



# Southwest Engineers

Civil | Environmental | Land Development

## WATER POLLUTION ABATEMENT PLAN (WPAP)

FOR

### HANWHA TEXAS PLANT

3600 N. IH 35 SERVICE RD,  
GEORGETOWN, WILLIAMSON COUNTY, TX 78626

Prepared For:

BERRY CREEK PARTNERS LP  
1102 S. ROCK STREET,  
GEORGETOWN, TX, 78626

Prepared By:

### **SOUTHWEST ENGINEERS, INC**

205 CIMARRON PARK LOOP, SUITE B  
BUDA, TX 78610

P: 512.312.4336 | F: 830.672.2034

[www.swengineers.com](http://www.swengineers.com) | TBPE NO. F-1909



12.15.2023

DECEMBER 2023

Project #: 1154-001-23



### **TABLE OF CONTENTS**

**I. Edwards Aquifer Application Cover Page (TCEQ-20705)**

**II. General Information Form (TCEQ-0587)**

Attachment A - Road Map  
Attachment B - USGS / Edwards Recharge Zone Map  
Attachment C - Project Description

**III. Geologic Assessment Form (TCEQ-0585)**

Attachment A - Geological Assessment Table (TCEQ-0585-Table)  
Attachment B - Stratigraphic Column  
Attachment C - Site Geology  
Attachment D - Site Geology Maps(s)

**IV. Water Pollution Abatement Plan Application Form (TCEQ-0584)**

Attachment A – Factors Affecting Surface Water Quality  
Attachment B – Volume and Character of Stormwater  
Attachment C – Suitability Letter from Authorized Agent  
Attachment D – Exception to the Required Geologic Assessment  
Site Plan

**V. Temporary Stormwater Section (TCEQ-0602)**

Attachment A - Spill Response Actions  
Attachment B - Potential Sources of Contamination  
Attachment C - Sequence of Major Activities  
Attachment D - Temporary Best Management Practices and Measures  
Attachment E - Request to Temporarily Seal a Feature, if sealing a feature  
Attachment F - Structural Practices  
Attachment G - Drainage Area Map  
Attachment H - Temporary Sediment Pond(s) Plans and Calculations  
Attachment I - Inspection and Maintenance for BMPs  
Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

**VI. Permanent Stormwater Section (TCEQ-0600)**

Attachment A – 20% or less Impervious Cover Waiver  
Attachment B – BMPs for Upgradient Stormwater





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Attachment C – BMPs for On-site Stormwater  
Attachment D – BMPs for Surface Streams  
Attachment E - Request to Seal a Feature, if sealing a feature  
Attachment F - Construction Plans  
Attachment G - Inspection, Maintenance, Repair and Retrofit Plan  
Attachment H – Pilot Scale Field Testing Plan  
Attachment I – Measures for Minimizing Surface Stream Contamination

- VII. **Agent Authorization Form (TCEQ-0599), if application submitted by agent**
- VIII. **Application Fee Form (TCEQ-0574)**
- IX. **Check Payable to the “Texas Commission on Environmental Quality”**
- X. **Core Data Form (TCEQ-10400)**



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**I.**

**EDWARDS AQUIFER APPLICATION COVER PAGE  
(TCEQ-20705)**

# Texas Commission on Environmental Quality

## Edwards Aquifer Application Cover Page

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### Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with [30 TAC 213](#).

### Administrative Review

1. [Edwards Aquifer applications](#) must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: <http://www.tceq.texas.gov/field/eapp>.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.
3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.
4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.
6. If the geologic assessment was completed before October 1, 2004 and the site contains "possibly sensitive" features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

### Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.
2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied the application fee will be forfeited.
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

#### Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name: Hanwha Texas Plant					2. Regulated Entity No.:				
3. Customer Name: Jarrett Dooley (Berry Creek Partners LP)					4. Customer No.:				
5. Project Type: (Please circle/check one)	<input checked="" type="radio"/> New	Modification			Extension		Exception		
6. Plan Type: (Please circle/check one)	<input checked="" type="radio"/> WPAP	<input type="radio"/> CZP	<input type="radio"/> SCS	<input type="radio"/> UST	<input type="radio"/> AST	<input type="radio"/> EXP	<input type="radio"/> EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	<input type="radio"/> Residential	<input checked="" type="radio"/> Non-residential				8. Site (acres):		±38.17	
9. Application Fee:	\$6,500	10. Permanent BMP(s):				Batch Detention Pond			
11. SCS (Linear Ft.):	N/A	12. AST/UST (No. Tanks):				N/A			
13. County:	Williamson	14. Watershed:				Berry Creek			

# Application Distribution

Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the "Texas Groundwater Conservation Districts within the EAPP Boundaries" map found at:

[http://www.tceq.texas.gov/assets/public/compliance/field\\_ops/eapp/EAPP%20GWCD%20map.pdf](http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf)

For more detailed boundaries, please contact the conservation district directly.

Austin Region			
County:	Hays	Travis	Williamson
Original (1 req.)	—	—	✓
Region (1 req.)	—	—	✓
County(ies)	—	—	✓
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Barton Springs/ Edwards Aquifer <input type="checkbox"/> Hays Trinity <input type="checkbox"/> Plum Creek	<input type="checkbox"/> Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	<input type="checkbox"/> Austin <input type="checkbox"/> Buda <input type="checkbox"/> Dripping Springs <input type="checkbox"/> Kyle <input type="checkbox"/> Mountain City <input type="checkbox"/> San Marcos <input type="checkbox"/> Wimberley <input type="checkbox"/> Woodcreek	<input type="checkbox"/> Austin <input type="checkbox"/> Bee Cave <input type="checkbox"/> Pflugerville <input type="checkbox"/> Rollingwood <input type="checkbox"/> Round Rock <input type="checkbox"/> Sunset Valley <input type="checkbox"/> West Lake Hills	<input type="checkbox"/> Austin <input type="checkbox"/> Cedar Park <input type="checkbox"/> Florence <input checked="" type="checkbox"/> Georgetown <input type="checkbox"/> Jerrell <input type="checkbox"/> Leander <input type="checkbox"/> Liberty Hill <input type="checkbox"/> Pflugerville <input type="checkbox"/> Round Rock

San Antonio Region					
County:	Bexar	Comal	Kinney	Medina	Uvalde
Original (1 req.)	—	—	—	—	—
Region (1 req.)	—	—	—	—	—
County(ies)	—	—	—	—	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Trinity-Glen Rose	<input type="checkbox"/> Edwards Aquifer Authority	<input type="checkbox"/> Kinney	<input type="checkbox"/> EAA <input type="checkbox"/> Medina	<input type="checkbox"/> EAA <input type="checkbox"/> Uvalde
City(ies) Jurisdiction	<input type="checkbox"/> Castle Hills <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Helotes <input type="checkbox"/> Hill Country Village <input type="checkbox"/> Hollywood Park <input type="checkbox"/> San Antonio (SAWS) <input type="checkbox"/> Shavano Park	<input type="checkbox"/> Bulverde <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Garden Ridge <input type="checkbox"/> New Braunfels <input type="checkbox"/> Schertz	NA	<input type="checkbox"/> San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.

Campbell Key, P.E.

Print Name of Customer/Authorized Agent

*A. Campbell Key*

12/29/2023

Signature of Customer/Authorized Agent

Date

**\*\*FOR TCEQ INTERNAL USE ONLY\*\***

Date(s) Reviewed:		Date Administratively Complete:	
Received From:		Correct Number of Copies:	
Received By:		Distribution Date:	
EAPP File Number:		Complex:	
Admin. Review(s) (No.):		No. AR Rounds:	
Delinquent Fees (Y/N):		Review Time Spent:	
Lat./Long. Verified:		SOS Customer Verification:	
Agent Authorization Complete/Notarized (Y/N):		Fee Check:	Payable to TCEQ (Y/N):
Core Data Form Complete (Y/N):			Signed (Y/N):
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):



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**II.**

**General Information Form  
(TCEQ-0587)**

# General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

*To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.*

*Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.*

## Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This General Information Form is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Customer/Agent: Campbell Key

Date: 12/29/2023

Signature of Customer/Agent:



## Project Information

1. Regulated Entity Name: Hanwha Texas Plant
2. County: Williamson County
3. Stream Basin: Dry Berry Creek
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:

- ☒ Recharge Zone  
☐ Transition Zone

6. Plan Type:

- ☒ WPAP  
☐ SCS  
☐ Modification

- ☐ AST  
☐ UST  
☐ Exception Request



7. Customer (Applicant):

Contact Person: Jarrett Dooley

Entity: Berry Creek Partners LP

Mailing Address: 1102 South Rock Street

City, State: Georgetown, TX

Zip: 78626

Telephone: 832-483-8899

FAX: \_\_\_\_\_

Email Address: jarrett@hw-companies.com

8. Agent/Representative (If any):

Contact Person: Campbell Key

Entity: Southwest Engineers, Inc.

Mailing Address: 205 Cimarron Park Loop, Suite B

City, State: Buda, TX

Zip: 78610

Telephone: (512) 312-4336

FAX: \_\_\_\_\_

Email Address: campbell.key@swengineers.com

9. Project Location:

- ☐ The project site is located inside the city limits of \_\_\_\_\_.
- ☒ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of Georgetown.
- ☐ The project site is not located within any city's limits or ETJ.

10. ☒ The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

3600 N IH 35 Service Road, Georgetown, Texas 78626

11. ☒ Attachment A – Road Map. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.
12. ☒ Attachment B - USGS / Edwards Recharge Zone Map. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:
- ☒ Project site boundaries.
- ☒ USGS Quadrangle Name(s).
- ☒ Boundaries of the Recharge Zone (and Transition Zone, if applicable).
- ☒ Drainage path from the project site to the boundary of the Recharge Zone.
13. ☒ The TCEQ must be able to inspect the project site or the application will be returned. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.
- ☐ Survey staking will be completed by this date: \_\_\_\_\_

14. ☒ Attachment C – Project Description. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:

- ☒ Area of the site
- ☒ Offsite areas
- ☒ Impervious cover
- ☒ Permanent BMP(s)
- ☒ Proposed site use
- ☒ Site history
- ☒ Previous development
- ☒ Area(s) to be demolished

15. Existing project site conditions are noted below:

- ☐ Existing commercial site
- ☐ Existing industrial site
- ☒ Existing residential site
- ☒ Existing paved and/or unpaved roads
- ☐ Undeveloped (Cleared)
- ☐ Undeveloped (Undisturbed/Uncleared)
- ☐ Other: \_\_\_\_\_

### *Prohibited Activities*

16. ☒ I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
- (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
- (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;
- (4) The use of sewage holding tanks as parts of organized collection systems; and
- (5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
- (6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

17. ☒ I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

- (3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

### *Administrative Information*

18. The fee for the plan(s) is based on:

- ☒ For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- ☐ For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
- ☐ For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
- ☐ A request for an exception to any substantive portion of the regulations related to the protection of water quality.
- ☐ A request for an extension to a previously approved plan.

19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

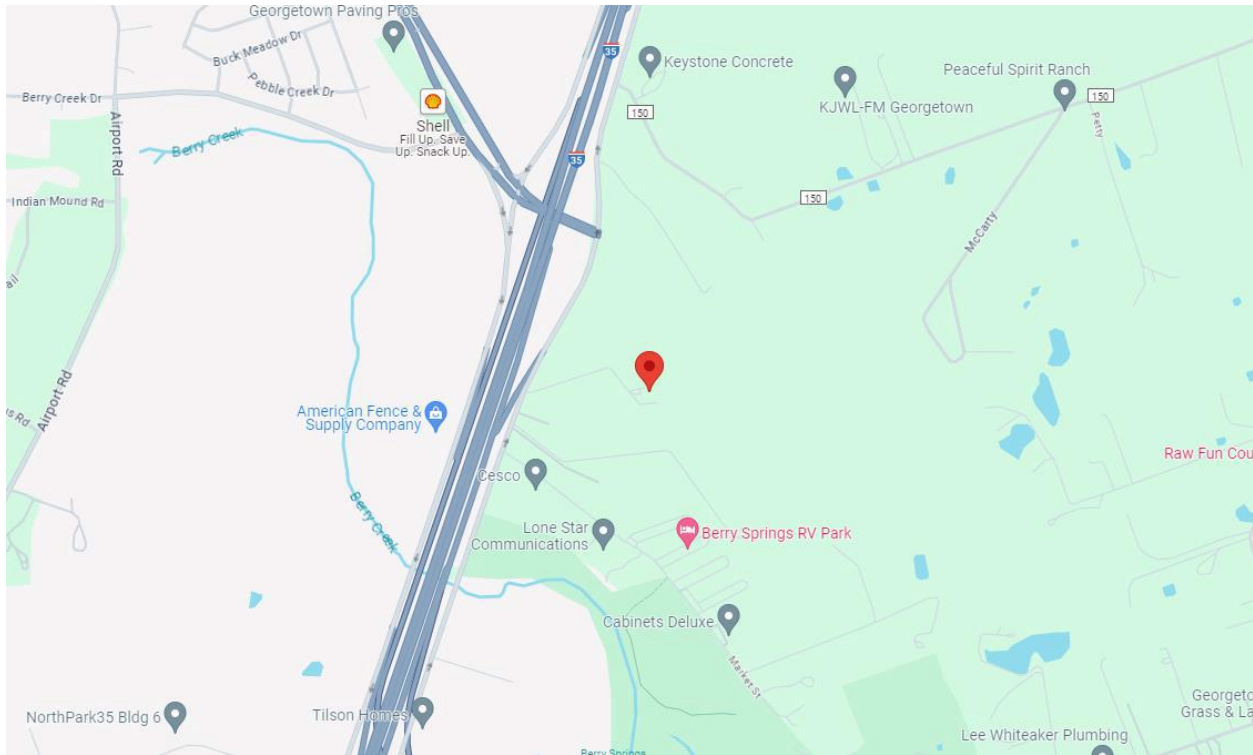
- ☐ TCEQ cashier
- ☒ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- ☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

20. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

21. ☒ No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

# WATER POLLUTION ABATEMENT PLAN ATTACHMENT A

## ROAD/LOCATION MAP



**3600 N IH 35 SERVICE ROAD,  
GEORGETOWN, TEXAS 78626**



### WATER POLLUTION ABATEMENT PLAN APPLICATION FORM ATTACHMENT B

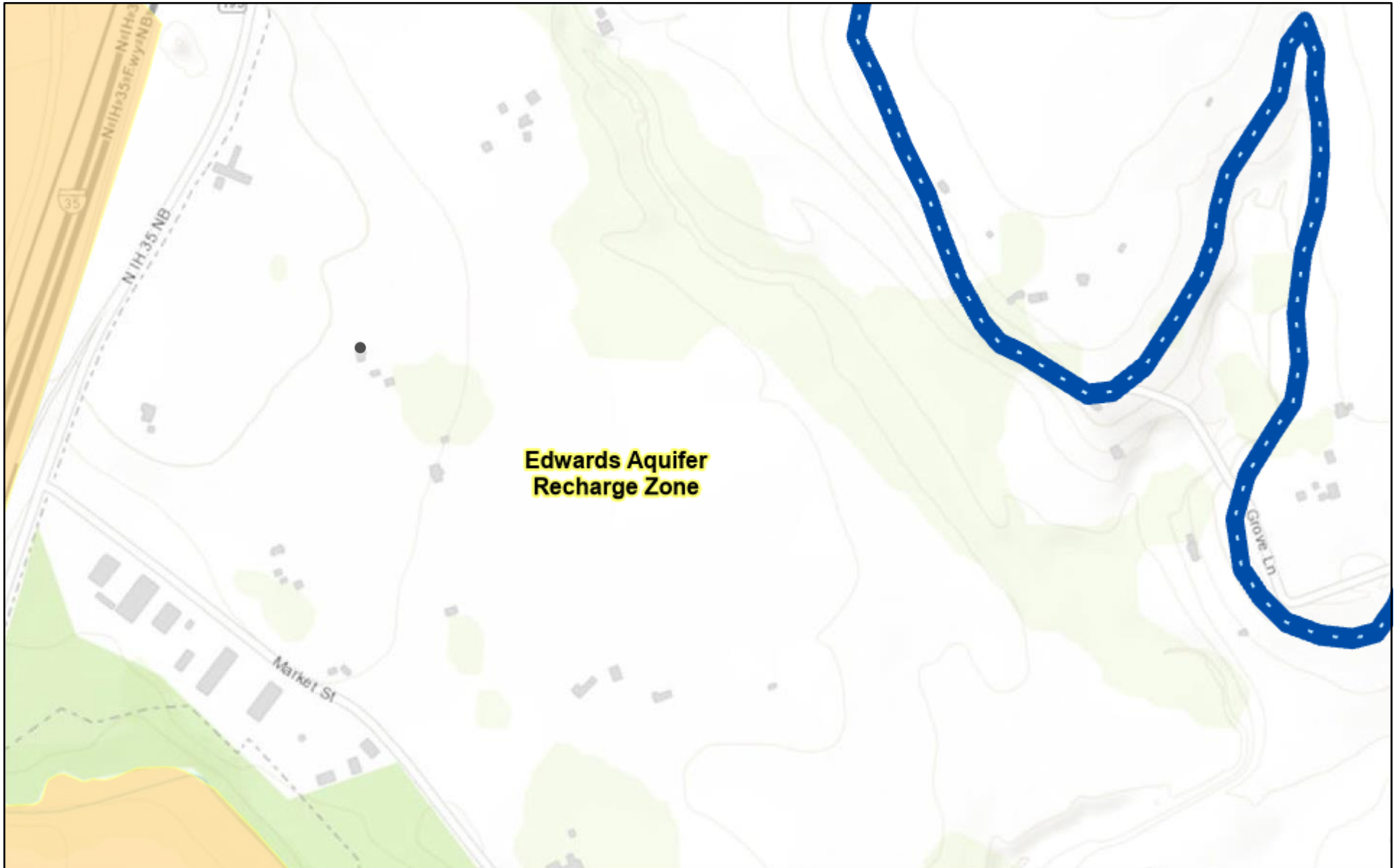
#### VOLUME AND CHARACTER OF STORMWATER

The project site is defined by one (1) major existing drainage area and it drains mainly from west to east across the property. Using City of Georgetown runoff coefficients and Atlas 14 rainfall data, the existing drainage area will produce a peak flow of approximately 143 cubic feet per second (cfs) during a 100-year storm event. Please refer to the "Existing Drainage Area Map – Overall" provided in the site construction drawings for more information. This existing drainage area naturally conveys storm water via overland flow into Dry Berry Creek.







In proposed conditions, the impervious cover on-site will be approximately 10.85 acres (+/- 28% of the total property acreage). Using City of Georgetown runoff coefficients and Atlas 14 rainfall data, the proposed drainage area will produce a peak flow of approximately 201 cubic feet per second (cfs) during a 100-year storm event. Please refer to the "Proposed Drainage Area Map – Overall" provided in the site construction drawings for more information. Please see the Project Narrative in General Information Section - Attachment C for more information.

Erosion Controls will be installed to decrease and/or prevent sediment runoff during construction. Please refer to the site construction drawings for further details.

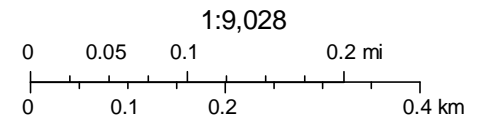
# Edwards Aquifer Viewer Custom Print



12/9/2023, 12:03:01 AM

- |  |  |
|--|--|
|  Edwards Aquifer Label                 |  City/Place           |
|  Edwards Aquifer Boundary              |  TX Counties          |
|  Edwards Aquifer Boundary central line |  7.5 Minute Quad Grid |

 TCEQ\_EDWARDS\_OFFICIAL\_MAPS



County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, TCEQ

Web AppBuilder for ArcGIS

County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA | TCEQ



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**GENERAL INFORMATION SECTION  
ATTACHMENT C**

**PROJECT DESCRIPTION**

The subject property consists of a ±38.17-acre tract located at 3600 N I-35 Service Road, Georgetown, TX 78626. The property is located within the City of Georgetown's 2-mile Extra-Territorial Jurisdiction (ETJ), Williamson County, and the Edwards Aquifer Recharge Zone as defined by the Texas Commission on Environmental Quality (TCEQ). The project tract is located within the Dry Berry Creek Watershed. Currently, the tract consists of a single-family dwelling structure, barn, and associated gravel driveway with runoff draining primarily by overland sheet flow in an easterly direction toward Dry Berry Creek. The proposed development includes the construction of an industrial building with associated drive, parking lot, water quality/detention pond (Batch Detention Pond), and on-site septic facility.

The batch detention pond will be used as a Permanent Best Management Practice (BMP) onsite to treat storm water generated. The BMP has been designed in accordance with TCEQ's Edwards Aquifer Rules Technical Guidance on Best Management Practices RG-348 Addendum Sheet. Stormwater will be detained in the batch detention pond prior to being released into the existing Dry Berry Creek.

This Water Pollution Abatement Plan (WPAP) describes the measures taken to design the batch detention pond. The design calculations are based on the proposed impervious cover, which consists of building roofs and paved areas (asphalt and concrete). Please refer to the site construction drawings provided with this WPAP for more information.



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**III.**

**Geologic Assessment Form  
(TCEQ-0585)**



# Geologic Assessment

## Texas Commission on Environmental Quality

For Regulated Activities on The Edwards Aquifer Recharge/transition Zones and Relating to 30 TAC §213.5(b)(3), Effective June 1, 1999

***To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.***

***Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.***

## Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Russell C Ford

Telephone: 512 442-1122

Date: 6/22/22

Fax: \_\_\_\_\_

Representing: Terlecon Consultants, Inc. (Name of Company and TBPG or TBPE registration number)

Signature of RUSSELL C. FORD  
GEOLOGY  
#1185  
LICENSED

Regulated Entity Name: 76.25-Acre Site, 3600 N. IH-35, Georgetown, Texas

6/22/2022

## Project Information

1. Date(s) Geologic Assessment was performed: 6/7/22

2. Type of Project:

☒ WPAP  
☐ SCS

☐ AST  
☐ UST

3. Location of Project:

☒ Recharge Zone  
☐ Transition Zone  
☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table.** Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.
5. ☒ Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups\* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

**Table 1 - Soil Units, Infiltration Characteristics and Thickness**

Soil Name	Group*	Thickness(feet)
QuC	D	6

Soil Name	Group*	Thickness(feet)
BrB	D	5
EaD	D	3
KrA	D	5
KrB	D	5
SvA	C	5
SvB	C	5
OkA	B	6

*\* Soil Group Definitions (Abbreviated)*

- A. Soils having a high infiltration rate when thoroughly wetted.
- B. Soils having a moderate infiltration rate when thoroughly wetted.
- C. Soils having a slow infiltration rate when thoroughly wetted.
- D. Soils having a very slow infiltration rate when thoroughly wetted.

6. ☒ **Attachment B – Stratigraphic Column.** A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.
7. ☒ **Attachment C – Site Geology.** A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.
8. ☒ **Attachment D – Site Geologic Map(s).** The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'
- Applicant's Site Plan Scale: 1" = ' \_\_\_\_\_
- Site Geologic Map Scale: 1" = 400 '
- Site Soils Map Scale (if more than 1 soil type): 1" = 400 '
9. Method of collecting positional data:
- ☒ Global Positioning System (GPS) technology.
- ☐ Other method(s). Please describe method of data collection: \_\_\_\_\_

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.
12. ☐ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.
- ☒ Geologic or manmade features were not discovered on the project site during the field investigation.
13. ☐ The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.
- ☐ There are (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
- ☐ The wells are not in use and have been properly abandoned.
- ☐ The wells are not in use and will be properly abandoned.
- ☐ The wells are in use and comply with 16 TAC Chapter 76.
- ☒ There are no wells or test holes of any kind known to exist on the project site.

### ***Administrative Information***

15. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

# ATTACHMENT A NO FEATURES OBSERVED

GEOLOGIC ASSESSMENT TABLE						PROJECT NAME: 76.25-Acre Site, 3600 N. IH-35, Georgetown, Texas																				
LOCATION			FEATURE CHARACTERISTICS											EVALUATION		PHYSICAL SETTING										
1A		1B	1C		2A	2B	3			4			5	5A	6	7	8A	8B	9	10		11		12		
FEATURE ID	LATITUDE		LONGITUDE		FEATURE TYPE	POINTS	FORMATION			DIMENSIONS (FEET)			TREND (DEGREES)		DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE		TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)	TOPOGRAPHY	
									X	Y	Z			10								<40	≥40	<1.6	≥1.6	

\* DATUM NAD27

2A TYPTYPE	2B POINTS	8A INFILLING
C Cave	30	N None, exposed bedrock
SC Solution cavity	20	C Coarse - cobbles, breakdown, sand, gravel
SF Solution-enlarged fracture(s)	20	O Loose or soft mud or soil, organics, leaves, sticks, dark colors
F Fault	20	F Fines, compacted clay-rich sediment, soil profile, gray or red colors
O Other natural bedrock features	5	V Vegetation. Give details in narrative description
MB Manmade feature in bedrock	30	FS Flowstone, cements, cave deposits
SW Swallow hole	30	X Other materials
SH Sinkhole	20	
CD Non-karst closed depression	5	
Z Zone, clustered or aligned features		
		TOPOGRAPHY
		Climb, Hilltop, Hillside, Drainage, Floodplain, Streambed

I have read and understood the Texas Natural Resource Conservation Commission's Instructions to Geologists. The information presented in this report is a true and accurate representation of the conditions observed in the field.

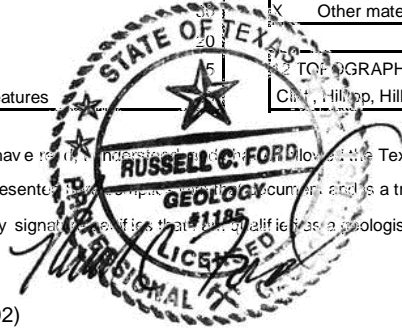
My signature certifies that I am qualified as a geologist as defined by 30 TAC 213 \_\_\_\_\_

Date

TNRCC-0585-Table (Rev. 5-1-02)

6/22/2022

Sheet \_\_\_\_\_ of \_\_\_\_\_



## ATTACHMENT B

Stratigraphic Column

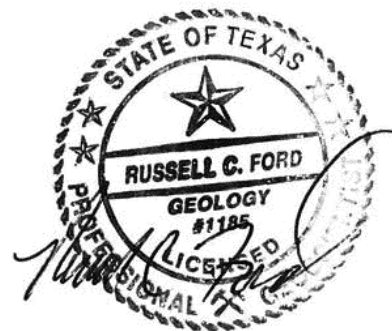
76.25-Acre Site

3600 N. IH-35

Georgetown, Texas

HYDROGEOLOGIC SUBDIVISION	FORMATION	THICKNESS (feet)	LITHOLOGY
Confining Layer	Quaternary alluvium	20	Gravel, sand, silt, and clay along streams

Source: Senger, Collins and Kreitler, 1990



6/22/2022



## ATTACHMENT C SITE-SPECIFIC GEOLOGY

The Geologic Assessment (GA) of the 76.25-Acre Site was performed by Mr. Russell C. Ford, P.G., of Terracon on June 7, 2022. The site is four tracts of mostly vacant land totaling approximately 76.25 acres, which were improved in 1975/76 with several small rural residential structures and associated agricultural out-buildings, located at 3600 North I-35, northeast of its intersection with Market Street in north Georgetown, Williamson County, Texas. The areas immediately surrounding the site are a mix of undeveloped and residential properties. The site is characterized as gently sloping to the east toward Dry Berry Creek which is located along the eastern edge of the site. Site elevation ranges from about 660 feet above mean sea level (msl) to 710 feet above msl.

The surficial geologic unit present at the site has been identified as the Quaternary alluvium. Exhibit 2 (attached) is a geologic map of the site. The Quaternary alluvium consists of varying amounts of gravels, sands, silts and clays associated with stream beds and floodplains. The site is located entirely within the recharge zone of the Edwards Aquifer and the recharge zone boundary is located adjacent to the site along Dry Berry Creek.

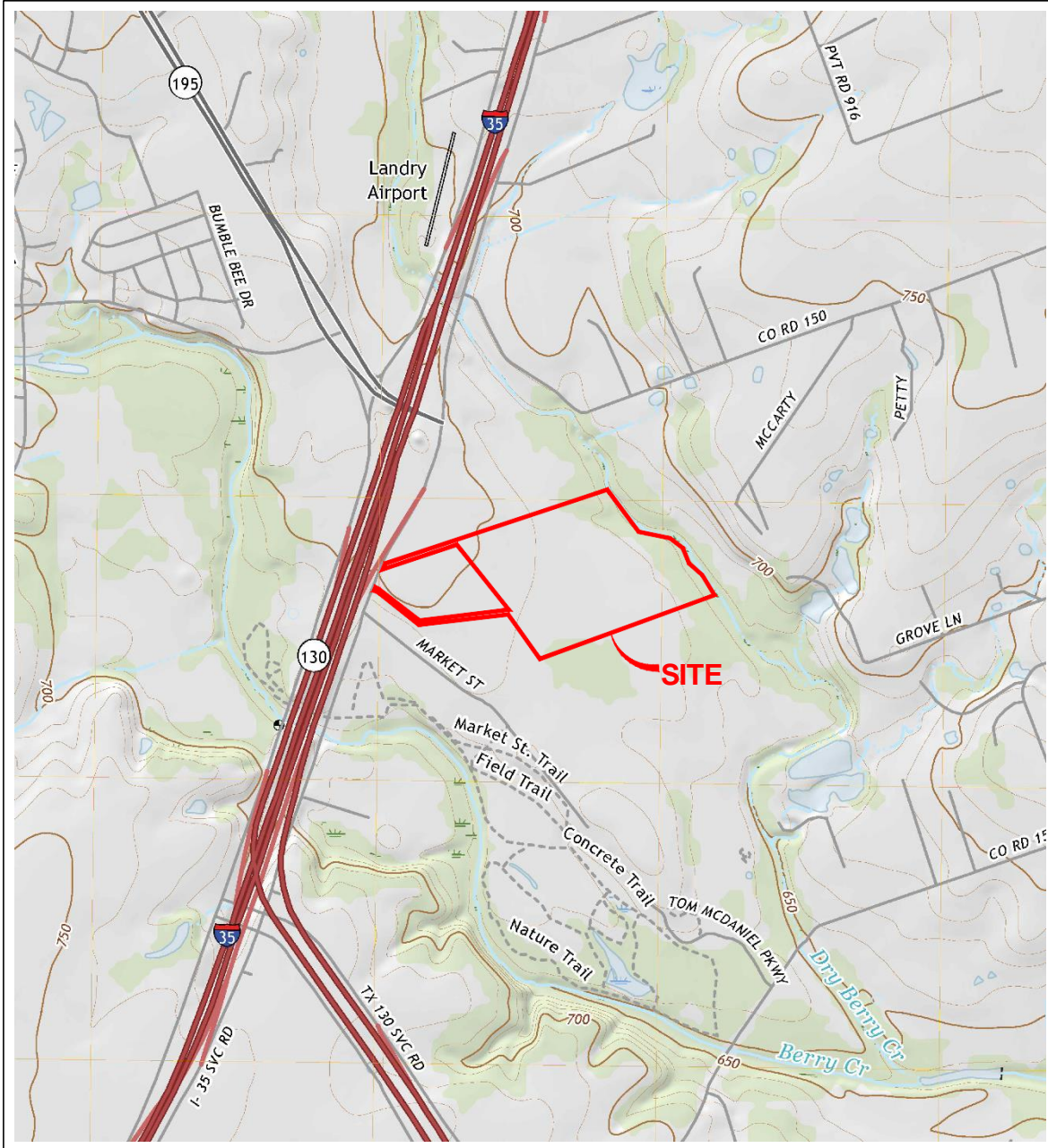
Table 1 (attached) is a stratigraphic column prepared for the site. No faulting was observed on the site, however, there is a mapped fault crossing the site. The fault, which trends toward the north-northeast, is associated with the Balcones Fault zone which represents the dominant structural trend in the vicinity of the site. The completed Geologic Assessment form is attached.

No geologic features were observed on the site. Due to the lack of any significant sensitive recharge features observed on the site and the presence of a relatively impermeable soil cover present, the potential for fluid movement to the Edwards aquifer beneath the project improvement areas is considered low.

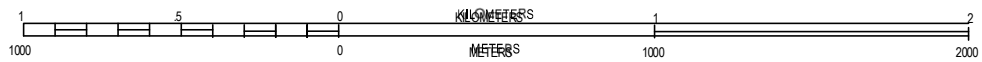
No springs were observed onsite. As previously indicated, Dry Berry Creek is located along the eastern site boundary. This stream would be subject to the Stream Buffer requirements contained in the City of Georgetown Ordinance 2015-14 which would generally coincide with the FEMA 1% floodplain limits. A review of the site maps contained in the City of Georgetown Ordinance 2015-14 indicated there are no known springs occupied by the Georgetown Salamander on the site and the nearest known occupied site is located approximately 3 miles south-southwest of the site (San Gabriel Spring).



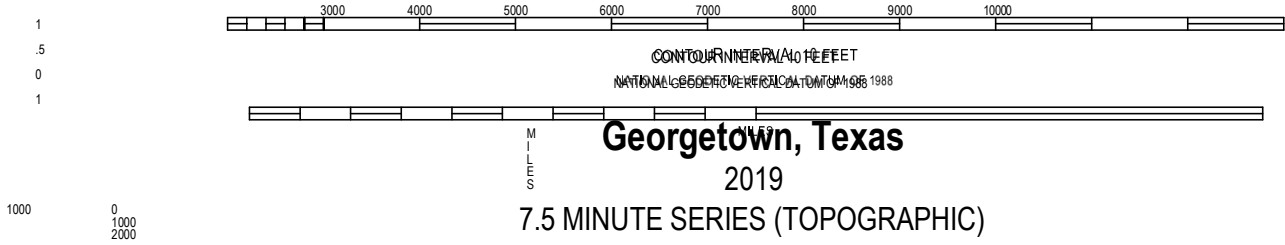
6/22/2022



SCALE 1:24,000





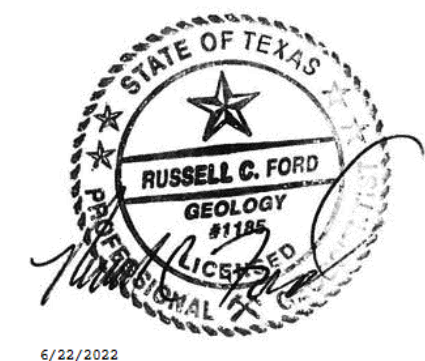
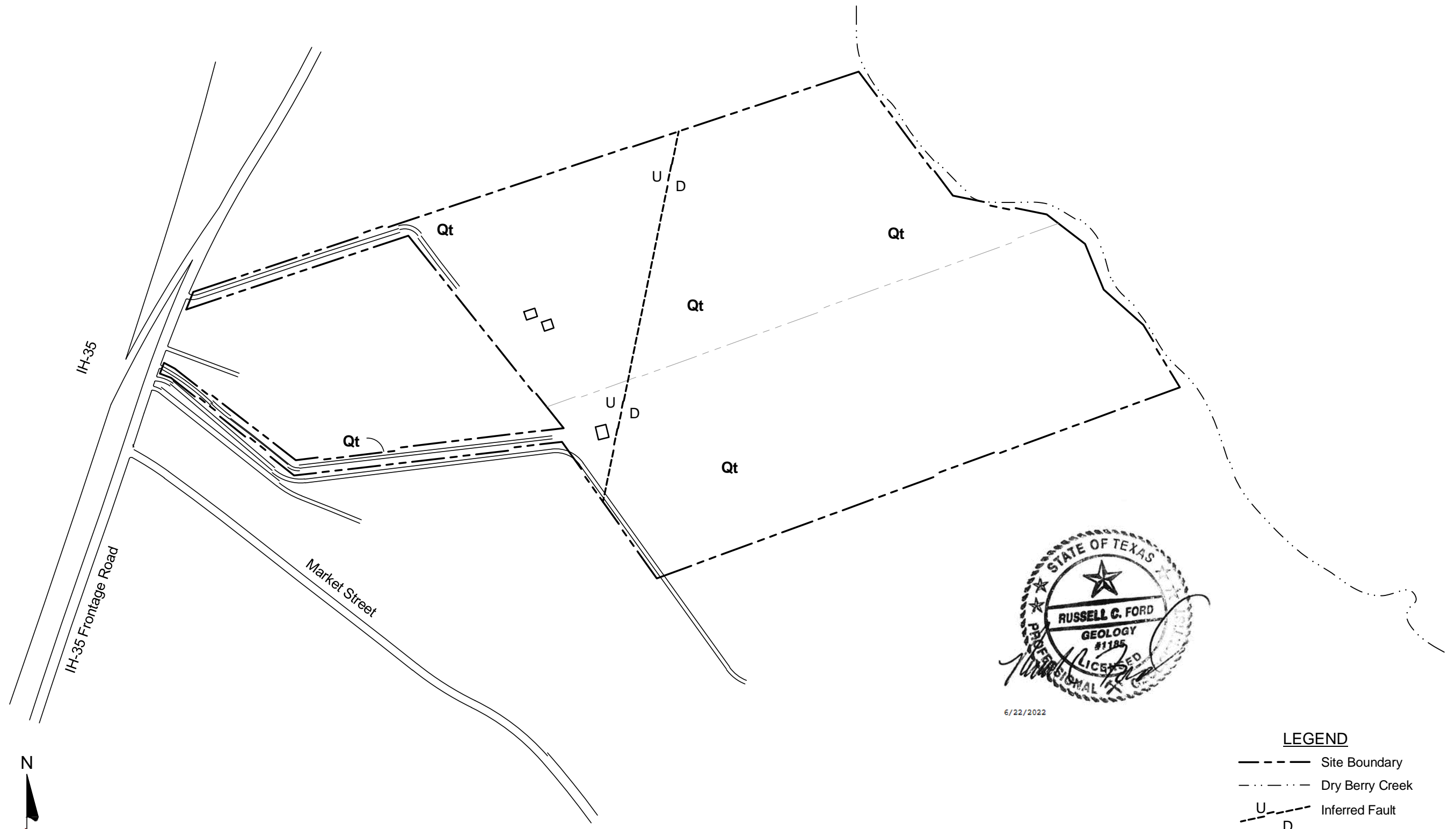


Project Mngr:	RF	Project No.	96227489A	TOPOGRAPHIC MAP	EXHIBIT
Drawn By:	ATX Drafting	Scale:	AS SHOWN	76.25 Acres	1
Checked By:	RF	File No.	96227489A	3600 IH-35	
Approved By:	RF	Date:	Jun 22, 2022	Georgetown, Williamson County, Texas	

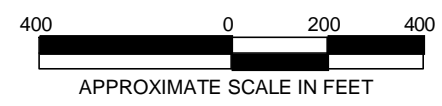



Consulting Engineers and Scientists  
5307 INDUSTRIAL OAKS BLVD. - #160  
PH. (512) 442-1122  
AUSTIN, TX 78735

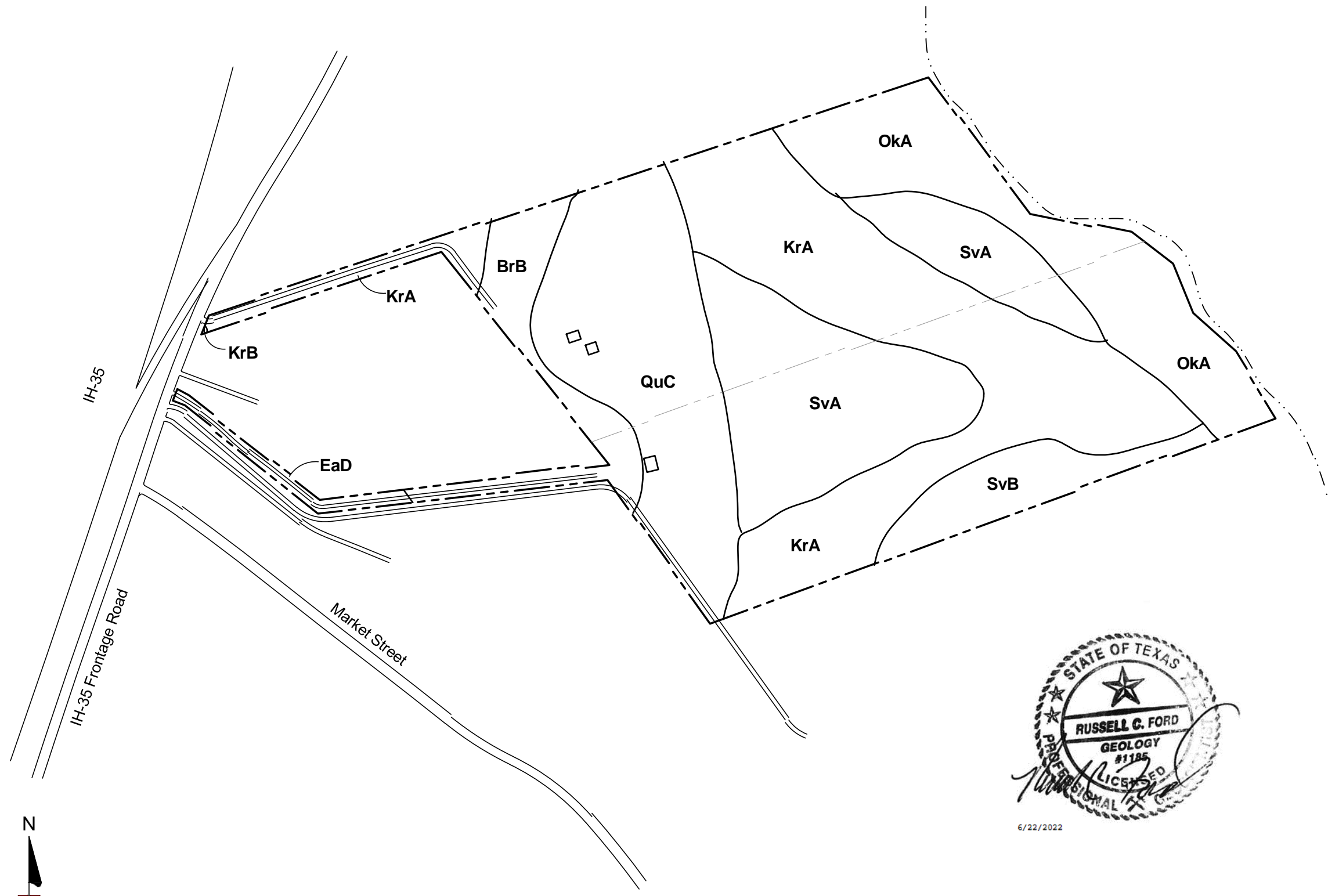




- LEGEND**
- Site Boundary
  - - - Dry Berry Creek
  - U / D Inferred Fault
  - U - Upthrown Side
  - D - Downthrown Side
  - Qt Quaternary Terrace Deposits

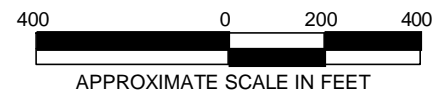
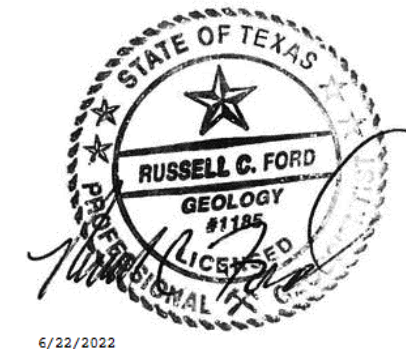



Project Mng'r: RF		Project No. 96227489A		 Consulting Engineers and Scientists 5307 INDUSTRIAL OAKS BLVD. - #160 AUSTIN, TX 78736 PH: (512) 442-1122 FAX: (512) 442-1161	SITE GEOLOGIC MAP		EXHIBIT
Drawn By: ATX Drafting		Scale: AS SHOWN			76.25 Acres		
Checked By: RF		File No. 96227489A			3600 IH-35		
Approved By: RF		Date: Jun 22, 2022			Georgetown, Williamson County, Texas		



# LEGEND

- Site Boundary
- Dry Berry Creek
- BrB** Branyon Clay (1%-3% slopes)
- EaD** Eckrant Cobbly Clay (1%-8% slopes)
- KrA** Krum Silty Clay (0%-1% slopes)
- KrB** Krum Silty Clay (1%-3% slopes)
- OkA** Oakalla Silty Clay Loam (0%-2% slopes)
- QuC** Queenly Clay Loam (1%-5% slopes)
- SvA** Sunev Silty Clay Loam (0%-1% slopes)
- SvB** Sunev Silty Clay Loam (1%-3% slopes)



Project Mngr: RF	Project No. 96227489A	 <p>Consulting Engineers and Scientists 5307 INDUSTRIAL OAKS BLVD. - #160 AUSTIN, TX 78738 PH: (512) 442-1122 FAX: (512) 442-1101</p>	<b>SITE SOILS MAP</b>  <b>76.25 Acres</b> 3600 IH-35 Georgetown, Williamson County, Texas	<b>EXHIBIT</b>  <b>3</b>
Drawn By: ATX Drafting	Scale: AS SHOWN			
Checked By: RF	File No. 96227489A			
Approved By: RF	Date: Jun 22, 2022			



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205 CIMARRON PARK LOOP  
BUDA, TX 78610  
512-312-4336

**IV.**

**Water Pollution Abatement Plan Application Form  
(TCEQ-0584)**

# Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b), Effective June 1, 1999

*To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.*

*Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.*

## Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This Water Pollution Abatement Plan Application Form is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Campbell Key

Date: 12/29/2023

Signature of Customer/Agent :



---

Regulated Entity Name: Hanwha Texas Plant

## Regulated Entity Information

1. The type of project is:

- ☐ Residential: Number of Lots:
- ☐ Residential: Number of Living Unit Equivalents: \_\_\_\_\_
- ☐ Commercial
- ☒ Industrial
- ☐ Other: \_\_\_\_\_

2. Total site acreage (size of property): +/- 38.17 Acres

3. Estimated projected population: N/A

4. The amount and type of impervious cover expected after construction are shown below:

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	205233	$\div 43,560 =$	4.71
Parking	68000	$\div 43,560 =$	1.56
Other paved surfaces	199518	$\div 43,560 =$	4.58
Total Impervious Cover	472751	$\div 43,560 =$	10.85

Total Impervious Cover 10.85  $\div$  Total Acreage 38.17 X 100 = 28.4% Impervious Cover

5. ☒ Attachment A - Factors Affecting Surface Water Quality. A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.
6. ☒ Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

### *For Road Projects Only*

Complete questions 7 - 12 if this application is exclusively for a road project.

