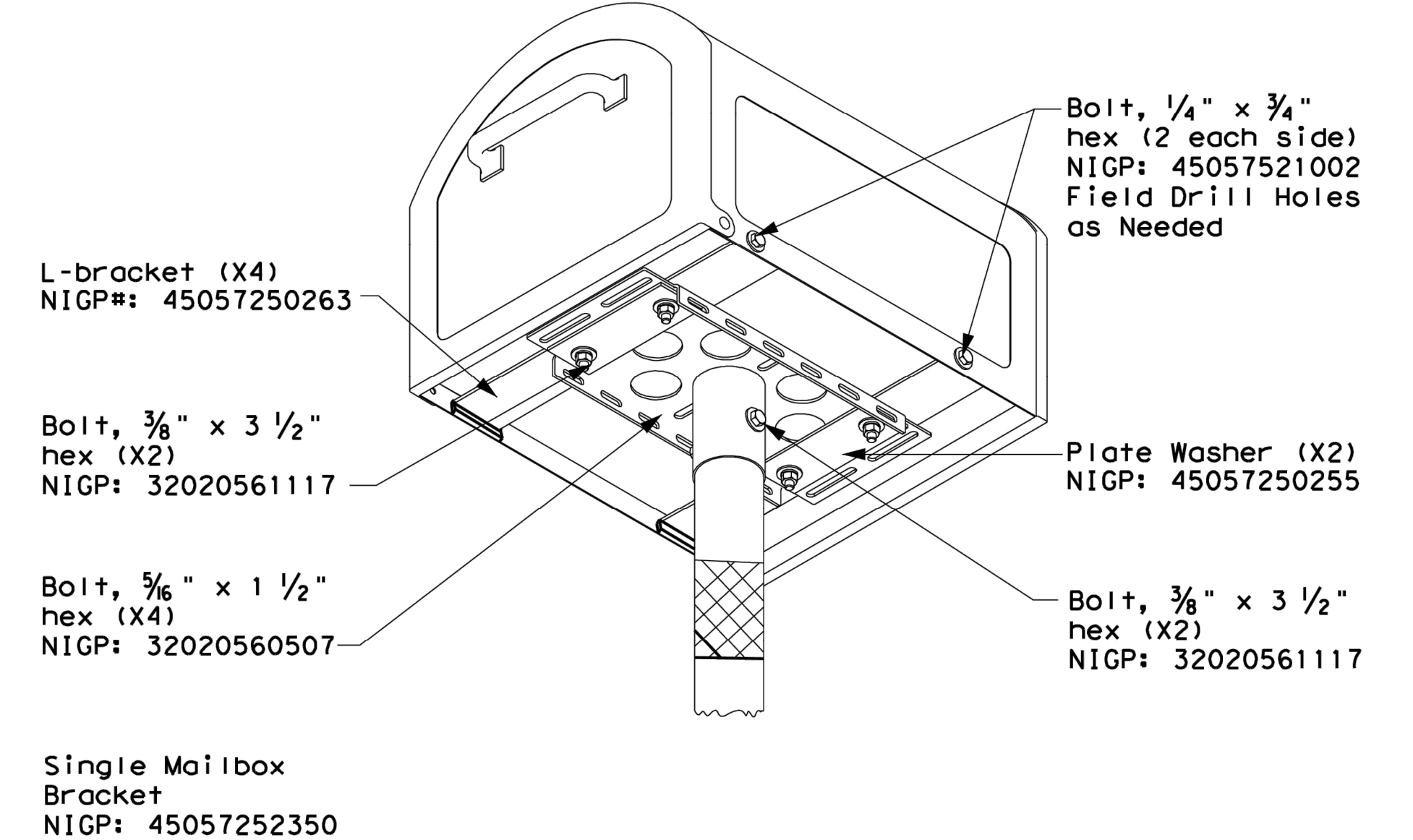
## TYPE 1 - MULTI LOCKABLE AND XL MAILBOX



## TYPE 2/4 - SINGLE LOCKABLE MAILBOX



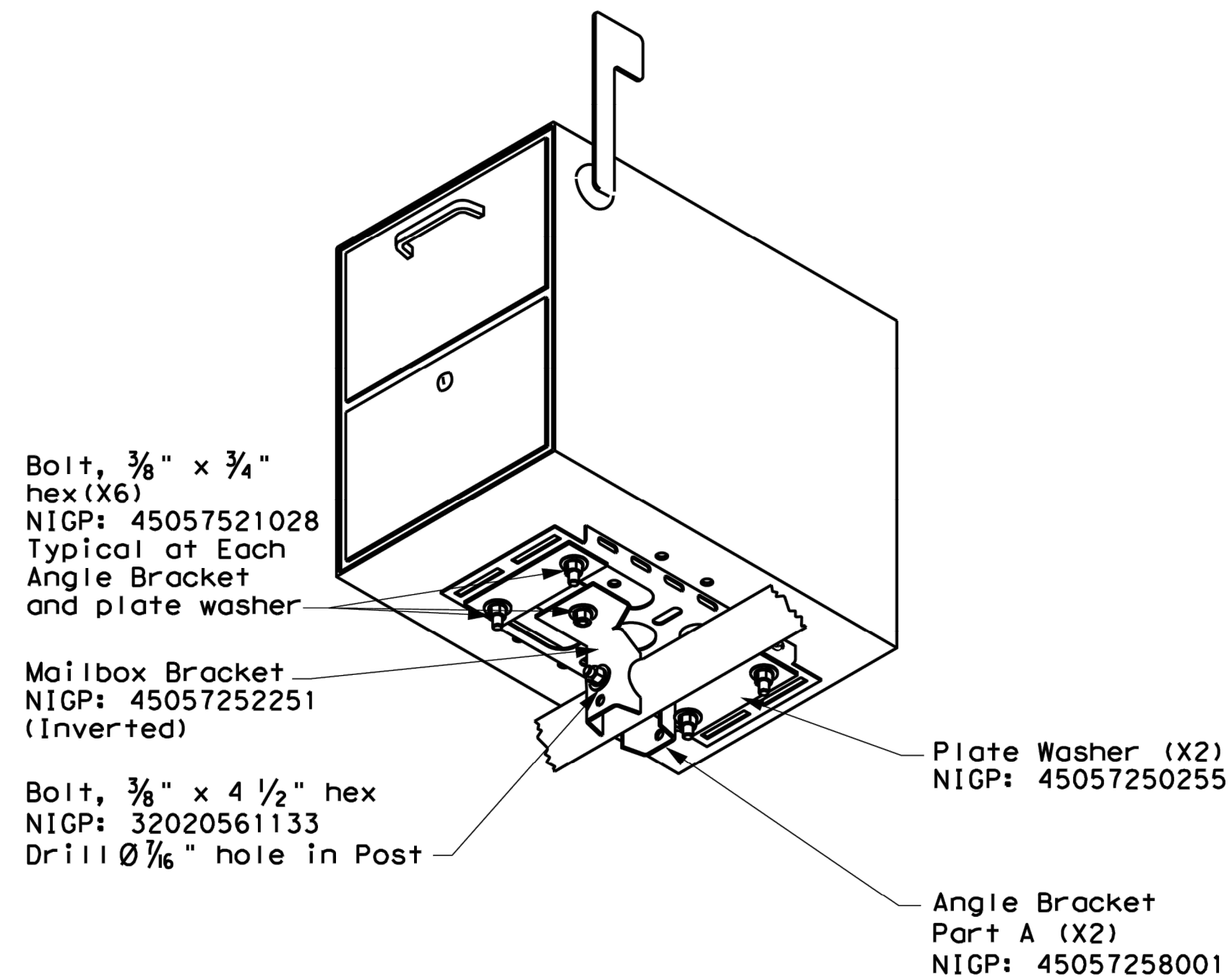
## TYPE 2/4 - SINGLE XL MAILBOX



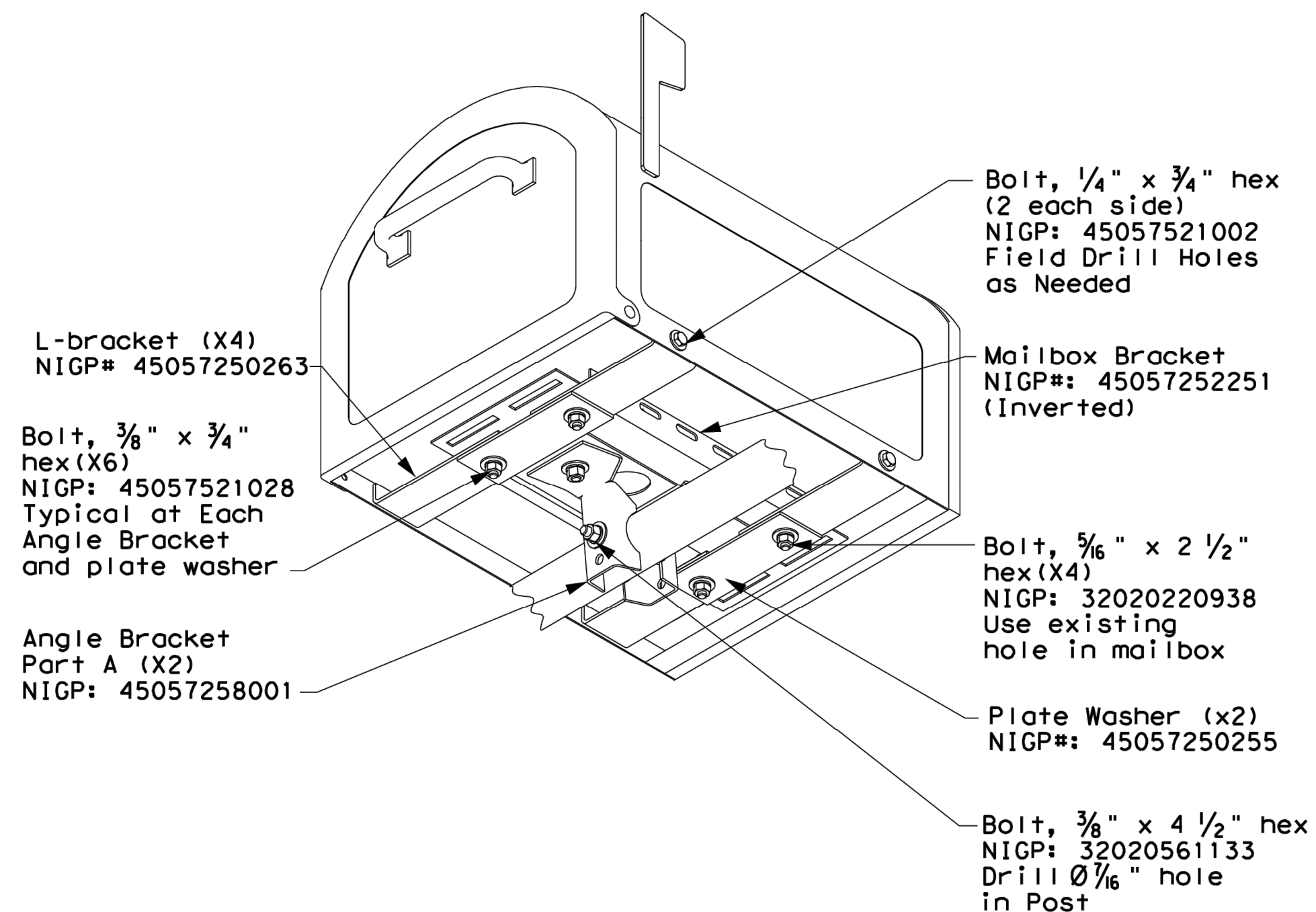
### NOTE:

Follow same configuration when mounting on XL mailbox on a Type 4 multi post.

