UNDERGROUND STORAGE TANK APPLICATION

for

CIRCLE K STORES, INC.
900 Louis Henna Blvd.
Round Rock, Texas 78664

1-27-26

Prepared For:

Marcella Rocha
Circle K Stores, Inc.
1130 West Warner Road, Suite B
Tempe, AZ 85284

Prepared By:

Lee Whited, P.E.
CARLSON, BRIGANCE & DOERING, INC.
5701 West William Cannon Drive
Austin, Texas 78749
(512) 280-5160

Carlson, Brigance & Doering, Inc.
Civil Engineering ❖ Surveying
#F3791

CBD No. 5767
January 2026

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*Check Payable to TCEQ

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

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: Circle K Stores. Inc.						**2. Regulated Entity No.:** RN 101489805			
3. Customer Name: Lee A. Whited						**4. Customer No.:** CN 6001344			
5. Project Type: **(Please circle/check one)**	(New)		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	(UST)	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		(Non-residential)			**8. Site (acres):**			3.517 AC
9. Application Fee:	$1,300.00		**10. Permanent BMP(s):**			EXISTING SITE BMP(s)			
11. SCS (Linear Ft.):	0 LF		**12. AST/UST (No. Tanks):**			UST. 2 TANKS			
13. County:	Williamson		**14. Watershed:**			Brushy			

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	___	1
Region (1 req.)	___	___	1
County(ies)	___	___	1
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville 1 ___Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	___	___	___	___	___
Region (1 req.)	___	___	___	___	___
County(ies)	___	___	___	___	___
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	___Edwards Aquifer Authority	___Kinney	___EAA ___Medina	___EAA ___Uvalde
City(ies) Jurisdiction	___Castle Hills ___Fair Oaks Ranch ___Helotes ___Hill Country Village ___Hollywood Park ___San Antonio (SAWS) ___Shavano Park	___Bulverde ___Fair Oaks Ranch ___Garden Ridge ___New Braunfels ___Schertz	NA	___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.

Lee A. Whited

Print Name of Customer/Authorized Agent

1-27-26

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):	

I. UST APPLICATION 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: Lee A. Whited

Date: 1/5/2026

Signature of Customer/Agent:

Project Information

1. Regulated Entity Name: Circle K Stores, Inc.
2. County: Williamson
3. Stream Basin: Brushy Creek
4. Groundwater Conservation District (If applicable): _____
5. Edwards Aquifer Zone:

   ☐ Recharge Zone
   ☒ Transition Zone

6. Plan Type:

   ☐ WPAP
   ☐ SCS
   ☐ Modification
   ☐ AST
   ☒ UST
   ☐ Exception Request

7. Customer (Applicant):

   Contact Person: Marcella Rocha
   Entity: Circle K Stores, Inc.
   Mailing Address: 1130 West Warner Road, Suite B
   City, State: Tempe, AZ Zip: 85284
   Telephone: 602 728 8000 FAX: _____
   Email Address: marcella.rocha@circlek.com

8. Agent/Representative (If any):

   Contact Person: Lee A. Whited
   Entity: Carlson, Brigance & Doering, Inc.
   Mailing Address: 5701 W William Cannon Dr, Austin
   City, State: Austin, TX Zip: 78749
   Telephone: 512 280 5160 FAX: _____
   Email Address: lee@cbdeng.com

9. Project Location:

   ☒ The project site is located inside the city limits of Round Rock.
   ☐ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
   ☐ 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.

    _____

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)

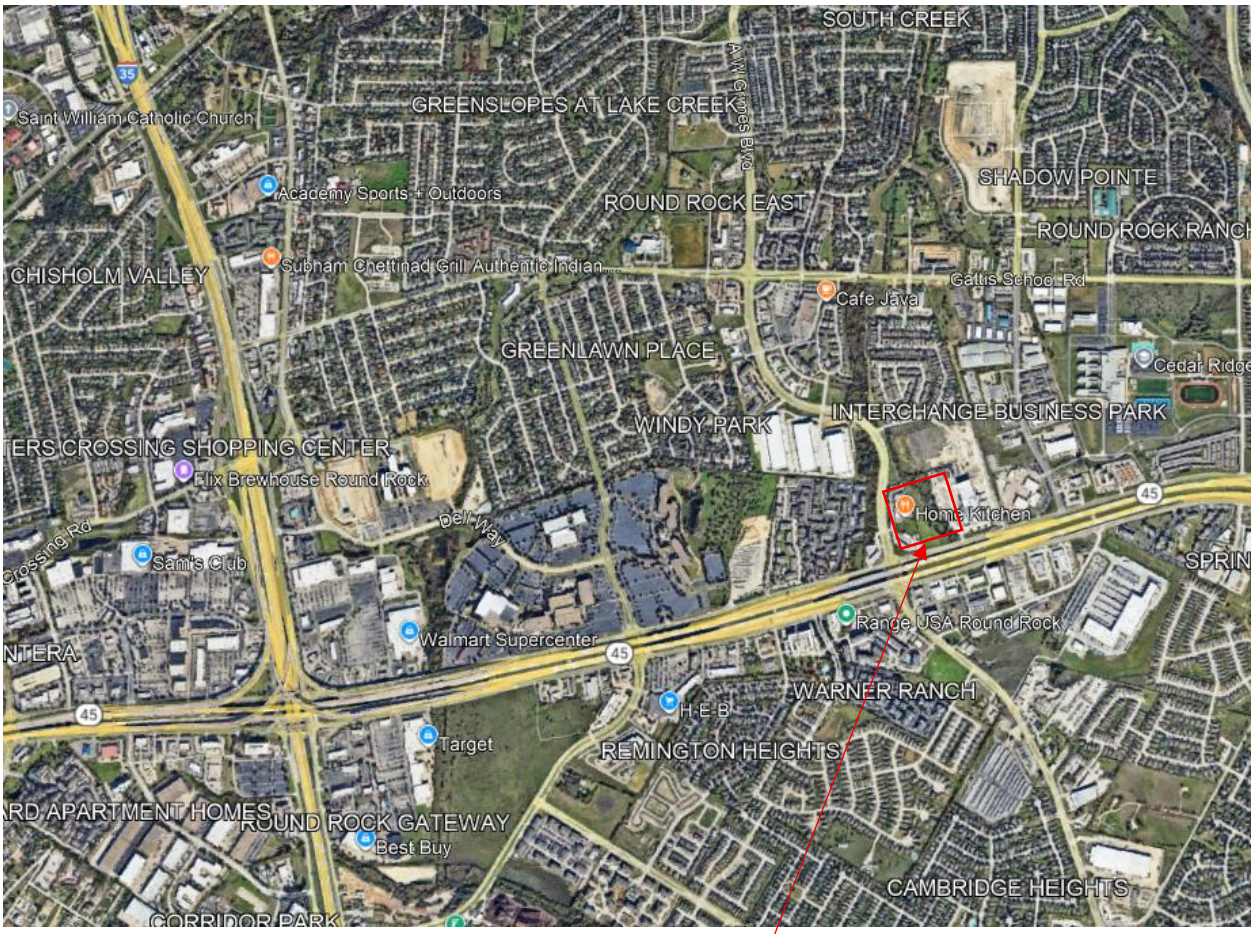
20. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies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

UNDERGROUND STORAGE TANK APPLICATION

Attachment "A"

ROAD MAP



PROJECT LOCATION

UNDERGROUND STORAGE TANK APPLICATION

Attachment "B"

USGS QUADRANGLE MAP

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map
OnDemand Topo

7.5-MINUTE TOPO QUADRANGLE
TEXAS - CUSTOM EXTENT
7.5-MINUTE TOPO

-97.7118° 624 000mE 25 26 27 28 29 30 31 32 33 34 35 -97.5868°
30.5496° 3380 000mN 30.4246°

PROJECT LOCATION

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid: UNIVERSAL TRANSVERSE MERCATOR, ZONE 14R

Data is provided by The National Map (TNM), is the best available at the time of map generation, and includes data content from supporting themes of Elevation, Hydrography, Geographic Names, Boundaries, Transportation, Structures, Land Cover, and Orthoimagery. Refer to associated Federal Geographic Data Committee (FGDC) Metadata for additional source data information.

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands. Temporal changes may have occurred since these data were collected and some data may no longer represent actual surface conditions.

Learn About The National Map: https://nationalmap.gov

MN GN
3°5′ 55 MILS
0°41′ 12 MILS
UTM GRID AND 2025 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
PU
Grid Zone Designation
14R

SCALE 1:24 000
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
CONTOUR SMOOTHNESS = Medium

TEXAS
QUADRANGLE LOCATION
Round Rock | Hutto
Pflugerville West | Pflugerville East
ADJOINING QUADRANGLES

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

7.5-MINUTE TOPO, TX
2025

UNDERGROUND STORAGE TANK APPLICATION
Attachment "C"
PROJECT DESCRIPTION

1.0 GENERAL

Circle K Gas Station is a convenience store and gas station located on 3.517 acres off the northeast side of the intersection of Louis Henna Blvd./State Highway 45 and AW Grimes Blvd. located roughly 1.5 miles east of Interstate 35. This project is an installation of 2 underground tanks, one to hold diesel and one to hold DEF. There are no offsite areas relevant to this project. The site contains two enclosed buildings which include a convenience store and a drive through car wash. There is a gas pump overhead cover also on the property. The car wash is to be demolished with this project. See attached demolition plan (Attachment H of the UST Facility Plan section) for more detail on demolition for this project. This application only refers to the installation of the 2 USTs that are to be installed with this project. The gas station, car wash, and pumps are currently existing on the property already. The project is located within the City Limits of Round Rock in the south part of Williamson County.

2.0 ACCESS/TRANSPORTATION

Access to this project will be primarily taken from Louis Henna Blvd./State Highway 45 via one main driveway entrance on the southern side of the site. An alternative access point is located onto AW Grimes Blvd. from the western side of the site.

3.0 DETENTION

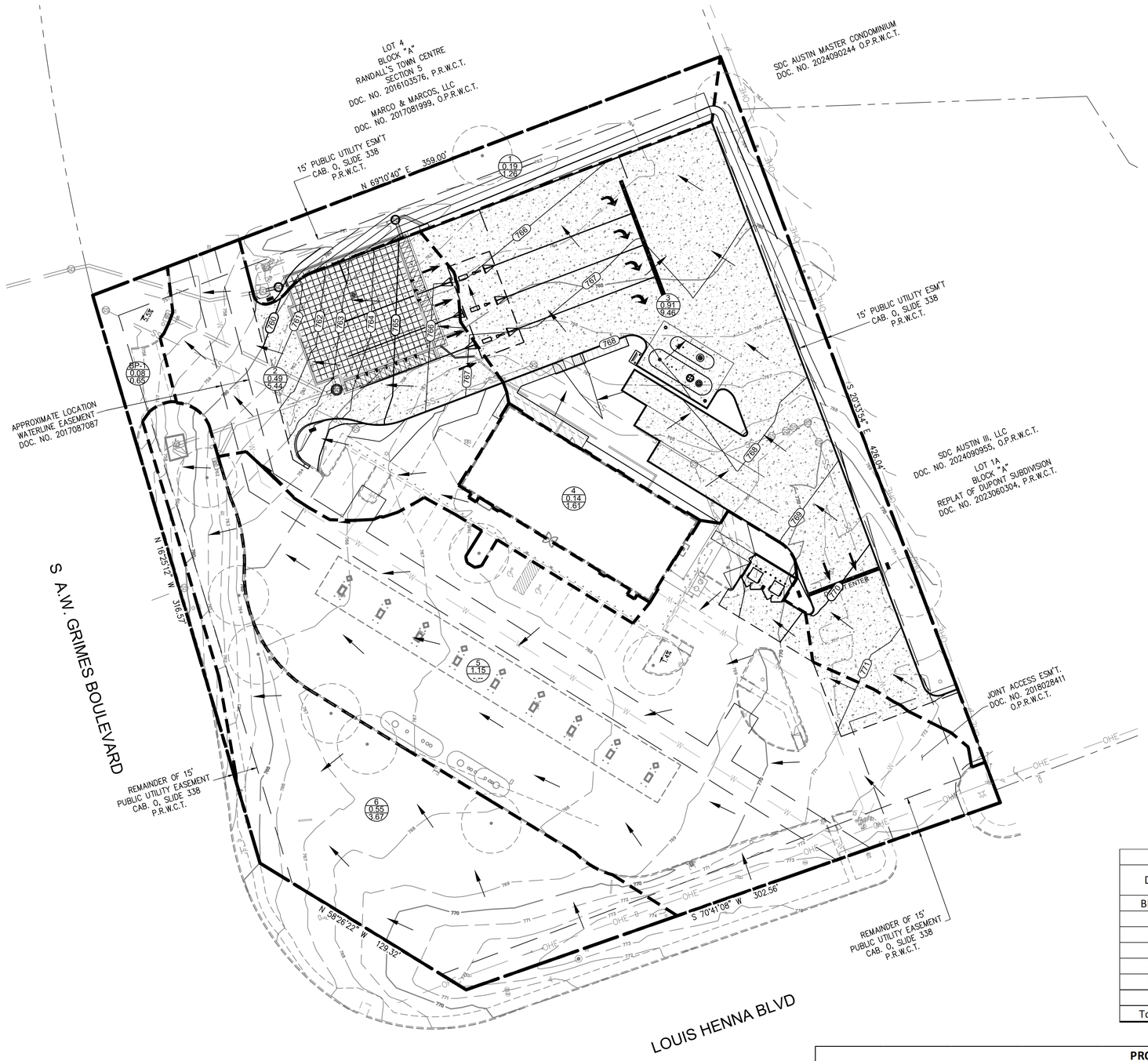
For proposed impervious cover area and impervious area percentage, please see sheets C9.3 in the below sheets taken from the civil plan set. Detention is an underground detention solution designed by others. The rational method is used to calculate flow rates before and after development. Water is to be stored in underground detention facilities and released through an 18" reinforced concrete pipe into an existing storm drain system at a controlled rate. Please see sheets C9.0 through C9.9 (attached below) for additional detention calculations and details regarding the underground detention.

4.0 SEDIMENTATION/EROSION CONTROL/TREE SURVEY

All sedimentation /erosion controls are required and will be in accordance with City of Round Rock requirements and City of Austin Standard Specifications. All appropriate temporary BMPs will be installed during the construction of the USTs and associated improvements. No new permanent BMPs will be installed with this project.

5.0 FLOODPLAIN

No portion of this project is located within the FEMA 100-year floodplain.



STORM DRAIN NOTES:

1. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR HIS MEANS AND METHODS OF CONSTRUCTION, JOB SITE CONDITIONS AND JOB SITE SAFETY, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS. THE CONTRACTOR SHALL SAVE, PROTECT, INDEMNIFY, DEFEND AND HOLD HARMLESS THE OWNER, THE ARCHITECT AND THE ENGINEER FROM ANY CLAIM OF LIABILITY, REAL OR ALLEGED, ARISING OUT OF THE PERFORMANCE OF ANY WORK ON THIS PROJECT. THE CONTRACTOR SHALL NAME THE OWNER, THE ARCHITECT AND THE ENGINEER AS "ADDITIONAL INSURED" ON HIS INSURANCE POLICIES.
2. EXISTING ABOVE GROUND UTILITIES HAVE BEEN SHOWN BASED ON INFORMATION SHOWN ON A SURVEY OF THE PROPERTY BY OTHERS. UNDERGROUND UTILITIES ARE SHOWN BASED ON RECORD DATA AND MAY NOT BE COMPLETE OR EXACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS AND DEPTHS OF ALL ABOVE GROUND AND UNDERGROUND UTILITIES AND ESTABLISHING THEIR EXACT LOCATION AND DEPTH PRIOR TO SETTING ANY FINISH GRADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE GROUND OR UNDERGROUND UTILITIES, INCLUDING THOSE NOT SHOWN ON THE PLANS. THE CONTRACTOR IS ADVISED TO CONTACT THE CITY AND ALL FRANCHISE UTILITY COMPANIES, EASEMENT HOLDERS, ETC. AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION IN THE VICINITY OF ANY UNDERGROUND UTILITY.
3. CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF ROUND ROCK STANDARDS, SPECIFICATIONS AND DETAILS FOR STORM SEWER CONSTRUCTION.
4. THE CONTRACTOR SHALL COMPLY WITH ALL BUILDING CODES AND REGULATIONS, FEDERAL STATE, COUNTY AND CITY SAFETY CODES AND INSPECTION REQUIREMENTS.
5. TRENCH SAFETY: IF ANY TRENCH ON THIS JOB SITE, INCLUDING OPEN EXCAVATIONS WHOSE DIMENSIONS CAUSE THEM TO BE CONSIDERED TRENCHES BY OSHA, REGARDLESS OF WHETHER FOR THE INSTALLATION OF UTILITIES, FOUNDATIONS OR ANY OTHER SITE ELEMENT, IS EQUAL TO OR GREATER THAN 5.00' DEPTH, THEN THE CONTRACTOR SHALL NOT PERFORM ANY TRENCHING ON THIS SITE UNTIL HE HAS FIRST OBTAINED DETAILED PLANS AND SPECIFICATIONS FOR TRENCH SAFETY SYSTEMS CONFORMING TO OSHA REQUIREMENTS. SUCH PLANS AND SPECIFICATIONS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY OR CONTRACTED BY THE CONTRACTOR AND SHALL BE CONSIDERED A PART OF THE CONTRACTOR'S MEANS AND METHOD'S OF CONSTRUCTION. IF THIS PROJECT IS OFFERED FOR BID, THE BIDS MUST CONTAIN A SEPARATE UNIT PRICE PAY ITEM FOR TRENCH SAFETY.
6. WHERE CONSTRUCTION DETAILS AND SPECIFICATIONS ARE NOT NOTED ON THESE PLANS USE CITY OF ROUND ROCK STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION.

GRAPHIC SCALE
30 0 15 30
1 INCH = 30 FEET

COMPOSITE RUNOFF COEFFICIENT CALCULATIONS

DA	Undeveloped			Developed			Composite	
	C25	C100	A (SF)	C25	C100	A (SF)	C25	C100
BP-1	0.48	0.54	0.05	0.88	0.97	0.03	0.61	0.68
1	0.48	0.54	0.19	0.88	0.97	0.01	0.49	0.55
2	0.48	0.54	0.05	0.88	0.97	0.44	0.84	0.93
3	0.48	0.54	0.21	0.88	0.97	0.70	0.79	0.87
4	0.48	0.54	0.00	0.88	0.97	0.14	0.88	0.97
5	0.48	0.54	0.13	0.88	0.97	1.02	0.84	0.92
6	0.48	0.54	0.53	0.88	0.97	0.02	0.50	0.56
Total	0.48	0.54	1.15	0.88	0.97	2.37	0.75	0.83

PROPOSED DRAINAGE AREA MAP CALCULATIONS

DA	AREA (acres)	Tc (min)	25-YR STORM C	25-YR STORM I (in/hr)	25-YR STORM Q (cfs)	100-YR STORM C	100-YR STORM I (in/hr)	100-YR STORM Q (cfs)	Description
BP-1	0.08	10	0.61	9.06	0.44	0.68	11.90	0.65	Sheet flows to S A.W. Grimes Blvd
1	0.19	10	0.49	9.06	0.85	0.55	11.90	1.26	Sheet flows to existing wye inlet
2	0.49	10	0.84	9.06	3.75	0.93	11.90	5.44	Sheet flows to existing curb inlet
3	0.91	10	0.79	9.06	6.51	0.87	11.90	9.46	Sheet flows to proposed curb inlet
4	0.14	10	0.88	9.06	1.11	0.97	11.90	1.61	Sheet flows to roof drains
5	1.15	10	0.84	9.06	8.72	0.92	11.90	12.65	Sheet flows to existing curb inlet
6	0.55	10	0.50	9.06	2.48	0.56	11.90	3.67	Sheet flows to existing wye inlet
Total	3.517				23.87			34.71	

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUCH CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

THE DIMENSION GROUP
ARCHITECTURE · CIVIL ENGINEERING · MEP ENGINEERING
10755 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL: 214.343.4640 · www.dimensiongroup.com

TBPE FIRM REGISTRATION #F-8396

STATE OF TEXAS
KEATON L. MAI
125077
PROFESSIONAL ENGINEER

12/15/2025

THESE PLANS ARE INSTRUMENTS OF PROFESSIONAL SERVICE AND ARE PROTECTED BY COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS INCLUDING COPYRIGHT. THEY SHALL NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF THE DIMENSION GROUP.

#	DATE	REVISION DESCRIPTION	BY

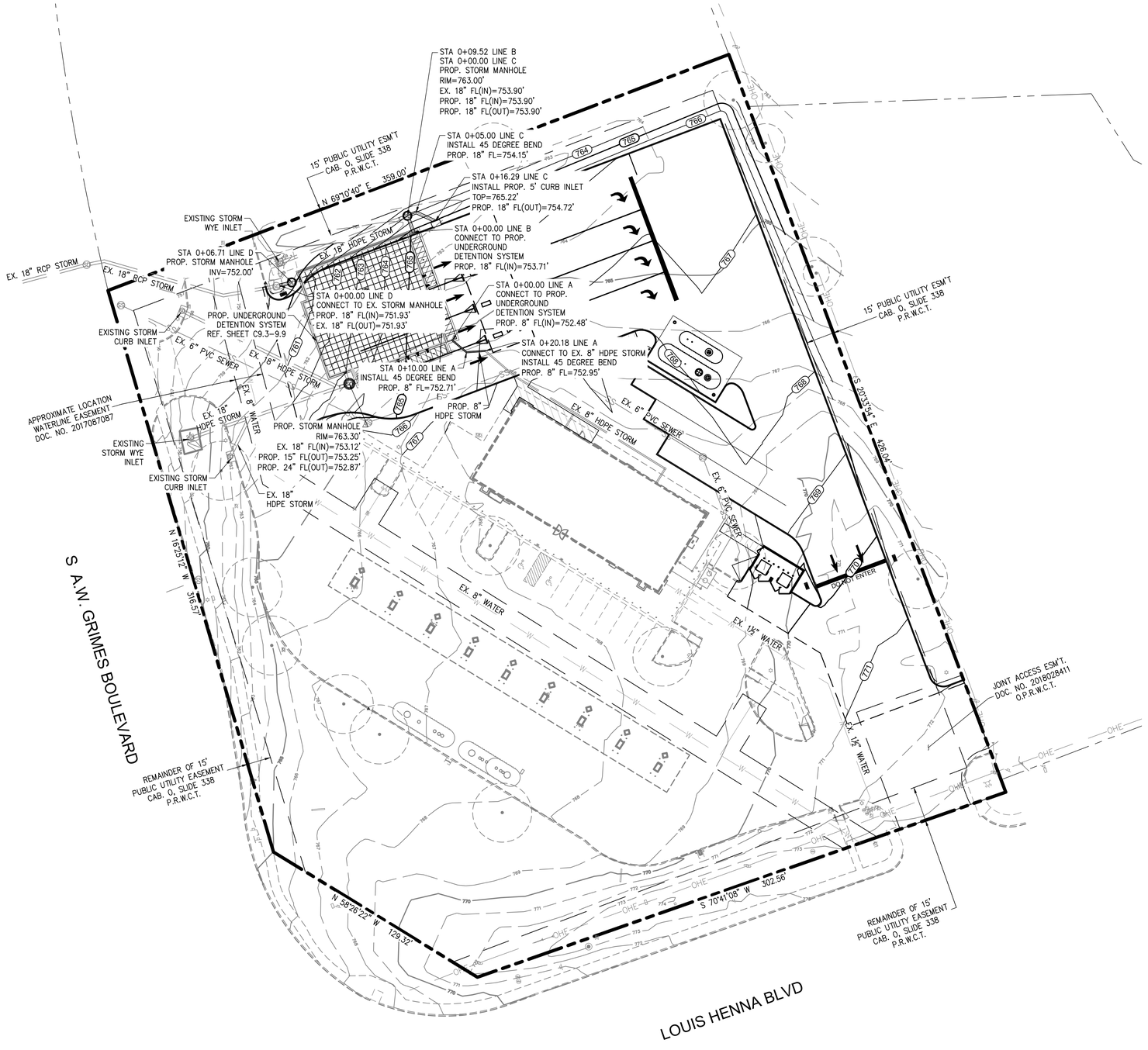
drawn by
designed by
approved by

project no. 230-817
date 12/15/2025 – 4:11 pm
dwg C9.1 PROPOSED DRAINAGE AREA MAP.dwg

PROPOSED DRAINAGE AREA MAP

CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

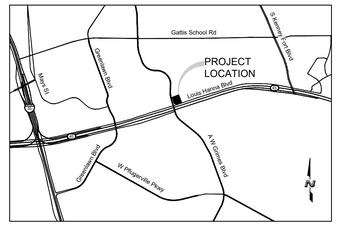
SHEET
C9.1



STORM DRAIN NOTES:

1. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR HIS MEANS AND METHODS OF CONSTRUCTION, JOB SITE CONDITIONS AND JOB SITE SAFETY, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS. THE CONTRACTOR SHALL SAVE, PROTECT, INDEMNIFY, DEFEND AND HOLD HARMLESS THE OWNER, THE ARCHITECT AND THE ENGINEER FROM ANY CLAIM OF VERIFYING THE LOCATIONS AND DEPTHS OF ALL ABOVE GROUND AND UNDERGROUND UTILITIES AND ESTABLISHING THEIR EXACT LOCATION AND DEPTH PRIOR TO SETTING ANY FINISH GRADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE GROUND OR UNDERGROUND UTILITIES, INCLUDING THOSE NOT SHOWN ON THE PLANS. THE CONTRACTOR IS ADVISED TO CONTACT THE CITY AND ALL FRANCHISE UTILITY COMPANIES, EASEMENT HOLDERS, ETC. AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION IN THE VICINITY OF ANY UNDERGROUND UTILITY.
2. EXISTING ABOVE GROUND UTILITIES HAVE BEEN SHOWN BASED ON INFORMATION SHOWN ON A SURVEY OF THE PROPERTY BY OTHERS. UNDERGROUND UTILITIES ARE SHOWN BASED ON RECORD DATA AND MAY NOT BE COMPLETE OR EXACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS AND DEPTHS OF ALL ABOVE GROUND AND UNDERGROUND UTILITIES AND ESTABLISHING THEIR EXACT LOCATION AND DEPTH PRIOR TO SETTING ANY FINISH GRADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE GROUND OR UNDERGROUND UTILITIES, INCLUDING THOSE NOT SHOWN ON THE PLANS. THE CONTRACTOR IS ADVISED TO CONTACT THE CITY AND ALL FRANCHISE UTILITY COMPANIES, EASEMENT HOLDERS, ETC. AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION IN THE VICINITY OF ANY UNDERGROUND UTILITY.
3. CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF ROUND ROCK STANDARDS, SPECIFICATIONS AND DETAILS FOR STORM SEWER CONSTRUCTION.
4. THE CONTRACTOR SHALL COMPLY WITH ALL BUILDING CODES AND REGULATIONS, FEDERAL STATE, COUNTY AND CITY SAFETY CODES AND INSPECTION REQUIREMENTS.
5. TRENCH SAFETY: IF ANY TRENCH ON THIS JOB SITE, INCLUDING OPEN EXCAVATIONS WHOSE DIMENSIONS CAUSE THEM TO BE CONSIDERED TRENCHES BY OSHA, REGARDLESS OF WHETHER FOR THE INSTALLATION OF UTILITIES, FOUNDATIONS OR ANY OTHER SITE ELEMENT, IS EQUAL TO OR GREATER THAN 5.00' DEPTH, THEN THE CONTRACTOR SHALL NOT PERFORM ANY TRENCHING ON THIS SITE UNTIL HE HAS FIRST OBTAINED DETAILED PLANS AND SPECIFICATIONS FOR TRENCH SAFETY SYSTEMS CONFORMING TO OSHA REQUIREMENTS. SUCH PLANS AND SPECIFICATIONS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY OR CONTRACTED BY THE CONTRACTOR AND SHALL BE CONSIDERED A PART OF THE CONTRACTOR'S MEANS AND METHOD'S OF CONSTRUCTION. IF THIS PROJECT IS OFFERED FOR BID, THE BIDS MUST CONTAIN A SEPARATE UNIT PRICE PAY ITEM FOR TRENCH SAFETY.
6. WHERE CONSTRUCTION DETAILS AND SPECIFICATIONS ARE NOT NOTED ON THESE PLANS USE CITY OF ROUND ROCK STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION.

GRAPHIC SCALE
30 0 15 30
1 INCH = 30 FEET



VICINITY MAP
1 IN. = 4,000 FT.

CAUTION NOTICE TO CONTRACTORS

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THE DIMENSION GROUP
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10755 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL: 214.343.4640 www.dimensiongroup.com

TBPE FIRM REGISTRATION #F-8396

STATE OF TEXAS
KEATON L. MAI
125077
PROFESSIONAL ENGINEER
12/15/2025

#	DATE	REVISION DESCRIPTION	BY

drawn by
designed by
approved by

project no. 230-817
date 12/15/2025 – 4:11 pm
dwg C9.2 STORM DRAINAGE PLAN.dwg

STORM DRAINAGE PLAN

CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

SHEET
C9.2

25 YR. MODIFIED RATIONAL METHOD

EXISTING SITE CONDITIONS (100 YR CRITERIA)

C	i	A	Q
0.87	8.4	3.36	24.55

PROPOSED SITE CONDITIONS (25 YR CRITERIA)

Runoff Coefficient (C) =	0.87	
Drainage Area (A) =	3.36	acres
Time of Concentration (tc) =	10	minutes
25 Yr Runoff Rate (Q=CIA)	26.48	cfs
Max Allowable Outflow Rate (Q=CIA)	**9.35**	cfs

DETENTION CALCULATION

Duration (minutes)	Intensity (inches/hr)	Depth (inches)	Inflow Discharge Q=CiA	Inflow Volume Cu. Ft.	Outflow Duration (minutes)	Outflow Volume Cu. Ft.	Storage Volume Cu. Ft.
5	11.30	0.94	33.0	9,910	15	4,208	5,702
10	9.06	1.51	26.5	15,891	20	5,610	10,281
15	7.52	1.88	22.0	19,784	25	7,013	12,772
20	6.76	2.25	19.8	23,725	30	8,415	15,310
30	5.25	2.63	15.3	27,624	40	11,220	16,404
40	4.66	3.11	13.6	32,716	50	14,025	18,691
50	4.08	3.40	11.9	35,751	60	16,830	18,921
60	3.49	3.49	10.2	36,727	70	19,635	17,092
120	2.28	4.56	6.7	47,987	130	36,465	11,522
180	1.75	5.25	5.1	55,248	190	53,295	1,953
360	1.07	6.42	3.1	67,561	370	103,785	(36,224)
720	0.61	7.36	1.8	77,411	730	204,765	(127,354)
					Required Storage Volume	**18,921**	cubic feet
						0.43	acre-feet

100 YR. MODIFIED RATIONAL METHOD

EXISTING SITE CONDITIONS (100 YR CRITERIA)

C	i	A	Q
0.87	10.22	3.36	29.88

PROPOSED SITE CONDITIONS (100 YR CRITERIA)

Runoff Coefficient (C) =	0.87	
Drainage Area (A) =	3.36	acres
Time of Concentration (tc) =	10	minutes
100 Yr Runoff Rate (Q=CIA)	34.79	cfs
Max Allowable Outflow Rate (Q=CIA)	**13.31**	cfs

DETENTION CALCULATION

Duration (minutes)	Intensity (inches/hr)	Depth (inches)	Inflow Discharge Q=CiA	Inflow Volume Cu. Ft.	Outflow Duration (minutes)	Outflow Volume Cu. Ft.	Storage Volume Cu. Ft.
5	14.90	1.24	43.6	13,067	15	5,990	7,077
10	11.90	1.98	34.8	20,872	20	7,986	12,886
15	9.84	2.46	28.8	25,888	25	9,983	15,905
20	8.84	2.95	25.8	31,009	30	11,979	19,030
30	6.84	3.42	20.0	35,990	40	15,972	20,018
40	6.09	4.06	17.8	42,702	50	19,965	22,737
50	5.33	4.44	15.6	46,771	60	23,958	22,813
60	4.58	4.58	13.4	48,198	70	27,951	20,247
120	3.11	6.22	9.1	65,456	130	51,909	13,547
180	2.44	7.32	7.1	77,032	190	75,867	1,165
360	1.52	9.12	4.4	95,975	370	147,741	(51,766)
720	0.87	10.48	2.6	110,244	730	291,489	(181,245)
					Required Storage Volume	**22,813**	cubic feet
						0.52	acre-feet

CAUTION NOTICE TO CONTRACTORS

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DETENTION CALCULATIONS

CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

SHEET
C9.3

PROPOSED HYDROCHAIN SYSTEM

		SYSTEM
FOUNDATION STONE	IN	6
TOP STONE	IN	4
SECTION HEIGHT	FT	5.75
AREA	SF	4,985
PERIMETER	FT	288
NUMBER OF LAYERS	EA	3
PRIMARY MODULES	EA	1,110
PRIMARY INSPECTION MODULES	EA	3
TOTAL MODULES	EA	1,113
S-29B CHAMBERS	EA	40
S-29 END CAPS	EA	4
INSPECTION PORTS	EA	2
EXCAVATION REQUIRED[4]	CY	1,062
BACKFILL AND STONE POROSITY	%	40
BACKFILL REQUIRED[6]	CY	0
STONE REQUIRED[6]	CY	293
CHAMBER AND MODULE STORAGE	CF	19,983
BACKFILL STORAGE	CF	0
STONE STORAGE	CF	3,165
TOTAL STORAGE	CF	23,147

NOTES:
1. THE INSTALLATION MUST BE PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION PLANS, AQUAMOD INSTALLATION MANUAL, AND SUPPLEMENTAL DOCUMENTS. AQUAMOD DOCUMENTS CAN BE FOUND USING THE QR CODE ON THIS SHEET.
2. THE PROPOSED DESIGN IS BASED ON AN ALLOWABLE SOIL BEARING CAPACITY OF 3.0 KSF. ACTUAL SITE-SPECIFIC SOIL BEARING CAPACITIES MUST BE PROVIDED TO XERXES AND THE SITE ENGINEER BEFORE INSTALLATION. VARIATIONS IN ACTUAL SOIL BEARING CAPACITIES MAY CHANGE THE FINAL DESIGN. THE SITE ENGINEER IS RESPONSIBLE TO EVALUATE THE SUBGRADE SOIL BEARING RESISTANCE AND DETERMINING FOUNDATION STONE DEPTH AT THE EXPECTED SOIL MOISTURE CONDITIONS UNDER THE STORMWATER SYSTEM.
3. QUANTITIES ARE NEAT LINE AND DO NOT INCLUDE ADDITIONAL MATERIALS FOR WASTE OR OVERLAP. INSTALLERS SHOULD ACCOUNT FOR EXTRA MATERIALS NECESSARY TO COMPLETE THE INSTALLATION BASED ON SITE-SPECIFIC NEEDS AND OVERLAP REQUIREMENTS.
4. THE EXCAVATION VOLUME IS CALCULATED BY THE SYSTEM SECTION HEIGHT X SYSTEM AREA. IT DOES NOT INCLUDE ADDITIONAL EXCAVATION FROM THE TOP OF STONE TO SURFACE.
5. NON-WOVEN FABRIC QUANTITY IS BASED ON THE SURFACE AREA OF THE TOP, SIDES, AND BOTTOM OF THE EXCAVATION PLUS THE SURFACE AREA OF THE CRATE SYSTEM. THIS PROVIDES SEPARATION BETWEEN NATIVE SOIL, STONE FILL, AND MODULES.
6. SEE AQUAMOD S-29B MHR CROSS SECTION DETAIL FOR BACKFILL AND STONE PLACEMENT.

PROPOSED ELEVATIONS

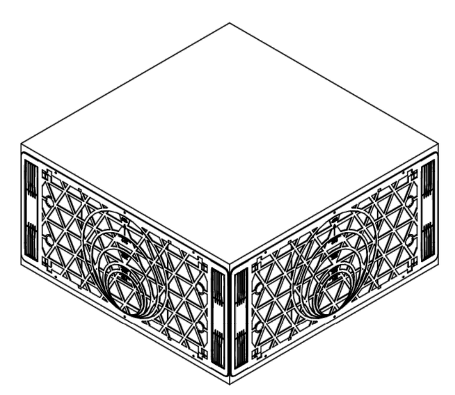
PROPOSED ELEVATIONS	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)	17.61
MINIMUM ALLOWABLE GRADE (NO PAVEMENT)	7.50
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT)	7.00
MINIMUM ALLOWABLE GRADE (BOTTOM OF FLEXIBLE PAVEMENT)	7.00
TOP OF STONE	5.75
TOP OF MODULE	5.42
TOP OF CHAMBER	3.61
BOTTOM OF MODULE	0.50
BOTTOM OF CHAMBER	0.50
BOTTOM OF STONE	0.00

BILL OF MATERIALS

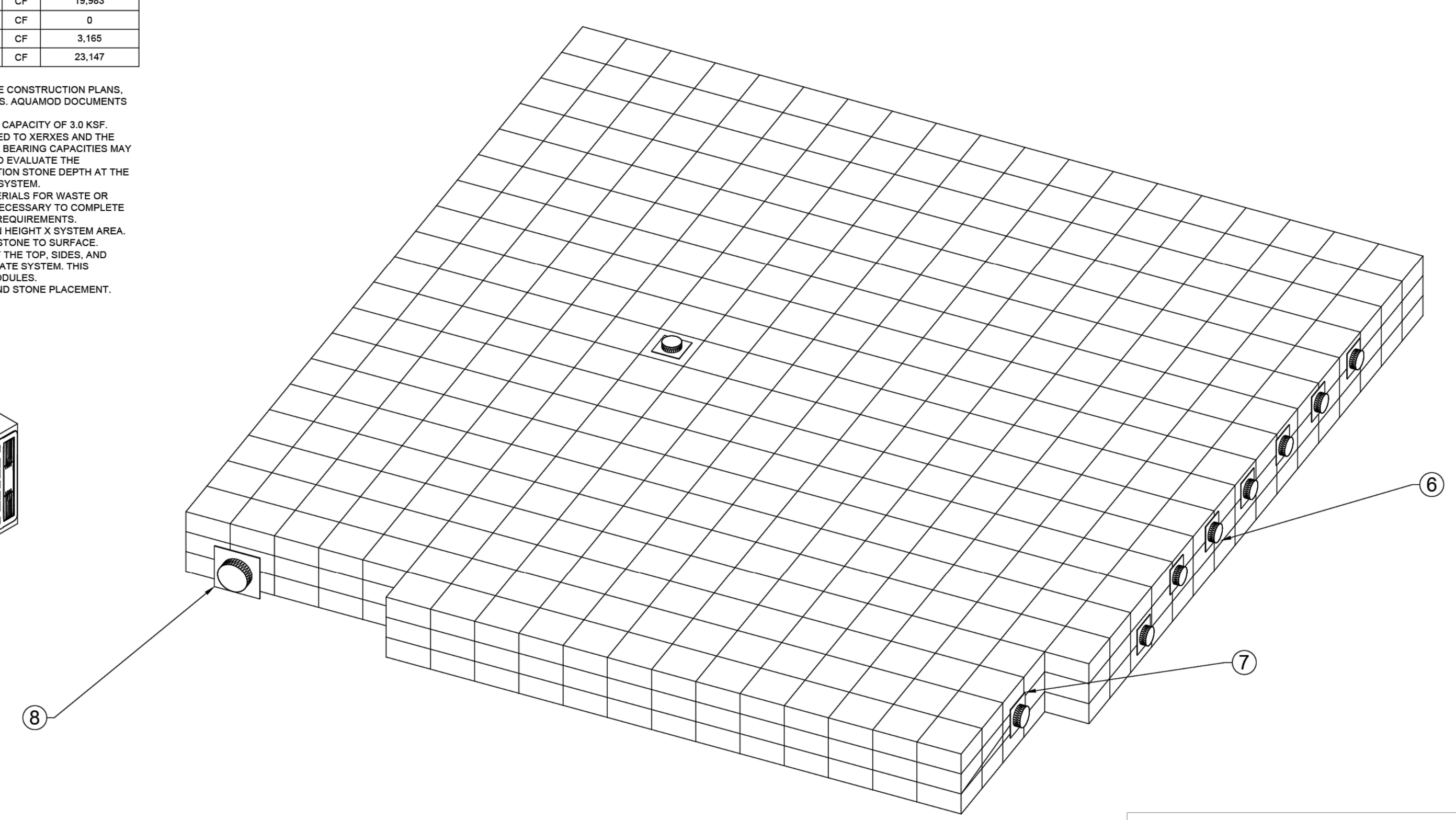
PART No.	ID	ITEM	QTY	DESCRIPTION
C470312	1	PRIMARY MODULE HALF	2,220	2X PRIMARY MODULE HALVES = 1 PRIMARY MODULE
C470320	2	PRIMARY MODULE HALF 12- INCH	6	PRIMARY MODULE HALF WITH PRECUT HOLE FOR INSPECTION PORT
C470331	3	PRIME MODULE SIDE PANEL	235	USED TO COVER EXTERNAL SIDES OF PRIMARY MODULES
C470296	4	H PIN (BOXES)	5	USED TO CONNECT MODULES HORIZONTALLY AND VERTICALLY - 350 PER BOX
C470297	5	U PIN (BOXES)	0	USED TO CONNECT MODULES HORIZONTALLY AT THE TOP OF THE SYSTEM - 700 PER BOX
C470235	6	TYPE 2 PIPE BOOT	11	400MM PIPE CONNECTION BOOT
C470252	7	TYPE 3 PIPE BOOT	1	450MM PIPE CONNECTION BOOT
C470236	8	TYPE 4 PIPE BOOT	1	670MM PIPE CONNECTION BOOT
C470238	9	CHAMBERS - STANDARD	30	HYDROCHAIN S-29B CHAMBER
C470307	10	CHAMBERS - PRE-CUT LEFT	10	HYDROCHAIN S-29B CHAMBER - PRE-CUT W/ 12" OPENING ON LEFT SIDE
C470306	11	CHAMBERS - PRE-CUT RIGHT	0	HYDROCHAIN S-29B CHAMBER - PRE-CUT W/ 12" OPENING ON RIGHT SIDE
C480037	12	END CAPS	4	HYDROCHAIN S-29 END CAP
C470194	13	4" INSPECTION PORT COUPLER	2	4" INTERNAL COUPLER (INSPECTION PORT FITTING)

ANCILLARY MATERIALS

ITEM		QTY
NONWOVEN GEOTEXTILE[5]	SY	1,404
NONWOVEN GEOTEXTILE[5] - AROUND CRATE SYSTEM	SY	1,027
IMPERVIOUS LINER (BY OTHERS)	SY	0
GEOSYNTHETIC REINFORCEMENT FABRIC	SY	0
MHR AND SCOUR PROTECTION LENGTH (WOVEN FABRIC)	LF	113
UNDERDRAIN PIPE	LF	67
BACKFILL REQUIRED (40% VOID SPACE)	CY	0
STONE REQUIRED (40% VOID SPACE)	CY	293
INSPECTION PORT AND ASSOCIATED MATERIALS	EA	3
CROSS CONNECTION PIPES (SIZE AND LENGTH PER PLANS)	EA	10
BUTYL TAPE ROLL	EA	1



SINGLE MODULE VIEW WITH SIDE PANELS DISPLAYED



NOTE:
1. PRIMARY MODULE SIDE PANELS NOT SHOWN.

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PLAN DISCLAIMER
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-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

STORMWATER SALES ENGINEER: TODD MEGRONIGLE, 919-805-0417, TODD.MEGRONIGLE@MATTR.COM
PROJECT NO: SW250629
DRAWN BY: CAR — DATE: 12/10/2025

CIRCLE K ROUND ROCK
ROUND ROCK, TX

HYDROCHAIN™ AQUAMOD SYSTEM
SYSTEM SUMMARY
WITHOUT LINER

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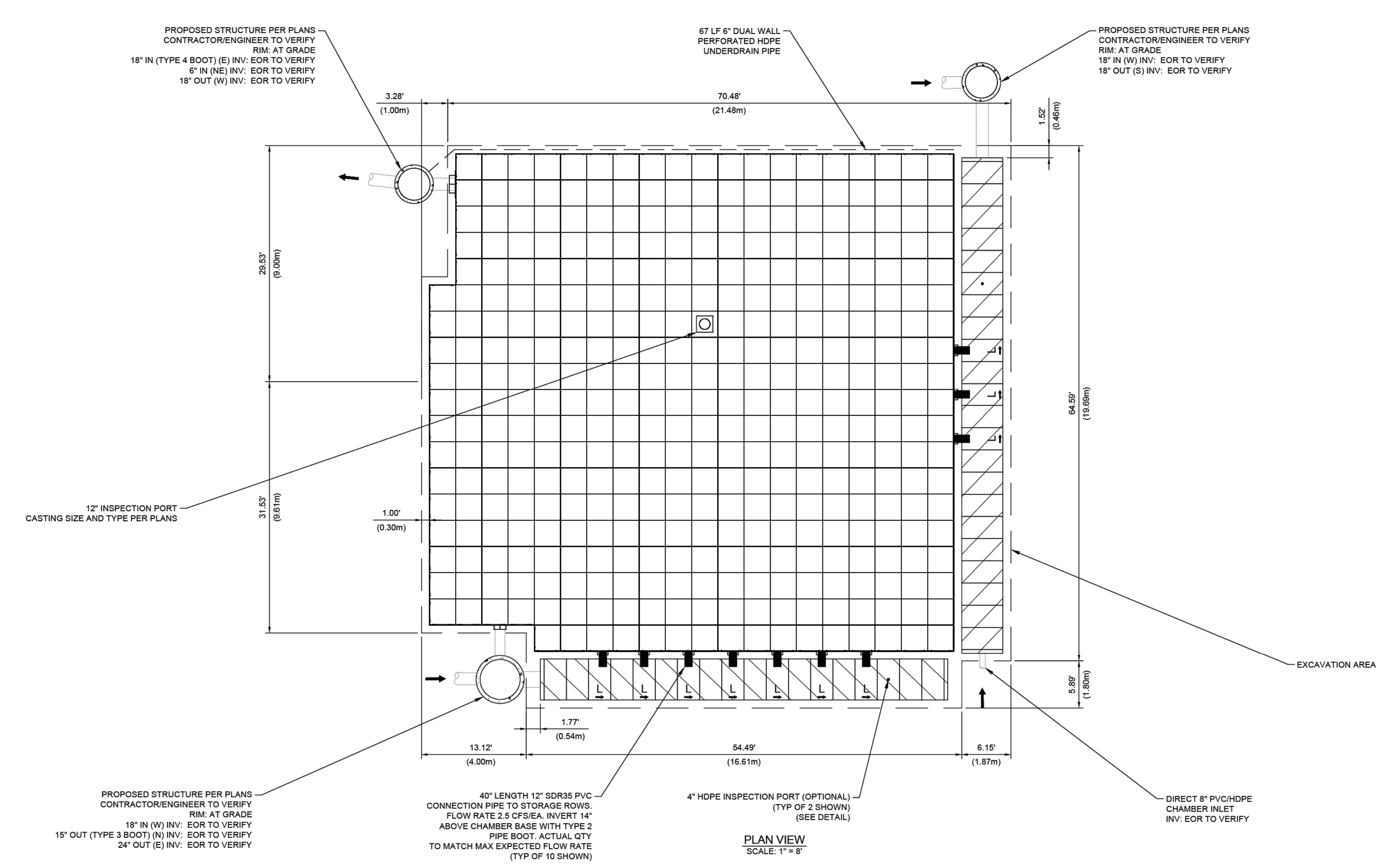

PLAN VIEW
SCALE: 1" = 8'

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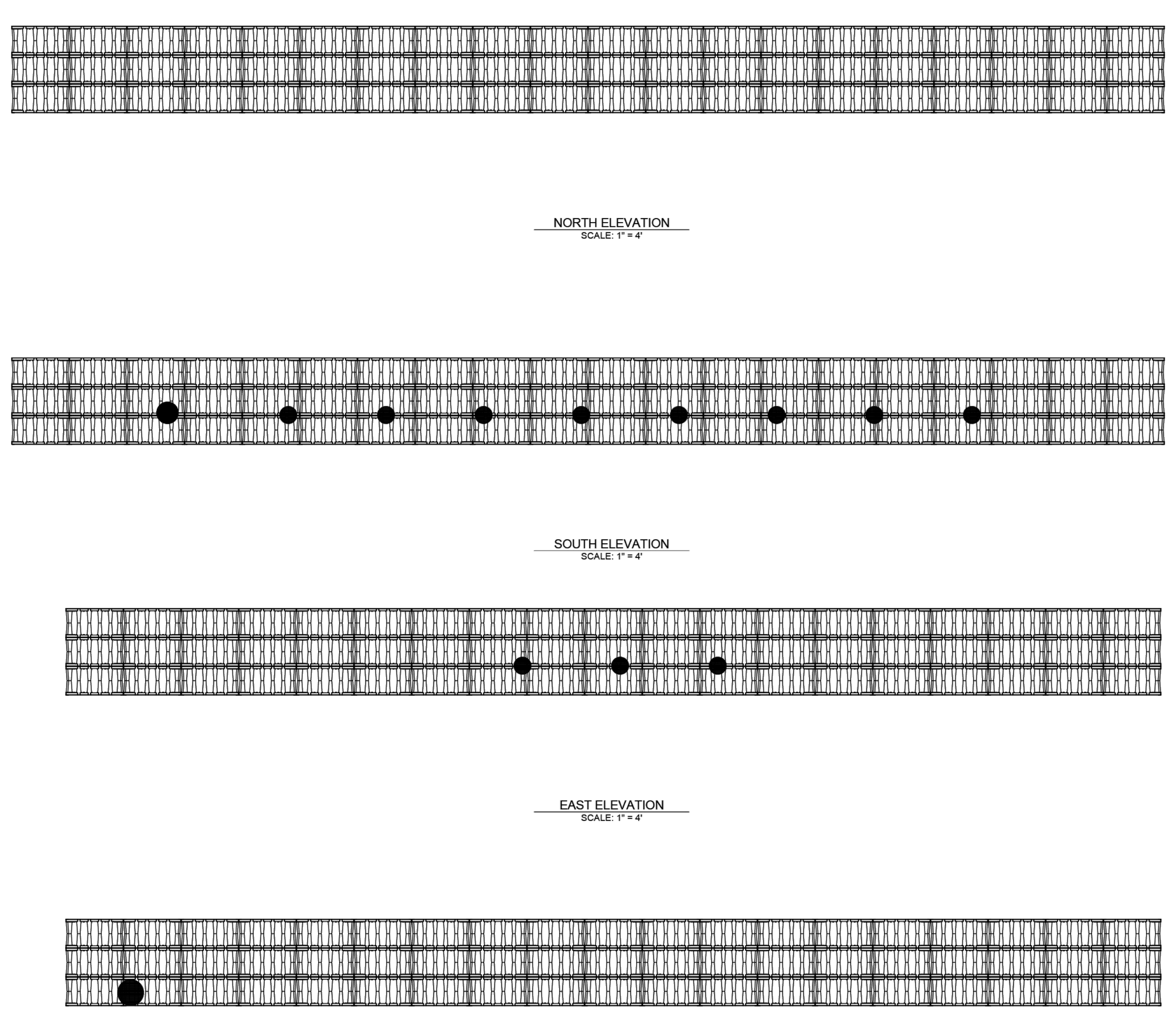
CIRCLE K ROUND ROCK
ROUND ROCK, TX

HYDROCHAIN™ AQUAMOD LAYOUT
SYSTEM PLAN
WITHOUT LINER



NORTH ELEVATION
SCALE: 1" = 8'

SOUTH ELEVATION
SCALE: 1" = 8'

EAST ELEVATION
SCALE: 1" = 8'

WEST ELEVATION
SCALE: 1" = 8'

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CIRCLE K ROUND ROCK
ROUND ROCK, TX

HYDROCHAIN™ AQUAMOD LAYOUT
SYSTEM ELEVATIONS
WITHOUT LINER

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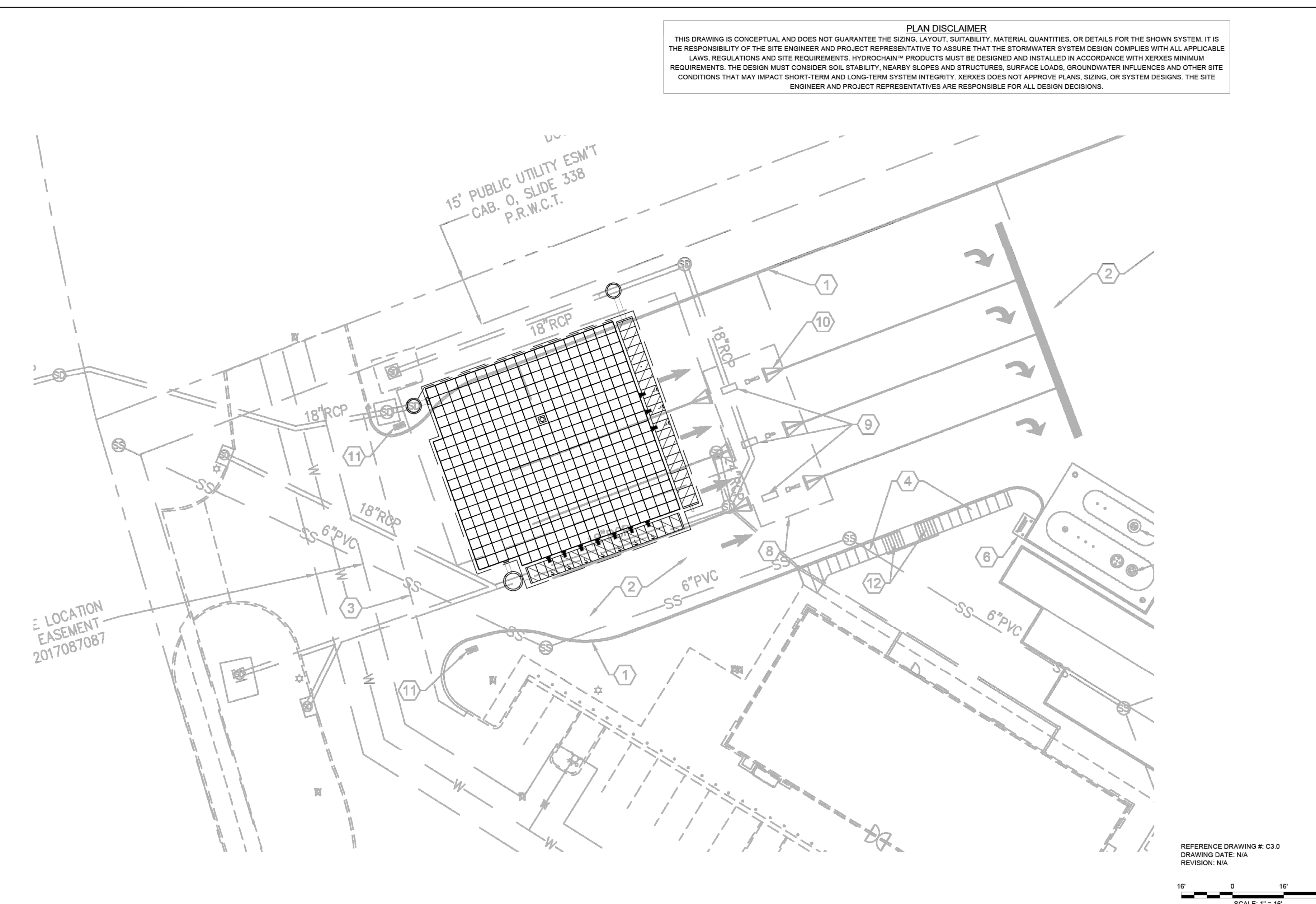

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CIRCLE K ROUND ROCK
ROUND ROCK, TX

HYDROCHAIN™ DESIGN OVERVIEW
AQUAMOD SYSTEM
LOCATION APPROXIMATE...NOT FOR CONSTRUCTION

CAUTION NOTICE TO CONTRACTORS
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[24x36TBs.dwg] [V-BASE.dwg] [C-BASE.dwg]
Drawing name: L:\Circle K\2023 PMF Projects\230-817 – Round Rock, TX – Louis Henna Blvd & A. W. Grimes Blvd, NEC (900 Louis Henna Blvd)\02 Civil\C3D\Sheet\CD\C9.2 STORM DRAINAGE PLAN.dwg Dec 15, 2025 – 4:12pm

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STATE OF TEXAS — KEATON L. MAI — 125077 — LICENSED PROFESSIONAL ENGINEER
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dwg. C9.2 STORM DRAINAGE PLAN.dwg

DETENTION DETAILS

CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

SHEET
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XERXES®

GENERAL

1. CHAMBERS MUST BE XERXES® HYDROCHAIN™ S-29B. ONLY CHAMBERS APPROVED BY THE ENGINEER OF RECORD ARE PERMITTED.
2. CHAMBERS MUST BE MANUFACTURED BY COMPRESSION MOLDING OF FIBERGLASS REINFORCED COMPOSITE POLYPROPYLENE.
3. CHAMBERS MUST BE EVALUATED AND TESTED TO MEET OR EXCEED THE STANDARDS IN ASTM F2418 STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS.
4. CHAMBERS MUST BE ARCH-SHAPED AND HAVE AN OPEN BOTTOM. CHAMBER ROWS MUST BE CONTINUOUS, UNOBSTRUCTED, AND WITHOUT INTERNAL SUPPORT THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION AND MAINTENANCE.
5. THE INSTALLED CHAMBER SYSTEM MUST BE DESIGNED TO MEET THE LOAD REQUIREMENTS OF ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" FOR:

   A. INSTANTANEOUS LIVE LOAD FROM AASHTO DESIGN TRUCK AT MINIMUM COVER
   B. MAXIMUM DEAD LOAD (100-YEAR)
   C. 1-WEEK AASHTO DESIGN TRUCK LOAD AT MINIMUM COVER
6. THE INSTALLED CHAMBER SYSTEM MUST BE DESIGNED TO MEET THE LOAD REQUIREMENTS OF AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SPECIFICATION 12.12 FOR:

   A. LONG-DURATION DEAD LOADS
   B. SHORT-DURATION LIVE LOADS WITH IMPACT AND MULTIPLE VEHICLE PRESENCE
7. CHAMBERS MUST HAVE AN ARCH STIFFNESS CONSTANT (ASC) ≥ 700 LBS/FT/% PER ASTM F2418, SECTION 6.2.8 AND MAINTAIN STIFFNESS THROUGH TEMPERATURE RANGES OF -40 DEGREES FAHRENHEIT TO 180 DEGREES FAHRENHEIT.
8. THE CHAMBER MUST INTERCONNECT USING AN OVERLAPPING CORRUGATION JOINT.
9. THE STORMWATER CHAMBER SYSTEM SHALL INCORPORATE A MAIN HEADER ROW FOR STORMWATER TREATMENT AND SYSTEM MAINTENANCE WHICH HAS BEEN TESTED TO A MINIMUM OF 85% OF TSS REMOVAL FOLLOWING NJCAT TESTING PROTOCOLS.