7. Type of project:

- ☐ TXDOT road project.
- ☐ County road or roads built to county specifications.
- ☐ City thoroughfare or roads to be dedicated to a municipality.
- ☐ Street or road providing access to private driveways.

8. Type of pavement or road surface to be used:

- ☐ Concrete
- ☐ Asphaltic concrete pavement
- ☐ Other: \_\_\_\_\_

9. Length of Right of Way (R.O.W.): \_\_\_\_\_ feet.

Width of R.O.W.: \_\_\_\_\_ feet.

L x W = \_\_\_\_\_ Ft<sup>2</sup>  $\div$  43,560 Ft<sup>2</sup>/Acre = \_\_\_\_\_ acres.

10. Length of pavement area: \_\_\_\_\_ feet.

Width of pavement area: \_\_\_\_\_ feet.

L x W = \_\_\_\_\_ Ft<sup>2</sup>  $\div$  43,560 Ft<sup>2</sup>/Acre = \_\_\_\_\_ acres.

Pavement area \_\_\_\_\_ acres  $\div$  R.O.W. area \_\_\_\_\_ acres x 100 = \_\_\_\_\_ % impervious cover.

11. ☐ A rest stop will be included in this project.

☐ A rest stop will not be included in this project.

12. ☐ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

*Stormwater to be generated by the Proposed Project*

13. ☒ Attachment B - Volume and Character of Stormwater. A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on the area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

*Wastewater to be generated by the Proposed Project*

14. The character and volume of wastewater is shown below:

_____ % Domestic	_____ Gallons/day
<u>100</u> % Industrial	<u>1,600</u> Gallons/day
_____ % Commingled	_____ Gallons/day
TOTAL gallons/day <u>1,600</u>	

15. Wastewater will be disposed of by:

☒ On-Site Sewage Facility (OSSF/Septic Tank):

☒ Attachment C - Suitability Letter from Authorized Agent. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

☒ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☐ Sewage Collection System (Sewer Lines):

☐ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.

☐ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

☐ The SCS was previously submitted on \_\_\_\_\_.

☐ The SCS was submitted with this application.

☐ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

☐ The sewage collection system will convey the wastewater to the \_\_\_\_\_ (name) Treatment Plant. The treatment facility is:

☐ Existing.

☐ Proposed.

16. ☒ All private service laterals will be inspected as required in 30 TAC §213.5.

### *Site Plan Requirements*

*Items 17 – 28 must be included on the Site Plan.*

17. ☒ The Site Plan must have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = 100'.

18. 100-year floodplain boundaries:

☒ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.

☐ No part of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): \_\_\_\_\_

19. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, open space, etc. are shown on the plan.

☐ The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, open space, etc. are shown on the site plan.

20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

☐ There are \_\_\_\_\_ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

☐ The wells are not in use and have been properly abandoned.

☐ The wells are not in use and will be properly abandoned.

☐ The wells are in use and comply with 16 TAC §76.

☒ There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:

☐ All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.

☒ No sensitive geologic or manmade features were identified in the Geologic Assessment.

☐ Attachment D - Exception to the Required Geologic Assessment. A request and justification for an exception to a portion of the Geologic Assessment is attached.

- 22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.
- 23. ☒ Areas of soil disturbance and areas which will not be disturbed.
- 24. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
- 25. ☒ Locations where soil stabilization practices are expected to occur.
- 26. ☒ Surface waters (including wetlands).  
☐ N/A
- 27. ☒ Locations where stormwater discharges to surface water or sensitive features are to occur.  
☐ There will be no discharges to surface water or sensitive features.
- 28. ☒ Legal boundaries of the site are shown.

### *Administrative Information*

- 29. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
- 30. ☒ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.



**WATER POLLUTION ABATEMENT PLAN APPLICATION FORM  
ATTACHMENT A**

**FACTORS AFFECTING SURFACE WATER QUALITY**

**DURING CONSTRUCTION**

Non-Storm Water Discharges - The following non-storm water discharges may occur from the site during the construction period:

- Non-point discharge of paint and solvents
- Water used to wash vehicles or control dust
- Water from utility line flushing during initial line testing
- Petroleum drippings from vehicle movement
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred)
- Groundwater (from dewatering of excavation)
- Silt Runoff from soil disturbance
- Trash and Debris (Litter) and discarded Food and Tobacco Products

All non-storm water discharge will be directed to the Erosion and Sedimentation Controls (Best Management Practices) to remove any suspended solids contained therein. Material management practices will be utilized to reduce the risk of spills, or other accidental exposure of the materials listed above to storm water runoff. These and any other sources of pollutants that may affect storm water quality will be screened and filtered by temporary BMPs, which will be installed prior to the commencement of site clearing.

**POST CONSTRUCTION**

Non-Storm Water Discharges after construction has been completed which can affect water quality include:

- Lawn fertilizer and pesticides
- Petroleum drippings from vehicle movement
- Cleaning products used out-of-doors not captured in sanitary sewer
- Landscape Maintenance

Post-construction storm water discharges typically will transport sediment in the form of dirt and dust accumulated on streets and other impervious flatwork, rooftops and sediment from erosion of grassy areas. That material will be conveyed to the water quality pond (where most pollutants will be removed), and then conveyed to the proposed detention pond and finally discharge sheet flows into the undeveloped land.



### WATER POLLUTION ABATEMENT PLAN APPLICATION FORM ATTACHMENT B

#### VOLUME AND CHARACTER OF STORMWATER

The project site is defined by one (1) major existing drainage area and it drains mainly from west to east across the property. Using City of Georgetown runoff coefficients and Atlas 14 rainfall data, the existing drainage area will produce a peak flow of approximately 272.23 cubic feet per second (cfs) during a 100-year storm event. Please refer to the "Existing Drainage Area Map" provided in the site construction drawings for more information. This existing drainage area naturally conveys storm water via overland flow into Dry Berry Creek.

In proposed conditions, the impervious cover on-site will be approximately 10.85 acres (+/- 28.4% of the total property acreage). Using City of Georgetown runoff coefficients and Atlas 14 rainfall data, the proposed drainage area will produce a peak flow of approximately 271.54 cfs during a 100-year storm event including attenuation from the proposed detention pond. Please refer to the "Proposed Drainage Area Map" provided in the site construction drawings for more information. Please see the Project Narrative in General Information Section - Attachment C for more information.

Erosion Controls will be installed to decrease and/or prevent sediment runoff during construction. Please refer to the site construction drawings for further details.



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**BUDA**

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BUDA, TX 78610  
512-312-4336

**WATER POLLUTION ABATEMENT PLAN APPLICATION FORM  
ATTACHMENT C**

**SUITABILITY LETTER FROM AUTHORIZED AGENT (OSSF)**

**WATER POLLUTION ABATEMENT PLAN APPLICATION FORM  
ATTACHMENT D**

**EXCEPTION TO THE REQUIRED GEOLOGIC ASSESSMENT**

Exception to the required Geologic Assessment is not applicable. Please see the Geological Assessment Form (TCEQ-0585).



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**BUDA**

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BUDA, TX 78610  
512-312-4336

**V.**

**Temporary Stormwater Section  
(TCEQ-0602)**

# Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC  
§213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

*To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.*

*Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.*

## Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This Temporary Stormwater Section is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Campbell Key

Date: 12/29/2023

Signature of Customer/Agent:



---

Regulated Entity Name: Hanwha Texas Plant

## Project Information

### Potential Sources of Contamination

*Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.*

1. Fuels for construction equipment and hazardous substances which will be used during construction:

☐ The following fuels and/or hazardous substances will be stored on the site: \_\_\_\_\_

These fuels and/or hazardous substances will be stored in:

☐ Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

- ☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
- ☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
- ☒ Fuels and hazardous substances will not be stored on the site.
- 2. ☒ Attachment A - Spill Response Actions. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.
- 3. ☐ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- 4. ☒ Attachment B - Potential Sources of Contamination. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

### *Sequence of Construction*

- 5. ☒ Attachment C - Sequence of Major Activities. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.
  - ☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.
  - ☒ For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
- 6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Dry Berry Creek

### *Temporary Best Management Practices (TBMPs)*

*Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. All structural BMPs must be shown on the site plan.*

- 7. ☒ Attachment D – Temporary Best Management Practices and Measures. TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

- ☒ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
  - ☒ A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
  - ☒ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
  - ☒ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.
8. ☒ The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.
- ☐ Attachment E - Request to Temporarily Seal a Feature. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
- ☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.
9. ☒ Attachment F - Structural Practices. A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.
10. ☒ Attachment G - Drainage Area Map. A drainage area map supporting the following requirements is attached:
- ☒ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
  - ☒ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
  - ☒ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.
  - ☒ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.



- ☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.
11. ☐ Attachment H - Temporary Sediment Pond(s) Plans and Calculations. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
- ☒ N/A
12. ☒ Attachment I - Inspection and Maintenance for BMPs. A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
13. ☒ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
14. ☒ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
15. ☐ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
16. ☒ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

### *Soil Stabilization Practices*

*Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.*

17. ☒ Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices. A schedule of the interim and permanent soil stabilization practices for the site is attached.

- 18. ☐ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

### *Administrative Information*

- 20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
- 21. ☒ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
- 22. ☒ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

**TEMPORARY STORMWATER SECTION  
ATTACHMENT A**

**SPILL RESPONSE ACTIONS**

Responsibility for adequate cleanup of any chemical spills during construction will be placed on the contractor. All cleanups will be to standards of TNRCC Regulatory Guidance Handbook, RG-285, June 1997. The contractor will notify TCEQ of any chemical spills as required and outlined in the TNRCC Regulatory Guidance Handbook, at 512-463-7727 or 512-239-2507.

Reportable quantities as defined by 30 TAC Chapter 327 are as follows:

(a) Hazardous substances. The reportable quantities for hazardous substances shall be:

(1) for spills or discharges onto land--the quantity designated as the Final Reportable Quantity (RQ) in Table 302.4 in 40 CFR §302.4; or

(2) for spills or discharges into waters in the state--the quantity designated as the Final RQ in Table 302.4 in 40 CFR §302.4, except where the Final RQ is greater than 100 pounds in which case the RQ shall be 100 pounds.

(b) Oil, petroleum product, and used oil.

(1) The RQ for crude oil and oil other than that defined as petroleum product or used oil shall be:

(A) for spills or discharges onto land--210 gallons (five barrels); or

(B) for spills or discharges directly into water in the state--quantity sufficient to create a sheen.

(2) The RQ for petroleum product and used oil shall be:

(A) except as noted in subparagraph (B) of this paragraph, for spills or discharges onto land--25 gallons;

(B) for spills or discharges to land from PST exempted facilities--210 gallons (five barrels); or

(C) for spills or discharges directly into water in the state--quantity sufficient to create a sheen.

(c) Industrial solid waste or other substances. The RQ for spills or discharges into water in the state shall be 100 pounds.

**TEMPORARY STORMWATER SECTION  
ATTACHMENT B**

**POTENTIAL SOURCES OF CONTAMINATION**

Some potential sources of contamination are as follows:

- fuel storage and use,
- chemical storage and use,
- use of asphaltic products,
- construction vehicles tracking onto public roads,
- existing solid waste,
- and other vehicular contaminants (i.e., fuel, oil, lubricants, etc.).

Refer to Attachment A for Spill Response Actions.

## TEMPORARY STORMWATER SECTION ATTACHMENT C

### SEQUENCE OF MAJOR ACTIVITIES

1. Construct temporary erosion control measures, including all silt fences, rock berms, diversion berms, and tree protection fencing per approved plan. (0.33 acres)
2. Conduct pre-construction conference with city inspector, water and wastewater utility representative, owner's representative, architect, engineer and contractor. Contact City of Georgetown permit center at (512) 930-2550 to schedule the pre-construction conference. An esc contact name and number will be provided to the city inspector for 24/7 access in the event of erosion and sediment control breach or related problem. (N/A)
3. Construction water quality pond, to act as temporary sedimentation basin. (2.23 acres)
4. Contractor shall contact City of Georgetown prior to utility abandonment at 512-930-3648, if appropriate. (N/A)
5. Perform clearing, demolition and rough grading. (37.86 acres)
6. Install utilities. Conduct water and wastewater utility construction and testing for city acceptance. Coordinate underground electric, telephone, cable tv, and telecommunications construction. Install inlet protection. (1.58 acres)
7. Construct all weather access drives including asphalt, base, concrete, and curb & gutter (as applicable). (8.04 acres)
8. Construct buildings. (4.71 acres)
9. Install all sidewalks. (0.07 acres)
10. Install streetscape and/or landscaping improvements. (0.33 acres)
11. Prior to city final acceptance, the contractor shall have vegetative cover in place in conformance with the general construction notes and landscape plan. All adjacent areas disturbed by the work will be repaired and revegetated by the general contractor to preexisting or better conditions. Permanent controls will be cleaned out and filter media will be installed prior to/concurrently with revegetation of site. (24.71 acres)
12. Schedule site final inspection with city environmental technician and city building inspector. (N/A)
13. Remove any trapped sediment at erosion control devices and upon approval of city inspector. Remove all temporary erosion controls and tree protection. (0.33 acres)
14. The total overall disturbed area for the Hanwha Texas Plant is approximately 37.86 acres.

## **TEMPORARY STORMWATER SECTION ATTACHMENT D**

### **TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES**

At the beginning of the project, Temporary Best Management Practices (BMPs) will be installed according to the Erosion and Sedimentation Control Details sheet and placed as shown on the Temporary Erosion and Sedimentation Control Plan sheets. Silt fences will be installed and the proposed batch detention pond will be rough cut before construction begins. When full, the proposed batch detention pond overflow will sheet flow downstream through silt fence. During construction, the silt fencing and batch detention pond are to be inspected weekly, and after any rainfall.

The site is located 3600 N I-35 Service Road, Georgetown Texas 78626. Upgradient water from the undeveloped site upstream of the proposed development will be conveyed to the proposed batch detention pond.

#### **On-site Water**

Silt fencing will be placed downwards along the boundary line of the tracts. Inlet protection will be placed as necessary to protect the existing inlets onsite. These Temporary BMPs will be installed along the down-gradient boundary of the property to filter all runoff that originates on site. The temporary construction entrance will be installed to prevent tracking materials offsite. Additionally, a concrete truck washout area will be placed onsite and be accessible to all existing traffic leaving the site. By this, the Temporary BMPs will prevent pollution of surface water that originates on-site due to the construction of the project.

The following sections were taken from the TNCC Manual, "Complying with Edward Aquifer

Rules: Technical Guidance on Best Management Practices."

- Construction Exit should be used at all designated access points.
- Silt Fence (interior) Areas of minor sheet flow. < ¼ acre/100 feet of fence < 20% slopes.
- Silt Fence (exterior) Down slope borders of site; up slope border is necessary to divert offsite drainage. For larger areas use diversion swale or berm. < ¼ acre/100 feet of fence < 20% slopes.
- Rock Berm Drainage swales and ditches with and below site. < 5 acres < 30% slopes.
- Inlet Protection Prevent sediment from entering storm drain system. < 1 acre.
- Spill Prevention Used on all sites to reduce spills.
- Concrete Washout Use on all concrete pouring operations.

- A. A description of how BMPs and measures will prevent pollution of surface water, groundwater or storm water that originates upgradient from the site and flows across the site.
1. The upgradient storm water will be directed to the previously mentioned temporary BMPs.
- B. A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated storm water runoff from the site.
1. Silt fence and stabilized construction entrances shall be used to prevent pollution of surface water, groundwater or storm water that originates on-site or flows off-site by locating the TBMPs downstream of the flows leaving the site. The TBMPs will reduce the amount of contaminated runoff leaving the site by acting as a filter for sediment before the flows are released into the existing storm sewer system. Also included is a stabilized construction entrance to reduce the amount of mud tracked onto surrounding streets by construction vehicles. Inspection and maintenance of the on-site controls shall be performed during the site clearing and rough grading process.
- All TBMPs will be maintained by the Contractor as will be described in the Contractor's Storm water Pollution Prevention Plan (SWPPP). The initial installation of Erosion and Sedimentation Controls, will act as a sediment trap, and help to prevent pollution of surface waters from runoff originating on-site to the greatest extent practicable.
- C. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
1. By locating the TBMPs downstream of the flows leaving the site, the TBMPs will reduce the amount of contaminated runoff leaving the site by acting as a filter for sediment before the flows are released. Also included is a stabilized construction entrance to reduce the amount of mud tracked onto surrounding streets by construction vehicles. Inspection and maintenance of the on-site controls shall be performed during the site clearing and rough grading process. All TBMPs will be maintained by the Contractor as will be described in the Contractor's SWPPP. The initial installation of Erosion and Sedimentation Controls, will act as a sediment trap, and help to prevent pollution of surface waters from runoff originating onsite to the greatest extent practicable.
- D. A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

Please refer to Temporary Erosion and Sedimentation Control Plan within the Construction plans.

**TEMPORARY STORMWATER SECTION  
ATTACHMENT E**

**REQUEST TO TEMPORARILY SEAL A FEATURE**

There will be no temporary sealing of naturally-occurring sensitive features on the site.



**TEMPORARY STORMWATER SECTION  
ATTACHMENT F**

**STRUCTURAL PRACTICES**

Structural practices will be used to limit runoff discharge of pollutants from exposed areas of the site. Silt fencing, triangular sediment filter dikes, inlet protection devices, and stabilized construction entrances will be incorporated as temporary erosion control devices and will be removed after the permanent stabilization is established.

Silt fencing shall be incorporated throughout the construction process. The placement of the silt fencing shall be perpendicular to runoff flow. Refer to project construction documents for quantity and actual locations of these erosion control devices. In areas where silt fencing is to be situated but is non-installable, triangular filter dikes shall be incorporated.

Stabilized construction entrances will be employed during the construction of this site to help minimize vehicle tracking of sediments. Paved streets adjacent to these site entrances shall be cleaned and/or swept regularly to remove any excess mud, dirt or rock tracked from the site. Refer to the project construction documents for actual locations of these erosion control devices. Staging areas will be utilized in locations as decided by the project general contractor and validated by the civil engineer. If the contractor determines the need for additional stabilized construction entrances, construction staging areas or pits, their locations shall be agreed upon by the contractor and the engineer and annotated in the Storm Water Pollution Prevention Plan (SWPPP) posted on the site during construction.

**TEMPORARY STORMWATER SECTION  
ATTACHMENT G**

**DRAINAGE AREA MAP**

Please see the Construction Plans provided with this application for Existing and Proposed Drainage Area Maps, as well as details on the proposed methods for temporary erosion and sedimentation controls for the disturbed areas.

**TEMPORARY STORMWATER SECTION  
ATTACHMENT H**

**TEMPORARY SEDIMENT POND(S) PLANS AND CALCULATIONS**

This section is not applicable for this project.

**TEMPORARY STORMWATER SECTION  
ATTACHMENT I**

**INSPECTION AND MAINTENANCE FOR BMPS**

**INSPECTIONS**

Each contractor will designate a qualified person (or persons) to perform the following inspections:

1. Disturbed areas and areas used for storage of materials that are exposed to precipitation will be inspected for evidence of, or the potential for, pollutants entering the drainage system.
2. Erosion and sediment control measures identified in the plan will be observed to ensure that they are operating correctly.
3. Where discharge locations or points are accessible, they will be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.
4. Locations where vehicles enter or exit the site will be inspected for evidence of offsite sediment tracking.

The inspection shall be conducted by the responsible person at least once every seven (7) calendar days and within 24 hours after a storm providing 1/2 inches of rainfall or greater. If one or more of the following conditions apply, the frequency of inspections shall be conducted at least once every month:

1. The site has been temporarily stabilized.
2. Where runoff is unlikely due to winter conditions (i.e. site is covered with snow, ice, or where frozen ground exists).
3. During seasonal arid periods in arid areas (areas with an average annual rainfall of 0 to 10 inches) and semi-arid areas (areas with an average annual rainfall of 10 to 20 inches).

The information required within an inspection and maintenance report are as follows:

1. Summary of the scope of the inspection.
2. Name(s) and qualifications of personnel making the inspection.
3. The date(s) of the inspection.
4. Major observations relating to the implementation of the storm water pollution prevention plan.

5. Changes required to correct damages or deficiencies in the control measures.

In addition to the required routine inspections, the following record of information will also be maintained:

1. The dates when selective clearing activities occur.
2. The dates when selective clearing activities permanently cease on a portion of the site.

Inspection and maintenance reports, as well as all records required by a Storm Water Pollution Prevention Plan (SWPPP), shall be included in the onsite SWPPP as part of the Texas Pollution Discharge Elimination System (TPDES) Report. Copies of example forms to be used for the inspection and maintenance reports along with their related records, will be included in the onsite SWPPP and are provided for reference.

## **MAINTENANCE**

Based on the results of the inspection, any changes required to correct damages or deficiencies in the control measures shall be made within seven (7) calendar days after the inspection. If existing erosion controls need modification or additional erosion controls are necessary, implementation shall be achieved prior to the next anticipated storm event. If, however, the execution of this requirement becomes impractical, then the implementation will occur as soon as possible, with the incident duly noted with an explanation of the impracticality, in the inspection report.

Sediment accumulation at each control will be removed and properly disposed when the depth of accumulation equals or exceeds six (6) inches. If sediment accumulation is found to be contaminated, its disposal shall be off-site in a manner which conforms to the appropriate applicable regulations.

HANWHA TEXAS PLANT  
3600 N IH 35 Service Road,  
Georgetown, TX 78626

### Inspection Report

Prevention Measure	Pollution	Inspected in Compliance (Y/N)	Corrective Action Required	
			Description (use additional sheet if necessary)	Date Completed
<b>BEST MANAGEMENT PRACTICES</b>				
Silt fences				
Rock berms				
Drain inlet protection				
Gravel filter bags				
Vehicle exits (offsite tracking)				
Concrete washout pit (leaks, failure)				
Temporary vegetation				
Permanent vegetation				
Sediment control basin				
Other structural controls				
Material storage areas (leakage)				
Equipment areas (leaks, spills)				
Construction debris				
General site cleanliness				
Trash receptacles				
Natural vegetation buffer strips				
<b>EVIDENCE OF EROSION</b>				
Site preparation				
Roadway or Parking Lot Construction				
Utility Construction				
Drainage Construction				
Building Construction				
<b>MAJOR OBSERVATIONS</b>				
Sediment discharges from site				
BMPs requiring maintenance				
BMPs requiring modification				
Additional BMPs required				

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Inspector's Name (Superintendent)

Berry Creek Partners LP

Name of Owner/Operator (Firm)

Inspector's Signature

Authorized Signature

Date

12/14/23

Date

**Note:** If there is a "NO" answer in the second column, the right columns will need to be completed and action is required within 7 days. Use additional sheets if necessary.

HANWHA TEXAS PLANT  
3600 N I-35 Service Road,  
Georgetown, TX 78626

### Responsible Party Form and Schedule

Prevention Measure	Pollution	Responsible Party Company Name									
<b>BEST MANAGEMENT PRACTICES</b>											
Silt fences											
Rock berms											
Drain inlet protection											
Gravel filter bags											
Vehicle exits (offsite tracking)											
Concrete washout pit (leaks, failure)											
Temporary vegetation											
Permanent vegetation											
Sediment control basin											
Other structural controls											
Material storage areas (leakage)											
Equipment areas (leaks, spills)											
Construction debris											
General site cleanliness											
Trash receptacles											
Natural vegetation buffer strips											
Inspections											
SWP3 Modification & Records											
<b>POTENTIAL EROSION SOURCES</b>											
Clearing											
Grading											
Excavation											
Drainage Construction											
Utility Construction											
Roadway or Parking Lot Construction											
Foundation Construction											
Building Construction											
Landscaping Activities											
Identify responsible parties and indicate responsible party for each pollution prevention item listed above by marking an X under the Responsible Party Name.											

**TEMPORARY STORMWATER SECTION  
ATTACHMENT J**

**SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES**

**During Construction:**

The methodology for handling pollution of on-site or up-gradient storm water during construction will include the following:

1. Silt fencing and rock berms will be used as a temporary erosion and sedimentation controls.
2. Stabilized construction entrances/exits will be put into place to reduce the dispersion of sediment from the site, and to aid in accessibility to the site.
3. A construction staging area will also be put into place for material stockpiles, machinery storage, and machinery maintenance.
4. Concrete truck washout pits will be put into place to prevent contamination of storm water runoff and to aid in the removal of sediments from the site.
5. As required by the TCEQ General Permit, disturbed areas on which construction activity has ceased (temporarily or permanently) and which will be exposed for more than 21 days shall be stabilized within 14 days. Areas receiving less than 20 inches of annual rainfall should be stabilized as soon as practicable and only to pre-project conditions.
6. If construction stops for more than 14 days, hydro-seeding, sod or other TCEQ approved method will be applied to re-stabilize vegetation.

**After Construction:**

This site will provide the following permanent pollution abatement measures to prevent the pollution of storm water originating on-site or upgradient from the project site:

1. Storm water will be directed to grate inlets via curbing and grading and discharged into the sedimentation/filtration basins. The sedimentation/filtration basins have been designed to capture and filter the required runoff from the individual watersheds. The basin has been designed in accordance with the TCEQ Technical Guidance Manual. Each basin will be constructed as that particular phase is built.



2. Native grasses will be used on-site to help reduce the use of fertilizers and this will in turn reduce the levels of phosphates present in the storm water runoff.
3. Where possible drainage will be directed across vegetated areas to provide some pretreatment prior to discharge into the filtration basin.

**Permanent Erosion Control:**

1. All disturbed areas shall be restored as noted below:
  - A minimum of 4" of topsoil shall be placed in all drainage channels (except rock) and between the curb and R.O.W. property lines.
2. Broadcast Seeding:
  - From September 15 to March 1, seeding shall be with a combination of 2 pounds per 1,000 SF of unhulled Bermuda and 7 pounds per 1000 SF of Winter Rye with a purity of 95% with 90% germination.
  - From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 2 pounds per 1000 SF with a purity of 95% with 85% germination.
3. Fertilizer shall be a pelleted or granular slow release with an analysis of 15-15-15 to be applied once at planting and once during the period of establishment at a rate of 1 pound per 1,000 SF.

**Seeding:**

- 1) The seeding for permanent erosion control shall be applied over areas disturbed by construction as follows:
  - a) From September 15 to March 1, seeding shall be with a combination of 2 pounds per 1,000 square feet of unhulled Bermuda and 7 pounds per 1,000 square feet of Winter rye with a purity of 95% with 90% germination.
  - b) From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 3 pounds per 1,000 square feet with a purity of 95% with 85% germination.
- 2) Fertilizer shall be slow release granular or pelleted type and shall have an analysis of 15-15-15 and shall be applied at the rate of 23 pounds per acre, once at the time of planting and again once during the time of establishment.
- 3) The planted area shall be irrigated or sprinkled in a manner that will not erode the topsoil but will sufficiently soak the soil to a depth of six inches. The irrigation shall occur at ten-day intervals during the first two months. Rainfall

occurrences of an inch or more shall postpone the watering schedule for one week.

- 4) Mulch type used shall be Prairie hay, applied at a rate of 4,000 pounds per acre.
- 5) Restoration shall be acceptable when the grass has grown at least one inch high with 70% coverage, provided no bare spots larger than 18 square feet exist.



**Southwest  
Engineers**

WWW.SWENGINEERS.COM | TBPE NO. F-1909

**BUDA**

205 CIMARRON PARK LOOP  
BUDA, TX 78610  
512-312-4336

## **VI.**

### **Permanent Stormwater Section (TCEQ-0600)**

# Permanent Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC  
§213.5(b)(4)(C), (D)(li), (E), and (5), Effective June 1, 1999

*To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.*

*Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.*

## Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This Permanent Stormwater Section is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Campbell Key

Date: 12/29/2023

Signature of Customer/Agent



Regulated Entity Name: Hanwha Texas Plant

## Permanent Best Management Practices (BMPs)

*Permanent best management practices and measures that will be used during and after construction is completed.*

1. ☒ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.  
☐ N/A
2. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.  
☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: \_\_\_\_\_

☒ N/A

3. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

☐ N/A

4. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.

☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.

☒ The site will not be used for low density single-family residential development.

5. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

☐ Attachment A - 20% or Less Impervious Cover Waiver. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.

☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.

☒ The site will not be used for multi-family residential developments, schools, or small business sites.

6. ☒ Attachment B - BMPs for Upgradient Stormwater.

- ☐ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.
  - ☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.
  - ☒ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.
7. ☒ Attachment C - BMPs for On-site Stormwater.
- ☒ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.
  - ☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.
8. ☒ Attachment D - BMPs for Surface Streams. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.
- ☐ N/A
9. ☒ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.
- ☒ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.
  - ☐ Attachment E - Request to Seal Features. A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.
10. ☒ Attachment F - Construction Plans. All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:
- ☒ Design calculations (TSS removal calculations)
  - ☒ TCEQ construction notes
  - ☒ All geologic features
  - ☒ All proposed structural BMP(s) plans and specifications
- ☐ N/A

11. ☒ Attachment G - Inspection, Maintenance, Repair and Retrofit Plan. A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:
- ☒ Prepared and certified by the engineer designing the permanent BMPs and measures
  - ☒ Signed by the owner or responsible party
  - ☒ Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
  - ☒ A discussion of record keeping procedures
- ☐ N/A
12. ☐ Attachment H - Pilot-Scale Field Testing Plan. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.
- ☒ N/A
13. ☐ Attachment I - Measures for Minimizing Surface Stream Contamination. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that results in water quality degradation.
- ☒ N/A

### *Responsibility for Maintenance of Permanent BMP(s)*

*Responsibility for maintenance of best management practices and measures after construction is complete.*

14. ☒ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
- ☐ N/A
15. ☐ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.
- ☒ N/A

**PERMANENT STORMWATER SECTION  
ATTACHMENT A**

**20% OR LESS IMPERVIOUS COVER WAIVER**

This Attachment is Not Applicable. Please refer to the site construction drawings provided with this application for information concerning the proposed permanent Best Management Practices (BMP's) on-site.



**PERMANENT STORMWATER SECTION  
ATTACHMENT B**

**BMPS FOR UPGRADIENT STORMWATER**

No BMP's are required for upgradient stormwater runoff. Please refer to the site construction drawings for more information.

**PERMANENT STORMWATER SECTION  
ATTACHMENT C**

**BMPS FOR ON-SITE STORMWATER**

Permanent Best Management Practices (BMPs) are proposed to prevent pollution of surface water that originates on-site, including pollution that originates from contaminated storm water runoff from the site. The BMPs will be in the form of a Batch Detention Pond designed to capture and treat storm water runoff produced on-site. Please refer to the site construction drawings for detailed calculations and more information.

**PERMANENT STORMWATER SECTION  
ATTACHMENT D**

**BMPS FOR SURFACE STREAMS**

No BMP's are required for upgradient stormwater runoff. Please refer to the site construction drawings for more information.

**PERMANENT STORMWATER SECTION  
ATTACHMENT E**

**REQUEST TO SEAL FEATURES**

This section is not applicable for this project.

**PERMANENT STORMWATER SECTION  
ATTACHMENT F**

**Construction Plans**

Please refer to the Hanwha Texas Plant construction plans provided with this application.

**PERMANENT STORMWATER SECTION ATTACHMENT G:  
INSPECTION SCHEDULE AND MAINTENANCE PLAN  
PERMANENT BEST MANAGEMENT PRACTICE**

**PROJECT NAME:** Hanwha Texas Plant  
**ADDRESS:** 3600 N I-35 Service Road  
**CITY, STATE ZIP:** Georgetown, Tx 78626

**Batch Detention Water Quality Ponds:**

A clear requirement for Batch Detention is that a firm commitment be made to carry out both routine and non-routine maintenance tasks. The nature of the maintenance requirements are outlined below, along with design tips that can help to reduce the maintenance burden (modified from Young et al., 1996).

**Routine Maintenance.**

*Mowing.* The side-slopes, embankment, and emergency spillway of the basin should be mowed at least twice a year to prevent woody growth and control weeds.

*Inspections.* Batch Detention Ponds should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. When possible, inspections should be conducted during wet weather to determine if the basin is functioning properly. There are many functions and characteristics of these BMPs that should be inspected. The embankment should be checked for subsidence, erosion, leakage, cracking, and tree growth. The condition of the emergency spillway should be checked. The inlet, barrel, and outlet should be inspected for clogging. The adequacy of upstream and downstream channel erosion protection measures should be checked. Stability of the side slopes should be checked. Modifications to the basin structure and contributing watershed should be evaluated. During semi-annual inspections, replace any dead or displaced vegetation. Replanting of various species of wetland vegetation may be required at first, until a viable mix of species is established. Cracks, voids and undermining should be patched/filled to prevent additional structural damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage. The inspections should be carried out with as-built pond plans in hand.

*Debris and Litter Removal.* As part of periodic mowing operations and inspections, debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the riser, and the outlet should be checked for possible clogging.

*Erosion Control.* The basin side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion. Corrective measures such as regrading and revegetation may be necessary. Similarly, the riprap protecting the channel near the outlet may need to be repaired or replaced.

3-97

*Nuisance Control.* Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.). Biological control of algae and mosquitoes using fish such as fathead minnows is preferable to chemical applications.

**Non-routine maintenance.**

*Structural Repairs and Replacement.* Eventually, the various inlet/outlet and riser works in the Batch Detention Pond will deteriorate and must be replaced. Some public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 yr, while concrete barrels and risers may last from 50 to 75 yr. The actual life depends on the type of soil, pH of runoff, and other factors. Polyvinyl chloride (PVC) pipe is a corrosion resistant alternative to metal and concrete pipes. Local experience typically determines which materials are best suited to the site conditions. Leakage or seepage of water through the embankment can be avoided if the embankment has been constructed of impermeable material, has been compacted, and if anti-seep collars are used around the barrel. Correction of any of these design flaws is difficult.

*Sediment Removal* Batch Detention Ponds will eventually accumulate enough sediment to significantly reduce storage capacity of the Sedimentation Basin. As might be expected, the accumulated sediment can reduce both the appearance and pollutant removal performance of the pond. Sediment accumulated in the Sedimentation Basin should be removed from the facility every two years to prevent accumulation in the Batch Detention Pond

*Harvesting.* If vegetation is present on the fringes or in the pond, it can be periodically harvested and the clippings removed to provide export of nutrients and to prevent the basin from filling with decaying organic matter.

Accumulated silt shall be properly disposed. Refer to Texas Natural Resource Conservation Commission (TNRCC) and the local government entity guidelines and specifications.

The responsible party understands that following any amendment(s) to the previously described inspection schedule and maintenance plan, a signed copy of the revised document will be submitted to the appropriate regional office of Texas Natural Resource Conservation Commission within thirty (30) days for review and approval. Also, if there are any changes

in the following information, a revised copy of this document will be submitted to appropriate regional office within 30 days.

Documenting Inspections: Inspection, maintenance, repairs, and retrofits performed per the above requirements must be documented and records thereof maintained with the WPAP.

The following format may be used to document the required maintenance:

**Facility Name:** Hanwha Texas Plant

**Date of Inspection:** \_\_\_\_\_

**Reason of Inspection/Action:** \_\_\_\_\_  
(Monthly, Quarterly, Yearly, Rainfall, Other)

**Sedimentation/Filtration Pond Conditions:** \_\_\_\_\_

**Detailed Description of Actions Taken:** \_\_\_\_\_

The responsible party understands that following any amendment(s) to the previously described inspection schedule and maintenance plan, a signed copy of the revised document will be submitted to the appropriate regional office of Texas Natural Resource Conservation Commission within thirty (30) days for review and approval. Also, if there are any changes in the following information, a revised copy of this document will be submitted to appropriate regional office within 30 days.

Responsible Party: Jarrett Dooley  
(Name Typed)

Entity: Berry Creek Partners LP  
Mailing Address: 1102 South Rock Street  
City, State: Georgetown, TX Zip: 78626  
Telephone: 512-557-0420  
Fax: \_\_\_\_\_

  
\_\_\_\_\_  
Signature of Responsible Party

12/14/23  
Date

**PERMANENT STORMWATER SECTION  
ATTACHMENT H**

**PILOT SCALE FIELD TESTING PLAN**

This section is not applicable for this project.



**PERMANENT STORMWATER SECTION  
ATTACHMENT I**

**MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION**

The proposed improvements are not expected to change the way in which stormwater runoff enters nearby streams or affects stream flashing, in-stream velocities, and other in-stream effects.



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**BUDA**

205 CIMARRON PARK LOOP  
BUDA, TX 78610  
512-312-4336

**VII.**

**Agent Authorization Form  
(TCEQ-0599)**

**Agent Authorization Form**  
For Required Signature  
Edwards Aquifer Protection Program  
Relating to 30 TAC Chapter 213  
Effective June 1, 1999

I Jarrett Dooley,  
Print Name  
Partner,  
Title - Owner/President/Other  
of Berry Creek Partners LP,  
Corporation/Partnership/Entity Name  
have authorized Campbell Key, P.E. & Matthew A. Dringenberg, P.E.  
Print Name of Agent/Engineer  
of Southwest Engineers, Inc.  
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

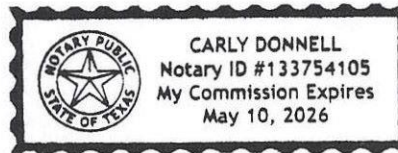
1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to \$10,000 per day per violation.
2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.
3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.
4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.
5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

[Signature]  
Applicant's Signature

12/13/2023  
Date

THE STATE OF Texas §  
County of Williamson §



BEFORE ME, the undersigned authority, on this day personally appeared Janett Dooley known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 13 day of December, 2023.