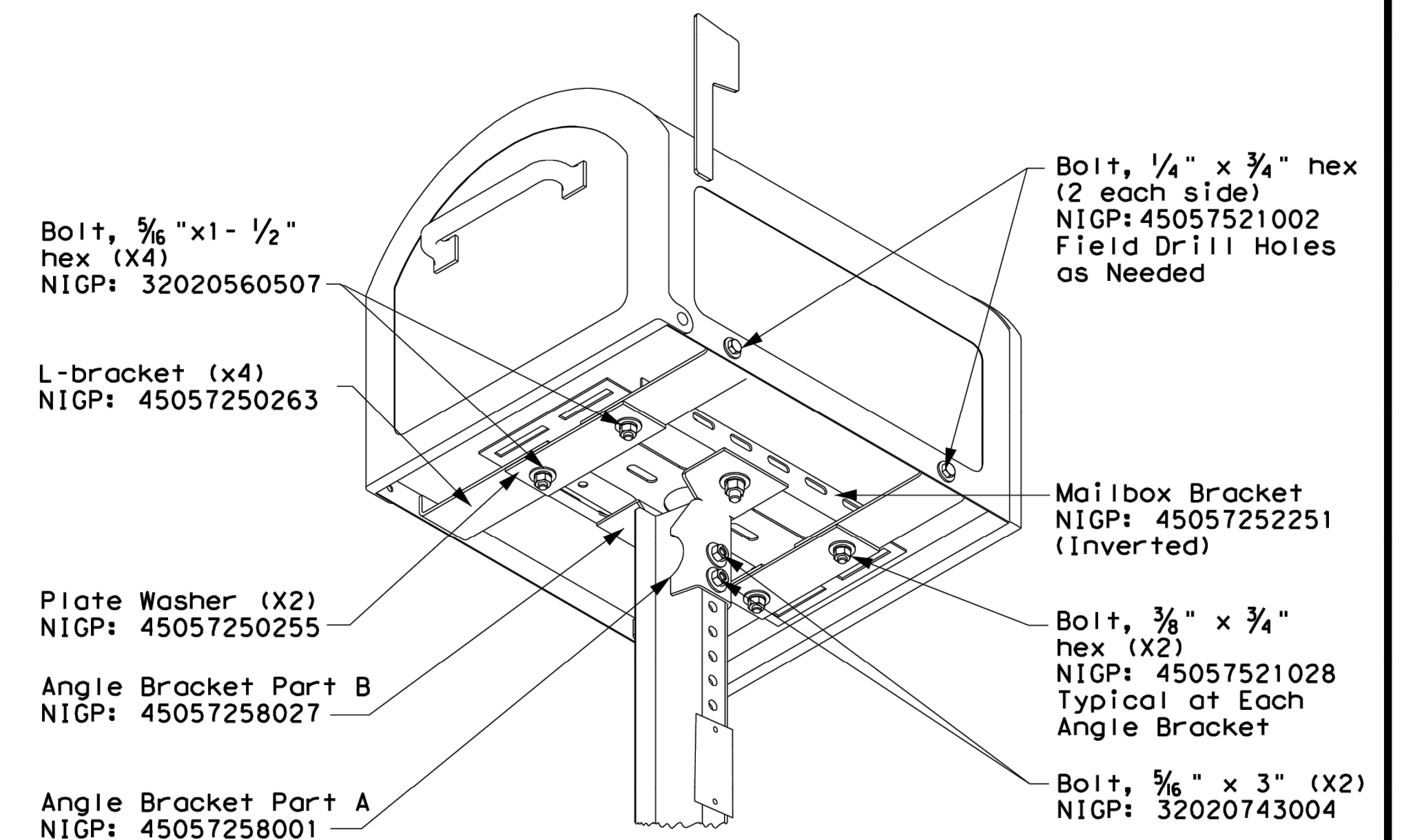
## TYPE 1 MULTI - LOCKABLE ARCHITECTURAL (LA)



## TYPE 1 MULTI - XL MAILBOX

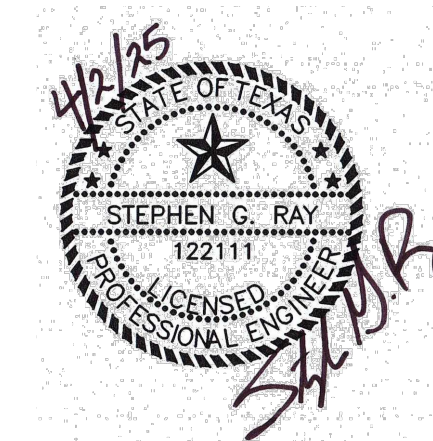


## TYPE 3 - XL MAILBOX MOUNTING



SHEET 2 OF 4

|   |           |                               |           |
|---|-----------|-------------------------------|-----------|
|   |           | Maintenance Division Standard |           |
| <b>XL AND LOCKABLE ARCHITECTURAL MAILBOX ASSEMBLY</b> |           |                               |           |
| <b>MB(2) - 21</b>                                     |           |                               |           |
| FILE: MB-21.dgn                                       | DN: TxDOT | CK: TxDOT                     | DW: TxDOT |
| © TxDOT March 2004                                    | CONT      | SECT                          | JOB       |
| REVISIONS   |           | HIGHWAY                       |           |
| 2/2005  | 11/2009   | 4/2015                        |           |
| 6/2005  | 1/2011    |                               |           |
| 11/2006   | 7/2014    |                               |           |
| DIST  |           | COUNTY                        | SHEET NO. |
|   |           |                               | 31 OF 35  |



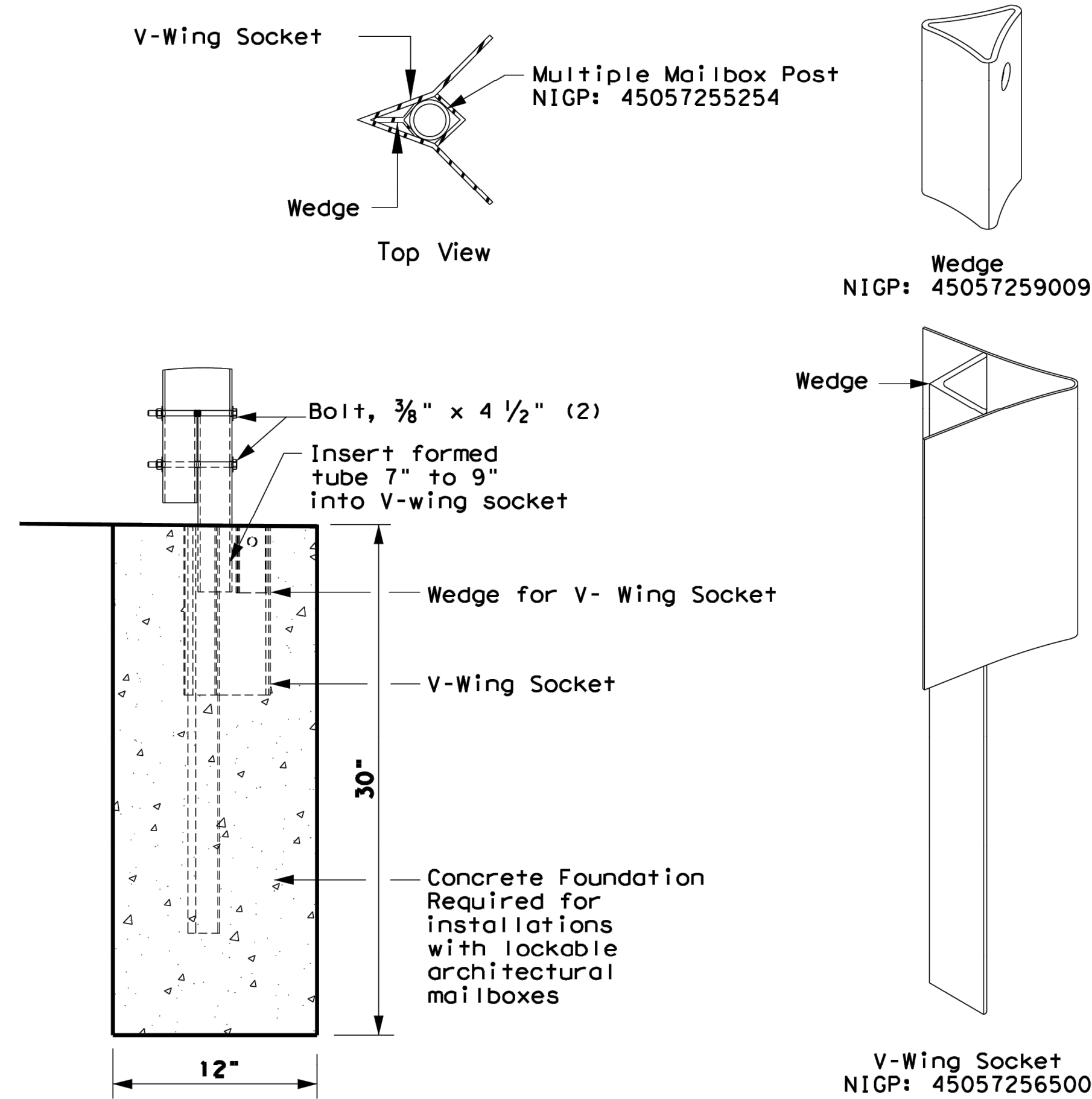


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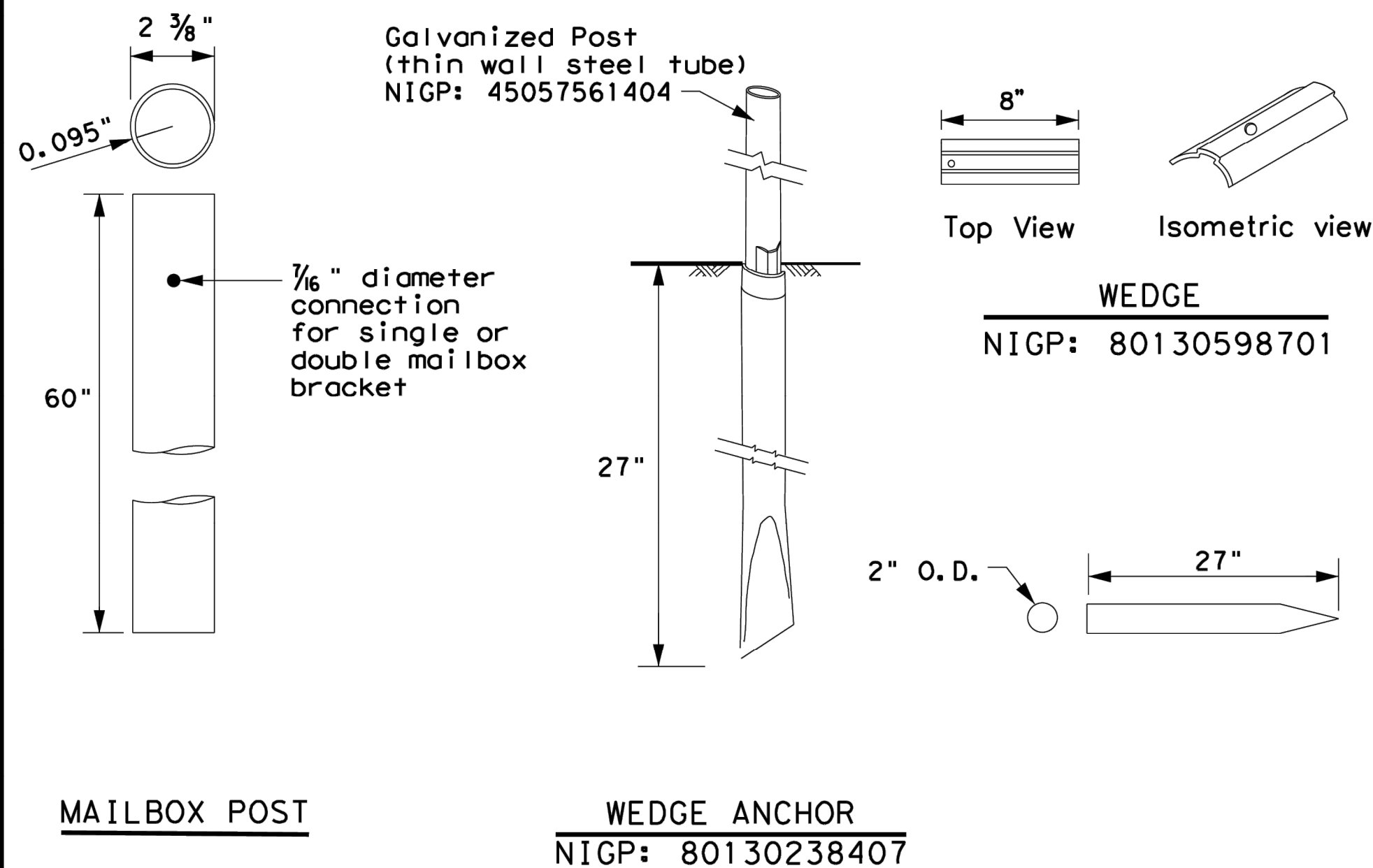
### TYPE 1 - SUPPORT/FOUNDATION