INSTALLATION

1. INSTALLATION MUST NOT START UNTIL A PRE-CONSTRUCTION MEETING HAS BEEN HELD WITH THE MANUFACTURER'S REPRESENTATIVE AND THE INSTALLERS.
2. INSTALLATION MUST BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS AND HYDROCHAIN™ INSTALLATION MANUAL.
3. BACKFILLING OVER CHAMBERS MUST NOT BE DONE WITH A DOZER OR AN EXCAVATOR LOCATED OVER THE CHAMBERS. SEE THE INSTALLATION MANUAL FOR MAXIMUM EQUIPMENT LOADS BASED ON THE DEPTH OF COVER OVER THE CHAMBERS. RECOMMENDED BACKFILL METHODS INCLUDE:

   A. USING A STONE SHOOTER LOCATED OFF THE CHAMBER BED.
   B. BACKFILLING WHILE PLACING ROWS USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   C. BACKFILLING FROM OUTSIDE THE EXCAVATION USING A LONG BOOM EXCAVATOR.
4. THE FOUNDATION STONE MUST BE LEVELED AND COMPACTED BEFORE PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS MUST BE PROPERLY SEATED BEFORE PLACING STONE.
6. A MINIMUM 5-INCH (125 MM) SPACING MUST BE MAINTAINED BETWEEN CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE CLEAN, CRUSHED, ANGULAR STONE MEASURING 3/8 - 2 INCHES (9.5-50 MM).
8. ANY DISCREPANCIES WITH CHAMBER FOUNDATION BEARING CAPACITIES MUST BE REPORTED TO THE ENGINEER OF RECORD.
9. IT IS RECOMMENDED TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF CONSTRUCTION.

Visit www.xerxes.com for the installation manual and additional resources.

Contact your sales representative or email the following Xerxes contacts for support:

North America: stormwater.support@mattr.com
Outside North America: hydrochain.int@mattr.com

XERXES.COM
STORMWATER.SUPPORT@MATTR.COM

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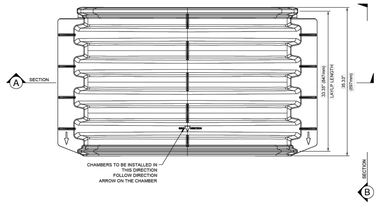
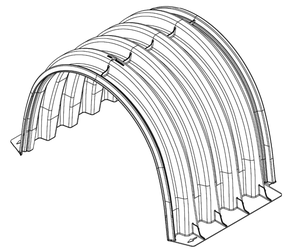
HYDROCHAIN™
S-29B CHAMBER
SPECIFICATIONS

DATE	06/10/2025	SHEET	1	OF	1



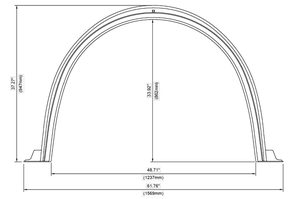
PLAN VIEW
SCALE: NTS



ISOMETRIC
SCALE: NTS

S-29B CHAMBER PROPERTIES	
NOMINAL DIMENSIONS (LAYUP LENGTH × WIDTH × HEIGHT)	33.38" × 61.76" × 37.27" (847mm × 1568mm × 947mm)
BARE CHAMBER STORAGE	27.66 CUBIC FEET (0.797 CUBIC METERS)
*MIN INSTALLED STORAGE	42.97 CUBIC FEET (1.191 CUBIC METERS)
CHAMBER WEIGHT	34 LBS (15.42 kg)
STORAGE PER LINEAR UNIT WITHOUT STONE	10.0 FT³/FT (0.929 M³/M)
STORAGE PER LINEAR UNIT WITH STONE	15.1 FT³/FT (1.406 M³/M)

*ASSUMING A MIN OF 9" (150mm) STONE ABOVE AND BELOW AND 9" (150mm) BETWEEN ROWS WITH 40% STONE POROSITY (DOES NOT INCLUDE 12" (300mm) PERIMETER STONE VOLUME)



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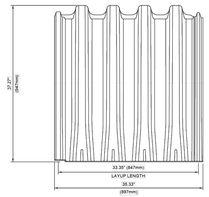

B SECTION
SCALE: NTS

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STORMWATER.SUPPORT@MATTR.COM

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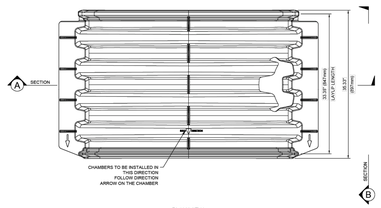
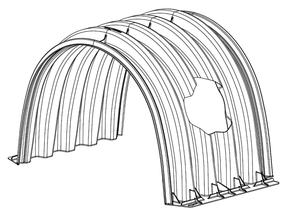
HYDROCHAIN™
S-29B CHAMBER

DATE	06/10/2025	SHEET	1	OF	1



PLAN VIEW
SCALE: NTS



ISOMETRIC
SCALE: NTS

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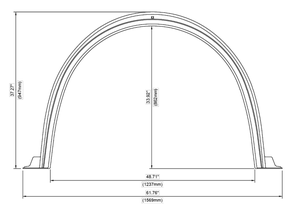

A SECTION
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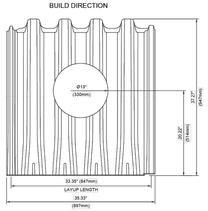
BUILD DIRECTION



B SECTION
SCALE: NTS

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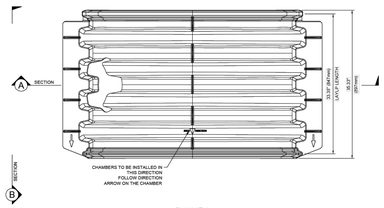
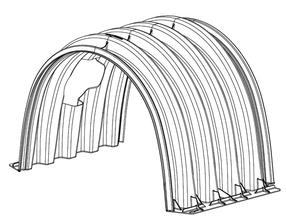
HYDROCHAIN™
S-29B CHAMBER
12-IN PRECUT LEFT

DATE	06/10/2025	SHEET	1	OF	1



PLAN VIEW
SCALE: NTS



ISOMETRIC
SCALE: NTS

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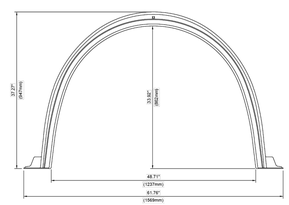

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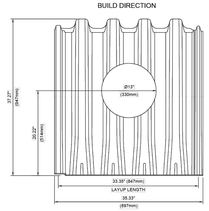
BUILD DIRECTION



B SECTION
SCALE: NTS

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HYDROCHAIN™
S-29B CHAMBER
12-IN PRECUT RIGHT

DATE	06/10/2025	SHEET	1	OF	1

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUCH CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

THE DIMENSION GROUP
ARCHITECTURE · CIVIL ENGINEERING · MEP ENGINEERING
TX FIRM #F-8396
10755 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL: 214.343.8040 www.thedimensiongroup.com

TBPE FIRM REGISTRATION
#F-8396

STATE OF TEXAS
KEATON L. MAI
125077
LICENSED PROFESSIONAL ENGINEER

12/15/2025

#	DATE	REVISION DESCRIPTION	BY

project no. 230-817
date 12/15/2025 – 4:12 pm
dwg. C9.2 STORM DRAINAGE PLAN.dwg

drawn by
designed by
approved by

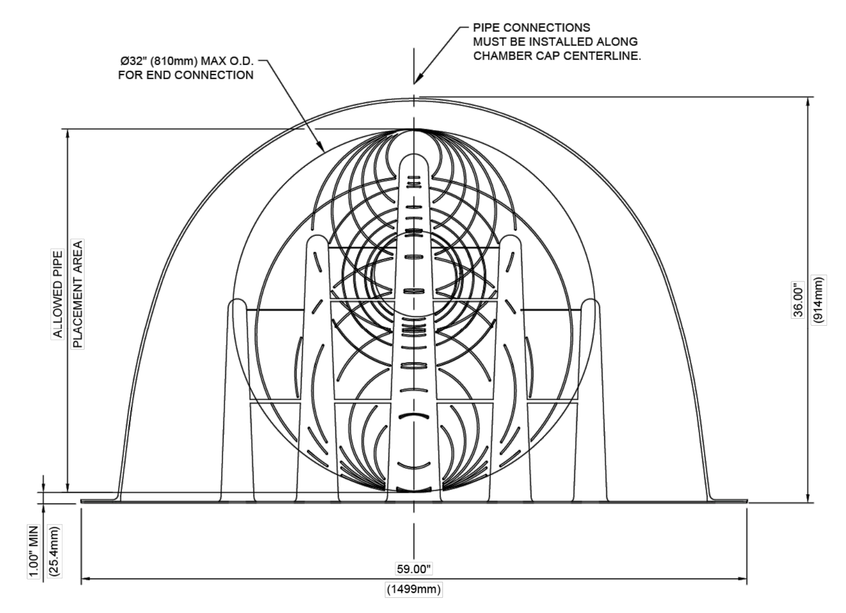
DETENTION DETAILS

CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

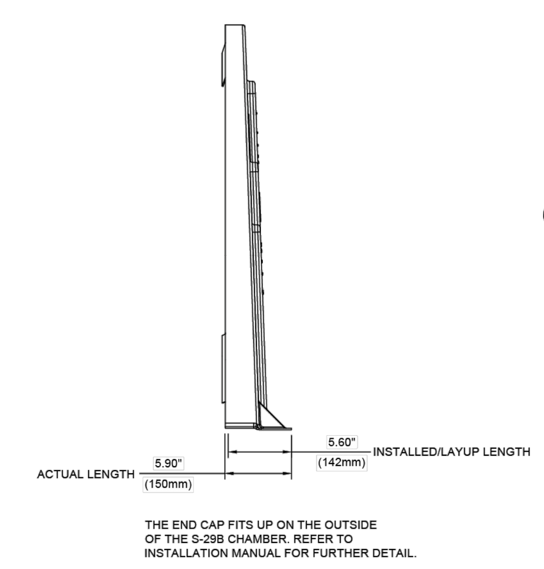
SHEET
C9.5

[24x36TBs.dwg] [V-BASE.dwg] [C-BASE.dwg]
Drawing name: L:\Circle K\2023 PWF Projects\230-817 – Round Rock, TX – Louis Henna Blvd & A. W. Grimes Blvd, NEC (900 Louis Henna Blvd)\02 Civil\C3D\Sheet\CD\C9.2 STORM DRAINAGE PLAN.dwg, Dec 15, 2025 – 4:12pm

S-29 END CAP PROPERTIES	
NOMINAL DIMENSIONS (LAYUP LENGTH × WIDTH × HEIGHT)	5.90" × 59.00" × 36.00" (150mm × 1499mm × 914mm)
BARE END CAP STORAGE	1.031 CUBIC FEET (0.029 CUBIC METERS)
*MIN INSTALLED STORAGE	4.98 CUBIC FEET (0.141 CUBIC METERS)
*ASSUMING A MIN OF 6" (150mm) STONE ABOVE AND BELOW AND 7.5" (191mm) BETWEEN ROWS WITH 40% STONE POROSITY (DOES NOT INCLUDE 12" (300mm) PERIMETER STONE VOLUME)	

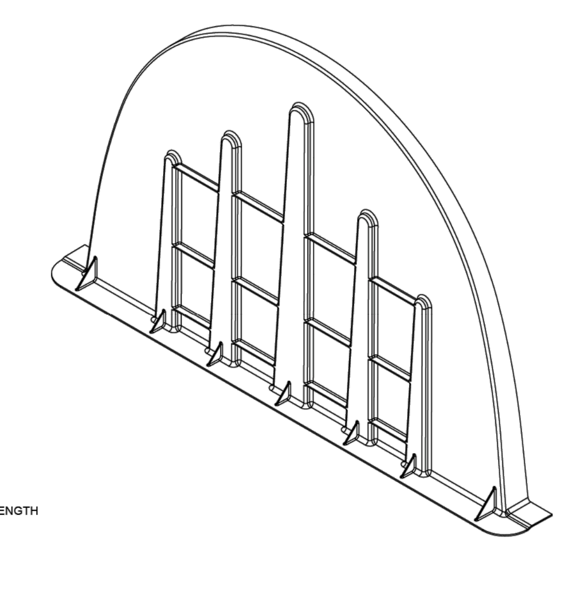


S-29 END CAP: ALLOWED PIPE PLACEMENT AREA
SCALE: NTS



THE END CAP FITS UP ON THE OUTSIDE OF THE S-29B CHAMBER. REFER TO INSTALLATION MANUAL FOR FURTHER DETAIL.

SIDE VIEW
SCALE: NTS



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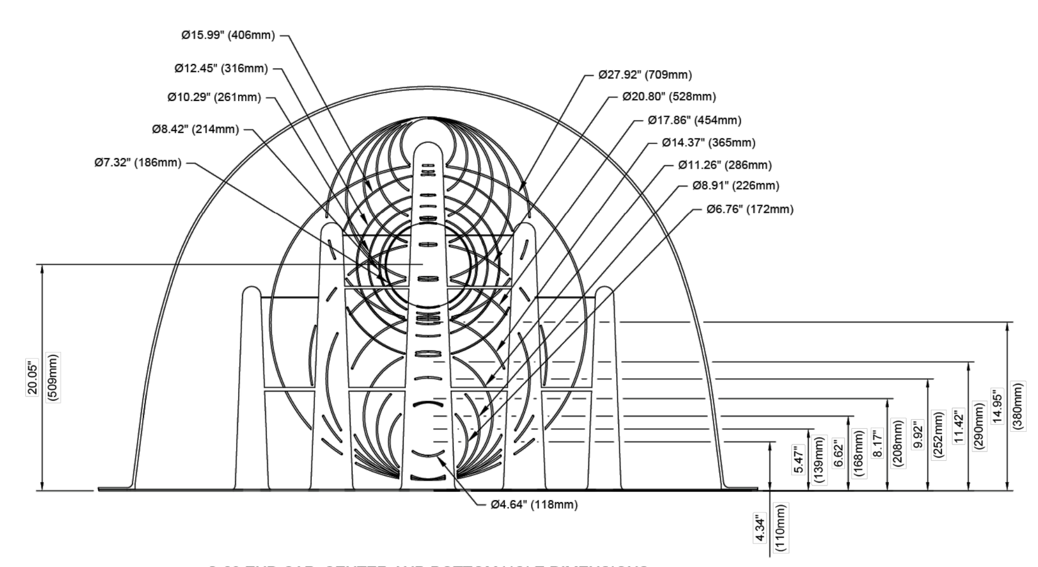
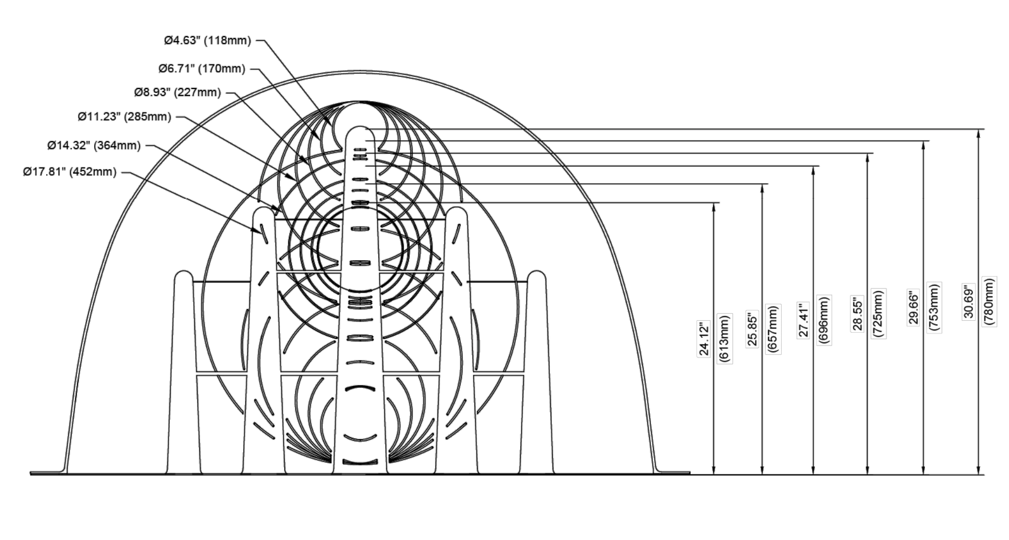


S-29 END CAP: CENTER AND BOTTOM HOLE DIMENSIONS
SCALE: NTS



S-29 END CAP: TOP HOLE DIMENSIONS
SCALE: NTS

XS-005669

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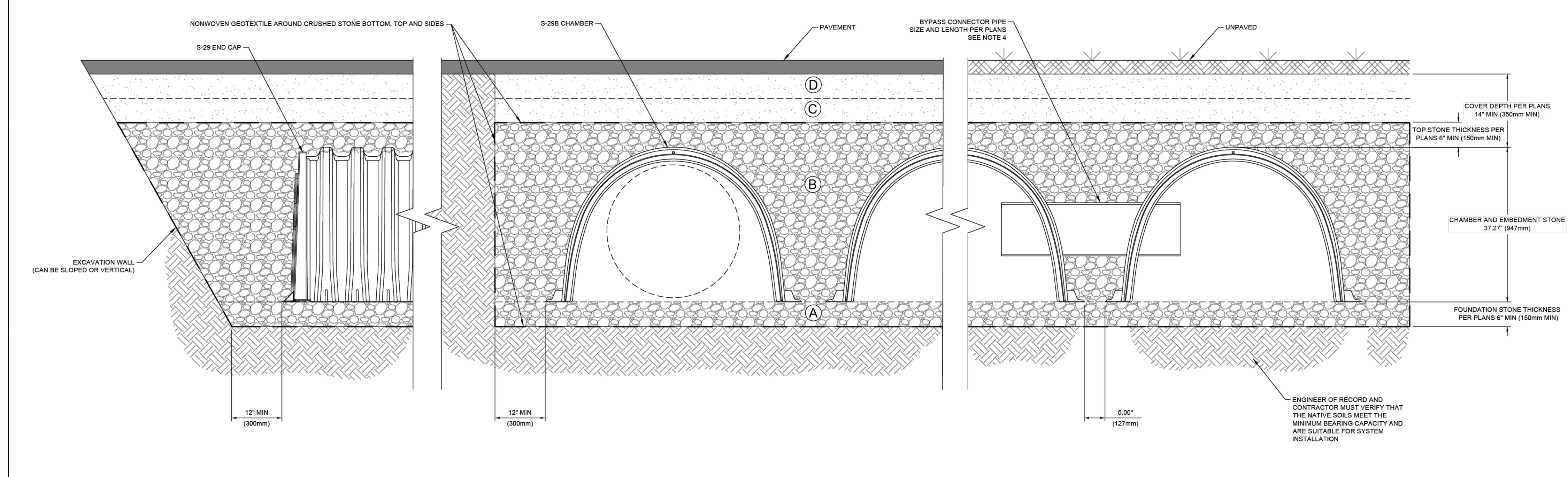
HYDROCHAIN™
S-29B END CAP

DATE	06/10/2025	SHEET 1 OF 1

CHAMBER STANDARD FILL MATERIALS				
	MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	COMPACT/DENSITY REQUIREMENT
D	FILL MATERIAL FROM 18" (450mm) ABOVE CHAMBER TO GRADE	PER CONSTRUCTION PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	PER PLANS	PER CONSTRUCTION PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.
C	FILL MATERIAL FOR 6" (150mm) TO 18" (450mm) ABOVE THE CHAMBER AND 24" (600mm) FOR UNPAVED INSTALLATIONS	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES. MOST PAVEMENT SUB-BASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 M145: A-1, A-2, A-3	COMPACT TO ≥ 95% STANDARD DENSITY IN MAXIMUM 6" (150mm) LIFTS. SEE NOTES.
B	EMBEDMENT AND TOP STONE	3/8" - 2" (9.5-50mm) CLEAN, CRUSHED, ANGULAR STONE	3, 357, 4, 467, 5, 56, 57	EMBEDMENT STONE: COMPACTION NOT REQUIRED. TOP STONE: COMPACT TO ≥ 95% STANDARD DENSITY AFTER 6" (150mm) THEN IN MAXIMUM 6" (150mm) LIFTS. SEE NOTES.
A	FOUNDATION STONE	3/8" - 2" (9.5-50mm) CLEAN, CRUSHED, ANGULAR STONE	3, 357, 4, 467, 5, 56, 57	COMPACT TO ≥ 95% STANDARD DENSITY IN MAXIMUM 6" (150mm) LIFTS. SEE NOTES.

NOTES:
1. INSTALL CHAMBERS AND END CAPS IN ACCORDANCE WITH SITE SPECIFIC PLANS, HYDROCHAIN INSTALLATION MANUAL AND SUPPLEMENTAL DOCUMENTS. REFERENCE THE QR CODE BELOW FOR PRODUCT DOCUMENTS.
2. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, AND ANGULAR.
3. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, COMPACTION REQUIREMENTS ARE MET WHEN STONE IS PLACED AND COMPACTED IN 6" (150mm) MAXIMUM LIFTS USING TWO FULL PASSES WITH A VIBRATORY COMPACTOR.
4. EXTEND CROSS CONNECTION PIPES INTO THE CHAMBER BY A LENGTH EQUAL OR GREATER THAN 1/2 THE PIPE O.D.



TYPICAL CHAMBER WITH END CAP CROSS SECTION
SCALE: NTS

TYPICAL CHAMBER CROSS SECTION
SCALE: NTS

TYPICAL CHAMBER CROSS SECTION WITH CONNECTOR PIPE
SCALE: NTS

XS-005669

XERXES®

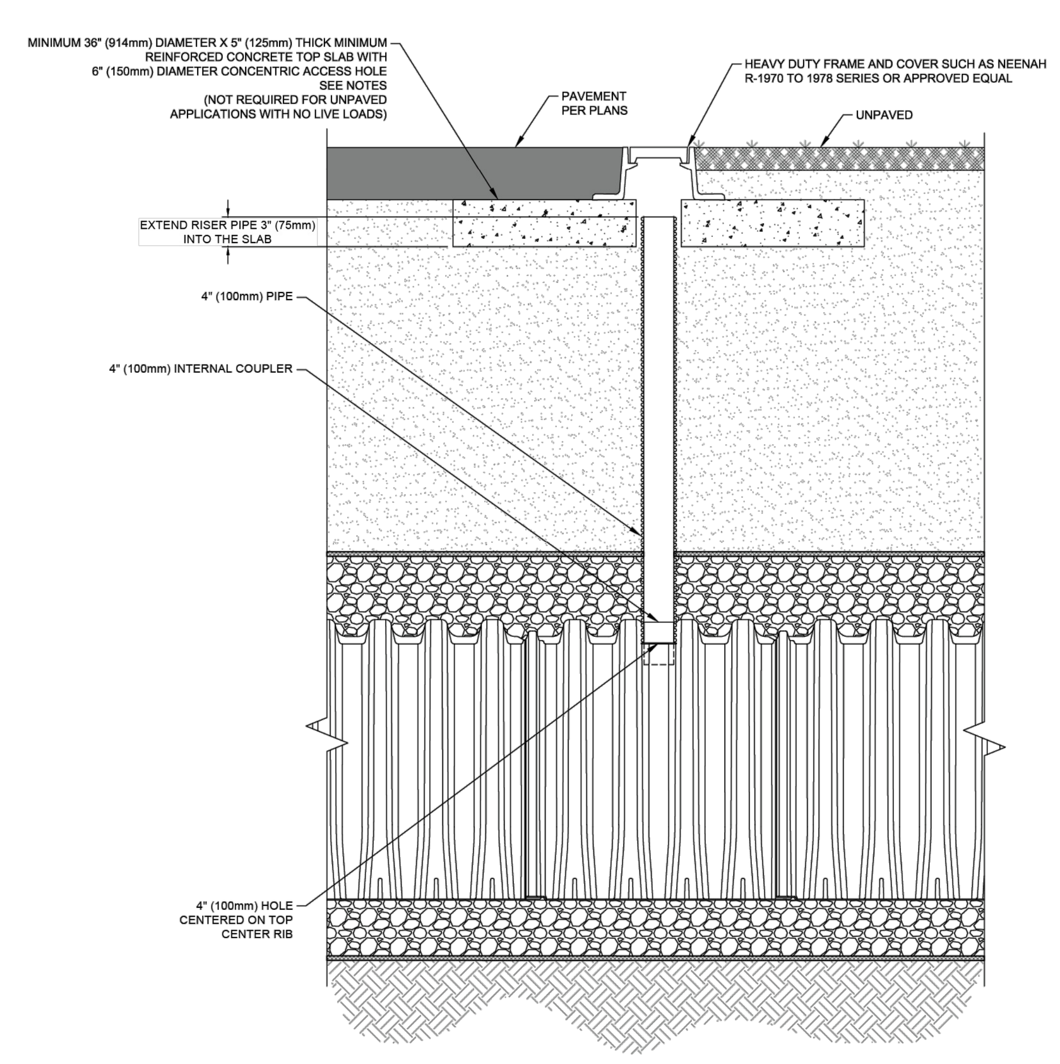
HYDROCHAIN™
S-29B CHAMBER
CROSS SECTION DETAIL

DATE	09/04/2025	SHEET 1 OF 1

PARTS LIST		
ITEM	QTY	PROVIDER
HEAVY DUTY FRAME AND COVER SUCH AS NEENAH R-1970 TO 1978 SERIES OR APPROVED EQUAL	1	CONTRACTOR/OTHERS
MINIMUM 36" (914mm) REINFORCED CONCRETE TOP SLAB	1	CONTRACTOR/OTHERS
4" (100mm) PIPE	PER PLANS	CONTRACTOR/OTHERS
4" (100mm) INTERNAL COUPLER	1	XERXES

NOTES:
1. INSTALL INSPECTION PORTS IN ACCORDANCE WITH THE SITE SPECIFIC PLANS, HYDROCHAIN INSTALLATION MANUAL AND SUPPLEMENTAL DOCUMENTS. REFERENCE THE QR CODE BELOW FOR PRODUCT DOCUMENTS.
2. THE INSPECTION PORT PIPE MUST BE DISCONNECTED FROM THE TOP SLAB. THE RISER PIPE MUST NOT BE SUBJECT TO SURFACE LOADS.
3. SEE HYDROCHAIN CHAMBER CROSS SECTION STANDARD DETAIL FOR CHAMBER AND MINIMUM BACK FILL DIMENSIONS.

OPERATION AND MAINTENANCE:
1. REMOVE CASTING LID.
2. USE A LIGHT AND STADIA ROD TO MEASURE THE SEDIMENT DEPTH IN THE BOTTOM OF THE CHAMBER.
3. OPTIONALLY, A BORESCOPE CAMERA MAY BE USED TO INSPECT THE INSIDE OF THE CHAMBERS.
4. IF SEDIMENT DEPTH IS ABOVE ACCEPTABLE LEVELS THEN PERFORM MAINTENANCE IN ACCORDANCE WITH LOCAL REQUIREMENTS AND HYDROCHAIN CHAMBER OPERATION AND MAINTENANCE MANUAL.



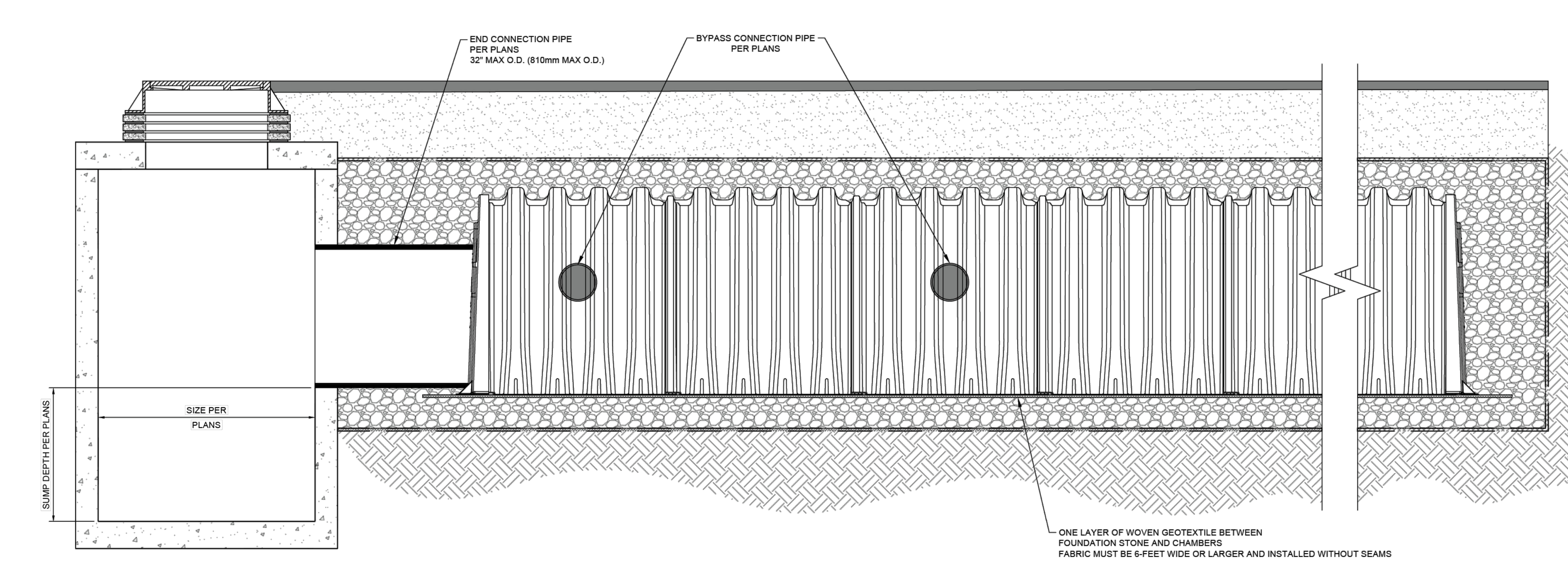
XS-005669

XERXES®

HYDROCHAIN™
S-29B CHAMBER
4-INCH INSPECTION PORT

DATE	07/11/2025	SHEET 1 OF 1

NOTES:
1. INSTALL THE MAIN HEADER ROW, CHAMBERS, AND END CAPS IN ACCORDANCE WITH THE SITE SPECIFIC PLANS, HYDROCHAIN INSTALLATION MANUAL AND SUPPLEMENTAL DOCUMENTS. REFERENCE THE QR CODE BELOW FOR PRODUCT DOCUMENTS.
2. CONDUCT INSPECTION AND MAINTENANCE IN ACCORDANCE WITH HYDROCHAIN CHAMBER MAIN HEADER ROW OPERATION AND MAINTENANCE MANUAL.



XS-005669

XERXES®

HYDROCHAIN™
S-29B CHAMBER
MAIN HEADER ROW (MHR) DETAIL

DATE	07/11/2025	SHEET 1 OF 1

CAUTION NOTICE TO CONTRACTORS

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THE DIMENSION GROUP
ARCHITECTURE • CIVIL ENGINEERING • MEP ENGINEERING
10755 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL 214.343.9400 www.DimensionGroup.com

TBPE FIRM REGISTRATION #F-8396

STATE OF TEXAS
KEATON L. MAI
125077
LICENSED PROFESSIONAL ENGINEER
12/15/2025

#	DATE	REVISION DESCRIPTION	BY

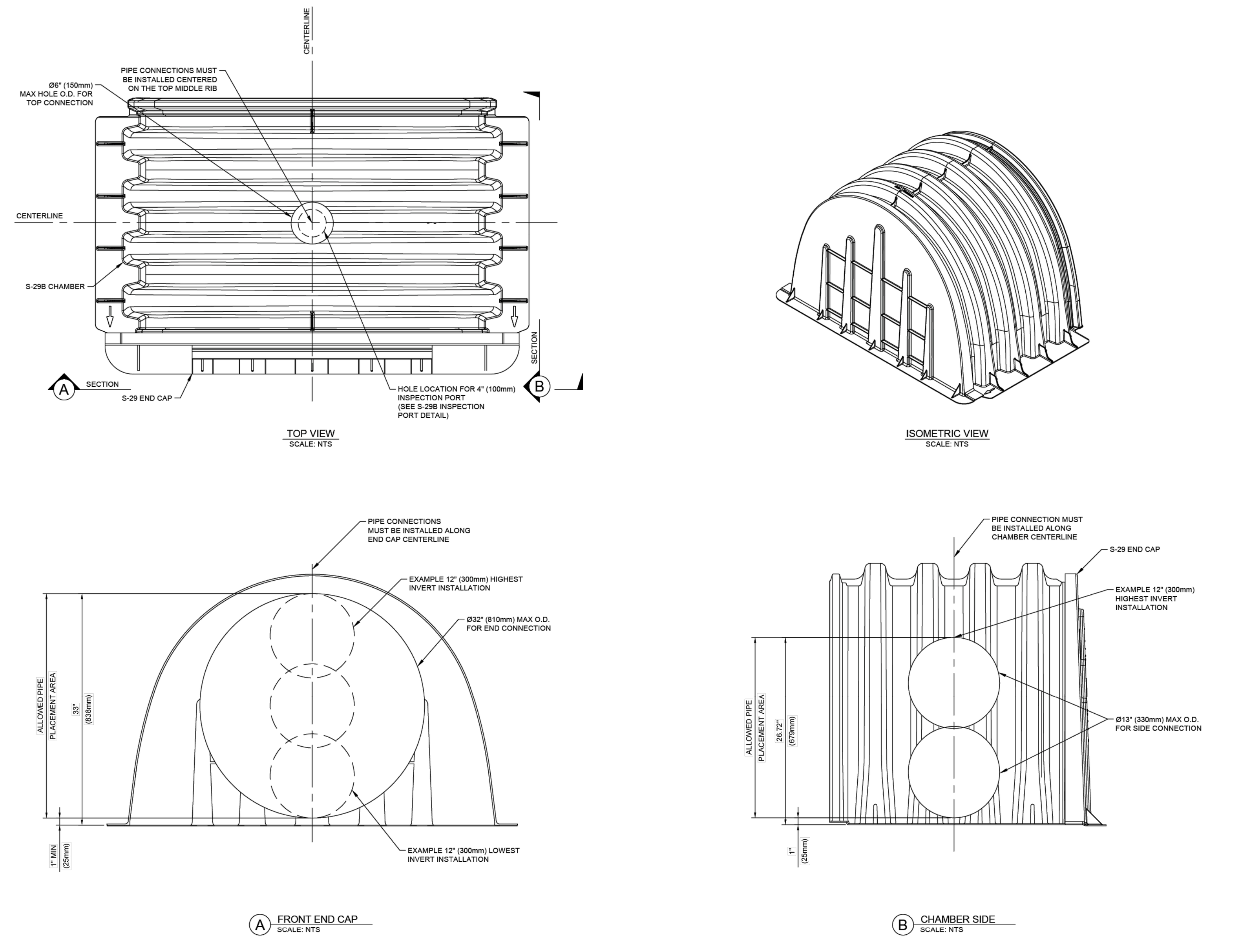
project no. 230-817
date 12/15/2025 — 4:12 pm
dwg. C9.2 STORM DRAINAGE PLAN.dwg
drawn by
designed by
approved by

DETENTION DETAILS

CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

SHEET
C9.6

Drawing name: L:\Circle K\2023 PMF Projects\230-817 — Round Rock, TX — Louis Henna Blvd & A. W. Grimes Blvd, NEC (900 Louis Henna Blvd)\02 Civil\C3D\Sheet\CD\C9.2 STORM DRAINAGE PLAN.dwg Dec 15, 2025 — 4:12pm
[24x36TBs.dwg] [V-BASE.dwg] [C-BASE.dwg]



CONNECTION PIPE COMPATIBILITY TABLE					
PIPE SIZE	PIPE MATERIAL[1]	HOLE CUT[2] MIN-MAX	SIDE CONNECTION	TOP CONNECTION	END CAP
4" (100mm)	PVC	4.5"-5.5" (114mm-140mm)	X	X	X
	HDPE/PP	4.8"-5.8" (122mm-147mm)	X	X	X
6" (150mm)	PVC	6.625"-7.625" (168mm-194mm)	X	X	X
	HDPE/PP	6.9"-7.9" (175mm-201mm)	X	X	X
8" (200mm)	PVC	8.625"-9.625" (219mm-244mm)	X		X
	HDPE/PP	9.1"-10.1" (231mm-257mm)	X		X
10" (250mm)	PVC	10.50" - 11.50" (267mm-392mm)	X		X
	HDPE/PP	11.10" - 12.10" (282mm)-307mm)	X		X
	RCP	11.75"-12.75" (298mm-324mm)	X		X
12" (300mm)	PVC	12.75"-13.75" (324mm-349mm)	X		X
	HDPE/PP	14.5"-15.5" (368mm-394mm)			X
	RCP	17.5"-18.5" (445mm-470mm)			X
15" (400mm)	PVC	16"-17" (406mm-431mm)			X
	HDPE/PP	22"-23" (559mm-584mm)			X
	RCP	23"-24" (584mm-610mm)			X
18" (450mm)	PVC	18"-19" (457mm-483mm)			X
	HDPE/PP	22"-23" (559mm-584mm)			X
	RCP	23"-24" (584mm-610mm)			X
24" (600mm)	PVC	24"-25" (610mm-635mm)			X
	HDPE/PP	28"-29" (711mm-737mm)			X
	RCP	30"-31" (762mm-787mm)			X

1. PVC HOLE CUT SIZES BASED ON SCH-40, SCH-80, SDR-35, AND SDR-26 PIPES. HDPE/PP HOLE CUT SIZES BASED ON INDUSTRY STANDARD PIPES CONFORMING TO ASTM F2881/F2306/F2648. RCP HOLE CUT SIZES BASED ON INDUSTRY STANDARD PIPES CONFORMING TO ASTM C76/C655.
2. CUT THE HOLE TO MINIMIZE GAPS BETWEEN THE CONNECTING PIPE O.D. AND CHAMBER HOLE I.D.

SCAN FOR STEP-BY-STEP VIDEO INSTRUCTIONS AND DEMONSTRATION OF CUTTING HOLES FOR PIPES
https://www.youtube.com/watch?v=h3VjsUkOklY

NOTES:
1. CUT CHAMBERS AND END CAPS IN ACCORDANCE WITH THE HYDROCHAIN CHAMBER SUPPLEMENTAL INSTRUCTIONS AND INSTALLATION MANUAL. REFERENCE THE QR CODE BELOW FOR PRODUCT DOCUMENTS.

RECOMMENDED EQUIPMENT:
1. PERSONAL PROTECTION EQUIPMENT (PPE): GLOVES, SAFETY GLASSES, FACE SHIELD, LONG-SLEEVE SHIRT, RESPIRATOR MASK, HEARING PROTECTION, SAFETY-TOED SHOES, HARDHAT, HIGH-VISIBILITY CLOTHING.
2. HAND TOOLS: MARKER, RECIPROCATING SAW WITH BIMETAL TAPERED BLADES, DRILL WITH 0.5" BITS, ANGLE GRINDER, TAPE MEASURE.
3. EXPENDABLES: SPRAY FOAM GAP SEALER TO FILL GAPS BETWEEN PIPE O.D. AND HOLE.

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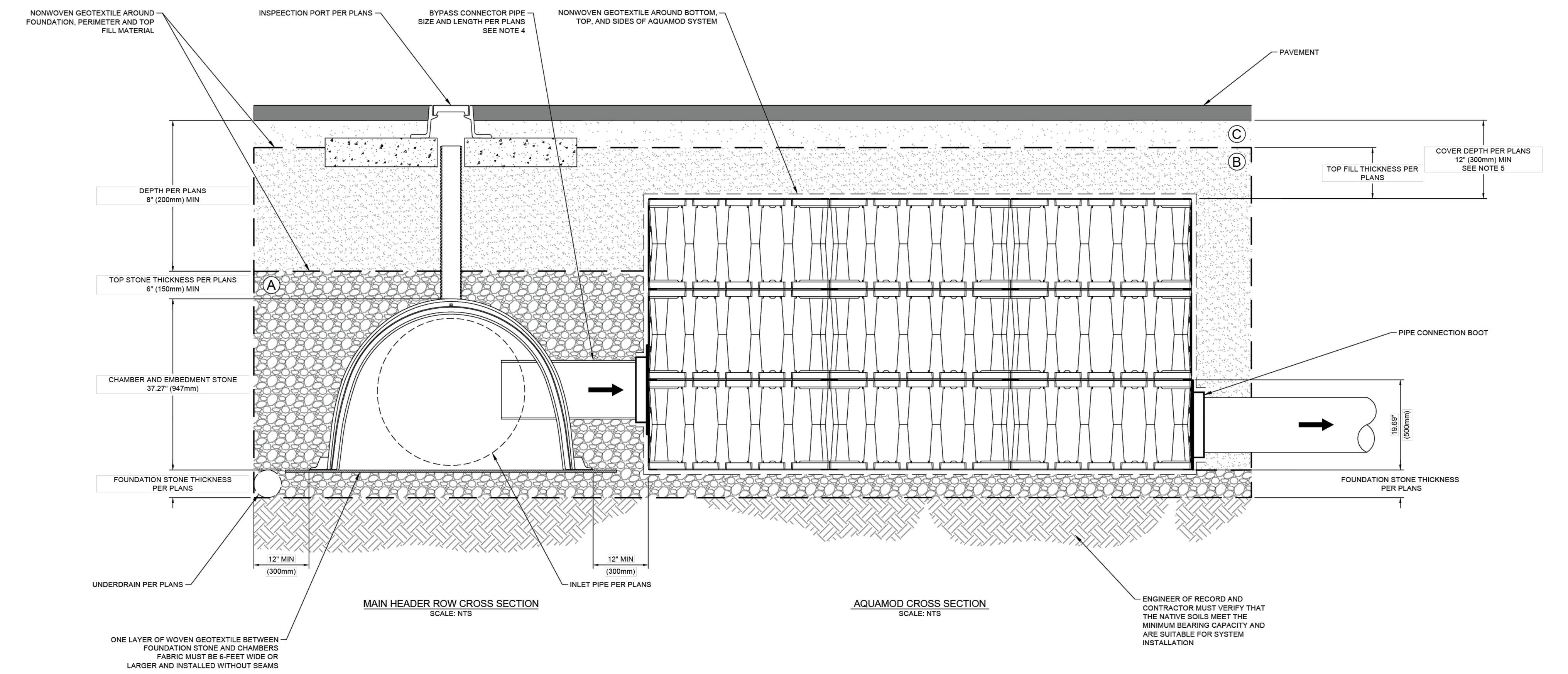
S-29B CHAMBER AND END CAP
HOLE CUTTING DETAIL
DATE 07/11/2025 SHEET 1 OF 1

AQUAMOD STANDARD FILL MATERIALS				
	MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	COMPACT/DENSITY REQUIREMENT
C	FILL MATERIAL FROM 25" (635mm) ABOVE MODULE TO GRADE	PER CONSTRUCTION PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	PER PLANS	PER CONSTRUCTION PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.
B	PERIMETER AND TOP FILL MATERIAL	3/8"-1 1/2" (9.5-37.5mm) CLEAN, CRUSHED, ANGULAR STONE OR COARSE-GRAINED SOILS	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, M145: A-1, A-3	COMPACT TO ≥ 95% STANDARD DENSITY IN MAXIMUM 6" (150mm) LIFTS. SEE NOTES.
A	FOUNDATION, PERIMETER AND TOP FILL MATERIAL	3/8"-1 1/2" (9.5-37.5mm) CLEAN, CRUSHED, ANGULAR STONE OR COARSE-GRAINED SOILS	3, 357, 4, 467, 5, 56, 57	

NOTES:
1. INSTALL SYSTEM IN ACCORDANCE WITH SITE SPECIFIC PLANS, INSTALLATION MANUAL AND SUPPLEMENTAL DOCUMENTS. REFERENCE THE QR CODE BELOW FOR PRODUCT DOCUMENTS.
2. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, AND ANGULAR.
3. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, COMPACTION REQUIREMENTS ARE MET WHEN STONE IS PLACED AND COMPACTED IN 6" (150mm) MAXIMUM LIFTS USING TWO FULL PASSES WITH A VIBRATORY COMPACTOR.
4. EXTEND CROSS CONNECTION PIPES INTO THE CHAMBER BY A LENGTH EQUAL OR GREATER THAN 1/2 THE PIPE O.D.
5. IF THERE IS LESS THAN 19 INCHES OF COVER DEPTH OVER THE AQUAMOD SYSTEM, REFER TO THE HYDROCHAIN AQUAMOD 12-HEIGHT OF COVER DETAIL FOR GEOSYNTHETIC REINFORCEMENT AND FILL MATERIAL REQUIREMENTS.



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AQUAMOD WITH S-29B MAIN HEADER ROW
CROSS SECTION DETAIL
DATE 11/07/2025 SHEET 1 OF 1

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GENERAL

1. THE STORMWATER DETENTION SYSTEM MUST BE XERXES® HYDROCHAIN™ AQUAMOD. ONLY MODULES APPROVED BY THE ENGINEER OF RECORD ARE PERMITTED.
2. MODULES MUST BE MANUFACTURED BY INJECTION MOLDING OF FIBERGLASS-REINFORCED POLYPROPYLENE (PP).
3. PRODUCT MATERIALS MUST BE TESTED AND MEET OR EXCEED THE STANDARDS FOR:
   A. D790 STANDARD TEST METHODS FOR FLEXURAL PROPERTIES OF UNREINFORCED AND REINFORCED PLASTICS AND ELECTRICAL INSULATING MATERIALS.
   B. D638 STANDARD TEST METHOD FOR TENSILE PROPERTIES OF PLASTICS
   C. D256 STANDARD TEST METHODS FOR DETERMINING THE IZOD PENDULUM IMPACT RESISTANCE OF PLASTICS
   D. D6992 STANDARD TEST METHOD FOR ACCELERATED TENSILE CREEP AND CREEP-RUPTURE OF GEOSYNTHETIC MATERIALS BASED ON TIME-TEMPERATURE SUPERPOSITION USING THE STEPPED ISOTHERMAL METHOD
   E. D2412 STANDARD TEST METHOD FOR DETERMINATION OF EXTERNAL LOADING CHARACTERISTICS OF PLASTIC PIPE BY PARALLEL-PLATE LOADING
4. THE INSTALLED SYSTEM MUST BE DESIGNED TO MEET THE LOAD REQUIREMENTS OF AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR LOADS AND LOAD FACTORS USING A VEHICULAR LIVE LOAD FACTOR OF 1.75 AND AN EARTH LOAD FACTOR OF 1.95.
5. MODULES MUST HAVE RESISTANCE OF 80,000 POUNDS FORCE APPLIED OVER 10.76 SQUARE FEET PER ASTM D2412.
6. THE MODULES MUST INTERCONNECT HORIZONTALLY AND VERTICALLY USING CONNECTION PINS.
7. THE MODULES AND ACCESSORIES MUST BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

INSTALLATION

1. INSTALLATION MUST NOT START UNTIL AFTER A PRE-CONSTRUCTION MEETING HAS BEEN HELD WITH THE MANUFACTURER'S REPRESENTATIVE AND THE INSTALLERS.
2. INSTALLATION MUST BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS AND AQUAMOD INSTALLATION MANUAL.
3. USE APPROPRIATE EQUIPMENT FOR PLACING FILL SUCH AS AN EXCAVATOR OR CONVEYOR. DO NOT DROP FILL A DISTANCE GREATER THAN 4 FT (1200 mm) TO PREVENT DAMAGE TO MODULES
4. THE FOUNDATION FILL MATERIAL MUST BE LEVELED AND COMPACTED BEFORE PLACING MODULES.
5. FILL MATERIAL MUST MEET THE REQUIREMENTS IN THE INSTALLATION MANUAL.
6. ANY DISCREPANCIES WITH THE NATIVE SOIL BEARING CAPACITIES MUST BE REPORTED TO THE ENGINEER OF RECORD.
7. IT IS A BEST PRACTICE TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF CONSTRUCTION.

Visit www.xerxes.com for the installation manual and additional resources.

Contact your sales representative or email the following Xerxes contacts for support.