Carly Donnell  
NOTARY PUBLIC  
Carly Donnell  
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 5/10/26



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BUDA, TX 78610  
512-312-4336

**VIII.**

**Application Fee Form  
(TCEQ-0574)**

# Application Fee Form

## Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Hanwha Texas Plant

Regulated Entity Location: 3600 N IH 35 Service Rd, Georgetown, TX, 78626

Name of Customer: Jarret Dooley (Berry Creek Partners LP)

Contact Person: Campbell Key

Phone: (512)-312-4336

Customer Reference Number (if issued): CN \_\_\_\_\_

Regulated Entity Reference Number (if issued): RN \_\_\_\_\_

### Austin Regional Office (3373)

☐ Hays

☐ Travis

☒ Williamson

### San Antonio Regional Office (3362)

☐ Bexar

☐ Medina

☐ Uvalde

☐ Comal

☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment.** This payment is being submitted to:

☒ Austin Regional Office

☐ San Antonio Regional Office

☐ Mailed to: TCEQ - Cashier

☐ Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

12100 Park 35 Circle

Building A, 3rd Floor

Austin, TX 78753

(512)239-0357

### Site Location (Check All That Apply):

☒ Recharge Zone

☐ Contributing Zone

☐ Transition Zone

Type of Plan	Size	Fee Due
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	38.17 Acres	\$ 6,500
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: A. Campbell Key

Date: 12/12/2023

## Application Fee Schedule

Texas Commission on Environmental Quality

Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

### ***Water Pollution Abatement Plans and Modifications***

#### ***Contributing Zone Plans and Modifications***

<b><i>Project</i></b>	<b><i>Project Area in Acres</i></b>	<b><i>Fee</i></b>
One Single Family Residential Dwelling	< 5	\$650
Multiple Single Family Residential and Parks	< 5	\$1,500
	5 < 10	\$3,000
	10 < 40	\$4,000
	40 < 100	\$6,500
	100 < 500	\$8,000
	≥ 500	\$10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1	\$3,000
	1 < 5	\$4,000
	5 < 10	\$5,000
	10 < 40	\$6,500
	40 < 100	\$8,000
	≥ 100	\$10,000

#### ***Organized Sewage Collection Systems and Modifications***

<b><i>Project</i></b>	<b><i>Cost per Linear Foot</i></b>	<b><i>Minimum Fee- Maximum Fee</i></b>
Sewage Collection Systems	\$0.50	\$650 - \$6,500

#### ***Underground and Aboveground Storage Tank System Facility Plans and Modifications***

<b><i>Project</i></b>	<b><i>Cost per Tank or Piping System</i></b>	<b><i>Minimum Fee- Maximum Fee</i></b>
Underground and Aboveground Storage Tank Facility	\$650	\$650 - \$6,500

#### ***Exception Requests***

<b><i>Project</i></b>	<b><i>Fee</i></b>
Exception Request	\$500

***Extension of Time Requests***

<b><i>Project</i></b>	<b><i>Fee</i></b>
Extension of Time Request	\$150





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**IX.**

**Check Payable to the “Texas Commission on Environmental  
Quality”**



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BUDA, TX 78610  
512-312-4336

**X.**

**Core Data Form  
(TCEQ-10400)**



TCEQ Use Only

# TCEQ Core Data Form

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

## SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> Other	
2. Customer Reference Number (if issued)	<a href="#">Follow this link to search for CN or RN numbers in Central Registry**</a>	3. Regulated Entity Reference Number (if issued)
CN		RN

## SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)	
<input checked="" type="checkbox"/> New Customer		<input type="checkbox"/> Update to Customer Information	
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)		<input type="checkbox"/> Change in Regulated Entity Ownership	
The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).			
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)		If new Customer, enter previous Customer below:	
Berry Creek Partners LP			
7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
0804699760	32085995895		
11. Type of Customer:	<input checked="" type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Other:	
12. Number of Employees		13. Independently Owned and Operated?	
<input checked="" type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following			
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator			
<input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> Voluntary Cleanup Applicant <input type="checkbox"/> Other:			
15. Mailing Address:	1102 South Rock Street		
	City	Georgetown	State TX ZIP 78626 ZIP + 4
16. Country Mailing Information (if outside USA)		17. E-Mail Address (if applicable)	
		jarrett@HW-companies.com	
18. Telephone Number	19. Extension or Code	20. Fax Number (if applicable)	
( 832 ) 483-8899		( ) -	

## SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity' is selected below this form should be accompanied by a permit application)	
<input checked="" type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information	
The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).	
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)	
Hanwha Texas Plant	

23. Street Address of the Regulated Entity: <i>(No PO Boxes)</i>	3600 N. IH 35 Service Road							
	City	Georgetown	State	TX	ZIP	78626	ZIP + 4	
24. County	Williamson							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	Located just north of IH 35 and SH 130 on the east side of IH 35, between Market Street and TX-195, adjacent to the Berry Springs RV Park.							
26. Nearest City				State		Nearest ZIP Code		
Georgetown				TX		78626		
27. Latitude (N) In Decimal:		30.695833		28. Longitude (W) In Decimal:		-97.653256		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds			
30	41	44.9988	-97	39	11.721			
29. Primary SIC Code (4 digits)		30. Secondary SIC Code (4 digits)		31. Primary NAICS Code (5 or 6 digits)		32. Secondary NAICS Code (5 or 6 digits)		
3714				332999				
33. What is the Primary Business of this entity? <i>(Do not repeat the SIC or NAICS description.)</i>								
Manufacturing								
34. Mailing Address:		1102 South Rock Street						
		City	Georgetown	State	TX	ZIP	78626	ZIP + 4
35. E-Mail Address:								
36. Telephone Number			37. Extension or Code			38. Fax Number <i>(if applicable)</i>		
( 832 ) 483-8899						( ) -		

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Waste Water	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

#### SECTION IV: Preparer Information

40. Name:	Campbell Key	41. Title:	Project Manager
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
( 512 ) 312-4336		( ) -	campbell.key@swengineers.com

#### SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Southwest Engineers	Job Title:	Project Manager
Name <i>(In Print)</i> :	Campbell Key	Phone:	( 512 ) 312- 4336

Signature:	<i>A. C. King</i>	Date:	
------------	-------------------	-------	--



# Southwest Engineers

Civil | Environmental | Land Development

## **SOUTHWEST ENGINEERS, INC**

205 CIMARRON PARK LOOP, SUITE B  
BUDA, TX 78610

P: 512.312.4336 | F: 830.672.2034

[www.swengineers.com](http://www.swengineers.com) | TBPE NO. F-1909

WCAD

Property	Owner	Property Address	Tax Year	2024 Market Value
R039068	BERRY CREEK PARTNERS LP	3546 IH 35 N, GEORGETOWN, TX 78626	2024	N/A

2024 GENERAL INFORMATION

Property Status	Active
Property Type	Residential
Legal Description	AW0051 AW0051 - Berry, J. Sur., ACRES 2.12
Neighborhood	G305M50H - E Gtown ISD Abstracts
Account	R-20-0051-000H-0043
Related Properties	R038978
Map Number	2-0836

2024 OWNER INFORMATION

Owner Name	BERRY CREEK PARTNERS LP
Owner ID	
Exemptions	
Percent Ownership	100%
Mailing Address	1102 S ROCK ST GEORGETOWN, TX 78626
Agent	MORRISON & HEAD LP (A1630)

2024 VALUE INFORMATION

MARKET VALUE	
Improvement Homesite Value	N/A
Improvement Non-Homesite Value	N/A
Total Improvement Market Value	N/A
Land Homesite Value	N/A
Land Non-Homesite Value	N/A
Land Agricultural Market Value	N/A
Total Land Market Value	N/A
Total Market Value	N/A
ASSESSED VALUE	
Total Improvement Market Value	N/A
Land Homesite Value	N/A
Land Non-Homesite Value	N/A
Agricultural Use	N/A
Timber Use	N/A
Total Appraised Value	N/A
Homestead Cap Loss ⓘ	N/A
Total Assessed Value	N/A

2024 ENTITIES & EXEMPTIONS

TAXING ENTITY	EXEMPTIONS	EXEMPTIONS AMOUNT	TAXABLE VALUE	TAX RATE PER 100	TAX CEILING
CAD- Williamson CAD		N/A	N/A	N/A	N/A
🔗 F08- Wmsn ESD #8		N/A	N/A	N/A	N/A
🔗 GWI- Williamson CO		N/A	N/A	N/A	N/A
🔗 RFM- Wmsn CO FM/RD		N/A	N/A	N/A	N/A
🔗 SGT- Georgetown ISD		N/A	N/A	N/A	N/A

2024 IMPROVEMENTS

⌵ Expand/Collapse All

Improvement #1	State Code	Homesite	Total Main Area (Exterior Measured)	Market Value
-	E1 - Farm And Ranch Improvements-residence	Yes	1,837 Sq. Ft	N/A

RECORD	TYPE	YEAR BUILT	SQ. FT	VALUE	ADD'L INFO
1	Main Area	1975	1,837	N/A	⌵ Details
2	Open Porch	-	126	N/A	⌵ Details
3	Open Porch	-	392	N/A	⌵ Details
4	Utility/storage	-	164	N/A	⌵ Details
5	Garage	-	342	N/A	⌵ Details
6	Out Bldg	-	-	N/A	⌵ Details
7	Site Improvement	-	1	N/A	⌵ Details
8	Barn	-	540	N/A	⌵ Details
9	Fireplace	1975	1	N/A	⌵ Details

2024 LAND SEGMENTS

LAND SEGMENT TYPE	STATE CODE	HOMESITE	MARKET VALUE	AG USE	TIM USE	LAND SIZE
1 - Residential	E1 - Farm And Ranch Improvements-residence	Yes	N/A	N/A	N/A	1.000000 acres
2 - Residential	E1 - Farm And Ranch Improvements-residence	Yes	N/A	N/A	N/A	1.120000 acres
TOTALS						92,347 Sq. ft / 2.120000 acres

VALUE HISTORY

YEAR	IMPROVEMENT	LAND	MARKET	AG MARKET	AG USE	APPRAISED	HS CAP LOSS	ASSESSED
2023	\$78,430	\$79,844	\$158,274	\$0	\$0	\$158,274	\$0	\$158,274
2022	\$60,306	\$89,260	\$149,566	\$0	\$0	\$149,566	\$0	\$149,566
2021	\$53,123	\$34,412	\$87,535	\$0	\$0	\$87,535	\$0	\$87,535
2020	\$50,466	\$17,308	\$67,774	\$0	\$0	\$67,774	\$0	\$67,774
2019	\$51,422	\$22,896	\$74,318	\$0	\$0	\$74,318	\$0	\$74,318

SALES HISTORY

DEED DATE	SELLER	BUYER	INSTR #	VOLUME/PAGE
10/14/2022	HOMEYER HOELCK, JOYCE E ET AL	BERRY CREEK PARTNERS LP	2022119279	
7/9/2007	HOMEYER HOELCK, JOYCE E ET AL	HOMEYER HOELCK, JOYCE E ET AL	2007077517	
10/22/2005	HOMEYER, ALICE E	HOMEYER HOELCK, JOYCE E ET AL	-	
4/19/1983	HOMEYER, LEROY (ESTATE)	HOMEYER, ALICE E	-	



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**ENGINEER:**  
SOUTHWEST ENGINEERS, INC.  
205 CIMARRON PARK LOOP, SUITE B  
BUDA, TX 78610  
CONTACT: MATTHEW A. DRINGENBERG, P.E.  
PHONE: (512) 312-4336  
EMAIL: MATT.DRINGENBERG@SWENGINEERS.COM

**SURVEYOR:**  
LANDPOINT, LLC.  
4100 INTERNATIONAL PLAZA, SUITE 240,  
FORT WORTH, TX, 76109  
CONTACT: TED A. GOSSETT, RPLS  
PHONE: (817)-554-1805

**FLOODPLAIN STATUS:**  
A PORTION OF THE PROPERTY LIES IN SHADED ZONE "A" AS SHOWN  
ON THE FEMA FIRM MAP PANEL NO. 48491C0285F, FOR WILLIAMSON  
COUNTY UNINCORPORATED AREAS, DATED DECEMBER 20, 2019

**WATERSHED NOTE:**  
THIS PROJECT IS LOCATED IN THE BERRY CREEK WATERSHED.

**LEGAL DESCRIPTION:**  
AW0051 - BERRY, J. SUR., ACRES 2.12 AND AW0051 BERRY, J. SUR ACRES 36.00

**EDWARDS AQUIFER NOTE:**  
THIS PROJECT IS LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.

**BENCHMARK:**  
PK NAIL SET IN ASPHALT AT SOUTHWEST EDGE OF STRIPE, SOUTH IH 35 FRONTAGE ROAD.  
ELEVATION = 695.71'

**GENERAL NOTES**

- IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER, AND SUCCESSORS TO THE CURRENT PROPERTY OWNER, TO ENSURE THE SUBJECT PROPERTY AND ANY IMPROVEMENTS ARE MAINTAINED IN CONFORMANCE WITH THIS SITE DEVELOPMENT PLAN.
- THIS DEVELOPMENT SHALL COMPLY WITH ALL STANDARDS OF THE UNIFIED DEVELOPMENT CODE (UDC), CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND SPECIFICATIONS MANUAL, THE DEVELOPMENT MANUAL AND ALL OTHER APPLICABLE CITY STANDARDS.
- THIS SITE DEVELOPMENT PLAN SHALL MEET THE UDC STORMWATER REQUIREMENTS.
- ALL SIGNAGE REQUIRES A SEPARATE APPLICATION AND APPROVAL FROM THE INSPECTION SERVICES DEPARTMENT. NO SIGNAGE IS APPROVED WITH THE SITE DEVELOPMENT PLAN.
- SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH THE UDC.
- DRIVEWAYS WILL REQUIRE APPROVAL BY THE TEXAS DEPARTMENT OF TRANSPORTATION.
- THE PROPERTY SUBJECT TO THIS APPLICATION IS SUBJECT TO THE WATER QUALITY REGULATIONS OF THE CITY OF GEORGETOWN
- A GEOLOGIC ASSESSMENT, IN ACCORDANCE WITH THE CITY OF GEORGETOWN WATER QUALITY REGULATIONS, WAS COMPLETED ON 06/22/2022. ANY SPRINGS AND STREAMS AS IDENTIFIED IN THE GEOLOGIC ASSESSMENT ARE SHOWN HEREIN.
- THE COMPANION LANDSCAPE PLAN HAS BEEN DESIGNED AND PLANT MATERIALS SHALL BE INSTALLED TO MEET ALL REQUIREMENTS OF THE UDC.
- ALL MAINTENANCE OF REQUIRED LANDSCAPE SHALL COMPLY WITH THE MAINTENANCE STANDARDS OF CHAPTER 8 OF THE UDC.
- ANY HERITAGE TREE NOTED ON THIS SITE DEVELOPMENT PLAN IS SUBJECT, IN PERPETUITY, TO THE MAINTENANCE, CARE, PRUNING AND REMOVAL REQUIREMENTS OF THE UNIFIED DEVELOPMENT CODE.
- THE CONSTRUCTION PORTION OF THESE PLANS WERE PREPARED, SEALED, SIGNED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE, BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE CONSTRUCTION PLANS FOR CONSTRUCTION OF THE PROPOSED PROJECT ARE HEREBY APPROVED SUBJECT TO THE STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS MANUAL AND ALL OTHER APPLICABLE CITY, STATE AND FEDERAL REQUIREMENTS AND CODES.
- THIS PROJECT IS SUBJECT TO ALL CITY STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.
- WHERE NO EXISTING OVERHEAD INFRASTRUCTURE EXISTS, UNDERGROUND ELECTRIC UTILITY LINES SHALL BE LOCATED ALONG THE STREET AND WITHIN THE SITE. WHERE EXISTING OVERHEAD INFRASTRUCTURE IS TO BE RELOCATED, IT SHALL BE REINSTALLED UNDERGROUND AND THE EXISTING FACILITIES SHALL BE REMOVED AT THE DISCRETION OF THE DEVELOPMENT ENGINEER.
- ALL ELECTRIC AND COMMUNICATION INFRASTRUCTURE SHALL COMPLY WITH UDC SECTION 13.06

**OWNER/DEVELOPER:**  
BERRY CREEK PARTNERS, LP  
1102 SOUTH ROCK STREET  
GEORGETOWN, TX 78626  
CONTACT: JARRETT DOOLEY  
PHONE: (512) 557-0420  
EMAIL: JARRETT@HW-COMPANIES.COM

**LANDSCAPE ARCHITECT:**  
CARRILLO DEAN LANDSCAPE ARCHITECTURE  
7301 VIA CORRETO DR.,  
AUSTIN, TX, 78749  
CONTACT: RILEY ANDERSON  
PHONE: (512)-535-7303

STORM WATER PERMIT  
FOR  
HANWHA TEXAS PLANT  
3600 N. IH 35  
GEORGETOWN, WILLIAMSON COUNTY, TEXAS 78626  
DECEMBER 2023  
SWE PROJECT # 1154-001  
2023-X-SWP



- EXISTING UTILITIES NOTES:**
- CONTRACTOR IS FULLY RESPONSIBLE FOR FIELD LOCATING ALL EXISTING UTILITIES, PRIVATE AND PUBLIC, WITHIN WORK AREA. NEITHER OWNER NOR ENGINEER HAS AS-BUILT INFORMATION FOR UNDERGROUND UTILITIES AND MAKES NO GUARANTEE AS TO THEIR LOCATION. CONTRACTOR WILL EMPLOY CONSTRUCTION METHODS NECESSARY TO ENSURE UNDERGROUND UTILITIES ARE NOT DAMAGED (IE. HAND DIGGING ETC.) THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES TO EXISTING UTILITIES, PRIVATE OR PUBLIC, AND SHALL REPAIR ANY UTILITIES DAMAGED TO THE OWNER'S SPECIFICATIONS AT NO COST TO HIM.
  - ACCORDING TO UDC 13.06.B. FOR ALL NONRESIDENTIAL DEVELOPMENT WHERE NO EXISTING OVERHEAD INFRASTRUCTURE EXISTS, UNDERGROUND ELECTRIC LINES SHALL BE REQUIRED ALONG THE STREET AND WITHIN THE SITE. WHERE EXISTING OVERHEAD LINES ARE TO BE RELOCATED, THEY SHALL BE RE-INSTALLED UNDERGROUND AND THE EXISTING FACILITIES SHALL BE REMOVED AT THE DISCRETION OF THE DEVELOPMENT ENGINEER. ALL ELECTRIC AND COMMUNICATION LINES MUST FOLLOW ALL REQUIREMENTS OF THE UDC 13.06.

**CORRECTION / REVISION**

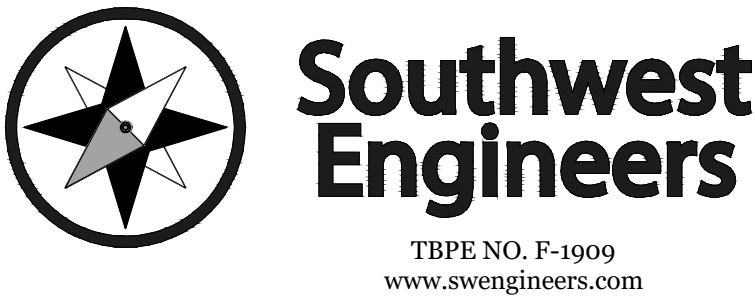
NO.	DESCRIPTION	REVISE (R) ADD (A) VOID (V) SHEET NO.'S	TOTAL SHEETS IN PLAN SET	NET CHANGE IMP. COVER	SITE IMP. COVER	% SITE IMP. COVER	APPROVED DATE	IMAGED DATE
NO.	DESCRIPTION							

SHEET INDEX	
NO.	TITLE
1	COVER SHEET
2	SURVEY SHEET
3	EXISTING TOPOGRAPHIC AND TREE SURVEY (1 OF 4)
4	EXISTING TOPOGRAPHIC AND TREE SURVEY (2 OF 4)
5	EXISTING TOPOGRAPHIC AND TREE SURVEY (3 OF 4)
6	EXISTING TOPOGRAPHIC AND TREE SURVEY (4 OF 4)
7	TEMPORARY EROSION AND SEDIMENTATION CONTROL PLAN (1 OF 2)
8	TEMPORARY EROSION AND SEDIMENTATION CONTROL PLAN (2 OF 2)
9	EROSION AND SEDIMENTATION CONTROL DETAILS
10	EXISTING DRAINAGE AREA MAP
11	PROPOSED DRAINAGE AREA MAP
12	TxDOT DRIVEWAYS PLAN
13	TxDOT DETAILS (1 OF 2)
14	TxDOT DETAILS (2 OF 2)
15	OVERALL SITE PLAN
16	DETAILED SITE AND DIMENSIONAL CONTROL PLAN (1 OF 4)
17	DETAILED SITE AND DIMENSIONAL CONTROL PLAN (2 OF 4)
18	DETAILED SITE AND DIMENSIONAL CONTROL PLAN (3 OF 4)
19	DETAILED SITE AND DIMENSIONAL CONTROL PLAN (4 OF 4)
20	SITE DETAILS
21	OVERALL GRADING PLAN
22	DETAILED GRADING PLAN (1 OF 4)
23	DETAILED GRADING PLAN (2 OF 4)
24	DETAILED GRADING PLAN (3 OF 4)
25	DETAILED GRADING PLAN (4 OF 4)
26	CHANNEL A
27	CHANNEL B
28	CHANNEL DETAILS
29	WATER QUALITY AND DETENTION POND PLAN
30	WATER QUALITY AND DETENTION POND DETAILS
31	POND CONTROL LOGIC DIAGRAM
32	POND CONTROL ALARM LOGIC DIAGRAM
33	POND LEVEL CONTROL ELEMENTARY DIAGRAM
34	WATER PLAN (1 OF 2)
35	WATER PLAN (2 OF 2)
36	WATER DETAILS
37	PRIVATE WASTEWATER PLAN
38	WASTEWATER DETAILS
39	LANDSCAPE OVERALL PLAN AND NOTES
40	LANDSCAPE PLAN (1 OF 4)
41	LANDSCAPE PLAN (2 OF 4)
42	LANDSCAPE (3 OF 4)
43	LANDSCAPE (4 OF 4)
44	LANDSCAPE TREE CALCULATIONS
45	LANDSCAPE SPECIFICATIONS

**SUBMITTED BY: SOUTHWEST ENGINEERS, INC.**  
**DATE: DECEMBER 15, 2023**

REVIEWED FOR COMPLIANCE WITH COUNTY REQUIREMENTS:

FOR WILLIAMSON COUNTY



**HEADQUARTERS**  
307 Saint Lawrence Street, Gonzales TX 78629  
P: 830.672.7546 F: 830.672.2034

**CENTRAL TEXAS**  
205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4336

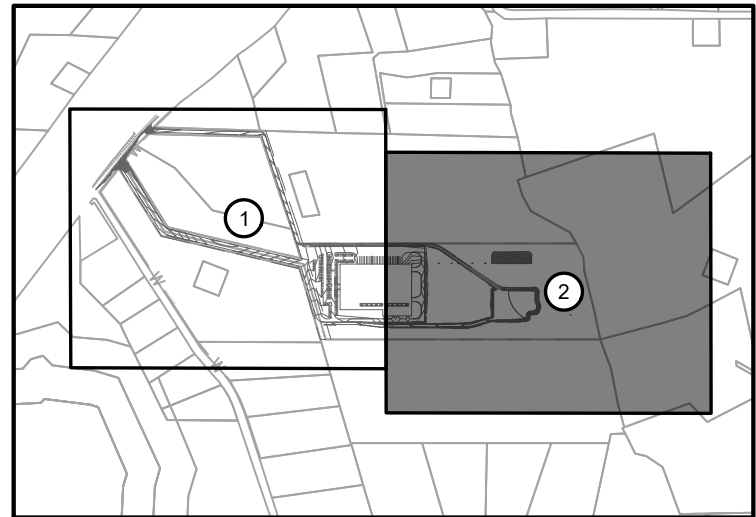
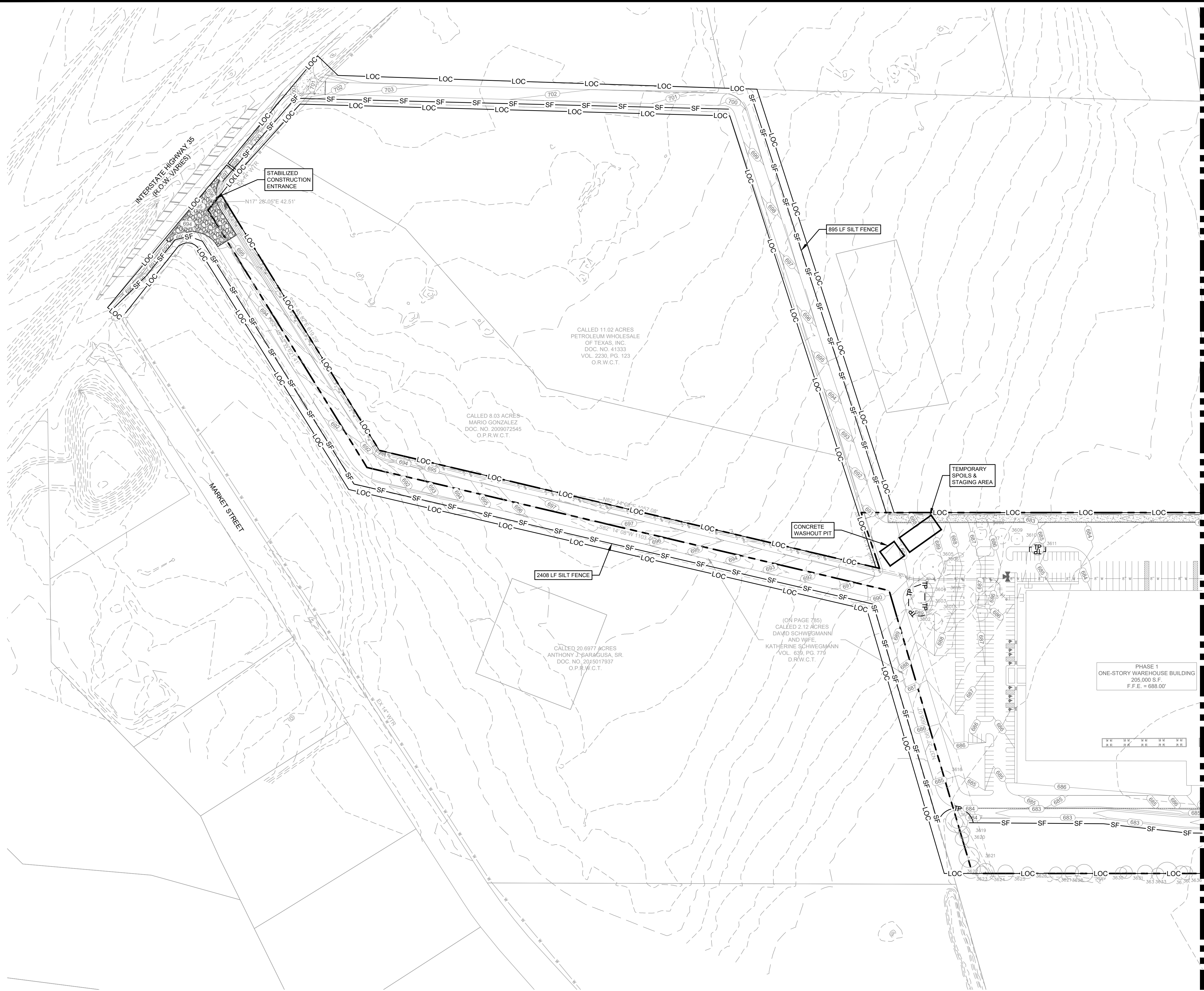


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KEY MAP  
N.T.S.

- LEGEND**
- 700 EXISTING CONTOURS
  - 700 PROPOSED CONTOURS
  - DRAINAGE FLOW DIRECTION
  - SF SILT FENCE
  - LOC LIMIT OF CONSTRUCTION
  - STABILIZED CONSTRUCTION ENTRANCE
  - 100 TREE TO BE KEPT
  - 100 PROTECTED TREE TO BE KEPT
  - 100 HERITAGE TREE TO BE KEPT
  - 100 PROTECTED TREE TO BE REMOVED

**NOTES**

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) AND SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES IN 21 DAYS, PER TPDES REQUIREMENTS.
- CONSTRUCTION ACTIVITY AND ACCESS TO THE PROPERTY FOR CONSTRUCTION PURPOSES IS LIMITED TO THE BOUNDARY OF THE LIMITS OF CONSTRUCTION.

**SEQUENCE OF CONSTRUCTION**

- INSTALL EROSION CONTROLS PER APPROVED PLAN.
- TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED. CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
- CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
- CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
- CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION, IF APPLICABLE.
- CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
- INSTALL STREETSCAPE AND/OR LANDSCAPING IMPROVEMENTS.
- CONTRACTOR TO VEGETATE ANY DISTURBED AREAS ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN. OF 70% VEGETATION PRIOR TO COMPLETION. PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
- REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

**LIMITS OF CONSTRUCTION:**

± 1,649,253 SF = ± 37.86 AC



TEXAS ONE CALL SYSTEM  
1-800-246-4545

UNDER PENALTY OF LAW, THE CONTRACTOR IS REQUIRED TO CONTACT THE TEXAS ONE CALL SYSTEM AT LEAST 48 HOURS BEFORE STARTING EXCAVATION.

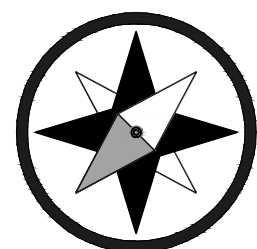
**CAUTION - ELECTRICITY PRESENT**

THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS THAT ENTER OR WORK ON THIS PROJECT ARE RESPONSIBLE FOR LOCATING, USING ONE-CALL OR THE ELECTRIC UTILITIES THEMSELVES, ALL OVERHEAD AND UNDERGROUND ELECTRICAL OF ANY NATURE AND FOR SAFEGUARDING ALL PERSONNEL ON THIS PROJECT, INCLUDING ANY OFF-SITE WORK AREAS SHOWN ON THE PLAN, FROM ANY INTERFERENCE WITH THE ELECTRIC LINES OR FROM DAMAGING, DIGGING UP OR UNCOVERING THE ELECTRIC LINES. GETTING A LADDER IN HARMS WAY OR ANY OTHER ACTIVITY OF ANY NATURE THAT COULD HARM ANY INDIVIDUAL IN ANY MANNER, THIS RESPONSIBILITY HEREBY REMOVES THE ENGINEER AND THE OWNER FROM ANY LIABILITY OF ANY NATURE.

NO.	REVISION	DATE



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**Southwest  
Engineers**

TBPE NO. F-1909  
www.swengineers.com

**HEADQUARTERS**

307 Saint Lawrence Street, Gonzales TX 78629  
P: 830.672.7546 F: 830.672.2034

**CENTRAL TEXAS**

205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4330

**WARNING**

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DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

TEMPORARY EROSION AND SEDIMENTATION CONTROL PLAN (1 OF 2)

**HANWHA TEXAS PLANT**

3600 N. IH 35, GEORGETOWN, TX 78626

PROJECT NO. 1154-001

DRAWING NO.

SHEET 7 OF 45



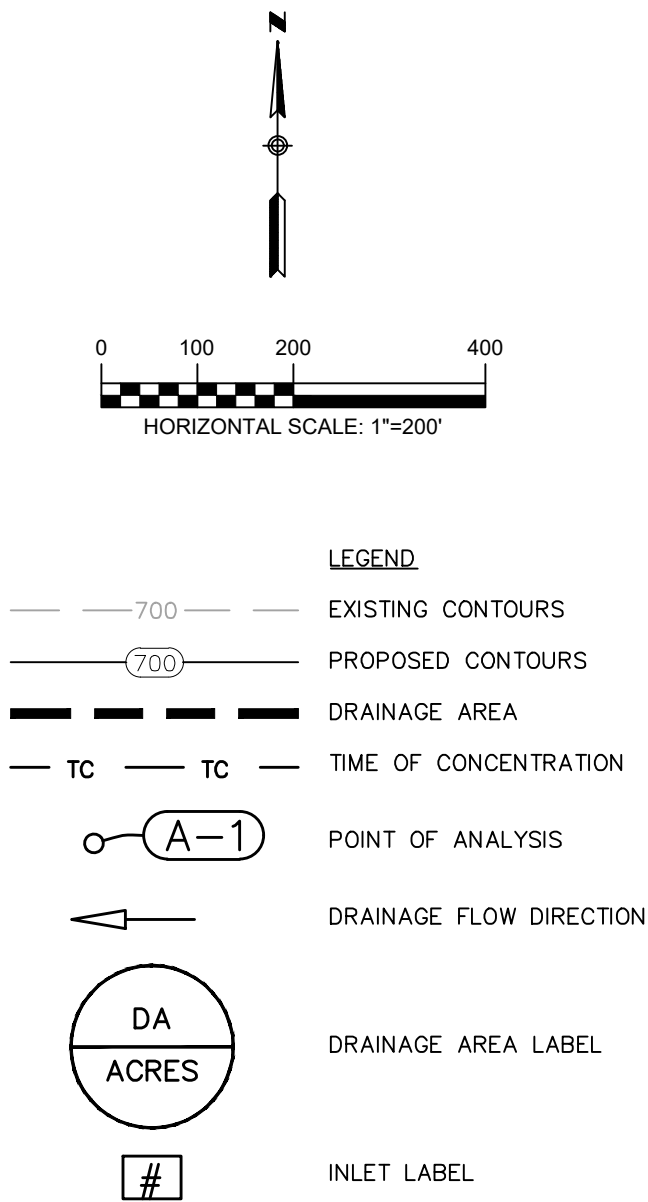
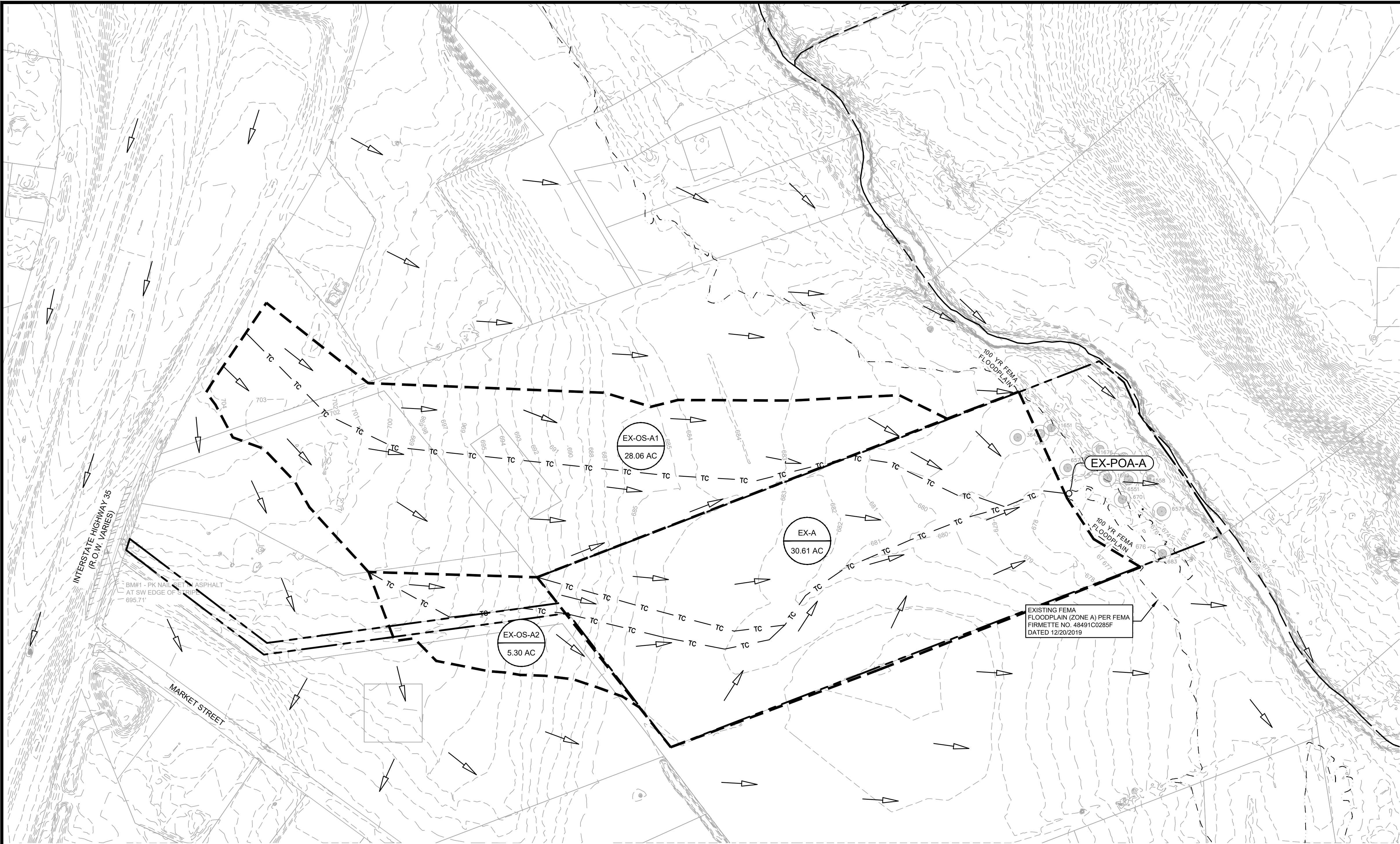









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- NOTES:
- ON-SITE SURVEY TOPOGRAPHIC INFORMATION PROVIDED BY LANDPOINT, LLC OBTAINED ON OCTOBER, 13, 2022.
  - OFF-SITE TOPOGRAPHIC INFORMATION OBTAINED FROM THE TEXAS NATURAL RESOURCES INFORMATION SYSTEM.
  - REFER TO WATER QUALITY AND DETENTION POND SHEETS FOR ADDITIONAL DRAINAGE CALCULATIONS AND DETAILS.

DRAINAGE AREA	SHEET FLOW				SHALLOW CONCENTRATED FLOW				SHALLOW CONCENTRATED FLOW				SHALLOW CONCENTRATED FLOW				CHANNEL FLOW			Total Tc (MIN.)	Total Tc (Hr.)
	SLOPE (FT/FT)	L FT	n	Tc sheet (MIN.)	SLOPE (FT/FT)	L FT	Paved? Y or N	Tc Shallow (MIN.)	SLOPE (FT/FT)	L FT	Paved? Y or N	Tc Shallow (MIN.)	SLOPE (FT/FT)	L FT	Paved? Y or N	Tc Shallow (MIN.)	Vavg (FT/S)	L	Tc Channel (MIN.)		
EX OS-A1	0.005	100.00	0.24	21.7	0.005	225.0	N	3.3	0.015	990.0	N	8.1	0.008	1500.0	N	17.3	2.00	400.00	3.33	53.8	0.90
EX OS-A2	0.009	100.00	0.24	17.2	0.009	800.0	N	2.2	0.017	800.0	N	6.3	—	1190.0	N	17.4	2.00	410.00	3.42	46.5	0.78
EXA	0.020	100.00	0.24	12.5	0.017	480.0	N	3.8	0.005	1085.0	N	15.9	—	—	—	—	2.00	410.00	3.42	35.6	0.59

EXISTING DRAINAGE SUMMARY TABLE (SCS METHOD)				
AREA NAME	EX OS-A1	EX OS-A2	EX A	POA A
Drainage Area (ac.)	28.06	5.30	30.61	—
CN #	75	81	70	—
Impervious Cover (ac)	0.48	0.35	0.48	—
% Impervious	1.7%	6.7%	1.6%	—
Tc (min)	53.8	46.5	35.6	—
2 year Discharge (cfs)	27.17	7.26	28.45	60.62
10 year Discharge (cfs)	56.40	13.55	66.34	131.67
25 year Discharge (cfs)	77.67	17.90	94.25	183.16
100 year Discharge (cfs)	114.35	25.23	142.98	272.23
Drainage calculations were performed using the U.S. Army Corps of Engineers HEC-HMS Version 4.1.1 software. Drainage assumptions (rainfall, depths, distribution, etc.) are based on NOAA Atlas-14 data.				

 TEXAS ONE CALL SYSTEM  
1-800-245-4545

UNDER PENALTY OF LAW, THE CONTRACTOR IS REQUIRED TO CONTACT THE TEXAS ONE CALL SYSTEM AT LEAST 48 HOURS BEFORE STARTING EXCAVATION.

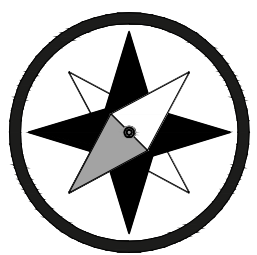
**CAUTION - ELECTRICITY PRESENT**

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NO.	REVISION	DATE



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**HEADQUARTERS**  
307 Saint Lawrence Street, Gonzales TX 78629  
P: 830.672.7546 F: 830.672.2034

**CENTRAL TEXAS**  
205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4336

**WARNING**  
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DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

EXISTING DRAINAGE AREA MAP

**HANWHA TEXAS PLANT**  
3600 N. IH 35, GEORGETOWN, TX 78626

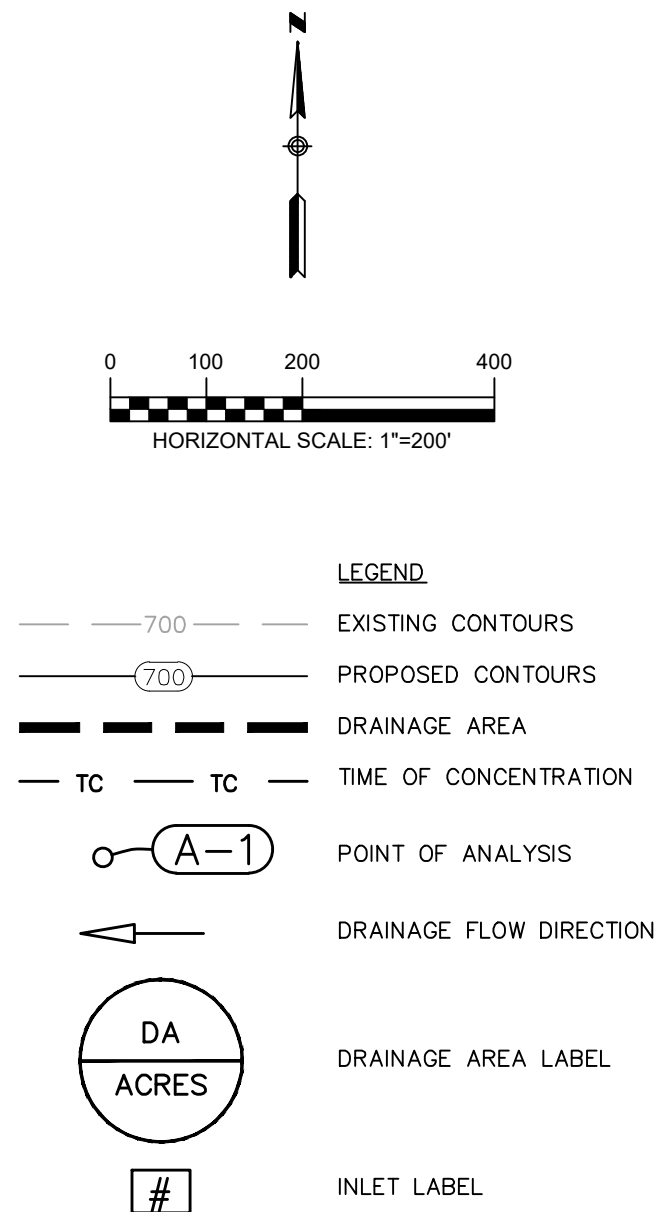
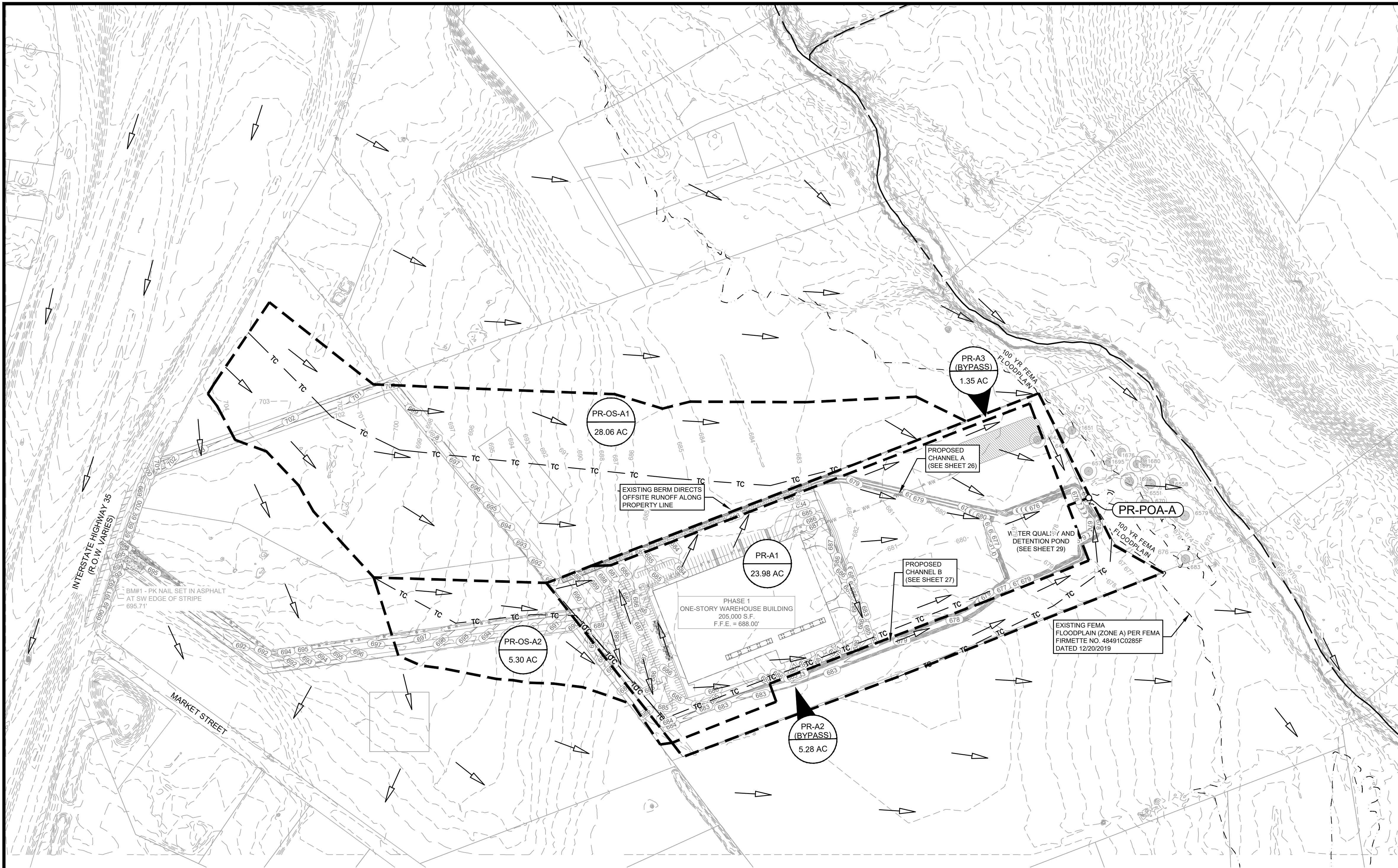
PROJECT NO. 1154-001

DRAWING NO.           

SHEET 10 OF 45



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- NOTES:
- ON-SITE SURVEY TOPOGRAPHIC INFORMATION PROVIDED BY LANDPOINT, LLC OBTAINED ON OCTOBER, 13, 2022.
  - OFF-SITE TOPOGRAPHIC INFORMATION OBTAINED FROM THE TEXAS NATURAL RESOURCES INFORMATION SYSTEM.
  - REFER TO WATER QUALITY AND DETENTION POND SHEETS FOR ADDITIONAL DRAINAGE CALCULATIONS AND DETAILS.
  - DRAINAGE FOR THIS DEVELOPMENT HAS BEEN DESIGNED SUCH THAT THERE WILL BE NO ADVERSE IMPACTS ON THE CAPACITY, FUNCTION OR INTEGRITY OF TEXAS DEPARTMENT OF TRANSPORTATION RIGHT OF WAY DRAINAGE FACILITIES.

PROPOSED TIME OF CONCENTRATION																					
DRAINAGE AREA	SHEET FLOW				SHALLOW CONCENTRATED FLOW				SHALLOW CONCENTRATED FLOW				SHALLOW CONCENTRATED FLOW				CHANNEL FLOW			Total Tc (MIN.)	Total Tc (Hr.)
	SLOPE (FT/FT)	L FT	n	Tc sheet (MIN.)	SLOPE (FT/FT)	L FT	Paved? Y or N	Tc Shallow (MIN.)	SLOPE (FT/FT)	L FT	Paved? Y or N	Tc Shallow (MIN.)				Vavg (FT/S)	L	Tc Channel (MIN.)			
PR OS-A1	0.005	100.00	0.24	21.7	0.005	225.0	N	3.3	0.015	960.0	N	8.1	0.008	750.0	N	8.7	2.00	1250.00	10.42	52.2	0.87
PR OS-A2	0.009	100.00	0.24	17.2	0.009	200.0	N	2.2	0.017	450.0	N	3.6	---	---	---	---	2.00	1950.00	16.25	39.2	0.65
PR A1	0.020	100.00	0.01	1.1	0.020	490.0	Y	2.8	---	---	---	---	---	---	---	---	2.00	1200.00	10.00	13.9	0.23
PR A2 (bypass)	0.006	100.00	0.24	20.2	0.010	840.0	N	8.7	---	---	---	---	---	---	---	---	---	---	---	28.9	0.48
PR A3 (bypass)	0.005	100.00	0.24	---	---	---	---	---	---	---	---	---	---	---	---	---	2	1950	16.25	16.3	0.27

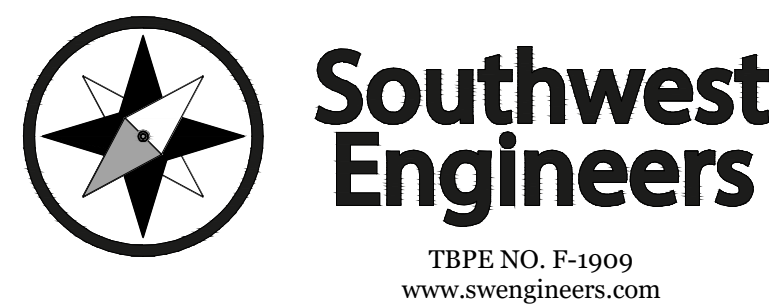
AREA NAME	PROPOSED						EXISTING	
	PR OS-A1	PR OS-A2	PR A1 (TO POND)	PR A2 (BYPASS)	PR A3 (BYPASS)	DETENTION POND WSE	POA A	POA A
Drainage Area (ac.)	28.06	5.30	23.98	1.35	5.28	---	---	---
CN #	75	82	83	68	68	---	---	---
Impervious Cover (ac)	0.48	0.57	10.85	0.00	0.00	---	---	---
% Impervious	1.7%	10.8%	45.3%	0.0%	0.0%	---	---	---
Tc (min)	52.2	39.2	13.9	28.9	16.3	---	---	---
2 year Discharge (cfs)	27.56	8.30	62.17	1.24	6.31	677.95 (msl)	58.77	60.62
10 year Discharge (cfs)	57.63	13.55	112.11	3.01	14.97	678.69 (msl)	129.28	131.67
25 year Discharge (cfs)	79.24	19.90	145.29	4.36	21.41	679.130 (msl)	180.98	183.16
100 year Discharge (cfs)	116.42	27.82	201.23	6.72	32.85	679.750 (msl)	271.54	272.23

Drainage calculations were performed using the U.S. Army Corps of Engineers HEC-HMS Version 4.11 software. Drainage assumptions (rainfall, depths, distribution, etc.) are based on NOAA Atlas-14 data.