Thin Wall Tube w/ V-LOC Anchorage

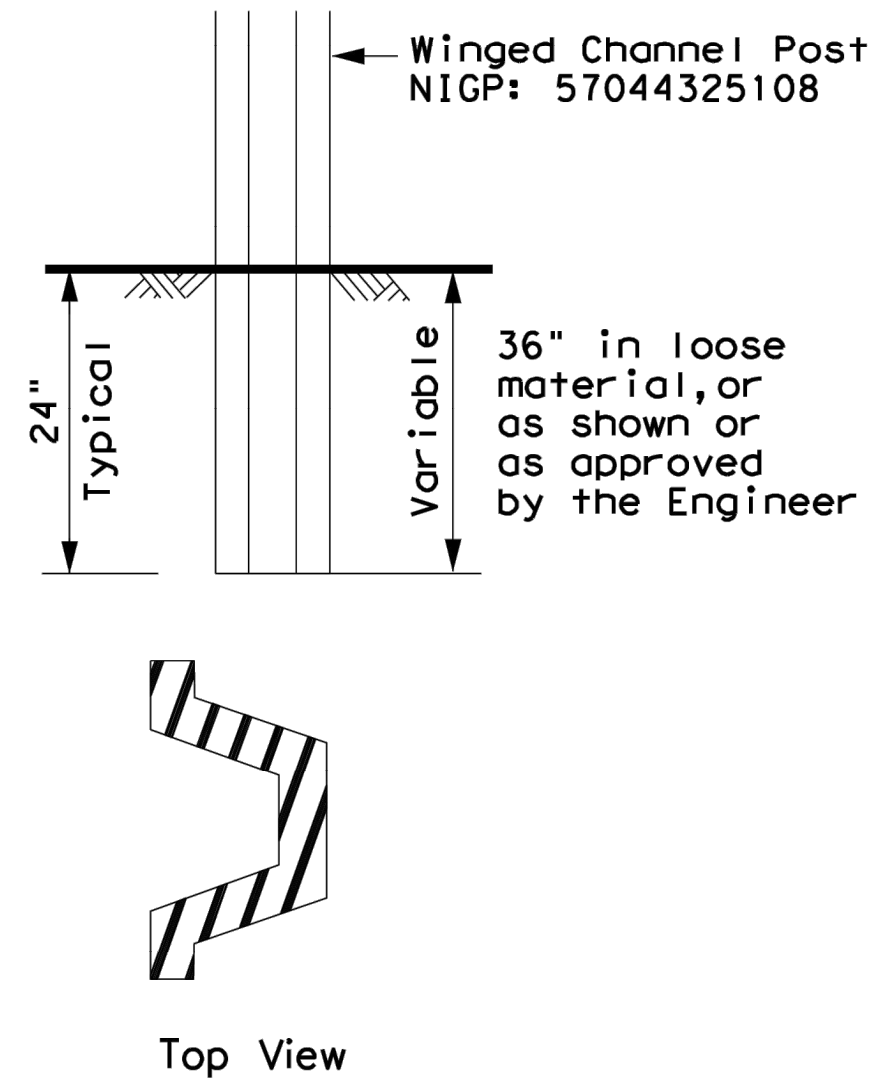


### TYPE 2 - SUPPORT/FOUNDATION

Thin Wall Steel Tube w/Wedge Anchor System



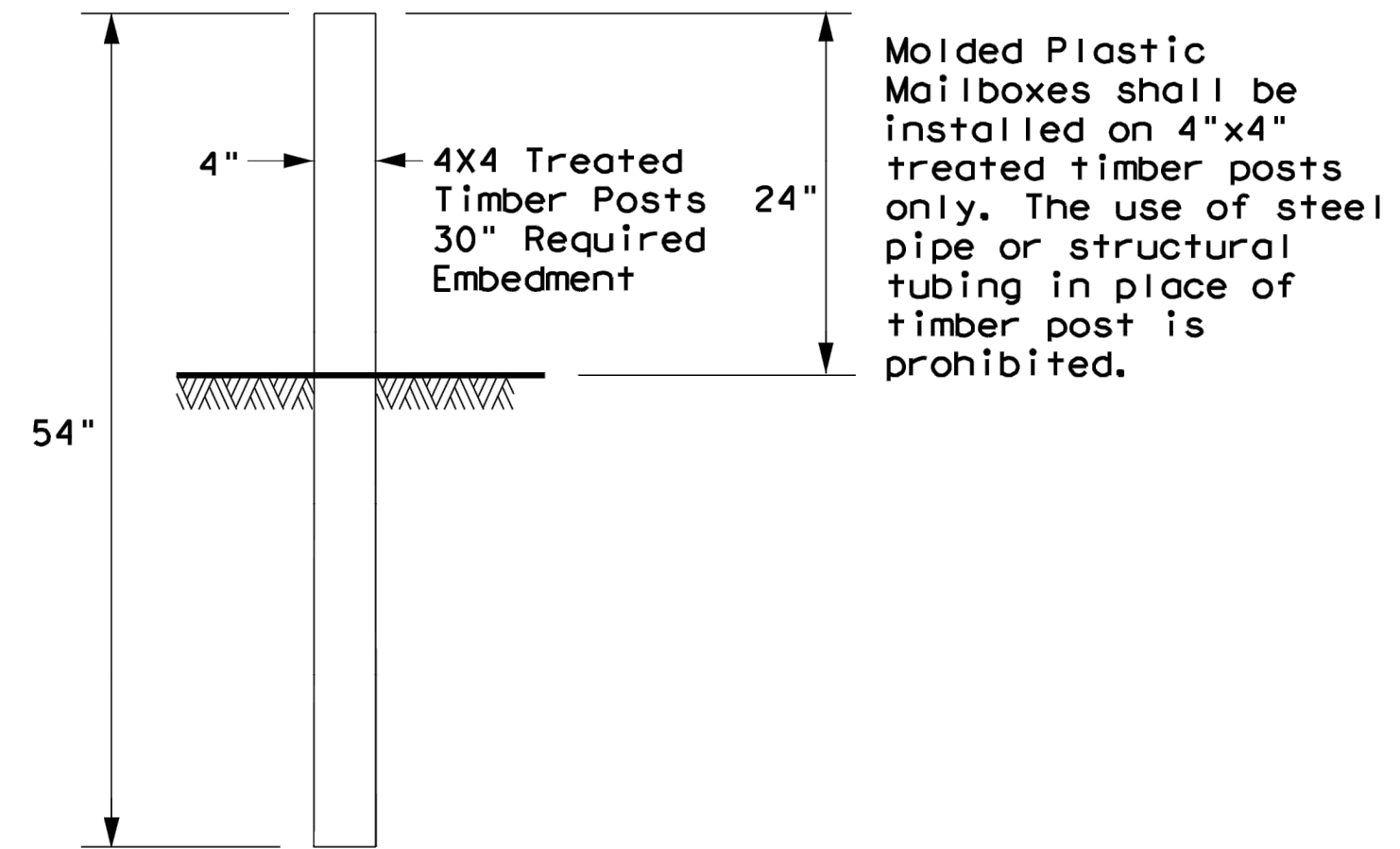
### TYPE 3 - SUPPORT/FOUNDATION



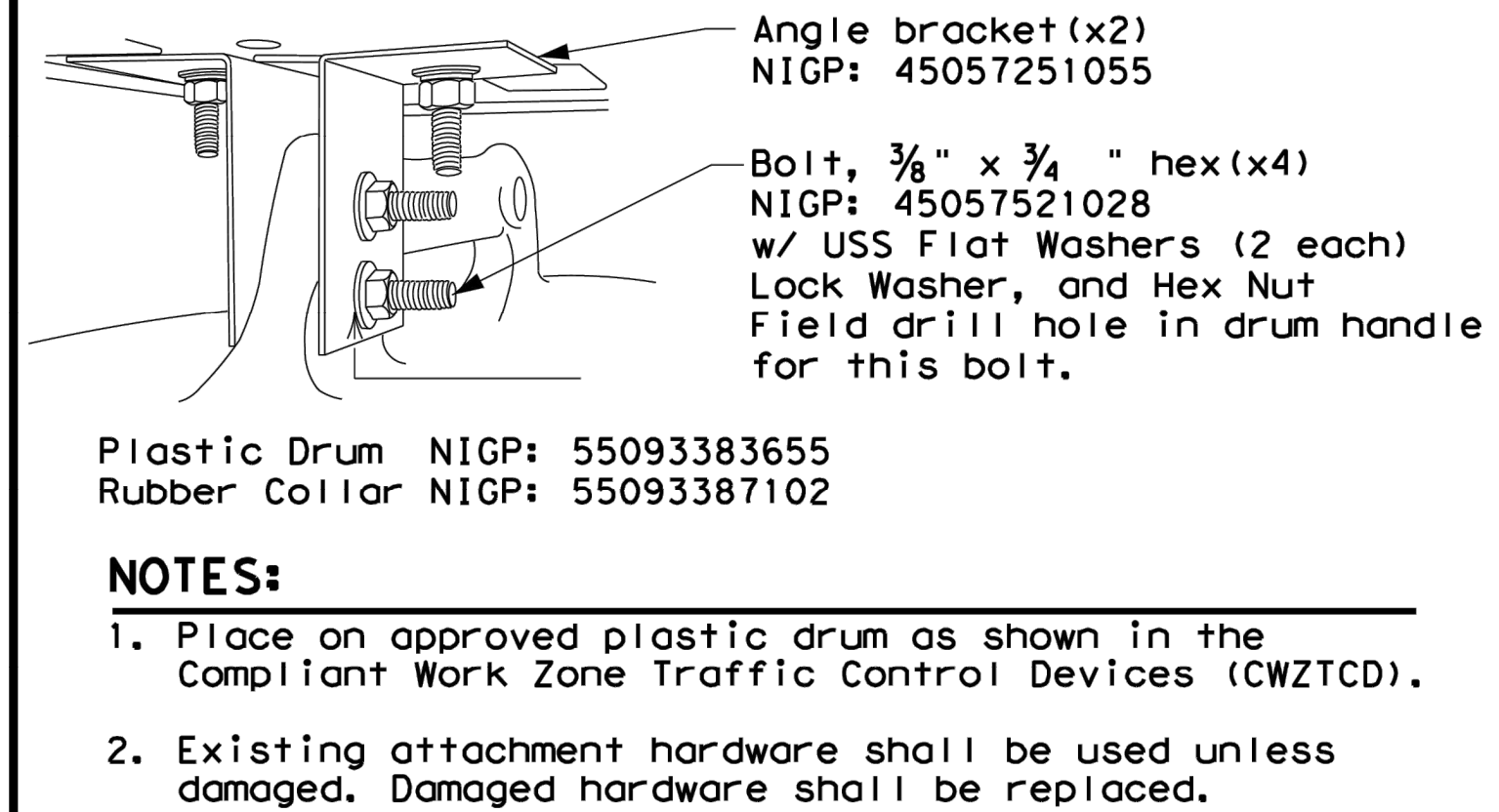
#### NOTES:

1. Attach Object Marker (OM) facing direction of traffic.
2. OM will also be required on opposite side if installed on a 2-Lane, 2-Way roadway.

### TYPE 5 - SUPPORT/FOUNDATION

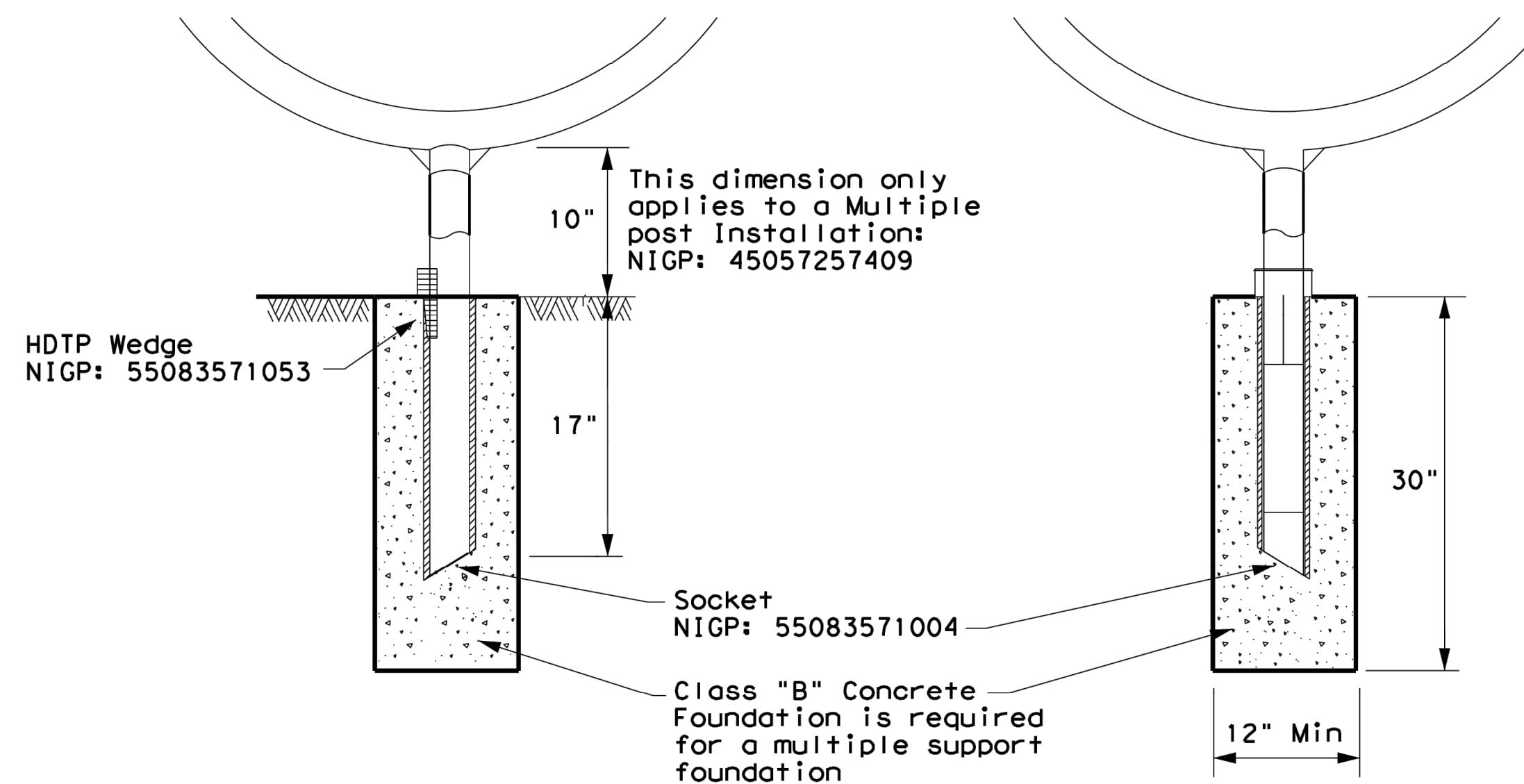


### TYPE 6 - TEMPORARY MAILBOX SUPPORT



### TYPE 4 - SUPPORT/FOUNDATION

Whitecoated steel post NIGP: 45057561107  
Multiple post NIGP: 45057257409  
Recycled Rubber post (RR) NIGP: 45057561057