North America: stormwater.support@mattr.com
Outside North America: hydrochain.int@mattr.com

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STORMWATER.SUPPORT@MATTR.COM
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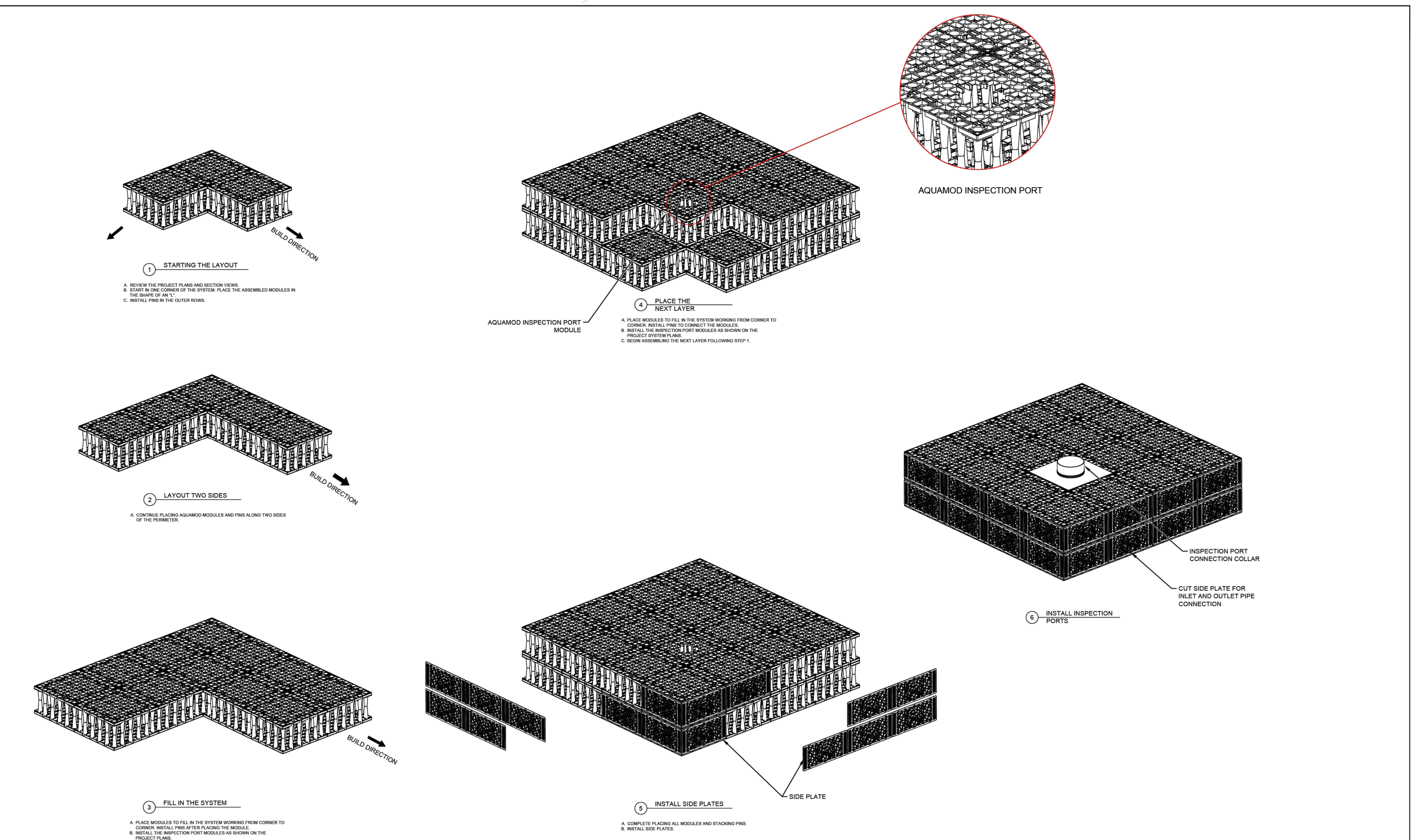
AQUAMOD
SPECIFICATIONS
DATE 05/30/2025 SHEET 1 OF 1



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AQUAMOD
PRIMARY MODULE INSTALLATION OVERVIEW
DATE 07/08/2025 SHEET 1 OF 1

CAUTION NOTICE TO CONTRACTORS

811

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUCH CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

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10755 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL 214.343.9400 www.DimensionGroup.com

TBPE FIRM REGISTRATION #F-8396
STATE OF TEXAS
KEATON L. MAI
125077
LICENSED PROFESSIONAL ENGINEER
12/15/2025

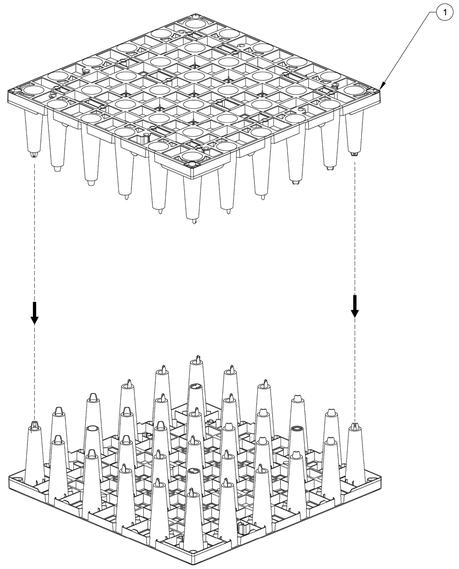
#	DATE	REVISION DESCRIPTION	BY

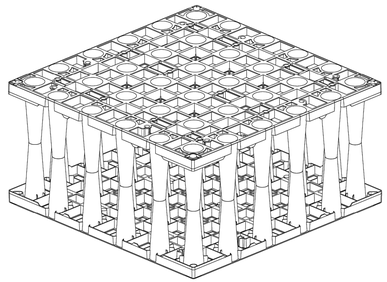
project no. 230-817
date 12/15/2025 — 4:12 pm
dwg. C9.2 STORM DRAINAGE PLAN.dwg
drawn by
designed by
approved by

DETENTION DETAILS

CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

SHEET
C9.7





AQUAMOD PROPERTIES	
NOMINAL DIMENSIONS (LENGTH x WIDTH x HEIGHT)	39.37" x 39.37" x 19.69" (1000mm x 1000mm x 500mm)
BARE UNIT STORAGE	16.95 CUBIC FEET (0.48 CUBIC METERS)
VOID SPACE	96%
UNIT WEIGHT	49 LBS (22 kg)

BILL OF MATERIALS		
ID	NAME	QTY
1	PRIMARY MODULE HALF	2

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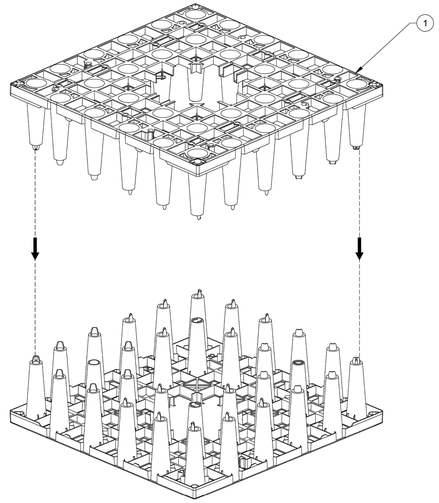
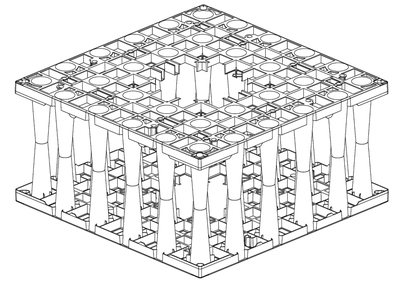
HYDROCHAIN™
AQUAMOD
PRIMARY MODULE

DATE	05/30/2025	SHEET	1	OF	1





AQUAMOD PROPERTIES	
NOMINAL DIMENSIONS (LENGTH x WIDTH x HEIGHT)	39.37" x 39.37" x 19.69" (1000mm x 1000mm x 500mm)
BARE UNIT STORAGE	16.95 CUBIC FEET (0.48 CUBIC METERS)
VOID SPACE	96%
UNIT WEIGHT	49 LBS (22 kg)

BILL OF MATERIALS		
ID	NAME	QTY
1	PRIME INSPECTION MODULE HALF	2

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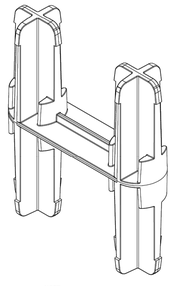
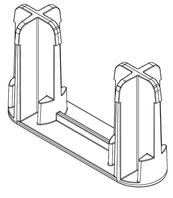
HYDROCHAIN™
AQUAMOD
PRIME INSPECTION MODULE

DATE	07/08/2025	SHEET	1	OF	1



NOTE:
1. USED TO CONNECT MODULES HORIZONTALLY AND VERTICALLY.

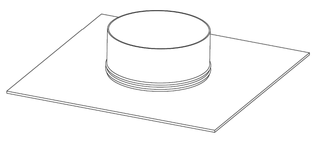
H PIN
SCALE: NTS



NOTE:
1. USED TO CONNECT MODULES HORIZONTALLY AT THE TOP OF THE SYSTEM.

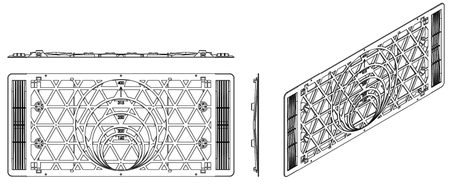
U PIN
SCALE: NTS

PIPE CONNECTION BOOT COMPATIBILITY TABLE		
PIPE SIZE (IN)	PIPE MATERIAL	TYPE
8	PVC SDR 35	1
	HDPE DUAL WALL	1
10	PVC SDR 35	1
	HDPE DUAL WALL	1
12	PVC SDR 35	2
	HDPE DUAL WALL	2
	RCP B-WALL	3
15	PVC SDR 35	2
	HDPE DUAL WALL	3
	RCP B-WALL	4
18	PVC SDR 35	4
	HDPE DUAL WALL	4
	RCP B-WALL	4
21	PVC SDR 35	4
	RCP B-WALL	
24	PVC SDR 35	4
	HDPE DUAL WALL	
	RCP B-WALL	



NOTE:
1. PROVIDES CONNECTION BETWEEN MODULE AND PIPES.

PIPE CONNECTION BOOT
SCALE: NTS



NOTE:
1. USED TO COVER SYSTEM SIDES AROUND THE PERIMETER OF PRIMARY MODULES.

PRIMARY MODULE SIDE PLATE
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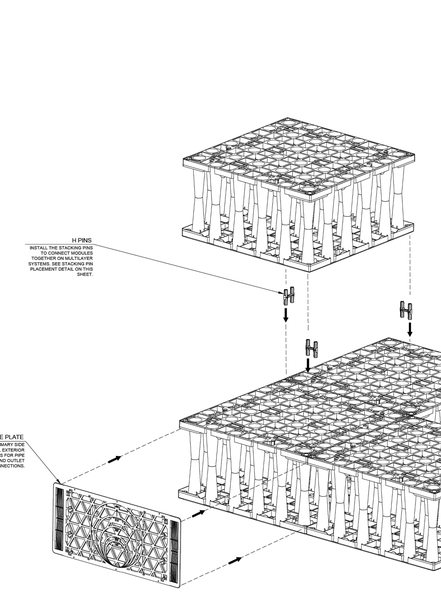
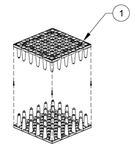
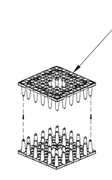
HYDROCHAIN™
AQUAMOD
PRIMARY MODULE ACCESSORY DETAILS

DATE	07/08/2025	SHEET	1	OF	1

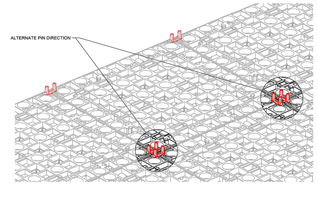




PRIMARY MODULE BILL OF MATERIALS		
ID	NAME	QTY
1	PRIMARY MODULE HALF	2



INSPECTION MODULE BILL OF MATERIALS		
ID	NAME	QTY
3	PRIME INSPECTION MODULE HALF	2



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HYDROCHAIN™
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PRIMARY MODULE ASSEMBLY GUIDE

DATE	07/25/2025	SHEET	1	OF	1

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUCH CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

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#F-8396
STATE OF TEXAS
KEATON L. MAI
125077
LICENSED
PROFESSIONAL
ENGINEER
12/15/2025

#	DATE	REVISION DESCRIPTION	BY

drawn by
designed by
approved by

project no. 230-817
date 12/15/2025 – 4:12 pm
dwg C9.2 STORM DRAINAGE PLAN.dwg

DETENTION DETAILS

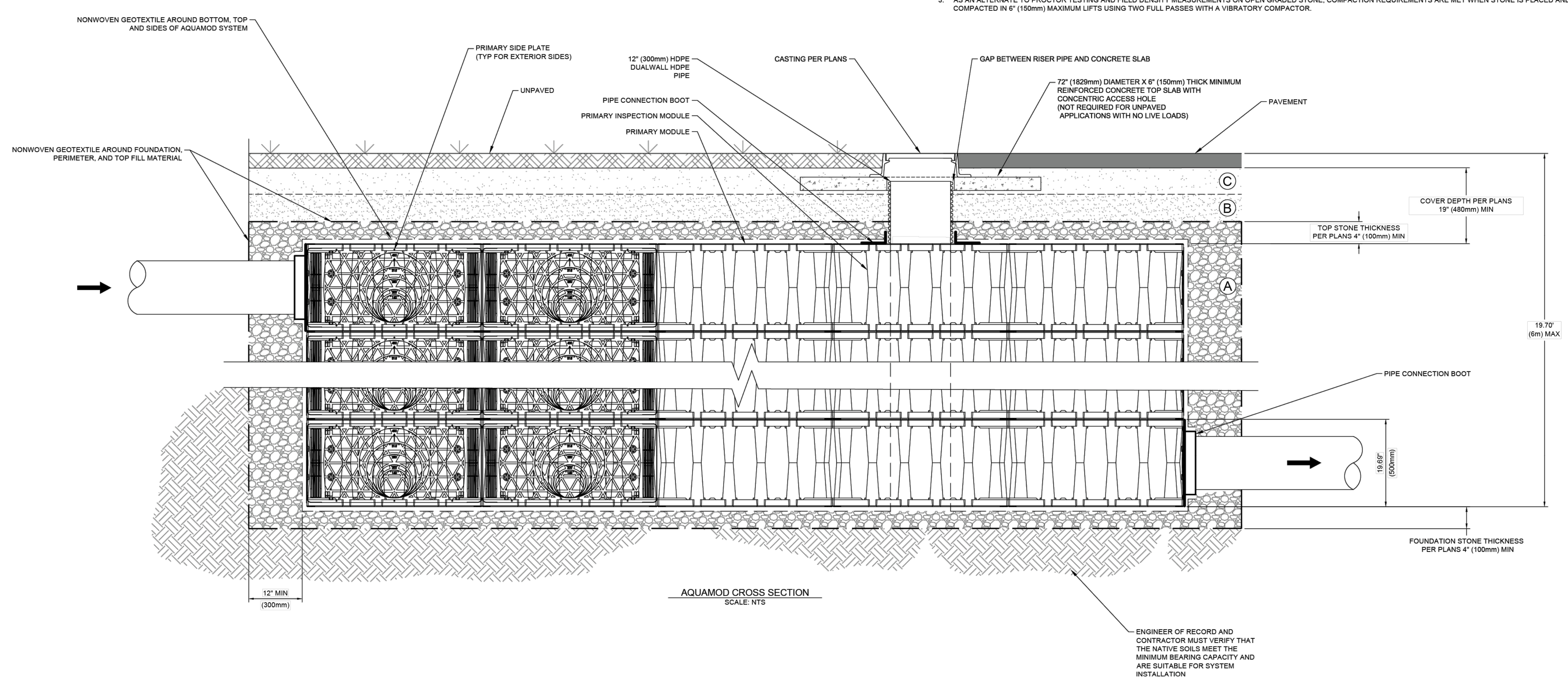
CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

SHEET
C9.8

[24x36TBs.dwg] [V-BASE.dwg] [C-BASE.dwg]
drawing name: L:\Circle K\2023 PMF Projects\230-817 – Round Rock, TX – Louis Henna Blvd & A. W. Grimes Blvd, NEC (900 Louis Henna Blvd)\02 Civil\C3D\Sheet\CD\C9.2 STORM DRAINAGE PLAN.dwg Dec 15, 2025 – 4:12pm

	MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	COMPACT/DENSITY REQUIREMENT
AQUAMOD STANDARD FILL MATERIALS				
C	FILL MATERIAL FROM 25" (635mm) ABOVE MODULE TO GRADE	PER CONSTRUCTION PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	PER PLANS	PER CONSTRUCTION PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.
B	FILL MATERIAL BETWEEN THE TOP FILL "A" AND 25" (635mm) ABOVE THE MODULE	GRANULAR WELL-GRADED SOIL / AGGREGATE MIXTURES, <35% FINES. MOST PAVEMENT SUB-BASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 M145: A-1, A-2, A-3	COMPACT TO ≥ 95% STANDARD DENSITY IN MAXIMUM 6" (150mm) LIFTS. SEE NOTES.
A	FOUNDATION, PERIMETER AND TOP FILL MATERIAL	3/8"-1 1/2" (9.5-37.5mm) CLEAN, CRUSHED, ANGULAR STONE OR COARSE-GRAINED SOILS	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9 M145: A-1, A-3	

NOTES:
1. INSTALL SYSTEM IN ACCORDANCE WITH SITE SPECIFIC PLANS, HYDROCHAIN INSTALLATION MANUAL AND SUPPLEMENTAL DOCUMENTS. REFERENCE THE QR CODE BELOW FOR PRODUCT DOCUMENTS.
2. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, AND ANGULAR.
3. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, COMPACTION REQUIREMENTS ARE MET WHEN STONE IS PLACED AND COMPACTED IN 6" (150mm) MAXIMUM LIFTS USING TWO FULL PASSES WITH A VIBRATORY COMPACTOR.



AQUAMOD CROSS SECTION
SCALE: NTS

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AQUAMOD
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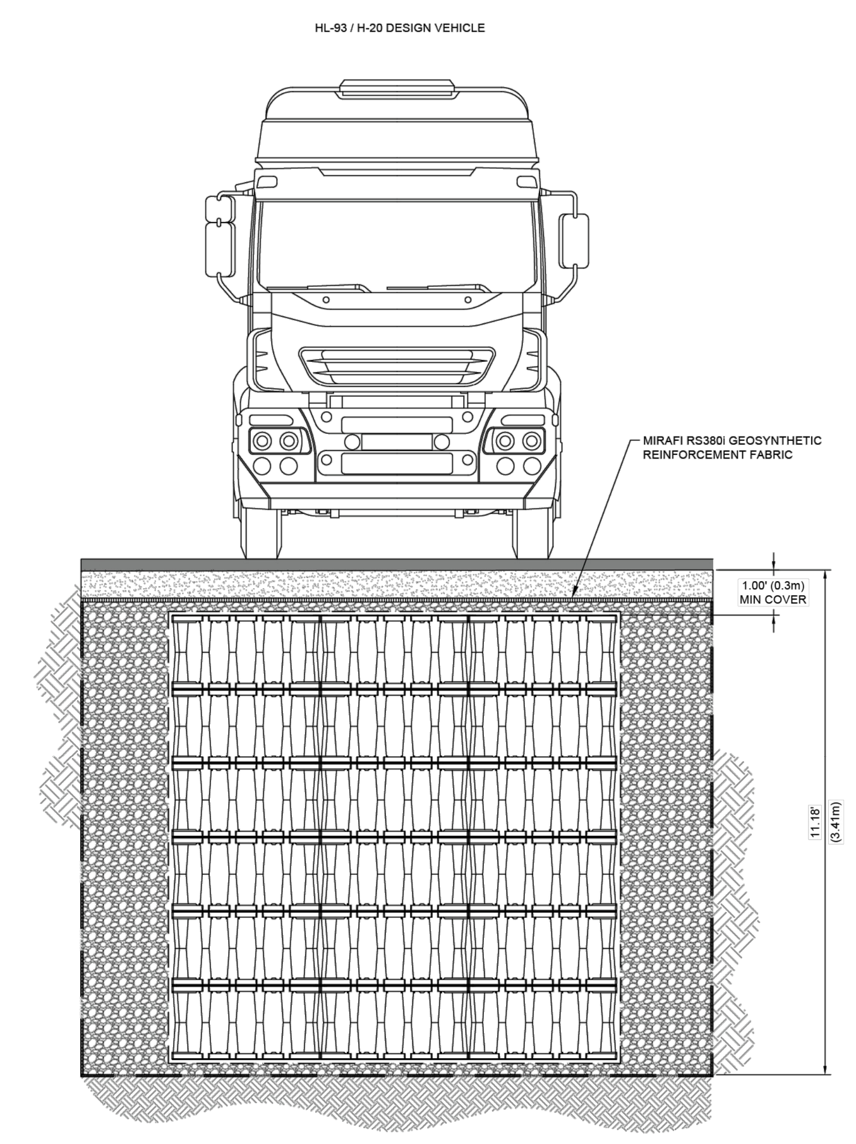
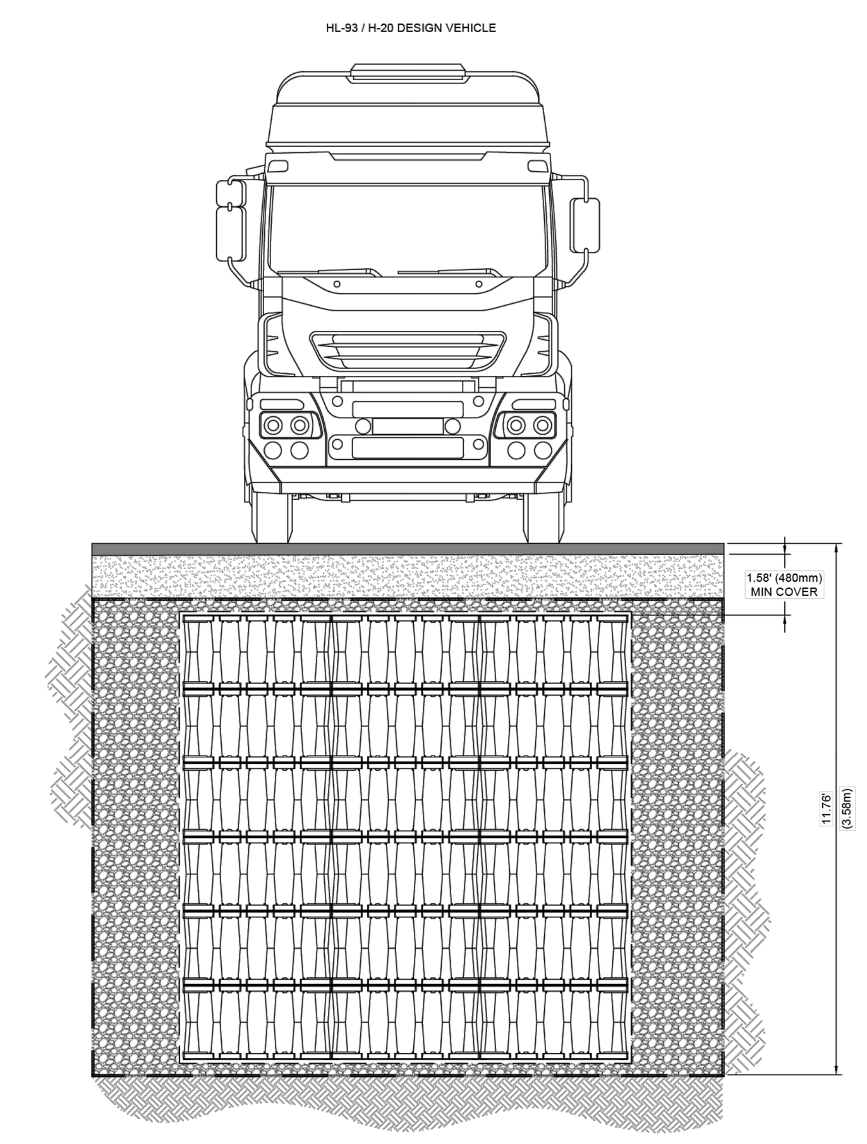
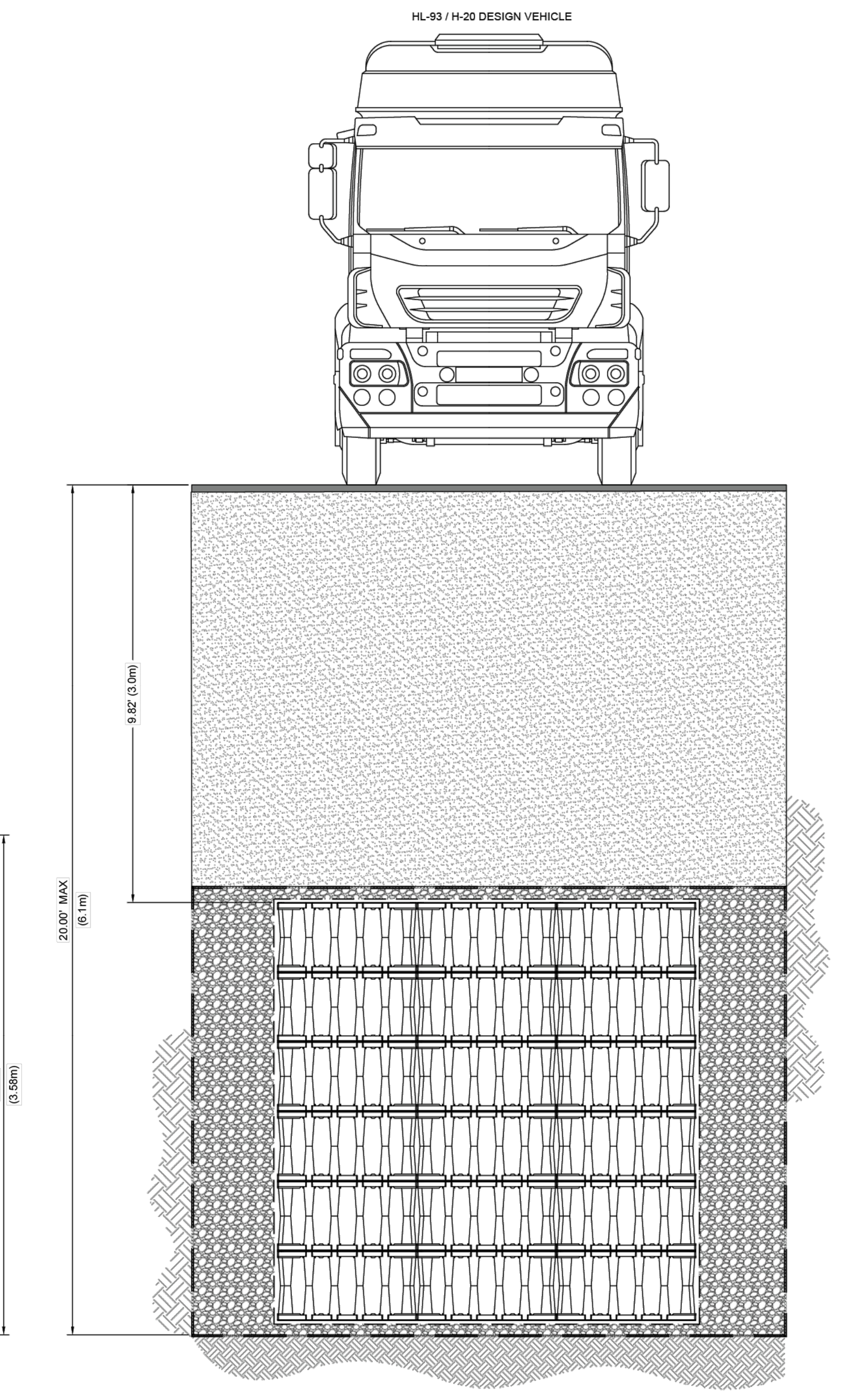
DATE	07/23/2025	SHEET	1	OF	1



MINIMUM HEIGHT OF COVER WITH GEOSYNTHETIC REINFORCEMENT
SCALE: NTS



MINIMUM HEIGHT OF COVER
SCALE: NTS



MAXIMUM HEIGHT OF COVER
SCALE: NTS

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HYDROCHAIN™
AQUAMOD
BURY DEPTH AND VEHICLE LOADS

DATE	08/07/2025	SHEET	1	OF	1

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUCH CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

[24x36TBs.dwg] [V-BASE.dwg] [C-BASE.dwg]
Drawing name: L:\Circle K\2023 PMF Projects\230-817 - Round Rock, TX - Louis Henna Blvd & A. W. Grimes Blvd, NEC (900 Louis Henna Blvd)\02 Civil\C3D\Sheet\CD\C9.2 STORM DRAINAGE PLAN.dwg Dec 15, 2025 - 4:12pm

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TEL: 214.343.9400 www.DimensionGroup.com

TBPE FIRM REGISTRATION #F-8396

STATE OF TEXAS
KEATON L. MAI
125077
LICENSED PROFESSIONAL ENGINEER
12/15/2025

#	DATE	REVISION DESCRIPTION	BY
1			
2			
3			
4			

project no.	230-817
date	12/15/2025 — 4:12 pm
dwg.	C9.2 STORM DRAINAGE PLAN.dwg
drawn by	
designed by	
approved by	

DETENTION DETAILS

CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

SHEET
C9.9

II. GEOLOGIC ASSESSMENT FORM (TCEQ-0585)

Carlson, Brigance & Doering, Inc.

Civil Engineering ❖ Surveying ❖ Environmental

Geologic Assessment
Circle K
900 Louis Henna Boulevard
Round Rock, Williamson County, Texas

Prepared for:
The Dimension Group
10755 Sandhill Road
Dallas, TX 75238

Subject Property

Report Issue Date: December 9, 2025

Carlson, Brigance & Doering, Inc. Project No. 5767

Prepared By:

Carlson, Brigance & Doering, Inc (CBD)
1270 North Loop 1604 E, Suite 1201
San Antonio, TX 78232

Table of Contents

SECTION **Page**

APPENDICES

1. 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

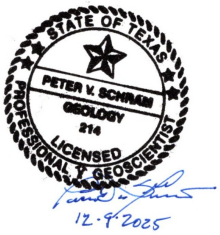
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Peter V. Schram, PG 214 Telephone: (210) 326-7831

Date: December 9, 2025 Fax: _____

Representing: EnTech Consulting Corporation (Firm Reg. No. 50633) for Carlson, Brigance & Doering, Inc.

Signature of Geologist:



Regulated Entity Name: EnTech Consulting Corporation (Firm Reg. No. 50633)

Project Information

1. Date(s) Geologic Assessment was performed: November 18, 2025
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)
Austin-Whiteright Complex (AwD3)	B	Veneer to 3.5 feet

Soil Name	Group*	Thickness(feet)
Castephen Silty Clay (CaC)	B	Veneer to 2 feet

** 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" = 60 '
   Site Geologic Map Scale: 1" = 60'
   Site Soils Map Scale (if more than 1 soil type): 1" = 60 '

9. Method of collecting positional data:

   ☑ Global Positioning System (GPS) technology.
   ☑ Other method(s). Please describe method of data collection: Google Earth

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.

2. GEOLOGIC ASSESSMENT TABLE TCEQ-0585

2. GEOLOGIC ASSESSMENT TABLE TCEQ-0585

GEOLOGIC ASSESSMENT TABLE | **PROJECT NAME: Circle K, 900 Louis Henna Boulevard Round Rock, 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	
S-1	30.487272	-97.650152	MB	30	Austin Chalk	5'	5'	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-2	30.486985	-97.650312	MB	30	Austin Chalk	5'	5'	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-3	30.486956	-97.650241	MB	30	Austin Chalk	5'	0.75'	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-4	30.487172	-97.650316	MB	30	Austin Chalk	5'	0.75'	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-5	30.487207	-97.650159	MB	30	Austin Chalk	~2-2.5' diameter	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-6	30.487212	-97.650132	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-7	30.487327	-97.649859	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-8	30.487165	-97.649834	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-9	30.487117	-97.649826	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-10	30.487001	-97.650007	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-11	30.487088	-97.649703	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-12	30.486936	-97.649434	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-13	30.486974	-97.649302	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-14	30.486983	-97.649278	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-15	30.486987	-97.649263	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-16	30.486994	-97.649239	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-17	30.486994	-97.649223	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-18	30.486769	-97.64929	MB	30	Austin Chalk	~2-2.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-19	30.48656	-97.649952	MB	30	Austin Chalk	~3', 1.5', 1.5', 1.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-20	30.486504	-97.649843	MB	30	Austin Chalk	~3', 1.5', 1.5', 1.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-21	30.486476	-97.649789	MB	30	Austin Chalk	~3',1.5',1.5', 1.5',1.5' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
S-22	30.486473	-97.649760	MB	30	Austin Chalk	~0.67' dia.	NA	NA	NA	NA	NA	NA	X	X	30	X		X		Hilltop
O-1	30.486299	-97.649972	O	5	Austin Chalk	100	10	NA	NA	NA	NA	NA	N	X	5	X		X		Hilltop

* DATUM: WGS84

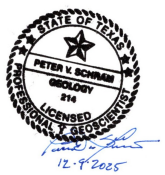
2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12 TOPOGRAPHY
Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.



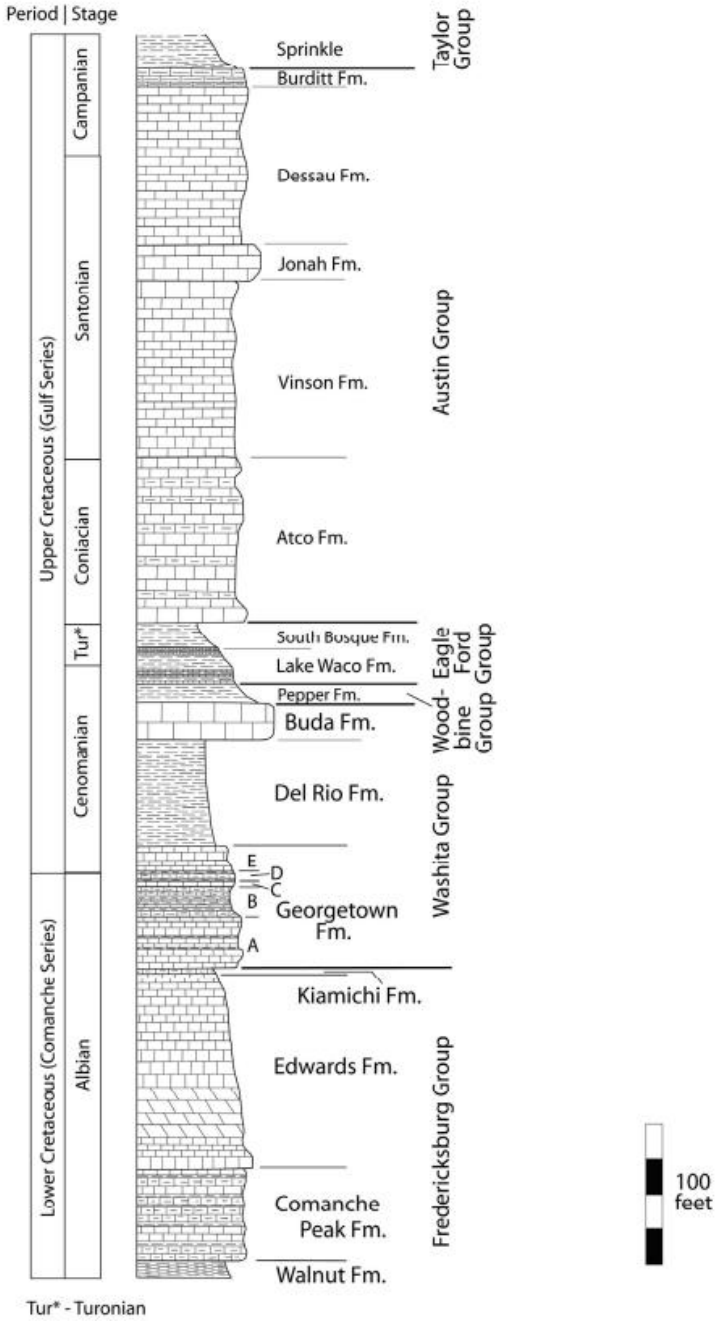
Date

Sheet 1 of 1

TCEQ-0585-Table (Rev. 10-01-04)

3. STRATIGRAPHIC COLUMN

Figure 1. Generalized Stratigraphic Column of the Round Rock Area



Source: Todd B. Housh, 2007: *Bedrock Geology of Round Rock and Surrounding Areas, Williamson and Travis Counties, Texas. Round Rock, TX*.

4. SUBJECT PROPERTY SUMMARY

Carlson, Brigance, & Doering, Inc. (CBD) has prepared this Geologic Assessment on the 3.517-acre Subject Property which is developed as a Circle K gas station at 900 Louis Henna Boulevard, Round Rock, Texas. This Geologic Assessment was performed to identify geologic features on or adjacent to the Subject Property that may affect the quality of groundwater in the Edwards Aquifer, as required by Title 30 Texas Administrative Code (TAC) §213.5.

The Subject Property encompasses Williamson County Appraisal District (Williamson CAD) parcel number R370954, located in Round Rock, Williamson County, Texas. Maps of the Subject Property and surrounding area are included in Appendix I of this report.

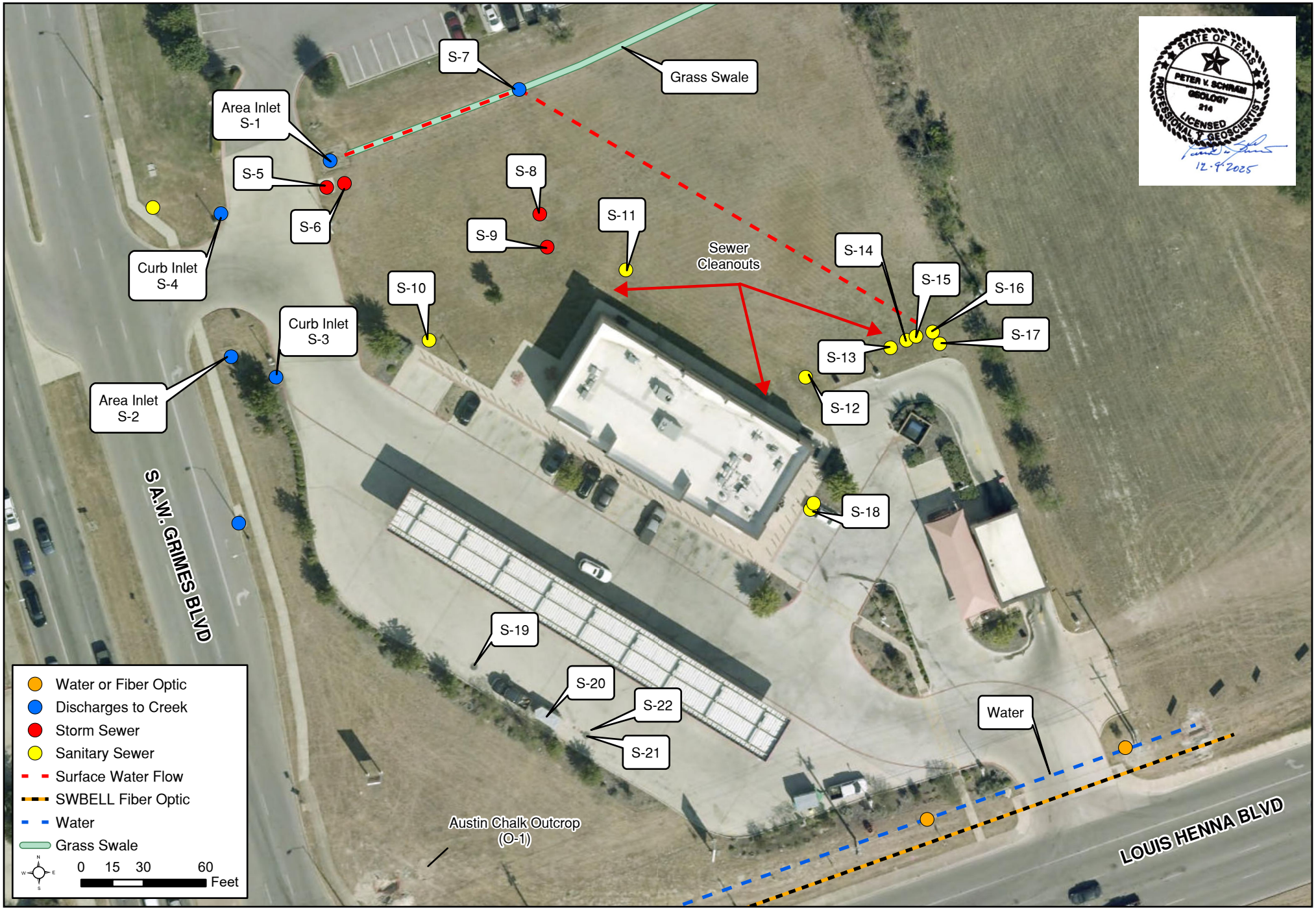
Subject Property Information Summary Table	
Project Name:	Circle K Louis Henna Boulevard & A.W. Grimes Boulevard Round Rock, Williamson County, Texas (CBD project no. 5767, TDG project no. 230-817)
Address:	900 Louis Henna Boulevard, Round Rock TX 78664
Parcel Information:	Williamson County CAD parcel no. R370954
Parcel Legal Description:	S6675 - George Sub, BLOCK A, Lot 2-3/pts, ACRES 3.517
Latitude/Longitude (NAD83):	30.486804°, -97.649752°
Field Survey Date:	November 18, 2025
Prepared By:	Peter Schram, P.G. & Kerry McEntire E.P.

5. SITE GEOLOGIC MAP

Carlson, Brigance & Doering, Inc.
Civil Engineering ❖ Surveying

CIRCLE K - SITE GEOLOGIC MAP

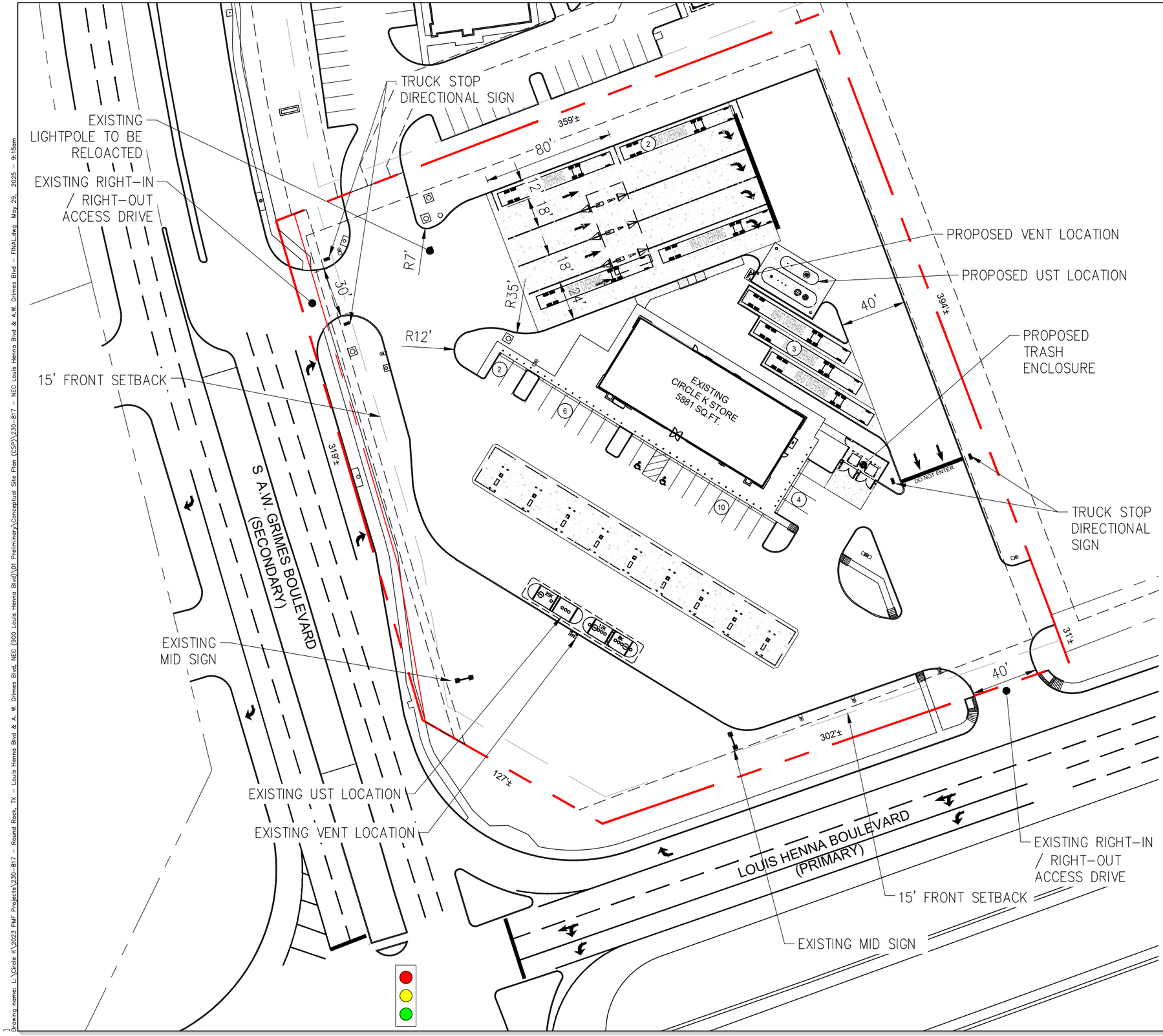
Williamson County, Texas
December 09, 2025



STATE OF TEXAS
PETER V. SCHRAM
GEOLOGY
214
LICENSED
PROFESSIONAL GEOSCIENTIST
12.9.2025

E:\5767\FIELDMAP_EXHIBITS\5767_FieldMaps.aprx

6. SITE PLANS



SITE LEGEND:

PROPERTY SETBACK LINE

GREEN SPACE SETBACK

PROPERTY LINE

(#) NUMBER OF PARKING SPACES

SITE DATA:

ZONING: C-1 (GENERAL COMMERCIAL)

CURRENT LAND USE: GASOLINE SERVICE STATION

TOTAL LOT AREA:	±3.51 ACRES ±153,052 SQ. FT.
AREA OF OUTPARCEL 1:	N/A
AREA OF OUTPARCEL 2:	N/A
AREA OF COMMERCIAL PARCEL:	N/A
AREA OF OPEN SPACE:	49,043 SQ. FT.
GROSS FLOOR AREA OF BUILDINGS:	5,881 SQ. FT.

BUILDING SETBACKS:	15'	FRONT
	0'	SIDE
	0'	SIDE
	0'	REAR
GREENSPACE SETBACKS:	N/A	FRONT
	N/A	SIDE (NORTH)
	N/A	SIDE (SOUTH)
	N/A	REAR

PARKING REQUIRED: (9'x18' PER CODE)
ONE (1) SPACE PER 250 SQUARE FEET OF GROSS FLOOR AREA
5881 / 250 = 24 SPACES

PARKING PROVIDED:
20 SPACES + 2 ADA = 22 PARKING
+ 18 PUMP SPACES
PARKING SPACES DIMENSION = 9.5'x18'
TRUCK PARKING SPACES = 5

TRUCK USED: WB - 50 - OVERALL LENGTH = 55 FT
TRAILER LENGTH 42.5 FT

GRAPHIC SCALE
60 0 30 60
1 INCH = 60 FEET

THE DIMENSION GROUP
ARCHITECTURE - CIVIL ENGINEERING - MEP ENGINEERING
10755 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL: 214.343.5400 www.DimensionGroup.com

CIRCLE K TM

#	DATE	REVISION DESCRIPTION	BY

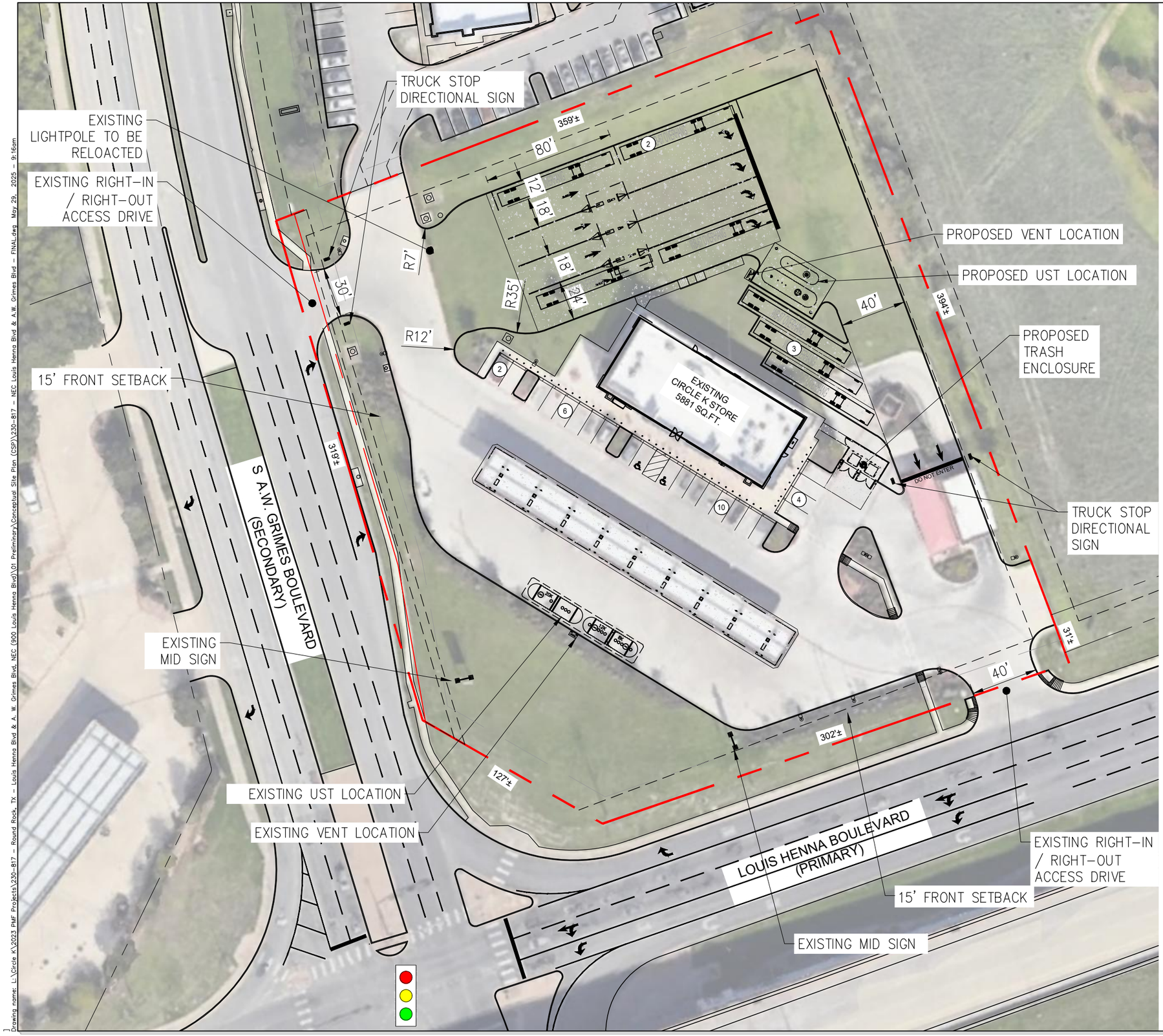
drawn by:
designed by:
project no. 230-817
date 5/29/2025 – 9:15 am
dwg. 230-817 – NEC Louis Henna Blvd & A.W. Grimes Blvd – FINAL.dwg

CONCEPTUAL SITE PLAN

900 LOUIS HANNA BLVD
ROUND ROCK, TEXAS

SHEET
CSP1.0W

Drawing name: L:\Circle K\2023 PMF Projects\230-817 – Round Rock, TX – Louis Henna Blvd & A. W. Grimes Blvd, NEC (900 Louis Henna Blvd)\01 Preliminary\Conceptual Site Plan (CSP)\230-817 – NEC Louis Henna Blvd & A.W. Grimes Blvd – FINAL.dwg May 29, 2025 – 9:15am



SITE LEGEND:

PROPERTY SETBACK LINE

GREEN SPACE SETBACK

PROPERTY LINE

(#) NUMBER OF PARKING SPACES

SITE DATA:

ZONING: C-1 (GENERAL COMMERCIAL)

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GROSS FLOOR AREA OF BUILDINGS:	5,881 SQ. FT.