NO.	REVISION	DATE



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P: 830.672.7546 F: 830.672.2034

CENTRAL TEXAS  
205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4336

WARNING  
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DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

PROPOSED DRAINAGE AREA MAP

HANWHA TEXAS PLANT  
3600 N. IH 35, GEORGETOWN, TX 78626

PROJECT NO. 1154-001

DRAWING NO. \_\_\_\_\_

SHEET 11 OF 45

TEXAS ONE CALL SYSTEM  
1-800-246-4545

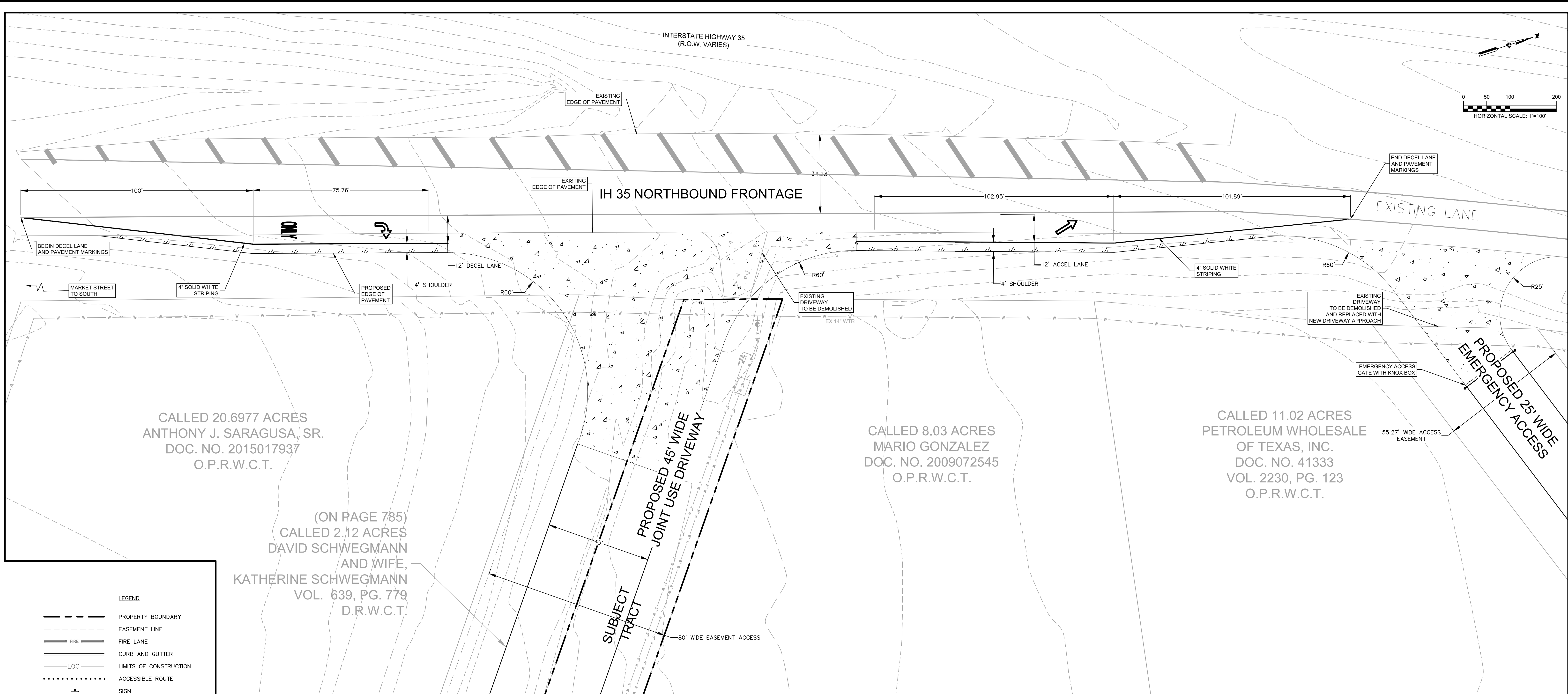
UNDER PENALTY OF LAW, THE CONTRACTOR IS REQUIRED TO CONTACT THE TEXAS ONE CALL SYSTEM AT LEAST 48 HOURS BEFORE STARTING EXCAVATION.

**CAUTION - ELECTRICITY PRESENT**

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C:\CompanyData\Clients\1154 - Headquarters\001-23 Dry Berry Creek Warehouse Development\CAD\Sheets\1154-001\_I-001.dwg -- Layout: "I-001 DRIVEWAY" -- Fri, Dec 15, 2023, 3:21pm, By: tjbrose



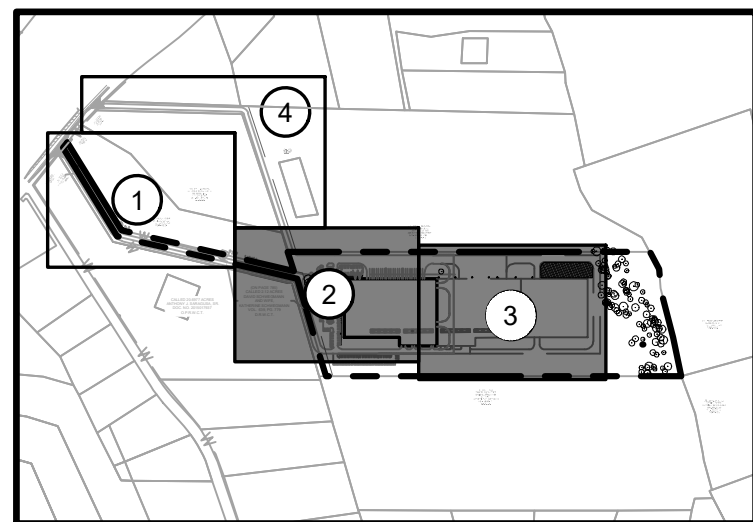
**LEGEND**

- PROPERTY BOUNDARY
- - - EASEMENT LINE
- FIRE LANE
- CURB AND GUTTER
- LOC
- LIMITS OF CONSTRUCTION
- ACCESSIBLE ROUTE
- SIGN

100' TREE TO BE KEPT

100' PROTECTED TREE TO BE KEPT

- NOTES:**
- ALL PAVEMENT MARKINGS TO MEET TXDOT DETAILS AND SPECIFICATIONS
  - ALL PAVEMENT MARKINGS/STRIPING TO BE 100 MIL AND RETROREFLECTIVE



**KEY MAP**  
N.T.S.

**TEXAS ONE CALL SYSTEM**  
1-800-246-4545

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**HEADQUARTERS**

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CHECKED BY: A.C.K.

TXDOT DRIVEWAYS PLAN

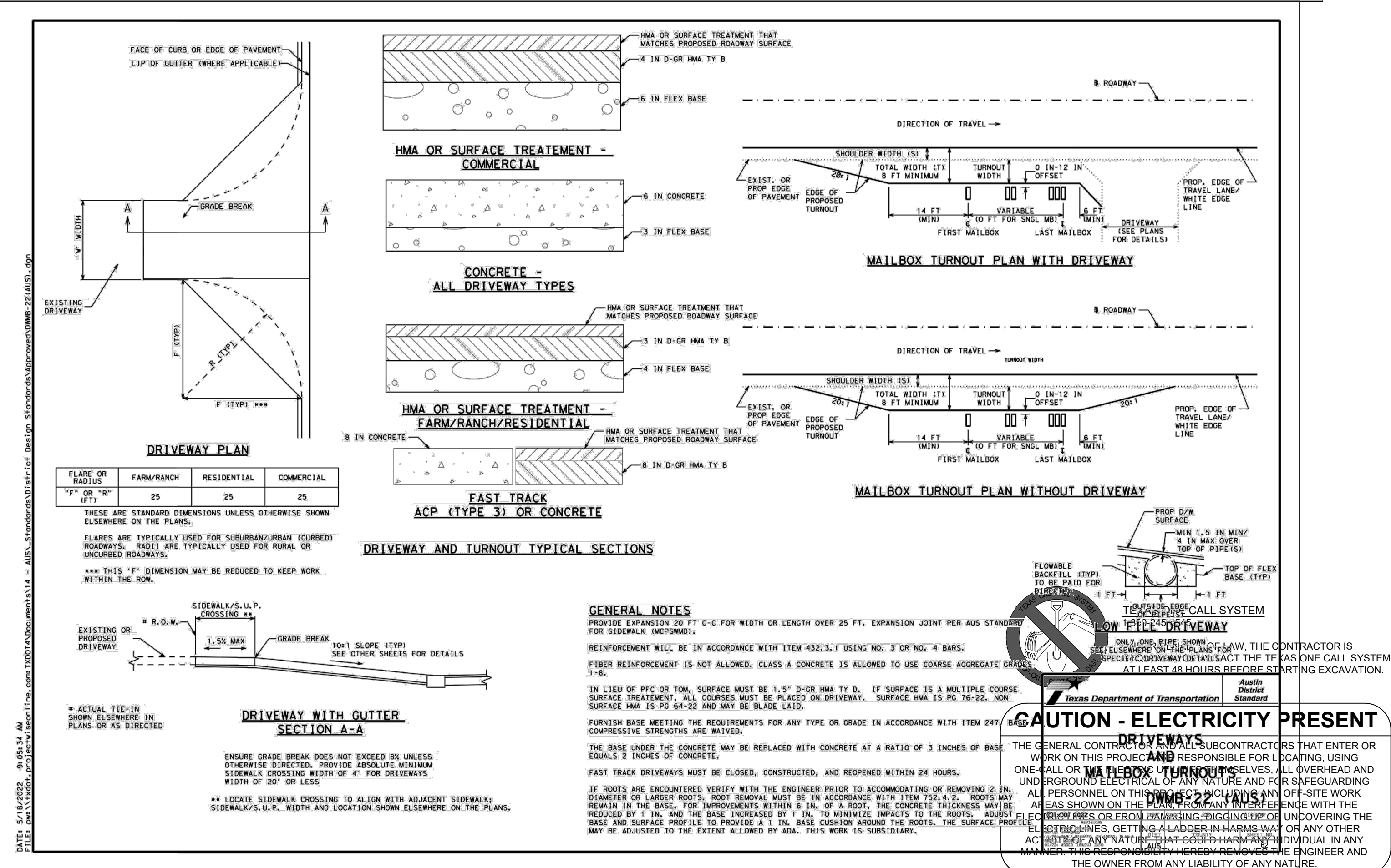
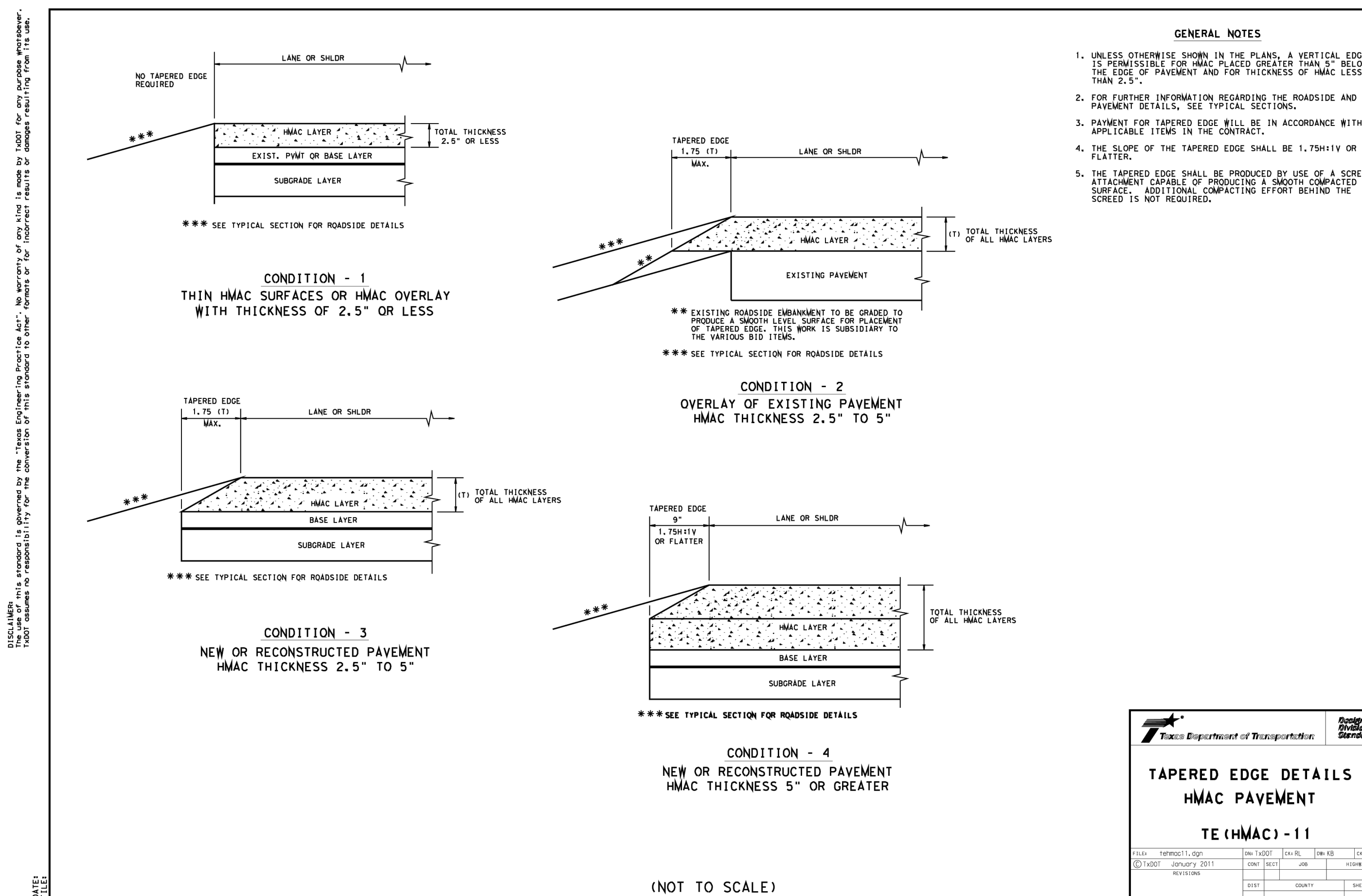
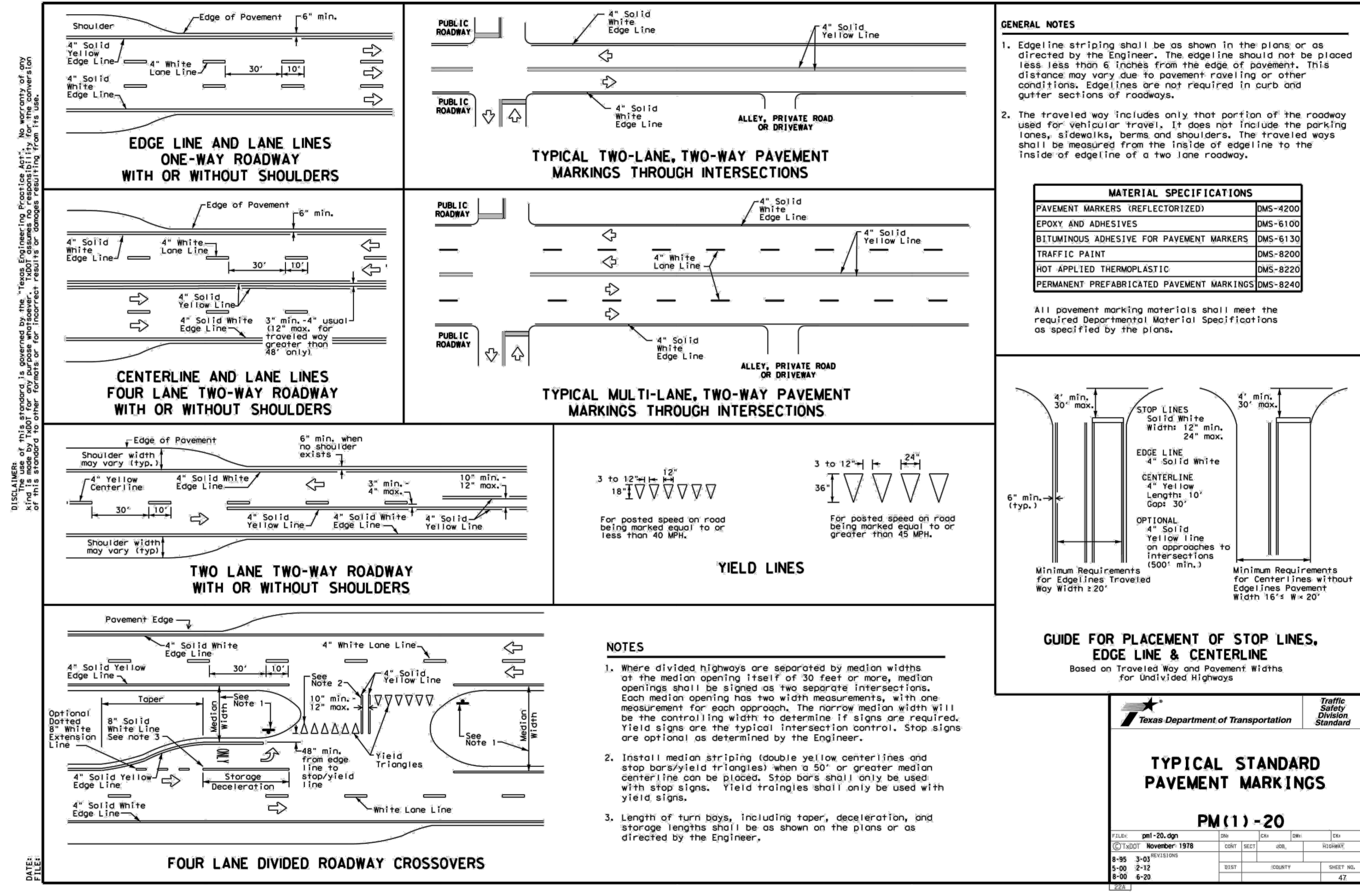
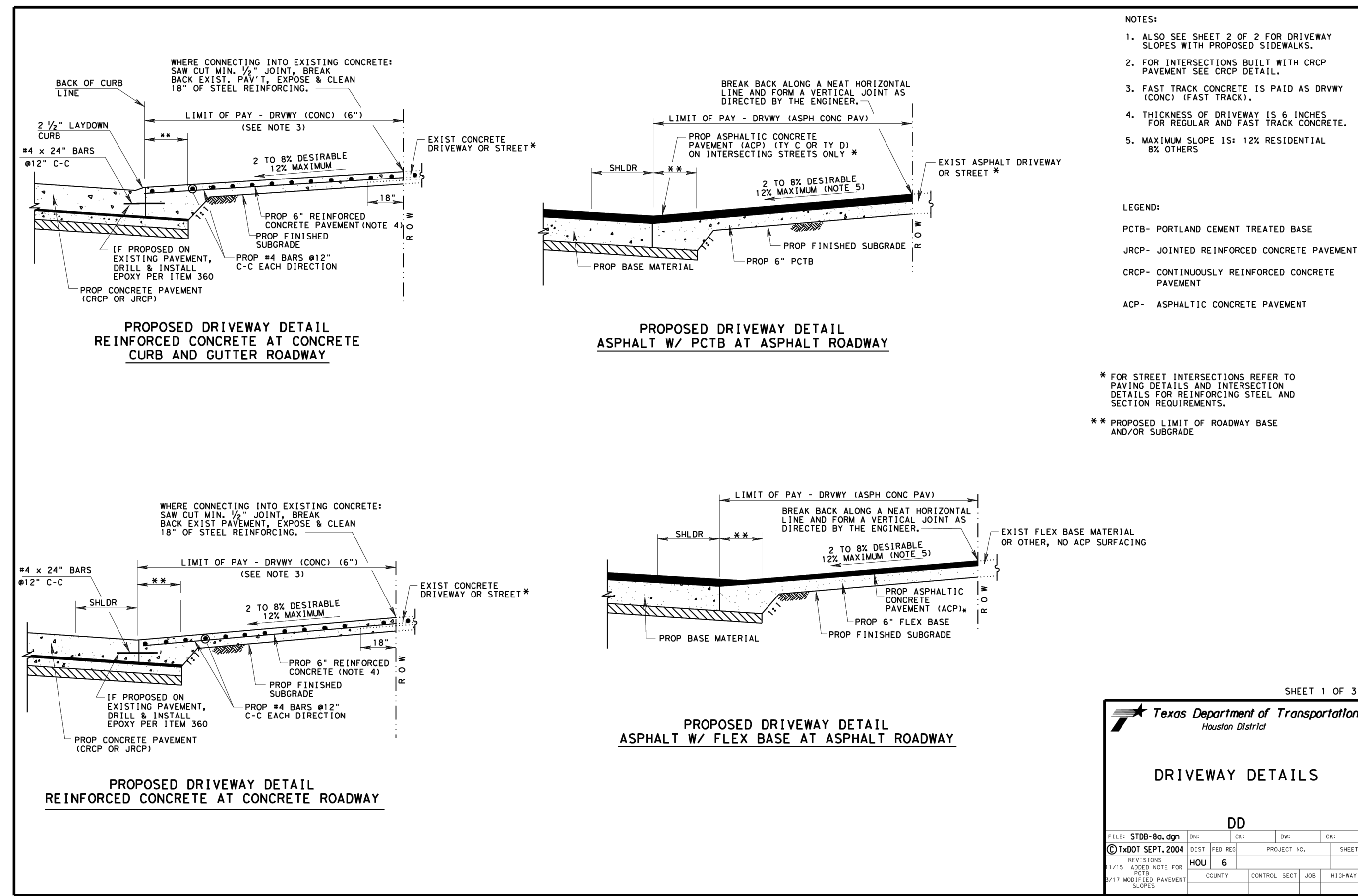
**HANWHA TEXAS PLANT**  
3600 N. IH 35, GEORGETOWN, TX 78626

PROJECT NO. 1154-001

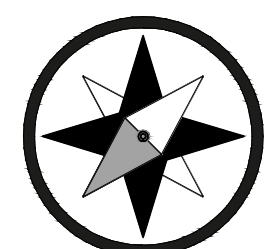
DRAWING NO.           

SHEET 12 OF 45



[illegible]

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CHECKED BY: A.C.K

TXDOT DETAILS (1 OF 2)

## HANWHA TEXAS PLANT

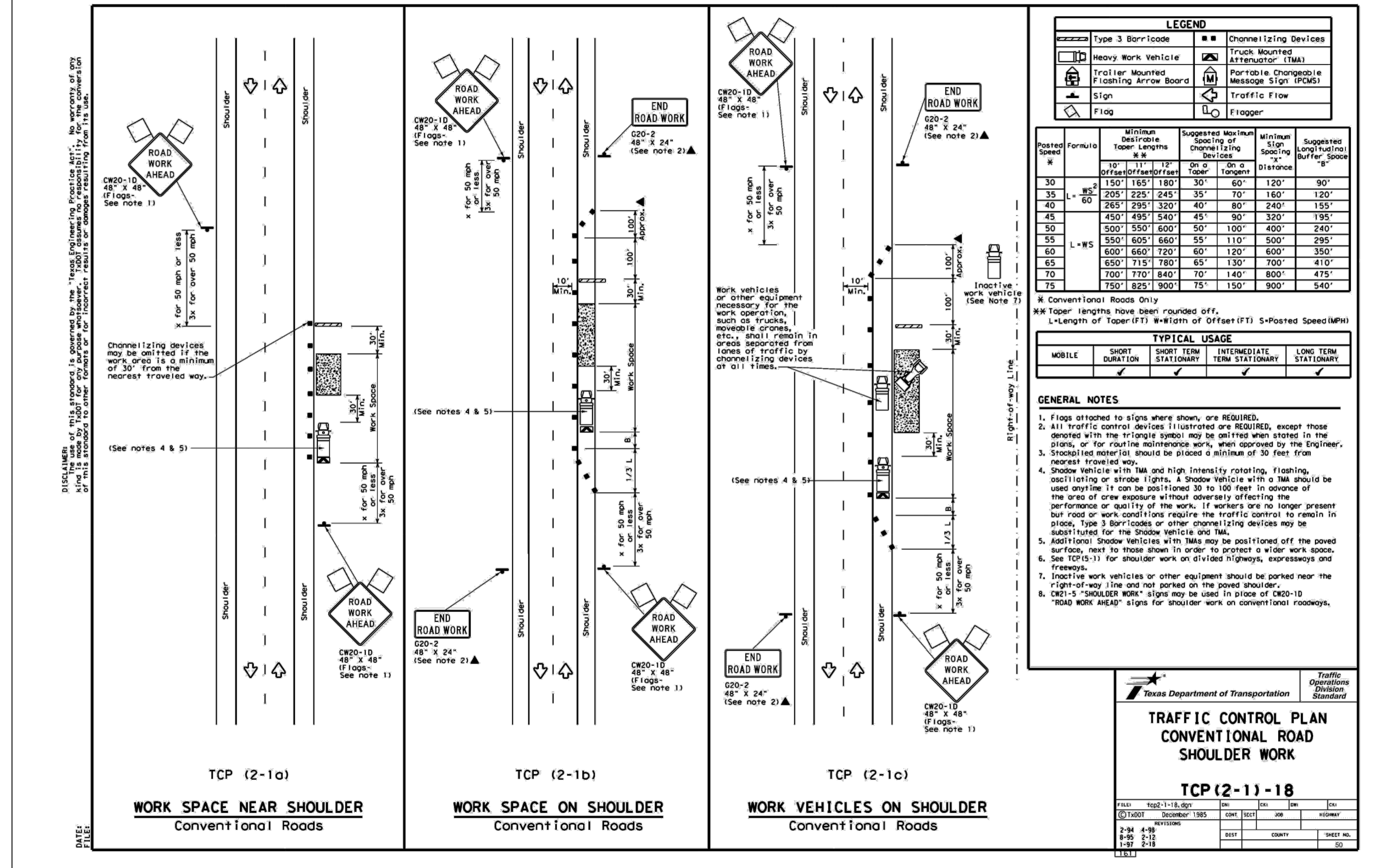
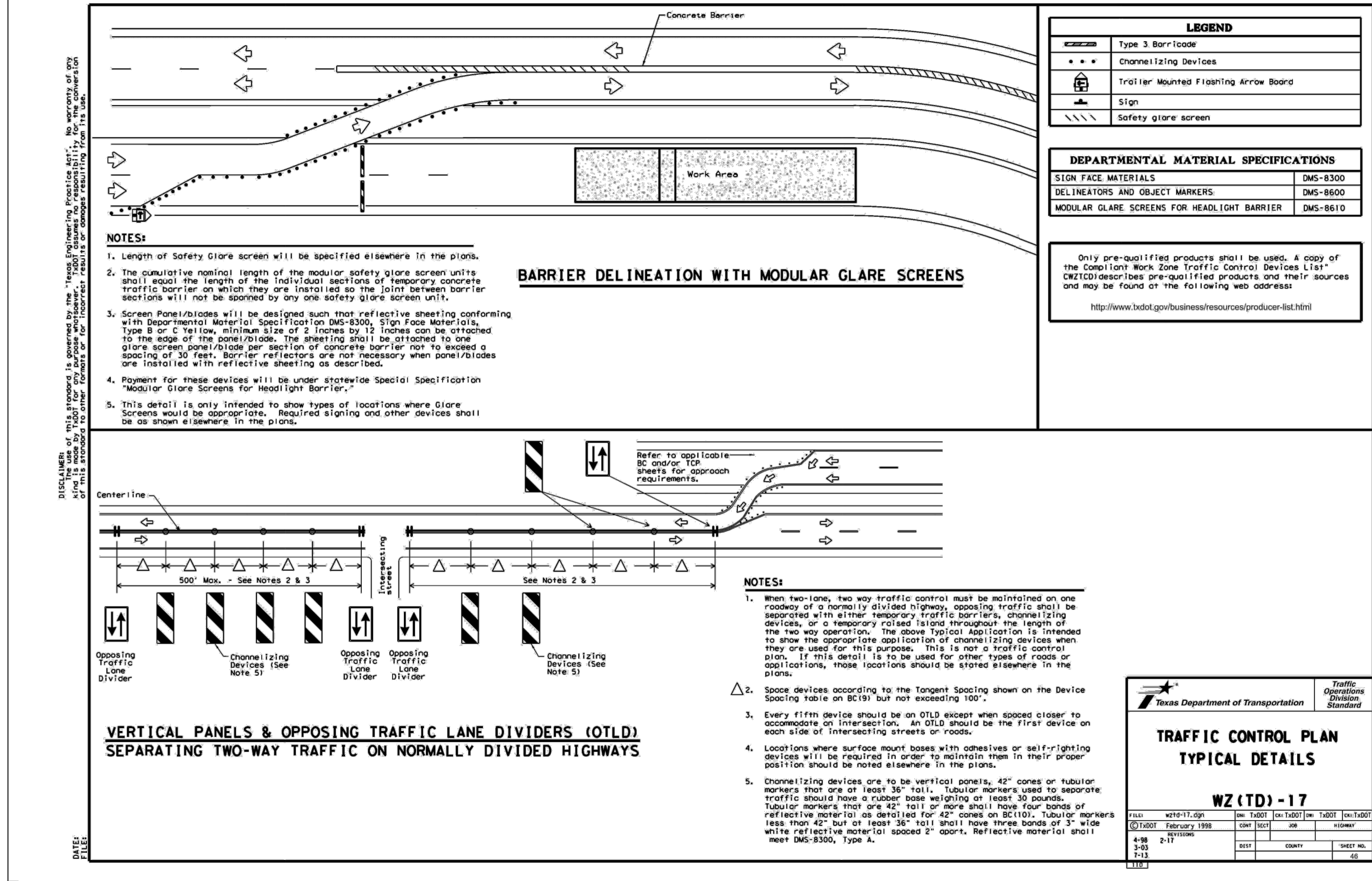
3600 N. IH 35, GEORGETOWN, TX 78626

1154 001

DRAWING NO.

SHEET 13 OF 45

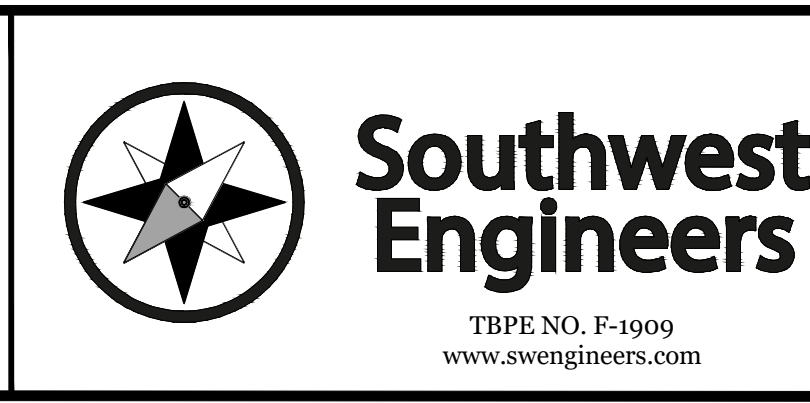




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CENTRAL TEXAS  
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P: 512.312.4330

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CHECKED BY: A.C.K.

TXDOT DETAILS (2 OF 2)

HANWHA TEXAS PLANT  
3600 N. IH 35, GEORGETOWN, TX 78626

PROJECT NO. 1154-001

DRAWING NO.

SHEET 14 OF 45



TEXAS ONE CALL SYSTEM  
1-800-245-4545

UNDER PENALTY OF LAW, THE CONTRACTOR IS REQUIRED TO CONTACT THE TEXAS ONE CALL SYSTEM AT LEAST 48 HOURS BEFORE STARTING EXCAVATION.

#### CAUTION - ELECTRICITY PRESENT

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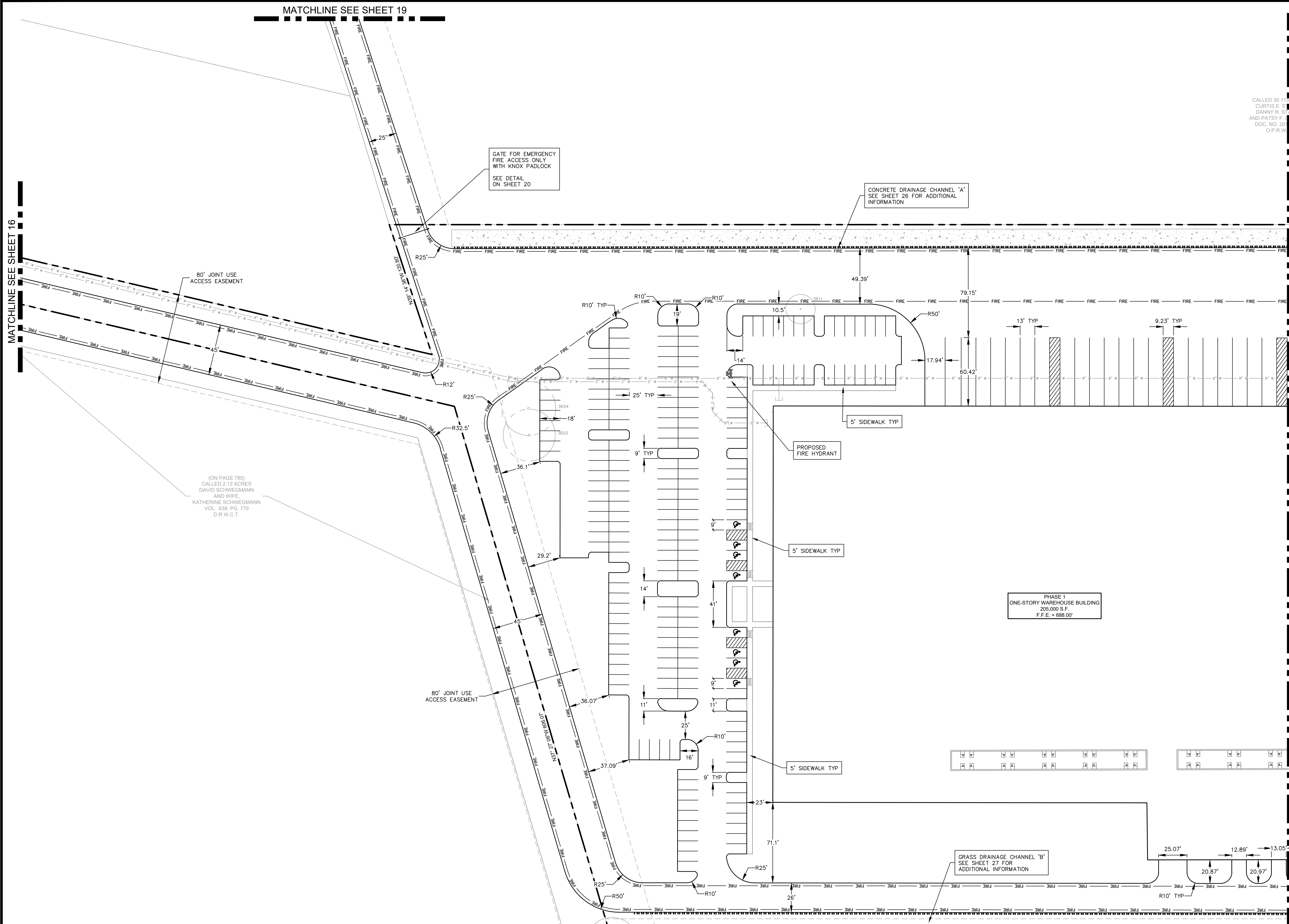




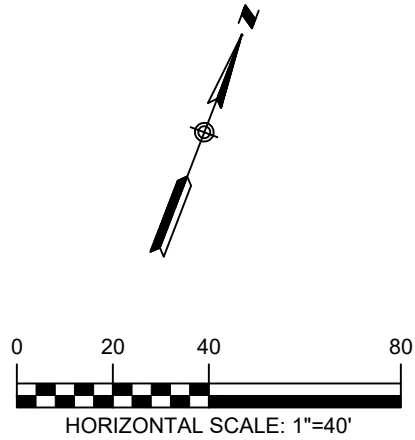




O:\CompanyData\Clients\1154 - Headquarters\001-23 Dry Berry Creek Warehouse Development\CAD\Sheets\1154-001\_SITE.dwg -- Layout: "DETAILED SITE (2)" -- Fri, Dec 15, 2023, 3:21pm, By: tjbruce



CALL 3811  
CURTIS E. S.  
DANNY R. S.  
AND PATSY F.  
DOC. NO. 26  
O.P.R.W.

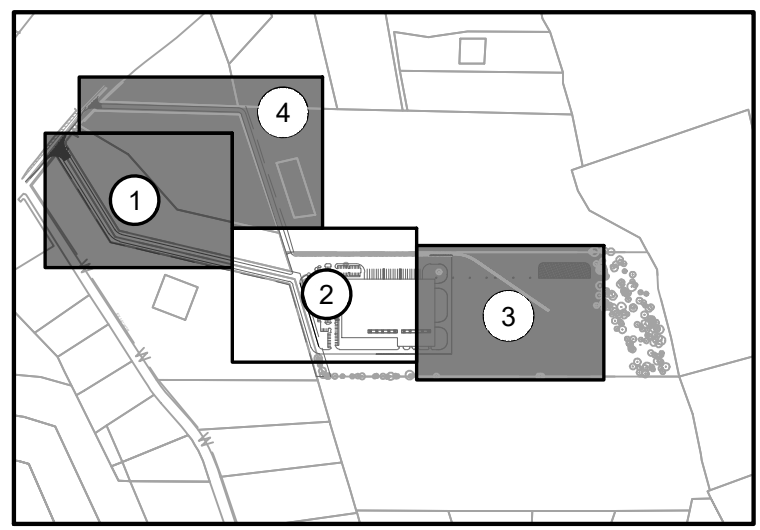


LEGEND

- PROPERTY BOUNDARY
- EASEMENT LINE
- FIRE LANE
- CURB AND GUTTER
- LOC
- LIMITS OF CONSTRUCTION
- ACCESSIBLE ROUTE
- SIGN
- TREE TO BE KEPT
- PROTECTED TREE TO BE KEPT
- HERITAGE TREE TO BE KEPT

NOTES:

- ALL TRAFFIC CONTROLS SHALL CONFORM WITH THE LATEST EDITION OF TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL DIMENSIONS ARE TO THE FACE OF CURB, UNLESS OTHERWISE NOTED.
- ALL DRIVES AND PARKING AREAS TO BE ASPHALT OR CONCRETE PAVING UNLESS OTHERWISE NOTED.
- ALL CURB RADI SHALL BE 3.0' UNLESS OTHERWISE NOTED.
- CONSTRUCTION ACTIVITY AND ACCESS TO THE PROPERTY FOR CONSTRUCTION PURPOSES IS LIMITED TO THE BOUNDARY OF THE LIMITS OF CONSTRUCTION AS SHOWN ON THE TEMPORARY EROSION AND SEDIMENTATION CONTROL PLAN (SHEETS 7 & 8)



KEY MAP  
N.T.S.



TEXAS ONE CALL SYSTEM  
1-800-245-4545

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**CENTRAL TEXAS**  
205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4330

**WARNING**  
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DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

DETAILED SITE AND DIMENSIONAL CONTROL PLAN (2 OF 4)

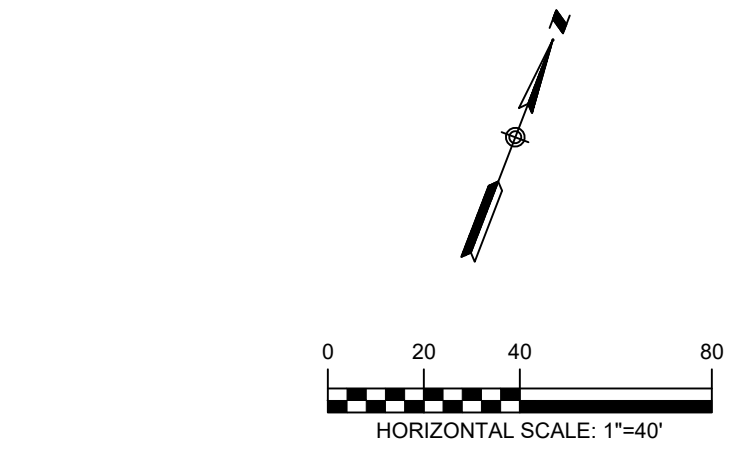
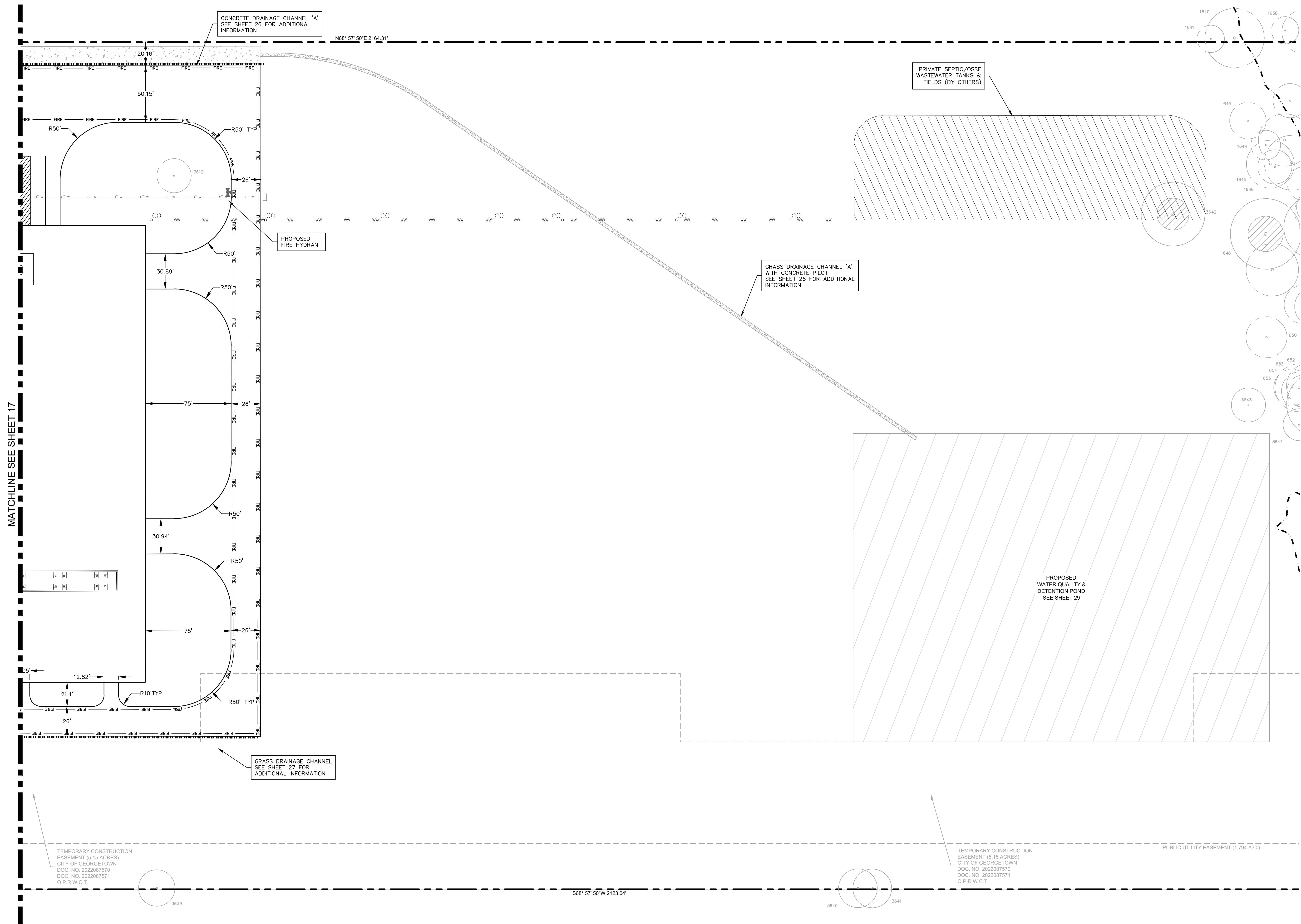
**HANWHA TEXAS PLANT**  
3600 N. IH 35, GEORGETOWN, TX 78626








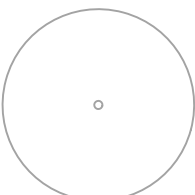
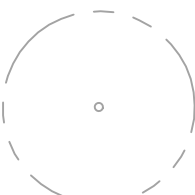

PROJECT NO. 1154-001

DRAWING NO.           

SHEET 17 OF 45





- |  |                           |
|--|---------------------------|
|  | <b>LEGEND</b>             |
|         | PROPERTY BOUNDARY         |
|         | EASEMENT LINE             |
|  FIRE   | FIRE LANE                 |
|         | CURB AND GUTTER           |
|  LOC    | LIMITS OF CONSTRUCTION    |
|         | ACCESSIBLE ROUTE          |
|         | SIGN                      |
| 100<br> | TREE TO BE KEPT           |
| 100<br> | PROTECTED TREE TO BE KEPT |
| 100<br> | HERITAGE TREE TO BE KEPT  |

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KEY MAP  
N.T.S.