#### GENERAL NOTES:

1. Erect post plumb or vertical.
2. When galvanized part is required galvanize in accordance with Item 445.
3. Use a concrete footing as shown or when directed. Concrete footing will be required when soils do not hold the support/foundations in a stable condition, only on Type 1, Type 2, and Type 4

SHEET 3 OF 4



## MAILBOX SUPPORT AND FOUNDATION

MB(3) - 21

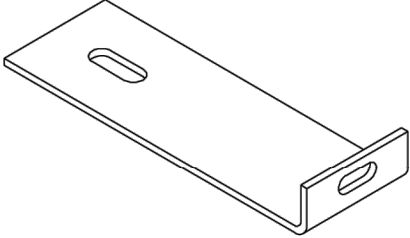
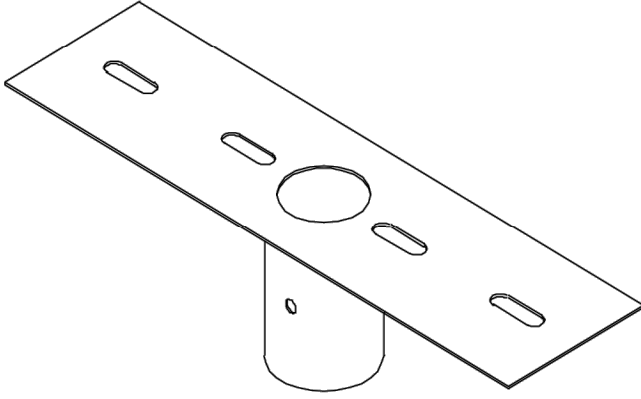
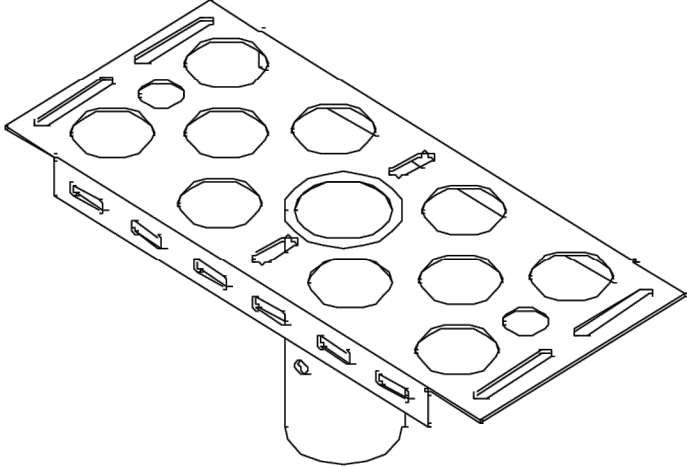
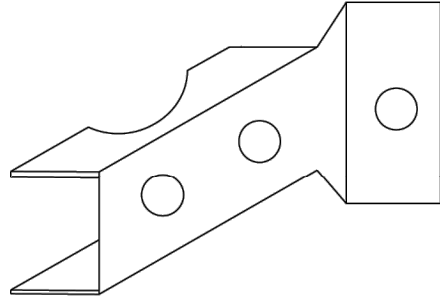
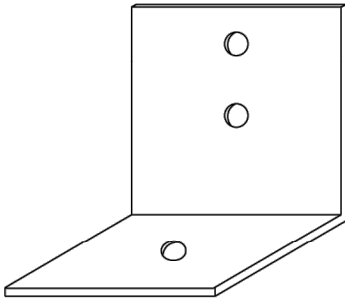
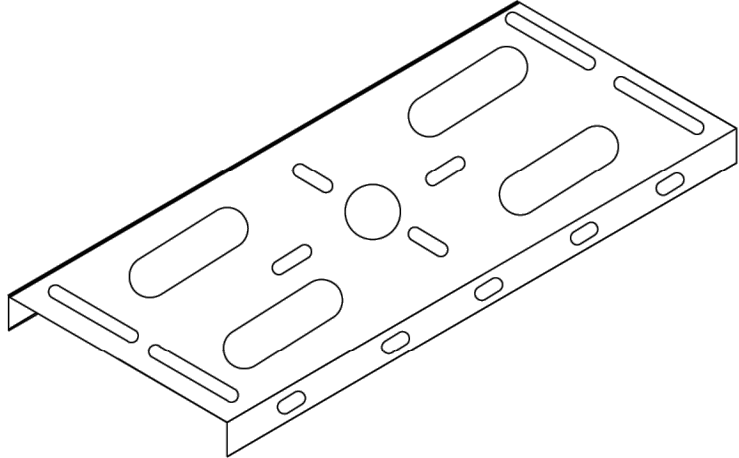
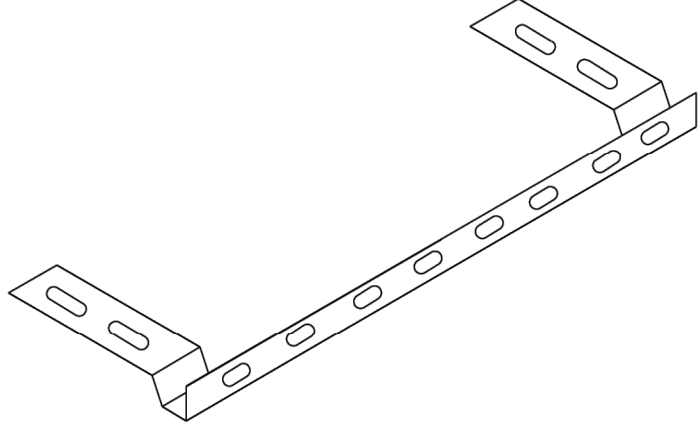
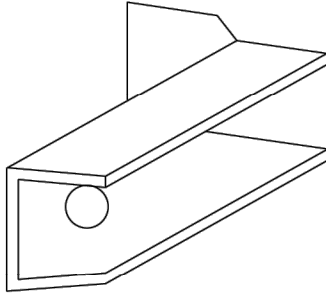
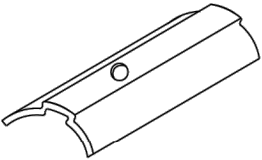
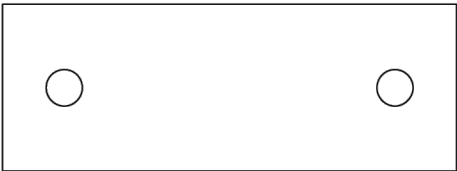

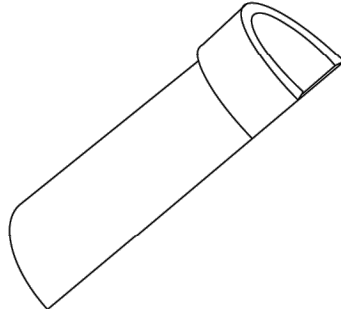
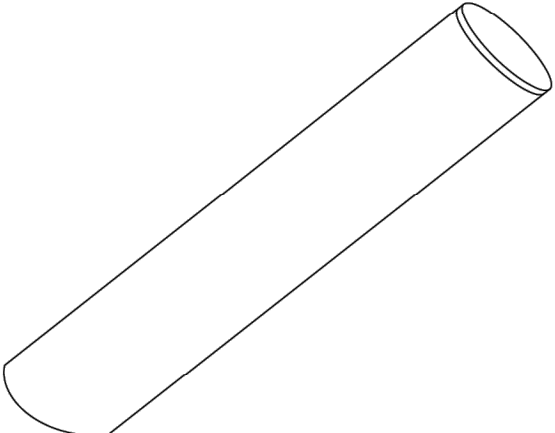

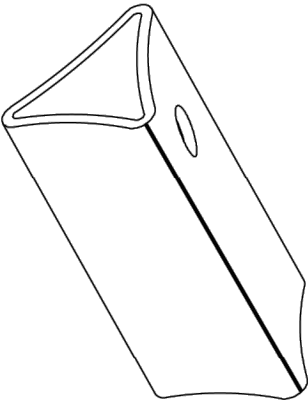
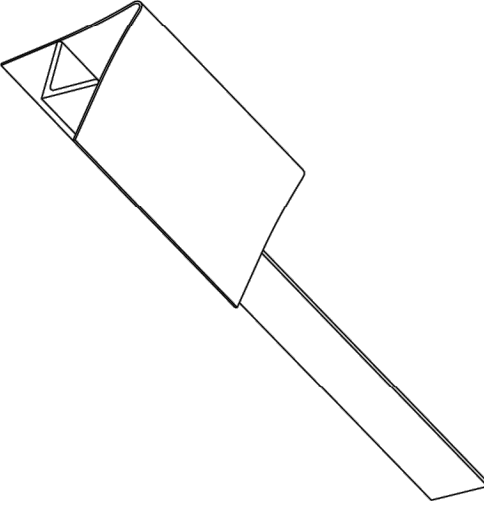
|                    |         |        |     |           |
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| FILE: MB-21.dgn    | DN:     | CK:    | OW: | CK:       |
| © TxDOT March 2004 | CONT    | SECT   | JOB | HIGHWAY   |
| REVISIONS          |         |        |     |           |
| 2/2005             | 11/2009 | 4/2015 |     |           |
| 6/2005             | 1/2011  |        |     |           |
| 11/2006            | 7/2014  |        |     |           |
|                    | DIST    | COUNTY |     | SHEET NO. |
|                    |         |        |     | 32 OF 35  |



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DATE:   
FILES:

| TYPE                                | TYPE 1  | TYPE 2  | TYPE 3   | TYPE 4   |  |   | TYPE 5         | TYPE 6                            |
|-------------------------------------|---|---|--|--|--|---|----------------|-----------------------------------|
| Configuration                       | Multiple  | Single or Double  | Single or Double   | Single   | Double   | Multiple  | Single         | Single                            |
| Mailbox Size<br>NIGP #              | Outside Position: S or M<br>Inside Position: S, M, L, XL, or LA   | Single: S, M, L, XL, or LA<br>Double: SS, SM, MM  | Single: S, M, L, or XL<br>Double: SS, SM, MM   | S, M, L, XL, or LA   | SS, SM, or MM  | Outside Position: S or M<br>Inside Position: S, M, L, or XL   | Molded Plastic | S, or M                           |
| Mailbox Post<br>NIGP #              | 45057255254<br>(Galvanized Multiple)  | 45057561404<br>(Thin Walled Gavanize)   | 57044325108<br>(Wing Channel Post)   | 45057561107 (Thin walled white powder coated)<br>45057561057 (Recycled Rubber Post: S or M only)   | 45057561107<br>(Thin Walled White Powder Coated)   | 45057257409<br>(White Powder Coated Multiple)   | 4x4 Timber     | Construction Barrel               |
| Post and Mailbox Hardware<br>NIGP # | 45057259009 (Wedge)<br>45057256500 (V-Wing Socket)<br>45057253002 (Bracket Extension)<br>45057252251 (Mailbox Bracket)<br>45057258001 (Part A Angle Bracket x2)<br>45057250255 (Plate Washer for XL/LA x2)<br>45057250263 (L-Bracket for XL x4) | 80130598701 (Wedge)<br>80130238407 (Wedge Anchor)<br>45057253002 (Bracket Extension)<br>45057252343 (Double MB Bracket)<br>45057252350 (S. Mailbox Bracket)<br>45057252251 (Mailbox Bracket)<br>45057250255 (Plate Washer for XL/LA x2)<br>45057250263 (L-Bracket forXL x4) | 45057541653 (Type 3 Double Mailbox Bracket)<br>45057252251 (Mailbox Bracket)<br>45057253002 (Bracket Extension)<br>45057258001 (Part A Angle Bracket)<br>45057258027 (Part B Angle Bracket)<br>45057250255 (Plate Washer for XL x2)<br>45057250263 (L-Bracket for XL x4) | 55083571053 (Wedge)<br>55083571004 (Socket)<br>45057252350 (Single Mailbox Bracket)<br>45057253002 (Bracket Extension)<br>45057250255 (Plate Washer for XL/LA x2)<br>45057250263 (L-Bracket for XL x4) | 55083571053 (Wedge)<br>55083571004 (Socket)<br>45057253002 (Bracket Extension)<br>45057252343 (Double Mount Bracket)<br>45057252251 (Mailbox Bracket x2) | 55083571053 (Wedge)<br>55083571004 (Socket)<br>45057253002 (Bracket Extension)<br>45057252350 (Single Mount Bracket)<br>45057250255 (Plate Washer for XL x2)<br>45057250263 (L-Bracket for XL x4) | None           | 45057251055<br>Angle Bracket (x2) |
| Foundation Used                     | Class B Concrete<br>(Required for LA Mailboxes)   | Class B Concrete<br>(Required for LA Mailboxes)   | None   | Class B Concrete<br>(not used with recycled rubber post,<br>required for LA Mailboxes)   | Class B Concrete<br>(not required)   | Class B Concrete  | None           | None                              |