BUILDING SETBACKS:		
	15'	FRONT
	0'	SIDE
	0'	SIDE
	0'	REAR

GREENSPACE SETBACKS:		
	N/A	FRONT
	N/A	SIDE (NORTH)
	N/A	SIDE (SOUTH)
	N/A	REAR

PARKING REQUIRED: (9'x18' PER CODE)
ONE (1) SPACE PER 250 SQUARE FEET OF GROSS FLOOR AREA
5881 / 250 = 24 SPACES

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PARKING SPACES DIMENSION = 9.5'x18'
TRUCK PARKING SPACES = 5

TRUCK USED: WB - 50 - OVERALL LENGTH = 55 FT
TRAILER LENGTH 42.5 FT

GRAPHIC SCALE
60 0 30 60
1 INCH = 60 FEET

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TEL: 214.343.8400 www.DimensionGroup.com

CIRCLE K

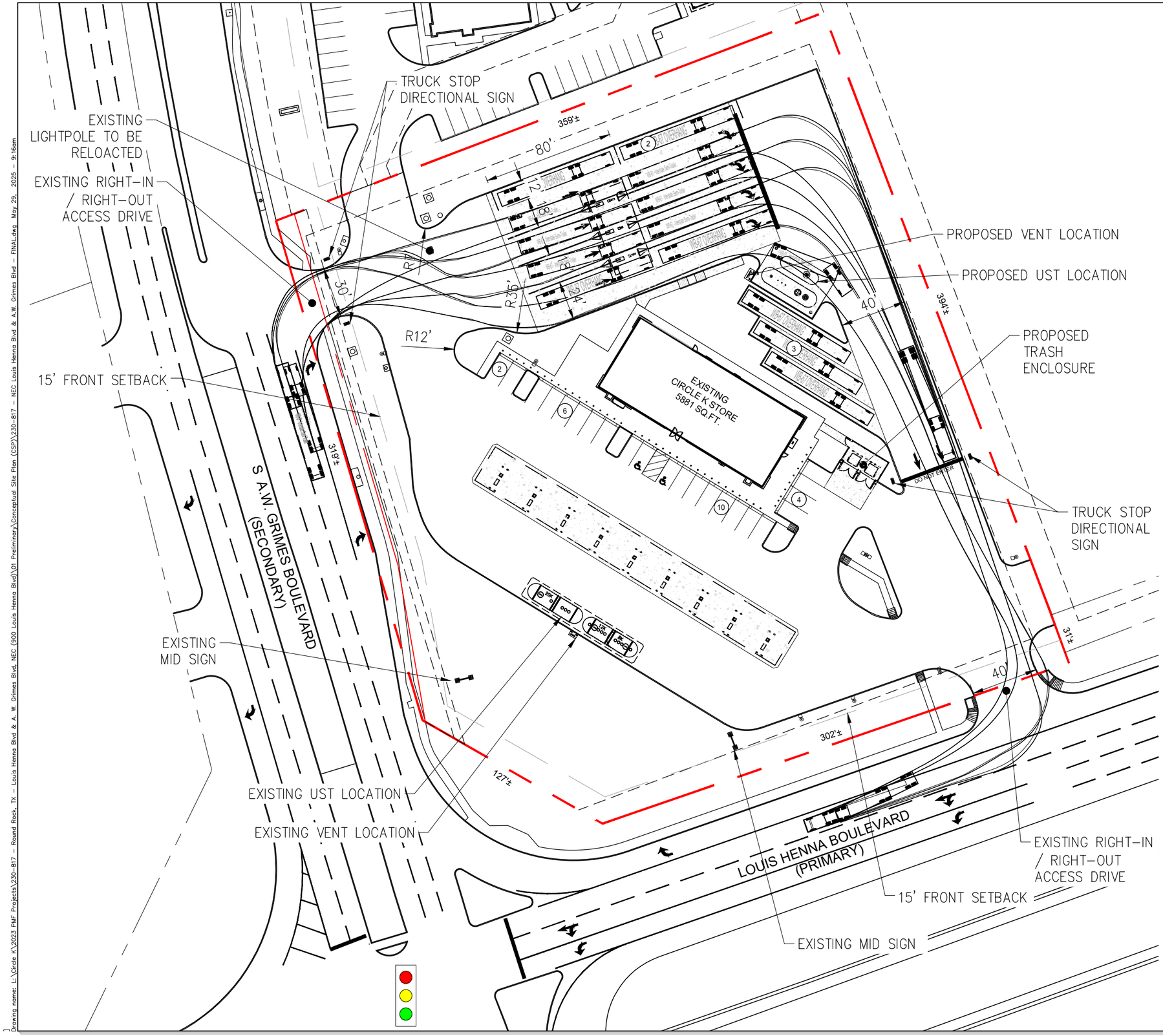
#	DATE	REVISION DESCRIPTION	BY

drawn by
designed by
project no. 230-817
date 5/29/2025 - 9:16 am
dwg. 230-817 - NEC Louis Henna Blvd & A.W. Grimes Blvd - FINAL.dwg

CONCEPTUAL SITE PLAN

900 LOUIS HANNA BLVD
ROUND ROCK, TEXAS

SHEET
CSP1.0A



SITE LEGEND:

PROPERTY SETBACK LINE

GREEN SPACE SETBACK

PROPERTY LINE

(#) NUMBER OF PARKING SPACES

SITE DATA:

ZONING: C-1 (GENERAL COMMERCIAL)

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	0'	SIDE
	0'	SIDE
	0'	REAR
GREENSPACE SETBACKS:	N/A	FRONT
	N/A	SIDE (NORTH)
	N/A	SIDE (SOUTH)
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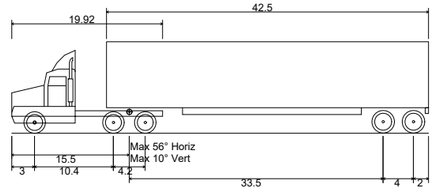
PARKING SPACES DIMENSION = 9.5'x18'
TRUCK PARKING SPACES = 5

TRUCK USED: WB - 50 - OVERALL LENGTH = 55 FT
TRAILER LENGTH 42.5 FT



WB-50 - Intermediate Semi-Trailer	
Overall Length	55.000ft
Overall Width	8.500ft
Overall Body Height	12.052ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	17.90°

N

GRAPHIC SCALE
50 0 25 50
1 INCH = 50 FEET

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ARCHITECTURE - CIVIL ENGINEERING - MEP ENGINEERING
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TEL: 214.343.8400 www.DimensionGroup.com

CIRCLE K

#	DATE	REVISION DESCRIPTION	BY

drawn by:
designed by:
project no. 230-817
date 5/29/2025 – 9:16 am
dwg. 230-817 – NEC Louis Henna Blvd & A.W. Grimes Blvd – FINAL.dwg

CONCEPTUAL SITE PLAN

900 LOUIS HANNA BLVD
ROUND ROCK, TEXAS

SHEET
CSP1.0T

Drawing name: L:\Circle K\2023 PMF Projects\230-817 – Round Rock, TX – Louis Henna Blvd & A. W. Grimes Blvd, NEC (900 Louis Henna Blvd)\01 Preliminary\Conceptual Site Plan (CSP)\230-817 – NEC Louis Henna Blvd & A.W. Grimes Blvd – FINAL.dwg May 29, 2025 – 9:16am

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#	DATE	REVISION DESCRIPTION	BY

drawn by
designed by
approved by

project. no. 230-817
date 5/29/2025 - 9:16 am
dwg. 230-817 - NEC Louis Henna Blvd & A.W. Grimes Blvd - FINAL.dwg

CONCEPTUAL SITE PLAN

900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS

SHEET
CSP1.0

Drawing name: L:\Circle K\2023 PMF Projects\230-817 - Round Rock, TX - Louis Henna Blvd & A. W. Grimes Blvd, NEC (900 Louis Henna Blvd)\01 Preliminary\Conceptual Site Plan (CSP)\230-817 - NEC Louis Henna Blvd & A.W. Grimes Blvd - FINAL.dwg May 29, 2025 - 9:16am

7. SITE SOIL MAPS

Soil Map—Williamson County, Texas
(SUBJECT BOUNDARY)
Index Sheet

Map Scale: 1:1,580 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

Soil Map—Williamson County, Texas
(SUBJECT BOUNDARY)
Map sheet 1 of 2

Joins sheet 2

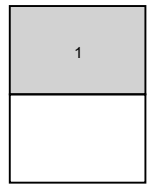
Map Scale: 1:720 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 10 20 40 60

Feet
0 35 70 140 210

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84



Map Sheet Location

Soil Map—Williamson County, Texas
(SUBJECT BOUNDARY)
Map sheet 2 of 2
Joins sheet 1

Map Scale: 1:720 if printed on A landscape (11" x 8.5") sheet.
Meters 0 10 20 40 60
Feet 0 35 70 140 210
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

Map Sheet Location: 2

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Williamson County, Texas
Survey Area Data: Version 26, Sep 5, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AwD3	Austin-Whitewright complex, 2 to 6 percent slopes, eroded	1.6	46.6%
CaC	Castephen silty clay, 3 to 5 percent slopes	1.9	53.4%
Totals for Area of Interest		**3.5**	**100.0%**

8. NARRATIVE DESCRIPTION OF SITE GEOLOGY

The Subject Property is situated on the northeast side of the intersection between the Louis Henna Boulevard & A.W. Grimes Boulevard, Round Rock, Williamson County, Texas. The Subject Property is developed as a gas station with a commercial building, fuel island dispensers and canopy, underground storage tanks (USTs), a detached car wash building with sanitary sewer/oil-water-separator, and stormwater improvements. The Subject Property is accessed via Louis Henna Boulevard at one driveway near the southeast corner and via a second entrance from a shared driveway originating from A.W. Grimes Boulevard near the northwest corner of the Subject Property and an adjoining commercial building at 2471 Grimes Boulevard.

Proposed activities to be conducted at the Subject Property include additional development with the removal of the current car wash and associated appurtenances and installation of additional USTs with associated dispensers, piping and impermeable surfaces.

The Subject Property is located on a gently sloping hillside characterized by hilltop topography. The Subject Property is on the eastern bank of Dry Branch, an intermittent tributary to Brushy Creek. The drainage of stormwater across the Subject Property is generally to the northwest. Some areas direct stormwater towards curb inlet drains and area inlet drains near the northwest corner of the Subject Property; however, the area inlets have metal landscape edging which appears to prevent water flow into the inlets. A grass swale is located along the northwest border which directs flow west-southwest toward the area inlet on the east side of the shared driveway. The second area inlet is located on the south side of the driveway at A.W. Grimes Boulevard. One curb inlet drain is located northwest and downgradient of the fuel dispenser canopy; the second curb inlet drain is located further north-northwest, between the A.W. Grimes Boulevard entrance and the shared driveway. The Subject Property elevation ranges from approximately 760 to 780 feet above mean sea level.

Less than half of the Subject Property is covered with the current buildings and concrete driveways/parking lots. Minor landscaping and a few small trees surround much of the concrete along the driveways near the storefront, located on the southwest-facing side of the commercial building. Maintained grasses extend from the northeast side of the commercial building toward the northeast and northwest corners.

CBD reviewed the Edwards Aquifer Viewer, an online interactive map maintained by the TCEQ. Based on the Viewer map (attached in Appendix I), the Subject Property is situated within the Edwards Aquifer Transition Zone.

This geologic assessment documents conditions observed by CBD within the project boundaries on November 18, 2025.

GEOLOGIC SETTING

Based on review of the U.S. Geological Survey Texas Geology Web Map Viewer, the Subject Property is situated over the Kau-Austin Chalk geologic formation. The Kau-Austin Chalk formation is an approximately 430-foot-thick sequence of Cretaceous-age carbonate rocks composed of chalk and marl (Housh, 2007, pg. 20). The Kau-Austin Chalk formation consists predominantly of white to gray, fossiliferous, soft to moderately hard chalky limestone interbedded with marl. The formation was formed from chalky limestones and marl interbeds that were deposited in a shallow marine environment and subsequently uplifted and faulted along features such as the Balcones Fault Zone. Because the Subject Property is underlain by shallow residuum soils derived from this formation (as indicated by mapped soils such as the Castephen silty clay and Austin-Whitewright complex), there is increased potential for direct infiltration into the underlying carbonate rock and for preferential flow along solution-enhanced conduits.

Based on the Bedrock Geology of Round Rock and Surrounding Areas, Williamson and Travis Counties, Texas (Housh, 2007), the Subject Property lies over the Dry Branch Fault, which is part of the Mankins Fault System. Approximately the western half of the Subject Property is located over the upthrown side of the Dry Branch Fault, and approximately the eastern half is located over the downthrown side of the fault. Based on the geologic map by Housh (2007) the mapped end of the fault lies on the Subject Property and runs to the north-northwest; the inferred direction of the fault is to the southwest.

This Subject Property is located within the Balcones Fault Zone which exhibits a distinct structural trend. This zone generally consists of a northeast-southwest trending, *en echelon* normal fault system, which juxtaposes Upper Cretaceous lithologies in the southeast with Lower Cretaceous lithologies in the northwest. As a result of this larger-scale, regional faulting, minor internal fault sequences and fractures exist within this zone which follow the same structural trend and accommodate localized displacement.

No evidence of faulting or displacement was noted during the assessment at the Subject Property. Additionally, no karst features or non-karst closed depressions were noted during the assessment.

SOILS AND INFILTRATION

According to the United States Department of Agriculture (USDA) Web Soil Survey Map, the soils on the Subject Property are Castephen silty clay, 3 to 5 percent slopes, and Austin-Whitewright complex, 2 to 6 percent slopes, eroded. Both derive from calcareous residuum over chalk/marl formations. Both soil units are well drained, with a moderately low to moderately high capacity to transmit water due to shallow soil depths to paralithic contact or rock fragments. Castephen silty clay generally has depth to a restrictive feature from 8 to 20 inches to paralithic bedrock. The Austin-Whitewright complex normally has a depth to a restrictive feature from 16 to 40 inches if it is moderately eroded, and 11 to 28 inches if it is severely eroded. The presence of these soils results in the potential for rapid infiltration or preferential flow into underlying carbonate rock, and thus the risk of groundwater contamination if fuel storage or drainage is not properly managed.

RESULTS-IDENTIFICATION OF SENSITIVE FEATURES

During the Geologic Assessment, CBD identified a number of manmade features on the Subject Property and adjoining property. These features are summarized in the table below and in Table F-0585.

MAN-MADE FEATURES					
Feature ID	Feature Type	Coordinates	Approximate Dimensions	Sensitive Feature?	Notes
S-1	Area Inlet	30.487272°, -97.650152°	5’ x 5’	No	Stormwater Asset
S-2	Area Inlet	30.486985°, -97.650312°	5’ x 5’	No	Stormwater Asset
S-3	Curb Inlet	30.486956°, -97.650241°	5’ x 0.75’	No	Stormwater Asset
S-4	Curb Inlet	30.487172°, -97.650316°	5’ x 0.75’	No	Stormwater Asset
S-5	Manhole &	30.487207°, -97.650159°	~2-2.5’ diameter	No	Storm Sewer Asset

	Junction Box				
S-6	Manhole	30.487212°, -97.650132°	~2-2.5' dia.	No	Storm Sewer Asset
S-7	Manhole	30.487327°, -97.649859°	~2-2.5' dia.	No	Storm Sewer Asset
S-8	Manhole	30.487165°, -97.649834°	~2-2.5' dia.	No	Storm Sewer Asset
S-9	Manhole	30.487117°, -97.649826°	~2-2.5' dia.	No	Storm Sewer Asset
S-10	Manhole	30.487001°, -97.650007°	~2-2.5' dia.	No	Sanitary Sewer Asset
S-11	Manhole	30.487088°, 97.649703°	~2-2.5' dia.	No	Sanitary Sewer Asset
S-12	Manhole	30.486936, -97.649434°	~2-2.5' dia.	No	Sanitary Sewer Asset
S-13	Manhole	30.486974°, -97.649302°	~2-2.5' dia.	No	Sanitary Sewer /Oil-Water-Separator (OWS)
S-14	Manhole	30.486983°, -97.649278°	~2-2.5' dia.	No	Sanitary Sewer/OWS
S-15	Manhole	30.486987°, -97.649263°	~2-2.5' dia.	No	Sanitary Sewer/OWS
S-16	Manhole	30.486994°, -97.649239°	~2-2.5' dia.	No	Sanitary Sewer/OWS
S-17	Manhole	30.486994°, -97.649223°	~2-2.5' dia.	No	Sanitary Sewer/OWS
S-18	Manholes	30.486769°, -97.64929°	~2-2.5' dia.	No	Sanitary Sewer/Grease Trap
S-19	Manholes & Fill Ports	30.48656°, -97.649952°	~3', 1.5', 1.5', 1.5' dia.	No	1 Manhole and 3 UST Fill Ports
S-20	Manholes & Fill Ports	30.486504°, -97.649843°	~3', 1.5', 1.5', 1.5' dia.	No	1 Manhole and 3 UST Fill Ports

S-21	Manholes & Fill Ports	30.486473°, -97.649783°	~3', 1.5', 1.5', 1.5', 1.5' dia.	No	1 Manhole and 4 UST Fill Ports
S-22	Monitor Well	30.486473°, -97.649760°	~0.67' dia.	No	Monitor Well for UST
O-1	Outcrop	30.486299°, -97.649972	~100' X 8'	No	Rock Outcrop

As presented above**,** a total of twenty-two (22) manmade features were identified which may potentially serve to enhance the transmission of surface runoff to the subsurface; however, all features are within concrete and/or piping, and there are no visual indications that they act as a conduit to the subsurface. The features primarily consist of manholes and caps over existing utility trenches (i.e., water lines, sanitary sewer lines, storm water lines, communication lines, and electric lines and a monitoring well) that meet criteria for assessment as a manmade feature in bedrock. Utility trenches are largely inferred, based on field observations of manway access points. The types or general classes of utility trench features are listed below:

- ***Features*** S-1 through S-4 consist of stormwater improvements which discharge to the creek.
- ***Features*** S-5 through S-9 are storm sewer manholes.
- ***Features*** S-10 and S-12 are sanitary sewer manholes.
- ***Features*** S-13 through S-17 are manholes for the sanitary sewer and what appears to be an oil-water-separator system associated with the car wash.
- ***Feature*** S-18 consists of two manholes on a grease trap system.
- ***Features*** S-19 to S-21 consist of fill ports and a manhole for the underground storage tank system.
- ***Feature*** S-22 is a monitor well for the UST system.
- ***Feature*** O-1 is a partially exposed natural rock outcrop along the southwest corner of the Subject Property with no visible karst features.

Although not directly observable, it is inferred that the utility trenches are backfilled in accordance with standard construction practices that include the use of structural fill soils (e.g., base course materials, limestone gravel, compacted clay soils, etc.) overlain by native or fill soils, depending upon location and surface improvements. The utility trenches were not observed in conjunction with any naturally-occurring recharge features. Although the backfilled utility trenches may exhibit somewhat greater relative infiltration rate than the surrounding soil/rock strata underlying the project Subject Property, the manmade features are classified as not sensitive, having a low potential of transmitting fluids into the Edwards Aquifer. This classification is based upon the

point assignment criteria presented in the ***Geologic Assessment Table (TCEQ-0585)*** and professional judgment.

EVALUATION OF SENSITIVE FEATURES

The TCEQ defines "sensitive features" as naturally occurring geologic features where water can infiltrate rapidly into the aquifer, such as:

- Sinkholes
- Fractures
- Solution cavities
- Caverns
- Faults intersecting the surface

Infiltration tests were not conducted. The natural bedrock feature (O-1) is located along the southwest corner of the Subject Property. The exposed bedrock is determined to be low sensitivity; no fractures, solution features, or voids were observed. No sinkholes, solution cavities, fractures, faults or other indicators of karst development were observed within or immediately adjacent to the Subject Property. No depressions, voids, signs of subsidence, or unusual drainage patterns indicative of subsurface conduits were identified. No evidence of faulting or displacement was noted to provide visual evidence of the Dry Creek Fault; its position on the subject property was not identifiable in the field. CBD did not identify any natural features that can be described as sensitive; no features were permeable or had the potential for interconnectedness between the surface and the Edwards Aquifer. CBD observed several manmade features on the Subject Property and adjoining properties. Per TCEQ guidance, manmade features are not sensitive features unless they transmit water directly to bedrock; and CBD did not observe evidence that these manmade features transmit water directly to bedrock.

9. SUBJECT PROPERTY HISTORICAL REVIEW

The Subject Property is currently a retail gas station. CBD evaluated former land use practices and modifications using publicly available sources. CBD reviewed the U.S. Geological Survey Topo Viewer, an online map showing historical and recent topographic maps. CBD used the online map to view the Pflugerville West 7.5-minute quadrangle topographic maps, dated 1968, 1973, 1987, 2010, 2013, 2016, 2019, and 2022. The 1968 topographic map does not depict any structures on the Subject Property. The 1973 topographic map is similar except that it depicts an unpaved road near the southern border which leads to two small structures. The 1987 topographic map depicts an unpaved road and a large rectangular building on the Subject Property. The 2010 and 2013 topographic maps do not depict structures on any properties;

however, they depict Louis-Henna Boulevard and A. W. Grimes Boulevard along the property boundaries. None of the topographic maps depicted caves on or near the Subject Property.

CBD reviewed the historical and recent satellite images maintained by Google Earth for the years 1985, 1995, 2002, 2004, 2005, 2006, and 2008-2025. In the 1985 image, the Subject Property appears to be developed with a gravel road, driveway, and a rectangular-shaped building. The 1995 image is clear and shows the Subject Property is developed with a gravel driveway, gravel/concrete parking lot, and one end of a rectangular, garage building; the building extends across the southern border. In the 2002, 2004, and 2005 images, the building is removed, and the Subject property is vacant land covered in gravel and grasses. By 2006, the Subject Property is developed with three small buildings or carports; the land surface is covered almost entirely by gravel, asphalt, and concrete. The buildings and equipment were removed from the Subject Property by the time of the 2008 image. In the images from 2009 through 2015, the Subject Property remains vacant, and the land is covered in gravel and grasses. In the 2017 images, the Subject Property is being developed as a gas station; although the soils on the property are disturbed, there are no obvious geologic features visible. The 2018 through early 2025 images all show the current gas station. None of the satellite images appeared to show remarkable geologic features. Satellite images indicate the surface of the Subject Property has been developed and mostly covered since the 1980s. The aerial images taken during construction of the current gas station (January and February 2016) do not show any remarkable features large enough to be discerned. CBD's review did not identify any evidence of any sensitive geologic features which may have previously existed.

10. METHODOLOGY

This assessment was conducted in accordance with the Texas Commission on Environmental Quality (TCEQ) Form-0585 instructions, using aerial imagery, topographic maps, site visits, GPS-enabled field mapping, and existing geologic data from United States Geological Survey (USGS) and Texas Water Development Board (TWDB) sources. CBD conducted a field survey to identify any potential sensitive geologic features on November 18, 2025, under clear conditions, by Peter Schram, a licensed Professional Geoscientist (PG) and Kerry McEntire, an Environmental Professional (EP). The pedestrian survey included walking 50-foot transects or less to identify potential karst features, such as depressions, animal burrows, or other holes which may lead to the subsurface.

11. RECOMMENDATIONS AND CONCLUSIONS

A field survey was conducted on November 18, 2025, to visually inspect all accessible portions of the Subject Property for sensitive geologic features in accordance with **30 TAC §213.5(b)(3)** and the requirements of **TCEQ Form 0585**. This assessment documents only those features visible at the time of inspection. Subsurface excavation may encounter features not observable at the surface. All area inlets and curb inlets were constructed with concrete sumps; the visible portions showed **no cracks, voids, or openings** that would provide direct access to the subsurface. No stormwater discharges flow directly to any observed karst feature. Drainage appears to flow via engineered structures only. No features were identified that meet the **30 TAC §213.3 definition of a sensitive feature**.

The Subject Property is located within the **Edwards Aquifer Transition Zone** and is underlain by **Castephen silty clay** and **Austin–Whitewright soils** derived from the **Kau–Austin Chalk formation**. These soils are shallow, well-drained, and moderately permeable. The Austin Chalk is a fractured carbonate unit capable of developing dissolution-enhanced voids, and the mapped **Dry Creek Fault** indicates the presence of structural discontinuities that may focus groundwater flow.

Although these geologic conditions indicate a **moderate potential** for encountering subsurface solution features, none were observed during the field investigation. Based on current observations and site conditions, **no additional geophysical or subsurface geotechnical investigation is warranted at this time.**

Before installing the proposed USTs, a geologist must inspect and certify that the tankhold excavation has been checked for any sensitive geologic features. The signed and sealed certification must be submitted to the appropriate TCEQ regional office. If a sensitive feature is found, construction must stop and additional protective methods must be proposed and approved by TCEQ before installation can continue. If no sensitive features are present, construction may proceed once the geologist has provided written certification. Given the shallow depth to the Austin Chalk and the presence of faulting, previously unrecognized cavities, voids, or solution features may be encountered during future excavation. Therefore, **any construction or utility excavation deeper than approximately 5 feet should be monitored by qualified personnel** familiar with karst and carbonate geology.

In accordance with **30 TAC §213.5(h)**, if any potential sensitive feature (e.g., voids, cavities, enlarged fractures, solution openings, or other conduits) is discovered during construction, the following actions are required:

1. **Immediately suspend activities** within 50 feet of the feature.

2. **Notify the TCEQ Edwards Aquifer Protection Program** at the appropriate Region Office.
3. Have a **qualified geologist** evaluate, document, and map the feature.
4. Do not resume regulated activities in the affected area until the **TCEQ Executive Director approves protective measures.**

No sinkholes, solution cavities, or other natural features were observed that would provide direct recharge to the Edwards Aquifer. Based on the results of this assessment, the Subject Property **does not currently exhibit sensitive geologic features**, and no geological conditions were identified that would preclude the proposed improvements. The property should continue to be considered **moderately sensitive** due to its geologic setting within the Transition Zone.

12. REFERENCES

Google Earth Pro. Imagery dated 1985, 1995, 2002, 2004, 2005, 2006, and 2008-2025. Viewed on November 12, 2025. Source: Google Earth Pro (Version 7.3.6). Location: 900 Louis Henna Boulevard, Round Rock TX 78664 (Subject Property). Google LLC, Mountain View, California.

Housh, Todd B., PhD, PG. (2007). *Bedrock Geology of Round Rock and Surrounding Areas, Williamson and Travis Counties, Texas.* Round Rock, TX.

Texas Water Development Board, Wells in TWDB Groundwater Database Viewer, https://www3.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer, viewed on November 19, 2025.

Web Soil Survey, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. http://websoilsurvey.sc.egov.usda.gov/, viewed on October 28, 2025.

U.S. Geological Survey (USGS), National Wetlands Mapper, https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper, accessed November 19, 2025.

U.S. Geological Survey (USGS). (2024). Texas Geology Web Map Viewer. Available at: U.S. Geological Survey Web Map Viewer Tools: www.usgs.gov/tools/texas-geology-web-map-viewer, accessed November 20, 2025.

USGS Topo Viewer https://ngmdb.usgs.gov/topoview/viewer/#4/40.00/-100.00, accessed November 12, 2025.

APPENDIX I

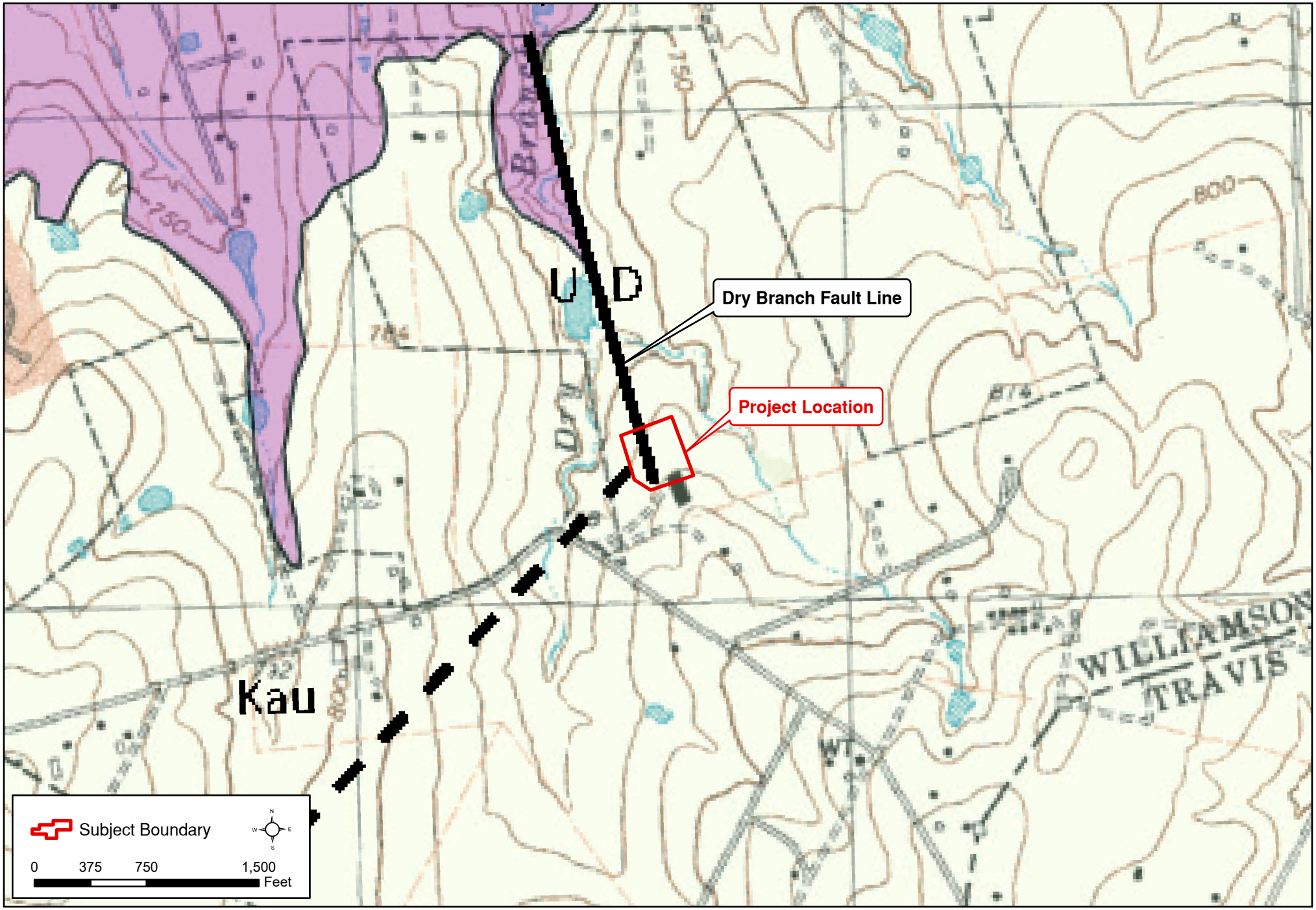
Maps & Figures

Carlson, Brigance & Doering, Inc.
Civil Engineering ❖ Surveying

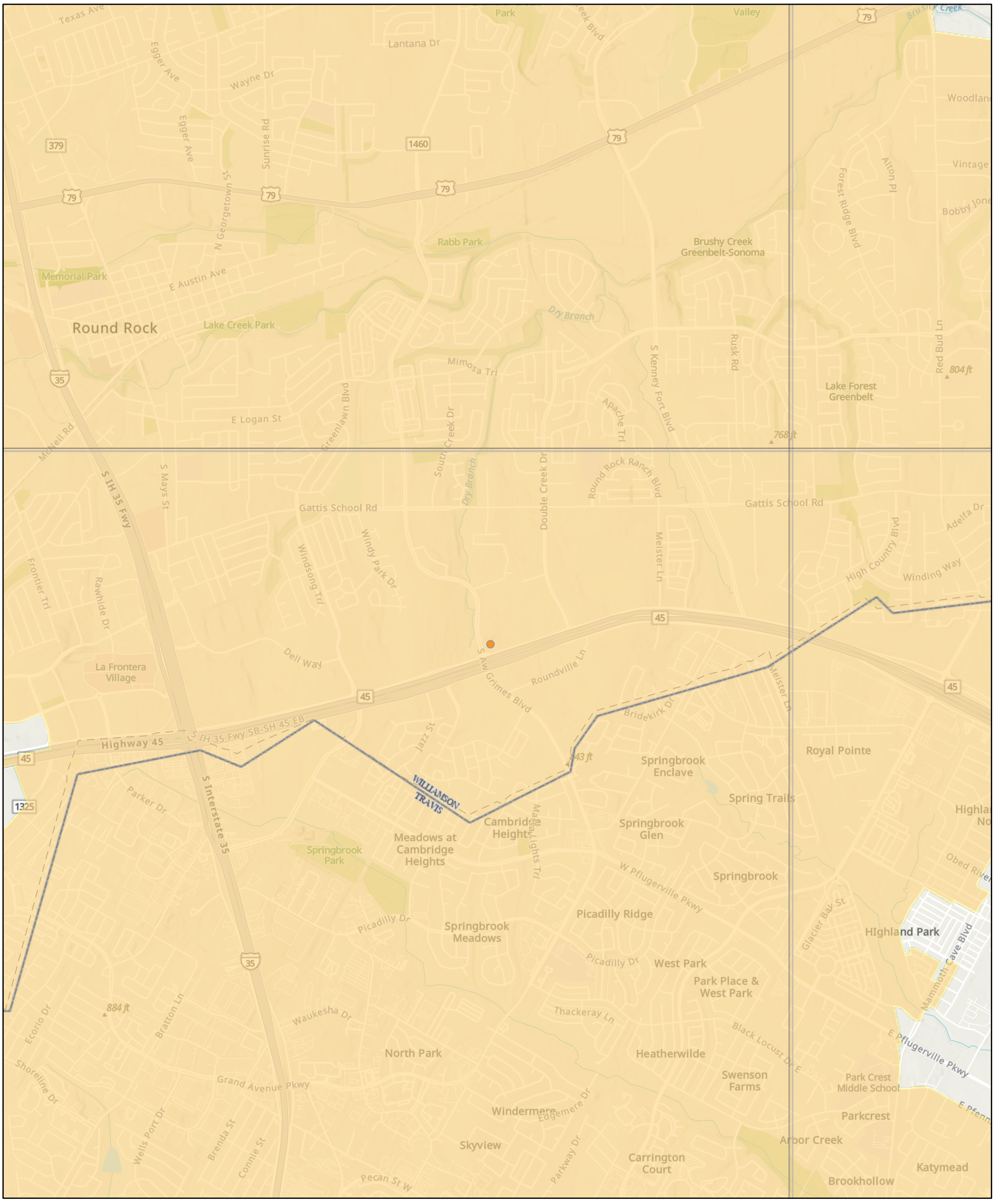
CIRCLE K - 2007 BEDROCK GEOLOGY EXHIBIT

Williamson County, Texas

December 05, 2025



Edwards Aquifer Viewer Map



12/4/2025, 11:28:41 AM

- ArcGIS World Geocoding Service
- TCEQ_EDWARDS_OFFICIAL_MAPS
- 7.5 Minute Quad Grid
- TX Counties
- City/Place
- World_Hillshade

1:32,057

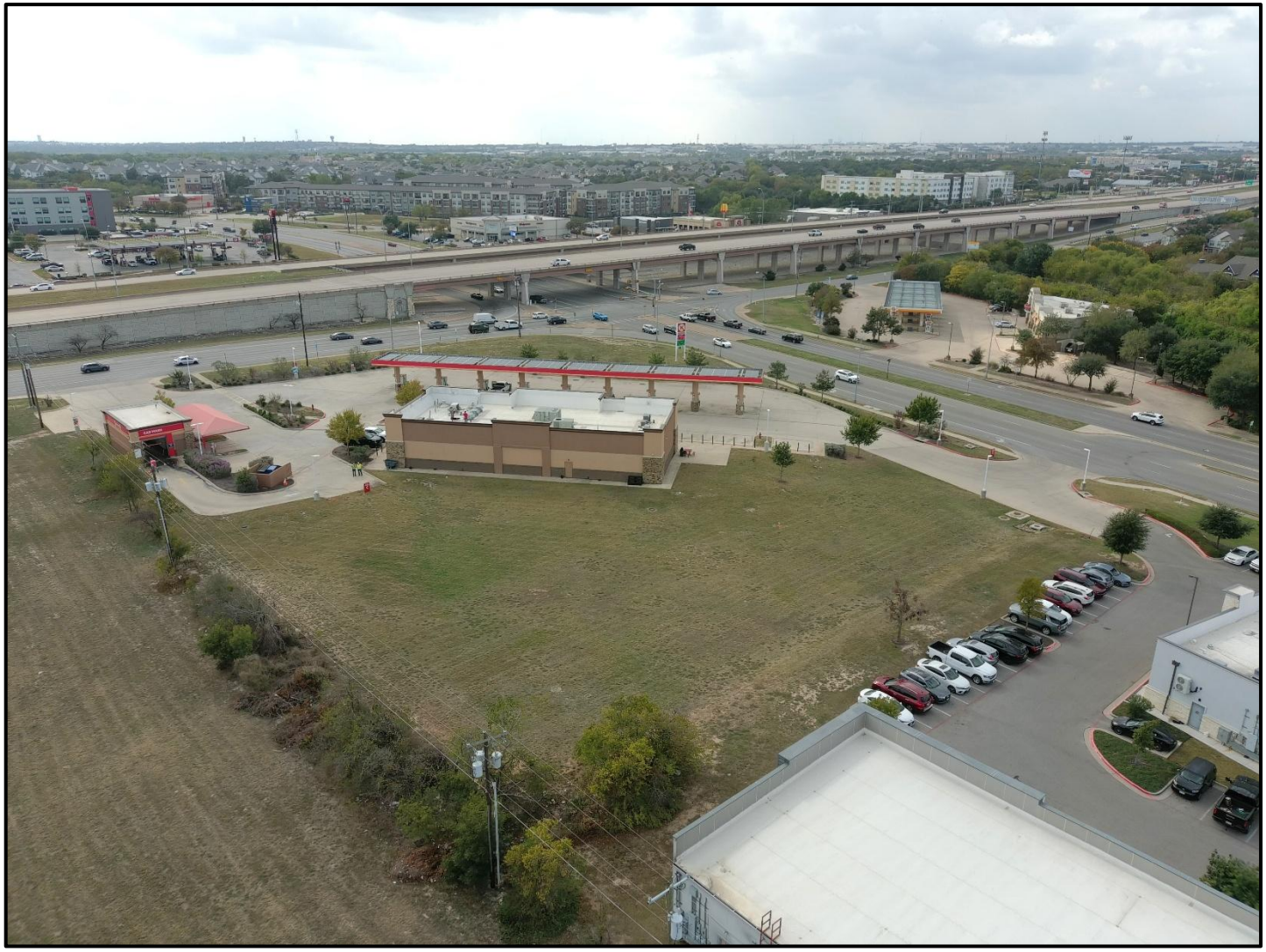
0 0.33 0.65 1.3 mi

0 0.5 1 2 km

Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community, TCEQ

APPENDIX II

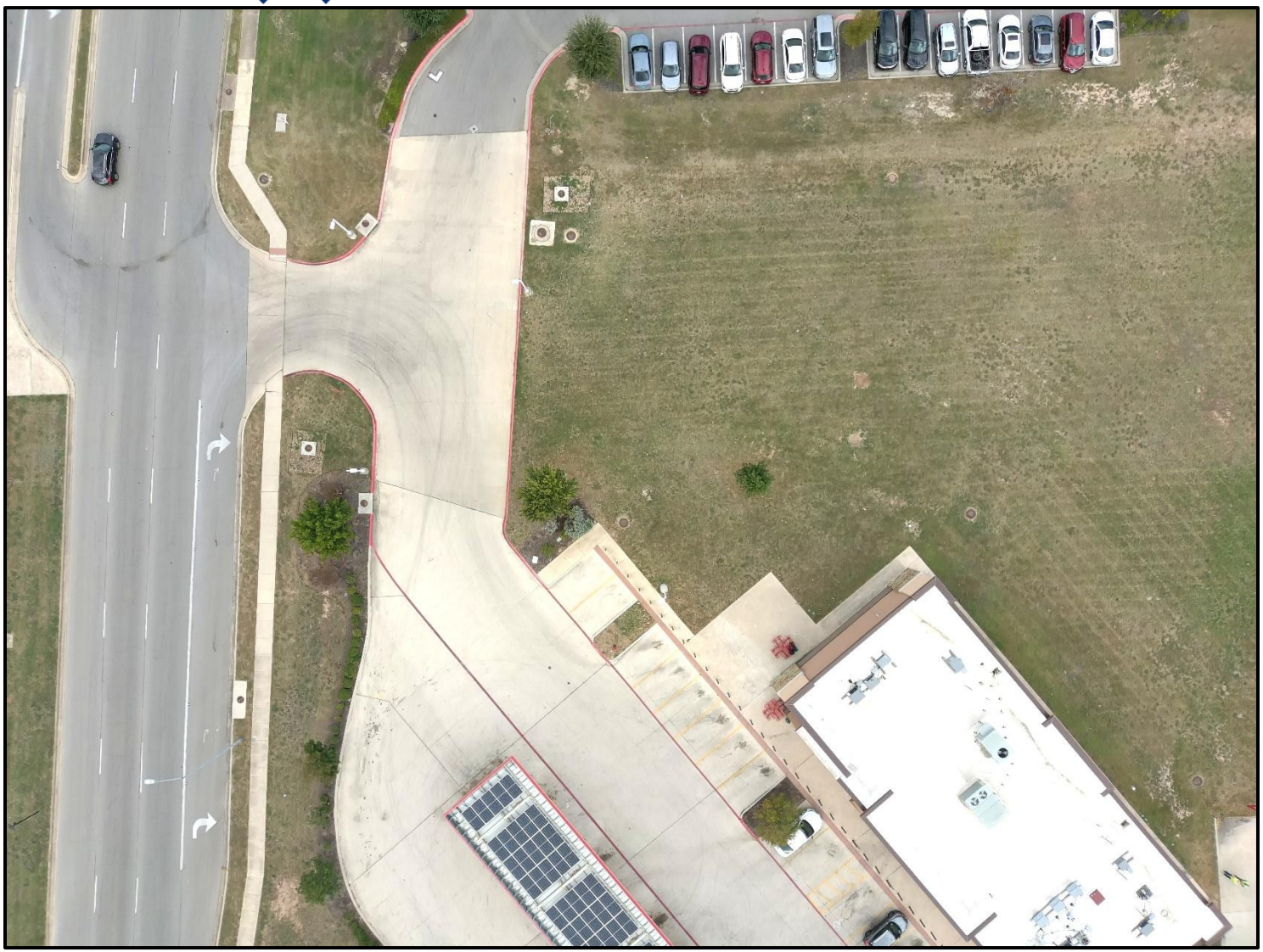
Field Survey Photos



Drone Photograph 1: An aerial view facing southwest toward the Subject Property, where construction is proposed.

Drone Photograph 2: An aerial view facing west across the Subject Property.

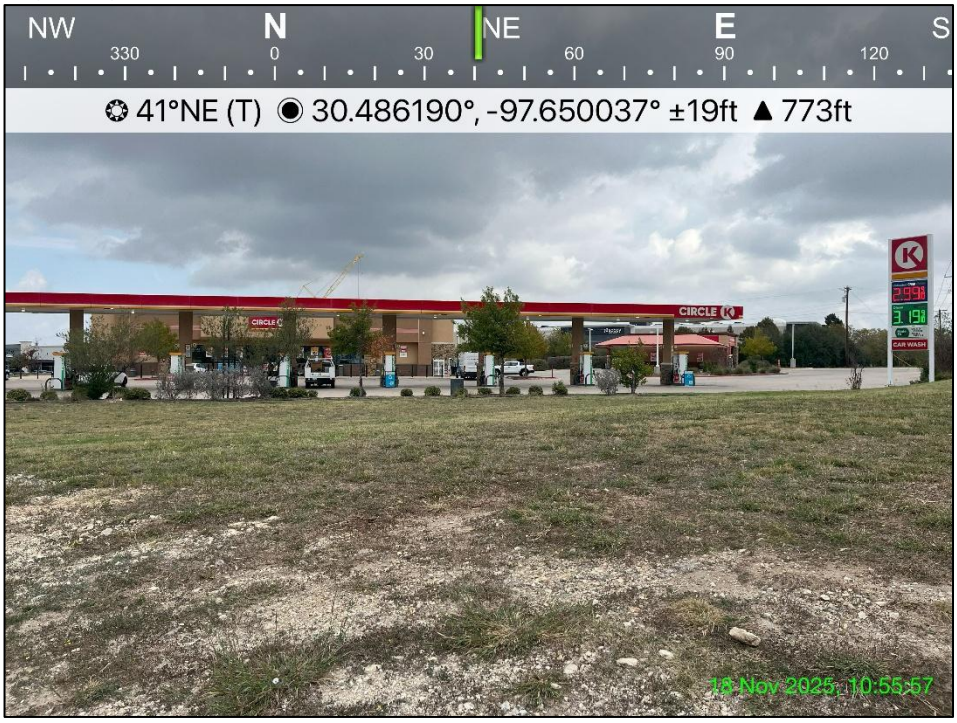
Drone Photograph 3: An aerial view facing northwest across the Subject Property.



Drone Photograph 4: An aerial view over the northwest corner of the Subject Property.

Drone Photograph 5: An aerial view over the northeast corner of the Subject Property.

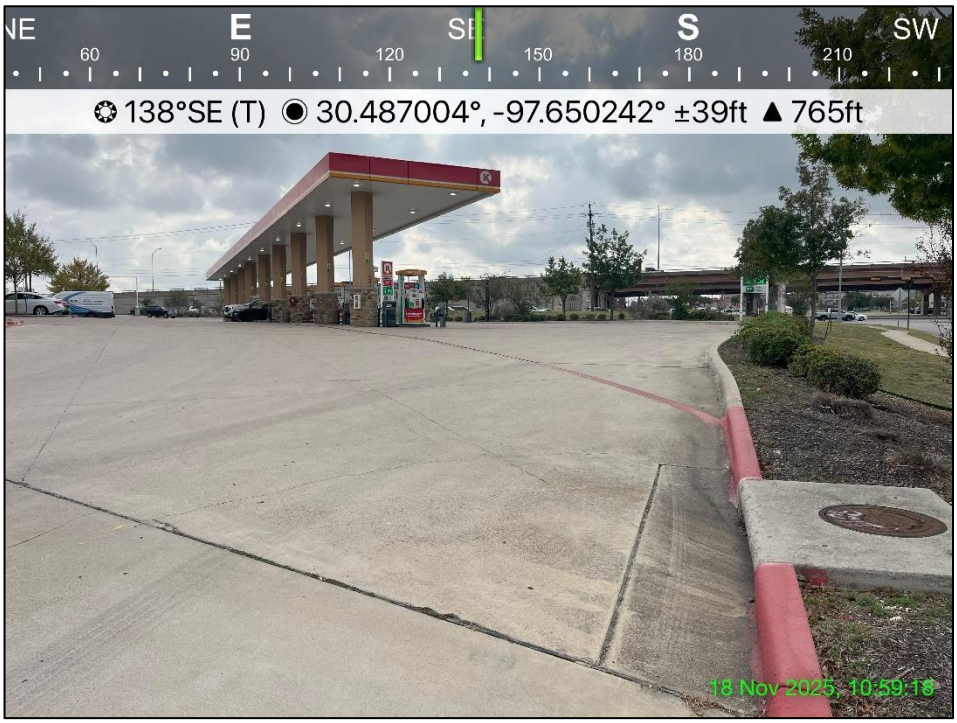
Drone Photograph 6: An aerial view showing the grass berm along the north border.



Photograph 1: A view facing northeast toward an outcrop along the southwest border.

Photograph 2: A view of Area Inlet S-1 and the grass swale.

Photograph 3: A view of Area Inlet S-2.

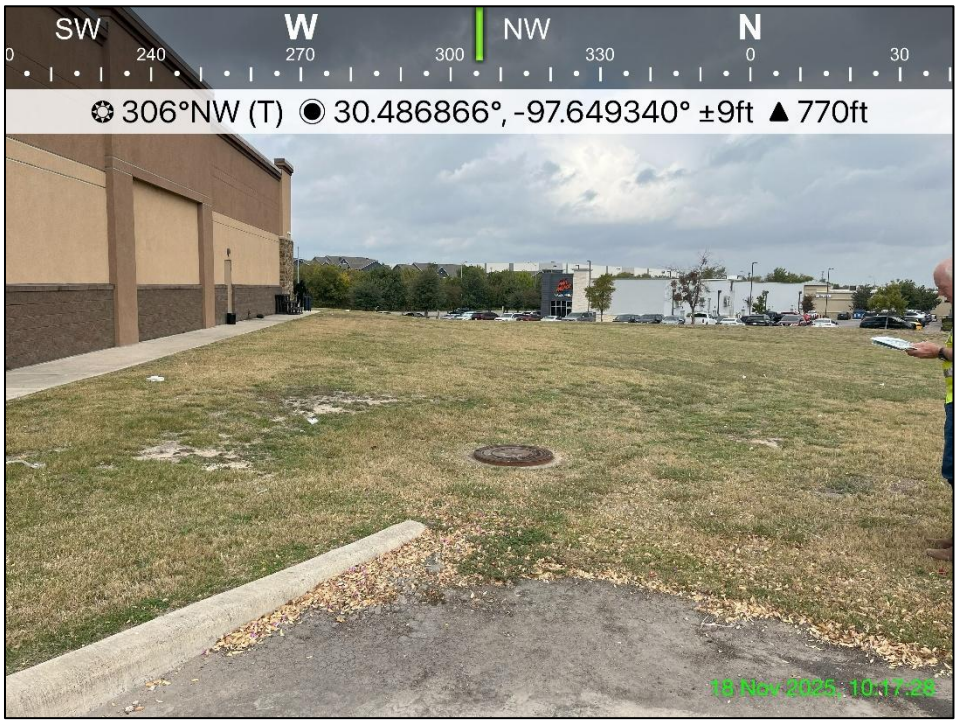


Photograph 4: A view of Curb Inlet S-3.

Photograph 5: A view of Curb Inlet S-4.

Photograph 6: A view of S-6, followed by S-5, with Curb Inlet S-4 in the background.

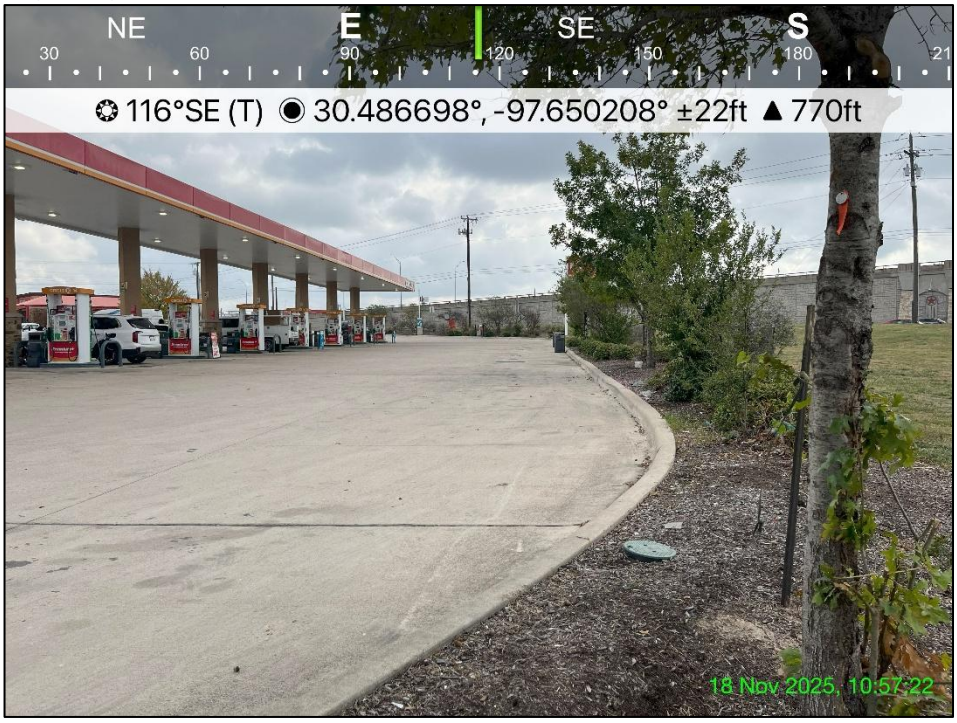
Photograph 7: A view of S-8 (foreground) and S-9 (right), with S-11 in the center of the background.



Photograph 8: A view of S-12.

Photograph 9: A view of S-13through S-17.

Photograph 20: A view facing S-18 on the southeast side of the storefront.



Photograph 13: A view facing S-19 through S-21 and the fuel dispenser island.

Photograph 42: A reverse view of S-19 through S-21 and the fuel dispenser island.

III. UNDERGROUND STORAGE TANK FACILTY PLAN (TCEQ-0583)

Underground Storage Tank Facility Plan Application

Texas Commission on Environmental Quality

for Storage on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.5(d), 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. All components used for this facility are U.L. listed or certified by a 3rd party and are compatible and will function pursuant to 30 TAC §213.5(d) and 30 TAC Chapter 334 Subchapter C. This **Underground Storage Tank Facility Plan Application** is hereby submitted for TCEQ review and Executive Director approval. The application was prepared by:

Print Name of Customer/Agent: Lee A. Whited

Date: 1/5/2026

Signature of Customer/Agent:

Regulated Entity Name: Circle K Stores, Inc.

Underground Storage Tank (UST) System Information

1. ☒ **Attachment A – Detailed Narrative of UST Facility**. A detailed narrative description of the proposed UST Facility is attached. Note: Example descriptions are provided in the instructions (TCEQ-0583-Instructions)

2. Tanks and substance to be stored:

Table 1 - Tanks and Substances Stored

UST Number	*Size(Gallons)*	*Substance to be Stored*	*Double-wall Tank Material*
1	8,000	DEF	FRP

UST Number	*Size(Gallons)*	*Substance to be Stored*	*Double-wall Tank Material*
2	20,000	Diesel	FRP
3			
4			
5			

3. Tanks:

☒ **Attachment B – Manufacturer Information for Tanks**. New or replacement systems for the underground storage of static hydrocarbons or hazardous substances must be double-walled or provide an equivalent method of protection approved by the executive director. Tanks must comply with technical standards as required by 30 TAC 334.45(b) relating to technical standards for new tanks. Manufacturer information is attached.

☐ **Attachment C – Alternative Design and Protection Method for Tanks**. Information required by 30 TAC 334.43, relating to variances and alternative procedures is attached.

4. Piping:

☒ **Attachment D – Manufacturer Information for Piping**. Piping must comply with technical standards as required by 30 TAC 334.45(c) relating to technical standards for new piping. Manufacturer information is attached.

☐ **Attachment E – Alternative Design and Protection Method for Piping**. Information required by 30 TAC 334.43, relating to variances and alternative procedures is attached.

5. ☐ Any new underground storage tank system that does not incorporate a method for tertiary containment shall be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature as required by 30 TAC §213.5(d)(1)(B).

☐ The UST system(s) will not be installed within 150 feet of a domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

☐ **Attachment F - Tertiary Containment Method**. The UST system(s) will be required to have tertiary containment provided. A description of the method proposed to provide tertiary containment is attached.

6. ☐ Corrosion protection equipment to be installed or type of non-corrodible materials:

Table 2 - Corrosion Protection

Equipment	*Corrosion Protection (Method)*
Tanks	DW FIBERGLASS TANKS
Product Delivery Piping	FIBERGLASS PIPING

Equipment	*Corrosion Protection (Method)*
Vapor Recovery Piping	FIBERGLASS PIPING
Submersible Pumps	POWDER COATED/E-COATED/STAINLESS STEEL PARTS
Flex Connector (dispenser end)	ISOLATION BOOTS/WARP
Flex Connector (pump end)	ISOLATION BOOTS/WARP
Riser	STAINLESS STEEL/EPOXY COATED

7. ☒ Overfill protection equipment to be installed:

   ☐ Overfill prevention restrictor positioned at 90% capacity.
   ☒ Overfill prevention valve positioned at 95% capacity.
   ☐ Overfill audible and visual alarm positioned at 90% capacity.

8. ☐ Methods for detecting leaks in the inside wall of a double-walled system must be included in the facility's design and construction. The leak detection system must provide continuous monitoring of the system and must be capable of immediately alerting the system's owner of possible leakages. Release detection equipment to be installed: (Check all that apply)

   ☐ Central on-site monitor
   ☒ Interstitial tank probes
   ☐ Automatic tank gauge
   ☐ Pump/manway sump probes
   ☒ Observation well probes
   ☐ Mechanical line leak detectors (for pressurized lines only)
   ☒ Automatic (electronic) line leak detectors

Excavation and Backfill

9. ☒ The depth of the tank excavation will be sufficient to accommodate piping fall requirements, tank diameter, bedding, and a minimum cover of three (3) feet [30 TAC §334.46].

   The depth of the tank excavation will be 14 feet.

10. ☒ The minimum thickness of the tank bedding will conform to 30 TAC §334.46(a)(5)(C and D).

    The tank bedding thickness will be 12 inches.

11. ☒ The material to be used as backfill will conform to 30 TAC §334.46(a)(5)(A and B) and will consist of:

    ☐ Clean washed non-corrosive sand
    ☒ Pea gravel
    ☐ Crushed rock
    ☐ Other: _____

12. ☒ The slope of the product delivery line(s) will conform to 30 TAC §334.46(c)(2) and will be 1/8" per foot (1/8" per foot minimum).

Site Plan Requirements

Items 13 - 24 must be included on the Site Plan.

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

    Site Plan Scale: 1" = 20'.

14. 100-year floodplain boundaries:

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

    ☐ 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.

15. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.

    ☐ The layout of the development is shown with existing contours. Finished topographic contours will not differ from the existing topographic configuration and are not shown.

16. 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.

17. 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 G - Exception to the Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

18. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.

19. ☒ Areas of soil disturbance and areas which will not be disturbed.

20. ☒ Locations of major structural and nonstructural controls. These are the temporary best management practices.

21. ☒ Locations where soil stabilization practices are expected to occur.

22. ☐ Surface waters (including wetlands).

☒ N/A

23. ☐ Locations where stormwater discharges to surface water or sensitive features.

☒ There will be no discharges to surface water or sensitive features.

24. ☒ Legal boundaries of the site are shown.

UST System Profiles

25. ☒ **Attachment H - Profile Drawing(s)**. A profile drawing(s) of the proposed UST system with all components shown and labeled is attached.

Best Management Practices

26. ☐ **Attachment I - Initial and Continuing Training**. A description of the initial and continuing training of on-site personnel for operation of release detection equipment is attached. The description should include how personnel will respond to warning and alarm conditions of the leak detection monitoring system.

27. ☐ **Attachment J - Release Detection Maintenance**. A description of the program and schedule for maintaining release detection and cathodic protection equipment is attached. Any such equipment should be operated and maintained in accordance with the manufacturer's specifications and instructions.

Administrative Information

28. A Water Pollution Abatement Plan (WPAP) is required for construction of any associated commercial, industrial or residential project located on the Recharge Zone.

- ☐ The WPAP application for this project was approved by letter dated _____. A copy of the approval letter is attached at the end of this application.
- ☐ The WPAP application for this project was submitted to the TCEQ on _____, but has not been approved.
- ☐ A WPAP application is required for an associated project, but it has not been submitted.
- ☐ There will be no building or structure associated with this project. In the event a building or structure is needed in the future, the required WPAP will be submitted to the TCEQ.
- ☐ The proposed UST is located on the **Transition Zone** and a WPAP is not required. Information requested in 30 TAC 213.5 subsection (b)(4)(B) and (C) and (5) is provided with this application. (Forms TCEQ-0600 Permanent Stormwater Section and TCEQ-0602 Temporary Stormwater Section or Stormwater Pollution Prevention Plan/SW3P).