**TEXAS ONE CALL SYSTEM**  
1-800-245-4545

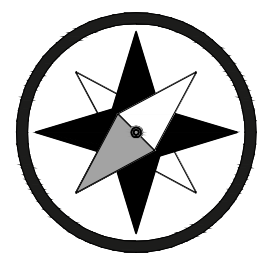
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[illegible]

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CHECKED BY: A.C.K

DETAILED SITE AND DIMENSIONAL CONTROL PLAN (3 OF 4)

## HANWHA TEXAS PLANT

**3600 N. IH 35, GEORGETOWN, TX 78626**

PROJECT NO. 1154-001

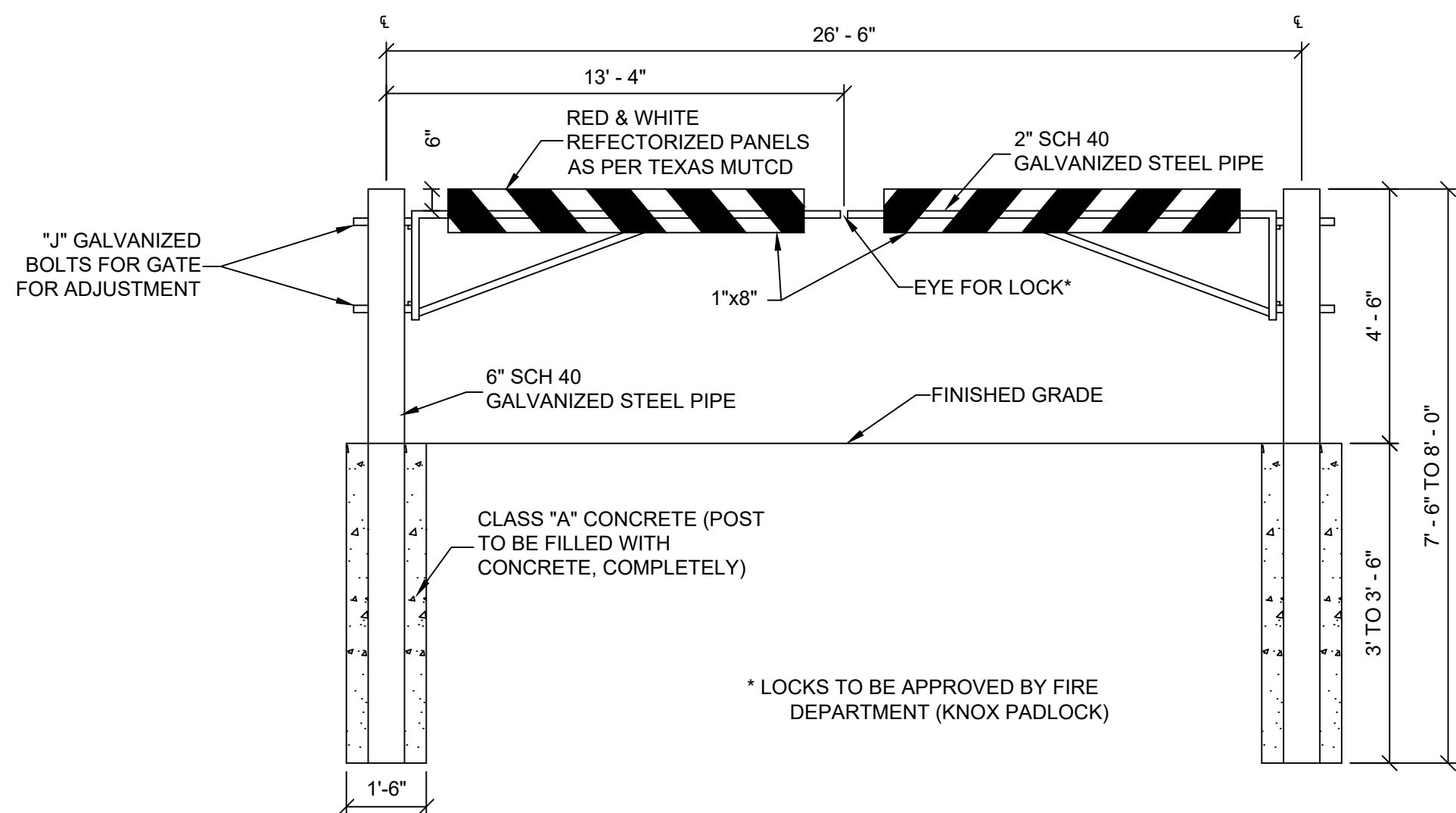
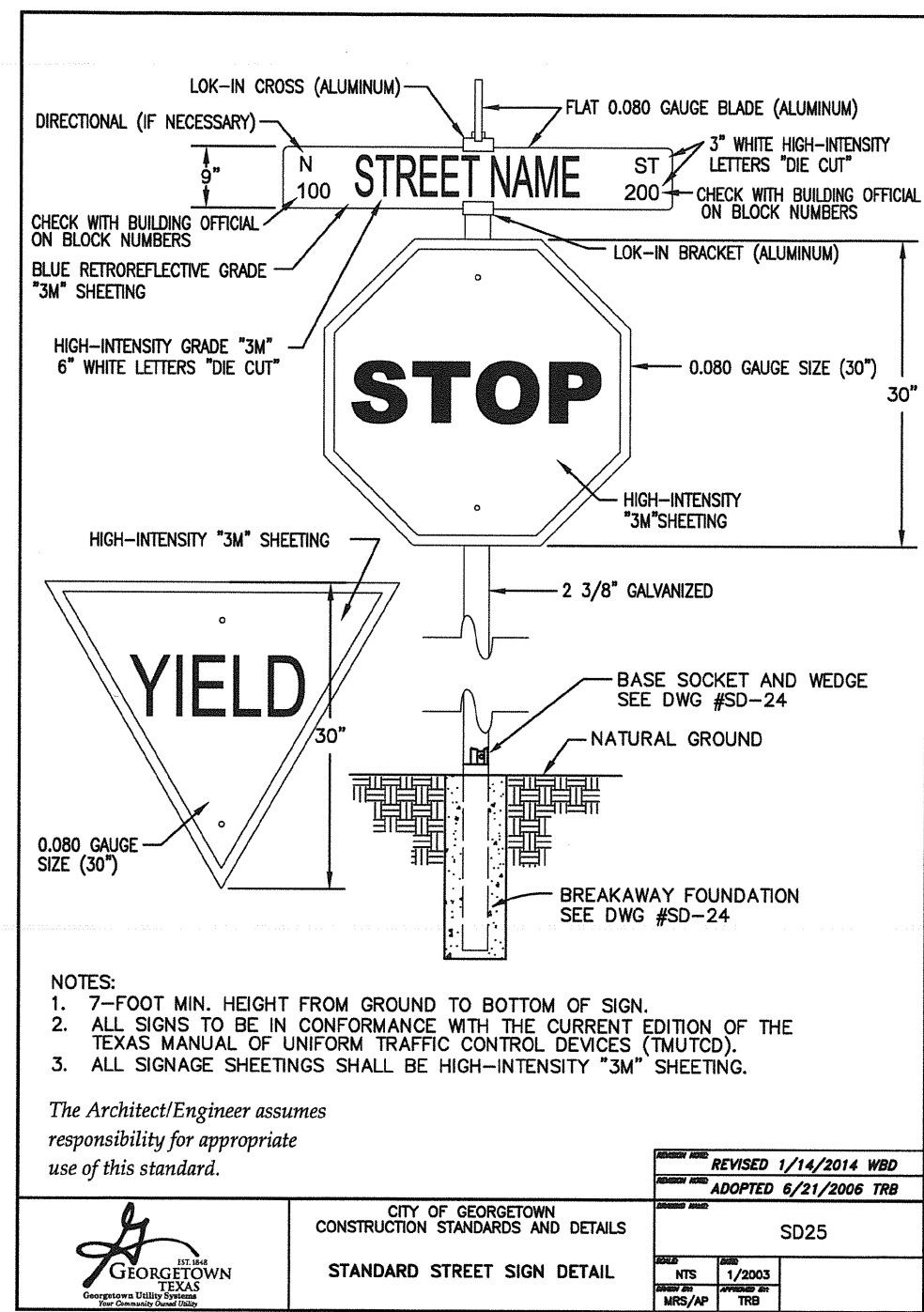
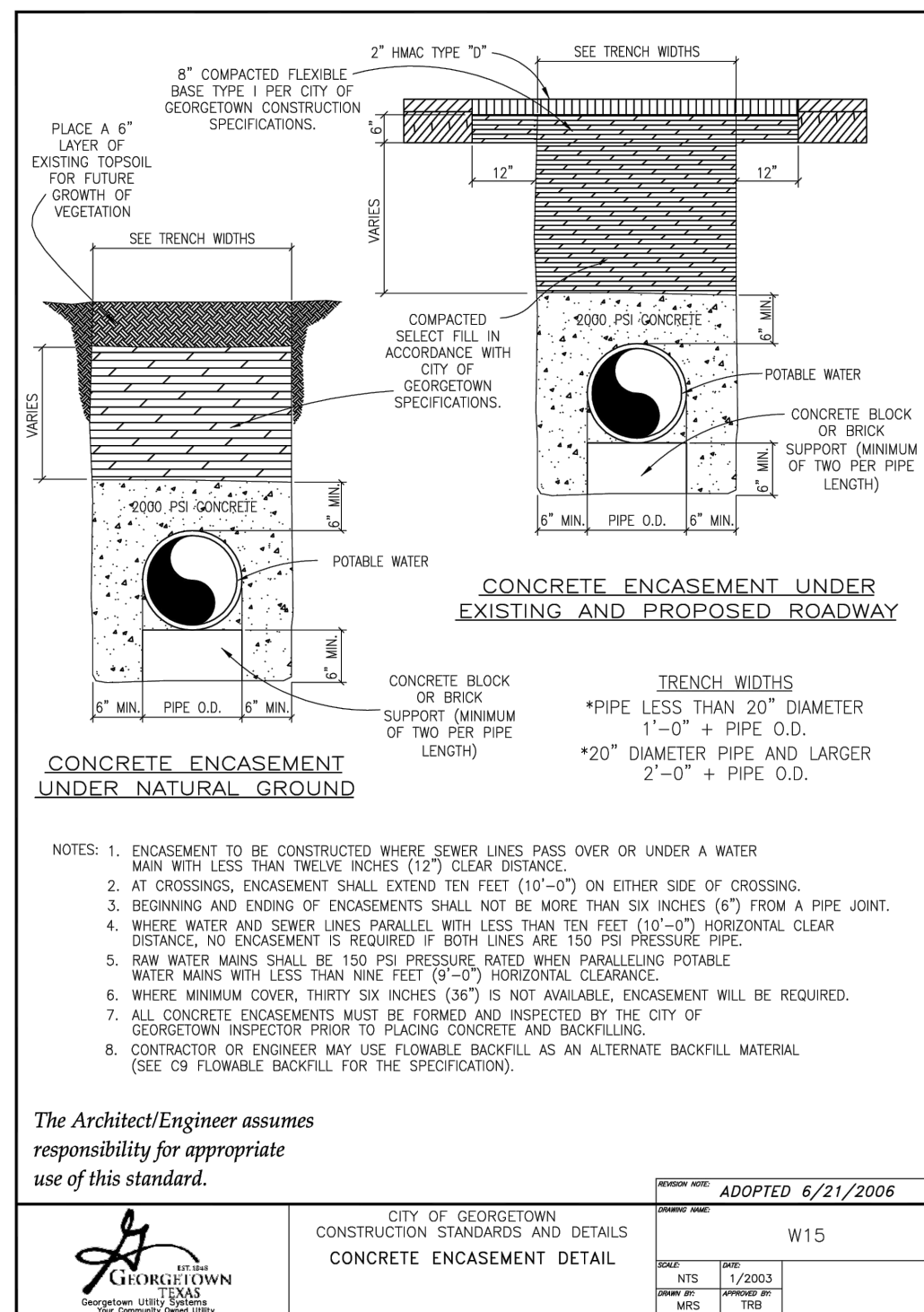
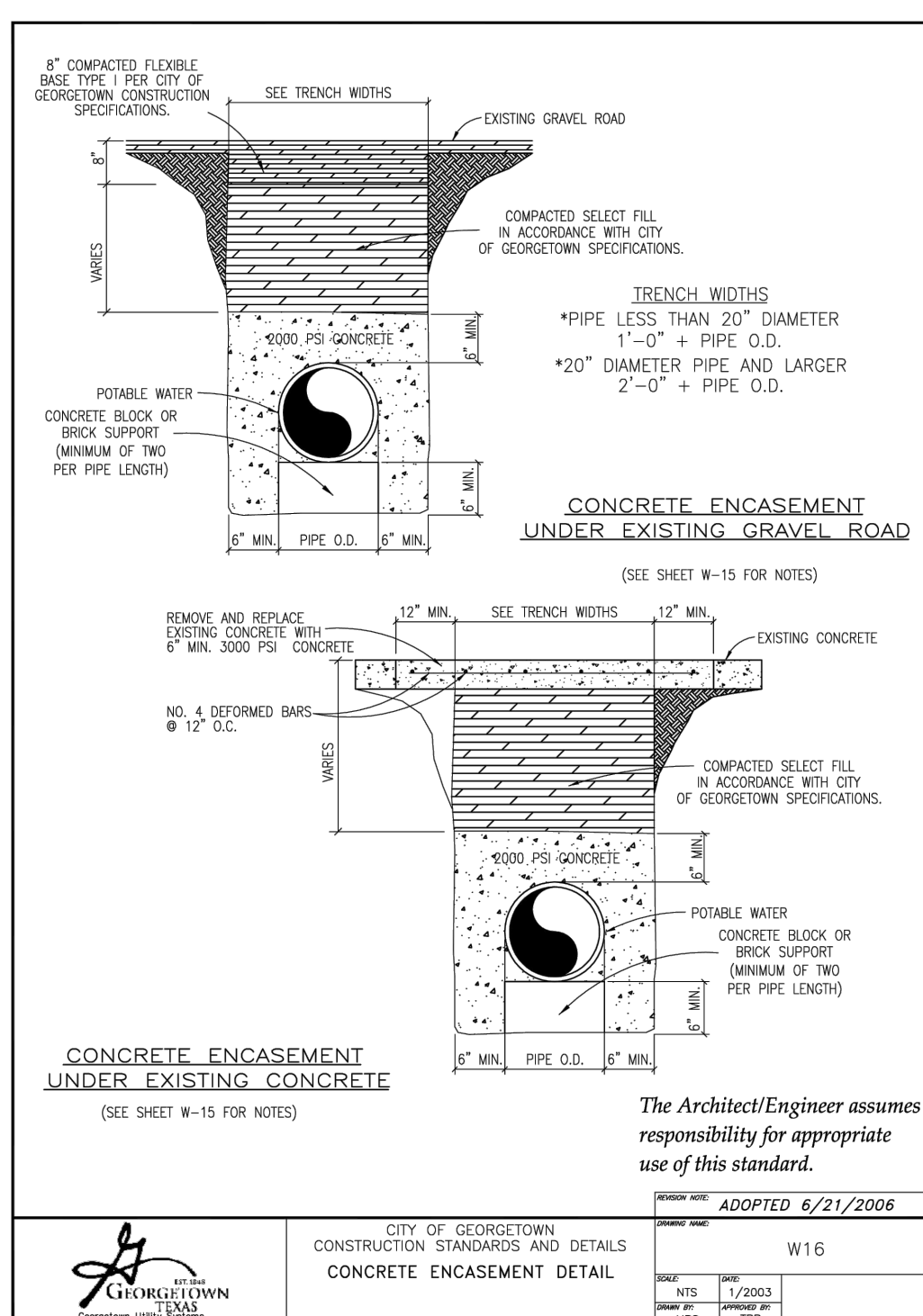
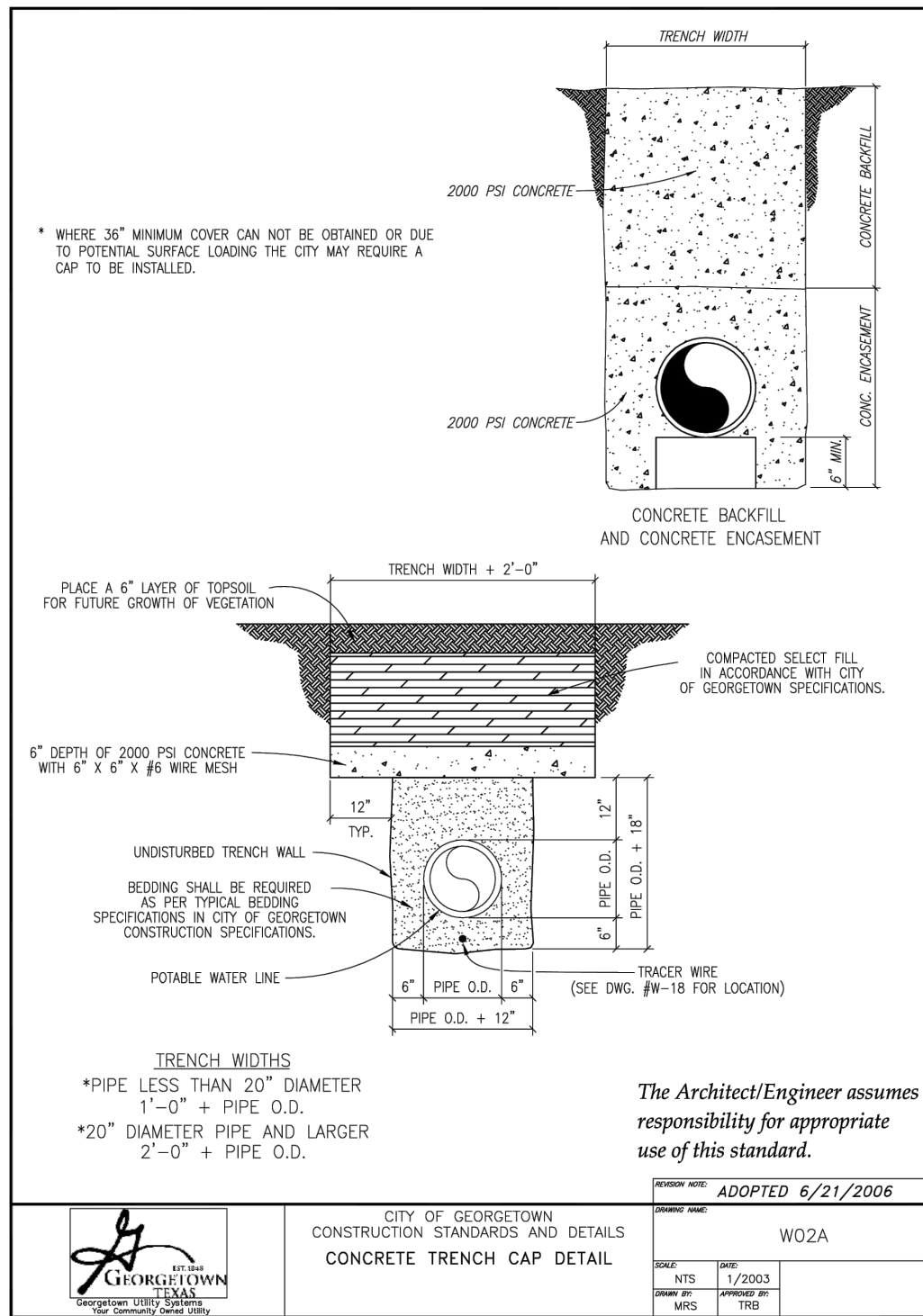
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SHEET 18 OF 45





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FIRE ACCESS GATE  
N.T.S.



TEXAS ONE CALL SYSTEM  
1-800-246-4545

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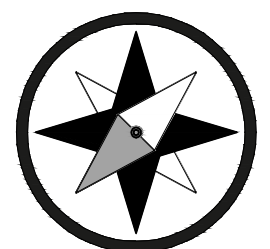
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#### CENTRAL TEXAS

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P: 512.312.4330

#### WARNING

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DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

#### SITE DETAILS

### HANWHA TEXAS PLANT

3600 N. IH 35, GEORGETOWN, TX 78626

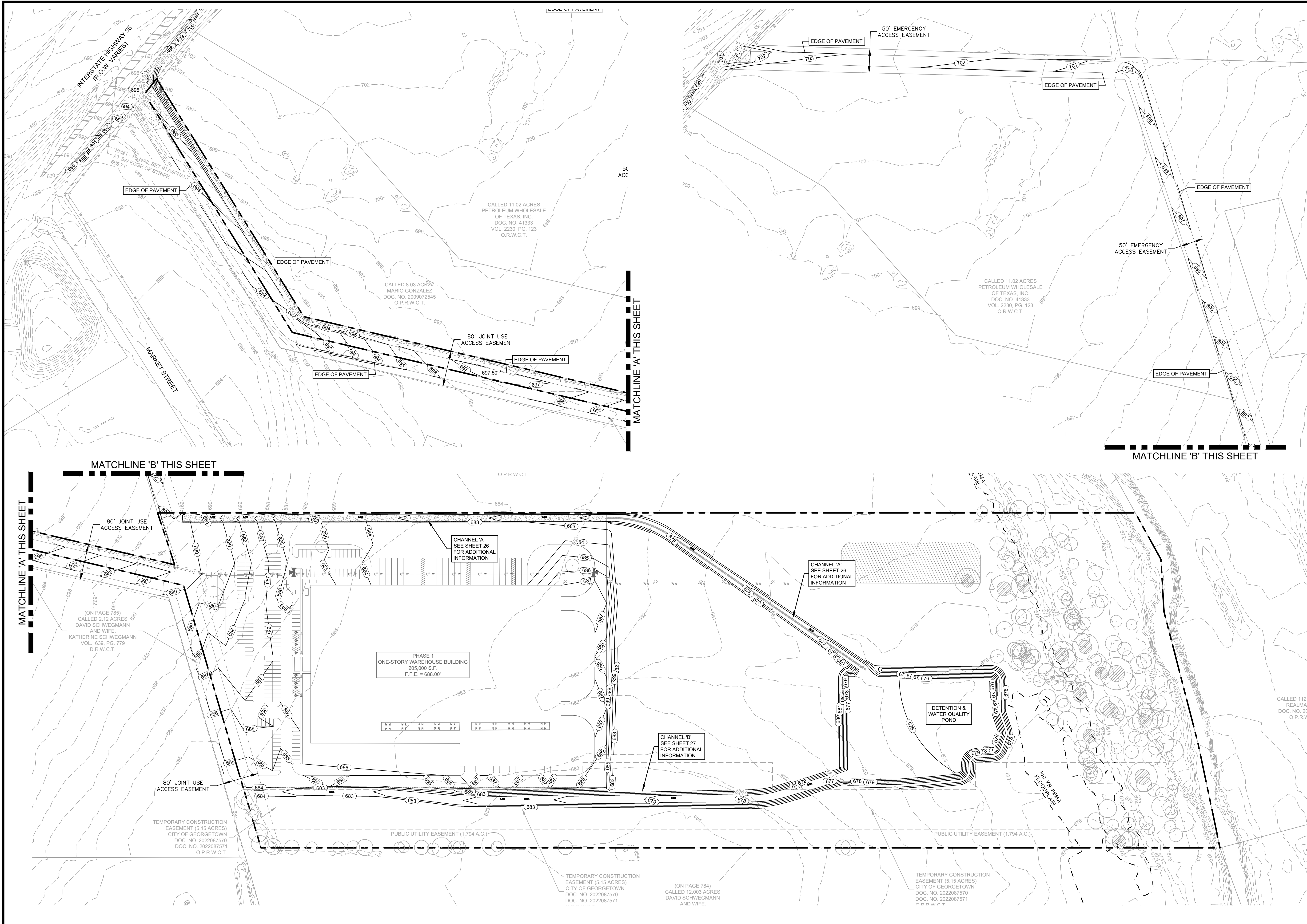
PROJECT NO. 1154-001

DRAWING NO.

SHEET 20 OF 45



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0 50 100 200  
HORIZONTAL SCALE: 1"=100'

LEGEND  
— 700 — EXISTING CONTOURS  
— 700 — PROPOSED CONTOURS  
700.00' o PROPOSED SPOT ELEVATION

KEY MAP  
N.T.S.

**NOTES:**



- 1) ALL DISTURBED AREAS AND AREAS DESIGNATED AS "GRASS" AREAS SHALL RECEIVE A MINIMUM OF 4" OF TOP SOIL AND BE REVEGETATED BY SEED, HYDROMULCH, OR SOD. MAINTAIN AND WATER THESE AREAS AS NECESSARY TO ESTABLISH PERMANENT REVEGETATIVE GROWTH OF APPROXIMATELY TWO (2) INCHES OF HEIGHT OVER 70% OF AREA.
- 2) TOPSOIL THAT HAS BEEN STRIPPED FROM THE SITE AND STOCKPILED MAY BE USED. REMOVE ALL BRUSH, TRASH, STUMPS, WOOD, CONCRETE AND OTHER DEBRIS OVER 1-1/2 IN SIZE PRIOR TO SPREADING.
- 3) IF SUFFICIENT QUANTITIES ARE NOT AVAILABLE, PROVIDE IMPORTED LOAM TOPSOIL CONTAINING A MINIMUM ORGANIC MATTER CONTENT BY WEIGHT OF 5%. TOPSOIL SHALL NOT HAVE A MIXTURE SUBSOIL AND SHALL CONTAIN NO STONES, LUMPS OF SOIL, STICKS, ROOTS, TRASH OR OTHER EXTRANEEOUS MATERIALS LARGER THAN 1-1/2 INCHES IN DIAMETER OR LENGTH.
- 4) ALL SIDEWALK SLOPES SHALL NOT EXCEED THE FOLLOWING A.D.A. REQUIREMENTS:  
1:20 LONGITUDINAL (ALONG THE WALK) MAX.  
1:50 TRANSVERSE (ACROSS THE WALK) MAX.  
ALL HANDICAP LOADING AND UNLOADING AREAS SHALL NOT EXCEED 1:50 IN ANY DIRECTION.

TEXAS ONE CALL SYSTEM  
1-800-245-4545

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					DRAWN BY: <u>T.J.B.</u>	DRAWING NO. _____		
					CHECKED BY: <u>A.C.K.</u>			
						SHEET <u>21</u> OF <u>45</u>		



C:\CompanyData\Clients\1154 - Headquarters Warehouse Development\CAD\Sheets\1154-001\_GD40.dwg -- Layout: "DETAILED GRADING (1)" -- Fri, Dec 15, 2023, 3:21pm, By: jlvaca



**LEGEND**

--- 700 --- EXISTING CONTOURS  
--- 700 --- PROPOSED CONTOURS  
700.00' o PROPOSED SPOT ELEVATION

**KEY MAP**  
N.T.S.

- NOTES:**
- 1) ALL DISTURBED AREAS AND AREAS DESIGNATED AS "GRASS" AREAS SHALL RECEIVE A MINIMUM OF 4" OF TOP SOIL AND BE REVEGETATED BY SEED, HYDROMULCH, OR SOD. MAINTAIN AND WATER THESE AREAS AS NECESSARY TO ESTABLISH PERMANENT REVEGETATIVE GROWTH OF APPROXIMATELY TWO (2) INCHES OF HEIGHT OVER 70% OF AREA.
  - 2) TOPSOIL THAT HAS BEEN STRIPPED FROM THE SITE AND STOCKPILED MAY BE USED. REMOVE ALL BRUSH, TRASH, STUMPS, WOOD, CONCRETE AND OTHER DEBRIS OVER 1-1/2 IN SIZE PRIOR TO SPREADING.
  - 3) IF SUFFICIENT QUANTITIES ARE NOT AVAILABLE, PROVIDE IMPORTED TOPSOIL CHARACTERISTIC OF THE AREA. PROVIDE IMPORTED LOAM TOPSOIL CONTAINING A MINIMUM ORGANIC MATTER CONTENT BY WEIGHT OF 5%. TOPSOIL SHALL NOT HAVE A MIXTURE SUBSOIL AND SHALL CONTAIN NO STONES, LUMPS OF SOIL, STICKS, ROOTS, TRASH OR OTHER EXTRANEOUS MATERIALS LARGER THAN 1-1/2 INCHES IN DIAMETER OR LENGTH.
  - 4) ALL SIDEWALK SLOPES SHALL NOT EXCEED THE FOLLOWING A.D.A. REQUIREMENTS:  
1:20 LONGITUDINAL (ALONG THE WALK) MAX.  
1:50 TRANSVERSE (ACROSS THE WALK) MAX.  
ALL HANDICAP LOADING AND UNLOADING AREAS SHALL NOT EXCEED 1:50 IN ANY DIRECTION.

**TEXAS ONE CALL SYSTEM**  
1-800-245-4545

UNDER PENALTY OF LAW, THE CONTRACTOR IS REQUIRED TO CONTACT THE TEXAS ONE CALL SYSTEM AT LEAST 48 HOURS BEFORE STARTING EXCAVATION.

**CAUTION - ELECTRICITY PRESENT**

THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS THAT ENTER OR WORK ON THIS PROJECT ARE RESPONSIBLE FOR LOCATING, USING ONE-CALL OR THE ELECTRIC UTILITIES THEMSELVES, ALL OVERHEAD AND UNDERGROUND ELECTRICAL OF ANY NATURE AND FOR SAFEGUARDING ALL PERSONNEL ON THIS PROJECT, INCLUDING ANY OFF-SITE WORK AREAS SHOWN ON THE PLAN, FROM ANY INTERFERENCE WITH THE ELECTRIC LINES OR FROM DAMAGING, DIGGING UP OR UNCOVERING THE ELECTRIC LINES. GETTING A LADDER IN HARMS WAY OR ANY OTHER ACTIVITY OF ANY NATURE THAT COULD HARM ANY INDIVIDUAL IN ANY MANNER, THIS RESPONSIBILITY HEREBY REMOVES THE ENGINEER AND THE OWNER FROM ANY LIABILITY OF ANY NATURE.

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**HEADQUARTERS**  
307 Saint Lawrence Street, Gonzales TX 78629  
P: 830.672.7546 F: 830.672.2034

**CENTRAL TEXAS**  
205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4330

**WARNING**  
IF THIS BAR DOES NOT MEASURE 1" THE DRAWING IS NOT TO SCALE

DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

DETAILED GRADING PLAN (1 OF 4)

**HANWHA TEXAS PLANT**

**3600 N. IH 35, GEORGETOWN, TX 78626**

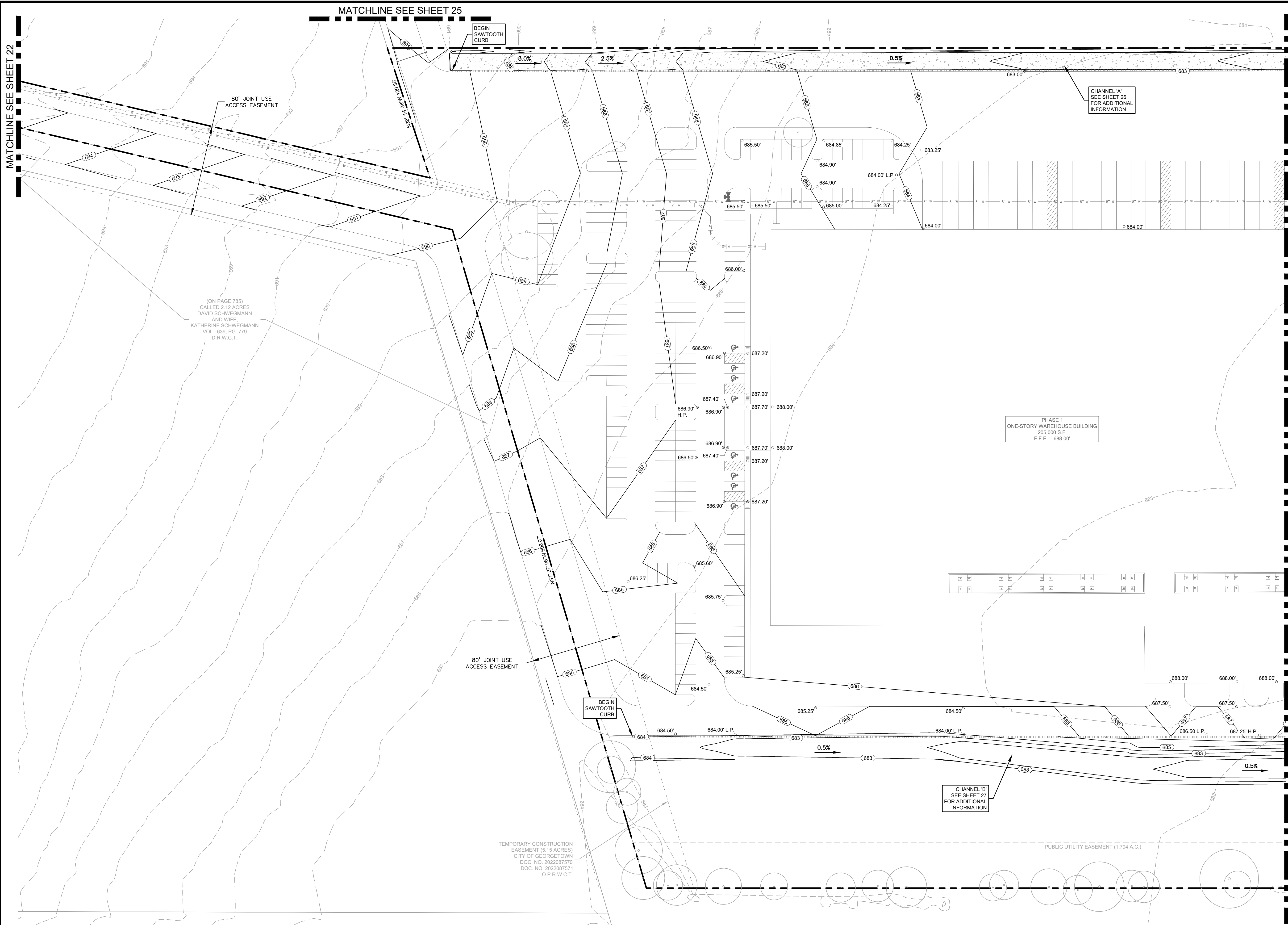
PROJECT NO. 1154-001

DRAWING NO.           

SHEET 22 OF 45



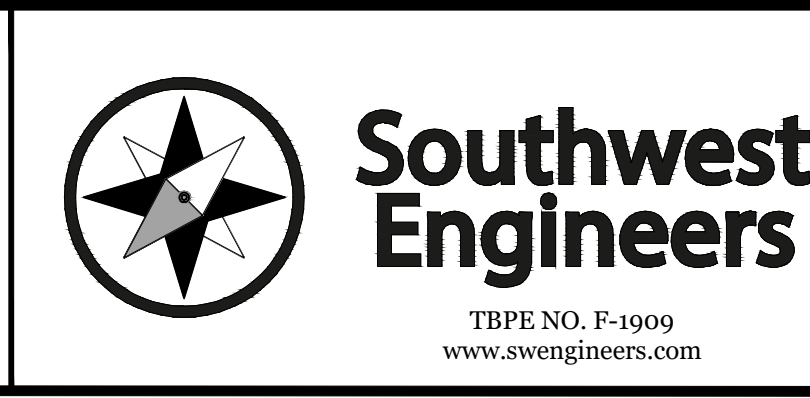
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NO.	REVISION	DATE



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HEADQUARTERS  
307 Saint Lawrence Street, Gonzales TX 78629  
P: 830.672.7546 F: 830.672.2034

CENTRAL TEXAS  
205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4330

WARNING  
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DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

DETAILED GRADING PLAN (2 OF 4)

HANWHA TEXAS PLANT

3600 N. IH 35, GEORGETOWN, TX 78626

PROJECT NO. 1154-001

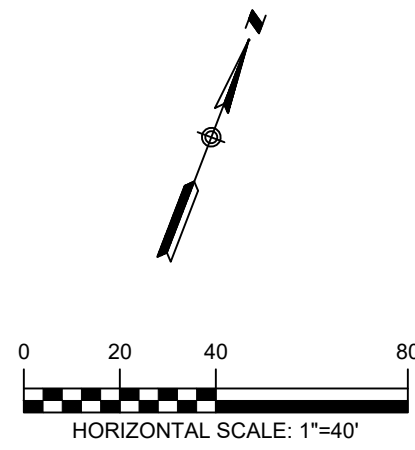
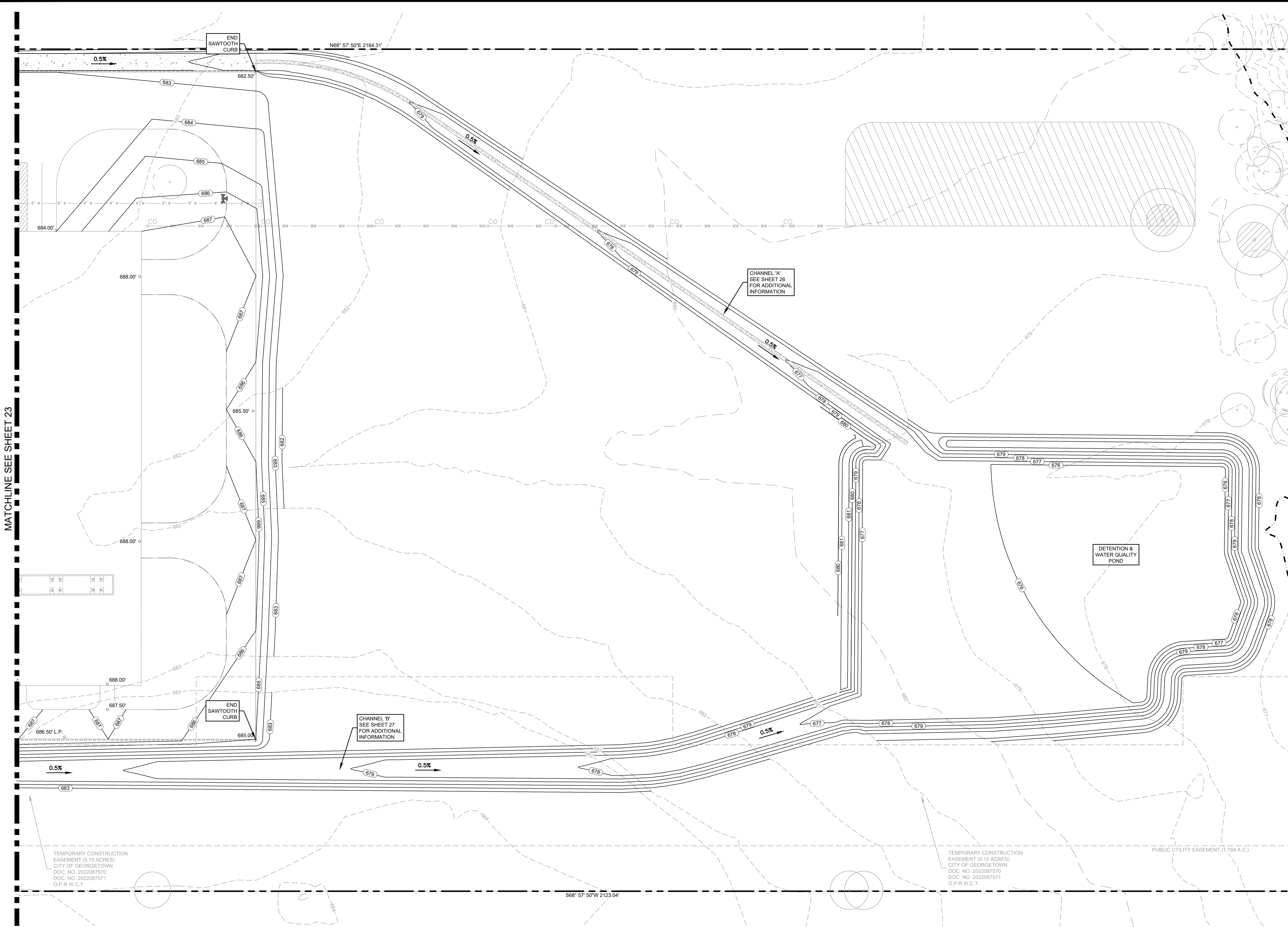
DRAWING NO.

SHEET 23 OF 45

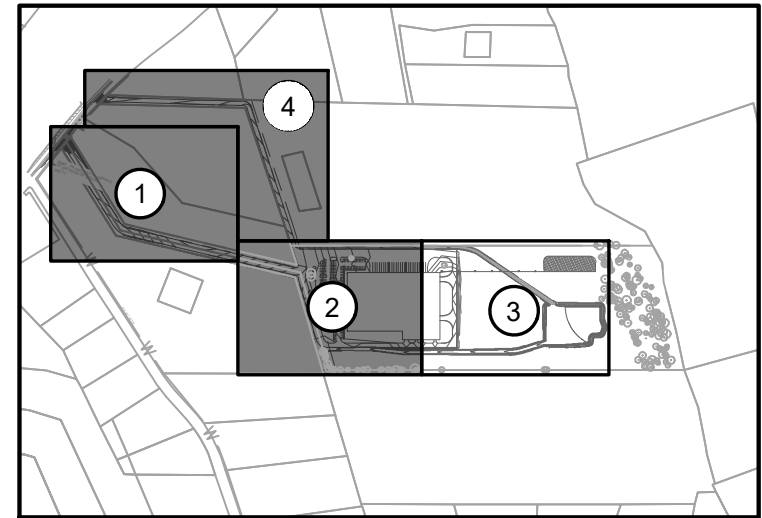


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MATCHLINE SEE SHEET 23



LEGEND  
--- 700 --- EXISTING CONTOURS  
--- 700 --- PROPOSED CONTOURS  
700.00' o PROPOSED SPOT ELEVATION



NOTES:

- 1) ALL DISTURBED AREAS AND AREAS DESIGNATED AS "GRASS" AREAS SHALL RECEIVE A MINIMUM OF 4" OF TOP SOIL AND BE REVEGETATED BY SEED, HYDROMULCH, OR SOD. MAINTAIN AND WATER THESE AREAS AS NECESSARY TO ESTABLISH PERMANENT REVEGETATIVE GROWTH OF APPROXIMATELY TWO (2) INCHES OF HEIGHT OVER 70% OF AREA.
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- 3) IF SUFFICIENT QUANTITIES ARE NOT AVAILABLE, PROVIDE IMPORTED TOPSOIL CHARACTERISTIC OF THE AREA. PROVIDE IMPORTED LOAM TOPSOIL CONTAINING A MINIMUM ORGANIC MATTER CONTENT BY WEIGHT OF 5%. TOPSOIL SHALL NOT HAVE A MIXTURE SUBSOIL AND SHALL CONTAIN NO STONES, LUMPS OF SOIL, STICKS, ROOTS, TRASH OR OTHER EXTRANEEOUS MATERIALS LARGER THAN 1-1/2 INCHES IN DIAMETER OR LENGTH.
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TEXAS ONE CALL SYSTEM  
1-800-245-4545

UNDER PENALTY OF LAW, THE CONTRACTOR IS REQUIRED TO CONTACT THE TEXAS ONE CALL SYSTEM AT LEAST 48 HOURS BEFORE STARTING EXCAVATION.

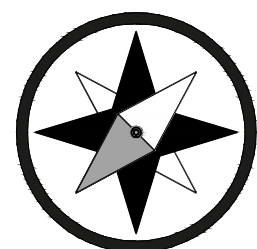
CAUTION - ELECTRICITY PRESENT

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CENTRAL TEXAS

205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4330

WARNING

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DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

DETAILED GRADING PLAN (3 OF 4)

**HANWHA TEXAS PLANT**

**3600 N. IH 35, GEORGETOWN, TX 78626**

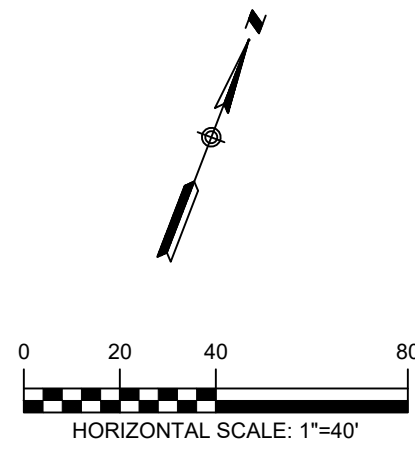
PROJECT NO. 1154-001

DRAWING NO. \_\_\_\_\_

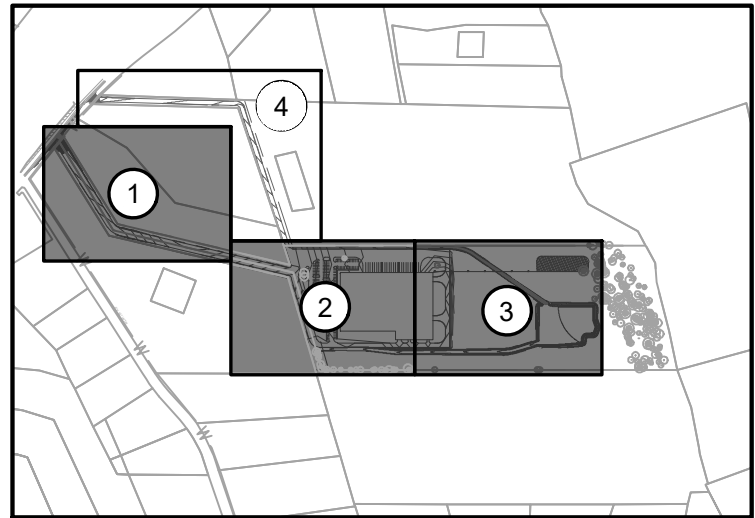
SHEET 24 OF 45



C:\CompanyData\Clients\1154 - Headquarters\001-23 Dry Berry Creek Warehouse Development\CAD\Sheets\1154-001\_GRADE.dwg -- Layout: "DETAILED GRADING (4)" -- Fri, Dec 15, 2023, 3:21pm, By: tjence



- LEGEND
- 700 --- EXISTING CONTOURS
  - 700 --- PROPOSED CONTOURS
  - 700.00' o PROPOSED SPOT ELEVATION



KEY MAP  
N.T.S.