|  |   |  |  |
|--|---|--|--|
| <br><br>NIGP: 45057250263<br>L-Bracket x4 for<br>XL sized mailboxes   | <br><br>NIGP: 45057252343<br>Double Mailbox Bracket<br>For Type 2 and Type 4<br>double mount      | <br><br>NIGP: 45057252350<br>Single Mailbox Bracket<br>For Type 2 single and for<br>Type 4 single and multi mount | <br><br>NIGP: 45057258001<br>Part "A" Angle Bracket<br>For Type 1 multi (2 per mailbox)<br>and Type 3 single and double |
| <br><br>NIGP: 45057251055<br>Type 6 Angle Bracket<br>(2 per mailbox) | <br><br>NIGP: 45057252251<br>Mailbox Bracket<br>For Type 1 multi and<br>any double mount (use 2) | <br><br>NIGP: 45057253002<br>Bracket Extension<br>Use 1 for a medium Mailbox<br>Use 2 for a Large Mailbox        | <br><br>NIGP: 45057258027<br>Part "B" Angle Bracket<br>For Type 3 single<br>and double                                 |
| <br><br>NIGP: 80130598701<br>Wedge for Type 2                       | <br><br>NIGP: 45057250255<br>Plate Washer for Architecural<br>and XL Mailboxes                   | <br><br>NIGP: 45057541653<br>Type 3 double mailbox bracket  | <br><br>NIGP: 55083571053<br>Type 4 Mailbox Wedge   |
| <br><br>NIGP: 55083571004<br>Type 4 Mailbox Socket                  | <br><br>NIGP: 80130238407<br>Type 2 Wedge Anchor   | <br><br>NIGP: 45057259009<br>Wedge for Type 1 V-wing Socket   | <br><br>NIGP: 45057256500<br>V-wing Socket for<br>Type 1 Foundation   |

| NIGP #      | OBJECT MARKERS AND CONFORMABLE SHEETING                       |
|-------------|---|
| 55008311759 | Type 2 OM 4"x4" (3 Needed) for Type 3 Wing Channel Post       |
| 55008312906 | Type 2 OM 6"x12" (1 needed) for Type 3 Wing Channel Post      |
| 80149872006 | 12" Conformable Reflective Yellow Sheeting for Flexible Posts |

- NOTES:**
- Type 2 object marker in accordance with Traffic Engineering Standard Delineators & Object Markers.
  - A light weight receptacle for newspaper delivery can be attached to mailbox posts if the receptacle does not touch the mailbox, present a hazard to traffic or delivery of the mail, extend beyond the front of the mailbox, or display advertising, except the publication title.

BID CODES FOR CONTRACTS

MB-(X) ASSM TY (XXX) (X)

Type of Mailbox \_\_\_\_\_

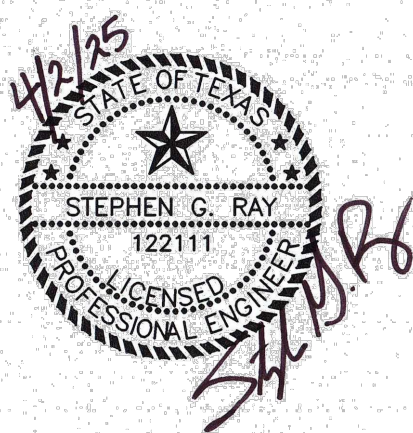
S = Single  
D = Double  
M = Multiple  
MP = Molded Plastic

Type of Post \_\_\_\_\_


WC = Winged Channel Post  
RR = Recycled Rubber  
TWW = Thin Walled White Tubing  
TWG = Thin Walled Galvanized Tubing  
TIM = Timber

Type of Foundation \_\_\_\_\_

Ty 1 = V-Loc  
Ty 2 = Wedge Anchor Steel System  
Ty 3 = Winged Channel post  
Ty 4 = Wedge Anchor Plastic System  
Ty 5 = 4 X 4 Post



**SHEET 4 OF 4**

  
**Texas Department of Transportation**

**Maintenance  
Division  
Standard**

# NIGP PARTS LIST AND COMPATIBILITY

## MB(4) -21

|                             |  |           |           |           |           |
|-----------------------------|--|-----------|-----------|-----------|-----------|
| FILE: MB-21.dgn             |  | DN: TxDOT | CK: TxDOT | DW: TxDOT | CK: TxDOT |
| © TxDOT March 2004          |  | CONT      | SECT      | JOB       | HIGHWAY   |
| 2/2005    11/2009    4/2015 |  |           |           |           |           |
| 6/2005    1/2011            |  |           |           |           |           |
| 11/2006    7/2014           |  |           |           |           |           |
|                             |  | DIST      | COUNTY    |           | SHEET NO. |
|                             |  |           |           |           | 33 OF 35  |

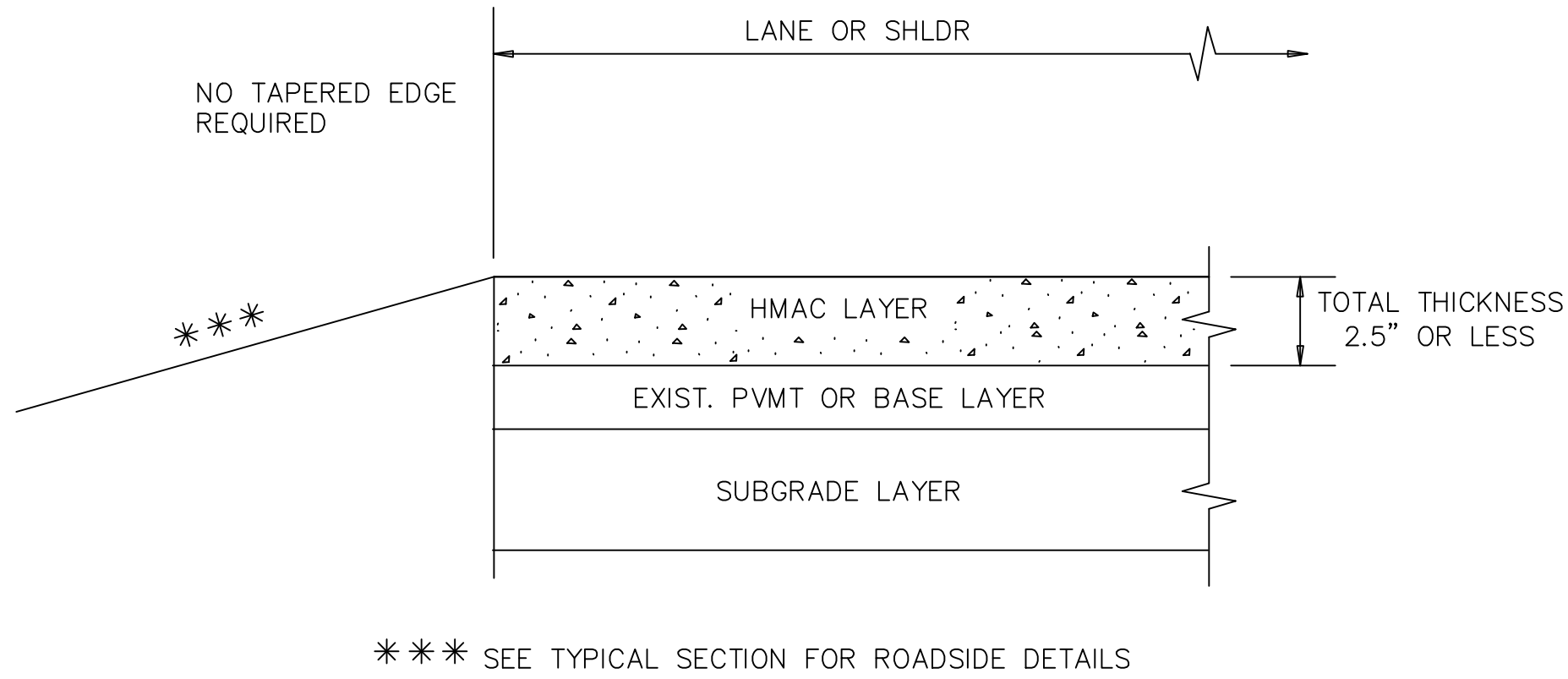


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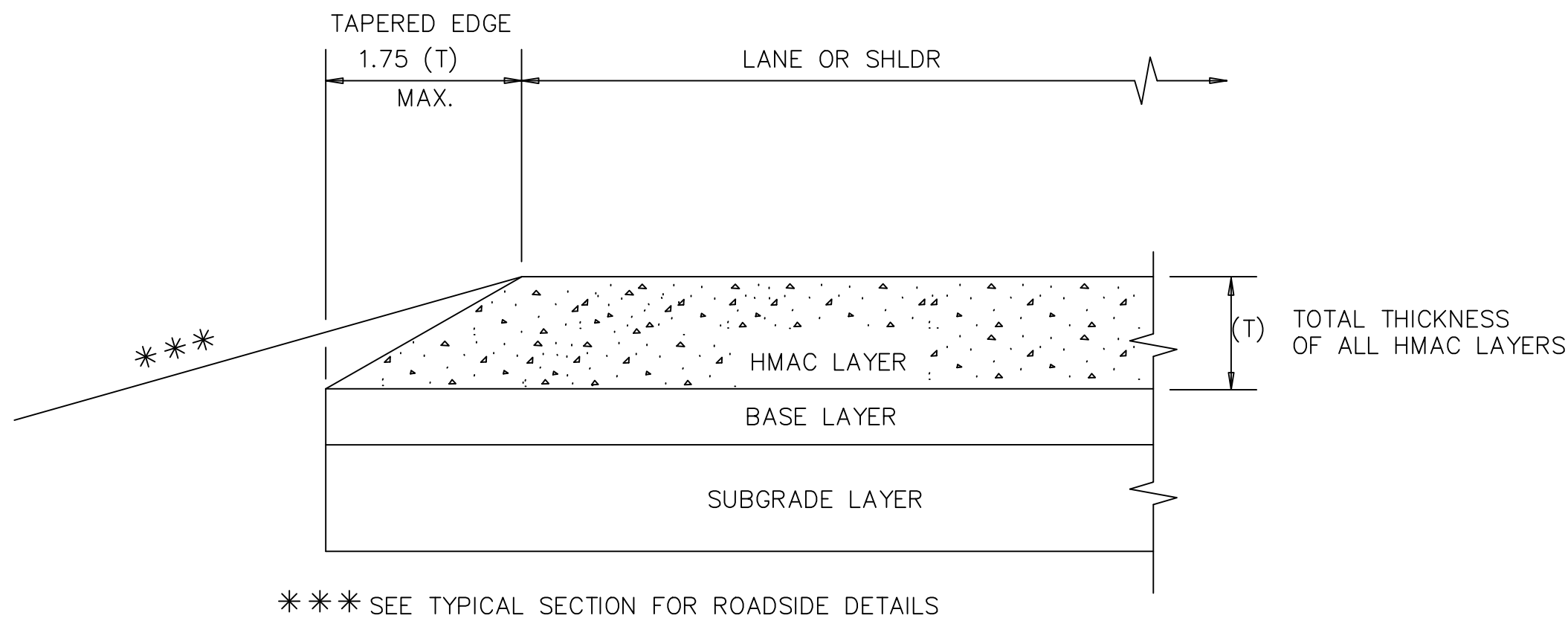
DATE:  
FILE:

GENERAL NOTES

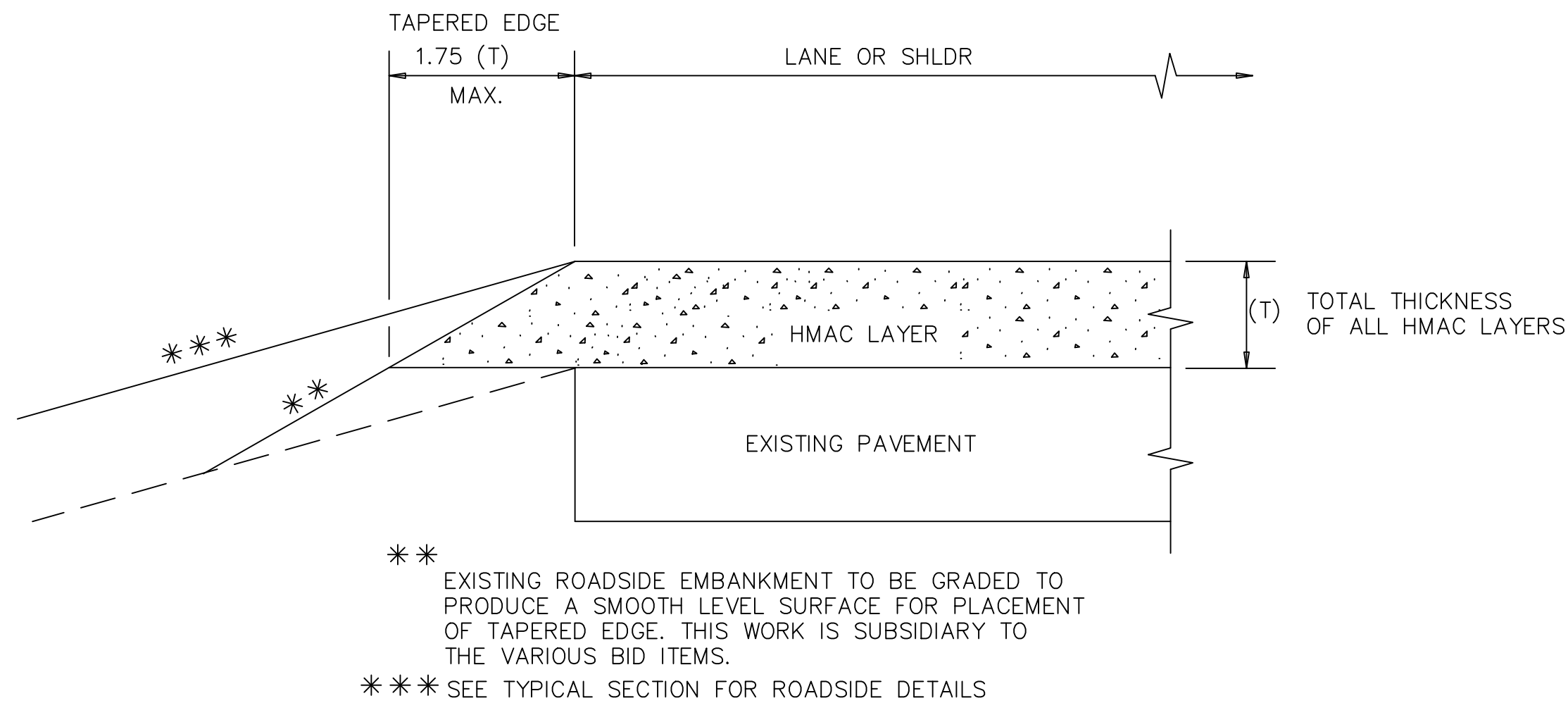
1. UNLESS OTHERWISE SHOWN IN THE PLANS, A VERTICAL EDGE IS PERMISSIBLE FOR HMAC PLACED GREATER THAN 5" BELOW THE EDGE OF PAVEMENT AND FOR THICKNESS OF HMAC LESS THAN 2.5".
2. FOR FURTHER INFORMATION REGARDING THE ROADSIDE AND PAVEMENT DETAILS, SEE TYPICAL SECTIONS.
3. PAYMENT FOR TAPERED EDGE WILL BE IN ACCORDANCE WITH APPLICABLE ITEMS IN THE CONTRACT.
4. THE SLOPE OF THE TAPERED EDGE SHALL BE 1.75H 1V OR FLATTER.
5. THE TAPERED EDGE SHALL BE PRODUCED BY USE OF A SCREED ATTACHMENT CAPABLE OF PRODUCING A SMOOTH COMPACTED SURFACE. ADDITIONAL COMPACTING EFFORT BEHIND THE SCREED IS NOT REQUIRED.



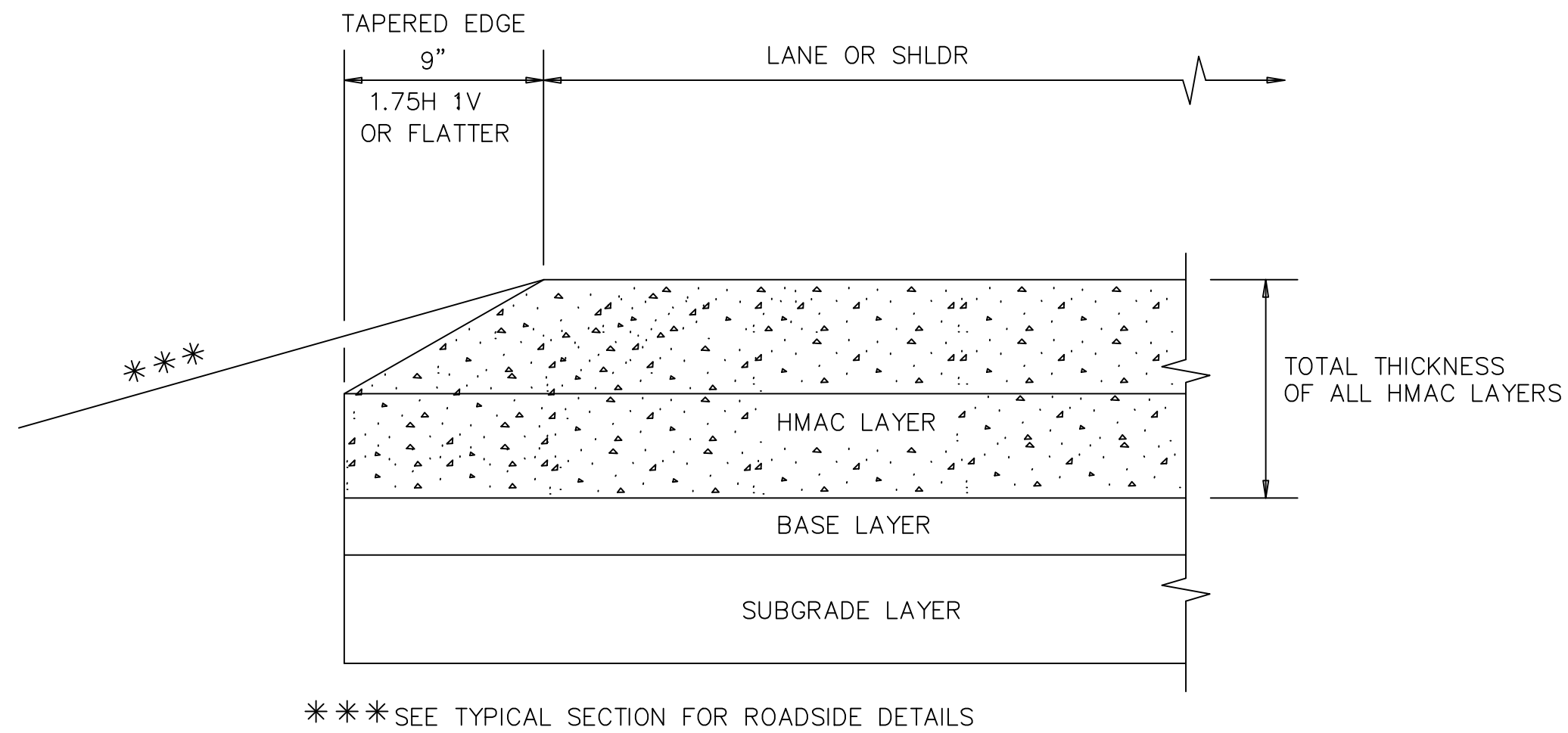
CONDITION — 1  
THIN HMAC SURFACES OR HMAC OVERLAY  
WITH THICKNESS OF 2.5" OR LESS



CONDITION — 3  
NEW OR RECONSTRUCTED PAVEMENT  
HMAC THICKNESS 2.5" TO 5"




CONDITION — 2  
OVERLAY OF EXISTING PAVEMENT  
HMAC THICKNESS 2.5" TO 5"



CONDITION — 4  
NEW OR RECONSTRUCTED PAVEMENT  
HMAC THICKNESS 5" OR GREATER

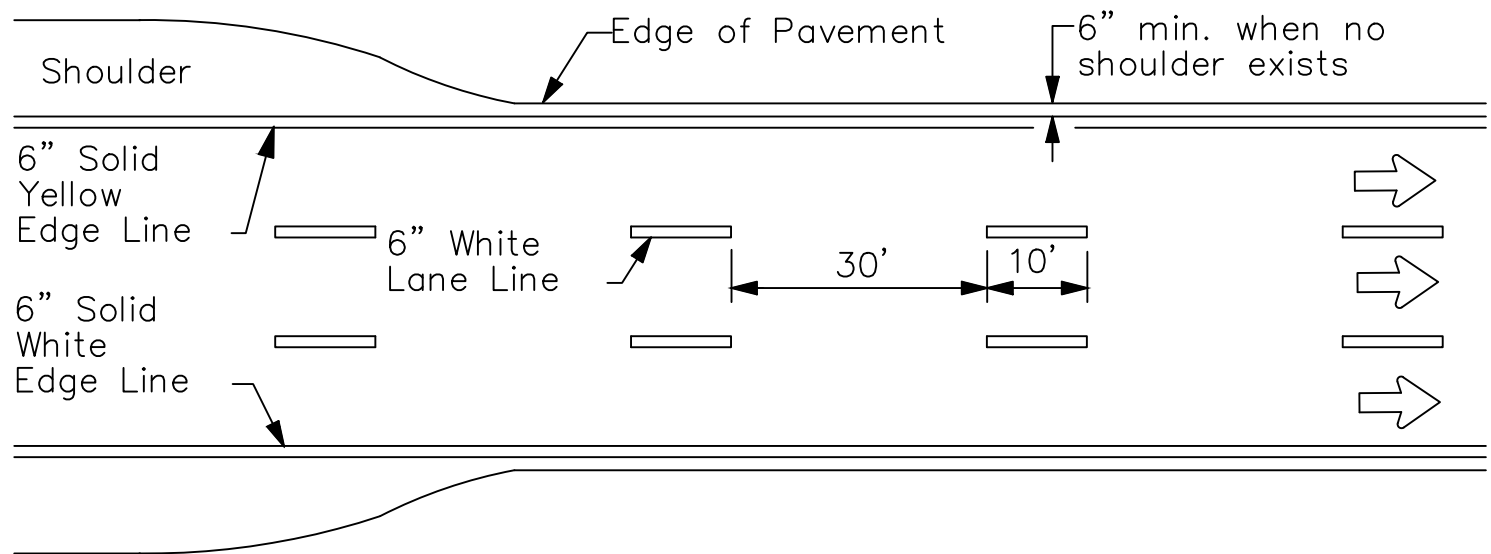


|  |  |           |        |                                |           |
|--|--|-----------|--------|--------------------------------|-----------|
|  Texas Department of Transportation |  |           |        | Design<br>Division<br>Standard |           |
| TAPERED EDGE DETAILS   |  |           |        |                                |           |
| HMAC PAVEMENT  |  |           |        |                                |           |
| TE(HMAC)–11  |  |           |        |                                |           |
| FILE:   tehmac11.dgn   |  | DN: TxDOT | CK: RL | DW: KB                         | CK:       |
| © TxDOT   January 2011   |  | CONT      | SECT   | JOB                            | HIGHWAY   |
| REVISIONS  |  | DIST      | COUNTY |                                | SHEET NO. |
|  |  |           |        | 34 OF 35                       |           |

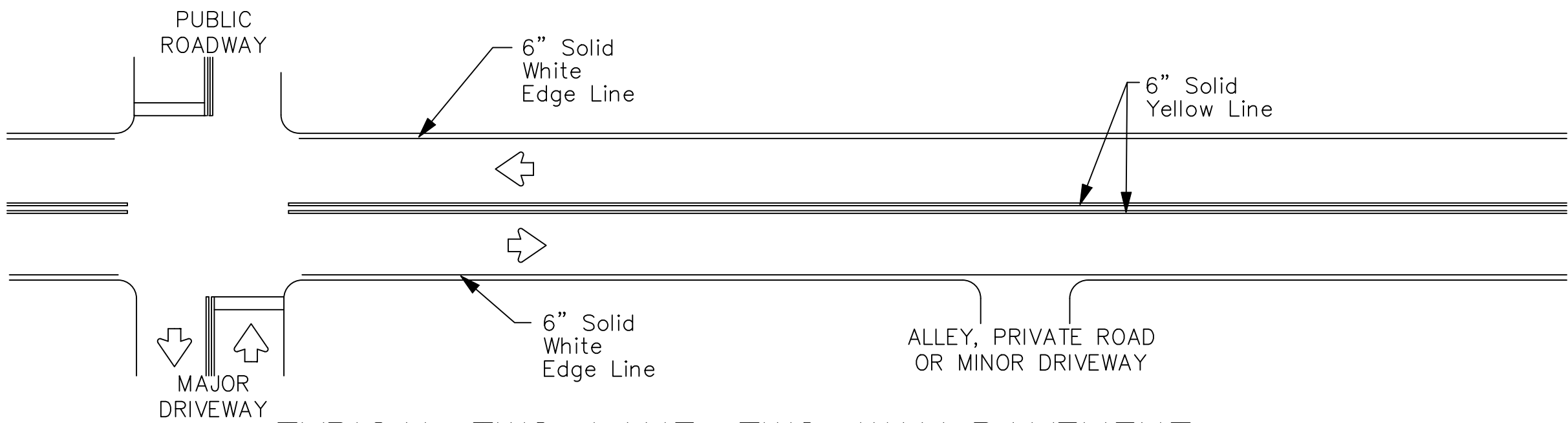
(NOT TO SCALE)