29. ☐ UST systems must be installed by a person possessing a valid certificate of registration in accordance with the requirements of 30 TAC Chapter 334 Subchapter I.

30. ☐ This facility is subject to and must meet the requirements of 30 TAC Chapter 334, including but not limited to the 30 day construction notification and reporting and cleanup of surface spills and overfills.

31. ☐ Upon completion of the tankhold excavation, a geologist must certify that the excavation was inspected for the presence of sensitive features. The certification must be submitted to the appropriate regional office. If sensitive features are found, then excavation near the feature may not proceed until the methods to protect the Edwards Aquifer are reviewed and approved by the executive director.

32. ☐ 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.

33. ☐ Any modification of this UST application will require TCEQ approval, prior to construction, and may require submission of a revised application, with appropriate fees.

UNDERGROUND STORAGE TANK FACILTY PLAN SECTION

DETAILED NARRATIVE OF UST FACILITY

ATTACHMENT "A"

The proposed new underground static hydrocarbon storage system will consist of two new double-wall fiberglass-reinforced plastic (FRP) tanks to be used for the storage of gasoline fuels. One of the proposed tanks is used for the storage of diesel and is 20,000 gallon capacity. The other is for the storage of DEF and is 8,000 gallons. Each tank will be equipped with a 2 horsepower, 2-inch diameter pump. Overfill prevention for each tank will be provided by an automatic shut off valve which will be installed in the tank below the fill tube and must be set to shut off flow into the tank when the volume of liquid in the tank reaches no more than 95% of the tank capacity. Spill protection for each tank will be provided by a spill containment manhole which will be fitted on the fill tube of each tank.

Product and vent piping will be U.L. listed fiberglass-reinforced plastic piping. Product lines will be of double-wall construction and will consist of a 2-inch diameter double wall pipe. Vent lines will be 2-inch diameter single-wall pipe. A safety shear valve will be installed on each product line at the dispenser island surface level to assure automatic shut-off of product flow during emergencies.

Corrosion protection is not proposed as the fiberglass tanks are DW fiberglass and do not require a separate method to prevent corrosion. See TCEQ-0583 attachment H or TCEQ-0583 attachment B for further details.

The proposed tanks and piping will be monitored for leaks by means of inventory and a pressure line leak detector. Each tank will be equipped with a hydrostatic reservoir sensor which will be installed in the interstitial space between the walls of the double-wall tanks. Each of the product piping systems will be monitored by a liquid discrimination sensor which will be installed adjacent to the submersible pump in the piping sump. Two 4-inch diameter slotted PVC observation wells will be installed in the corners of the tank pit excavation, of which two wells will be equipped with a vapor/conductivity (water) probe to provide a means of monitoring the backfilled tank pit area. Each tank will also be equipped with an automatic tank gauging probe which will automatically inventory the product volume in the tank. Each product piping line will be equipped with an electronic positive flow shut off that is designed to stop product flow in the event a leak in the product line is detected. The probes and sensors from all tanks, piping, and observation wells will be connected to a programmable control unit to be located in the store building. This central monitoring unit is designed to provide visual and audible alarms when hydrocarbon liquids, hydrocarbon vapors, or water is detected.

UNDERGROUND STORAGE TANK FACILTY PLAN SECTION

MANUFACTURER INFORMATION FOR TANKS

ATTACHMENT "B"

XERXES®

Double-Wall and Triple-Wall Tanks

Underground tanks backed by proven longevity

Fuel marketers, equipment distributors and commercial accounts rely on proven technology when planning their underground installations. It makes sense that they look to Xerxes, the manufacturer that developed the first UL-listed double-wall fiberglass tank.

Xerxes tanks were in early compliance with the updated certification requirements of the bi-national standard ANSI/CAN/UL/ULC 1316:2018.

Tank geometry and materials create structural strength

- Xerxes fuel tanks are designed and manufactured to provide decades of secure storage for any application
- Cylindrical tank with hemispherical or elliptical end caps is designed to withstand the stresses of underground storage
- Integrally manufactured fiberglass ribs function like I-beams and enhance tank strength
- Premium resin and glass-fiber reinforcement create a structurally strong tank

Multicompartment tanks

- Store more than one grade or type of fuel in the same tank
- Double-wall tanks are available in models with two, three or four compartments
- Provide space-saving installation with a single tank
- Can provide cost savings in installation and insurance costs

Double-wall and triple-wall tanks

- No added corrosion protection needed to store ethanol-blended fuel (E10, E15, E85), biodiesel fuels and ultra-low sulfur diesel (ULSD)
- Incorporates Xerxes' proprietary 3D glass fabric (Parabeam®) to create interstitial monitoring space between tank walls
- Tertiary containment available for added protection in sensitive environments, such as nearby acquifers, lakes or streams

Key Features

Designed to withstand **H-20/ HS-20 axle loads**

Compatible with **traditional fuels and new biofuels**

Lightweight tanks for **easy shipping and installation**

Corrosion-resistant inside and out

30-year limited warranty

Double-Wall and Triple-Wall Tanks

Product and project reliability

- Stringent quality control of manufacturing
- Ongoing technical support ensures that each tank is a long-term investment
- Comprehensive installation training is available
- 45+ years of composite manufacturinng and 225,000+ installed tanks assure customers that Xerxes stands behind its products and warranties

Easy shipping and installation

- Lightweight tank and engineered deadmen can generally fit on the same truck flatbed
- No special, heavy equipment needed for unloading and installing tanks
- Ideal for tight site footprints and remote locations

Single-Compartment Tanks

Double-Wall

Nominal Diameter	Nominal Capacities for Tanks Specified in U.S. Gallons	Nominal Capacities for Tanks Specified in Liters
4-foot	600 – 2,000	2,900 – 5,000
6-foot	2,500 – 6,000	Not available
8-foot	6,000 – 20,000	25,000 – 65,000
10-foot	9,000 – 40,000	40,000 – 150,000
12-foot	20,000 – 50,000	Not available

Multicompartment Tanks

Double-Wall

Nominal Diameter	Nominal Capacities for Tanks Specified in U.S. Gallons	Nominal Capacities for Tanks Specified in Liters
6-foot	4,500 – 12,000	Not available
8-foot	9,000 – 25,000	35,000 – 95,000
10-foot	15,000 – 40,000	60,000 – 150,000

Typical fuel tank accessories

- Engineered anchoring system
- Truchek® hydrostatic monitoring system
- Containment collars, sumps and covers
- Manways, extensions and covers
- Fittings and nozzles
- Fill tubes

For over 45 years, Xerxes has designed and manufactured fiberglass underground storage tanks for fuel, water and wastewater. Xerxes' most recent expansion is its HydroChain™ stormwater product line — highly engineered products with site-specific designs for stormwater management solutions. Xerxes is a key brand of Mattr, a global materials technology company serving critical infrastructure markets.

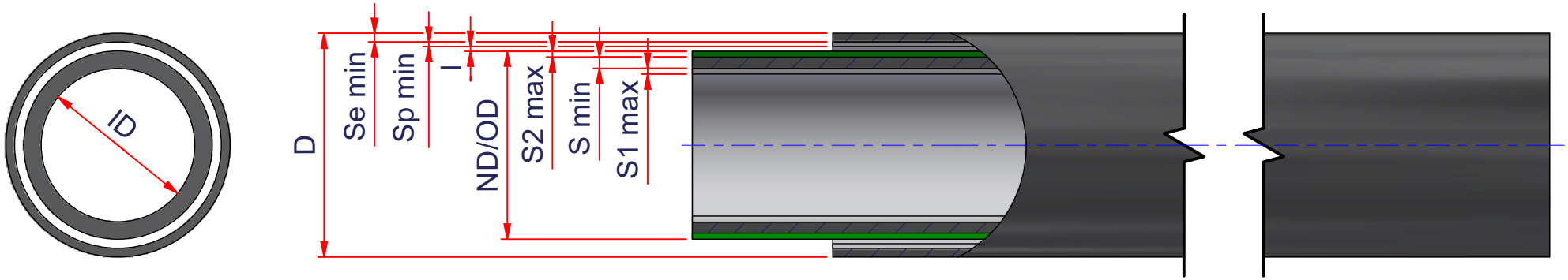
FDTW0425 | xerxes.com | **fuelsales@mattr.com**

XERXES®

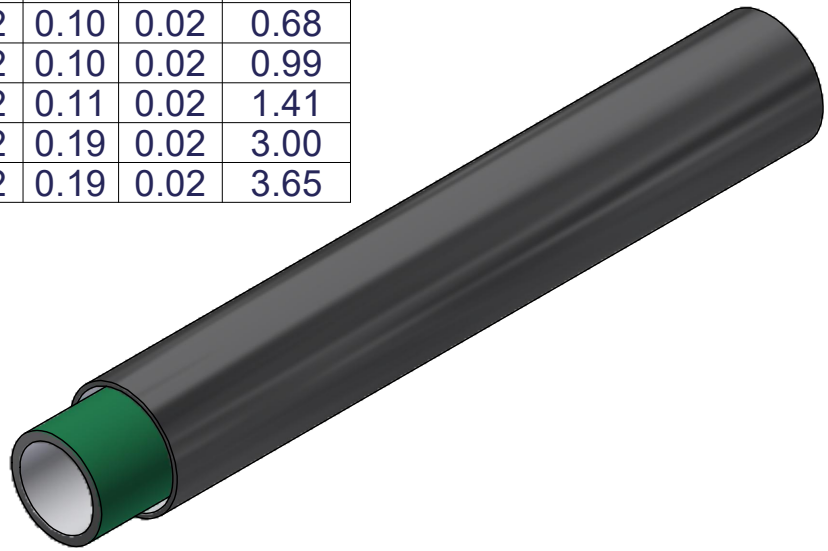
UNDERGROUND STORAGE TANK FACILTY PLAN SECTION

MANUFACTURER INFORMATION FOR PIPING

ATTACHMENT “D”



CODE	ND	OD	D	ID	I	S min	S1 max	S2 max	Se min	Sp min	Weight lbs/ft
19TSMAXPD3250	1"	1.26	1 1/2"	0.88	0.44	0.15	0.02	0.02	0.10	0.02	0.68
19TSMAXPD50	1 1/2"	1.97	2"	1.59	0.12	0.15	0.02	0.02	0.10	0.02	0.99
19TSMAXPD63	2"	2.48	2 1/2"	2.02	0.09	0.19	0.02	0.02	0.11	0.02	1.41
19TSMAXPD90	3"	3.54	5"	2.94	0.47	0.26	0.02	0.02	0.19	0.02	3.00
19TSMAXPD110	4"	4.33	5"	3.61	0.09	0.32	0.02	0.02	0.19	0.02	3.65



nupi AMERICAS

SMARTFLEX™

ITEM: TSMAXPD

C:\Vault_Temp\Disegni\Schede Tecniche\00_Inches\Smartflex\Double Wall System\SM10157.dwg

DESC: DOUBLE WALL UL 971 LISTED PRODUCT PIPE - COILS, STRAIGHT LENGTHS/STICKS

DRAWING No: SM10157

SHEET OF 1 1

REV. -3

www.nupiamericas.com - info@nupiamericas.com

All dimensions have to be considered in inches with 5% tolerance if not otherwise mentioned

UNDERGROUND STORAGE TANK FACILTY PLAN SECTION

TERTIARY CONTAINMENT METHOD

ATTACHMENT "F"

There is not a tertiary containment method proposed. See TCEQ-0583 attachment H and TCEQ-0583 attachment B for information regarding primary and secondary containment methods.

UNDERGROUND STORAGE TANK FACILTY PLAN SECTION

PROFILE DRAWINGS

ATTACHMENT "H"

CIRCLE K

CIRCLE K STORES, INC.
LOUIS HENNA BLVD & A.W. GRIMES BLVD
ROUND ROCK, TX 78644

DESIGN CODES

ALL CONSTRUCTION SHALL COMPLY WITH:
2015 INTERNATIONAL BUILDING CODE
2015 INTERNATIONAL FIRE CODE
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL PLUMBING CODE
2023 NATIONAL ELECTRICAL CODE
NFPA 30
NFPA 30A

SYMBOLS LEGEND

API	AMERICAN PETROLEUM INSTITUTE
N.C.	NORMALLY CLOSED
&	AND
NIP	NIPPLE
@	AT
NO.	NUMBER
A.C.	ASPHALT CONCRETE
N.O.	NORMALLY OPEN
APPROX.	APPROXIMATE
N.T.S.	NOT TO SCALE
AUX.	AUXILIARY
N/A	NOT APPLICABLE
BLU.	BLUE
O.D.	OUTSIDE DIAMETER
BLK.	BLACK
P	PRODUCT LINE
℄	CENTERLINE
PVC	POLYVINYL CHLORIDE
COMB.	COMBINATION
PLC.	PLACES
CONN.	CONNECTOR/CONNECTION
±	PLUS OR MINUS
CORP.	CORPORATION
#	POUND OR NUMBER
CSLD	CONTINUOUS STATISTICAL LEAK DETECTION
QTY.	QUANTITY
ø	DIAMETER
REF.	REFERENCE
DIM.	DIMENSION
REQD.	REQUIRED
D.C.	DIRECT CURRENT
RSG.	RIGID STEEL GALVANIZED
DWG.	DRAWING
SCH.	SCHEDULE
DBL.	DOUBLE
SCR'D.	SCREWED
(E)	EXISTING
SEC.	SECTION
ELECT.	ELECTRICAL
SPEC'S.	SPECIFICATIONS
E.S.O.	EMERGENCY SHUT OFF
S.T.P.	SUBMERGED TURBINE PUMP
EMT	ELECTRICAL METALLIC TUBING
TYP.	TYPICAL
ELL	ELBOW
U.L.	UNDERWRITERS LABORATORY
EMT	ELECTRICAL METALLIC TUBING
U.F.C.	UNIFORM FIRE CODE
FLEX.	FLEXIBLE
U.G.	UNDER GROUND
FRP	FIBERGLASS REINFORCED PLASTIC
U.S.T.	UNDERGROUND STORAGE TANKS
FNPT	FEMALE NATIONAL PIPE THREAD
UNL	UNLEADED
F.G.	FIBERGLASS
V	VAPOR LINE
'	FEET
VAC	VOLT AMP CURRENT
ELD	ENHANCED LEAK DETECTION
VIO.	VIOLET
GAL.	GALLON
V.R.	VAPOR RECOVERY
GALV.	GALVANIZED
WHT	WHITE HEX HEXAGON
W/	WITH
H.P.	HORSEPOWER
I.D.	INSIDE DIAMETER
"	INCH
J-BOX	JUNCTION BOX
MAX.	MAXIMUM
MFRS	MANUFACTURERS
MNPT	MALE NATIONAL PIPE THREADS
MIN.	MINIMUM
NPT	NATIONAL PIPE THREAD
(N)	NEW

CIRCLE K STORES INC.
1130 WEST WARNER ROAD
SUITE B
TEMPE, AZ 85284
602-728-8000

THE DIMENSION GROUP
ARCHITECTURE • CIVIL ENGINEERING • MEP ENGINEERING
10755 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL: 214-343-9400
www.dimensiongrp.com

PROTOTYPE VERSION

#	DATE
FGA22.01.24	06/22/2022

REVISIONS

#	DATE

PROJECT:
CIRCLE K STORE
900 LOUIS HENNA BLVD
ROUND ROCK, TX 78664

SHEET TITLE:
COVER SHEET

Drawn
Checked
PROJECT #: 230-817

TBPE FIRM REGISTRATION
#F-8396

STATE OF TEXAS
TERRY HESSELTINE
109399
LICENSED
PROFESSIONAL ENGINEER

12/29/25

SHEET NO.
TK001

GENERAL NOTE:

A. CONTRACTORS MUST HAVE AT LEAST 5 YEARS EXPERIENCE INSTALLING RETAIL FUEL SYSTEMS AND COMPLY WITH THE FOLLOWING IN ORDER TO BID ON ANY CIRCLE K PROJECT OR BE INVOLVED ON ANY CONSTRUCTION:

- A.1. AMERON CERTIFICATION
- A.2. NUPI CERTIFICATION
- A.3. BRAVO CERTIFICATION
- A.4. FLEXING CERTIFICATION
- A.5. EMCO WHEATON CERTIFICATION
- A.6. GILBARCO/VEEDER-ROOT CERTIFICATION
- A.7. CONTAINMENT SOLUTIONS/XERXES/MODERN WELDING CERTIFICATION & COMPLY WITH INSTALLATION INSTRUCTIONS
- A.8. HAZWOPPER & TRENCH EXCAVATION TRAINING

B. IT IS REQUIRED THAT ONLY "CERTIFIED INSTALLERS" BE USED FOR INSTALLATION OF THE PIPING SYSTEM TO INSURE THAT PROPER PIPE FABRICATION, COUPLING AND INSTALLATION PERFORMED. "CERTIFIED INSTALLERS" ARE EQUIPPED WITH FACTORY MANUFACTURED COUPLING EQUIPMENT AND INSTALLATION TOOLS AND HAVE RECEIVED FACTORY TRAINING BY AMERON AND NUPI REPRESENTATIVES ON THE PROPER INSTALLATION AND TESTING PROCEDURES.

THIS ENVIRONMENTALLY SAFE, FLEXIBLE UNDERGROUND PIPING SYSTEM PROVIDES PIPING RUNS BETWEEN USTS AND THE PRODUCT DISPENSERS

C. ALL PRODUCT PIPING IS TO BE PRIMARY FUEL OF SPECIFIED DIAMETER IN SECONDARY PIPING OF SPECIFIED DIAMETER. PIPING TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

D. WHERE FLEX CONNECTORS ARE COMPLETELY CONTAINED (NOT IN CONTACT WITH GROUND WATER, NATIVE SOIL OR BACKFILL MATERIAL), STAINLESS STEEL CONNECTORS ARE ACCEPTABLE. WHERE FLEX CONNECTORS ARE NOT COMPLETELY CONTAINED ISOLATION BOOTS OR PRIME AND WARP SHALL BE USED TO SEPARATE CONNECTOR FROM COMING INTO CONTACT WITH GROUND WATER, NATIVE SOIL OR BACKFILL MATERIAL. ALL FLEX CONNECTORS SHALL BE INSTALLED AS STRAIGHT AS POSSIBLE.

E. THE GENERAL CONTRACTOR ACCEPTS FULL RESPONSIBILITY FOR PROPER HANDLING AND INSTALLATION OF PIPING SYSTEM. THE GENERAL CONTRACTOR SHALL INSURE THAT GOOD WORKMANSHIP AND CONSTRUCTION PROCEDURES ARE FOLLOWED THROUGHOUT THE INSTALLATION, REGARDLESS OF INCLUSION OR OMISSION OF ANY APPLICABLE SUGGESTION IN THESE INSTRUCTIONS OR ON THE DRAWINGS.

F. UNKNOWN SITUATIONS OR CONDITIONS NOT COVERED IN THESE INSTRUCTIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR. MANUFACTURERS SPECIALISTS ARE AVAILABLE FOR CONSULTATION. THE PRESENCE OF THE OWNER'S OR MANUFACTURER'S REPRESENTATIVE AT AN INSTALLATION SITE DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR A PROPER INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SAFEGUARDING OF THE INSTALLATION AND MATERIALS AND EQUIPMENT STORED ON THE SITE TO PREVENT THEFT, VANDALISM OR DAMAGE.

RESPONSIBILITY NOTE:

PETROLEUM SYSTEM ELECTRICIAN IS RESPONSIBLE FOR ALL POWER WIRING, LOW VOLTAGE WIRING, ATG SENSOR/PROBE WIRING, AND SETUP.

PETROLEUM CONTRACTOR IS RESPONSIBLE FOR DISPENSER/SYSTEM START-UP AND CALIBRATION.

ON DAY OF SYSTEM STARTUP, DATA/NETWORK SUPPLIER, PETROLEUM CONTRACTOR, PETROLEUM ELECTRICIAN, AND CK CONSTRUCTION MANAGER MUST BE ON SITE.

PETROLEUM CONTRACTOR IS REQUIRED TO BE ON SITE FOR THE ENTIRETY OF THE FIRST DAY OF STORE OPERATION (7AM - 6PM)

CONCRETE NOTE:

UPON INSTALLATION & APPROVALS OF NEW PIPING, CONDUIT, PLUMBING, ETC. FOR THE TANK INSTALLATION, BACKFILL EXCAVATION AREAS WITH APPROVED BACKFILL, AND PROVIDE CONCRETE PAVING PER CIVIL. NOTE: MINIMUM REQUIREMENTS. 8" THICK, 4000 P.S.I. MIN. REQ'D @ TANK AREAS W/ NO. 4 BARS @ 12" O.C.E.W. (TYP). PROVIDE 6" THICK MIN. CONC W/ NO. 4'S 18" O.C.E.W. REINFORCING AT PIPING TRENCHES. FINISH SHALL BE WOOD FLOAT WITH MEDIUM BROOM FINISH.

A MEDIUM BROOM FINISH IS REQUIRED ON THE CONCRETE PAVING LOCATED BETWEEN THE GASOLINE ISLANDS AND THE SIDEWALK IN FRONT OF THE CIRCLE K BUILDING. CONTRACTOR TO PROVIDE TEST AREA FOR CIRCLE K REPRESENTATIVE APPROVAL.

SETTLEMENT NOTE:

CAUTION TANK SETTLEMENT, TANK DISTORTION, OR MOVEMENT IN CONCRETE COVER SLAB CANNOT BE TOLERATED AND IF SPECIFIED MATERIALS ARE USED AND SPECIFIED PROCEDURES ARE FOLLOWED, NO INSTALLATION FAILURE SHOULD OCCUR. IT WILL BE PRESUMED THE CONTRACTOR HAS NOT FOLLOWED THE SPECIFIED INSTRUCTIONS AND PROCEDURES AND THE CONTRACTOR SHALL IMMEDIATLY UNDERTAKE, AT HIS SOLE EXPENSE, ANY NECESSARY CORRECTIVE MEASURES, AS MAY BE APPROVED BY THE CIRCLE K FIELD REPRESENTATIVE, UP TO AND INCLUDING COMPLETE REMOVAL AND RESETTING OF ALL UNDERGROUND TANKAGE AT THE SITE. IF IT IS DETERMINED THAT MOVEMENT, SETTLEMENT OR DISTORTION HAS BEEN CAUSED BY FACTORS BEYOND THE CONTRACTOR'S CONTROL, THE COST OF REMEDIAL MEASURES WILL BE BORNE BY OTHERS. THE GAS INSTALLATION CONTRACTOR DOES HEREBY AGREE TO GUARANTEE THE UNDERGROUND TANKAGE INSTALLATION AGAINST FAILURE AS OUTLINED HEREIN ABOVE, FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE.

TANK BACKFILL REQUIREMENTS

UNDERGROUND STORAGE TANK BACKFILL MUST ADHERE TO MANUFACTURER MATERIAL REQUIREMENTS AND COMPLIANCE TO STANDARDS

POLICY

IN ORDER TO ASSURE COMPLIANCE TO UST MANUFACTURER'S REQUIREMENTS FOR UST BACKFILL MATERIALS, PROCEDURES WILL BE FOLLOWED TO MONITOR APPROVAL BY MANUFACTURER, VERIFICATION THAT APPROVED MATERIAL HAS BEEN DELIVERED TO THE SITE, AND DOCUMENTATION ON THE CONSISTENCY OF MATERIAL PLACED IN THE UST EXCAVATION.

PROCEDURE

SPECIFICATIONS FOR ACCEPTABLE MATERIALS TO BE USED AS STRUCTURAL SUPPORT FOR FIBERGLASS USTS.

ROUNDED GRAVEL
WHEN USING ROUNDED GRAVEL, THE MATERIAL IS THE BE A MIX OF ROUNDED PARTICLES, SIZES BETWEEN 1/8" AND 3/4". THE ROUNDED GRAVEL MUST CONFORM TO THE SPECIFICATIONS OF ASTM C-33, PARAGRAPH 9.1, SIZES 6, 67, OR 7. NO MORE THAN 5% (BY WEIGHT) OF THE BACKFILL MAY PASS THROUGH A #8 SIEVE. THE MATERIAL IS TO BE WASHED, FREE-FLOWING, AND FREE OF ICE, SNOW, AND DEBRIS.

CRUSHED STONE
WHEN USING CRUSHED STONE, THE MATERIAL IS TO BE A MIX OF ANGULAR PARTICLES, SIZES BETWEEN 1/8" AND 1/2". THE CRUSHED STONE MUST CONFORM TO THE SPECIFICATIONS OF ASTM C-33, PARAGRAPH 9.1, SIZES 7 OR 8. NO MORE THAN 5% (BY WEIGHT) OF THE BACKFILL MAY PASS THROUGH A #8 SIEVE. THE MATERIAL IS TO BE WASHED, FREE-FLOWING, AND FREE OF ICE, SNOW, AND DEBRIS.

APPROVAL PROCESS

ROUNDED GRAVEL
A SAMPLE CONSISTING OF THREE (3) SEPARATE RANDOM INTERIOR STOCKPILE SAMPLES SHALL BE TAKEN AT THE QUARRY BY THE MATERIALS TESTING COMPANY. CLEAN ONE GALLON SIZED BUCKETS (APPROXIMATE) CAN BE USED FOR SAMPLING.

THE MATERIALS TESTING COMPANY SHALL COMPLETE A SIEVE ANALYSIS ON THIS MATERIAL AS IT HAS BEEN COMBINED. IF THIS MATERIAL MEETS THE ASTM C-33 SPECIFICATIONS, THE ANALYSIS SHALL BE SUBMITTED TO THE TANK MANUFACTURER FOR APPROVAL. THE TANK MANUFACTURER WILL ISSUE AN APPROVAL ON THAT SAMPLE AS REFERENCED TO A SPECIFIC QUARRY. THIS PROCESS SHOULD TAKE ABOUT TWO DAYS.

WITH ROUNDED GRAVEL ONLY, IT WILL BE NECESSARY TO OBTAIN A NEW SAMPLE ON EACH INSTALLATION AS LONG AS THE QUARRY REMAINS THE SAME. AN APPROVAL FROM THE TANK MANUFACTURER WILL ONLY BE NEEDED ONCE TO DOCUMENT THE APPROVAL OF THE ROCK. IT WILL NOT BE NECESSARY TO ASK FOR APPROVAL ON ADDITIONAL INSTALLATIONS, UNLESS THE QUARRY LOCATION CHANGES.

IT WILL BE THE TANK INSTALLATION CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT ANY MATERIAL THAT HAS BEEN APPROVED BY THE TANK MANUFACTURER ALWAYS COMES FROM THE SAME QUARRY AND REMAINS CONSISTENT.

CRUSHED STONE
A SAMPLE CONSISTING THREE (3) SEPARATE RANDOM INTERIOR STOCKPILE SAMPLES SHALL BE TAKEN AT THE QUARRY BY THE MATERIALS TESTING COMPANY. CLEAN ONE GALLON (APPROXIMATE) SIZED BUCKETS CAN BE USED FOR SAMPLING.

THE MATERIALS TESTING COMPANY SHALL COMPLETE A SIEVE ANALYSIS ON THIS MATERIAL AS IS HAS BEEN COMBINED. IF THIS MATERIAL MEETS THE ASTM C-33 SPECIFICATIONS WITH NO VARIATION, IT WILL NOT BE NECESSARY TO SUBMIT A SIEVE ANALYSIS FOR APPROVAL BY THE TANK MANUFACTURER. IT IS NOT UNCOMMON TO RECEIVE AN ANALYSIS THAT INDICATES MATERIAL SIZES OUTSIDE OF THE ASTM-33 STANDARD. THESE VARIABLE REPORTS WILL NEED TO BE SUBMITTED TO THE TANK MANUFACTURER FOR APPROVAL. THIS PROCESS SHOULD TAKE ABOUT TWO DAYS.

A NEW SAMPLE AND SIEVE ANALYSIS WILL BE REQUIRED FOR EVERY LOCATION AS WELL AS AN APPROVAL FROM THE TANK MANUFACTURER.

ON CRUSHED STONE ONLY, CIRCLE K WILL REQUIRE AN ON-SITE INSPECTION AND DOCUMENTATION BY THE TESTING COMPANY AS TO THE CONSISTENCY OF THE MATERIAL DELIVERED TO THE SITE AND ITS SIMILARITY TO THE MATERIAL APPROVED BY THE TANK MANUFACTURER. CIRCLE K WILL ALSO REQUIRE TESTING COMPANY DOCUMENTATION TO VERIFY THAT THE MATERIAL PLACED IN THE TANK EXCAVATION REMAINS CONSISTENT THROUGHOUT THE BACKFILL PROCESS.

MATERIAL DISCOVERED ON SITE THAT DOES NOT MEET THE ASTM C-33 SPECIFICATION, FOR ANY REASON, WILL BE REMOVED AND REPLACED AT THE UST INSTALLERS EXPENSE.

TANK AND DISPENSER NOTE:

A. THE SPECIFIC SITE PLAN AND SPECIFICATIONS WILL GOVERN THE EXACT LOCATION, NUMBER, SIZE, AND TYPE OF EQUIPMENT TO BE INSTALLED AND INSTALLATION TO BE FOLLOWED.

B. PLANS AND SPECIFICATIONS REPRESENT MINIMUM REQUIREMENTS. CONTRACTOR SHALL MAKE THE INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S, FEDERAL, STATE, AND LOCAL ORDINANCES WHEN SUCH ORDINANCES EXCEED THESE MINIMUMS.

C. CONTRACTOR SHALL SECURE, ARRANGE FOR AND PAY FOR ALL NECESSARY PERMITS, INSPECTIONS, AND TESTS AND INCLUDE THE COST IN THEIR BID (UNLESS SPECIFIED DIFFERENTLY IN SCOPE OF WORK).

D. THE SCOPE OF WORK OR SPECIFICATIONS WILL LIST MATERIAL AND EQUIPMENT TO BE FURNISHED BY CIRCLE K. CONTRACTOR SHALL STORE, SAFEGUARD AND FURNISH ALL OTHER MATERIALS REQUIRED TO COMPLETE THE INSTALLATION.

E. MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION AND OPERATIONAL TESTING OF ALL TANKS, PIPING, DISPENSERS, AND MONITORING EQUIPMENT SHALL BE FOLLOWED TO AVOID POSSIBILITY OF DAMAGE TO EQUIPMENT.

F. ALL INSTALLATIONS SHALL INCLUDE THE INSTALLATION OF STAGE I VAPOR RECOVERY.

G. CONTRACTOR SHALL PLACE ALL UNDERGROUND PIPING WHERE SHOWN WITH A MINIMUM NUMBER OF BENDS AND CONTINUOUSLY PITCHED TO PROVIDE MAXIMUM SLOPE FROM RISER TO THE LOW POINT AT THE CONNECTION. MINIMUM SLOPE OF 1/8" PER FOOT. INSTALL ALL PRODUCT AND VENT LINES IN A COMMON TRENCH.

H. ALL PRODUCT LINES SHALL BE DOUBLE WALL FLEX PIPE. ALL VENT LINES (UNDERGROUND) SHALL BE FIBERGLASS UNLESS OTHERWISE NOTED. ALL PRODUCT LINES SHALL BE NUPI SMARTFLEX. ALL VENT LINES SHALL BE AMERON DUALOY 3000/L.

I. CONTRACTOR SHALL IDENTIFY UNDERGROUND PIPING, AND VENT PIPING ONCE IT HAS BEEN BACKFILLED AND COVERED UP SO FINISH GRADING AND CONCRETE CONTRACTOR KNOW WHERE UNDERGROUND PIPING IS LOCATED.

PIPE TRENCH NOTE:

PIPING TRENCH LINERS SHALL BE 6oz NON-WOVEN GEOTECH FABRIC - OVERLAP TOP COURSE. CONTACT LOCAL CIRCLE K REPRESENTATIVE FOR LOCAL REQUIREMENTS.

FINISH NOTE:

(ALL PRODUCTS ARE SHERWIN-WILLIAMS)

A.	BOLLARDS:	N/A - SLEEVED PER ARCH.
	ISLAND FORMS (IF REQUIRED BY AHJ):	AMARILLO WHITE
	VENT PIPE:	AMARILLO WHITE

CANOPY NOTE:

CANOPY IS A PREFAB STEEL STRUCTURE, CONTACT CIRCLE K REPRESENTATIVE FOR NAME OF MANUFACTURER, SEE MANUFACTURER'S DRAWING FOR STRUCTURAL DESIGN AND INSTALLATION INFORMATION. SEE ARCHITECTURAL SITE FOR LOCATION OF CANOPY AND GAS ISLANDS. THE GASOLINE CANOPY STRUCTURE IS FURNISHED AND INSTALLED BY CIRCLE K.

INSTALLATION NOTE:

CANOPY TANKS AND BUILDING TO BE INSTALLED AT THE SAME TIME. THESE PLANS MUST BE USED IN COORDINATION WITH SEPARATE SITE, BUILDING AND CANOPY PLANS.

CONTRACTOR NOTE:

A. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPOSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

B. THE CONTRACTOR ACCEPTS FULL RESPONSIBILITY FOR PROPER HANDLING AND INSTALLATION OF THE GASOLINE USTS AND SHALL INSURE THAT GOOD WORKMANSHIP PRACTICES AND CONSTRUCTION PROCEDURES ARE FOLLOWED REGARDLESS OF THE INCLUSION OR OMISSION OF ANY INSTRUCTION.

C. UNKNOWN SITUATIONS OR CONDITIONS NOT COVERED IN THESE AND THE MANUFACTURER'S INSTRUCTIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR. MANUFACTURER'S SPECIALISTS ARE AVAILABLE FOR CONSULTATION. THE PRESENCE OF THE MANUFACTURER OR OBSERVER AT AN INSTALLATION SITE DOES NOT RELIVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR THE PROPER INSTALLATION OF THE TANKS.

D. QUESTIONS REGARDING INSTALLATION PROCEDURES OR TANK REPAIRS SHOULD BE DIRECTED TO THE CIRCLE K FIELD REPRESENTATIVE.

E. GASOLINE UNDERGROUND TANKS MUST BE INSTALLED ACCORDING TO THESE INSTRUCTIONS, THE MANUFACTURER'S INSTRUCTIONS AND NFPA 30 AND 30A UL971. LOCAL CODES MAY APPLY AND MUST BE ADHERED TO. FAILURE TO FOLLOW THESE INSTALLATIONS INSTRUCTIONS WILL VOID THE WARRANTY AND WILL RESULT IN TANK FAILURE. PROPER INSTALLATION OF GASOLINE USTS HELP PREVENT TANK DAMAGE AND SHOULD INSURE LONG-TERM CORROSION-PROOF SERVICE. IT IS IMPERATIVE TO READ, UNDERSTAND AND FOLLOW THESE INSTRUCTIONS.

F. THESE SPECIFICATIONS ARE SUPPLEMENTED BY THE RESPECTIVE TANK MANUFACTURER'S SPECIFICATIONS. THE INSTALLATION PROCEDURE SHALL COMPLY WITH BOTH SETS OF INSTRUCTIONS AND SPECIFICATIONS. IF, IN THE CONTRACTOR'S JUDGEMENT, THERE APPEARS TO BE A CONFLICT IN THESE SPECIFICATIONS AND THE TANK MANUFACTURER'S INSTRUCTIONS, CONTACT THE LOCAL CIRCLE K REPRESENTATIVE FOR CLARIFICATION AND GUIDANCE.

G. CONTRACTOR SHALL INSPECT AND CONFIRM ALL PIPING TO BE CLEAR OF ALL BEDDING MATERIAL, TRASH, ANY TYPE OF LIQUID OR DEBRIS PRIOR TO AND AFTER INSTALLATION.

I. TANK AND PRODUCT LINE TESTING AND REPORTING REQUIRED. COORDINATE REQUIREMENTS WITH CIRCLE K REPRESENTATIVE.

J. TANK TIGHTNESS TESTING PROCEDURES SHALL BE FOLLOWED FOR ALL TANKS BEING INSTALLED. TESTING DATA LOG SHALL BE COMPLETED BY THE CONTRACTOR AND SUBMITTED TO THE CIRCLE K REPRESENTATIVE AFTER TESTING IS COMPLETE. CONTRACTOR SHALL ALSO RETAIN A COPY AS PART OF THE TANK RECORDS THAT MAY BE REQUIRED BY FEDERAL, STATE AND/OR LOCAL REGULATIONS AND CODES.

K. CONTRACTOR SHALL PROVIDE TANK EXCAVATION HOLE PROTECTION AT AL TIMES UNTIL PAVING IS IN PLACE PER OSHA STANDARD 1910. COVERS AND/OR GUARDRAILS SHALL BE PROVIDED TO PROTECT PERSONNEL FROM THE HAZARDS OF OPEN PITS, TANK VATS, DITCHES, ETC.

L. ALL TANK, TRANSITION, AND DISPENSER SUMPS SHALL BE COVERED DURING CONSTRUCTION TO PREVENT DEBRIS AND WATER FROM ACCUMULATING. ANY ACCUMULATION SHALL BE REMOVED AND SUMPS KEPT CLEAN.

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PROTOTYPE VERSION

#	DATE
FGA22.01.24	06/22/2022

REVISIONS

#	DATE

PROJECT:
CIRCLE K STORE
900 LOUIS HENNA BLVD
ROUND ROCK, TX 78664

SHEET TITLE:
GENERAL NOTES

Drawn
Checked
PROJECT #: 230-817

TBPE FIRM REGISTRATION
#F-8396

STATE OF TEXAS
TERRY HESSELTINE
109399
LICENSED
PROFESSIONAL ENGINEER

12/29/25

SHEET NO.
TK002

EQUIPMENT LIST

#	PART DESCRIPTION	MANUFACTURER	MODEL NUMBER	FURN.	INST.	REMARKS
	PRODUCT TANKS					
1	DOUBLEWALL FIBERGLASS UNDERGROUND STORAGE TANK	XERXES	20K - 10' DIA.	CK	GC	COMPLETE WITH FIBERGLASS TANK SUMPS, CONTAINMENT COLLARS AND MISCELLANIOUS PARTS INCLUDING FIBERGLASS STRAPS, GALVANIZED TIE-DOWNS, AND DEADMEN. HYDROSTATIC INTERSTITIAL FOR ALL TANKS. NO EXCEPTIONS.
2						
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	PRODUCT AND VENT PIPING					
6	2" DOUBLE WALL FLEXIBLE PIPING	NUPI SMARTFLEX	19TSMAXPD63R75	CK	GC	246' COIL
7	2" SINGLE WALL FIBERGLASS PIPING (VENT PIPING ONLY)	AMERON	AMERON-DUALOY 3000/L	CK	GC	33' STICK LENGTH, USE GLUE KIT FOR 100% ALCOHOL COMPATIBILITY. PROTECTIVE MESH IS REQUIRED FOR L PIPING
8						
9						
	TANK TOP PACKAGES, CONTAINMENT SUMPS, HARDWARE, AND MANHOLES					
10	FILL SPILL BUCKET	EMCO WHEATON	A1004EVR-317S	CK	GC	NO DRAIN VALVES.
11	VAPOR BUCKET	EMCO WHEATON	A1004EVR-317A	CK	GC	NO DRAIN VALVES.
12	SWIVEL FILL ADAPTOR	EMCO WHEATON	A0030-124S	CK	GC	
13	4" FILL CAP	EMCO WHEATON	A0097-005	CK	GC	
14	SWIVEL VAPOR ADAPTOR	EMCO WHEATON	A0076-124S	CK	GC	DO NOT INSTALL SWIVEL VAPOR ADAPTOR AT DIESEL.
15	VAPOR CAP	EMCO WHEATON	A0099-002	CK	GC	INSTALL A0099-002 CAP AT DIESEL VAPOR ONLY. INSTALL A0097-005 AT ALL OTHER PRODUCTS
16	EXTRACTOR VALVE 4x4x2 (NO CAGE)	EMCO WHEATON	A0079-150	CK	GC	
17	COMPOSITE 42" MANHOLE W/CAM LOCK	EMCO WHEATON	A0716-042C	CK	GC	
18	15' OVERFILL DROP TUBE	EMCO WHEATON	A1100EVR-056CF	CK	GC	
19	4" x 16' SLOTTED SCH 40 PVC W/ PLUG	TITAN INDUSTRIES	MF-4X16WS	GC	GC	
20	12" X 16' SLOTTED SCH 40 PVC W/ PLUG	TITAN INDUSTRIES	TI-PVC12X16WELL	GC	GC	
21	12" MONITOR WELL MANHOLE	EMCO WHEATON	A0721-101	CK	GC	Steel Skirt, White Lid
22	18" MONITOR WELL MANHOLE	EMCO WHEATON	A0721-018	CK	GC	
23	18" RAINTITE BOLTED MANHOLE	EMCO WHEATON	A0717-018B	CK	GC	
24	4" WELL CAP	EMCO WHEATON	A0720-001	CK	GC	
25	12" WELL CAP	TITAN INDUSTRIES	EM-P4120BTMPLUG	CK	GC	
26	UNITED SIGN FILL PIPE ID TAG, DIESEL	UNITED SIGN	US-FPI-125D	CK	GC	
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30	UNITED SIGN VAPOR RECOVERY ID TAG	UNITED SIGN	US-FPI-22	CK	GC	
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	TURBINE					
40	FE PETRO 2 HP FIXED SPEED W/ MAG SHELL	FRANKLIN FUELING	FE-STPM200-VL2	CK	GC	REFER TO TK101 FOR PUMP QTY & SIZING CHART, ORDER RISER WITH PUMP
41	4" x 24" RISER - NPT THREADED 304L STAINLESS STEEL	FRANKLIN FUELING		CK	GC	ORDER PRE-THREADED FROM MNFR.
42	4" x 24" RISER - NPT THREADED EPOXY COATED (DIESEL ONLY)	FRANKLIN FUELING	FE-400168424	CK	GC	
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	TURBINE SUMP FITTINGS, PIPING, AND VENT HARDWARE					
55	BRAVO 3/4 FIBERGLASS CONDUIT ENTRY 10 PACK W/ GLUE	BRAVO	BR-F-07-FF/BR-F-07R-FF	CK	GC	USE BR-F-07R-FF WHEN PVC COATED CONDUIT IS USED
56	2.5" ID FIBERGLASS SUMP ENTRY FITTING FOR 2" NUPI SMARTFLEX	NUPI	19SEBEFM75A	CK	GC	
57						
58	3" PIPE CLAMP	BRAVO	BR-T-FF-CLAMP-3	CK	GC	
59	ENTRY FITTING ADHESIVE KIT 7 OZ - 1 KIT PER FITTING	BRAVO	BR-ADHESIVE-EPOXY-KIT	CK	GC	
60	2" X 1-1/2" F ADAPTER - SS	NUPI	19SAF63112SSNPT	CK	GC	
61	2" M ADAPTER - SS	NUPI	19SAM632SSNPT	CK	GC	
62	2" F ADAPTER - SS	NUPI	19SAF632SSNPT	CK	GC	
63	FLEX CONN 2"x24" MxM SWIVEL END	OMEGAFLEX	OF-2X24MMS	CK	GC	
64	ISOLATION BOOT 3x30"	CRUSHPROOF	CTC-450036	CK	GC	
65	2" THREAD,3" WC PRESSURE VACUUM VENT	HUSKY	5885	CK	GC	
66	2" ALUMINUM OPEN TANK VENT (DIESEL ONLY)	HUSKY	A4103-002	CK	GC	
67	2" BALL VALVE - STAINLESS STEEL	JOMAR	JI-T100-2SS	CK	GC	
68	2" BALL VALVE - BRASS	JOMAR	JI-T100-2PC	CK	GC	
69	2" STEEL PIPING & FITTINGS - 304L STAINLESS STEEL - NPT THREADED			GC	GC	
70	2" STEEL PIPING & FITTINGS - SCH 40 BLACK STEEL - NPT THREADED (DIESEL ONLY)			GC	GC	
71	2" STEEL PIPING & FITTINGS - SCH 40 GALVANIZED - NPT THREADED (VENT RISER ONLY)			GC	GC	
72	2" 90 - SINGLE WALL	NUPI	19SGE63	CK	GC	
73	2" 45 - SINGLE WALL	NUPI	19SCE63	CK	GC	
74	2" TEE - SINGLE WALL	NUPI	19STE63	CK	GC	
75	2" COUPLING - SINGLE WALL	NUPI	19SME63	CK	GC	
76	2" 90 - DOUBLE WALL	NUPI	19SGEDW63	CK	GC	WITHOUT TEST PORT
77	2" 45 - DOUBLE WALL	NUPI	19SCEDW63	CK	GC	WITHOUT TEST PORT
78	2" TEE - DOUBLE WALL	NUPI	19STEDW63	CK	GC	WITHOUT TEST PORT
79	2" COUPLING - DOUBLE WALL	NUPI	19SMEDW63	CK	GC	WITHOUT TEST PORT
80	2" TERMINATION FITTING	NUPI	19SETFCV63	CK	GC	WITH TEST PORT

#	PART DESCRIPTION	MANUFACTURER	MODEL NUMBER	FURN.	INST.	REMARKS
	DISPENSER & DISPENSER HARDWARE					
81						
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	MISCELLANEOUS					
105	6" BOLLARD COVER	POST-GUARD	GREY - 48"	CK	GC	
106	6" x 72" BOLLARDS			GC	GC	
107	3' x 5' x 13" DISPENSER ISLAND FORMS	RIVERSIDE STEEL	RS-3X5X13	CK	GC	USE ONLY IF REQUIRED BY AUTHORITY HAVING JURISDICTION. USE STAINLESS STEEL ISLAND FORMS IN SNOW SITES.
108	20 CHANNEL INTERCOM SYSTEM-TRADEMARK	ESCO	ES-941-0114	CK	GC	
109	CONTAINMENT LINER	MPC	PETROGARD X	GC	GC	FOR PIPING AND TANK HOLES THAT REQUIRE "TERTIARY CONTAINMENT". VERIFY WITH CK REP AT TIME OF BIDDING
110	FILTER FABRIC	GSE	8 OZ GSE NW8	GC	GC	FOR STANDARD INSTALLATION IN TANK HOLES AND PIPING TRENCHES
111	FILTER FABRIC	GSE	16 OZ GSE NW16	GC	GC	FOR USE WITH ROCK HOLES. INCLUDE IN BID IF ROCK EXISTS.
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	MONITORING					
125	TLS450PLUS W/ TCH DISPLAY & PRINT - CK	VEEDER-ROOT	VR-860091-301CK	CK	GC	
126	TLS450PLUS APPLICATION SOFTWARE - CK	VEEDER-ROOT	VR-333545-001CK	CK	GC	
127	RISK MGMT LEAK DETECTION DPLLD	VEEDER-ROOT	VR-332972-008CK	CK	GC	
128	UNIVERSAL SENSOR PROBE 16 INPUT MOD	VEEDER-ROOT	VR-332812-001CK	CK	GC	
129	UNIVERSAL INPUT/OUTPUT INTERFACE MOD	VEEDER-ROOT	VR-332813-001CK	CK	GC	
130	CSLD SOFTWARE ENHANCEMENT	VEEDER-ROOT	VR-332972-006CK	CK	GC	
131	DPLLD WITHOUT SWIFTCHECK	VEEDER-ROOT	VR-859080-001CK	CK	GC	
132	8' MAG PLUS TANK PROBE	VEEDER-ROOT	VR-846396-107CK	CK	GC	
133	10' MAG PLUS TANK PROBE	VEEDER-ROOT	VR-846396-109CK	CK	GC	
134	PHASE SEPARATION 4" GAS FLOAT KIT - 10' CABLE	VEEDER-ROOT	VR-886100-010CK	CK	GC	
135	4" NEW STYLE DIESEL FLOAT KIT - 10'CABLE	VEEDER-ROOT	VR-846400-011CK	CK	GC	
136	4" CAP AND RING KIT	VEEDER-ROOT	VR-312020-952CK	CK	GC	
137	PIPING SUMP SENSOR	VEEDER-ROOT	VR-794380-208CK	CK	GC	
138	SENSOR HOLDER FOR UDC	BRAVO	BR-SH-UDC	CK	GC	
139	SENSOR HOLDER FOR TANK SUMP	BRAVO	BR-SH-TS	CK	GC	
140	HYDROSTATIC RESERVOIR SENSOR WITH VENTED CAP	VEEDER-ROOT	VR-794380-303CK	CK	GC	
141	EMERGENCY SHUT OFF SIGN	UNITED SIGN	US-MS76	GC	GC	
142	EMERGENCY SHUT OFF SWITCH	POWER INTEGRITY	PI-IA-ESOCA/T	GC	GC	
143	OVERFILL ALARM	VEEDER-ROOT	VR-790091-001CK	CK	GC	
144	OVERFILL ALARM ACKNOWLEDGEMENT SWITCH	VEEDER-ROOT	VR-790095-001CK	CK	GC	
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CIRCLE K STORES INC.
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PROTOTYPE VERSION	
#	DATE
FGA22.01.24	06/22/2022

REVISIONS	
#	DATE

PROJECT:
CIRCLE K STORE
900 LOUIS HENNA BLVD
ROUND ROCK, TX 78664

SHEET TITLE:
EQUIPMENT LIST

Drawn
Checked
PROJECT #: 230-817

TBPE FIRM REGISTRATION
#F-8396

12/29/25

SHEET NO.
TK006

EQUIPMENT LIST

#	PART DESCRIPTION	MANUFACTURER	MODEL NUMBER	FURN.	INST.	REMARKS
			HIGH SPEED DIESEL/DEF - DISPENSERS, CONTAINMENT, AND HANGING HARDWARE			
156	ULTRA HI FLOW DISPENSER	GILBARCO	ENCORE 700S	CK	GC	SEE SITE PLAN AND VERIFY NUMBER OF MASTER/SATELLITES WITH CK CONSTRUCTION REP
157	ULTRA HI FLOW DISPENSER WITH DEF	GILBARCO	ENCORE 700S	CK	GC	SEE SITE PLAN AND VERIFY NUMBER OF MASTER/SATELLITES WITH DEF WITH CK CONSTRUCTION REP
158	UNITED SIGN FILL PIPE ID TAG, DEF	UNITED SIGN	FPI-XXXX	CK	GC	
159	SHEAR VALVE - 2" SINGLE POPPET	OPW	10RF-2001	CK	GC	FOR USE AT SATELLITE FEEDS ONLY
160	SHEAR VALVE - 2" DOUBLE POPPET	OPW	10RF-2002	CK	GC	FOR USE AT MAINFEED ONLY
161	SHEAR VALVE - 1" DEF	OPW	60V-DEF	CK	GC	FOR DEF ONLY. USE BSPP/NPT ADAPTORS PART #'s 205900/205899 FOR FINAL CONNECTIONS
162	ENCORE DIESEL/DEF UNDER DISPENSER SUMP	BRAVO	B1385-S30	CK	GC	FOR USE AT DISPENSERS WITH DEF. INSTALL B1000-ENC (REF. TK006) FOR DISPENSERS WITHOUT DEF.
163	1" DEF HOSE - BLUE	OPW	21GU-H12	CK	GC	12' HOSE
164	STAINLESS STEEL DEF SWIVEL/RECONNECTABLE BREAKAWAY	OPW	21GU-SSB	CK	GC	COMES WITH 21GU-BCS SWIVEL COVER SLEEVE
165	1" DEF NOZZLE - BLUE	OPW	21GU-040G	CK	GC	NO MIS-FILLING DEVICE. CONFIRM WITH CK WHEN MIS-FILLING DEVICE WILL BE NEEDED.
166	1" x 8" WHIP HOSE - BLACK	CONTINENTAL	20022010	CK	GC	
167	1" MAGNETIC BREAKAWAY DEVICE	CATLOW	CAM TWIST CTM100-HD	CK	GC	
168	1" x 10' DIESEL HOSE - BLACK	CONTINENTAL	20021982	CK	GC	
169	1" SWIVEL	HUSKY	0087	CK	GC	
170	1" HIGH VOLUME NOZZLE - GREEN	HUSKY	177610-03	CK	GC	
171	FLEX CONN 1" x 18" MxM SWIVEL END	FRANKLIN	FF10X18HMXM346	CK	GC	
172	1" STAINLESS STEEL BALL VALVE	JOMAR	T100-965	CK	GC	
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			HIGH SPEED DIESEL SERVICE ISLAND EQUIPMENT			
181	ADA APPROVED FREEZE PROOF WATER HYDRANT W/ 3/4" CONNECTION	MERRIL	R103	CK	GC	3/4" OUTLET 1" INLET X 70 - 1/2" HYDRANT
182	5HP ELECTRIC AIR COMPRESSOR	CHAMPION	VR5-8 - VERT/HR5-8 - HORIZONTAL	CK	GC	INSTALL IN CK SUPPLIED CABINET AT REAR OF BUILDING OR DUMPSTER ENCLOSURE. REFER TO TK101.
183	AIR HOSE REEL	REELCRAFT	D8650 ELP	CK	GC	ORDER SIDE WIND OPTION FOR COLUMN MOUNTING
184	1/2" X 18" STAINLESS STEEL FLEX CONNECTOR			GC	GC	
185	1/2" STAINLESS STEEL BALL VALVE			GC	GC	
186	3/4" SCH 40 PVC			GC	GC	FOR USE WITH WATER ONLY. REFER TO CIVIL
187	1/2" TYPE K COPPER LINE			GC	GC	FOR USE WITH AIR ONLY
188	1/2" BRASS BALL VALVE			GC	GC	
189	AIR COMPRESSOR FILTER	CHAMPION	CFL SERIES	CK	GC	
190	AIR COMPRESSOR REGULATOR	CHAMPION		CK	GC	
191	ANGLED AIR CHUCK	WESTWARD	2HKY2	CK	GC	ANGLED AIR CHUCK, 1/4" FEMALE NPT, 150PSI RATING
192	WATER SPOUT	MILTON	JE 8647	CK	GC	WATER SPOUT, 1/4" FEMALE NPT
193	WATER HOSE			CK	GC	20' LENGTH X 3/4", RED
194	EXCEL HIGH FLOW TRUCK COMPRESSOR	EXCEL	SC05SS HIGH FLOW	CK	GC	HIGH FLOW - 120 PSI OUTPUT PRESSURE
195						
			DEF TANK HARDWARE AND COMPONENTS			
196	DEF SUBMERSIBLE PUMP KIT	FE PETRO	FE-STP-DEF-VL2	CK	GC	FOR 8' DIA TANK
197	2" STAINLESS STEEL CHECK VALVE		CSVE200	CK	GC	
198	DEF FILL BUCKET	EMCO WHEATON	A1005-518GW2DEF	CK	GC	USE ONLY WHEN DIRECT BURY FILL IS SPECIFIED
199	SS 4" X 3" FILL REDUCER ADAPTER		SS 64143040	CK	GC	USE ONLY WHEN DIRECT BURY FILL IS SPECIFIED
200	SS 3" DUST CAP		SS 1401130	CK	GC	USE ONLY WHEN DIRECT BURY FILL IS SPECIFIED
201	DEF REMOTE FILL BOX	MORRISON BROS	515SD-0200 AC	CK	GC	USE ONLY WHEN REMOTE FILL APPLICATION IS SPECIFIED
202	DEF OVERFILL DEVICE	MORRISON BROS	9095SS-9800AV	CK	GC	USE ONLY WHEN REMOTE FILL APPLICATION IS SPECIFIED
203	2" DEF DRY DISCONNECT ADAPTER	MORRISON BROS	927S-0200 1A	CK	GC	USE ONLY WHEN REMOTE FILL APPLICATION IS SPECIFIED
204	2" DEF DUST CAP	MORRISON BROS	9284-0200 1C	CK	GC	USE ONLY WHEN REMOTE FILL APPLICATION IS SPECIFIED
205	2" STAINLESS STEEL BALL VALVE	MORRISON BROS	691BSS0800 1V	CK	GC	USE ONLY WHEN REMOTE FILL APPLICATION IS SPECIFIED
206	2" LINE STRAINER	MORRISON BROS	284S-3100 1S	CK	GC	USE ONLY WHEN REMOTE FILL APPLICATION IS SPECIFIED
207						
208						
209						
210						