NOTES:

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TEXAS ONE CALL SYSTEM  
1-800-246-4545

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CAUTION - ELECTRICITY PRESENT

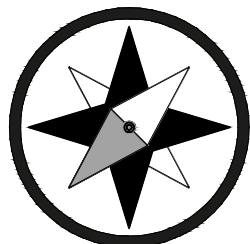
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12/15/2023



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307 Saint Lawrence Street, Gonzales TX 78629  
P: 830.672.7546 F: 830.672.2034

CENTRAL TEXAS

205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4330

WARNING

IF THIS BAR DOES NOT MEASURE 1",  
THE DRAWING IS NOT TO SCALE

DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

DETAILED GRADING PLAN (4 OF 4)

**HANWHA TEXAS PLANT**

**3600 N. IH 35, GEORGETOWN, TX 78626**

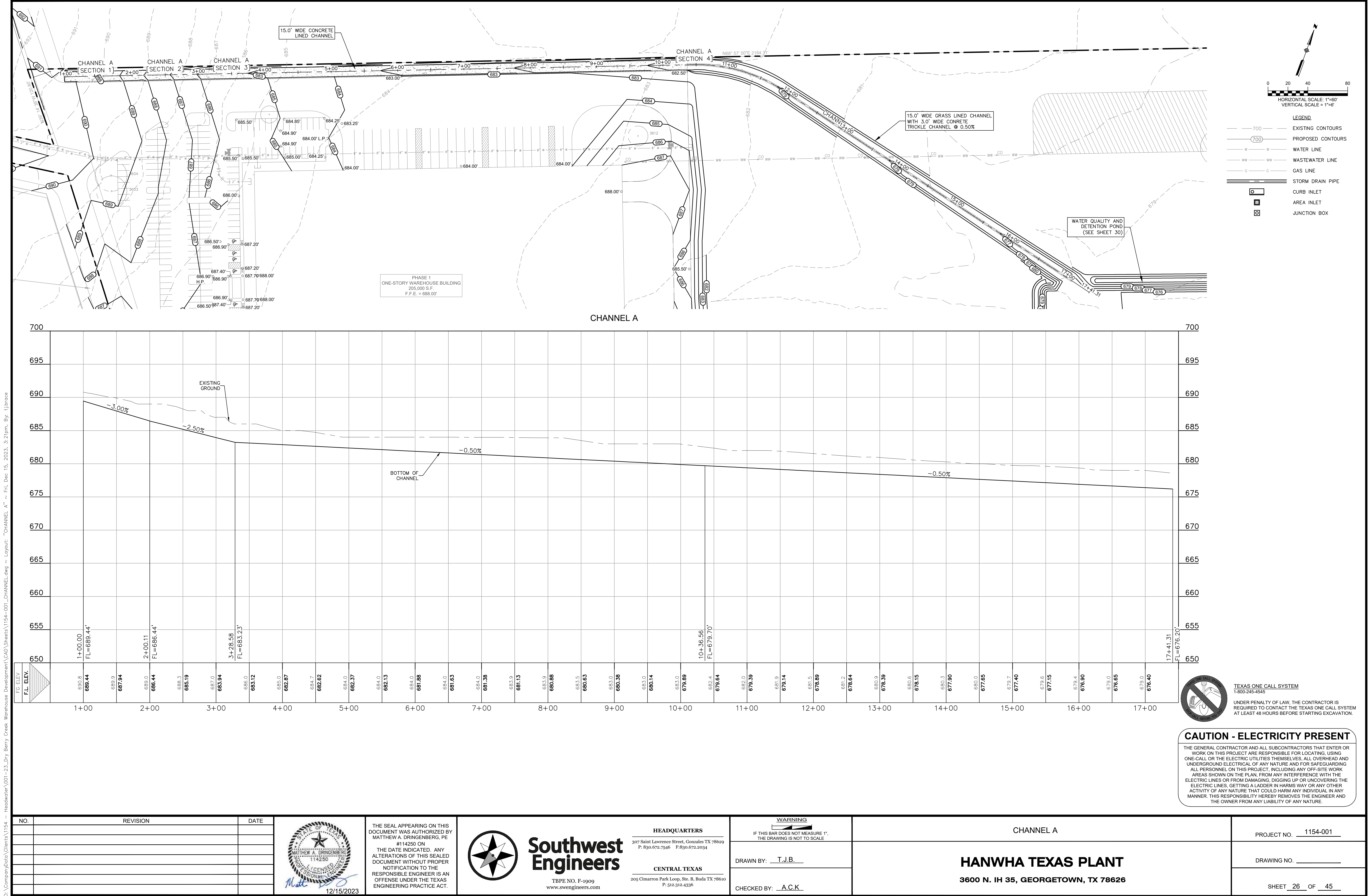
PROJECT NO. 1154-001

DRAWING NO. \_\_\_\_\_

SHEET 25 OF 45

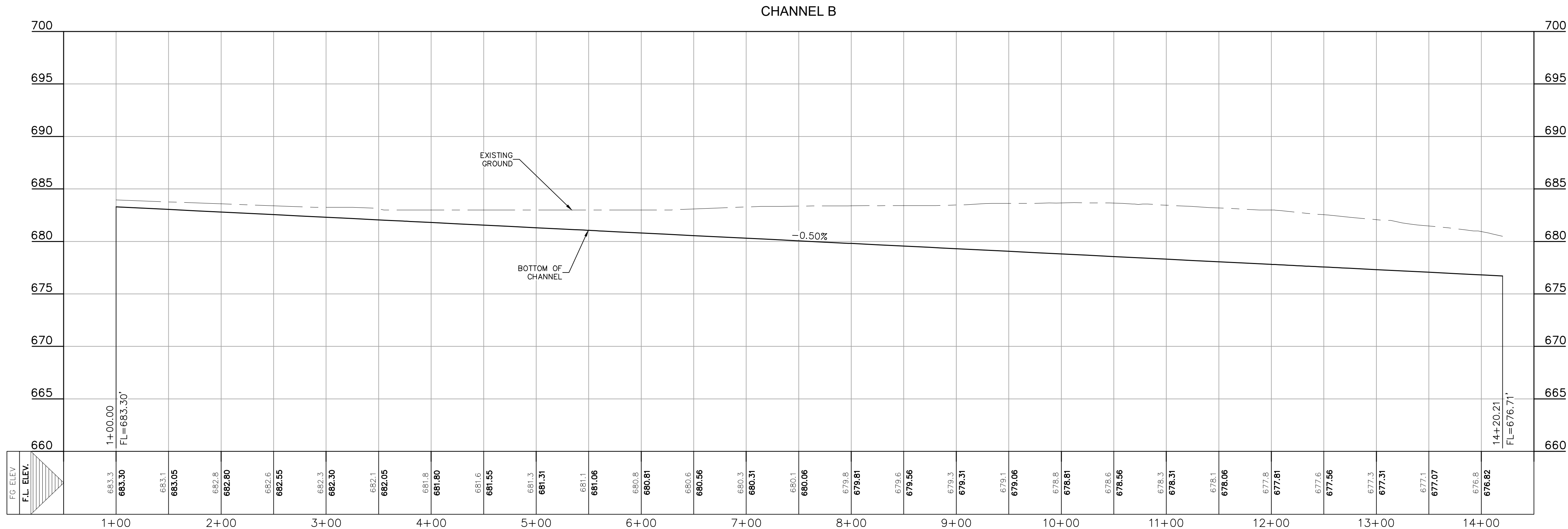
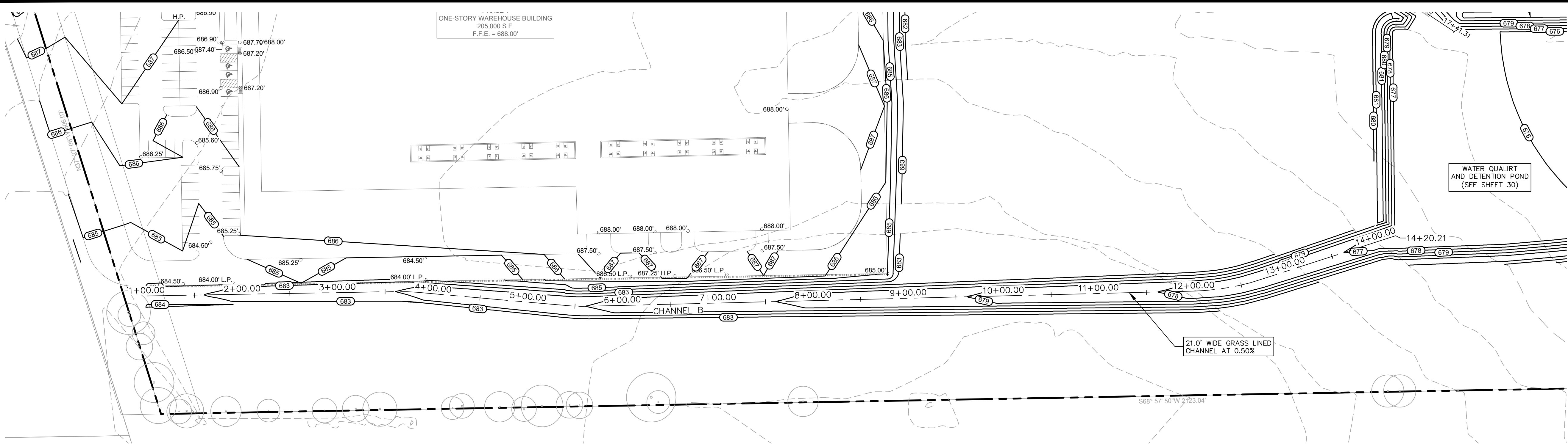


C:\CompanyData\Clients\1154 - Headquarters\001-23 Dry Berry Creek Warehouse Development\CAD\Sheets\1154-001\_CHANNEL.dwg -- Layout: "CHANNEL A" -- Fri, Dec 15, 2023, 3:21pm, By: JIbrasa





C:\CompanyData\Clients\1154 - Headquarters\001-23 Dry Berry Creek Warehouse Development\CAD\Sheets\1154-001\_CHANNEL.dwg -- Layout: "CHANNEL\_B" -- Fri, Dec 15, 2023, 3:22pm, By: jibrose



TEXAS ONE CALL SYSTEM  
1-800-246-4545

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REQUIRED TO CONTACT THE TEXAS ONE CALL SYSTEM  
AT LEAST 48 HOURS BEFORE STARTING EXCAVATION.

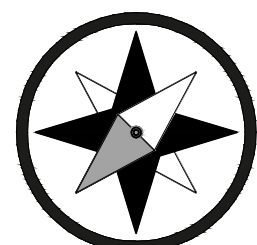
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NO.	REVISION	DATE



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DOCUMENT WAS AUTHORIZED BY  
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#114250 ON  
THE DATE INDICATED. ANY  
ALTERATIONS OF THIS SEALED  
DOCUMENT WITHOUT PROPER  
NOTIFICATION TO THE  
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#### HEADQUARTERS

307 Saint Lawrence Street, Gonzales TX 78629  
P: 830.672.7546 F: 830.672.2034

#### CENTRAL TEXAS

205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4336

#### WARNING

IF THIS BAR DOES NOT MEASURE 1"  
THE DRAWING IS NOT TO SCALE

DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

CHANNEL B

## HANWHA TEXAS PLANT

3600 N. IH 35, GEORGETOWN, TX 78626

PROJECT NO. 1154-001

DRAWING NO.

SHEET 27 OF 45

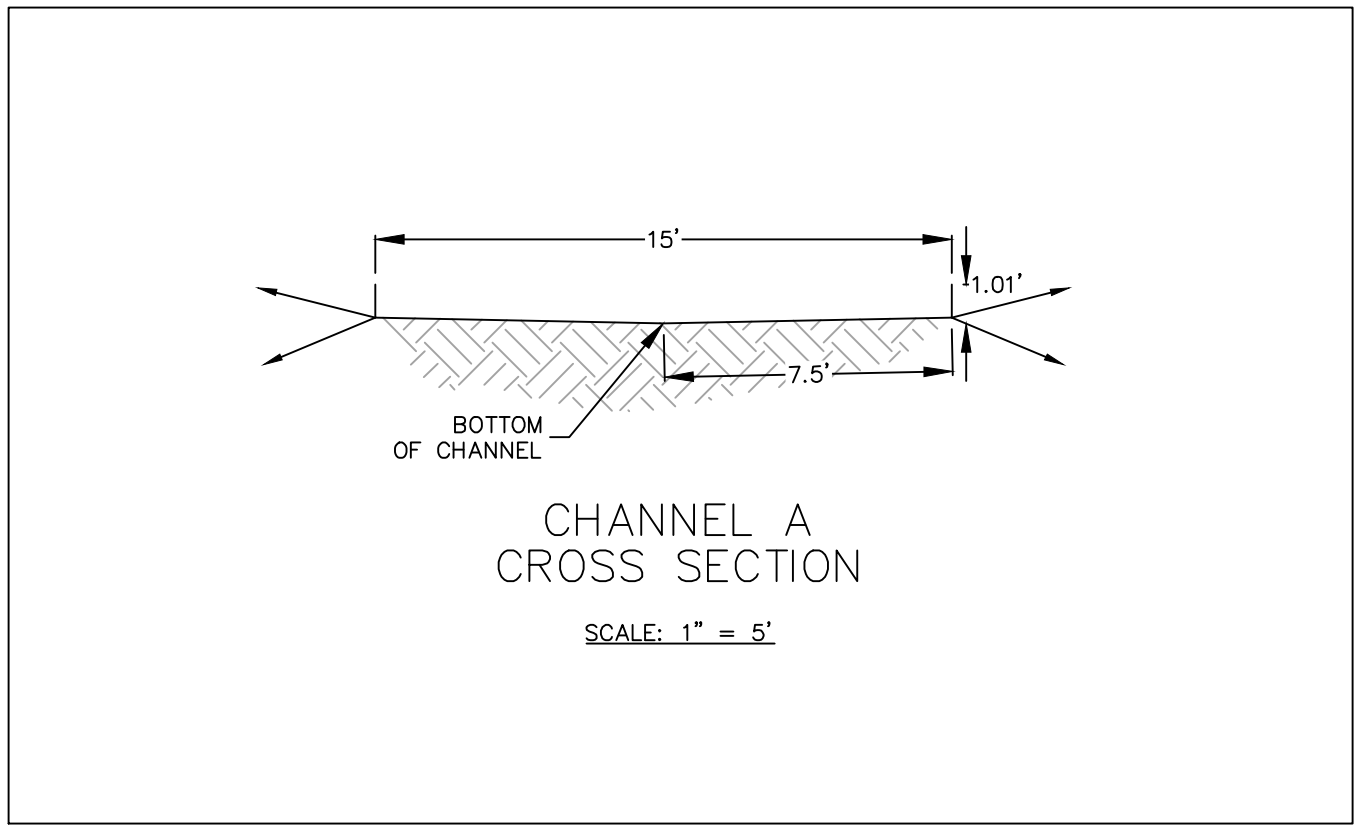
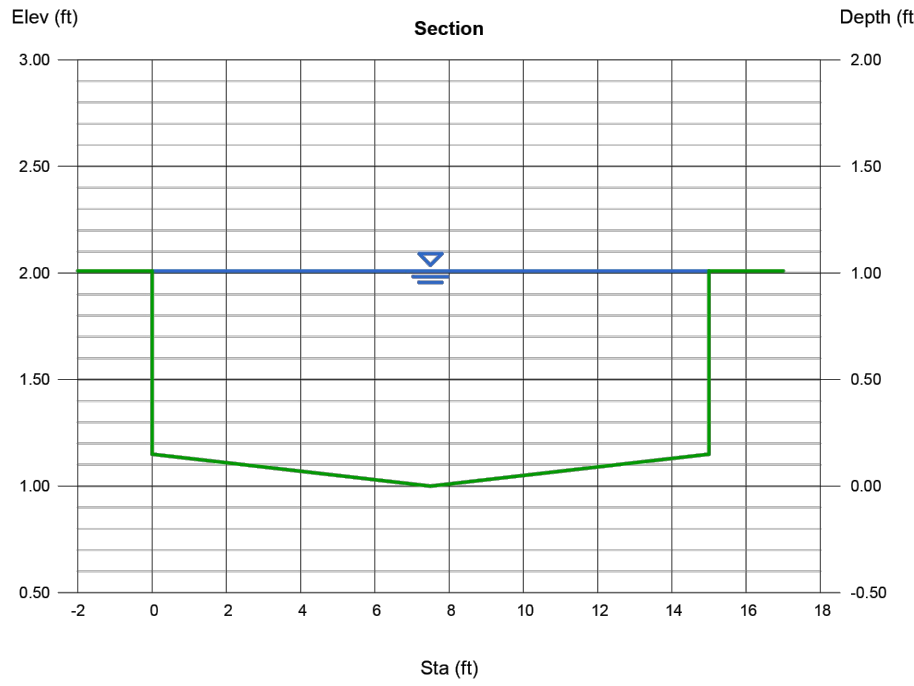
Channel Report

Hydrow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Wednesday, Dec 13 2023

Channel A Section 3

User-defined		Highlighted	
Invert Elev (ft)	= 1.00	Depth (ft)	= 1.01
Slope (%)	= 0.50	Q (cfs)	= 117.50
N-Value	= 0.011	Area (sqft)	= 14.02
Calculations		Velocity (ft/s)	= 8.38
Compute by:	Known Q	Wetted Perim (ft)	= 16.72
Known Q (cfs)	= 117.50	Crit Depth, Yc (ft)	= 1.01
		Top Width (ft)	= 15.00
		EGL (ft)	= 2.10

(Sta, El, n)-(Sta, El, n)...  
(0.00, 2.01)/7.50, 1.00, 0.011/(5.00, 1.15, 0.011)/(5.00, 2.01, 0.011)



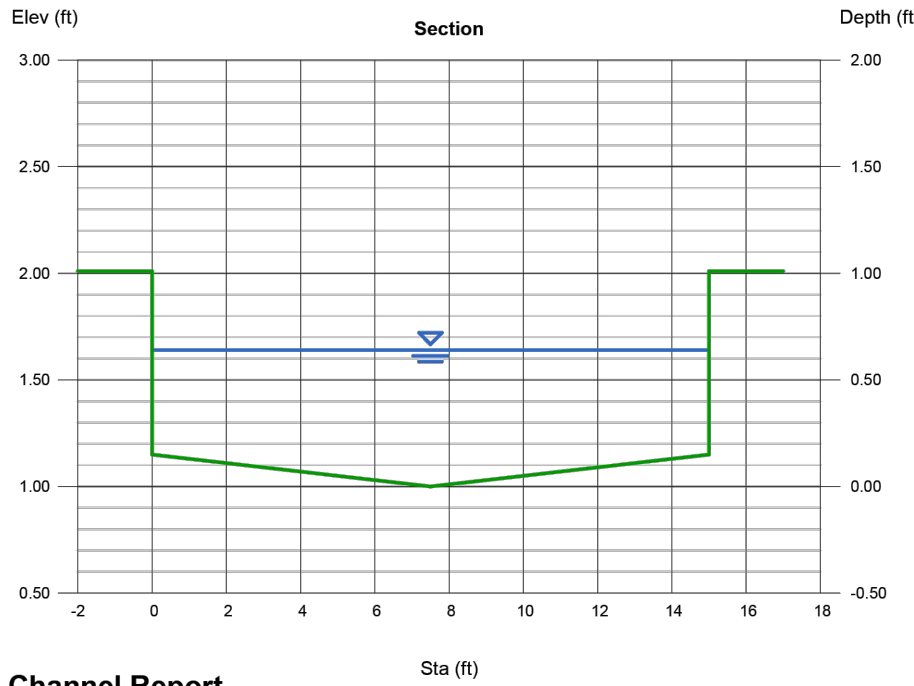
Channel Report

Hydrow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Wednesday, Dec 13 2023

Channel A Section 2

User-defined		Highlighted	
Invert Elev (ft)	= 1.00	Depth (ft)	= 0.64
Slope (%)	= 2.50	Q (cfs)	= 117.50
N-Value	= 0.011	Area (sqft)	= 8.47
Calculations		Velocity (ft/s)	= 13.98
Compute by:	Known Q	Wetted Perim (ft)	= 15.98
Known Q (cfs)	= 117.50	Crit Depth, Yc (ft)	= 1.01
		Top Width (ft)	= 15.00
		EGL (ft)	= 3.63

(Sta, El, n)-(Sta, El, n)...  
(0.00, 2.01)/7.50, 1.00, 0.011/(5.00, 1.15, 0.011)/(5.00, 2.01, 0.011)



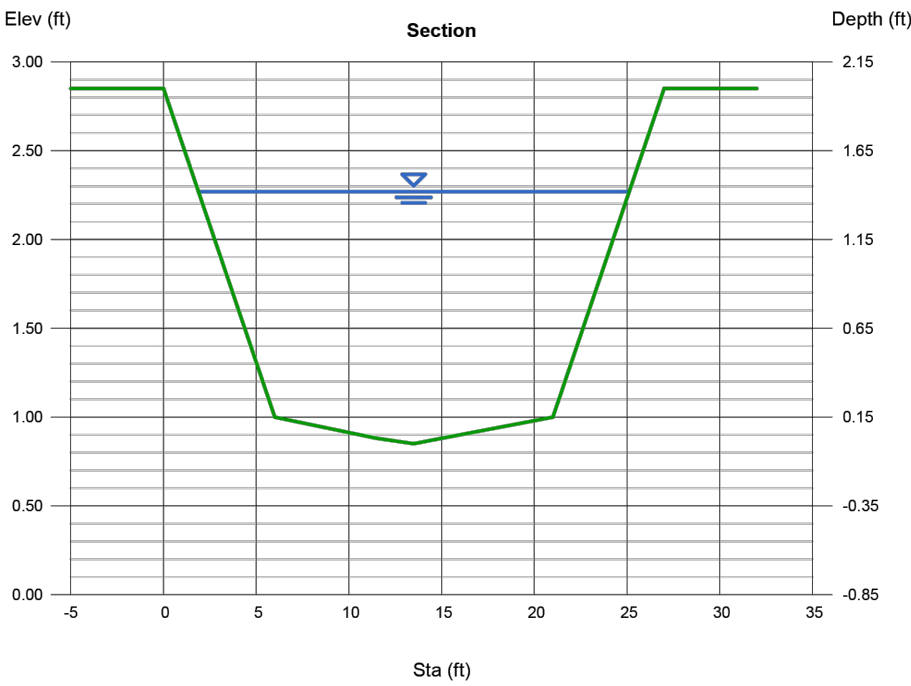
Channel Report

Hydrow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Thursday, Dec 14 2023

CHANNEL A SECTION 4

User-defined		Highlighted	
Invert Elev (ft)	= 0.85	Depth (ft)	= 1.42
Slope (%)	= 0.50	Q (cfs)	= 117.50
N-Value	= 0.024	Area (sqft)	= 25.44
Calculations		Velocity (ft/s)	= 4.62
Compute by:	Known Q	Wetted Perim (ft)	= 23.62
Known Q (cfs)	= 117.50	Crit Depth, Yc (ft)	= 1.23
		Top Width (ft)	= 23.24
		EGL (ft)	= 1.75

(Sta, El, n)-(Sta, El, n)...  
(0.00, 2.00)/0.00, 1.00, 0.024/(15.00, 0.85, 0.011)/(15.00, 0.85, 0.011)/(21.00, 1.00, 0.000)/(21.00, 2.00, 0.000)



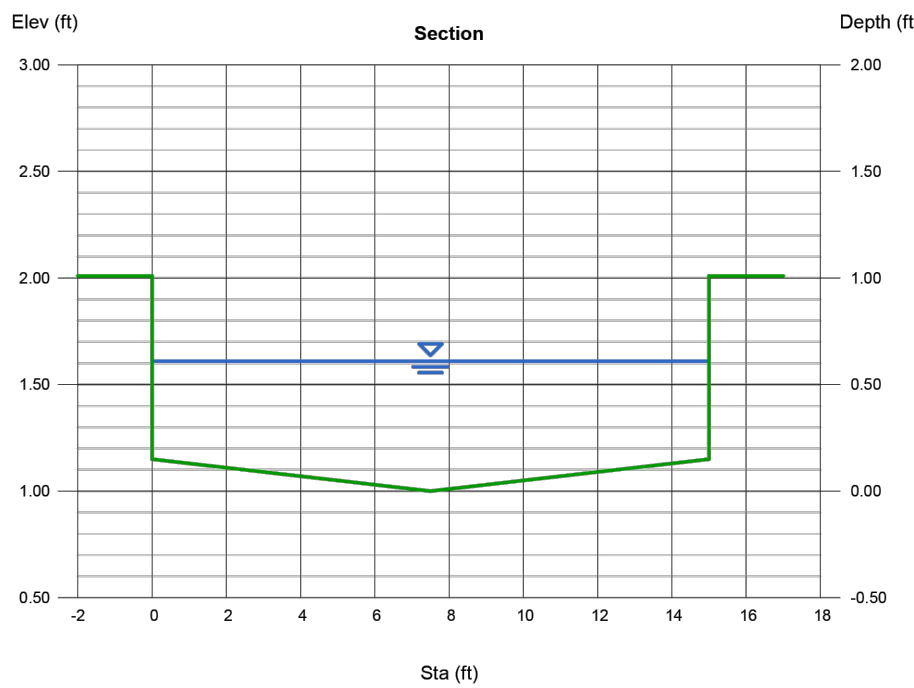
Channel Report

Hydrow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Wednesday, Dec 13 2023

Channel A Section 1

User-defined		Highlighted	
Invert Elev (ft)	= 1.00	Depth (ft)	= 0.61
Slope (%)	= 3.00	Q (cfs)	= 117.50
N-Value	= 0.011	Area (sqft)	= 8.02
Calculations		Velocity (ft/s)	= 14.64
Compute by:	Known Q	Wetted Perim (ft)	= 15.92
Known Q (cfs)	= 117.50	Crit Depth, Yc (ft)	= 1.01
		Top Width (ft)	= 15.00
		EGL (ft)	= 3.94

(Sta, El, n)-(Sta, El, n)...  
(0.00, 2.01)/7.50, 1.00, 0.011/(5.00, 1.15, 0.011)/(5.00, 2.01, 0.011)



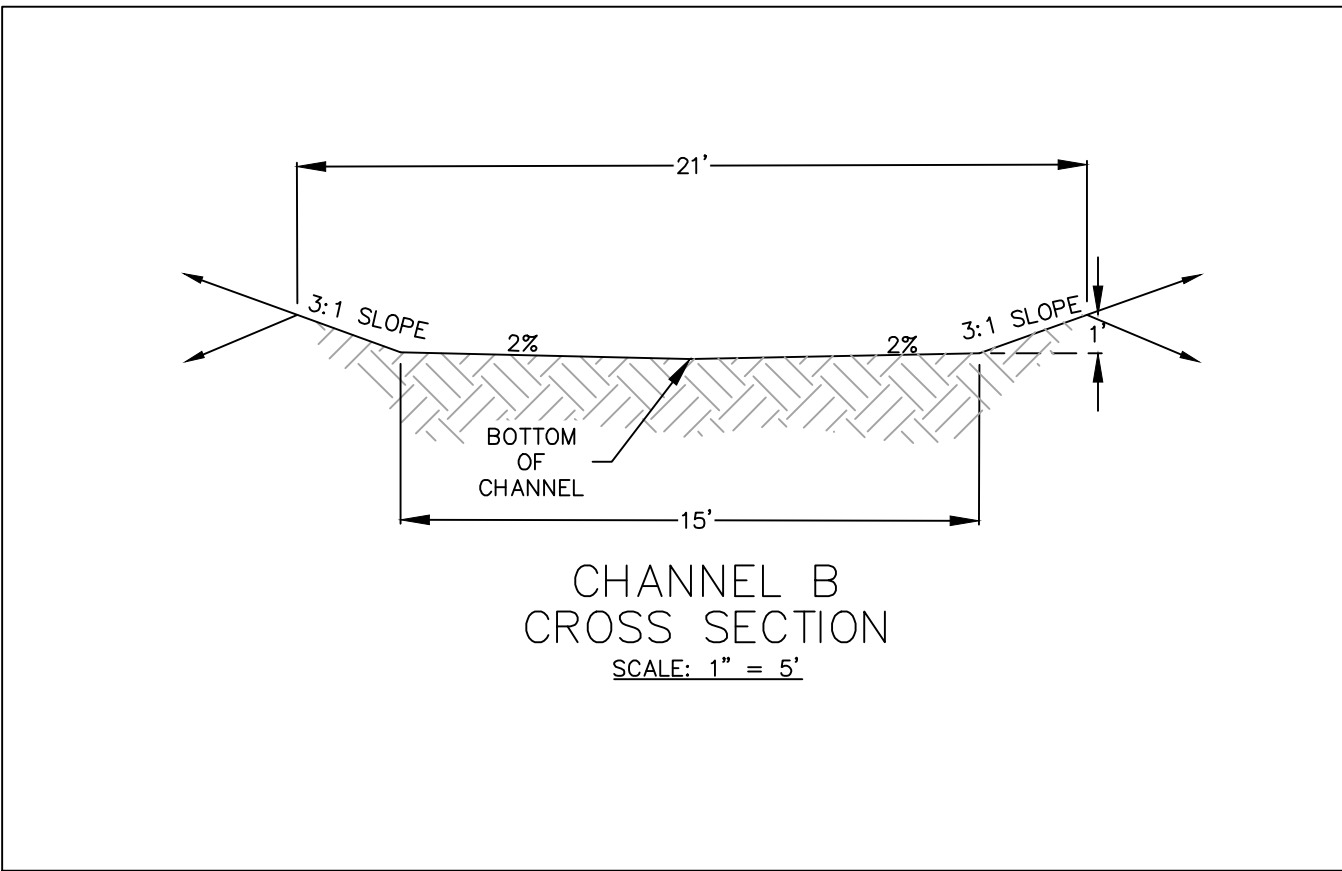
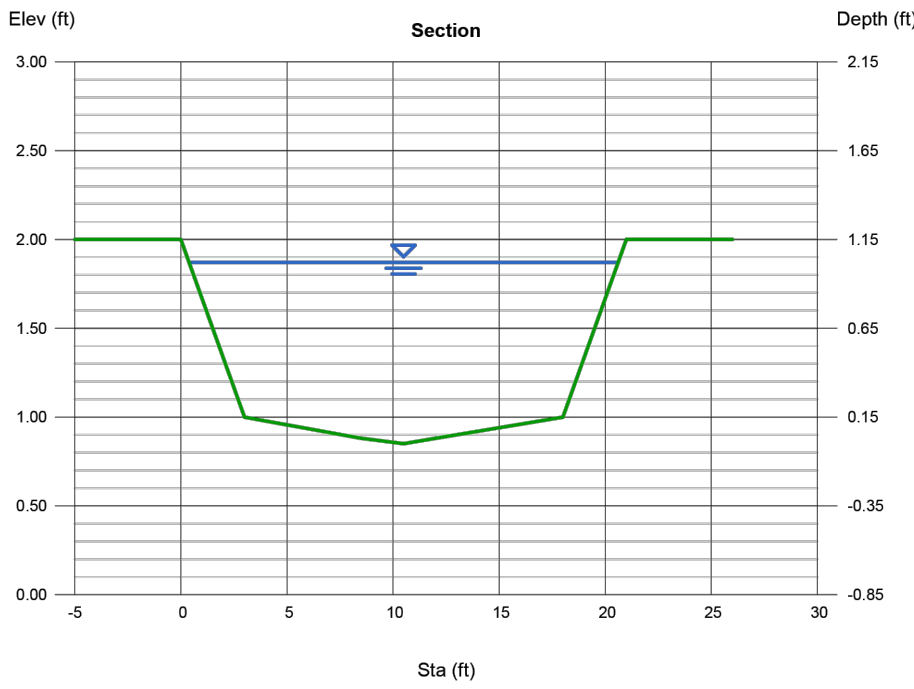
Channel Report

Hydrow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Wednesday, Dec 13 2023

Channel B

User-defined		Highlighted	
Invert Elev (ft)	= 0.85	Depth (ft)	= 1.02
Slope (%)	= 0.50	Q (cfs)	= 49.50
N-Value	= 0.030	Area (sqft)	= 16.46
Calculations		Velocity (ft/s)	= 3.00
Compute by:	Known Q	Wetted Perim (ft)	= 20.51
Known Q (cfs)	= 49.50	Crit Depth, Yc (ft)	= 0.75
		Top Width (ft)	= 20.22
		EGL (ft)	= 1.16

(Sta, El, n)-(Sta, El, n)...  
(0.00, 2.00)/15.00, 1.00, 0.030/(15.00, 0.85, 0.030)/(15.00, 0.85, 0.030)/(19.00, 1.00, 0.000)/(21.00, 2.00, 0.000)

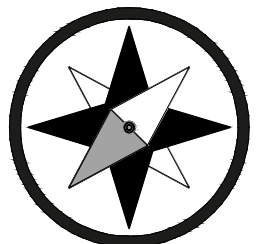


C:\CompanyData\Clients\1154 - Headwater\001-23\_Dry Berry Creek Warehouse Development\CAD\Sheets\1154-001\_CHANNEL.dwg -- Layout: "CHANNEL DETAILS" -- Fri, Dec 15, 2023, 3:22pm, By: j.brouse

NO.	REVISION	DATE



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WARNING

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DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

CHANNEL DETAILS

**HANWHA TEXAS PLANT**

**3600 N. IH 35, GEORGETOWN, TX 78626**

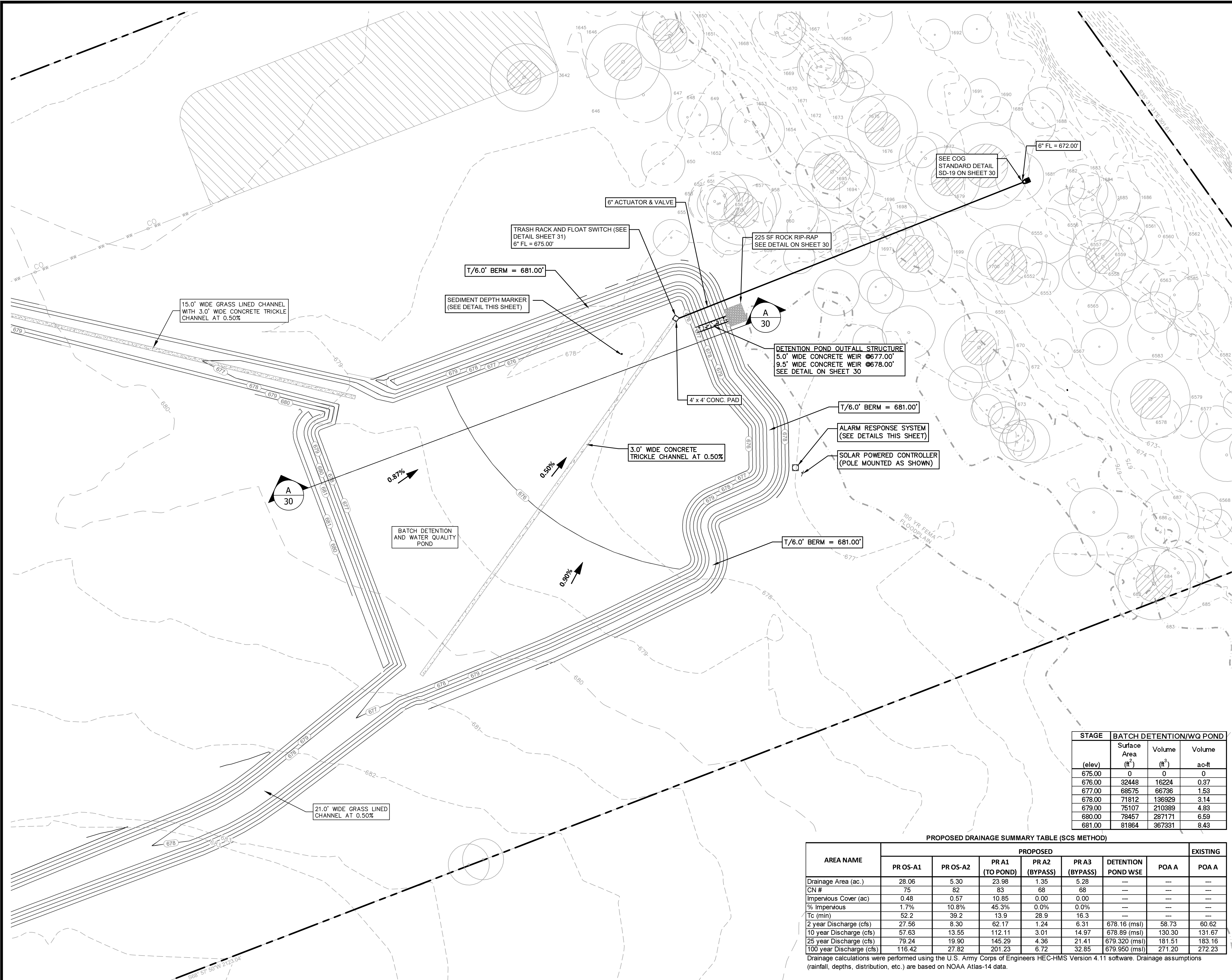
PROJECT NO. 1154-001

DRAWING NO.           

SHEET 28 OF 45



C:\CompanyData\Clients\1154 - Headquarters Warehouse Development\CAD\Sheets\1154-001\_POND.dwg -- Layout: "POND" -- Fri, Dec 15, 2023, 3:22pm, By: libroce

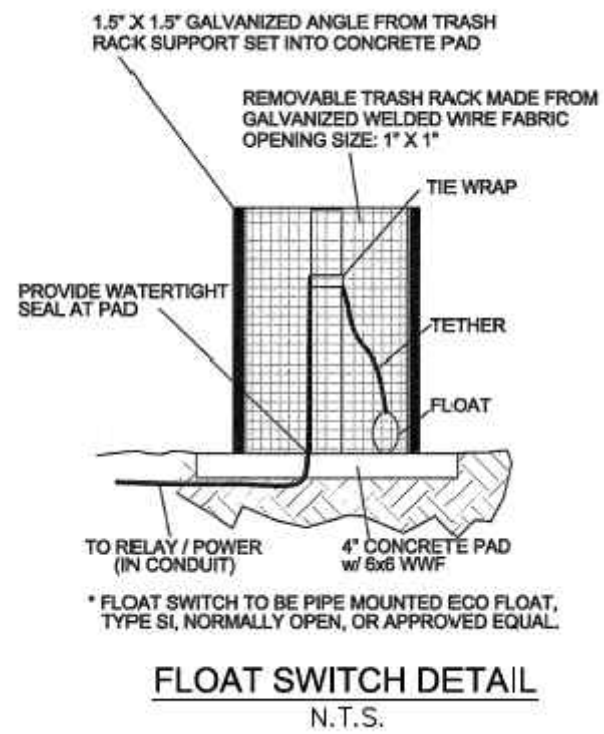


STAGE	BATCH DETENTION/WQ POND		
(elev.)	Surface Area (ft <sup>2</sup> )	Volume (ft <sup>3</sup> )	Volume ac-ft
675.00	0	0	0
676.00	32448	16224	0.37
677.00	68575	66736	1.53
678.00	71812	136929	3.14
679.00	75107	210989	4.83
680.00	78457	287171	6.59
681.00	81984	367331	8.43

PROPOSED DRAINAGE SUMMARY TABLE (SCS METHOD)

AREA NAME	PROPOSED						EXISTING
	PR OS-A1	PR OS-A2	PR A1 (TO POND)	PR A2 (BYPASS)	PR A3 (BYPASS)	DETENTION POND WSE	
Drainage Area (ac.)	28.06	5.30	23.98	1.35	5.28	---	---
ON #	75	82	83	68	68	---	---
Impervious Cover (ac)	0.48	0.57	10.85	0.00	0.00	---	---
% Impervious	1.7%	10.8%	45.3%	0.0%	0.0%	---	---
Tc (min)	52.2	39.2	13.9	28.9	16.3	---	---
2 year Discharge (cfs)	27.56	8.30	62.17	1.24	6.31	678.16 (msl)	58.73
10 year Discharge (cfs)	57.63	13.55	112.11	3.01	14.97	678.89 (msl)	130.30
25 year Discharge (cfs)	79.24	19.90	145.29	4.36	21.41	679.320 (msl)	181.51
100 year Discharge (cfs)	116.42	27.82	201.23	6.72	32.85	679.950 (msl)	271.20

Drainage calculations were performed using the U.S. Army Corps of Engineers HEC-HMS Version 4.11 software. Drainage assumptions (rainfall, depths, distribution, etc.) are based on NOAA Atlas-14 data.



- LEGEND
- 700 EXISTING CONTOURS
  - 700 PROPOSED CONTOURS
  - W WATER LINE
  - WW WASTEWATER LINE
  - G GAS LINE
  - STORM DRAIN PIPE
  - INLET
  - AREA INLET
  - JUNCTION BOX

NOTES:

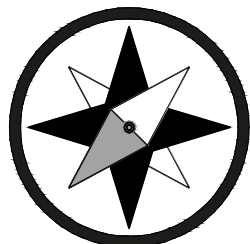
- BATCH DETENTION POND SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RG-348 MANUAL (ADDENDUM).
- THE BATCH DETENTION POND AND RISER PIPE/TRASH RACK WILL FUNCTION AS THE DEWATERING OUTLET AND SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY GENERAL GRADING AND UTILITY WORK.
- SYSTEM SHALL BE 12 VDC WITH SOLAR CHARGED 12VDC BATTERY. ALTERNATIVE ELECTRICAL DESIGN MAY ALSO BE UTILIZED IN LIEU OF SOLAR POWER WITH ENGINEERS APPROVAL.
- ACTUATOR SHALL BE ELECTRONIC QUATER-TURN WITH MANUAL OVERRIDE AND POSITION INDICATOR.
- ACTUATOR SHALL BE "AVID 12V ACTUATOR, EPI-6" OR EQUIVALENT.
- ACTUATOR VALVE TO BE SET AT "NORMALLY CLOSED" POSITION.
- CONTROLLER SHALL BE SET TO OPEN VALVE 12 HOURS AFTER INITIAL RAINFALL DETECTION. VALVE TO REMAIN OPEN UNTIL 2HRS FOLLOWING BASIN EMPTY SIGNAL.
- CONTROLLER SHALL HAVE TEST SEQUENCE, ON/OFF/RESET SWITCH AND THE PROGRAMMING SHALL BE FIELD UPLOADABLE.
- CONTROLLER SHALL BE "MORNINGSTAR SOLAR CONTROLLER, 12V, 20 AMP" OR EQUIVALENT.
- ALL WIRING SHALL BE INSTALLED IN CONDUIT AND BURIED. CONTACT ENGINEER FOR ADDITIONAL CONTROLER SCHEMATICS.
- CONTRACTOR TO INSTALL LIBERTY ALARM MODEL ALM-2W OR EQUIVALENT AT A CONTROLLER PANEL.
- ATTACH ALARM RESPONSE SIGN TO CONTROLLER POLE. REFERENCE ALARM SIGN.
- CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION AND ENSURE CONTINUITY OF SERVICES AS NECESSARY.
- ALL POND BOTTOMS, SIDE SLOPES, AND EARTHEN EMBANKMENTS SHALL BE COMPACTED TO NINETY-FIVE (95%) PERCENT MAXIMUM DENSITY IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD SPECIFICATIONS.
- A CELLULAR BASED NOTIFICATION SYSTEM SHALL BE PROVIDED TO COMMUNICATE THE STATUS OF THE POND; VALVE OPERATION AND POWER STATUS.
- EXPANSION JOINTS ON FREE STANDING WALLS SHALL HAVE WATER TIGHT SEALS AS NEEDED.
- STRUCTURAL DETAILS FOR WALLS 4' AND GREATER IN HEIGHT, WATER QUALITY POND, AND DETENTION POND TO BE PROVIDED BY STRUCTURAL ENGINEER.

NO.	REVISION	DATE



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CHECKED BY: A.C.K.

WATER QUALITY AND DETENTION POND PLAN

**HANWHA TEXAS PLANT**

3600 N. IH 35, GEORGETOWN, TX 78626

PROJECT NO. 1154-001

DRAWING NO.