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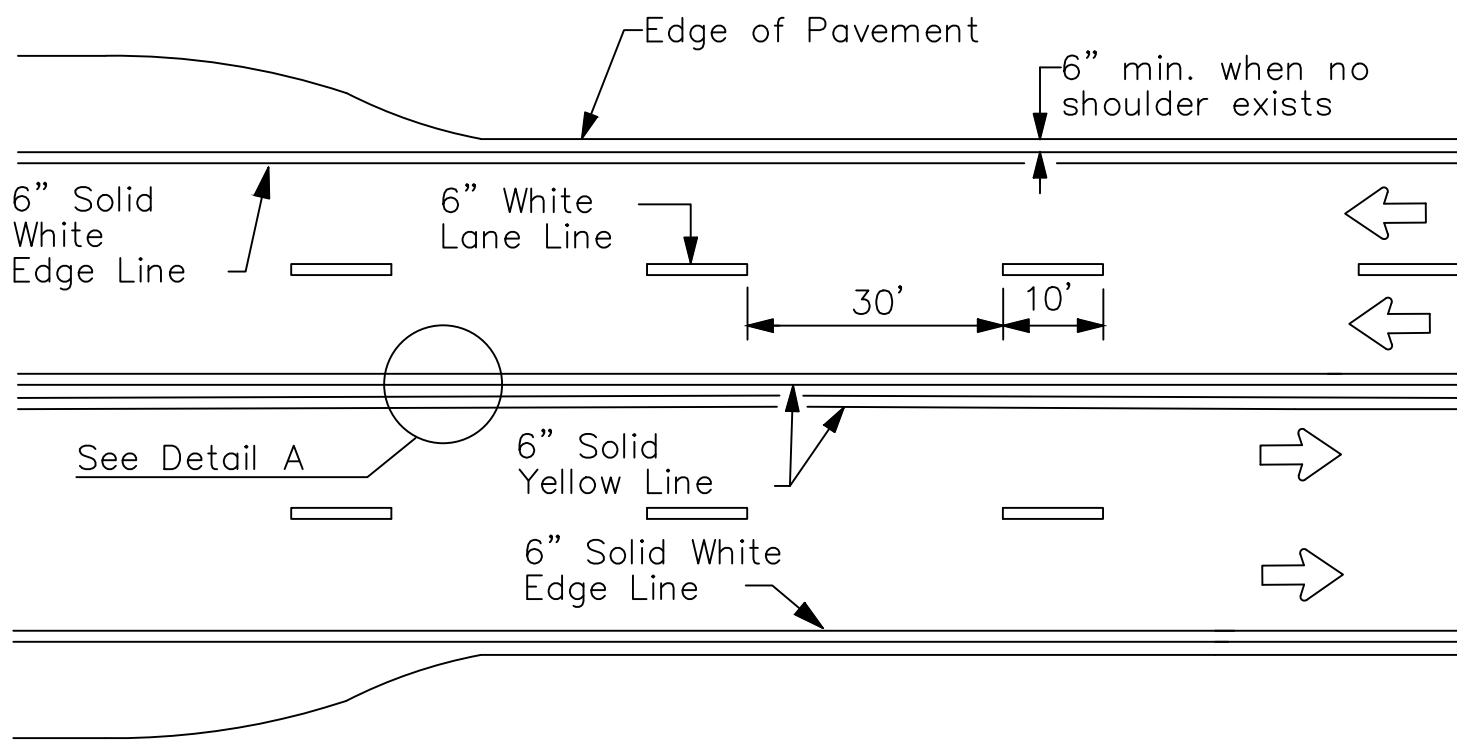
DATE:  
FILE:



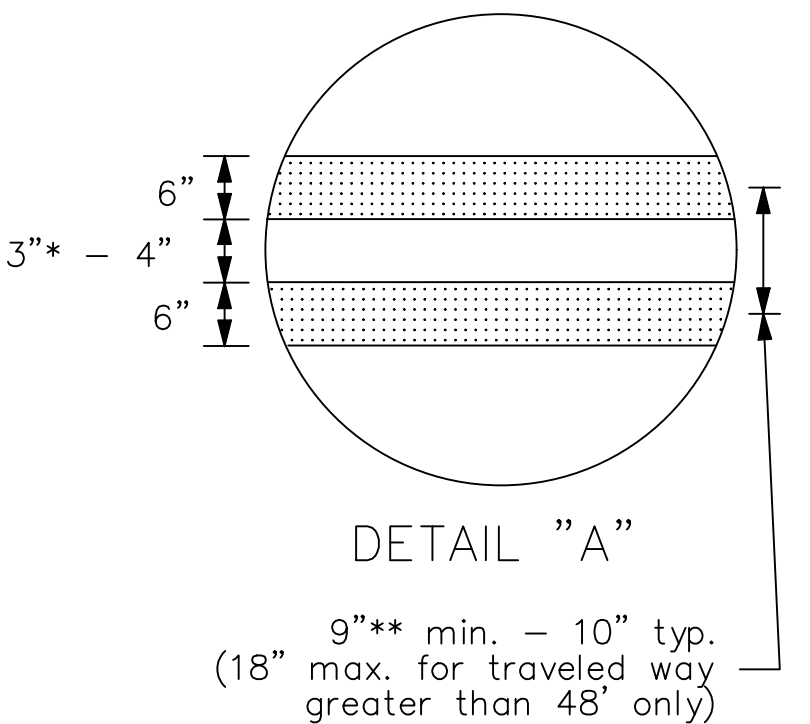
EDGE LINE AND LANE LINES  
ONE-WAY ROADWAY  
WITH OR WITHOUT SHOULDERS



TYPICAL TWO-LANE, TWO-WAY PAVEMENT  
MARKINGS THROUGH INTERSECTIONS

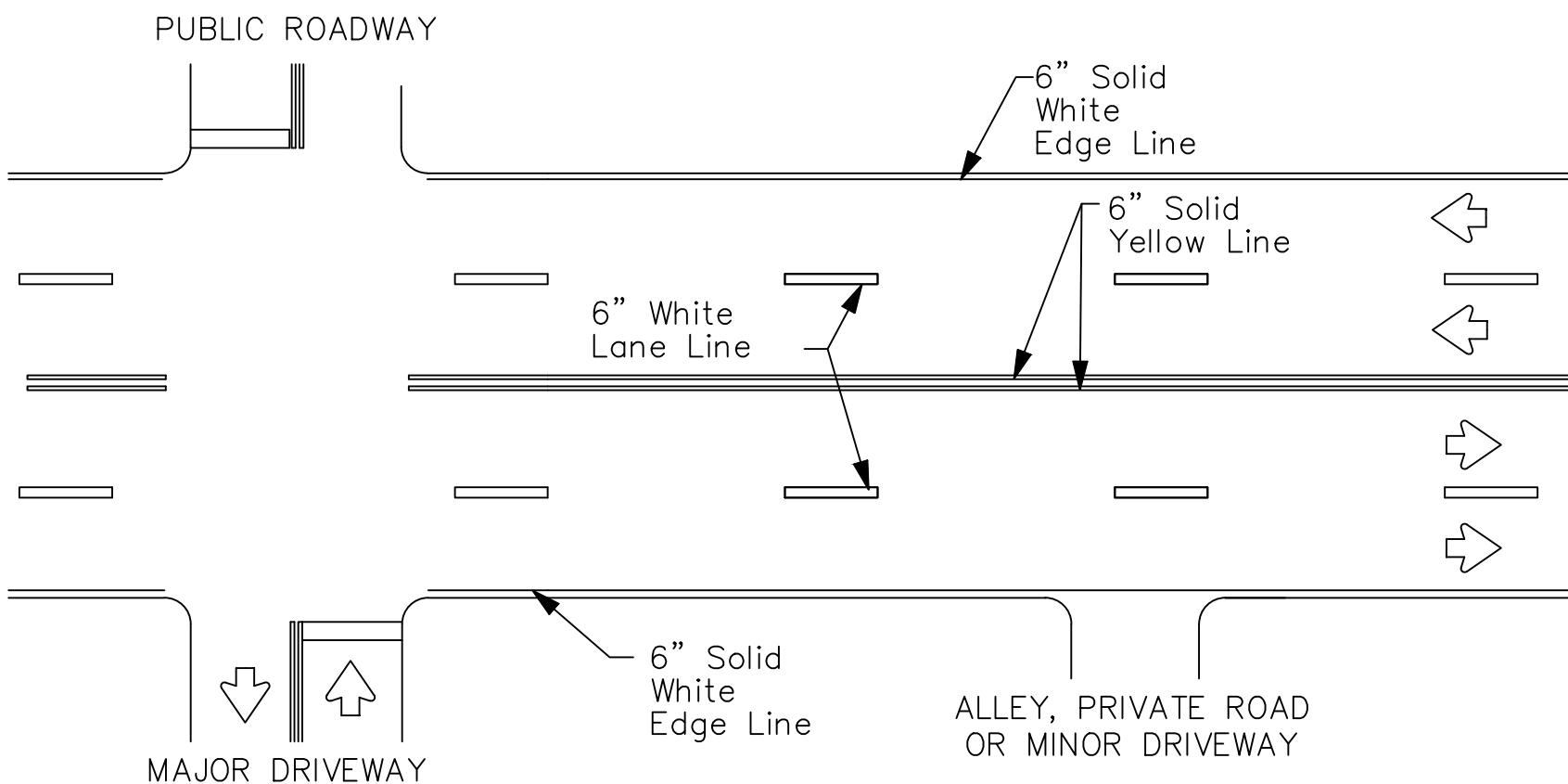


CENTERLINE AND LANE LINES  
FOUR LANE TWO-WAY ROADWAY  
WITH OR WITHOUT SHOULDERS

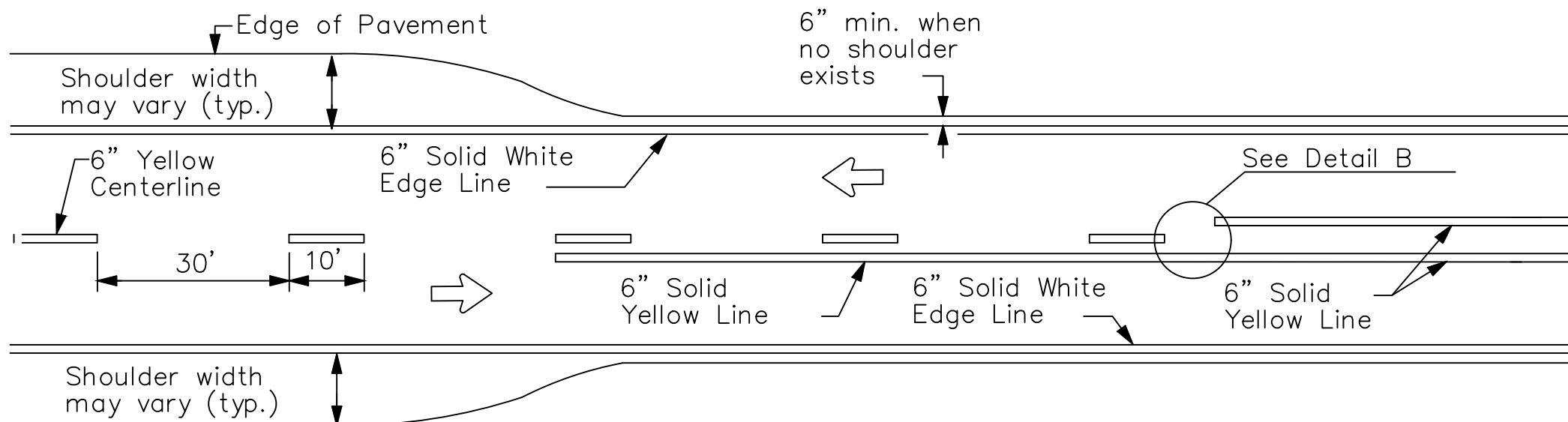


\* 2" minimum for  
restripe projects  
when approved by  
the Engineer.