CIRCLE K STORES INC.
1130 WEST WARNER ROAD
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PROTOTYPE VERSION

#	DATE
FGA22.01.24	06/22/2022

REVISIONS

#	DATE

PROJECT:
CIRCLE K STORE
900 LOUIS HENNA BLVD
ROUND ROCK, TX 78664

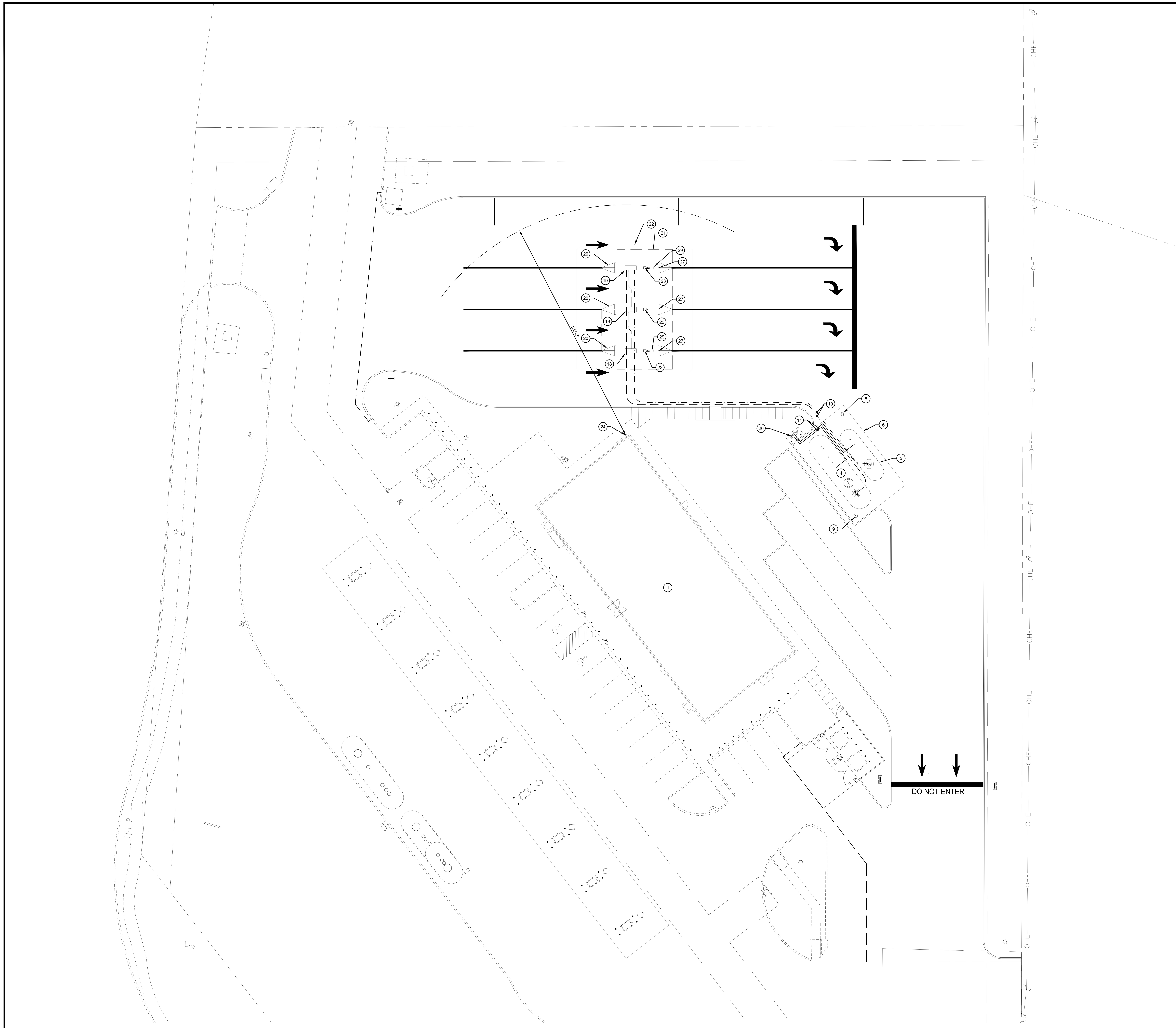
SHEET TITLE:
EQUIPMENT LIST

Drawn
Checked
PROJECT #: 230-817

TBPE FIRM REGISTRATION
#F-8396

12/29/25

SHEET NO.
TK007



1 SITE PIPING PLAN

SCALE: 1" = 20'-0"

KEY SCHEDULE:

1. EXISTING CIRCLE K STORE; REF. ARCH
2. NOT USED
3. NOT USED
4. DIESEL DOUBLE WALL UNDERGROUND STORAGE TANK; REF. TK301
5. DEF DOUBLE WALL UNDERGROUND STORAGE TANK; REF. TK301
6. TANK PAD; REF. TK301
7. NOT USED
8. OBSERVATION WELL (4"); REF. DTL 1/TK502
9. OBSERVATION WELL (12"); REF. DTL 2/TK502
10. 2" FIBERGLASS PRODUCT PIPING. PIPE TO SLOPE AT MINIMUM SLOPE OF 1/8" PER FOOT BACK TO TANK
11. 2" FIBERGLASS VENT PIPING. PIPE TO SLOPE AT MINIMUM SLOPE OF 1/8" PER FOOT BACK TO TANK
12. NOT USED
13. NOT USED
14. NOT USED
15. NOT USED
16. NOT USED
17. NOT USED
18. HI FLOW DIESEL DISPENSER; REF. DTL 1+5/TK505.1
19. HI FLOW DIESEL & DEF DISPENSER; REF. DTL 2+6/TK505.1
20. PYRAMID BOLLARD; REF. DTL 4/TK505.1
21. HI FLOW DIESEL CANOPY; REF. ARCH
22. HI FLOW DIESEL CANOPY APRON; REF. CIVIL
23. HI FLOW DIESEL CANOPY COLUMN; REF. ARCH
24. EMERGENCY STOP BUTTON PLACED 20' MINIMUM/100' MAXIMUM FROM DISPENSER PER NFPA 30A
25. NOT USED
26. NOT USED
27. WATER HYDRANT; REF. DTL 1/TK506
28. NOT USED
29. EXCEL AIR COMPRESSOR/AIR UNIT

LEGEND

- PREMIUM UNLEADED
- REGULAR UNLEADED
- CIRCLE K CHOICE
- DIESEL
- DEF
- VENT

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PROTOTYPE VERSION

#	DATE
FGA22.01.24	06/22/2022

REVISIONS

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PROJECT:
CIRCLE K STORE
900 LOUIS HENNA BLVD
ROUND ROCK, TX 78664

SHEET TITLE:
SITE PIPING PLAN

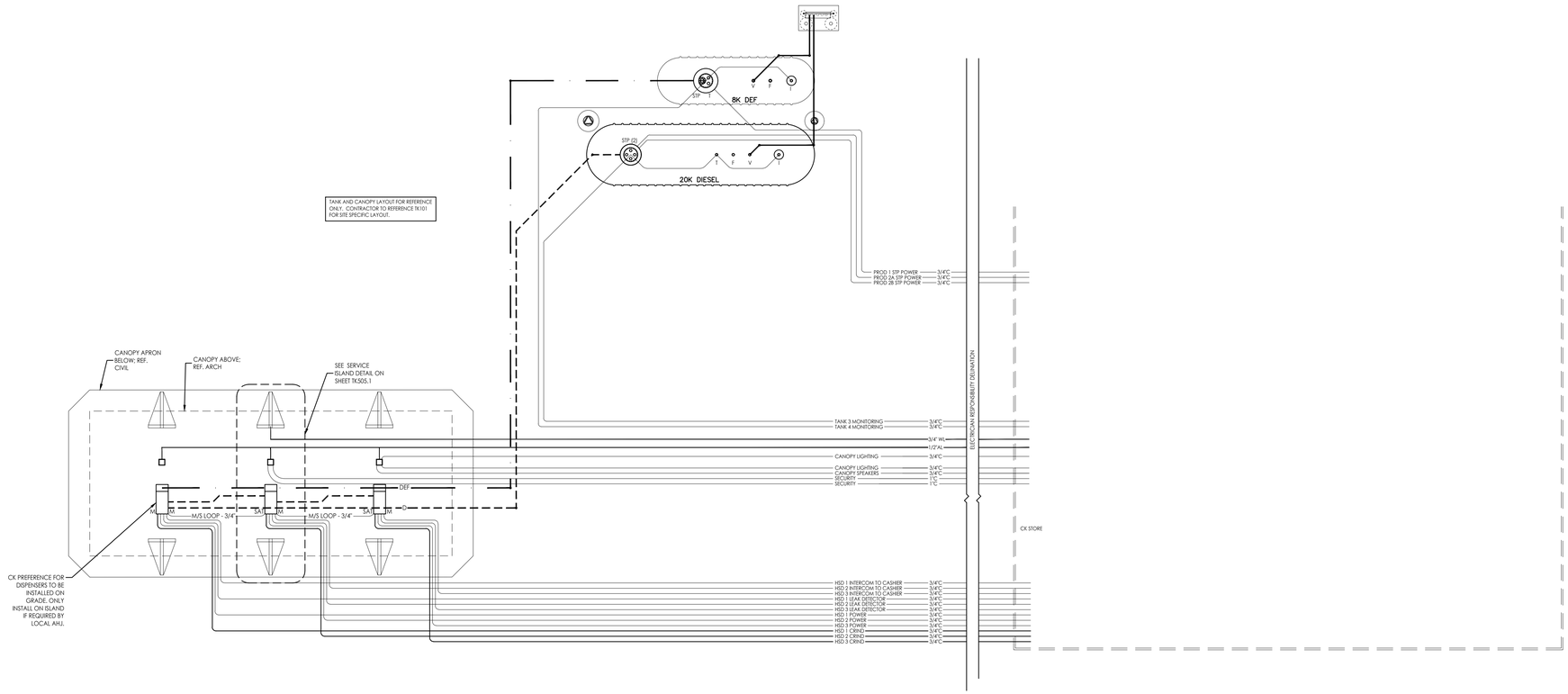
Drawn
Checked
PROJECT #: 230-817

TBPE FIRM REGISTRATION
#F-8396

STATE OF TEXAS
TERRY HESSELTINE
109399
LICENSED PROFESSIONAL ENGINEER

12/29/25

SHEET NO.
TK101



NOTE:

CONDUITS REQUIRED PER DISPENSER:
- (1) 3/4" FOR INTERCOM
- (1) 3/4" FOR POWER
- (1) 3/4" FOR VEEDER ROOT SENSOR IN DISPENSER SUMP
- (1) 3/4" FOR CRIND

POWER CONDUIT REQUIRED PER SUB PUMP:
- (1) 3/4" CONDUIT

LV CONDUIT REQUIRED PER TANK :
- (1) 3/4" CONDUIT TO EACH TANK AND ADJACENT PROBES

AUTO CANOPY LIGHTS, SPEAKERS, AND SIGNS:
- (4) 3/4" CONDUIT FOR LIGHTS
- (1) 3/4" CONDUIT FOR SPEAKERS

HSD CANOPY LIGHTS, SPEAKERS, AND SIGNS:
- (2) 3/4" CONDUIT FOR LIGHTS
- (1) 3/4" CONDUIT FOR SPEAKERS

AUTO CANOPY SECURITY CAMERAS:
- (3) 1" CONDUIT

HSD CANOPY SECURITY CAMERAS:
- (2) 1" CONDUIT

NUMBER WILL VARY BASED ON NUMBER OF DISPENSERS AND SUB PUMPS. REFER TO TK101 FOR TYPE AND QUANTITY OF DISPENSERS.

LEGEND

F - FILL
V - VAPOR
T - TANK LEVEL MONITOR
STP - SUBMERSIBLE TURBINE PUMP
X - EXTRA TANK OPENING
I - INTERSTITIAL SPACE
S - SPARE
M - MASTER
SAT - SATELLITE
X - BLANK

P - PREMIUM UNLEADED
U - UNLEADED
V - VENT
D - DIESEL
DEF - DIESEL EXHAUST FLUID
ED - ETHANOL FREE
C - ELECT. CONDUIT

P
U
V
D
DEF

1 SCHEMATIC SITE PLAN - OPTION A

SCALE: N.T.S.

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PROTOTYPE VERSION

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FGA22.01.24	06/22/2022

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PROJECT:
CIRCLE K STORE
900 LOUIS HENNA BLVD
ROUND ROCK, TX 78664

SHEET TITLE:
SCHEMATIC WIRING, PIPING & DETAILS

Drawn
Checked
PROJECT #: 230-817

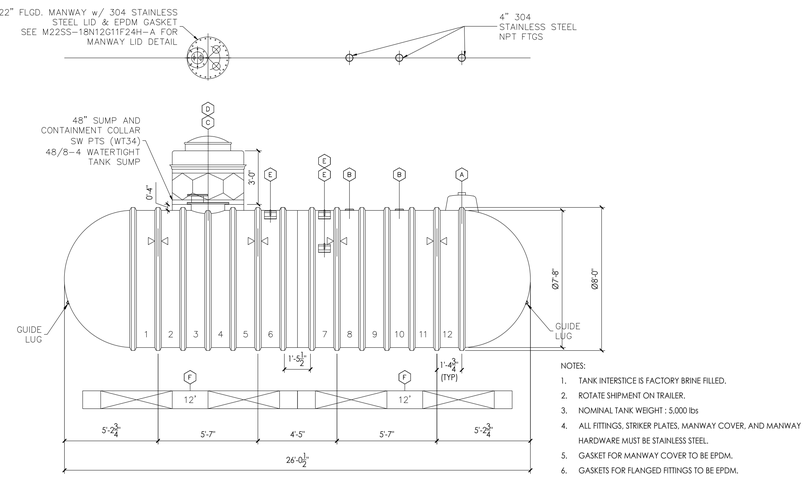
TBPE FIRM REGISTRATION
#F-8396

12/29/25

SHEET NO.
TK102

1 8K GALLON UNDERGROUND DEF STORAGE TANK (8' DIAMETER)

SCALE: NTS



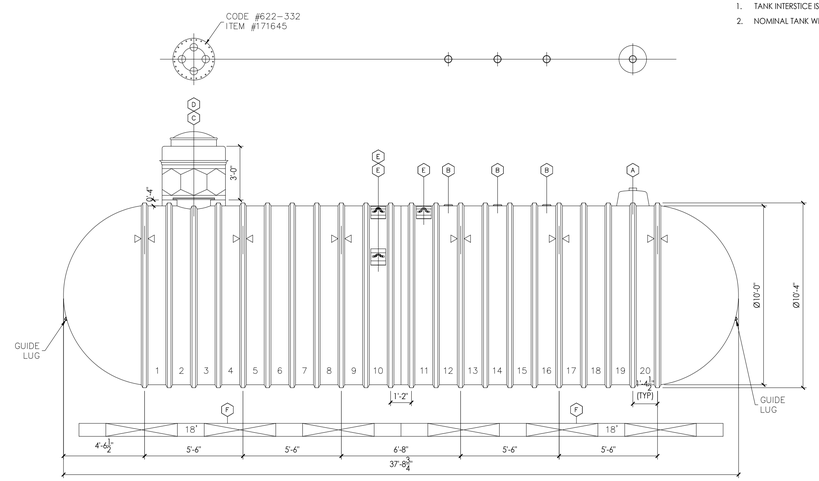
NOTES:

1. TANK INTERSTICE IS FACTORY BRINE FILLED.
2. ROTATE SHIPMENT ON TRAILER.
3. NOMINAL TANK WEIGHT : 5,000 lbs
4. ALL FITTINGS, STRIKER PLATES, MANWAY COVER, AND MANWAY HARDWARE MUST BE STAINLESS STEEL.
5. GASKET FOR MANWAY COVER TO BE EPDM.
6. GASKETS FOR FLANGED FITTINGS TO BE EPDM.

ITEM	QTY	DESCRIPTION
A	1	4" NPT (S.S.) MONITOR FITTING
B	2	4" NPT (S.S.) SERVICE FITTING WITH STRIKER PLATE (S.S.) (SEE NOTE 4)
C	1	48" DIA. SW CONTAINMENT COLLAR & 48" HIGH 8 SIDED SW SUMP WITH 36" DIA. WATERTIGHT TOP COVER (SEE NOTES 4, 5, 6)
D	1	22" DIA. MANWAY WITH SPECIAL COVER (S.S.) & STRIKER PLATES (S.S.)
E	3	LIFTING LUG
F	4	12' PREFABRICATED CONCRETE DEADMEN
▷◁	4	HOLD DOWN STRAP LOCATION

2 20K GALLON UNDERGROUND STORAGE TANK (10' DIAMETER)

SCALE: NTS



NOTES:

1. TANK INTERSTICE IS FACTORY BRINE FILLED.
2. NOMINAL TANK WEIGHT : 11,300 lbs

ITEM	QTY	DESCRIPTION	
A	1	18"DIA HYDROSTATIC MONITORING RESERVOIR WITH 4"NPT FITTING	
B	3	4"NPT SERVICE FITTING WITH STRIKER PLATE	
C	1	22"DIA MANWAY WITH 4-4"NPT FITTINGS IN COVER & STRIKER PLATE	
D	1*	42"DIA SW CONTAINMENT COLLAR & 36"HIGH 8 SIDED SW SUMP WITH 30"DIA LEVER LOCK WATERTIGHT TOP	*USE 42" COLLAR AND SUMP FOR TANKS WITH (1) STPS ONLY
D	1*	48"DIA SW CONTAINMENT COLLAR & 36"HIGH 8 SIDED SW SUMP WITH 30"DIA LEVER LOCK WATERTIGHT TOP	*USE 48" COLLAR AND SUMP FOR TANKS WITH (2) STPS
E	3	LIFTING LUG (12"x10") 22.5°, 22.5°, 45°	
F	4	18' PREFABRICATED CONCRETE DEADMEN	
▷◁	6	HOLD DOWN STRAP LOCATION	

3 NOT USED

SCALE: NTS

4 NOT USED

SCALE: NTS

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REVISIONS

#	DATE

PROJECT: CIRCLE K STORE
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ROUND ROCK, TX 78664

SHEET TITLE: STANDARD TANKS

Drawn
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PROJECT #: 230-817

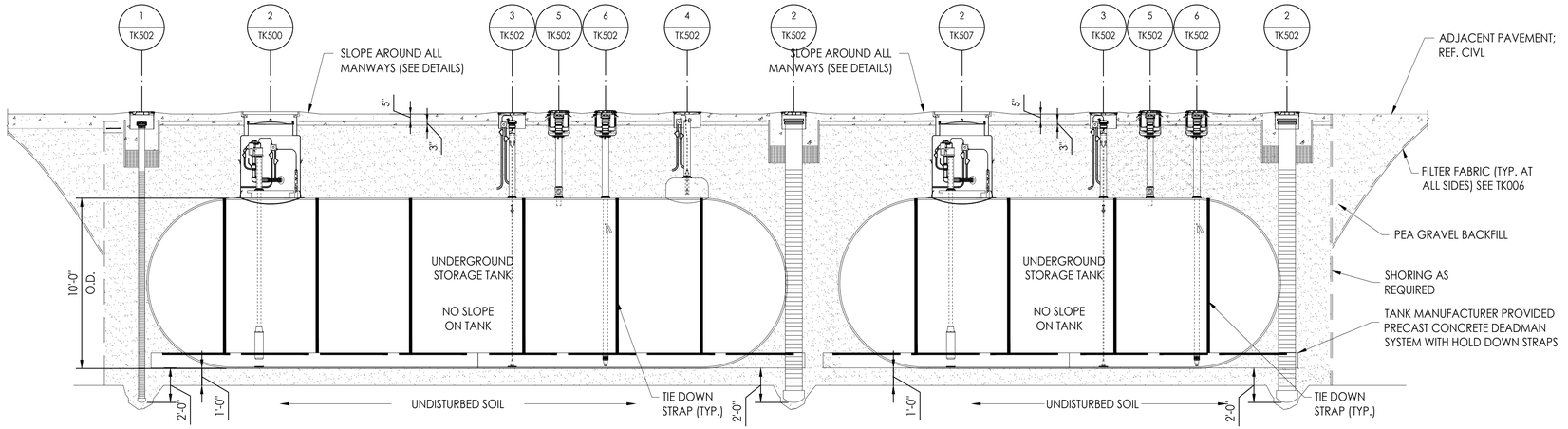
TBPE FIRM REGISTRATION #F-8396

STATE OF TEXAS
JERRY HESSELTINE
109399
LICENSED PROFESSIONAL ENGINEER

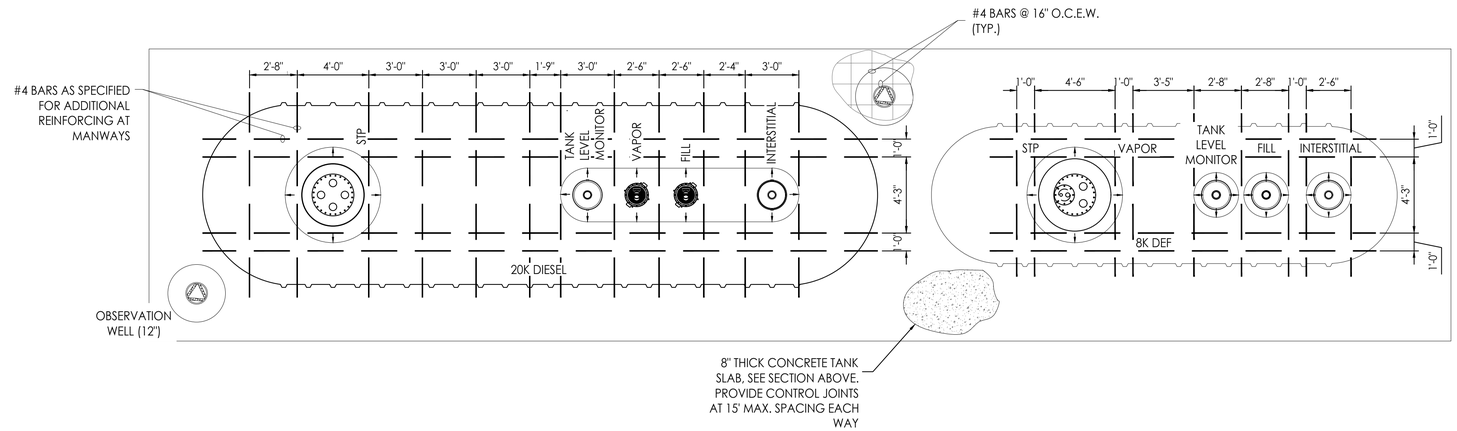
12/29/25

SHEET NO.

TK201



1 UNDERGROUND STORAGE TANK PROFILE — SCALE: NONE



2 UNDERGROUND STORAGE TANK PLAN — SCALE: NONE

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PROTOTYPE VERSION

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#	DATE

PROJECT: CIRCLE K STORE
900 LOUIS HENNA BLVD
ROUND ROCK, TX 78664

SHEET TITLE: UST PLAN AND SECTIONS

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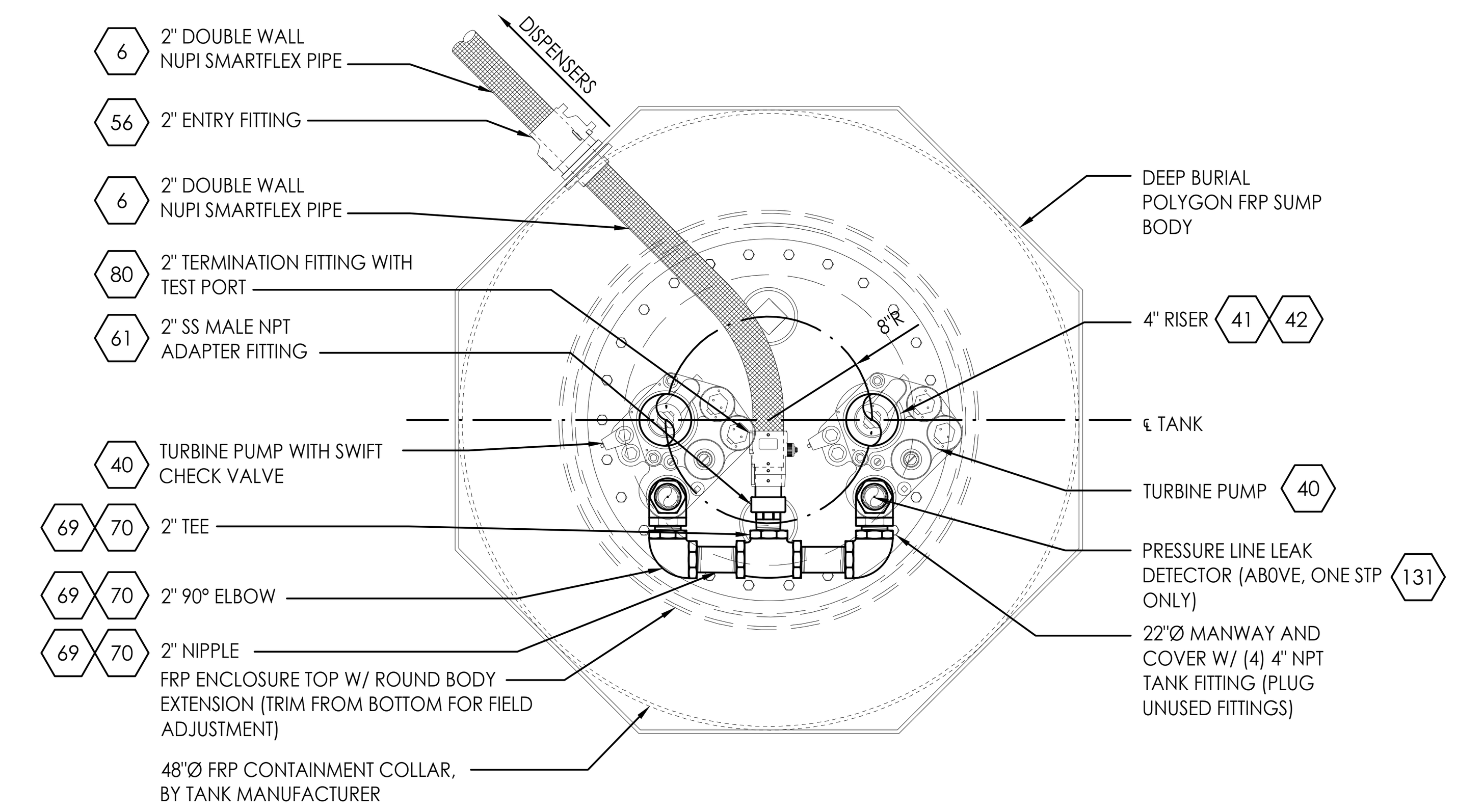
PROJECT #: 230-817

TBPE FIRM REGISTRATION #F-8398

STATE OF TEXAS
JERRY HESSELTINE
109399
LICENSED
PROFESSIONAL ENGINEER

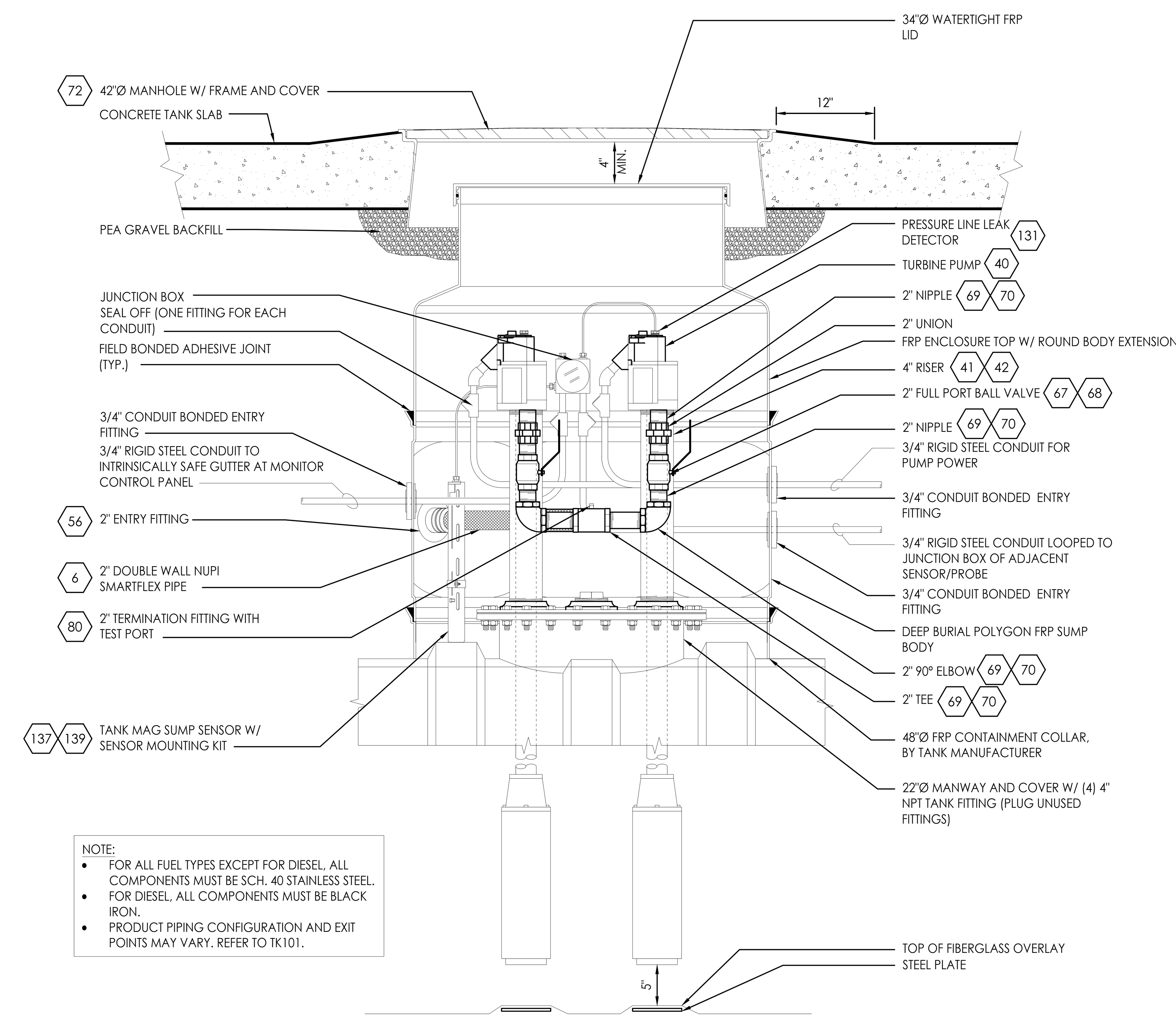
12/29/25

SHEET NO.
TK301



PLAN VIEW AT MANWAY

1	TANK SUMP DETAIL - PLAN	SCALE: NTS



NOTE:
- FOR ALL FUEL TYPES EXCEPT FOR DIESEL, ALL COMPONENTS MUST BE SCH. 40 STAINLESS STEEL.
- FOR DIESEL, ALL COMPONENTS MUST BE BLACK IRON.
- PRODUCT PIPING CONFIGURATION AND EXIT POINTS MAY VARY. REFER TO TK101.

SECTION

2	TANK SUMP DETAIL - PROFILE	SCALE: NTS

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#	DATE

PROJECT:
CIRCLE K STORE
900 LOUIS HENNA BLVD
ROUND ROCK, TX 78664

SHEET TITLE:
TANK SUMP DETAILS

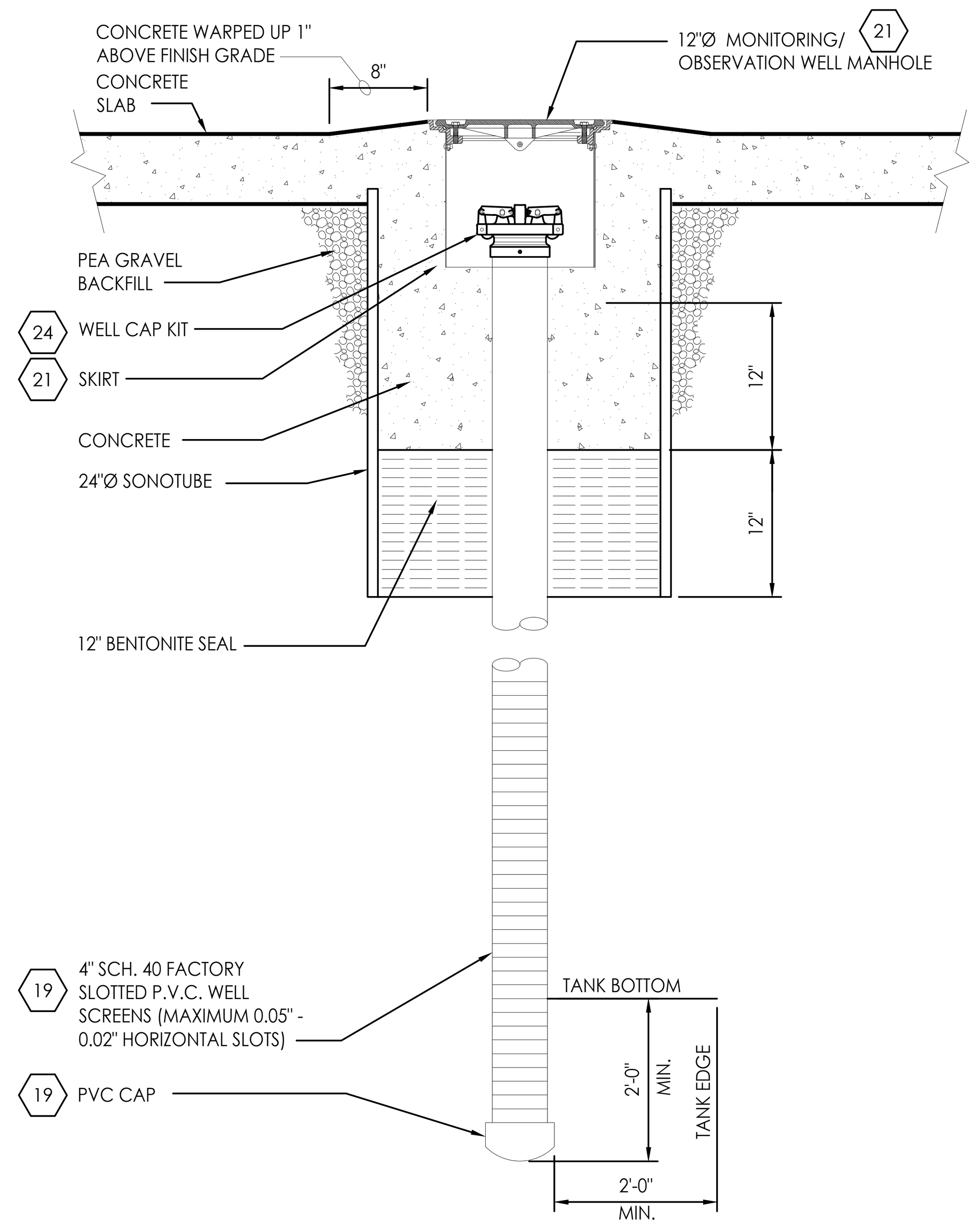
Drawn
Checked
PROJECT #: 230-817

TBPE FIRM REGISTRATION
#F-8396

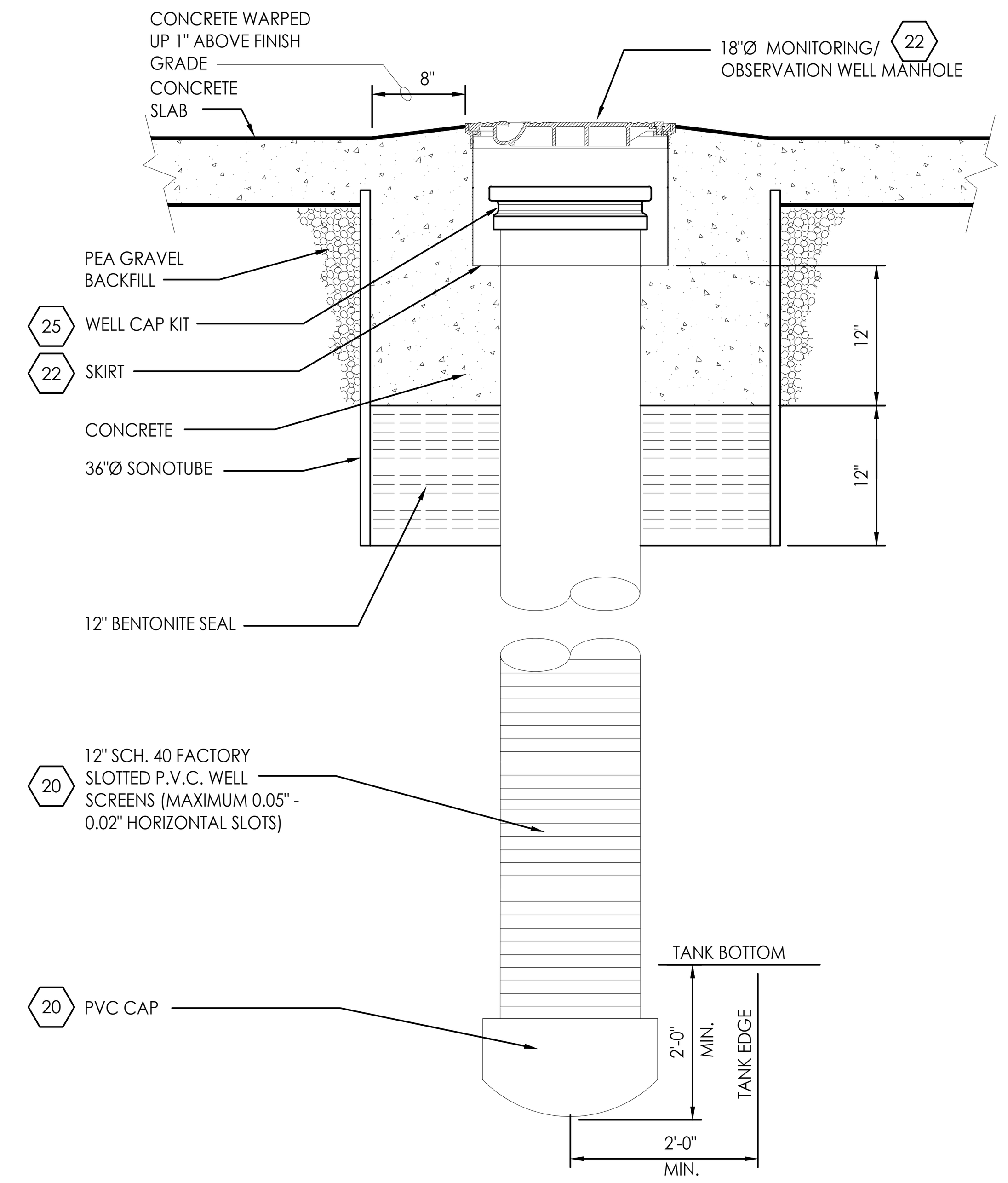
STATE OF TEXAS
TERRY HESSELTINE
109399
LICENSED PROFESSIONAL ENGINEER

12/29/25

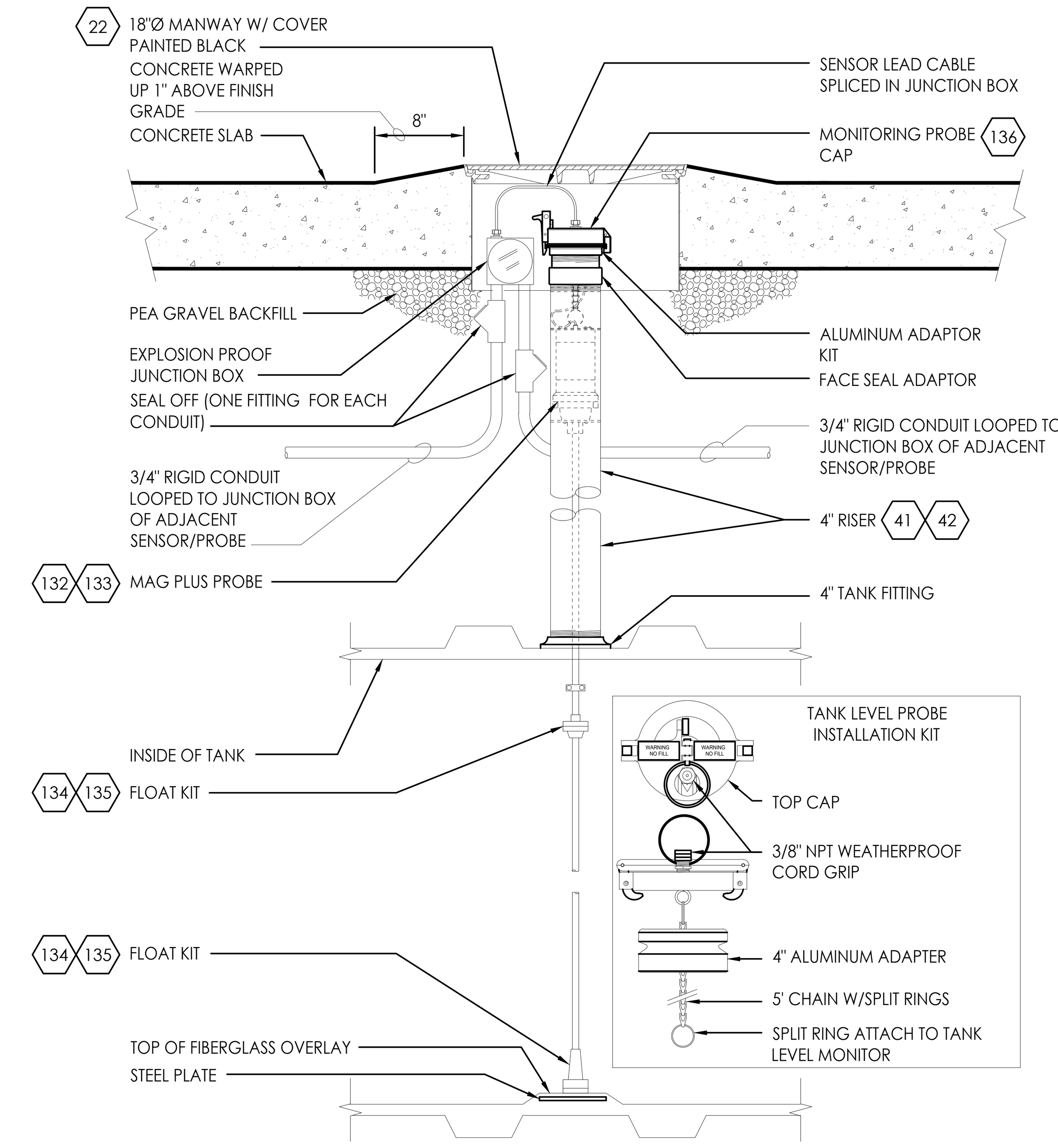
SHEET NO.
TK500



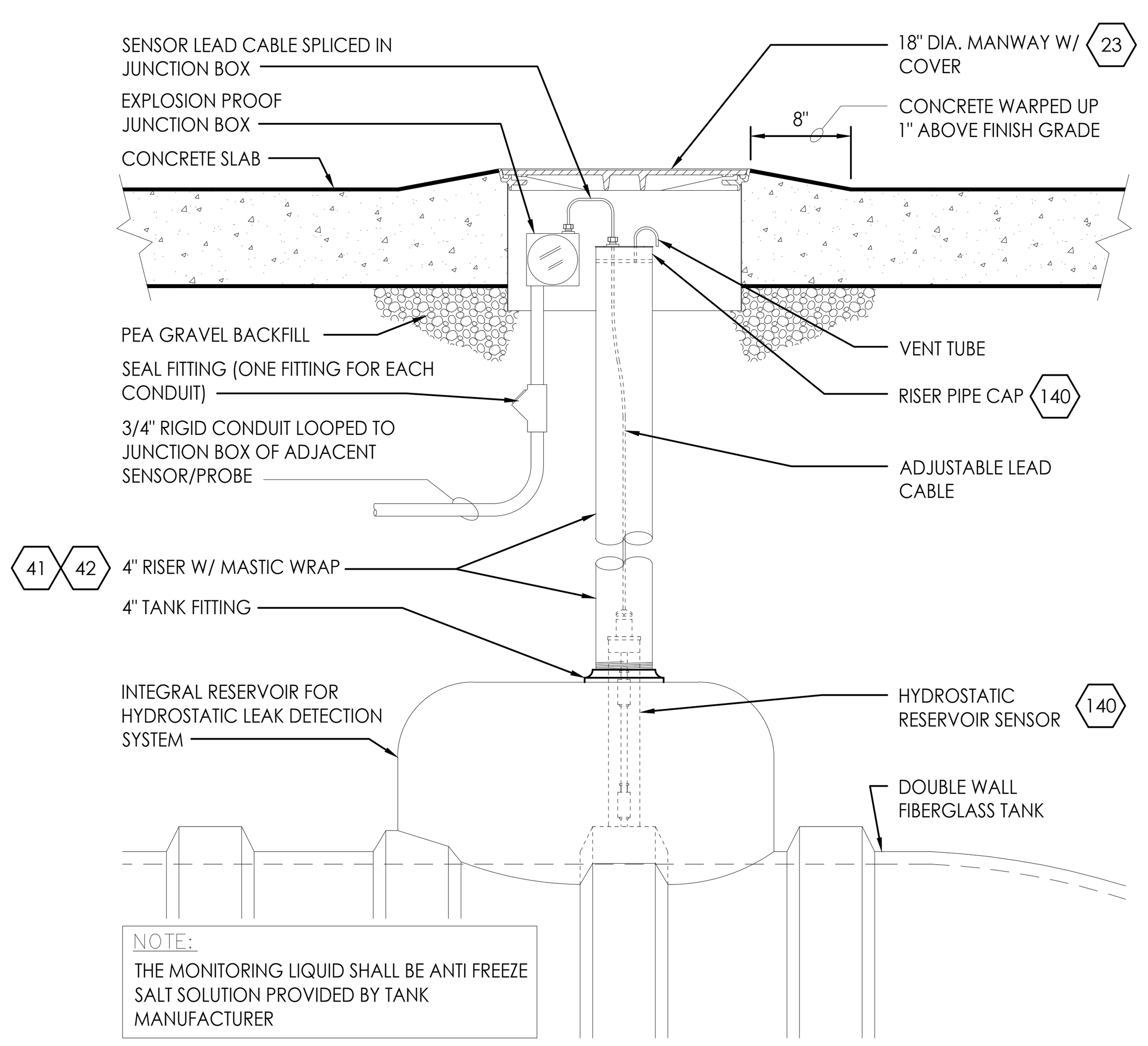
1 OBSERVATION WELL DETAIL (4") SCALE: NONE



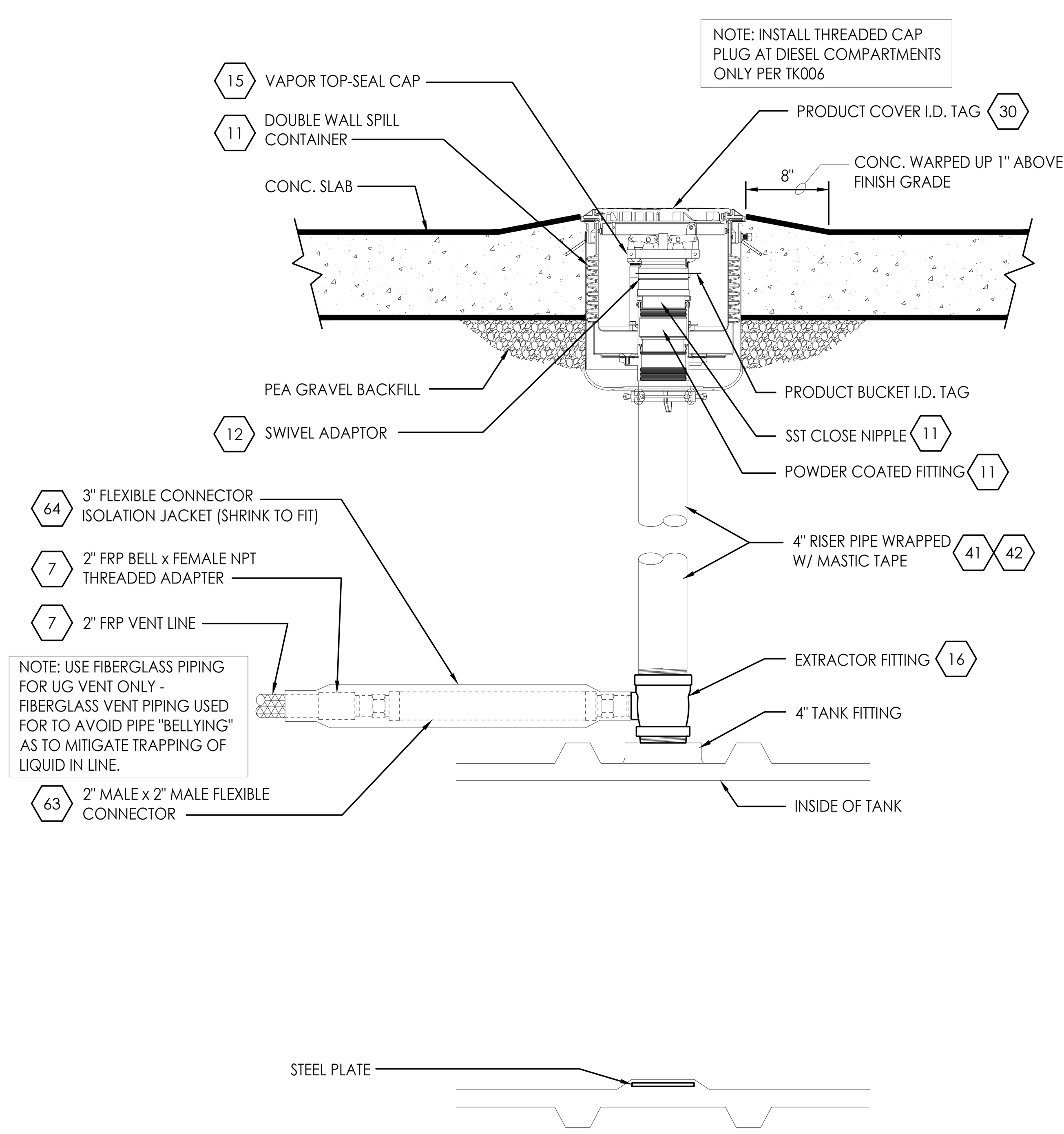
2 OBSERVATION WELL DETAIL (12") SCALE: NONE



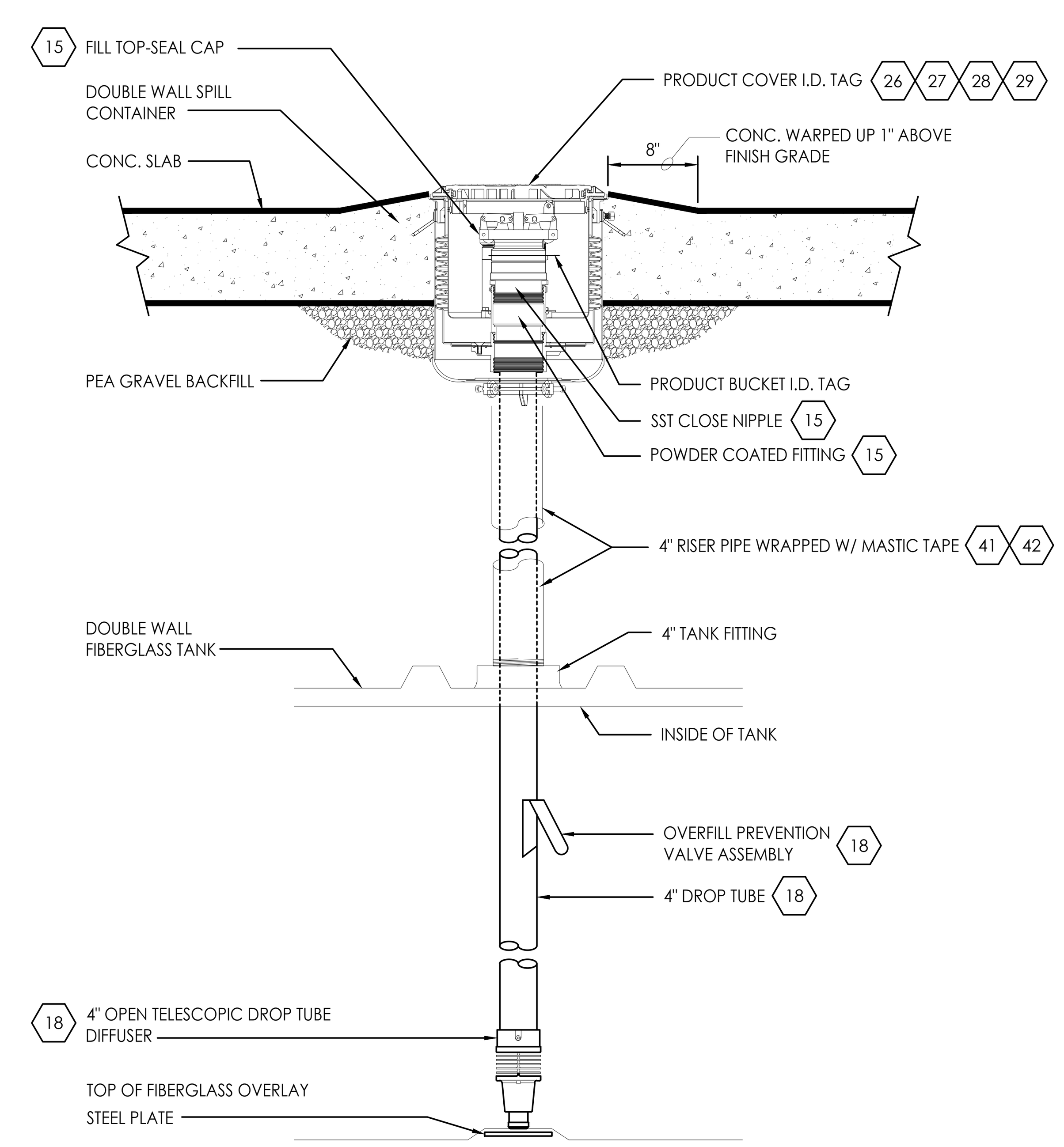
3 TANK LEVEL MONITOR DETAIL SCALE: NONE



4 INTERSTITIAL MONITOR DETAIL SCALE: NONE



5 VAPOR RISER DETAIL SCALE: NONE



6 FILL RISER DETAIL SCALE: NONE

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PROJECT:
CIRCLE K STORE
900 LOUIS HENNA BLVD
ROUND ROCK, TX 78664

SHEET TITLE:
TANK TOP HARDWARE DETAILS

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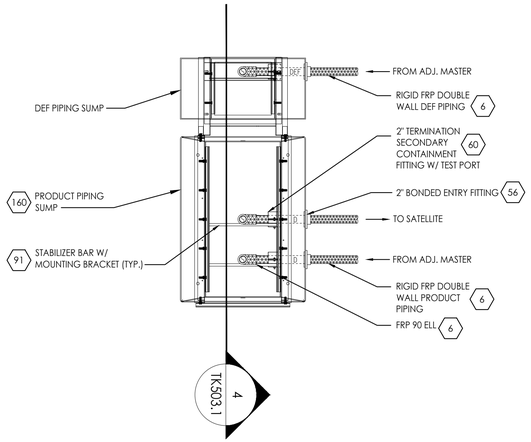
PROJECT #: 230-817

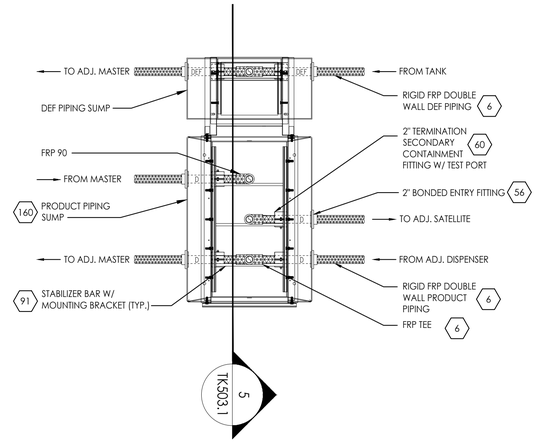
TBPE FIRM REGISTRATION #F-8396

STATE OF TEXAS
TERRY HESSELTINE
109399
LICENSED PROFESSIONAL ENGINEER
12/29/25

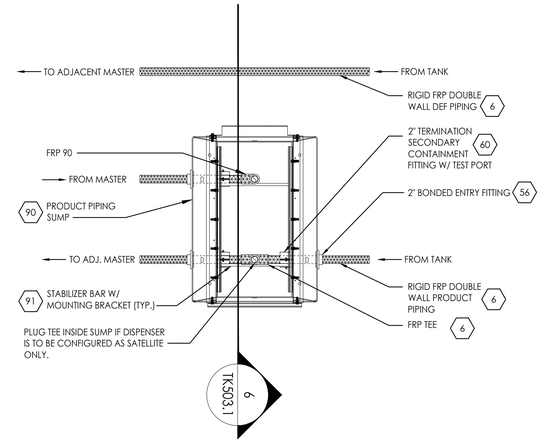
SHEET NO.
TK502



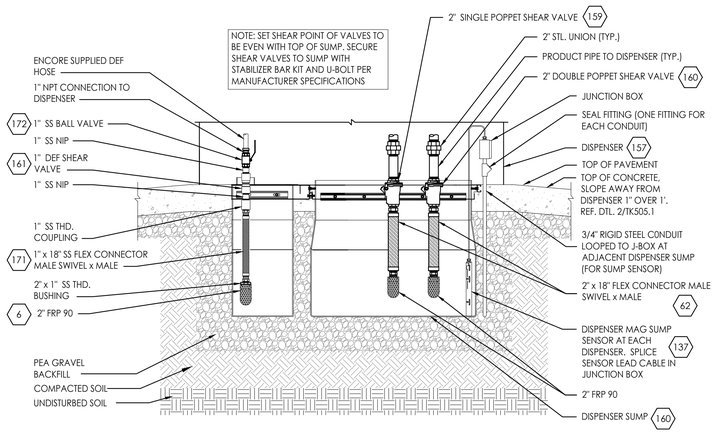
1 | DISPENSER SUMP & DEF SUMP DETAIL (THROUGH & THROUGH) | SCALE: NONE



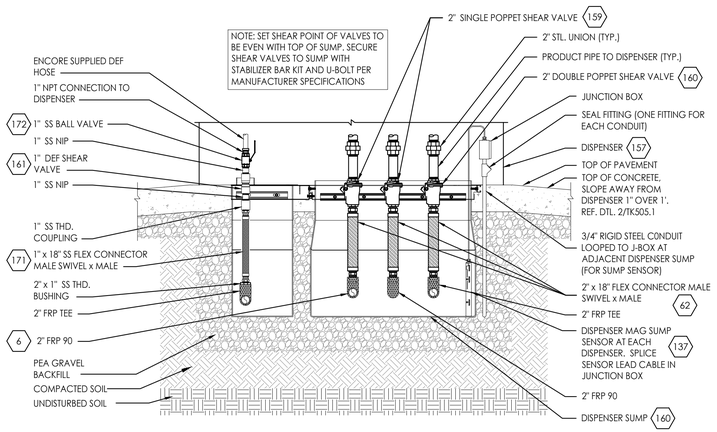
2 | DISPENSER SUMP & DEF SUMP DETAIL (THROUGH & THROUGH) | SCALE: NONE



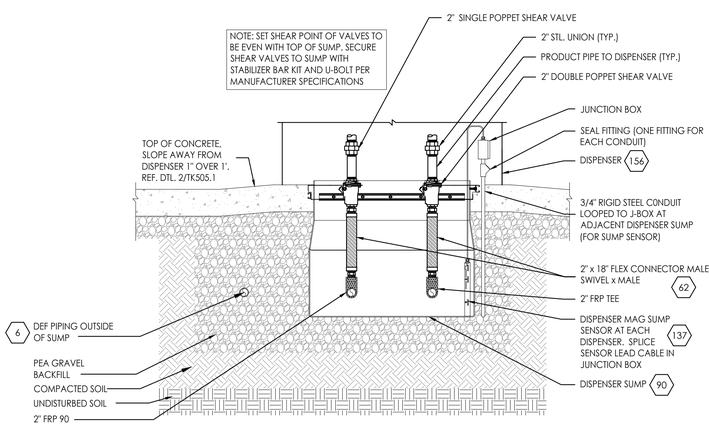
3 | DISPENSER SUMP DETAIL (NO DEF) | SCALE: NONE



4 | DISPENSER SUMP & DEF SUMP DETAIL (THROUGH & THROUGH) | SCALE: NONE



5 | DISPENSER SUMP & DEF SUMP DETAIL (THROUGH & THROUGH) | SCALE: NONE



6 | DISPENSER SUMP DETAIL (NO DEF) | SCALE: NONE

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SHEET TITLE: DISPENSER SUMP DETAILS

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TBPE FIRM REGISTRATION #F-8396

12/29/25

SHEET NO.
TK503.1

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SHEET TITLE: FUEL SYSTEM DETAILS

Drawn
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PROJECT #: 230-817

TBPE FIRM REGISTRATION #F-8396

STATE OF TEXAS — TERRY HESSELTINE — 109399 — LICENSED PROFESSIONAL ENGINEER

12/29/25

SHEET NO.