SHEET 29 OF 45



1. The Required Load Reduction for the total project

Calculations from RG-348

Pages 3-27 to 3-30

Page 3-29 Equation 3.3:  $L_M = 28.93(A_N \times P)$

where:  $L_M$  TOTAL PROJECT = Required TSS removal resulting from the proposed development = 85% of increased load  
 $A_N$  = Net increase in impervious area for the project  
 $P$  = Average annual precipitation, inches

\*NOTE: THE CITY OF GEORGETOWN REQUIRES 85% OF INCREASED TSS LOAD REMOVAL

Site Data: Determine Required Load Removal Based on the Entire Project  
County = Williamson  
Total project area included in plan = 38.18 acres  
Predevelopment impervious area within the limits of the plan = 0.47 acres  
Total post-development impervious area within the limits of the plan = 10.85 acres  
Total post-development impervious cover fraction = 0.28  
 $P$  = 32 inches

$L_M$  TOTAL PROJECT = 9609 lbs.

\* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 1

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = 1  
Total drainage basin/outfall area = 23.98 acres  
Predevelopment impervious area within drainage basin/outfall area = 0.09 acres  
Post-development impervious area within drainage basin/outfall area = 10.32 acres  
Post-development impervious fraction within drainage basin/outfall area = 0.43  
 $L_M$  THIS BASIN = 8904 lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention Basin  
Removal efficiency = 91 percent

4. Calculate Maximum TSS Load Removed ( $L_R$ ) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:  $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

where:  $A_C$  = Total On-Site drainage area in the BMP catchment area  
 $A_i$  = Impervious area proposed in the BMP catchment area  
 $A_p$  = Pervious area remaining in the BMP catchment area  
 $L_R$  = TSS Load removed from this catchment area by the proposed BMP

$A_C$  = 23.98 acres  
 $A_i$  = 10.32 acres  
 $A_p$  = 13.66 acres  
 $L_R$  = 10613 lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired  $L_M$  THIS BASIN = 9609 lbs.

$F$  = 0.91

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.

Calculations from RG-348

Pages 3-34 to 3-36

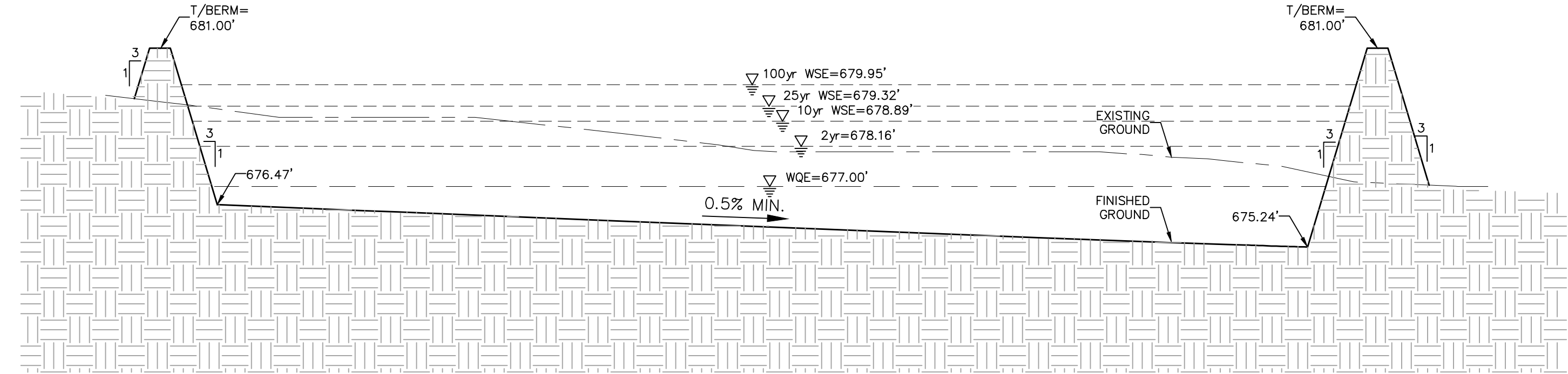
Rainfall Depth = 1.80 inches  
Post Development Runoff Coefficient = 0.32  
On-site Water Quality Volume = 50386 cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

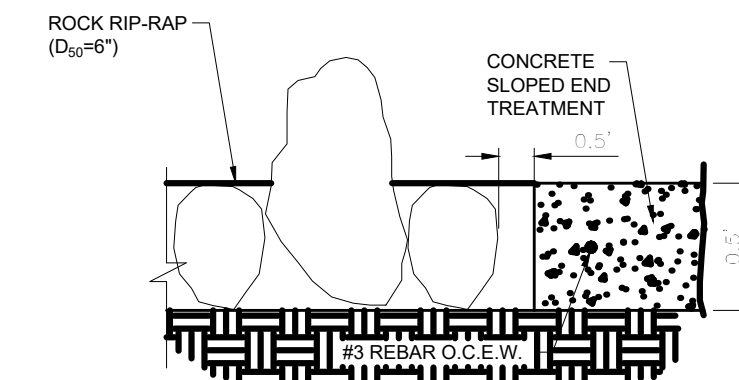
Off-site area draining to BMP = 5.30 acres  
Off-site impervious cover draining to BMP = 0.57 acres  
Impervious fraction of off-site area = 0.11  
Off-site Runoff Coefficient = 0.13  
Off-site Water Quality Volume = 4559 cubic feet

Storage for Sediment = 10989

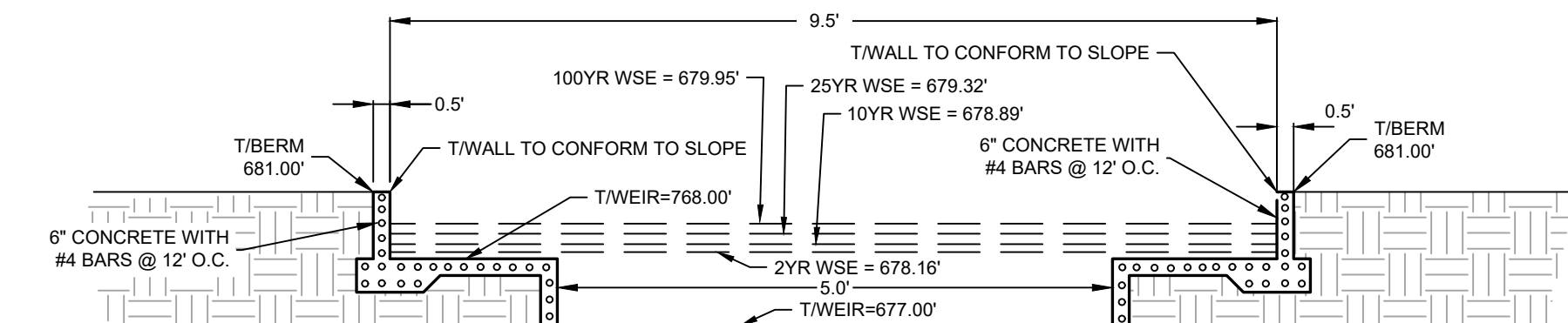
Total Capture Volume (required water quality volume(s) x 1.20) = 65934 cubic feet



A WATER QUALITY AND DETENTION POND CROSS SECTION A-A  
Scale: HORZ: 1"=30' VERT: 1"=3'

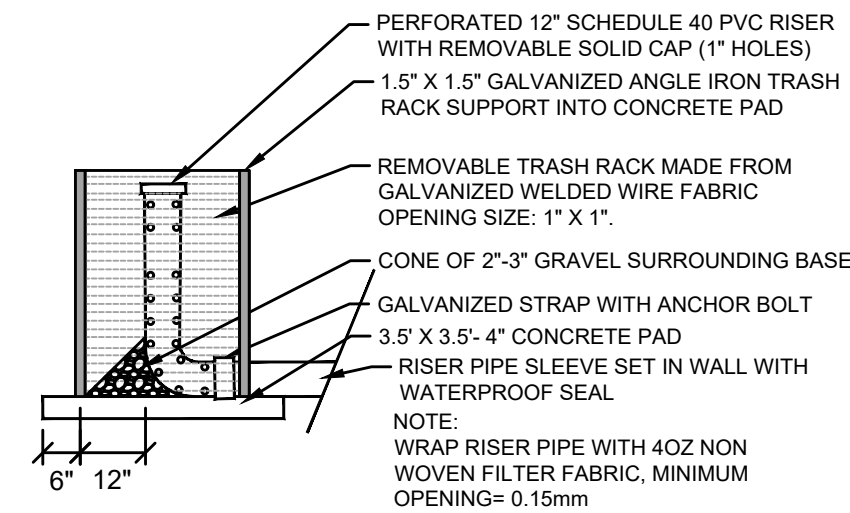
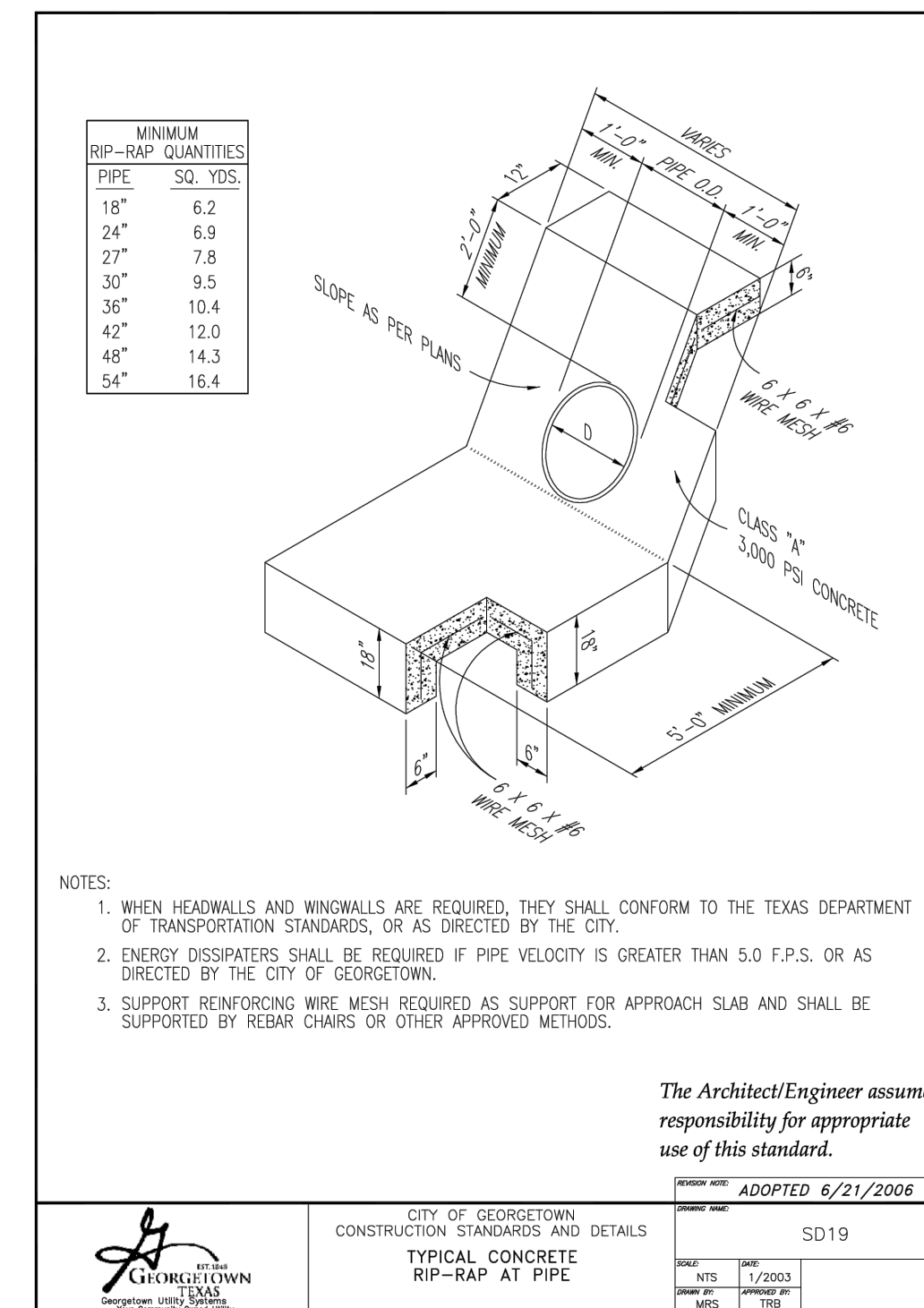


ROCK RIP-RAP DETAIL  
S.C.M. & N.L.L.



B DETENTION POND OUTFALL CROSS SECTION  
N.T.S.

\*NOTE: 9.5' WIDTH OF OPENING AT ELEVATION 678.00' CORRESPONDS TO A 4.5' WEIR AT THAT ELEVATION, SINCE THIS OPENING IS "STACKED" ON TOP OF THE 5.0' OPENING AT ELEVATION 677.00'

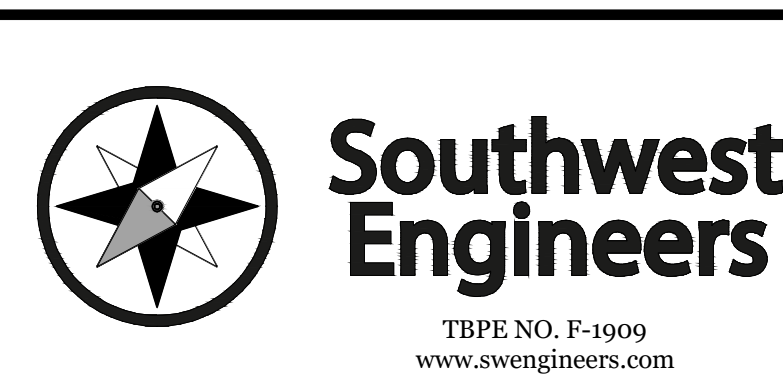


TRASH RACK/ RISER PIPE DETAIL  
N.T.S.

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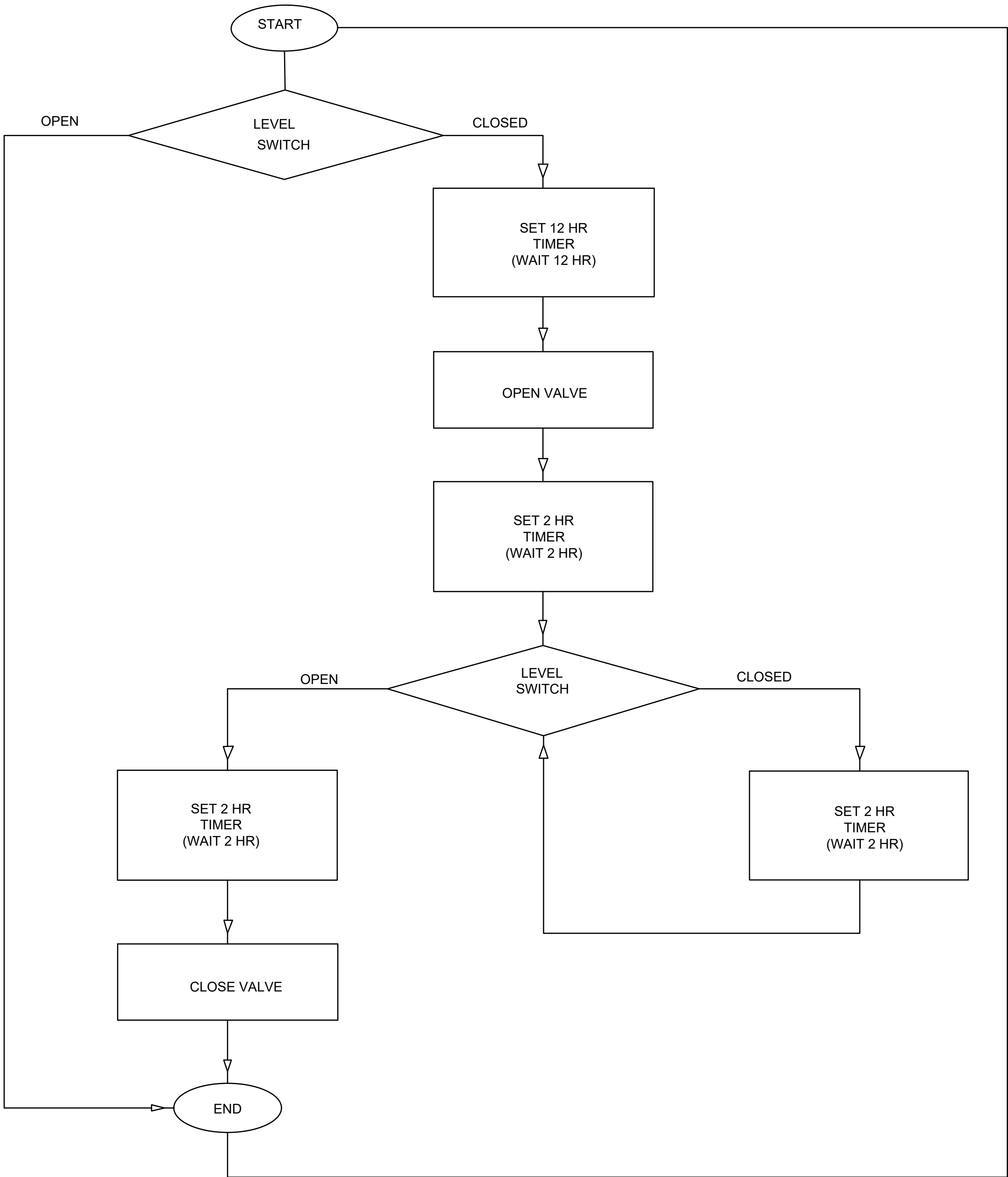
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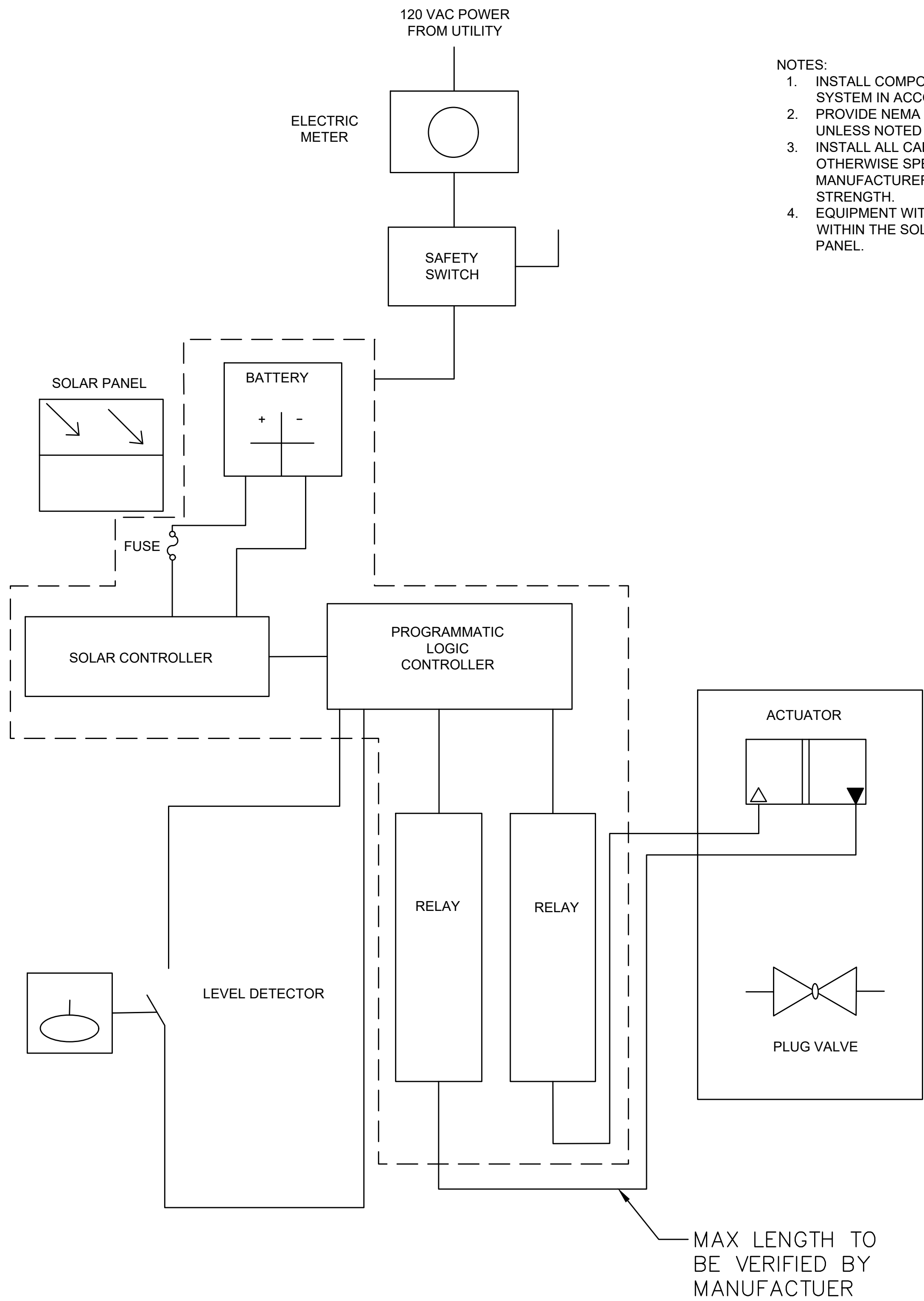
WATER QUALITY AND DETENTION POND DETAILS  
HANWHA TEXAS PLANT  
3600 N. IH 35, GEORGETOWN, TX 78626  
PROJECT NO. 1154-001  
DRAWING NO.  
SHEET 30 OF 45

C:\CompanyData\Clients\1154 - Headquarters Warehouse Development\CAD\Sheets\1154-001\_POND.dwg -- Layout: "POND LOGIC DIAGRAM" -- Fri, Dec 15, 2023, 3:22pm, By: Ultrace

STARTING OPERATION:  
-SWITCH- OPEN  
-VALVE CLOSED



LOGIC DIAGRAM



BLOCK DIAGRAM

- NOTES:
1. INSTALL COMPONENTS FOR SOLAR PHOTOVOLTAIC SYSTEM IN ACCORDANCE WITH NEC.
  2. PROVIDE NEMA 3R CABINETS FOR ALL EQUIPMENT, UNLESS NOTED OTHERWISE.
  3. INSTALL ALL CABLES IN RIGID CONDUIT UNLESS OTHERWISE SPECIFICALLY IDENTIFIED BY THE MANUFACTURER AS DETRIMENTAL TO SIGNAL STRENGTH.
  4. EQUIPMENT WITHIN DASHED LINES IS CONTAINED WITHIN THE SOLAR UPS AND BLOCK VALVE CONTROL PANEL.



TEXAS ONE CALL SYSTEM  
1-800-246-4545  
UNDER PENALTY OF LAW, THE CONTRACTOR IS REQUIRED TO CONTACT THE TEXAS ONE CALL SYSTEM AT LEAST 48 HOURS BEFORE STARTING EXCAVATION.

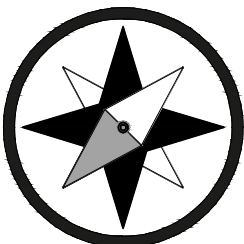
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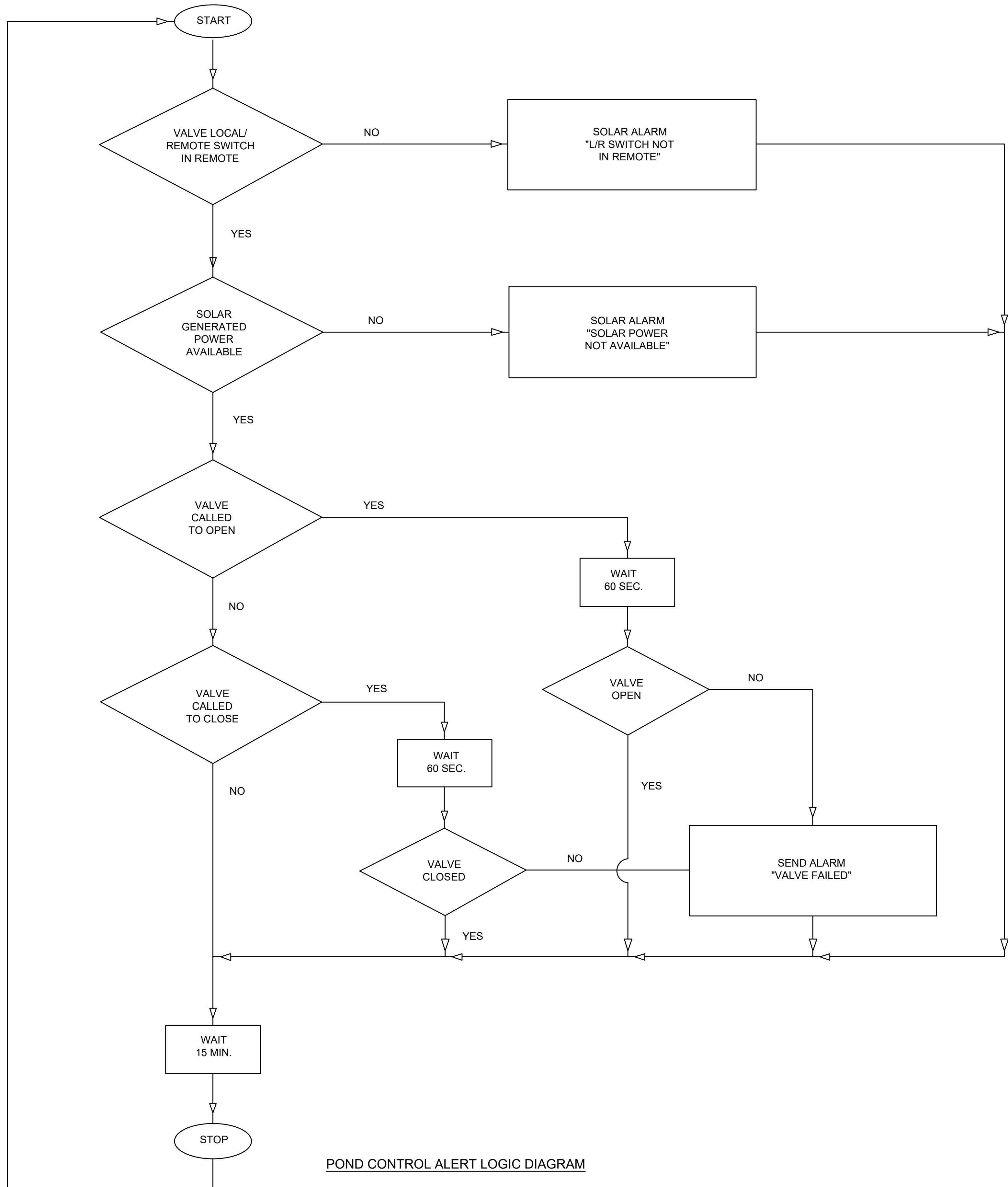
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CHECKED BY: <u>A.C.K.</u>

POND CONTROL LOGIC DIAGRAM
<b>HANWHA TEXAS PLANT</b> 3600 N. IH 35, GEORGETOWN, TX 78626

PROJECT NO. <u>1154-001</u>
DRAWING NO. _____
SHEET <u>31</u> OF <u>45</u>



C:\CompanyData\Clients\1154 - Headquarters Warehouse Development\CAD\Sheets\1154-001\_POND.dwg -- Layout: "POND CONTROL ALARM LOGIC DIAGRAM" -- Fri, Dec 15, 2023, 3:22pm, By: jibrose



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1-800-245-4545

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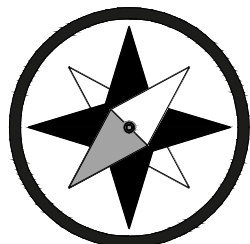
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ALL PERSONNEL ON THIS PROJECT, INCLUDING ANY OFF-SITE WORK  
AREAS SHOWN ON THE PLAN, FROM ANY INTERFERENCE WITH THE  
ELECTRIC LINES OR FROM DAMAGING, DIGGING UP OR UNCOVERING THE  
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CHECKED BY: A.C.K.

**POND CONTROL ALARM LOGIC DIAGRAM**

**HANWHA TEXAS PLANT**

**3600 N. IH 35, GEORGETOWN, TX 78626**

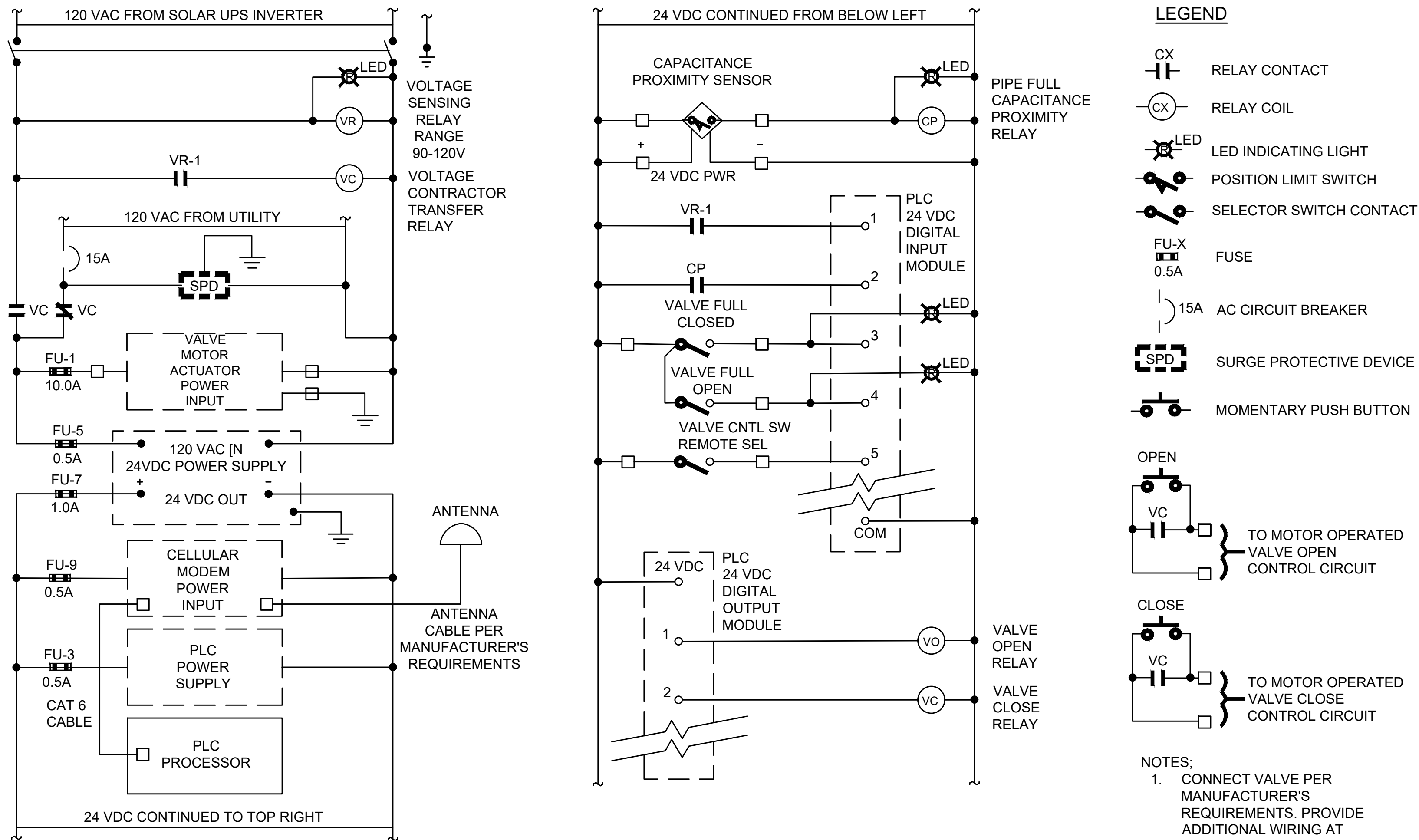
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SHEET 32 OF 45

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- NOTES:
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POND LEVEL CONTROL ELEMENTARY DIAGRAM

 TEXAS ONE CALL SYSTEM  
1-800-246-4545

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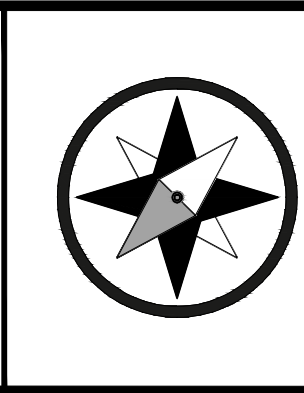
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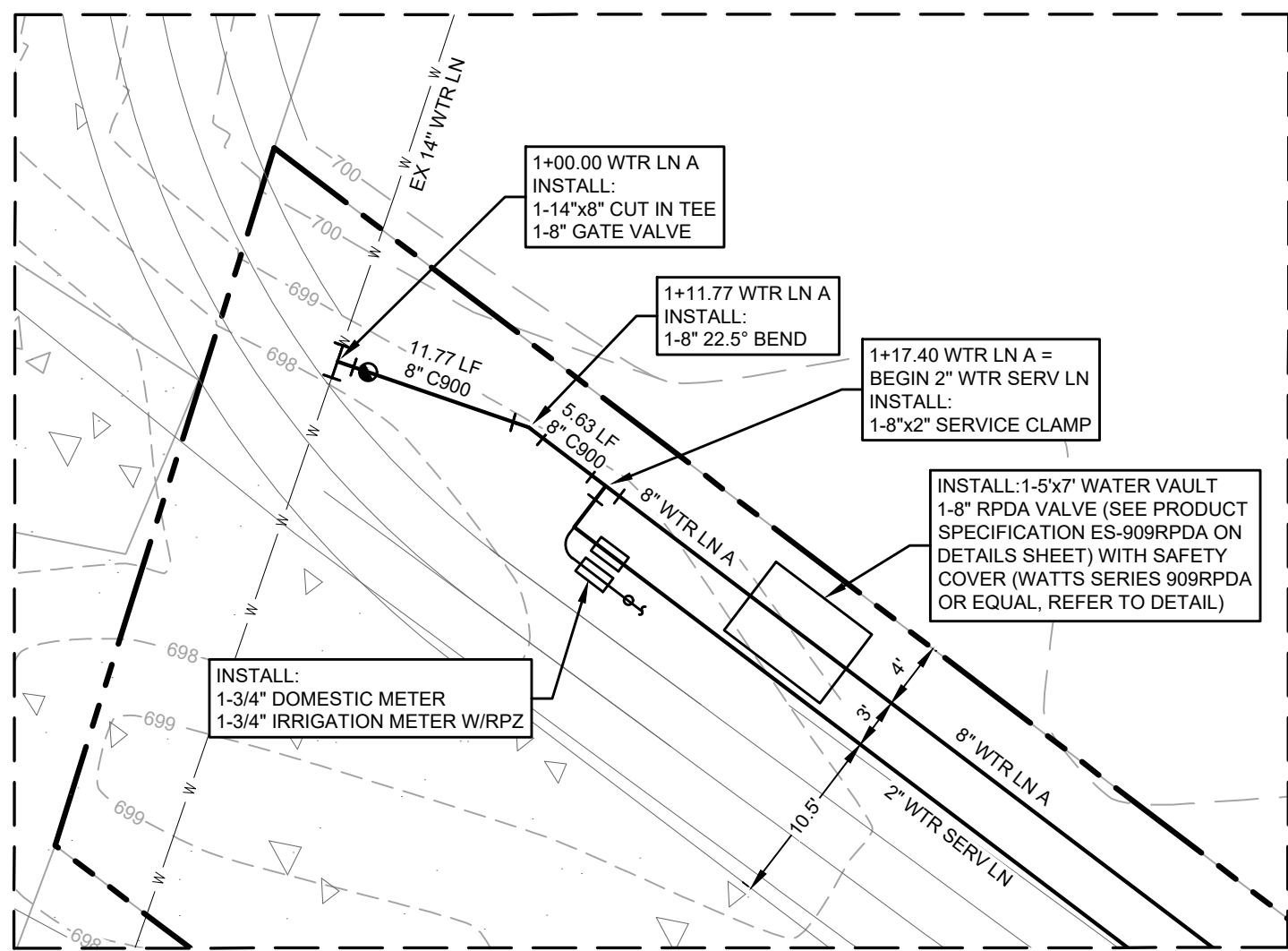
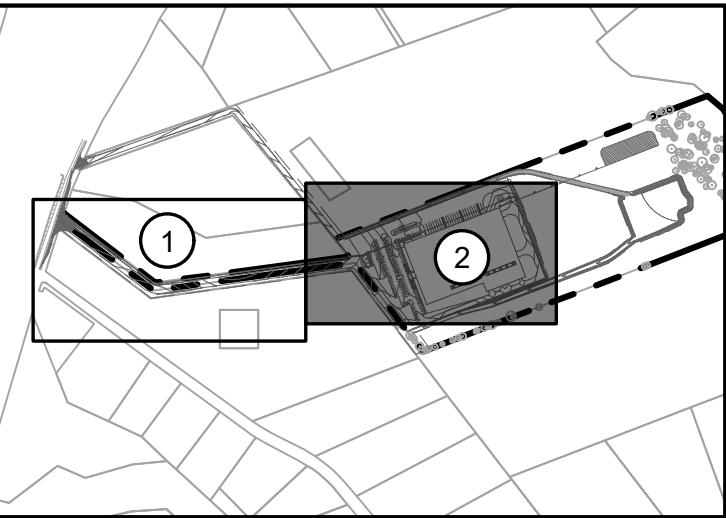
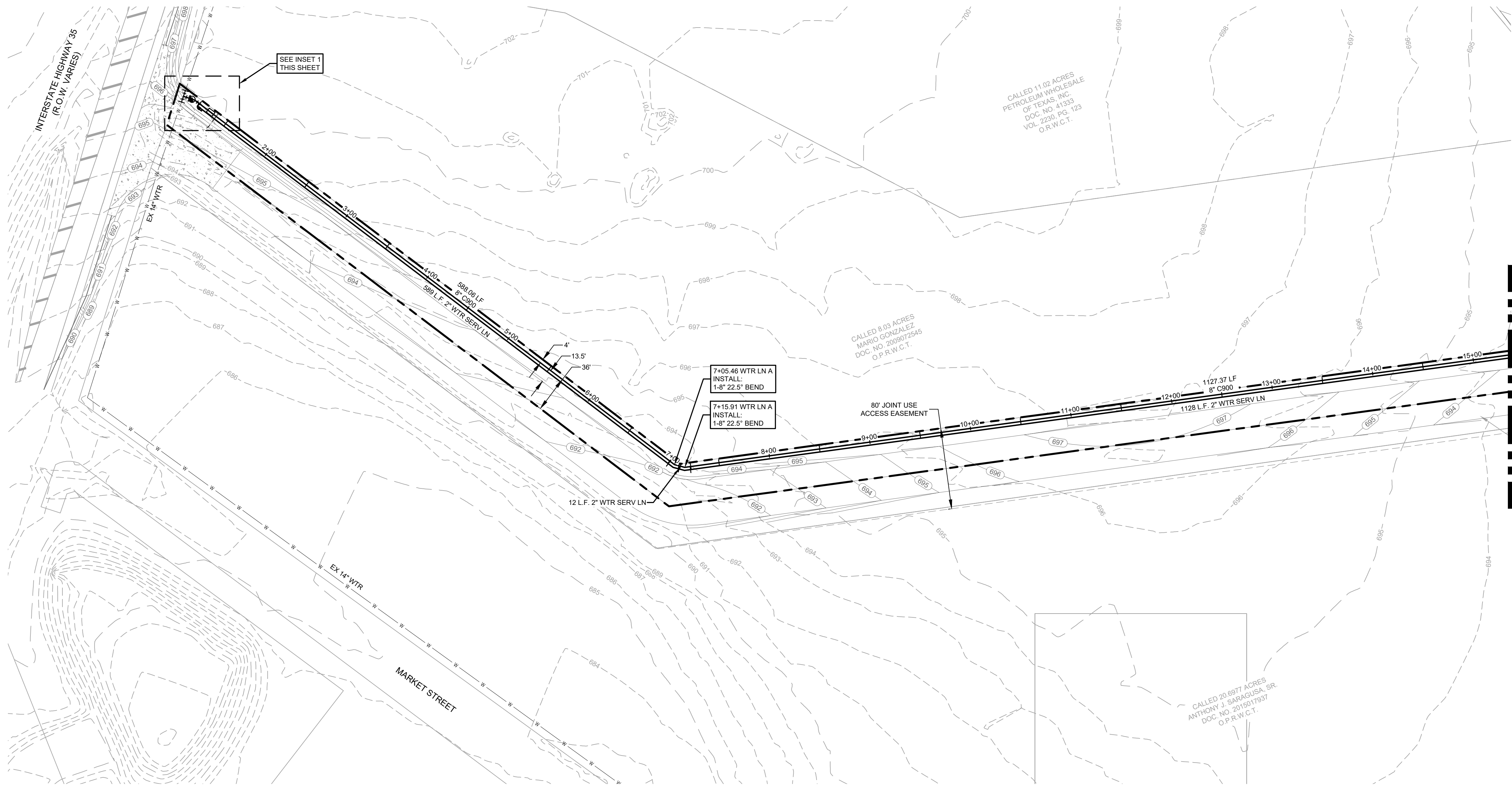
POND LEVEL CONTROL ELEMENTARY DIAGRAM

**HANWHA TEXAS PLANT**  
3600 N. IH 35, GEORGETOWN, TX 78626

PROJECT NO. <u>1154-001</u>
DRAWING NO. _____
SHEET <u>33</u> OF <u>45</u>



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INSET 1  
SCALE: 1"=10'



TEXAS ONE CALL SYSTEM  
1-800-245-4545

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#### CAUTION - ELECTRICITY PRESENT

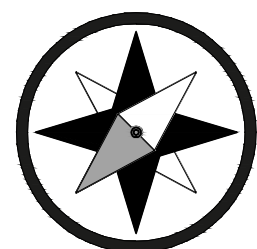
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THE OWNER FROM ANY LIABILITY OF ANY NATURE.