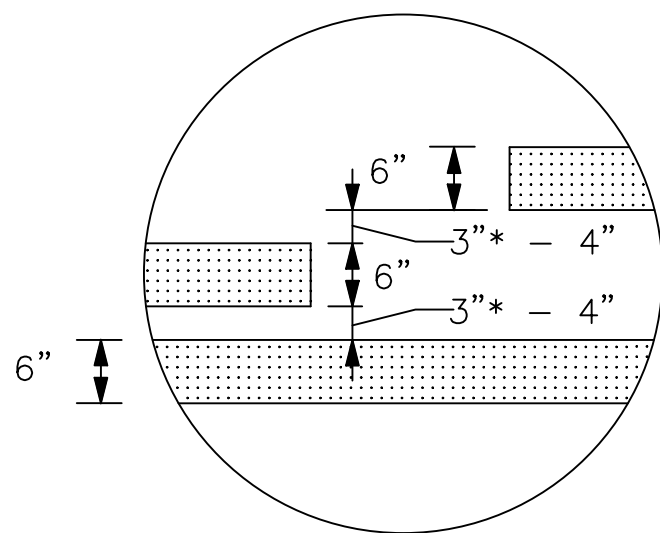
\*\* 8" minimum for  
restripe projects  
when approved by  
the Engineer.



TYPICAL MULTI-LANE, TWO-WAY PAVEMENT  
MARKINGS THROUGH INTERSECTIONS

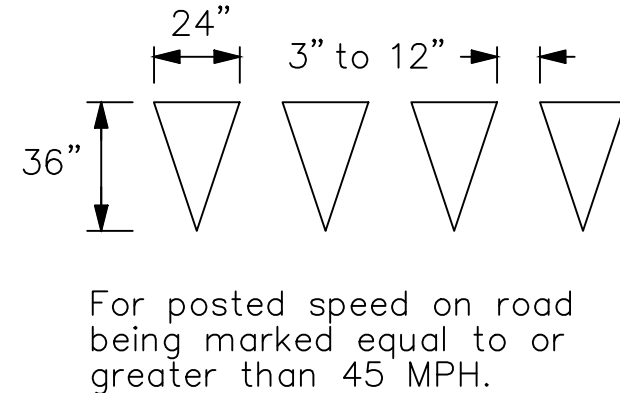


TWO LANE TWO-WAY ROADWAY  
WITH OR WITHOUT SHOULDERS

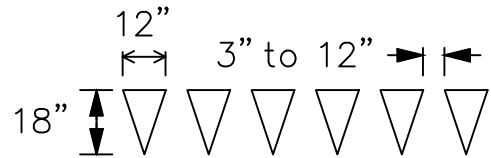


DETAIL "B"

\* 2" minimum for restripe projects when  
approved by the Engineer.



YIELD LINES



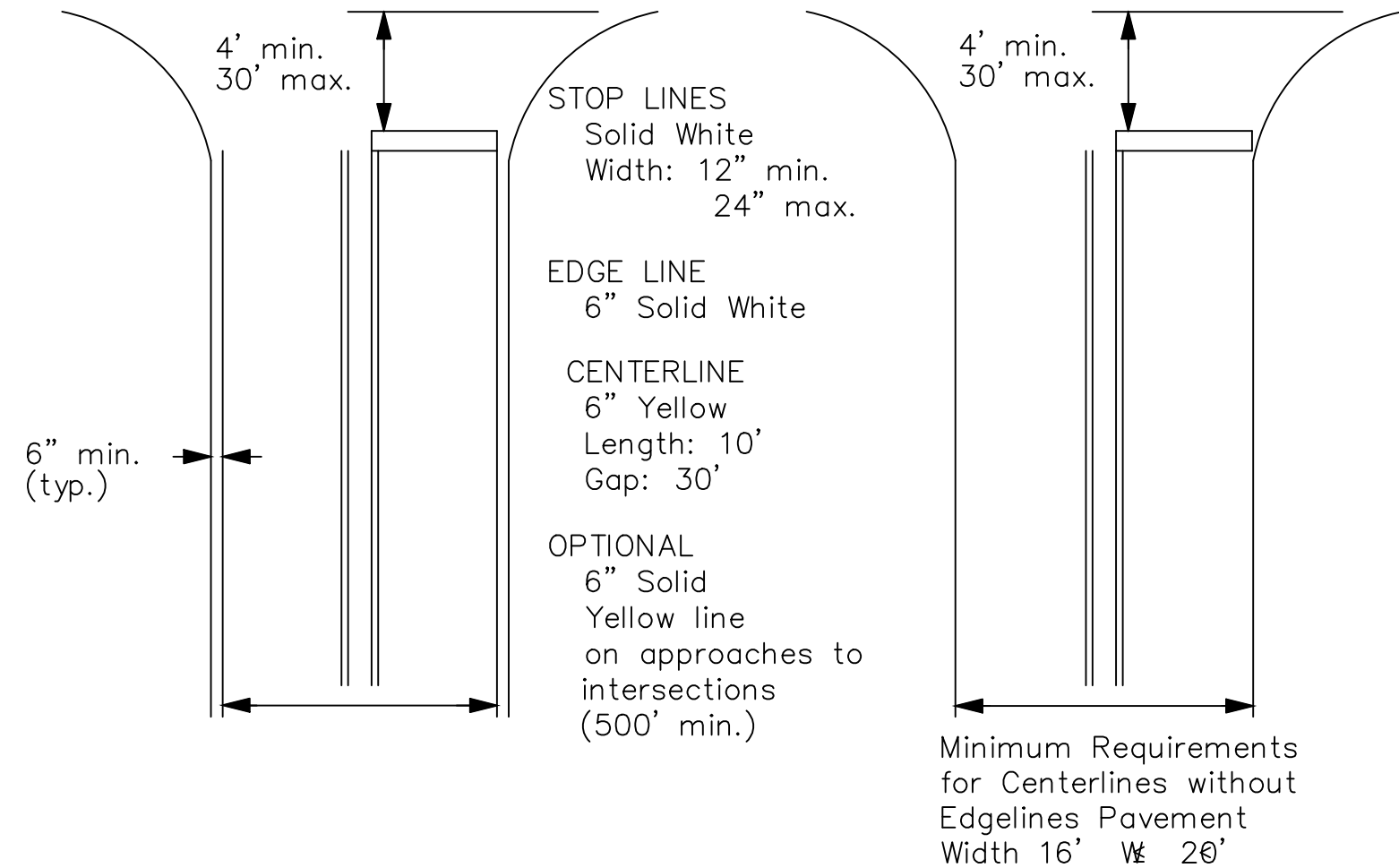
For posted speed on road  
being marked equal to or  
less than 40 MPH.

#### GENERAL NOTES

- Edge line striping shall be as shown in the plans or as directed by the Engineer. The edge line should not be placed less than 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edge lines are not required in curb and gutter sections of roadways.
- The traveled way includes only that portion of the roadway used for vehicular travel. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the center of edge line to the center of edge line of a two lane roadway.

| MATERIAL SPECIFICATIONS                   |          |
|---|----------|
| PAVEMENT MARKERS (REFLECTORIZED)          | DMS-4200 |
| EPOXY AND ADHESIVES                       | DMS-6100 |
| BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS  | DMS-6130 |
| TRAFFIC PAINT                             | DMS-8200 |
| HOT APPLIED THERMOPLASTIC                 | DMS-8220 |
| PERMANENT PREFABRICATED PAVEMENT MARKINGS | DMS-8240 |

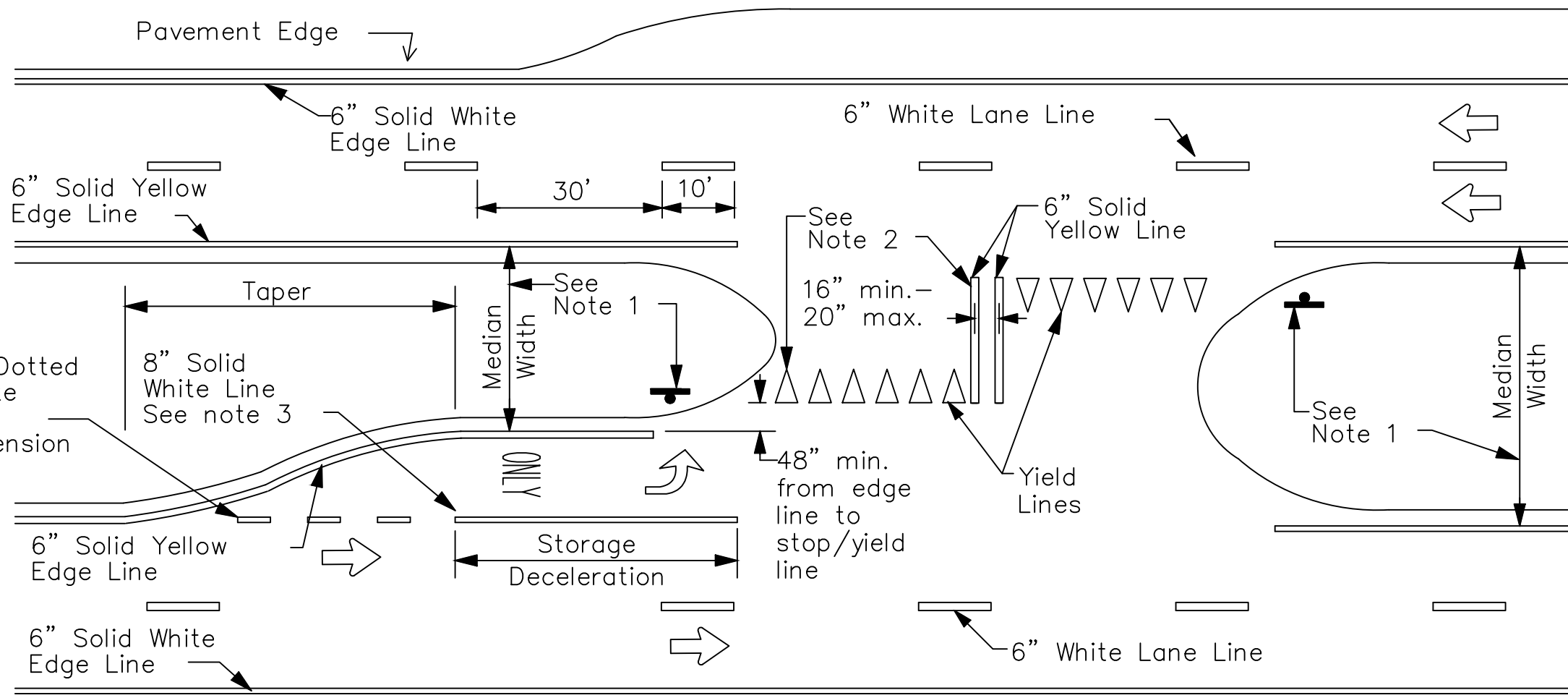
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



NOTE: Traveled way is exclusive of shoulder widths.  
Refer to General Note 2 for additional details.

#### GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths  
for Undivided Roadways



FOUR LANE DIVIDED ROADWAY CROSSOVERS

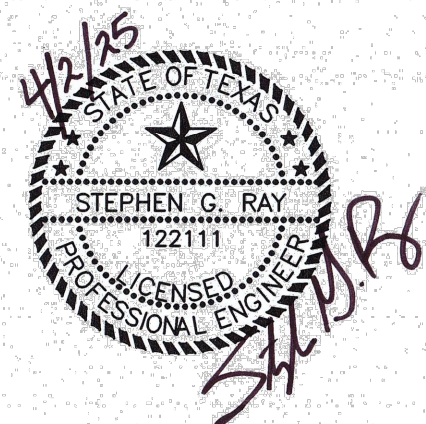
#### NOTES


- Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections.

Each median opening has two width measurements, with one measurement for each approach. The narrow median width will be the controlling width to determine if signs are required. Yield signs are the typical intersection control. Stop signs and stop bars are optional as determined by the Engineer.

- Install median striping (double yellow centerlines and stop lines/yield lines) when a 50' or greater median centerline can be placed. Stop lines shall only be used with stop signs. Yield lines shall only be used with yield signs.

- Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.





Traffic  
Safety  
Division  
Standard

TYPICAL STANDARD  
PAVEMENT MARKINGS

PM(1)-22

|                      |      |        |     |           |
|----------------------|------|--------|-----|-----------|
| FILE: pm1-22.dgn     | DN:  | CK:    | DW: | CK:       |
| ©TxDOT December 2022 | CONT | SECT   | JOB | HIGHWAY   |
| REVISIONS            |      |        |     |           |
| 11-78 8-00 6-20      |      |        |     |           |
| 8-95 3-03 12-22      |      |        |     |           |
| 5-00 2-12            |      |        |     |           |
|                      | DIST | COUNTY |     | SHEET NO. |
|                      |      |        |     | 35 OF 35  |

22A