TK504

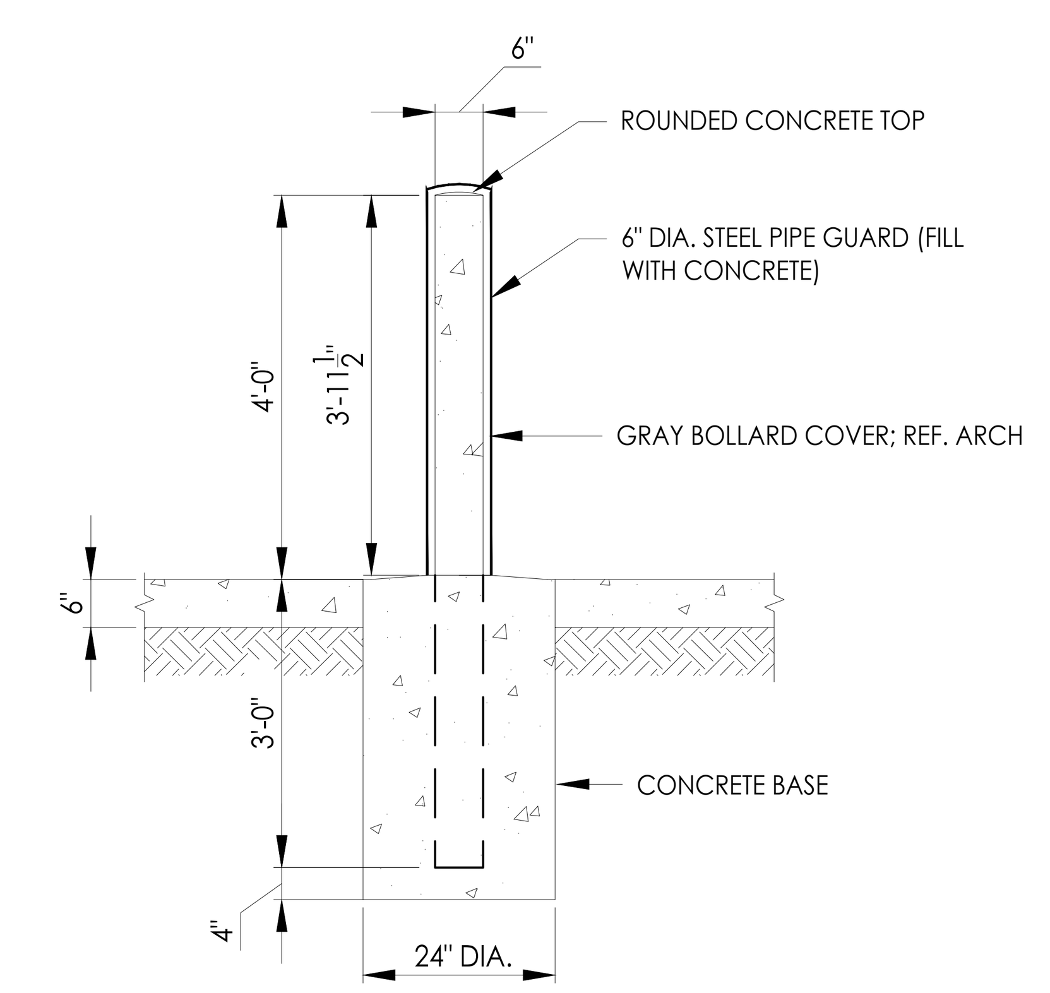
2 API COLOR CODES FOR MANWAYS

Lid	Description
0	REGULAR E0 UNLEADED: LID PAINTED WHITE WITH "0" PAINTED IN BLACK
0	MIDGRADE E0 UNLEADED: LID PAINTED BLUE WITH "0" PAINTED IN BLACK
0	PREMIUM E0 UNLEADED: LID PAINTED RED WITH "0" PAINTED IN BLACK
	REGULAR E10 UNLEADED: LID PAINTED WHITE
	MIDGRADE E10 UNLEADED: LID PAINTED BLUE
	PREMIUM E10 UNLEADED: LID PAINTED RED
E15	E15 FUEL: LID PAINTED BROWN WITH "E15" PAINTED IN BLACK
E85	E85 FUEL: LID PAINTED BROWN WITH "E85" PAINTED IN BLACK
	ON-ROAD ULTRA LOW SULFUR DIESEL: LID PAINTED YELLOW
B20	ON-ROAD ULTRA LOW SULFUR DIESEL B20% BIODIESEL: LID PAINTED YELLOW WITH "B20" PAINTED IN BLACK
OFF	OFF-ROAD ULTRA LOW SULFUR DIESEL: LID PAINTED YELLOW WITH "OFF" PAINTED IN RED
OFF B20	OFF-ROAD ULTRA LOW SULFUR DIESEL: LID PAINTED YELLOW WITH "OFF" PAINTED IN RED AND "B20" PAINTED IN BLACK
	BIODIESEL B100/B99.9: LID PAINTED LIGHT BLUE
	DIESEL EXHAUST FLUID: PAINT DARK BLUE
2	FUEL OIL #2: LID PAINTED GREEN WITH "2" PAINTED IN BLACK
	KEROSENE: LID PAINTED BROWN
	USED OIL: LID PAINTED GRAY
▲	MONITORING WELL: LID PAINTED WHITE WITH BLACK TRIANGLE
	VAPOR RECOVERY: LID PAINTED ORANGE

3 NOT USED

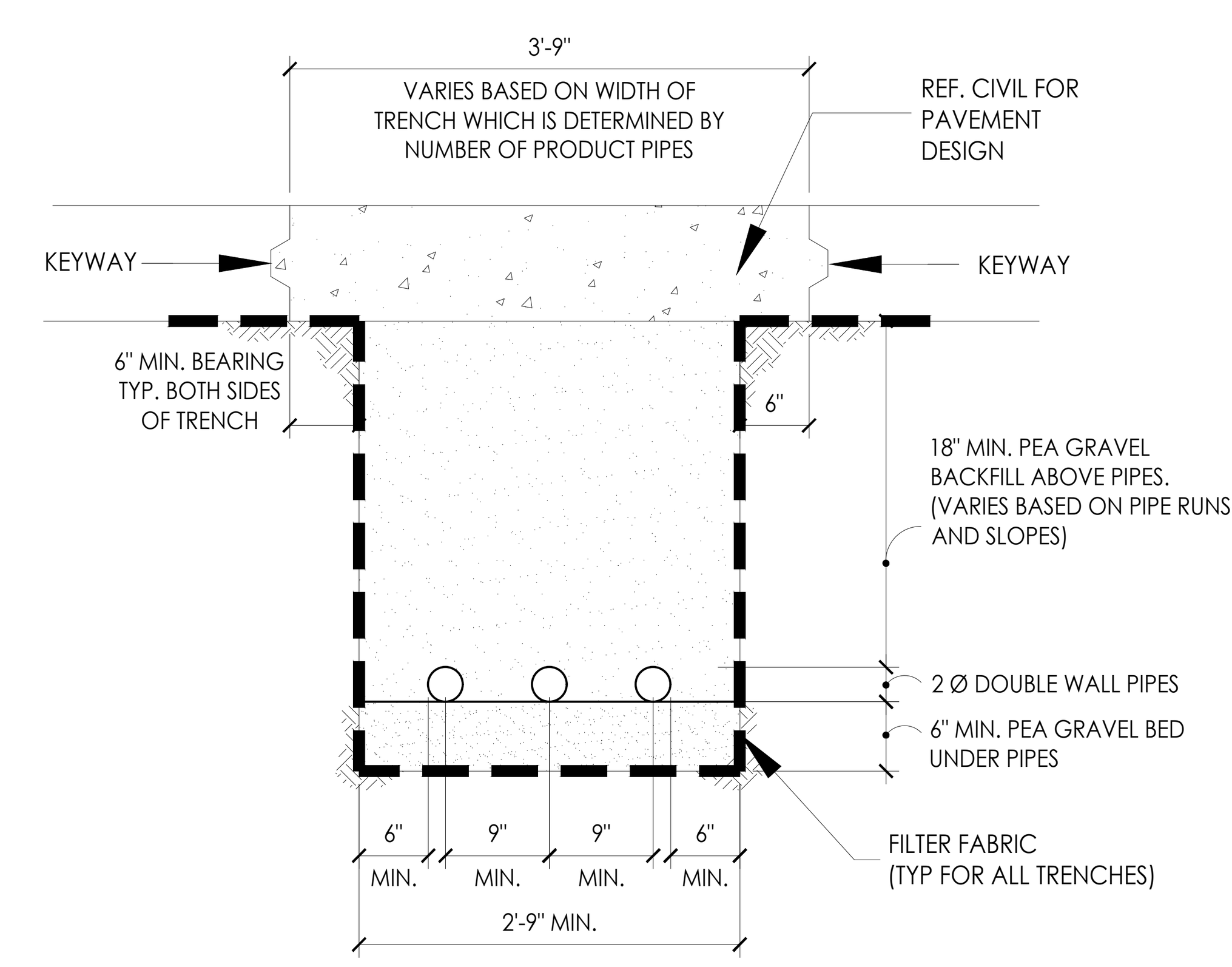
SCALE: 1/2" = 1'-0"

4 PIPE BOLLARD DETAIL



SCALE: 1/2" = 1'-0"

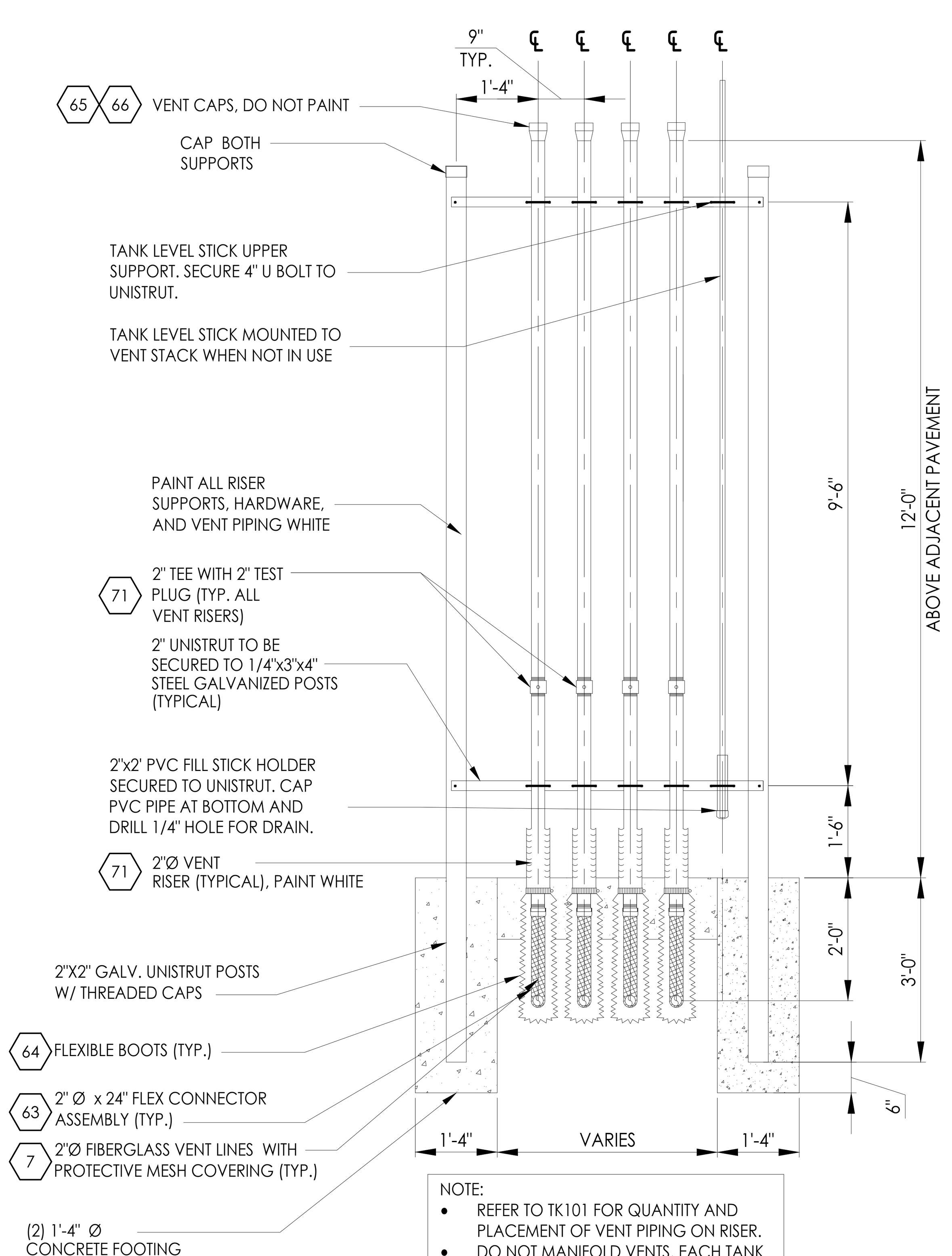
5 PIPE TRENCH



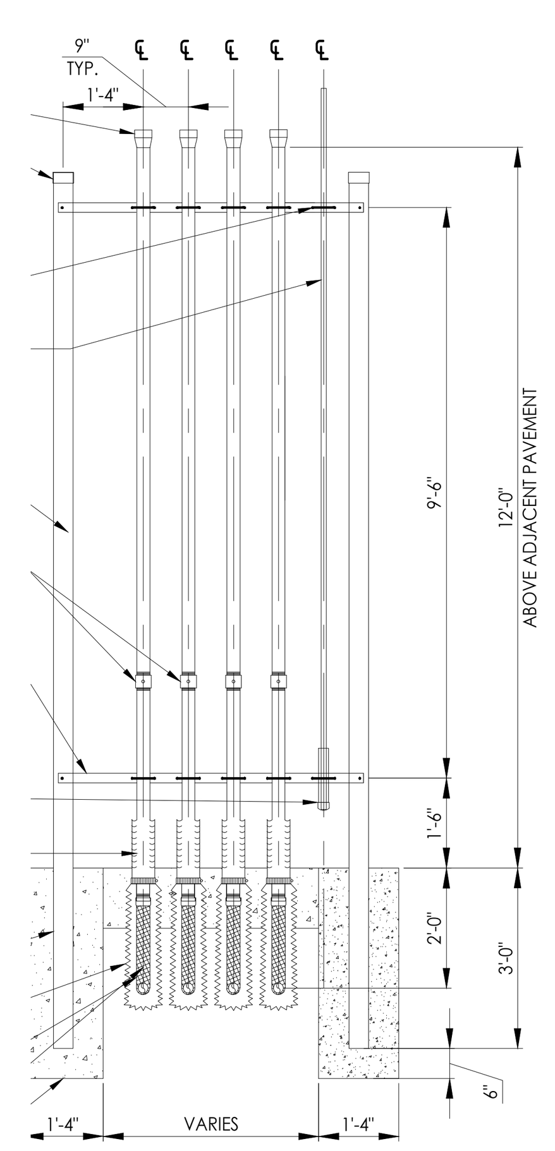
NOTE:
MIN. SPACING MUST BE ADHERED TO PIPE. (MANUFACTURERS REQUIREMENT)

SCALE: 3/4" = 1'-0"

1 TYPICAL FREE STANDING VENT RISER



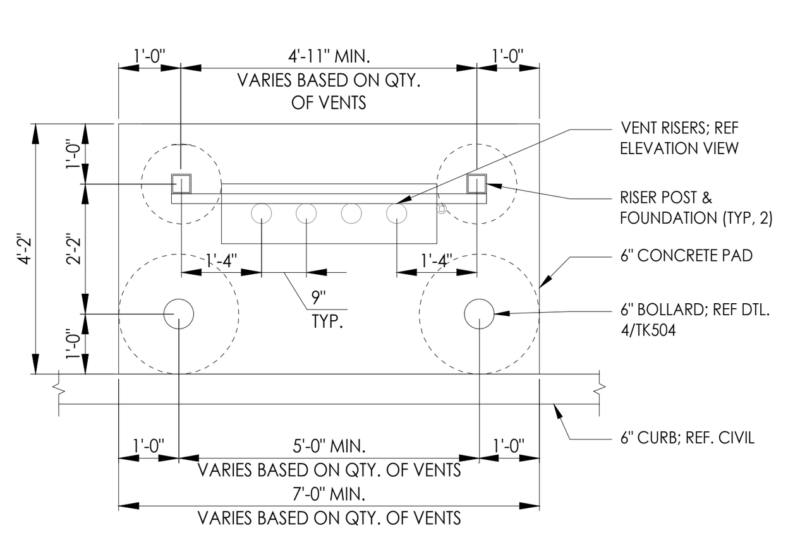
NOTE:
- REFER TO TK101 FOR QUANTITY AND PLACEMENT OF VENT PIPING ON RISER.
- DO NOT MANIFOLD VENTS. EACH TANK TO HAVE A DEDICATED VENT LINE



NOTE:
- REFER TO TK101 FOR QUANTITY AND PLACEMENT OF VENT PIPING ON RISER.
- DO NOT MANIFOLD VENTS. EACH TANK TO HAVE A DEDICATED VENT LINE

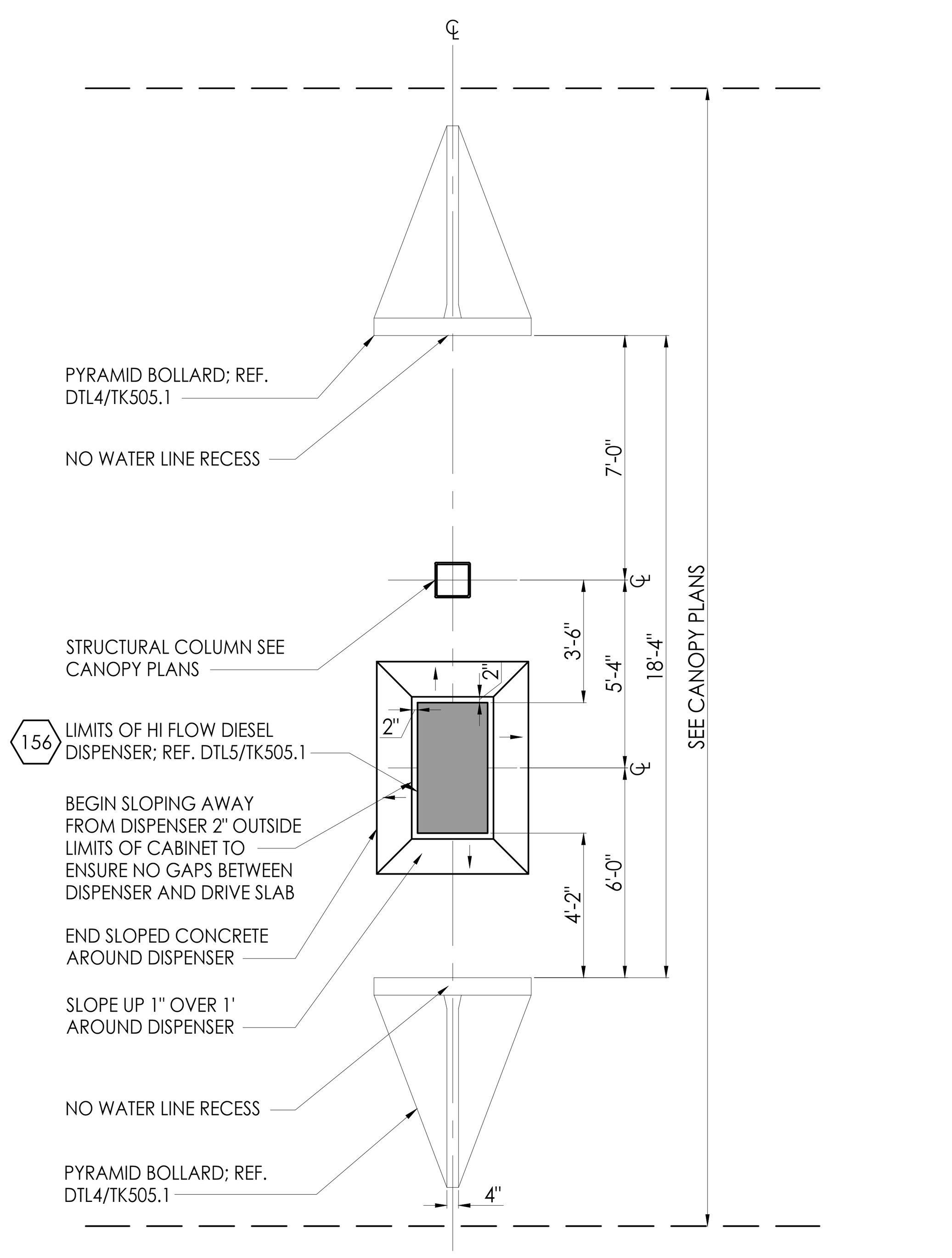
THE FOLLOWING DECALS AND INSTRUCTIONS TO BE APPLIED TO DISPENSER PER CODE REQUIREMENTS AND OWNER'S DIRECTION:

- DISPENSER DESIGNATION NUMBER
- PUMP USAGE INSTRUCTIONS
- EMERGENCY ATTENDANT CALL BUTTON INSTRUCTIONS
- "DO NOT TOP OFF" SIGNAGE
- ADA ACCESSIBLE SIGNAGE
- SELF SERVICE INSTRUCTIONS
- POINT OF SALE INSTRUCTIONS

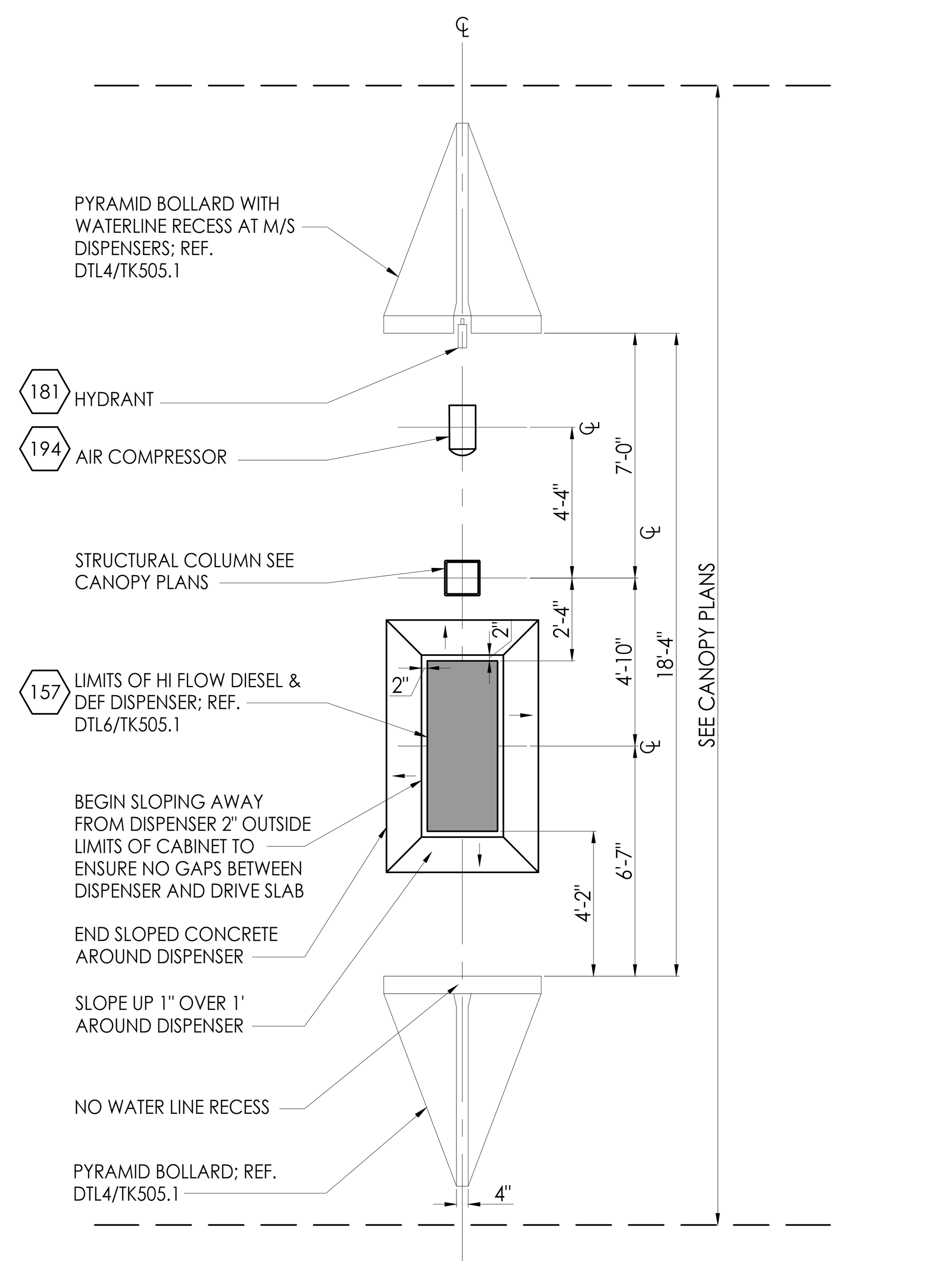


PLAN VIEW

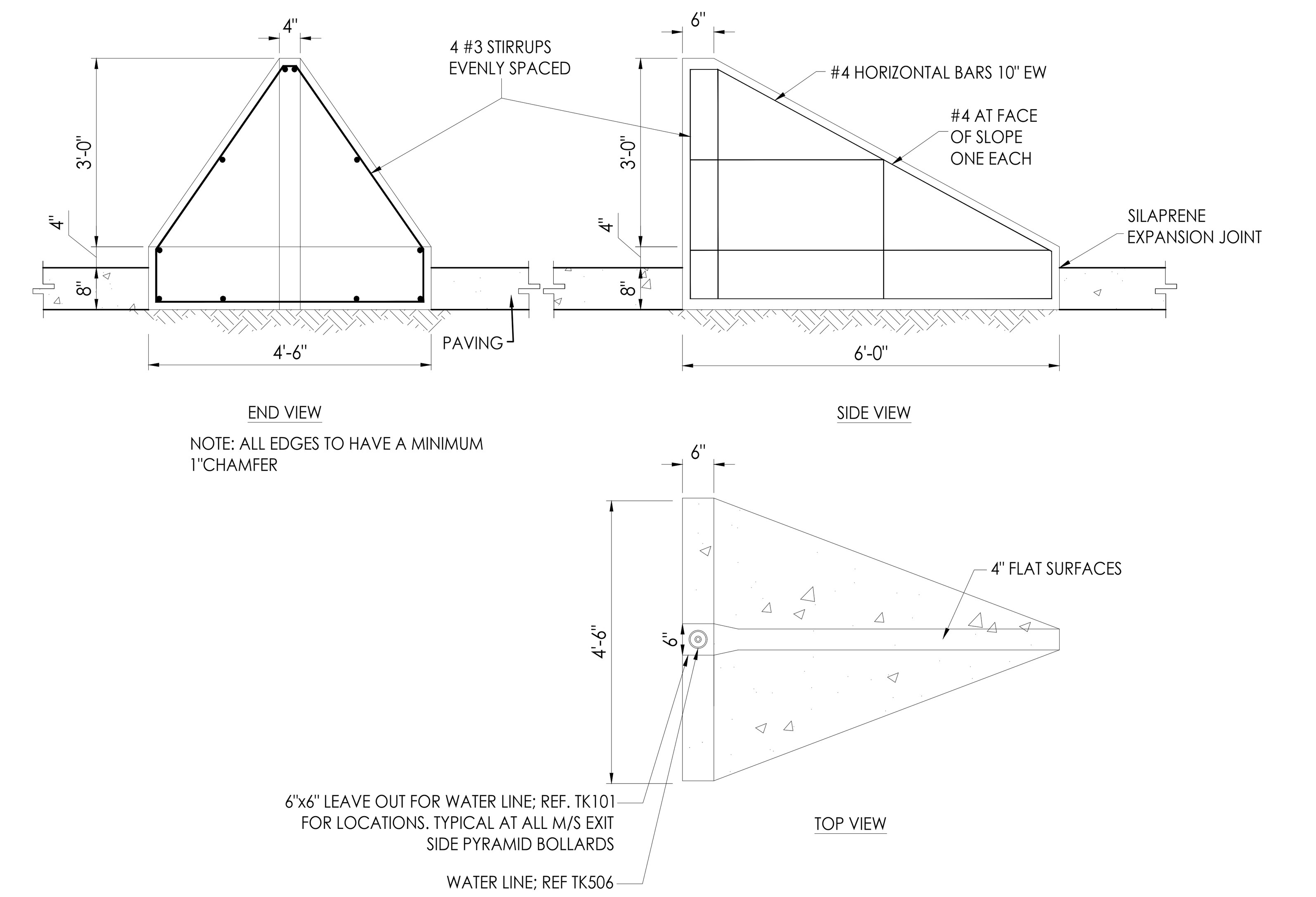
SCALE: 1/2" = 1'-0"



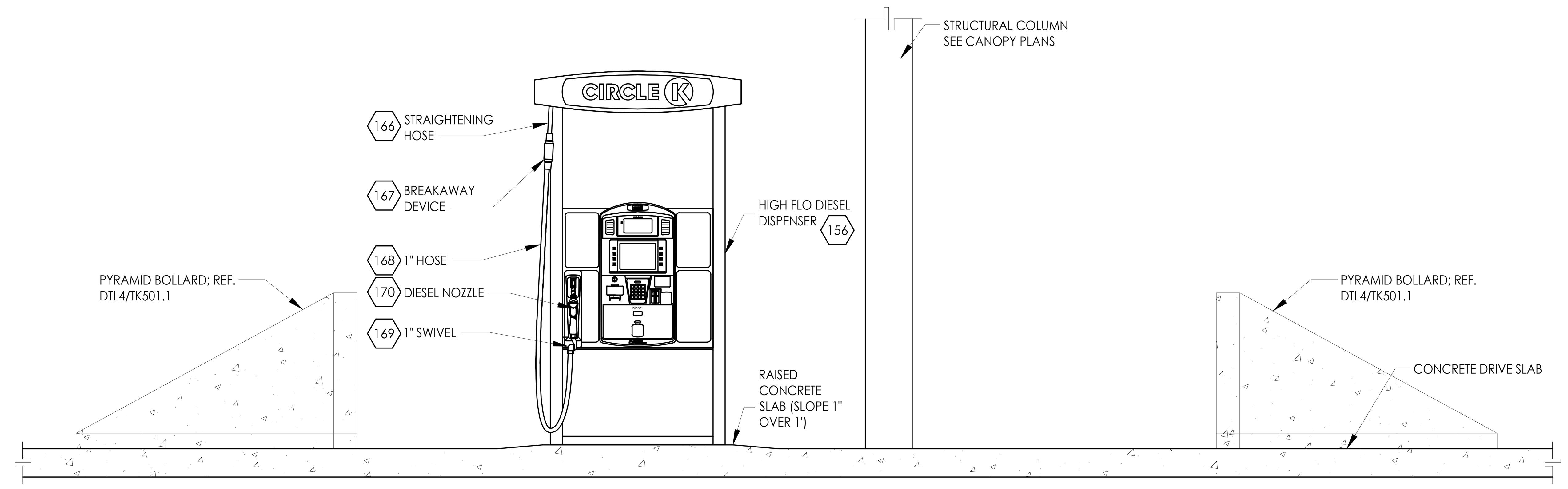
1	DISPENSER PLAN (HI FLOW ONLY)	SCALE: 1/4" = 1'-0"



2	DISPENSER PLAN (HI FLOW & DEF)	SCALE: 1/4" = 1'-0"



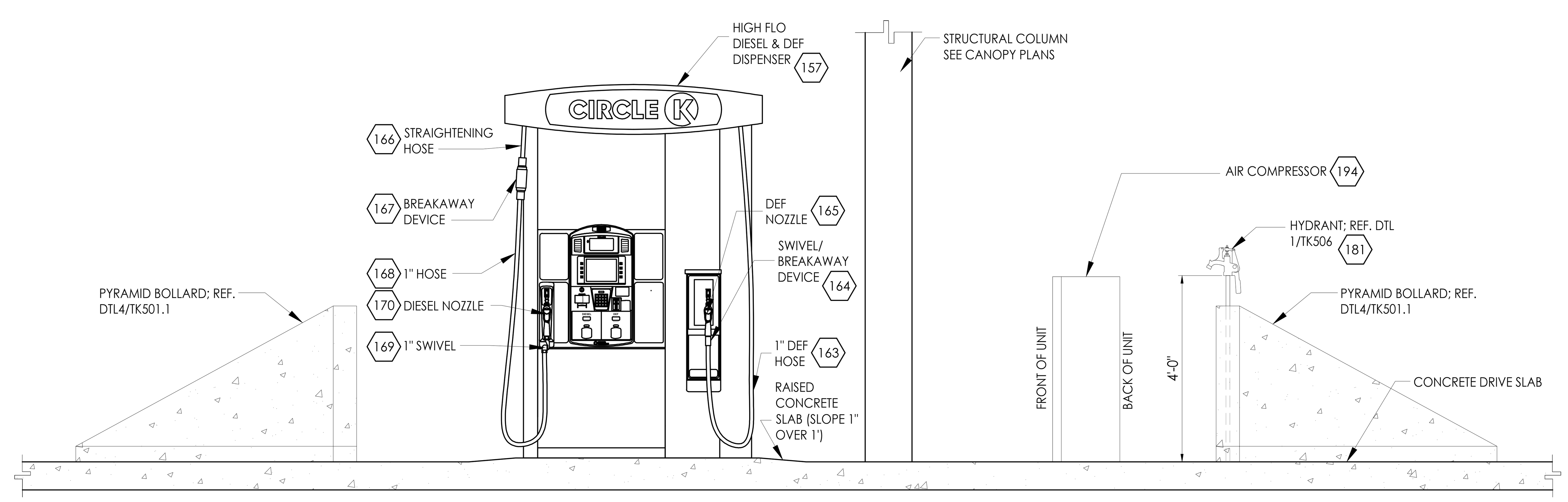
4	PYRAMID BOLLARD DETAIL	SCALE: 1/2" = 1'-0"



5	DISPENSER ELEVATION (HI FLOW ONLY)	SCALE: 1/2" = 1'-0"

THE FOLLOWING DECALS AND INSTRUCTIONS TO BE APPLIED TO DISPENSER PER CODE REQUIREMENTS AND OWNER'S DIRECTION:

- DISPENSER DESIGNATION NUMBER
- PUMP USAGE INSTRUCTIONS
- EMERGENCY ATTENDANT CALL BUTTON INSTRUCTIONS
- "DO NOT TOP OFF" SIGNAGE
- ADA ACCESSIBLE SIGNAGE
- SELF SERVICE INSTRUCTIONS
- POINT OF SALE INSTRUCTIONS



6	DISPENSER ELEVATION (HI FLOW & DEF)	SCALE: 1/2" = 1'-0"

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SUITE B
TEMPE, AZ 85284
602-728-8000

THE DIMENSION GROUP
ARCHITECTURE CIVIL ENGINEERING MEP ENGINEERING

PROTOTYPE VERSION

#	DATE
FGA22.01.24	06/22/2022

REVISIONS

#	DATE

PROJECT:
CIRCLE K STORE
900 LOUIS HENNA BLVD
ROUND ROCK, TX 78664

SHEET TITLE:
DISPENSER DETAIL (HI FLOW DIESEL)

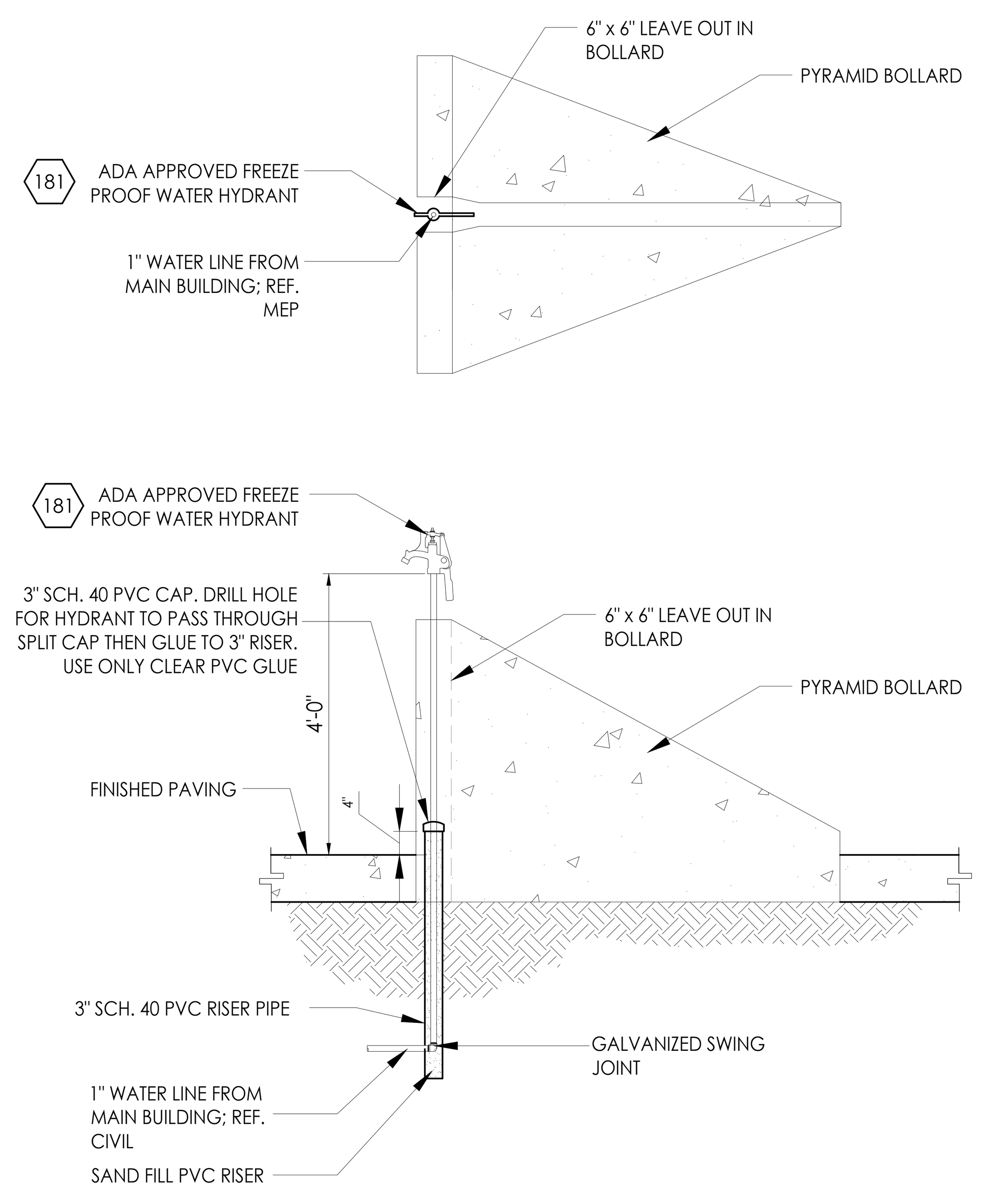
Drawn
Checked
PROJECT #: 230-817

TBPE FIRM REGISTRATION
#F-8396

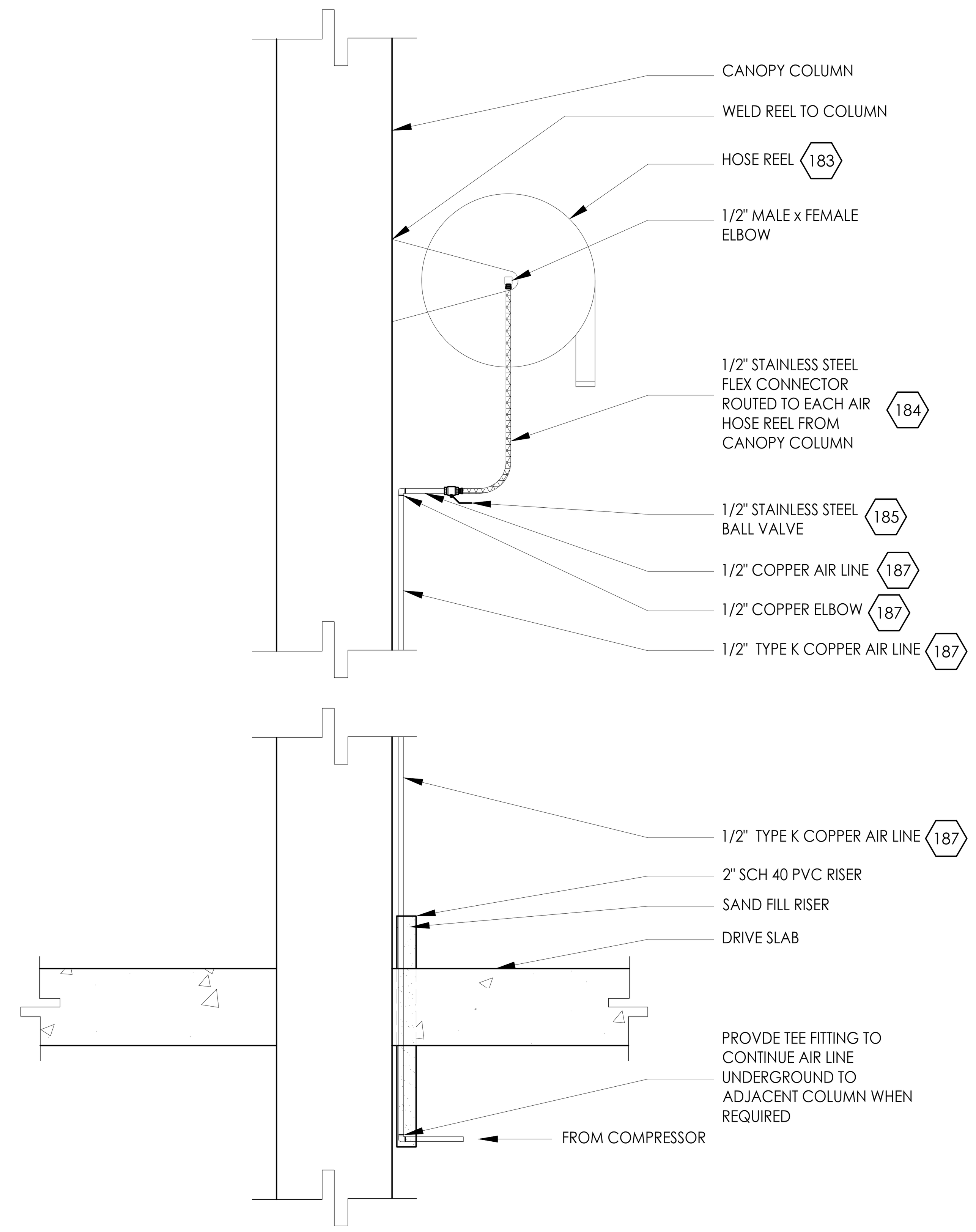
STATE OF TEXAS
TERRY HESSELTINE
109399
LICENSED PROFESSIONAL ENGINEER

12/29/25

SHEET NO.
TK505



1	WATER HYDRANT DETAIL	SCALE: NONE

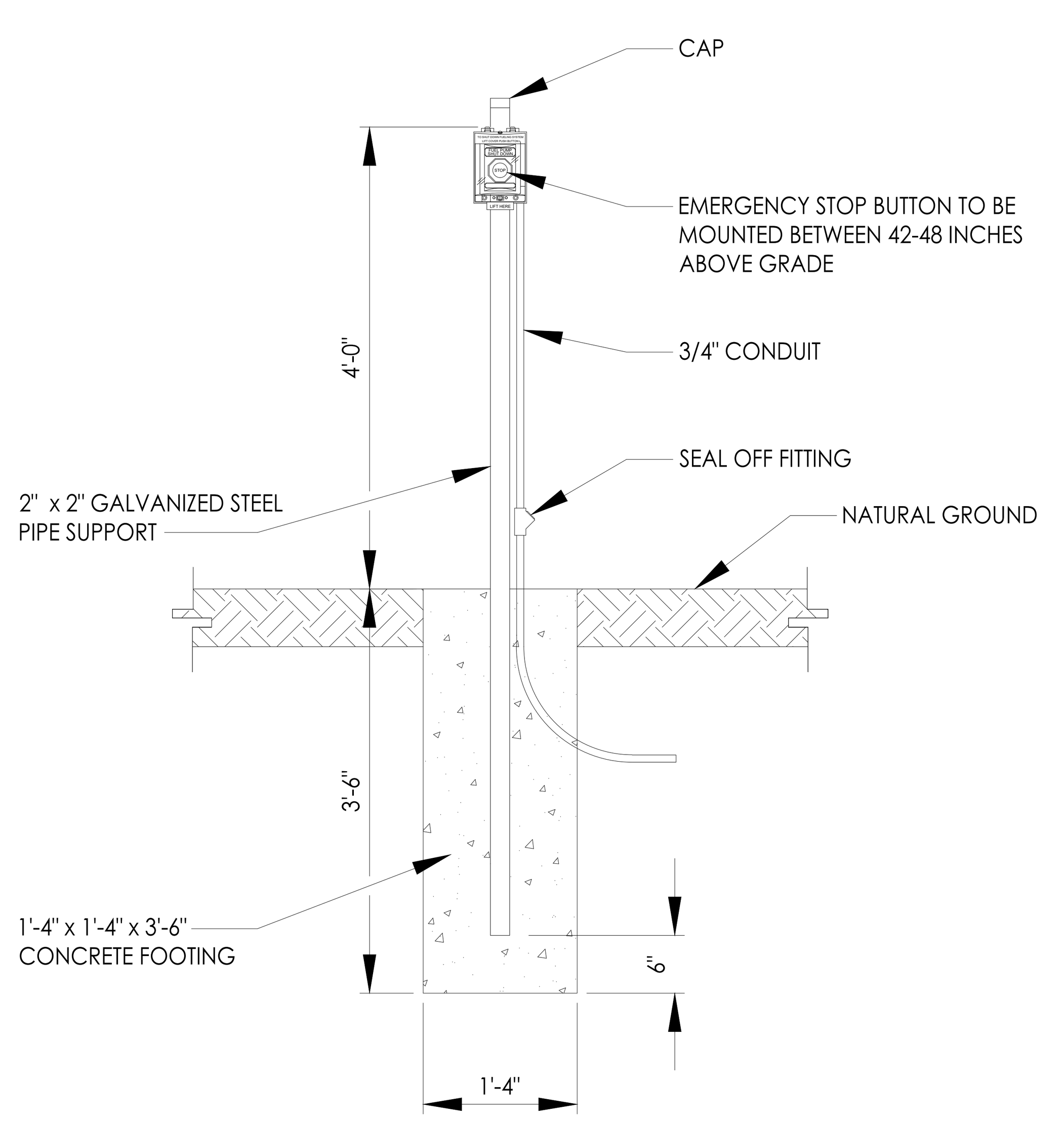


2	AIR HOSE REEL CONNECTION DETAIL	SCALE: NONE

EMERGENCY
FUEL SHUT OFF

EMERGENCY STOP SIGNAGE TO BE RED WITH WHITE TEXT. LETTERING SHALL BE A MINIMUM HEIGHT OF 2 INCHES WITH A MINIMUM STROKE OF 3/8 INCHES. SIGNS TO BE PLACED AT ALL EMERGENCY STOP LOCATIONS.