NO.	REVISION	DATE



12/15/2023

THE SEAL APPEARING ON THIS  
DOCUMENT WAS AUTHORIZED BY  
MATTHEW A. DRINGENBERG, PE  
#114250 ON  
THE DATE INDICATED. ANY  
ALTERATIONS OF THIS SEALED  
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RESPONSIBLE ENGINEER IS AN  
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**Southwest  
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TBPE NO. F-1909  
www.swengineers.com

#### HEADQUARTERS

307 Saint Lawrence Street, Gonzales TX 78629  
P: 830.672.7546 F: 830.672.2034

#### CENTRAL TEXAS

205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4330

#### WARNING

IF THIS BAR DOES NOT MEASURE 1"  
THE DRAWING IS NOT TO SCALE

DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

WATER PLAN (1 OF 2)

**HANWHA TEXAS PLANT**

**3600 N. IH 35, GEORGETOWN, TX 78626**

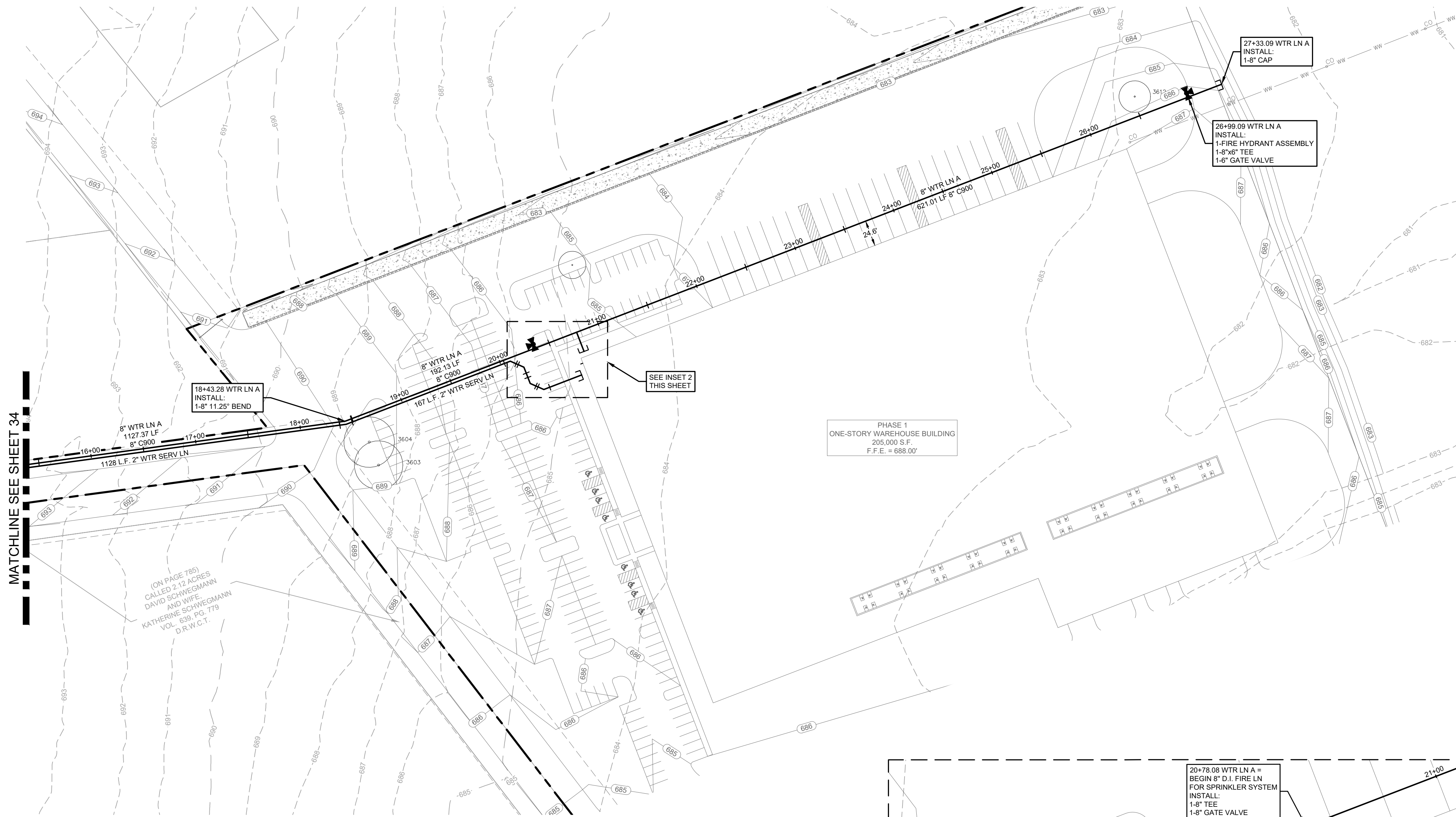
PROJECT NO. 1154-001

DRAWING NO. \_\_\_\_\_

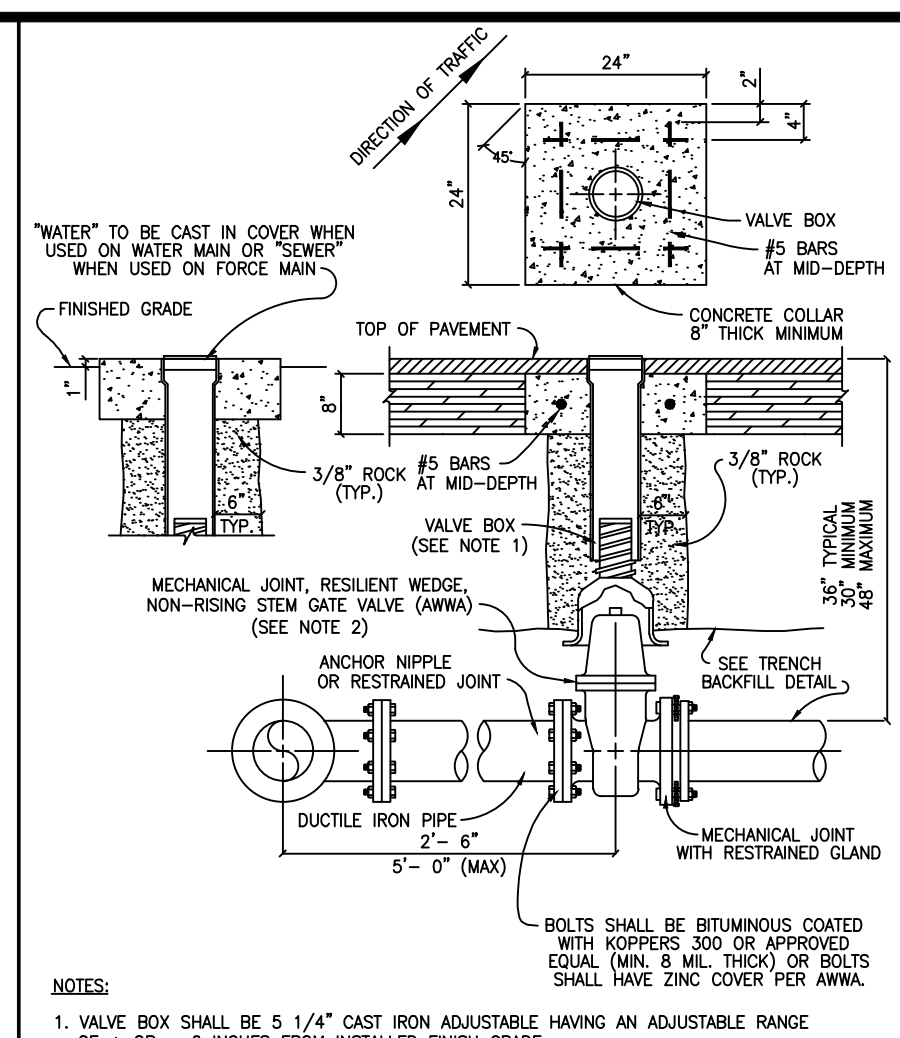
SHEET 34 OF 45



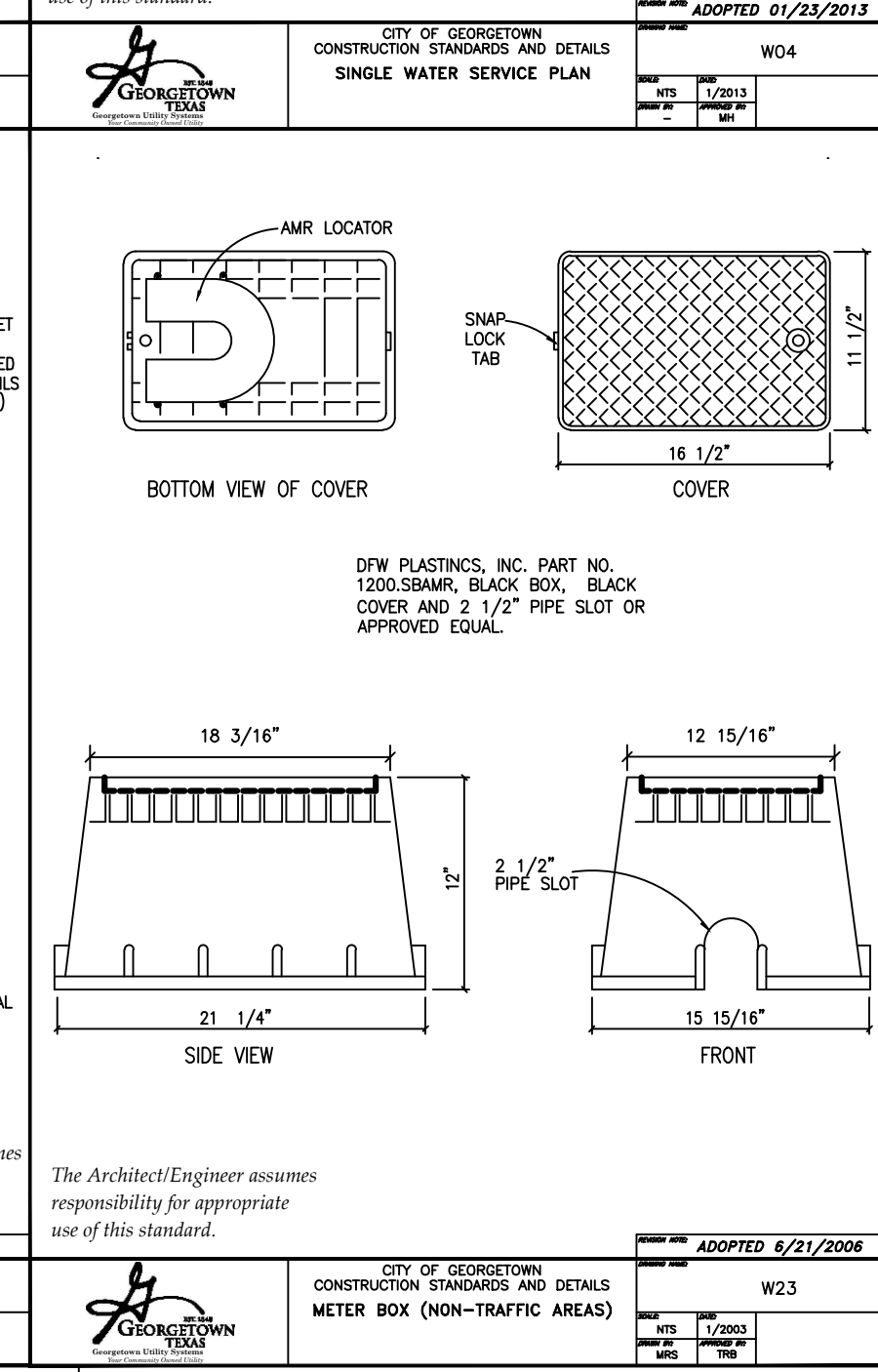
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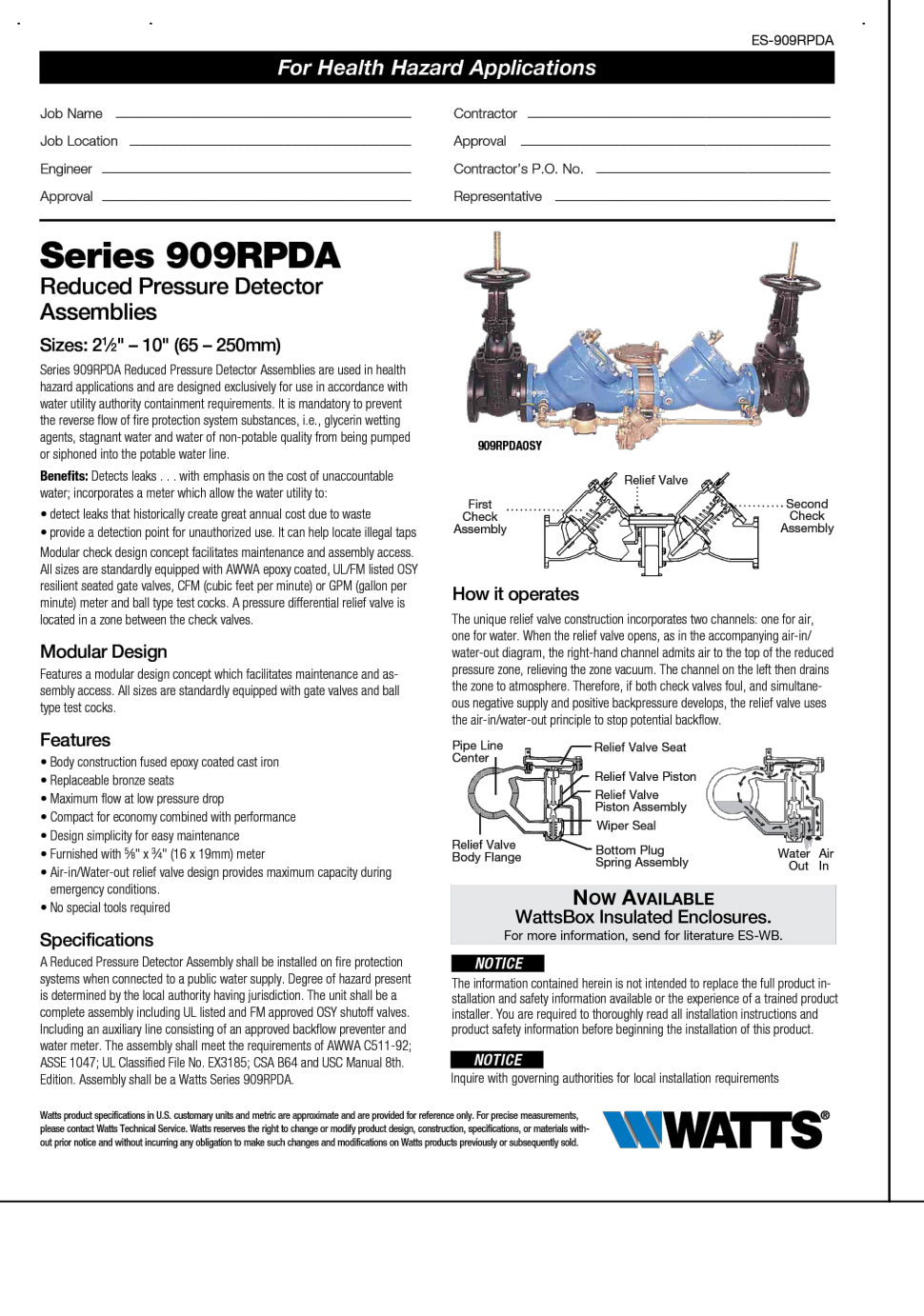




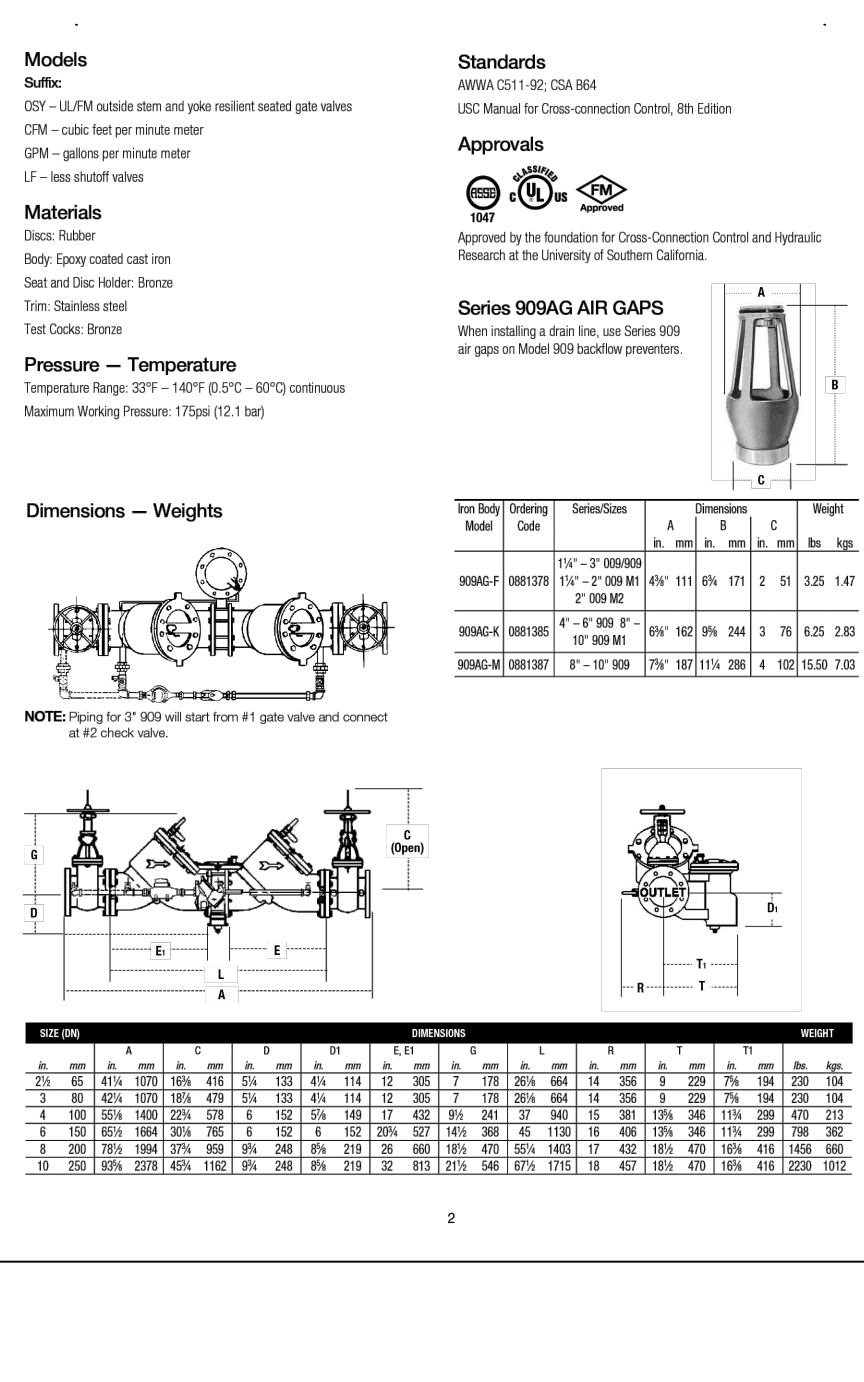
2. ACCEPTABLE GATE VALVES ARE:  
A. AMERICAN FLOW CONTROL - SERIES 2500  
B. MUELLER - 2360 SERIES  
C. CLOW



The Architect/Engineer assumes responsibility for appropriate




All Fire Department Connections (FDC's) shall be marked as approved by the Fire Code Official. Two red street lane reflectors (stimsonite model 88AB or similar) shall be installed six inches from centerline of the fire apparatus access roadway on the side closest to the FDC. Markers shall be parallel to the FDC having the reflective ends of the street markers facing the direction of traffic. 2012 IFC

[illegible]

**Standards**  
AWWA C511-92, CSA B54  
USC Manual for Cross-connection Control, 8th Edition

**Approvals**

UL 1047 FM Approved

[illegible]


## Dimensions – Weight

		Valve Body	Ordering Code	Dimensions	A	B	C	D	E	F	G	H	I	J	K	Net Wt.
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2

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**TEXAS ONE CALL SYSTEM**  
1-800-254-2545

UNDER PENALTY OF LAW, THE CONTRACTOR IS  
REQUIRED TO CALL THE TEXAS ONE CALL SYSTEM  
AT LEAST 48 HOURS BEFORE STARTING EXCAVATION.

**CAUTION - ELECTRICITY PRESENT**

THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS THAT ENTER OR  
WORK ON THIS PROJECT ARE RESPONSIBLE FOR LOCATING, USING  
ONE-CALL OR THE ELECTRIC UTILITIES THEMSELVES, ALL OVERHEAD AND  
UNDERGROUND ELECTRICAL OF ANY NATURE AND FOR SAFEGUARDING  
ALL PERSONNEL ON THIS PROJECT, INCLUDING ANY OFF-SITE WORK  
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<p style="text-align: center;"><b>WARNING</b></p>  <p style="text-align: center;">IF THIS BAR DOES NOT MEASURE 1", THE DRAWING IS NOT TO SCALE</p>	
<p>RAWN BY: <u>  T.J.B.  </u></p>	
<p>CHECKED BY: <u>  A.C.K.  </u></p>	

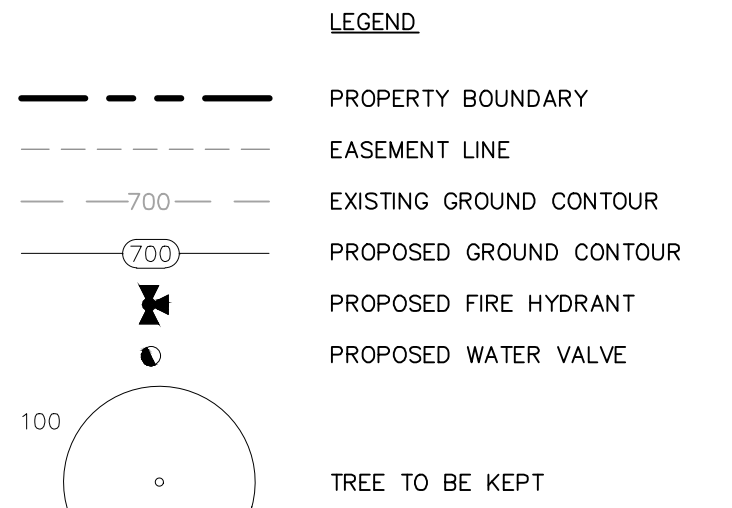
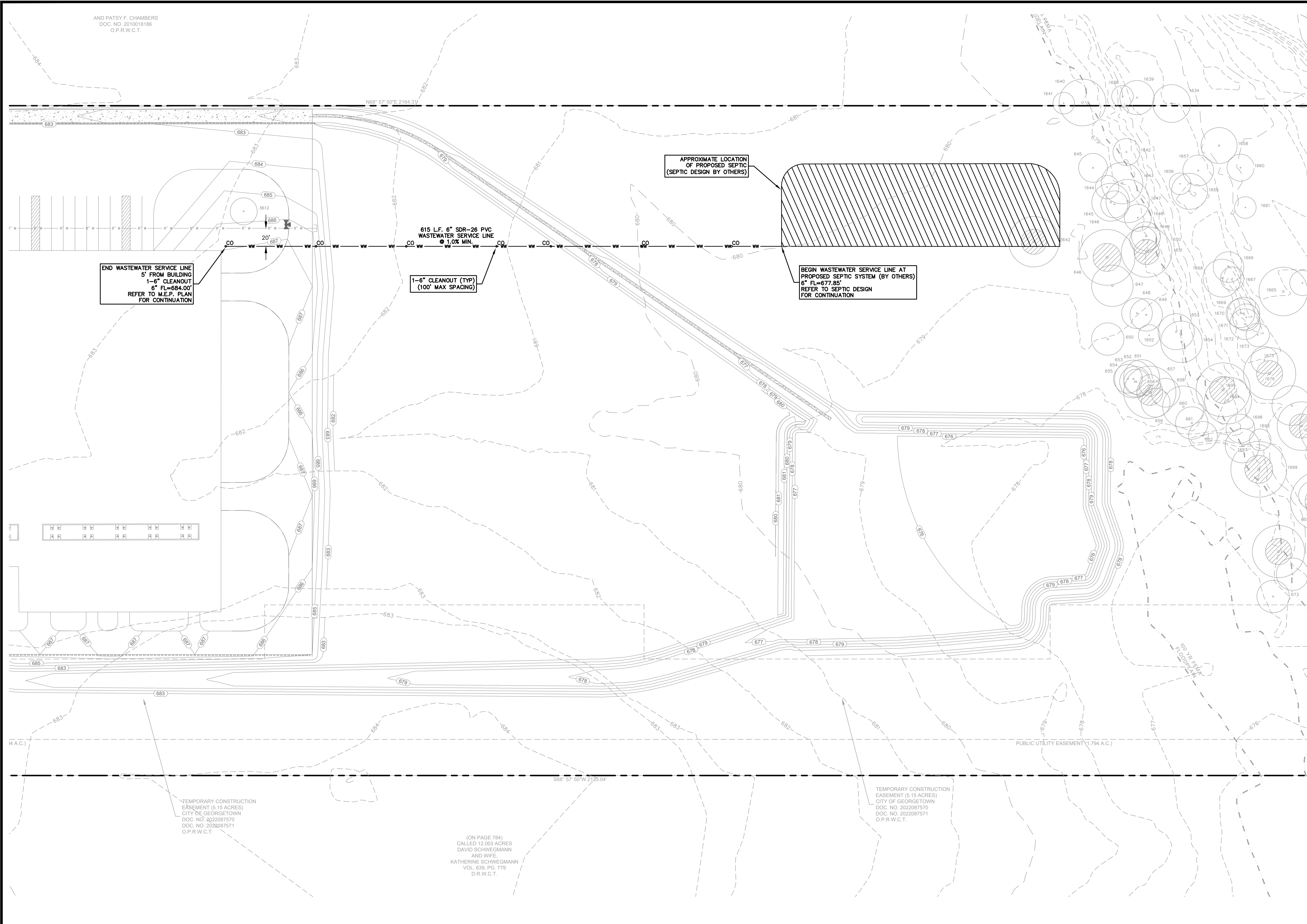
PROJECT NO. 1154-001

DRAWING NO. \_\_\_\_\_

SHEET 36 OF 45

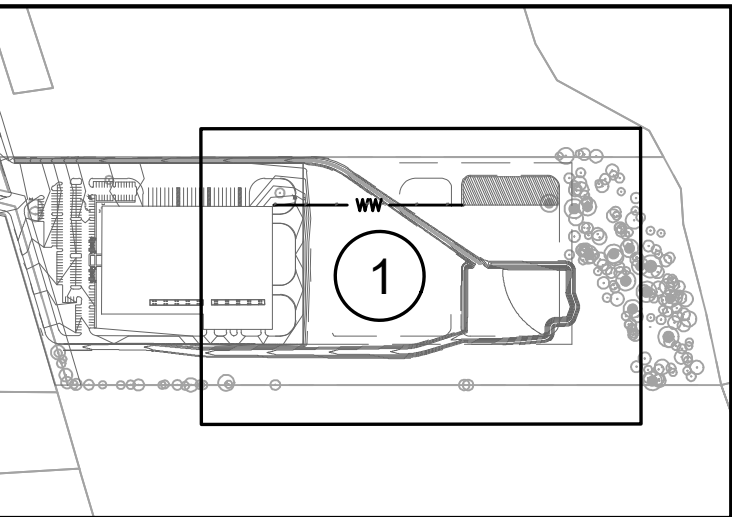


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WASTEWATER NOTES:

1. WASTEWATER SERVICE IS NOT PROPOSED WITH THIS PLAN. A SEPTIC DESIGN AND PERMIT WILL BE OBTAINED BY THE OWNER.



KEY MAP  
N.T.S.



TEXAS ONE CALL SYSTEM  
1-800-246-4545

UNDER PENALTY OF LAW, THE CONTRACTOR IS  
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AT LEAST 48 HOURS BEFORE STARTING EXCAVATION.

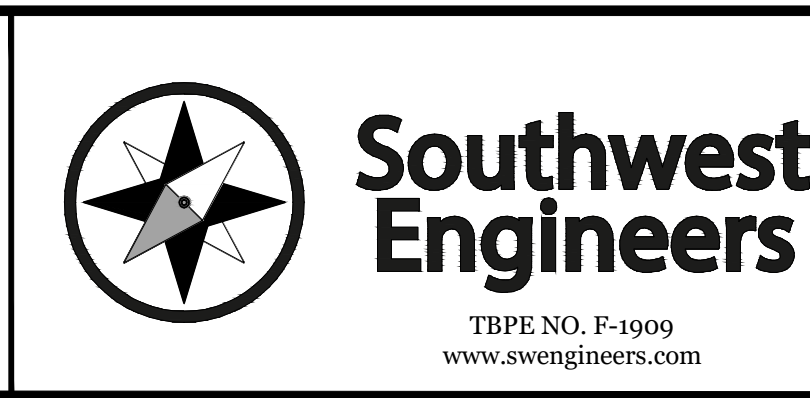
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NO.	REVISION	DATE



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MATTHEW A. DRINGENBERG, PE  
#114250 ON  
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**CENTRAL TEXAS**  
205 Cimarron Park Loop, Ste. B, Buda TX 78610  
P: 512.312.4336

**WARNING**  
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THE DRAWING IS NOT TO SCALE

DRAWN BY: TXDB

CHECKED BY: AKOK

PRIVATE WASTEWATER PLAN

**HANWHA TEXAS PLANT**  
3600 N. IH 35, GEORGETOWN, TX 78626

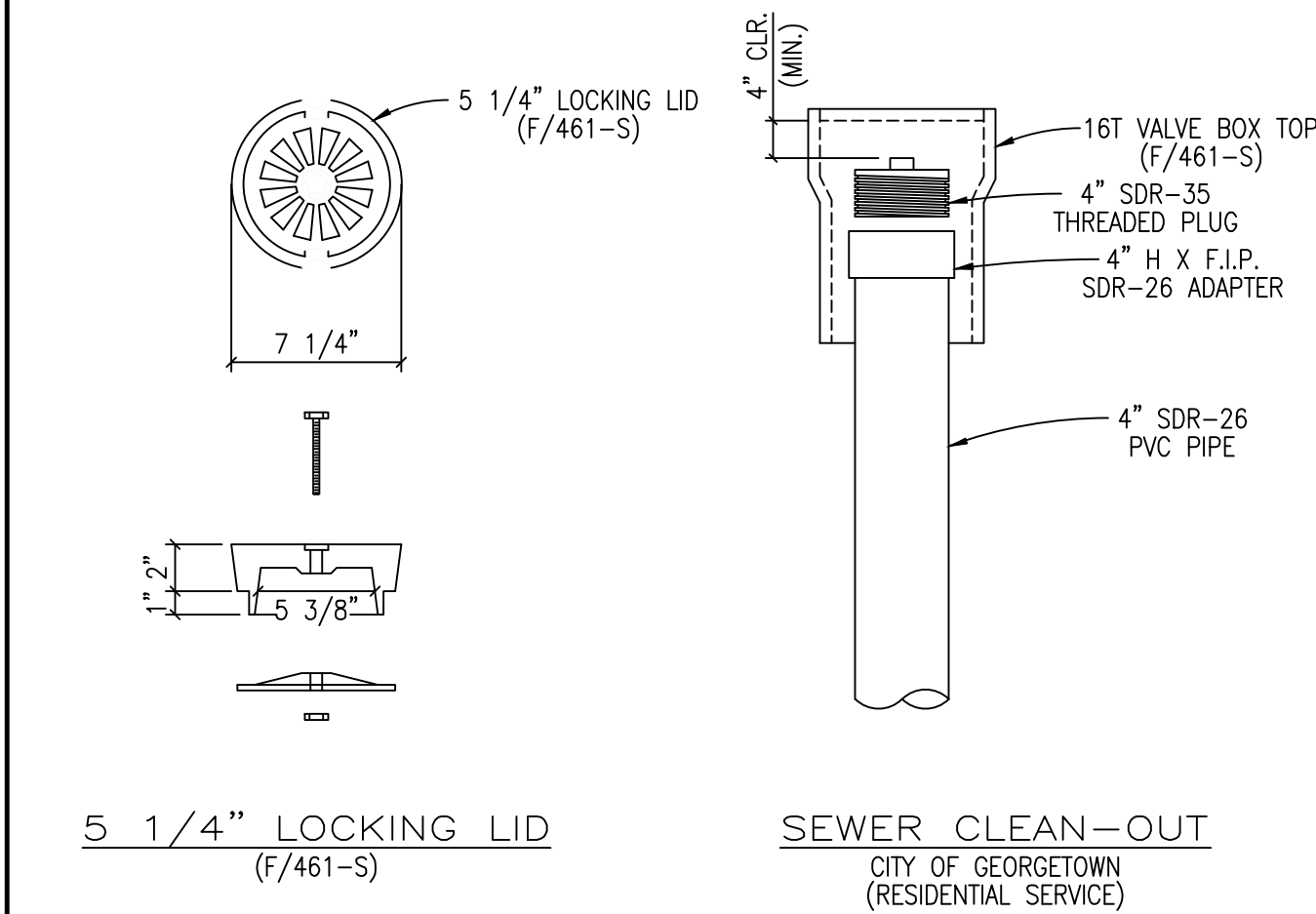
PROJECT NO. 1154-001

DRAWING NO.           

SHEET 37 OF 45



C:\CompanyData\Clients\1154 - Headquarters Warehouse Development\CAD\Sheets\1154-001\_WW18.dwg -- Layout: "WW DETAILS" -- Fri, Dec 15, 2023, 3:22pm, By: Librera



5 1/4" LOCKING LID  
(F/461-S)

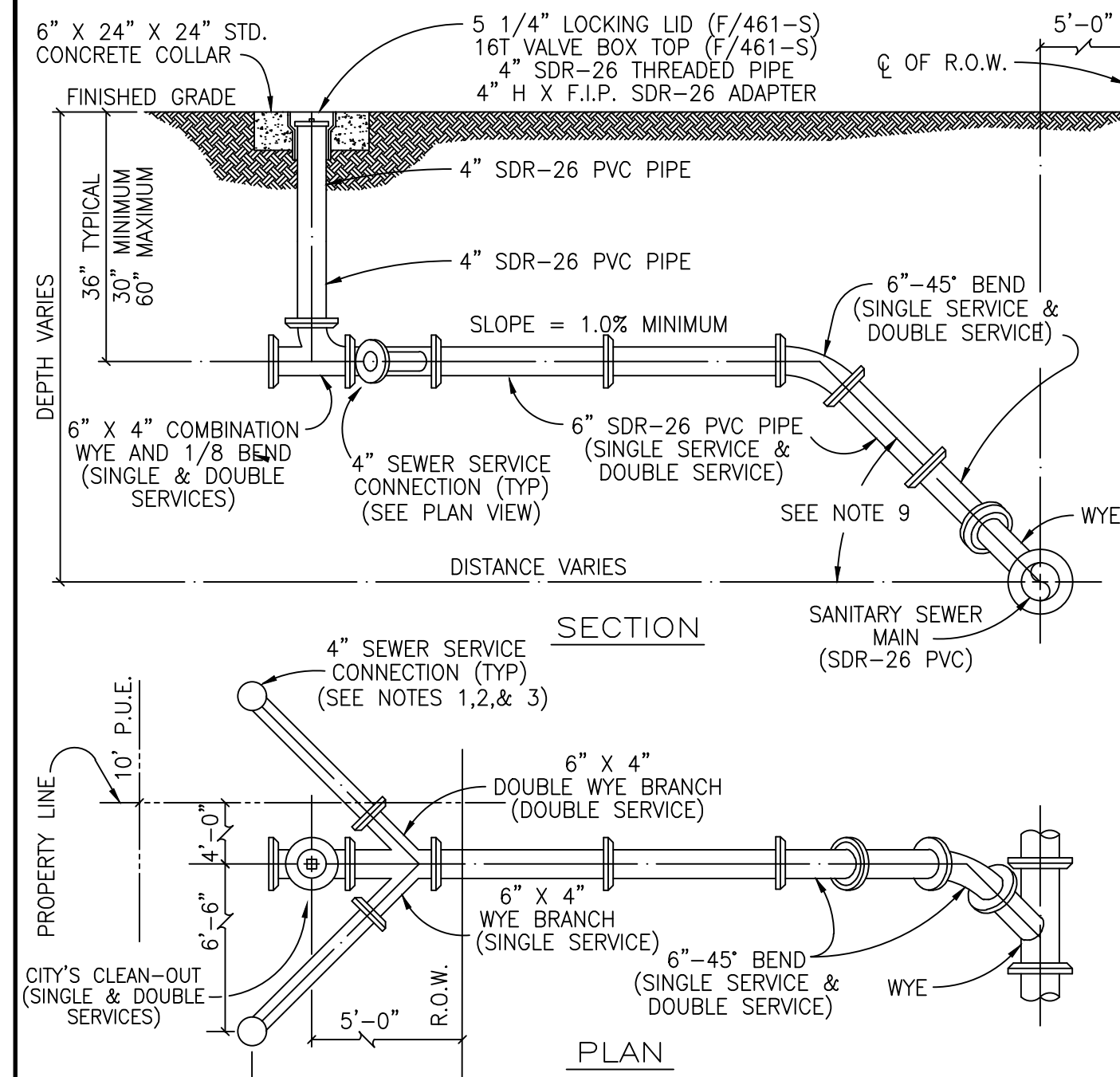
SEWER CLEAN-OUT  
CITY OF GEORGETOWN  
(RESIDENTIAL SERVICE)

The Architect/Engineer assumes  
responsibility for appropriate  
use of this standard.



CITY OF GEORGETOWN  
CONSTRUCTION STANDARDS AND DETAILS  
SEWER CLEAN-OUT DETAIL

REVISION NOTE: ADOPTED 6/21/2006	
DATE: NTS 1/2003	DATE: NTS 1/2003
DRAWN BY: MFS	APPROVED BY: TRB



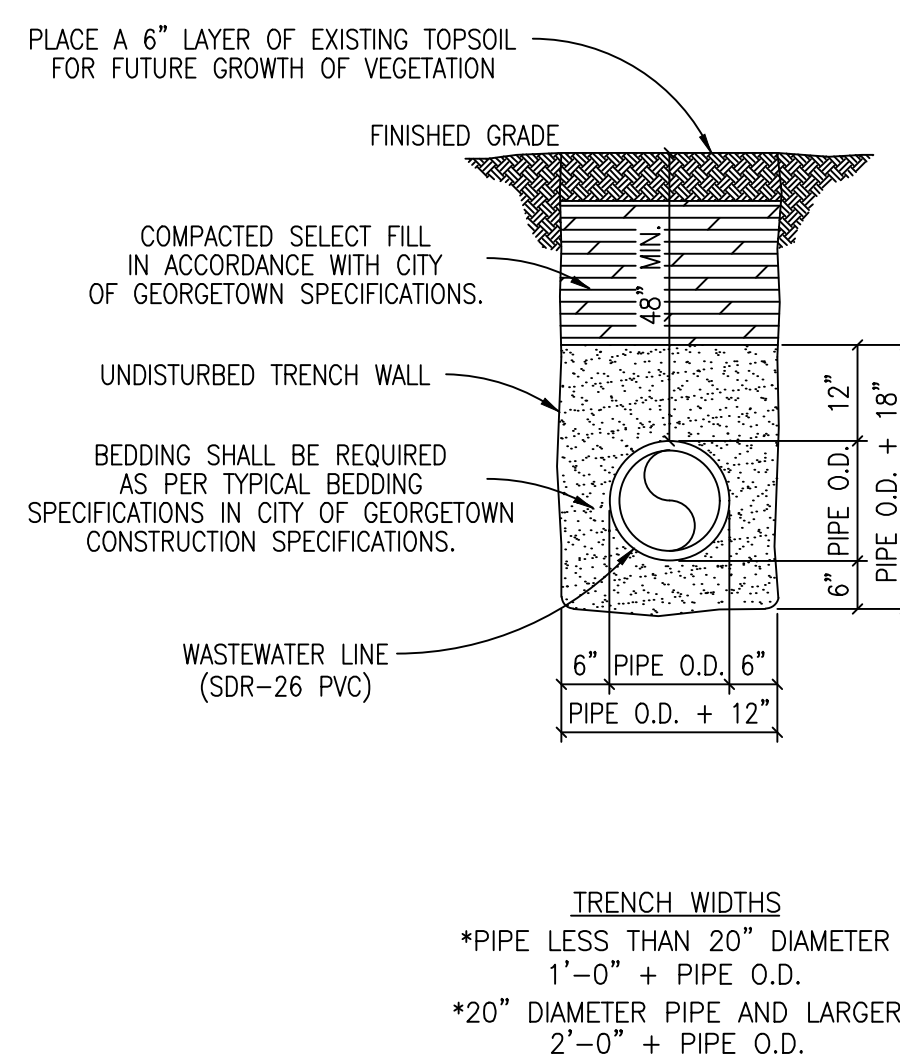
- NOTES:
- SERVICE CONNECTION RISERS SHALL TERMINATE 8' IN-SIDE THE PROPERTY LINE.
  - THE END OF EACH SERVICE CONNECTION RISER SHALL BE EXTENDED 12" ABOVE FINISH GRADE.
  - EACH SERVICE CONNECTION SHALL BE PLUGGED WATER-TIGHT WITH AN APPROVED CAP OR PLUG.
  - FOR P.V.C. INSTALLATIONS, CONNECT TO EXISTING "BELL END" AND CONNECT OPPOSITE END WITH P.V.C. TO P.V.C. KNOCK ON SLEEVE.
  - SOLIDLY TAMP BACKFILL AT LEAST ONE FOOT (1'-0") ABOVE TOP OF PIPE. SERVICES UNDER PAVED AREAS SHALL BE BACKFILLED TO THE SAME SPECIFICATIONS AS SHOWN ON PAVEMENT REPLACEMENT DETAIL.
  - CONTRACTOR SHALL MARK ON A CLEAN SET OF PLANS THE FINAL STATIONING OR DISTANCE AND DIRECTION FROM MANHOLE TO EACH SERVICE LATERAL AND GIVE TO ENGINEER FOR RECORD DRAWING PURPOSES.
  - ANY DEVIATION FROM THESE METHODS MUST BE APPROVED BY THE CITY OF GEORGETOWN ENGINEERING DEPARTMENT.
  - SERVICE LINE MATERIAL SHALL BE P.V.C., SDR-26.
  - SEWER SERVICE SLOPE TO BE 45' OFF CENTERLINE OF MAIN.

The Architect/Engineer assumes  
responsibility for appropriate  
use of this standard.



CITY OF GEORGETOWN  
CONSTRUCTION STANDARDS AND DETAILS  
SEWER SERVICE CONNECTIONS

REVISION NOTE: ADOPTED 6/21/2006	
DATE: NTS 1/2003	DATE: NTS 1/2003
DRAWN BY: MFS	APPROVED BY: TRB

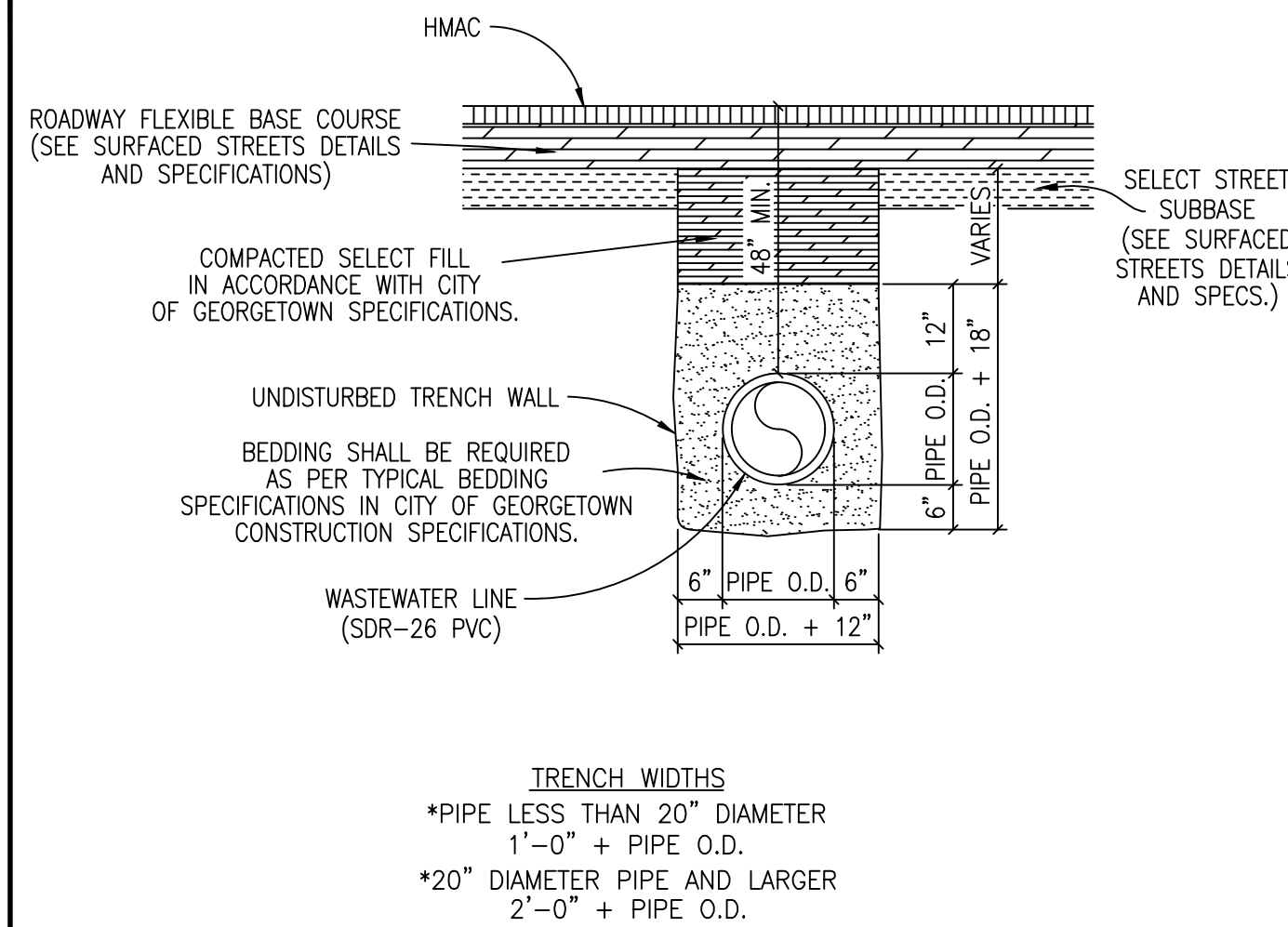


The Architect/Engineer assumes  
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CITY OF GEORGETOWN  
CONSTRUCTION STANDARDS AND DETAILS  
TRENCH AND EMBEDMENT DETAIL  
UNDER NON-PAVED AREAS

REVISION NOTE: ADOPTED 6/21/2006	
DATE: NTS 1/2003	DATE: NTS 1/2003
DRAWN BY: MFS	APPROVED BY: TRB



- TRENCH WIDTHS
- \*PIPE LESS THAN 20" DIAMETER  
1'-0" + PIPE O.D.
  - \*20" DIAMETER PIPE AND LARGER  
2'-0" + PIPE O.D.

- NOTES:
- DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
  - CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

The Architect/Engineer assumes  
responsibility for appropriate  
use of this standard.



CITY OF GEORGETOWN  
CONSTRUCTION STANDARDS AND DETAILS  
TRENCH AND EMBEDMENT DETAIL  
UNDER PROPOSED ROADWAY

REVISION NOTE: ADOPTED 6/21/2006	
DATE: NTS 1/2003	DATE: NTS 1/2003
DRAWN BY: MFS	APPROVED BY: TRB



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1-800-246-4545

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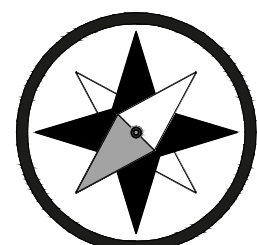
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P: 512.312.4330

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DRAWN BY: T.J.B.

CHECKED BY: A.C.K.

#### WASTEWATER DETAILS

#### HANWHA TEXAS PLANT

3600 N. IH 35, GEORGETOWN, TX 78626

PROJECT NO. 1154-001

DRAWING NO.

SHEET 38 OF 45