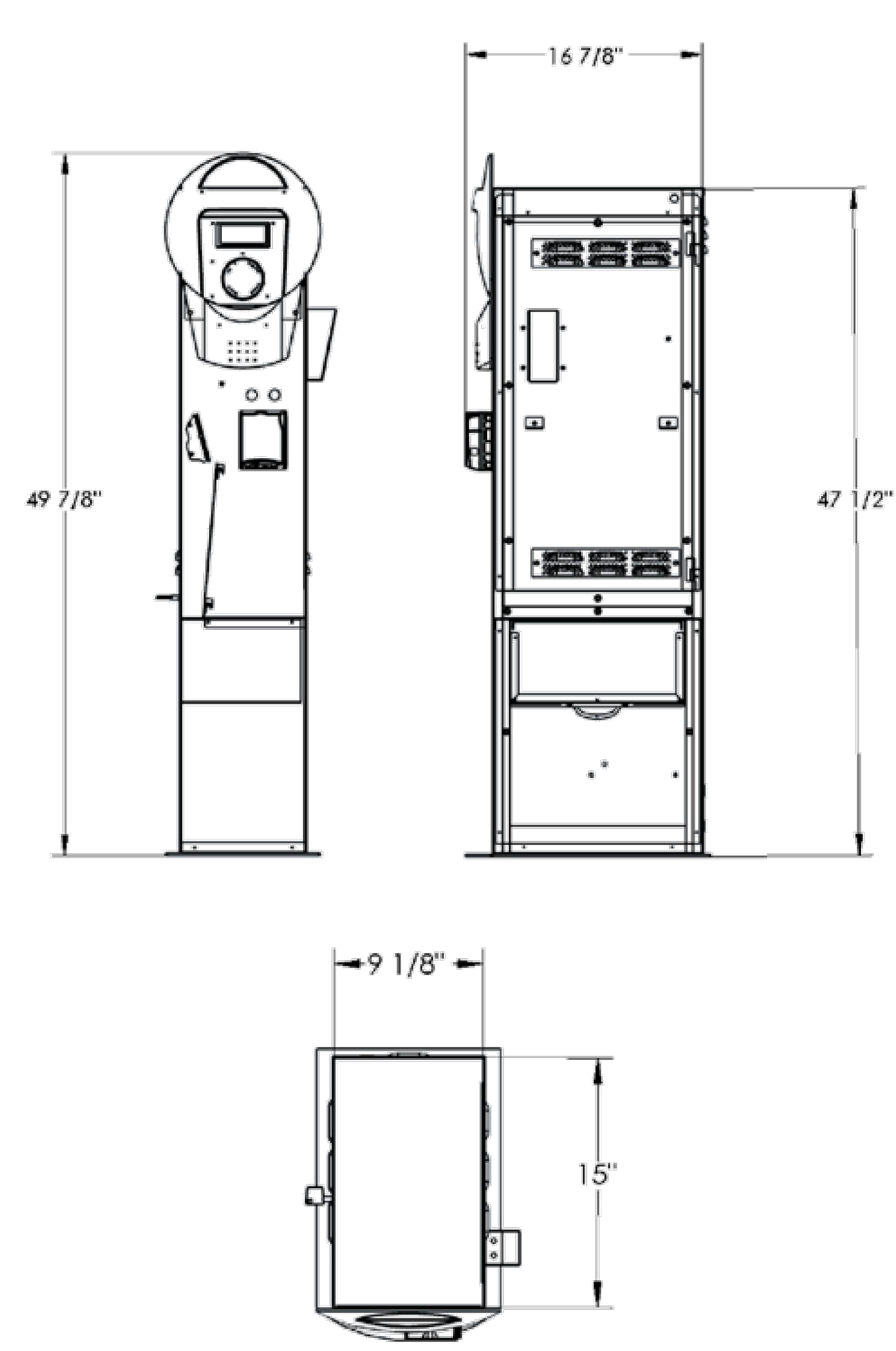
3	EMERGENCY STOP SIGNAGE	SCALE: NONE



4	EMERGENCY STOP BUTTON PEDESTAL	SCALE: NONE

Excel TIRE GAUGE
America's Leader in Digital Air Inflation

DIMENSIONS



4

(401) 732-8420 www.exceltiregauge.com
(401) 384-6157 215 Jefferson Blvd, Warwick, RI 02888

5	REMOTE AIR COMPRESSOR DETAIL	SCALE: NONE

Excel TIRE GAUGE
America's Leader in Digital Air Inflation

TECHNICAL SPECIFICATIONS

	SC05SS NO COMPRESSOR	SC05SS ZW500D2-30/7Y(3)	SC05SS HIGH FLOW TRUCK COMPRESSOR
Electrical Requirement	110 VAC +/- 10%	110 VAC +/- 10%	110 VAC +/- 10%
Electrical Frequency	60Hz	60Hz	60Hz
Electrical Consumption	3 AMPS	13 AMPS	21 AMPS
Recommended Circuit Breaker	20 A - Class C	20 A - Class C	30 Amp - Class C
Air Pressure Default Setting	35 PSI	35 PSI	35 PSI
Air Calibration Range	4 - 80 PSI	4 - 80 PSI	4 - 120 PSI
Average Air Flow	Dependant on connected air supply	3.4 - 2.5 CFM	5.3 - 4.2 CFM
Max Pressure Output	80 PSI	80 PSI	120 PSI
Operational Temp Range *with Optional Heater	-30 ° - 140 °F	-30 ° - 140 °F	-30 ° - 140 °F
Air Relative Humidity w/o Condensation	0 - 95%	0 - 95%	0 - 95 %
Weight	90 lbs	110 lbs	125 lbs

THE MOST COMMON APPLICATION OF THIS UNIT IS TO CALIBRATE TIRES

6

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6	REMOTE AIR COMPRESSOR SPECS	SCALE: NONE

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602-728-8000

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10755 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL: 214-343-9400 www.dimensiongrp.com

PROTOTYPE VERSION

#	DATE
FGA22.01.24	06/22/2022

REVISIONS

#	DATE

PROJECT:
CIRCLE K STORE
900 LOUIS HENNA BLVD
ROUND ROCK, TX 78664

SHEET TITLE:
HSD DETAILS

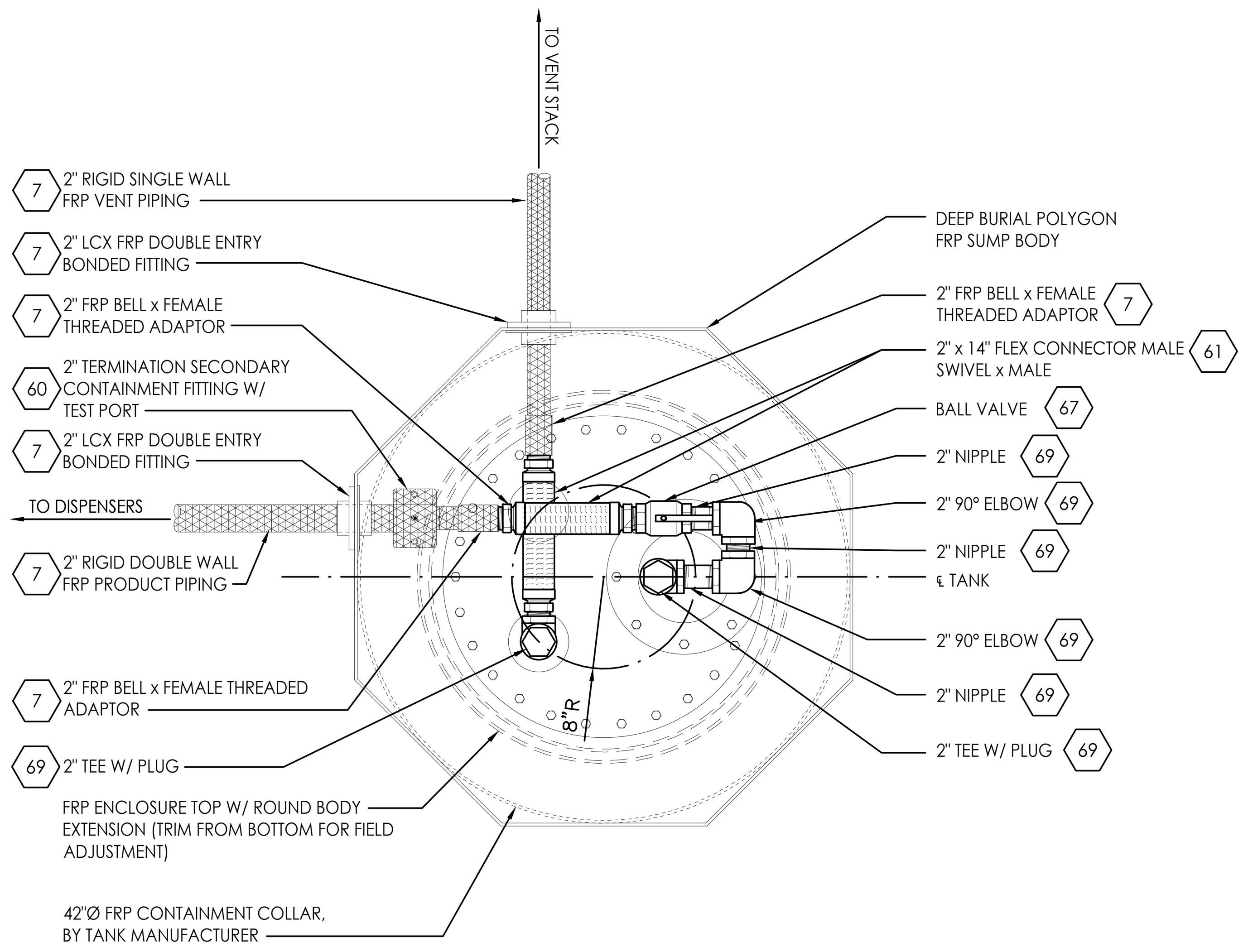
Drawn
Checked
PROJECT #: 230-817

TBPE FIRM REGISTRATION
#F-8396

TERRY HESSELTINE
109399

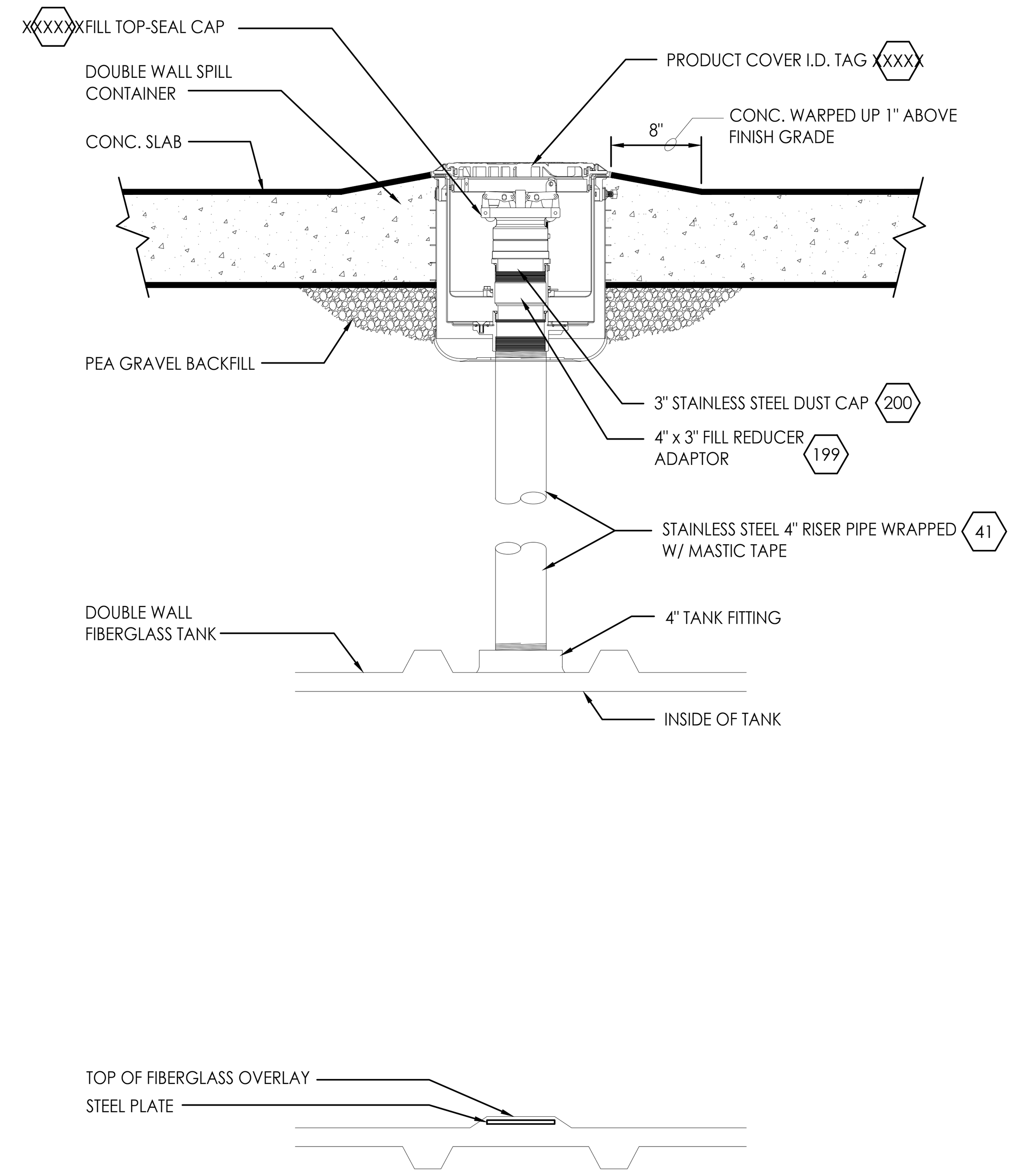
12/29/25

SHEET NO.
TK506

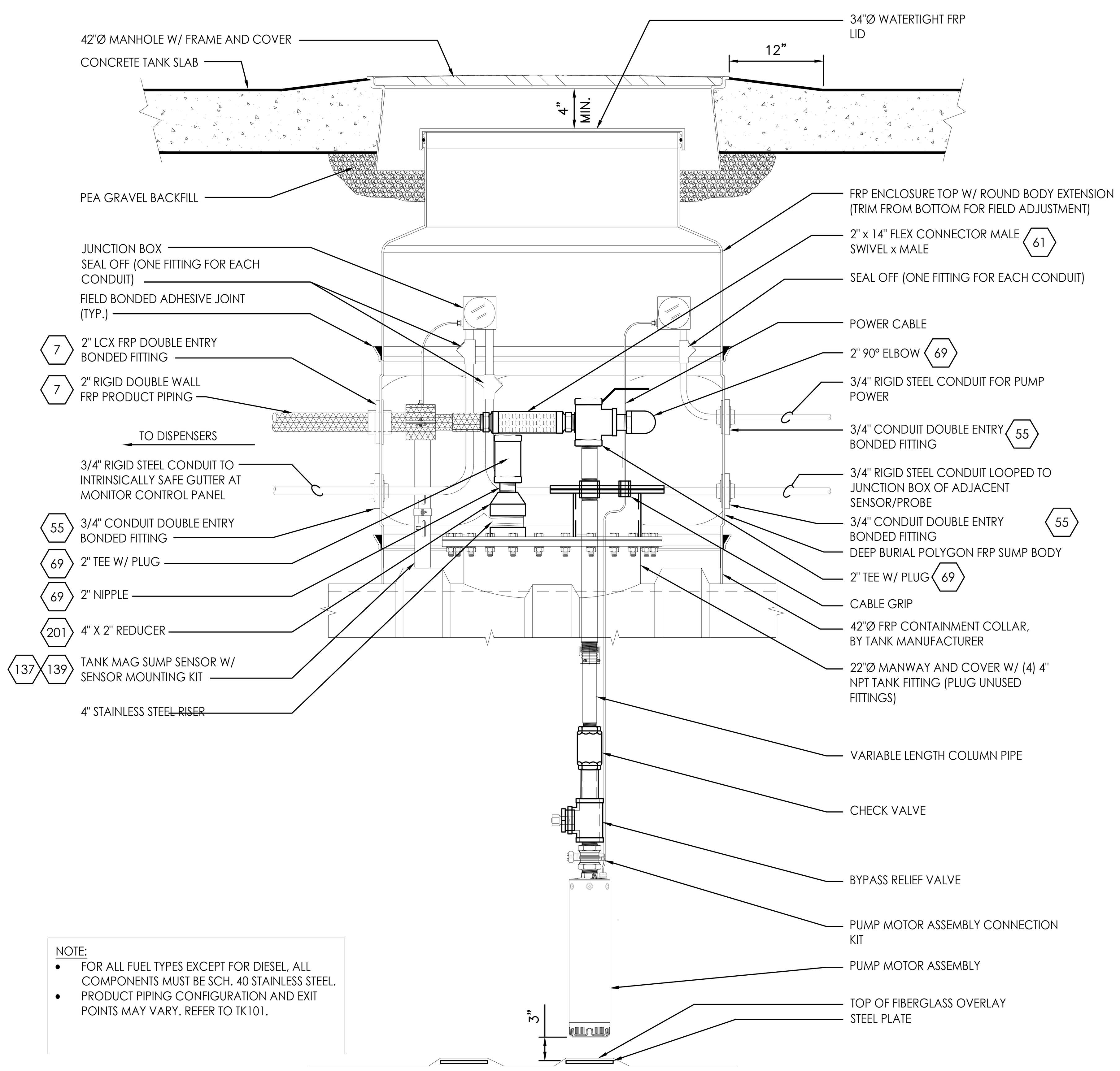


NOTE:
- FOR ALL FUEL TYPES EXCEPT FOR DIESEL, ALL COMPONENTS MUST BE SCH. 40 STAINLESS STEEL.
- PRODUCT PIPING CONFIGURATION AND EXIT POINTS MAY VARY. REFER TO TK101.

1	DEF TANK SUMP DETAIL - PLAN	SCALE: NONE



3	DEF FILL DETAIL - DIRECT BURY	SCALE: NONE



NOTE:
- FOR ALL FUEL TYPES EXCEPT FOR DIESEL, ALL COMPONENTS MUST BE SCH. 40 STAINLESS STEEL.
- PRODUCT PIPING CONFIGURATION AND EXIT POINTS MAY VARY. REFER TO TK101.

SECTION

2	DEF TANK SUMP DETAIL - PROFILE	SCALE: NONE

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SUITE B
TEMPE, AZ 85284
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10755 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL: 214-343-9400 www.dimensiongrp.com

PROTOTYPE VERSION

#	DATE
FGA22.01.24	06/22/2022

REVISIONS

#	DATE

PROJECT:
CIRCLE K STORE
900 LOUIS HENNA BLVD
ROUND ROCK, TX 78664

SHEET TITLE:
TANK TOP HARDWARE DETAILS

Drawn
Checked
PROJECT #: 230-817

TBPE FIRM REGISTRATION
#F-8396

STATE OF TEXAS
TERRY HESSELTINE
109399
LICENSED PROFESSIONAL ENGINEER

12/29/25

SHEET NO.
TK507

UNDERGROUND STORAGE TANK FACILTY PLAN SECTION
INITIAL AND CONTINUING TRAINING
ATTACHMENT "I"

Initial training regarding the underground storage tanks will be performed in accordance with recommended manufacturer practices per the operating manual of all pumps, storage tanks, monitors/sensors, and pipes. Initial training may include training on monitoring systems, cutoff systems, and containment systems. See manufacturer information for specific information regarding the exact systems to be used. Systems that could be used include fluid level monitors, vapor sensors, and overfill protection sensors.

Continuing training regarding underground storage tanks will be performed as necessary deemed by the operating manual of all pumps, storage tanks, monitors/sensors, and pipes. Continuing training could include topics such as maintenance, cleaning, and operation of the underground storage tanks and associated systems. See manufacturer information for specific information regarding the exact systems to be used.

UNDERGROUND STORAGE TANK FACILTY PLAN SECTION

TERTIARY CONTAINMENT METHOD

ATTACHMENT "F"

There is not a tertiary containment method proposed. See TCEQ-0583 attachment H and TCEQ-0583 attachment B for information regarding primary and secondary containment methods.

VEEDER-ROOT

Piping Sump Sensor Specifications

Sensor Description	**Piping Sump Sensor**	The Piping Sump Sensor is installed in a tank piping sump (STP Containment Sump) and will detect the presence of a liquid.
Part Number	**0794380-208**	

Category

- ☐ Discriminating
- ☑ Non-Discriminating
- ☐ Position Sensitive
- ☐ Level Sensing
- ☐ Static Testing
- ☐ Hydrostatic

Fuel Compatibility

- ☑ Gas
- ☑ Diesel
- ☑ Kerosene
- ☑ Jet Fuel
- ☑ Aviation Gas
- ☑ E-15
- ☐ E-85[1]
- ☐ E-100
- ☑ Bio-Diesel 20
- ☐ Bio-Diesel 100
- ☑ Green Diesel
- ☐ DEF
- ☑ Waste Oil
- ☑ Motor Oil

[1] Single use only (Test per Sensor Operability Guide in E-10 or less)

Console Compatibility	**Recommended Min. Console Software**	**Sensor Interface Modules**				
		Module Part #	**Module Description**	**# of Modules per Console**	**# of Sensor Inputs per Module**	**Availability**
TLS-450PLUS (8600 Series)	6.A or Higher	0332812-001	Universal Sensor Module (USM)	Up to 4 – TLS-4xx Up to 8 – TLS-4xx w/ opt. TLS-XB	16	Sold Separately
TLS-450	4.A or Higher					
TLS4 (8601 Series)	6.A or Higher	0330020-750	Universal Sensor Input/Output Module (USIOM-AC)	1	12	Included
TLS4i (8601 Series)						
TLS4B (8601 Series)		0330020-751			6	
TLS4c (8601 Series)						
TLS-350/R/PLUS	124/324 or Higher	0329358-001	Interstitial Sensor Interface Module	Up to 8	8	Sold Separately
TLS-350J		0329356-003	4 Probe / 4 Sensor Interface Module	1	4	Sold Separately
TLS-300i		0330230-001	4 Probe / 8 Sensor Interface Module		8	Included

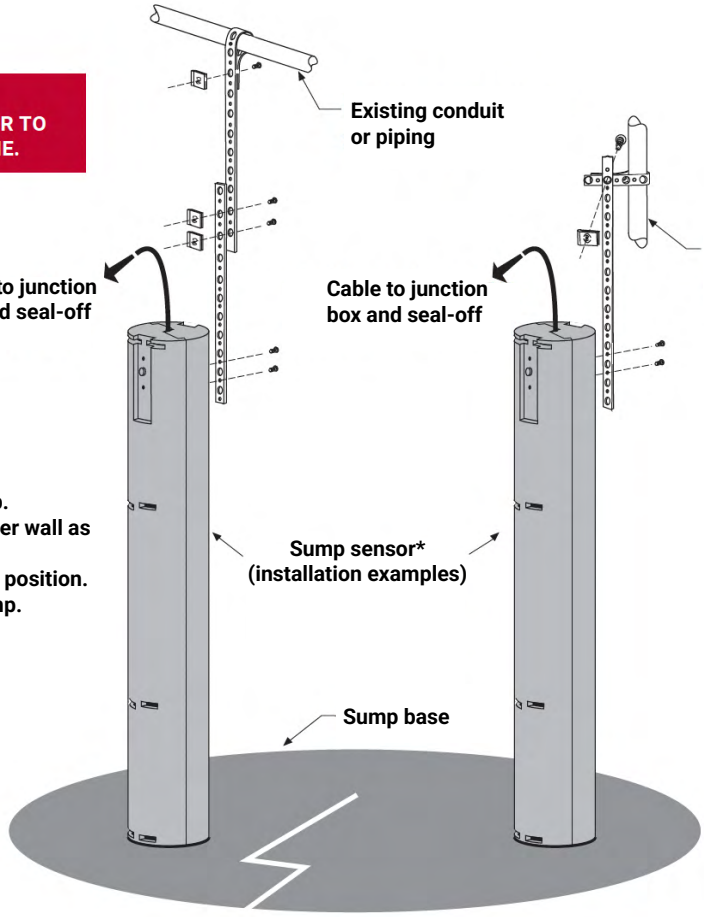
Alarm Notification	Normal	Sensor in Normal State – No liquid detected
	Fuel Alarm	Liquid detected at a minimum of 1.84” (4.67cm)
	Sensor Out	Sensor not communicating to ATG/Console
Installation Kit	0330020-076	Piping Sump Sensor Mounting Kit is included (see example installation below)

Specifications	
Operating Principle	Float / Magnetic Reed Switch
Product Activation Height	Liquid 1.84” (4.67cm)
Operating Temp	+32°F to +140°F (0°C to +60°C)
Dimensions	12” (30.5cm) high, 1.9” (4.8cm) diameter
Miscellaneous/Notes	Standard Cable Length: 12’ (3.66m) Installation kit 0330020-076 included (see example installation)
Third Party Evaluation Links	TLS-3XX/TLS-450 Series Consoles TLS4 (8601 Series) Consoles
Product Link	Piping Sump Sensor
Warranty with System	1 Year Parts & Labor
Warranty (When purchased separately)	1 Year Parts Only

Where Used (Typical)	
	☑ Dispenser Pan ☑ Spill Containment ☑ STP Sump ☐ Convault Tank ☐ Annular Space ☐ Monitoring Well ☐ Oil/Water Separator Tank

Example Installation

IMPORTANT!
DO NOT MOUNT SENSOR TO FLEXIBLE PRODUCT LINE.



***Sump sensor should:**
1. **Rest on the base of the sump.**
2. **Be positioned as close to outer wall as possible.**
3. **Be mounted in a true vertical position.**
4. **Be installed only in a dry sump.**

Notice

Veeder-Root makes no warranty of any kind with regard to this publication, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

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Example Illustrations

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Third Party Evaluations

Third party evaluations of the Veeder-Root sensors contained in this application guide can be found under the Veeder-Root vendor name on the National Work Group on Leak Detection Evaluations (NWGLDE) website: https://neiwpcc.org/nwglde/

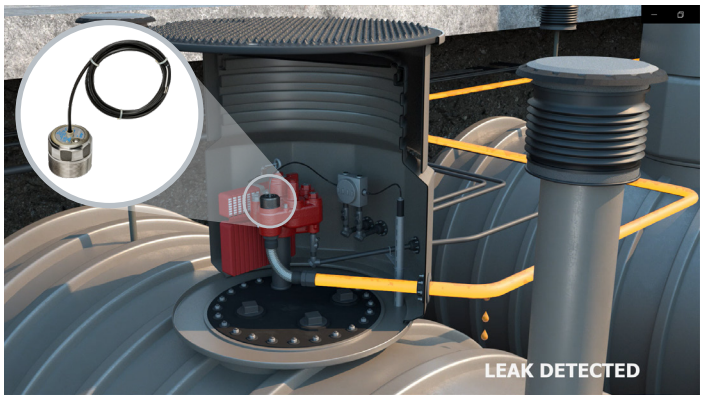
VEEDER-ROOT

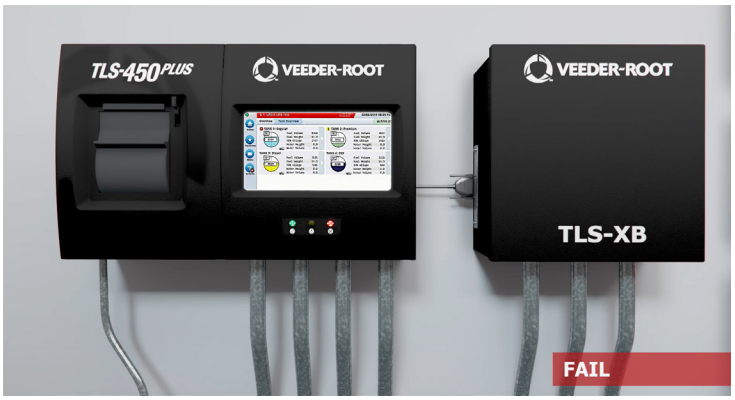
CONNECTED. SECURE. COMPLIANT.

Digital Pressurized Line Leak Detection System

Why DPLLD for Detecting Line Leaks?

The Veeder-Root Digital Pressurized Line Leak Detection (DPLLD) system is designed to meet your everyday compliance needs in a variety of applications. Our patented technology performs precision line leak testing at full pump pressure for 0.1 Gallons Per Hour (GPH)/0.38 Liters Per Hour (LPH) and 0.2 GPH/0.76 LPH, and a pressure decay test to meet the U.S. Environmental Protection Agency (EPA) 3.0 GPH/11.4 LPH test requirements. DPLLD offers flexible testing and digital reporting options, helping to detect catastrophic leaks. When paired with a TLS-450PLUS Automatic Tank Gauge (ATG), customers can monitor up to 1,178 gallons/4,459 liters of fuel line volume.





If the pressure is out of normal range, the TLS-450PLUS will record a failing result and generate an audible and visual alarm for the store operator.

SYSTEM FEATURES

Equipment Design

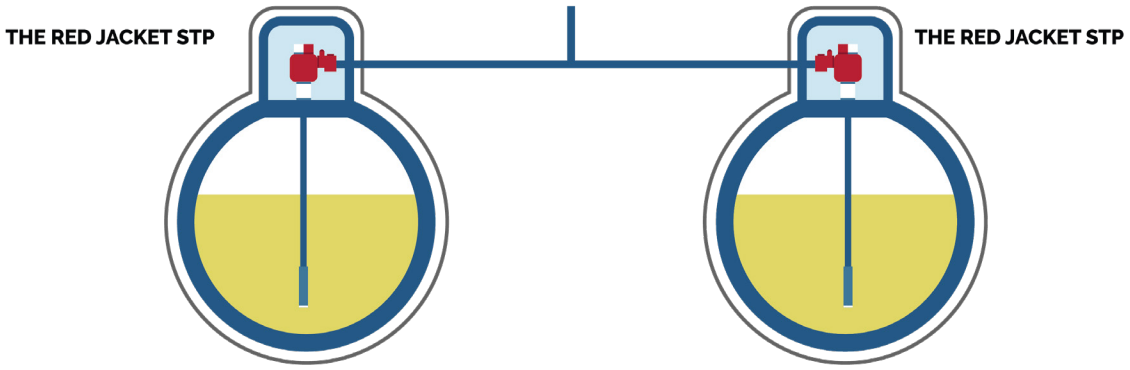
- **Pressure sensor is installed easily** without breaking piping or adding a new sump
- **Stainless steel construction** meets the challenges of a highly corrosive environment
- **Test lines at full pressure** for quick and accurate results, without restricting fuel flow rate
- **Not impacted by thermal contraction of fuel in the line** due to changes in temperature

System Functionality

- **Monitors line pressure during dispensing activity** to ensure a catastrophic leak is not occurring during a dispense
  - If a leak is detected at a pre-set pressure threshold, the system will shutoff power to the Submersible Turbine Pump (STP) to minimize environmental damage and help prevent a public safety issue
- **Conducts test once all dispensing is completed** to ensure the integrity of the line
- **Test can be manually performed** to reset alarms
- **Built-in calibration verification** to notify the site operator when the pressure transducer is not operating properly
- **Auto-Confirm function**, when enabled, runs a second line leak test, if an initial test failure occurs, to verify and reduce false alarms due to mechanical issues that may be occurring in other parts of the fueling system
- **Provides two alarm shutdown options when failure occurs**
  1. Standard Dispenser Shutdown (Alarm and Shutdown)
  2. Optional No Shutdown (Alarm Only)

SUPPORTS MANIFOLDED LINES

One transducer per manifolded line is required



STPs & Piping	
Supports a wide-range of pump and pipe types	Utilizes SwiftCheck Valve on early generation Red Jacket Standard STPs
For further details, **click here for the Line Leak Application Guide**	

Line Leak Transducer Specifications	
Operating Temperature	-25°F to 130°F/-32°C to 54°C
Compatible Fuel Types	• Unleaded Gasoline • Leaded Gasoline • 5% Methanol • Up to 100% Ethanol • 15% MTBE • Diesel • Biodiesel (Up to B100) • Kerosene • Jet Fuel • Aviation Gasoline • DEF
Line Flow Rate	120 GPM/473 LPM Maximum w/ SwiftCheck Valve
Operating Range	0 to 70 PSI/0 to 4.83 Bar
Proof Pressure	200 PSI/13.79 Bar
Maximum Vertical Pipeline Height Above Transducer	11 Feet/3.4 Meters
Minimum Pump Output Pressure	23 PSI/1.59 Bar
Maximum Volume of Fuel Monitored	TLS-450PLUS – 1,178 Gallons/4,459 Liters

TLS-450PLUS Line Leak Digital Transducer Ordering Information

Part Number	Description
0859080-001	Digital Pressurized Line Leak Detector without SwiftCheck Valve, UL
0859080-002	Digital Pressurized Line Leak Detector with SwiftCheck Valve, UL
0332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD
0332813-001	Universal Input/Output Interface Module (UIOM) for Relay Control and Input Signal Monitoring *
0332972-007	Ultimate Testing: Digital Line Leak Detection
0332972-008	Risk Management: Digital Line Leak Detection
0332972-009	Base Compliance: Digital Line Leak Detection

** Required to ensure STP pump control when RJ Diagnostic Alarm is generated or line shutdown to meet regulatory or business needs (Utilizes 5 Inputs and Outputs)*

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VEEDER-ROOT

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Dual-Point Hydrostatic Reservoir Sensor (Brine-Filled Double-Wall Tank Sensor) Specifications

Sensor Description	*Dual-Point Hydrostatic Reservoir Sensor (Brine-Filled Double-Wall Tank Sensor)*	The Hydrostatic Reservoir Sensor accurately detects fluid level change in the reservoir and interstice of a double wall storage tank. The Dual-Point version is ideal for high groundwater areas, and can differentiate between a high level alarm condition and a low level alarm condition. If an inner-wall leak occurs, the brine seeps into the tank triggering a low level alarm. If an outer wall leak occurs, fluid seeps into the interstice triggering a high level alarm.
Part Number	*0794380-303*	
Category	☐ Discriminating ☐ Non-Discriminating ☐ Position Sensitive ☐ Level Sensing ☐ Static Testing ☑ Hydrostatic	
Fuel Compatibility	☑ Gas ☑ Diesel ☑ Kerosene ☑ Jet Fuel ☑ Aviation Gas ☑ E-15 ☑ E-85 ☐ E-100 ☑ Bio-Diesel 20 ☑ Bio-Diesel 100 (All blends up to B100) ☑ Green Diesel ☐ DEF ☑ Waste Oil ☑ Motor Oil	

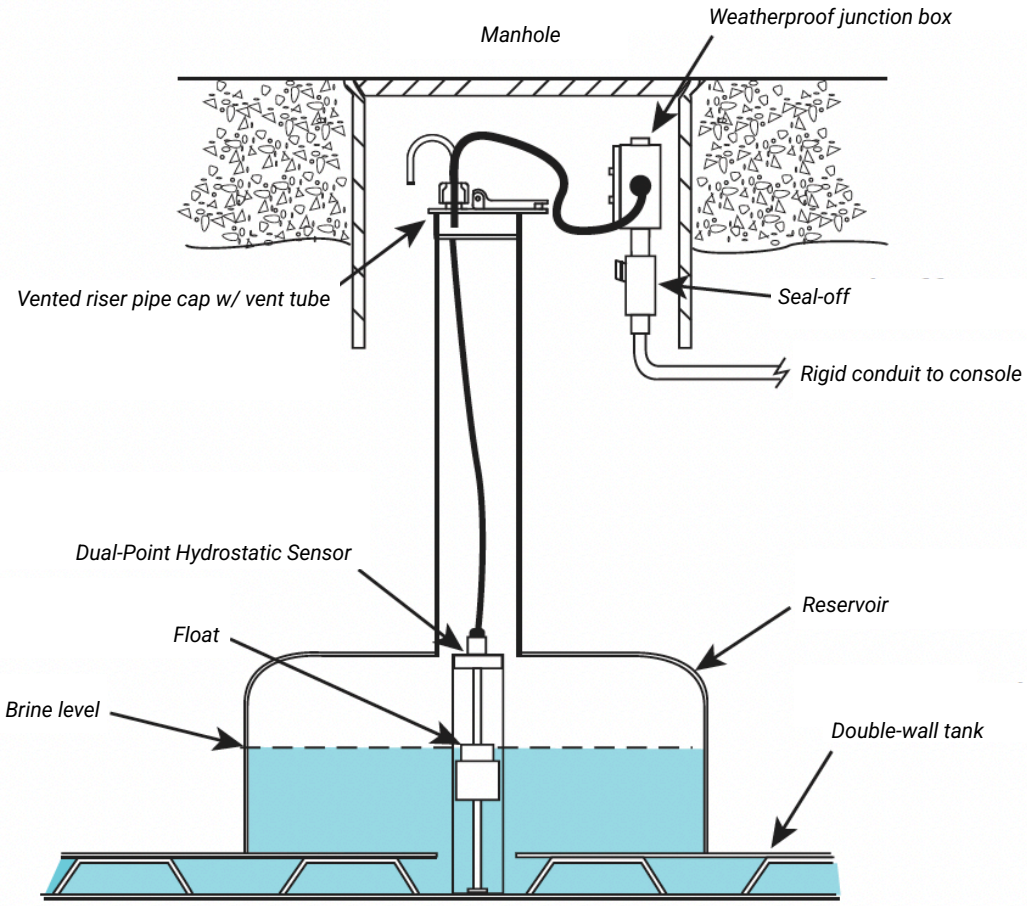
Console Compatibility	*Recommended Min. Console Software*	*Sensor Interface Modules*				
		Module Part #	*Module Description*	*# of Modules per Console*	*# of Sensor Inputs per Module*	*Availability*
TLS-450PLUS (8600 Series)	6.A or Higher	0332812-001	Universal Sensor Module (USM)	Up to 4 – TLS-4xx Up to 8 – TLS-4xx w/ opt. TLS-XB	16	Sold Separately
TLS-450	4.A or Higher					
TLS4 (8601 Series)	6.A or Higher	0330020-750	Universal Sensor Input/Output Module (USIOM-AC)	1	12	Included
TLS4i (8601 Series)						
TLS4B (8601 Series)		0330020-751			6	
TLS4c (8601 Series)						
TLS-350/R/PLUS	124/324 or Higher	0329358-001	Interstitial Sensor Interface Module	Up to 8	8	Sold Separately
TLS-350J		0329356-003	4 Probe / 4 Sensor Interface Module	1	4	Sold Separately
TLS-300i		0330230-001	4 Probe / 8 Sensor Interface Module		8	Included

Alarm Notification		
	Normal	Float is in the Center position (correct amount of brine in reservoir)
	Low Liquid	Brine drops below 1.2” (3cm)
	High Liquid	Brine rises above 13.13” (33.4cm)
	Sensor Out	Sensor not communicating to ATG/Console

Specifications	
Operating Principle	Reed Switch / Float
Product Activation Height	Low: 1.2” (3cm), High: 13.13” (33.4cm)
Operating Temp	-13°F to +122°F (-25°C to +50°C)
Dimensions	17.3” (43.9cm) high, 2.5” (6.4cm) diameter
Miscellaneous/Notes	• Standard Cable Length: 12’ (3.65m) • Vented riser cap assembly included • Reservoir solutions: Up to 50% ethylene glycol in water; up to 50% propylene glycol in water; salt brine solution of up to 30% CaCl.

Specifications (Continued)	
Third Party Evaluation Links	TLS-3XX/TLS-450 Series Consoles TLS4 (8601 Series) Consoles
Product Link	Dual-Point Hydrostatic Reservoir Sensor
Warranty with System	1 Year Parts & Labor
Warranty (When purchased separately)	1 Year Parts Only
Where Used (Typical)	☐ Dispenser Pan ☐ Spill Containment ☐ STP Sump ☐ Convault Tank ☑ Annular Space ☐ Monitoring Well ☐ Oil/Water Separator Tank

Example Installation



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Third Party Evaluations

Third party evaluations of the Veeder-Root sensors contained in this application guide can be found under the Veeder-Root vendor name on the National Work Group on Leak Detection Evaluations (NWGLDE) website: https://neiwpcc.org/nwglde/

IV. TEMPORARY STORMWATER (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: Lee A. Whited

Date: 1/19/2026

Signature of Customer/Agent:

Regulated Entity Name: Circle K Stores, Inc.

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: Brushy 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

Spill Response Actions

ATTACHMENT "A"

Below is the general procedure to follow in the event of a spill or loss of product resulting in an impact or potential impact to soil, surface water, groundwater or sanitary sewer system.

Notifications:

- 911 (if immediate danger to life or health)
- General Contractor Site Superintendent.
- Environmental Emergency Response Contractor (if necessary).
- For spills that exceed the reportable quantity established per federal and state regulations, also contact the Texas Commission on Environmental Quality (TCEQ) at 800-832-8224 and the National Response Center at 800-424-8802. **Reportable quantities are provided behind this Attachment.**

Cleanup:

- Impacted soil or used absorbent material shall be picked up and stored in a waterproof, leak proof manner such as on plastic sheeting and covered with plastic sheeting, a drum or roll-off container with a lid or cover that can be secured, or a 5-gallon bucket with a secure lid.
- The Site Superintendent or Emergency Response Coordinator will work with TCEQ to determine the appropriate sampling and disposal protocols for handling impacted soils, absorbent materials, or water.
- Provide proof of sampling and disposal such as laboratory analytical reports and waste manifests to TCEQ.

Follow-up:

- Within 48 hours send a written report to TCEQ describing the cause of the release, the total quantity of material discharged, description of corrective action taken or still in progress to be completed, notifications made, and plans for preventing recurrence.
- Complete any follow-up reports required by the TCEQ or National Response Center within the allowable time frames.
- Submit a copy of documentation of disposal to TCEQ and US EPA at the time of disposal. Also submit a copy of the final uniform hazardous waste manifest "designated facility to generator copy" by the time of environmental closeout.

REPORTABLE QUANTITY TABLE

Kind of spill	Where discharged	Reportable quantity	Rule, statute, or responsible agency
Hazardous substance	onto land	"Final RQ" in Table 302.4 in 40 CFR 302.4 (see attached)	30 TAC 327
	into water	"Final RQ" or 100 lbs, whichever is **less**	30 TAC 327
Any Oil	coastal waters	as required by the Texas General Land Office	Texas General Land Office
Crude Oil, Oil that is neither a petroleum product nor used oil	onto land	210 gallons (five barrels)	30 TAC 327
	Directly into water	enough to create a sheen	30 TAC 327
Petroleum Product, used oil	onto land from an exempt PST facility	210 gallons (five barrels)	30 TAC 327
	onto land, or onto land from a non-exempt PST facility	25 gallons	30 TAC 327
	directly into water	enough to create a sheen	30 TAC 327
Industrial solid waste or other substances	into water	100 lbs	30 TAC 327
From petroleum storage tanks, underground or aboveground	into water	enough to create a sheen on water	30 TAC 334.75-81
From petroleum storage tanks, underground or aboveground	onto land	25 gallons or equal to the RQ under 40 CFR 302	30 TAC 327
Other substances that may be useful or valuable and are not ordinarily considered to be waste, but will cause pollution if discharged into water in the state	into water	100 lbs	30 TAC 327

TEMPORARY STORMWATER SECTION

Potential Sources Of Contamination

ATTACHMENT "B"

Potential sources of contamination include the leaking of fluids from construction equipment, trash generated by workers and material, sediment transport onto public roadways, from construction equipment, and the use of asphaltic products on the roadways.

TEMPORARY STORMWATER SECTION
Sequence of Major Activities

ATTACHMENT "C"

The major activities of this project that will result in large areas of soil disturbance are:
Sequence of Construction Disturbance

1. General contractor to install and maintain erosion controls and tree protection per approved plans. **(Disturbance ~1.5 AC.)**

2. Hold Pre-Construction conference. **(Disturbance 0 AC.)**

3. Rough cut all required or necessary areas. **(Disturbance ~1.2 AC.)**

4. Rough paving areas. No Development of embankment will be permitted at this time. Once paved areas are rough cut, the geotechnical engineer is to field verify pavement design is appropriate, and modify recommendations accordingly. **(Disturbance ~1.2 AC.)**

5. Install all utilities to be located under the proposed pavement. **(Disturbance 0.26 AC.)**

6. Deliver storm sewer cut sheets to the contractor. **(Disturbance ~0.2 AC.)**

7. Begin installation of storm sewer lines. Upon Completion, restore as much disturbed area as much as possible. **(Disturbance ~0.2 AC.)**

8. Grade pavement to subgrade. **(Disturbance ~1.2 AC.)**

9. Ensure that all underground utility crossings are completed. Lay first course base material on all paved areas. **(Disturbance ~1.2 AC.)**

10. Install curb and gutter. **(Disturbance ~.25 AC.)**

11. Lay final base course on all paved areas. **(Disturbance ~1.2 AC.)**

12. Lay asphalt. **(~Disturbance 1.2 AC.)**

13. Complete restoration of site vegetation. **(Disturbance ~0.3 AC.)**

14. Final inspection of the project. **(Disturbance ~1.5 AC.)**

15. Remove and dispose of temporary erosion controls. **(Disturbance~ 0.1 AC.)**

TEMPORARY STORMWATER SECTION
Temporary Best Management Practices and Measures
ATTACHMENT "D"

All temporary BMP's will be installed prior to the beginning of construction and remain in place until revegetation has been completed. These temporary measures will include silt fences, inlet dykes, and stabilized construction entrances. These erosion control devices will prevent the transport of sediment generated from this site. Most offsite flows have been diverted around the project via the existing topography; and, therefore will not be polluting or contaminating this runoff. The erosion control devices proposed with this project allow for the passing of water while retaining any sediment or trash. This will allow for the flow to maintain its natural course to naturally occurring sensitive features.

Sequence of Construction Disturbance

1. General contractor to install and maintain erosion controls and tree protection per approved plans. Ensure that concrete wash out area is installed in accordance with the approved plans. **(Duration-1 week**)

2. Hold Pre-Construction conference. **(Duration-2 hours)**

3. Rough cut all required or necessary areas. **(Duration-2 weeks**)

4. Rough grade paved areas. **(Duration- 2 week)**

5. Install all utilities to be located under the proposed pavement. **(Duration- 3 weeks)**

6. Deliver storm sewer cut sheets to the contractor. **(Duration- 3 days)**

7. Begin installation of storm sewer lines. Upon Completion, restore as much disturbed area as much as possible. **(Duration- 2 weeks)**

8. Grade paved areas to subgrade. **(Duration-1 week)**

9. Insure that all underground utility crossings are completed. Lay first course base material on all paved areas. **(Duration-1 week)**

10. Install curb and gutter. **(Duration-1 week)**

11. Lay final base course on all paved areas. **(Duration-2 weeks)**

12. Lay asphalt. **(Duration-1 week)**

13. Complete all underground installations.**(Duration-2 weeks)**

14. Complete permanent erosion control and restoration of site vegetation. **(Duration-3 weeks)**

15. Final inspection of the project. **(Duration-3 days)**

16. Remove and dispose of temporary erosion controls. **(Duration-1 week)**

TEMPORARY STORMWATER SECTION

Structural Practices

ATTACHMENT "F"

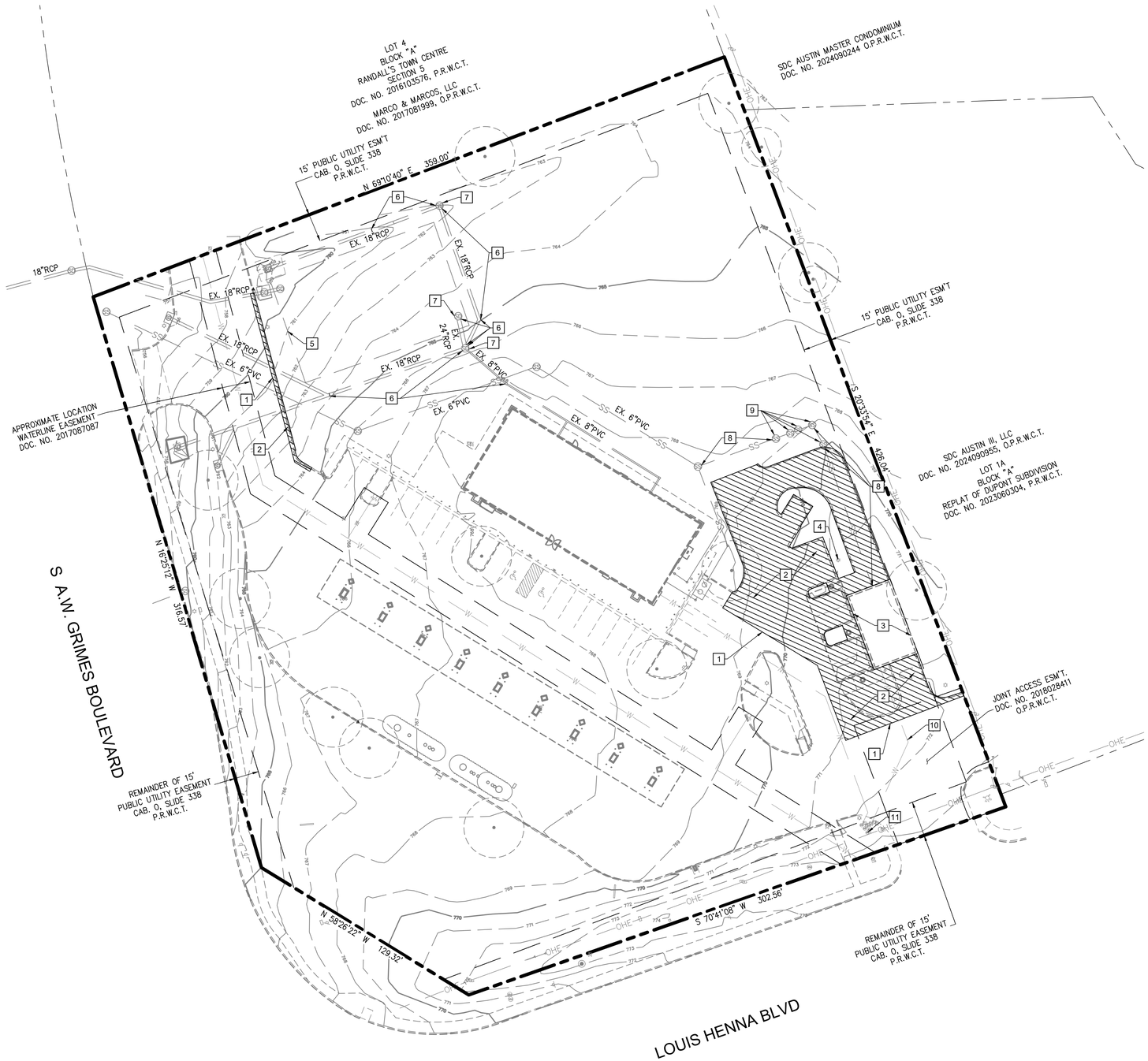
Practices of diverting runoff around exposed soils will consist of silt fence, which will be utilized to catch any pollutants from leaving the site. The only runoff aimed at exposed soils will be from the site itself. Below is a list of controls for the site with description.

Stabilized construction entrance: A stabilized construction entrance will be placed at the project boundary provided in the erosion control details sheet. The stabilized construction entrance will help prevent sediment from being transported from the site.

Silt Fence: silt fence shall be installed per City of Austin detail 642S-1, as provided in the erosion control detail sheet. Silt fence shall be installed along the outer perimeter of the downstream portion of the site and within the blocks of the lots as shown on the plans. The silt fence will prevent sediment from leaving the site due to disturbed soils during construction. Internal silt fence will reduce sediment draining to the streets under rough cut conditions and final paving.

Inlet Protection: Inlet protection will be installed using a GeoCurve Inlet filter as provided in the detail on the Erosion Control Detail sheet. The inlet filter will prevent any runoff from the pavement are to draining to the water quality pond and causing sediment build up.

Concrete Washout: a concrete washout area will be provided per the on the Erosion Control Detail sheet. The concrete washout area will be provided in the contractor staging area and temporary spoils site. The concrete washout area will prevent concrete slurry from draining into the storm system and washing into the water quality pond.



DEMOLITION KEYNOTES:

1. SAWCUT EXISTING CONCRETE PAVEMENT, CURB, AND SIDEWALK
2. REMOVE EXISTING CONCRETE PAVEMENT
3. DEMOLISH EXISTING CARWASH BUILDING
4. REMOVE EXISTING LIGHT POLE
5. REMOVE EXISTING UNDERGROUND DETENTION SYSTEM
6. REMOVE EXISTING STORM LINE SECTION
7. REMOVE EXISTING STORM STRUCTURE
8. REMOVE EXISTING SANITARY SEWER LINE SECTION
9. REMOVE EXISTING SANITARY SEWER STRUCTURE
10. REMOVE EXISTING WATER LINE SECTION
11. REMOVE EXISTING WATER METER (CONTRACTOR TO COORDINATE WITH CITY TO RETURN WATER METER)

DEMOLITION NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL AND DISPOSAL OF ALL MATERIALS.
2. ALL CITY, STATE, AND FEDERAL CODES, LAWS, AND ORDINANCES SHALL BE FOLLOWED.
3. CONTRACTOR IS RESPONSIBLE FOR LOCATING & DISCONNECTING ALL UTILITIES TO THE BUILDING BEFORE START OF DEMOLITION.
4. CONTRACTOR TO GIVE APPROPRIATE NOTICE TO ALL AGENCIES PRIOR TO DEMOLITION.
5. CONTRACTOR TO PROVIDE BARRICADES AND COORDINATE WITH CITY & STATE ON ALL TRAFFIC CONTROL REQUIREMENTS.
6. PROVIDE TREE PROTECTION FOR ALL TREES ON OR JUST OUTSIDE THE PROPERTY LINE.
7. CONTRACTOR TO CONTACT CITY PUBLIC SERVICES & UTILITY COMPANIES IF ANY EXISTING ON-SITE UTILITIES ARE TO BE REMOVED.

CAUTION:

1. PROTECT ALL EXISTING UNDERGROUND & ABOVE GROUND UTILITIES DURING DEMOLITION PROCESS EXCEPT AS IT IS SHOWN TO BE REMOVED BY THIS PLAN.

TEMPORARY BENCHMARK "A":

A BOX CUT SET ON THE BACK OF A CURB ±140 FEET NORTHEAST FROM THE CENTERLINE OF S.A.W. GRIMES BOULEVARD ROAD, ±470 FEET NORTHEAST FROM THE INTERSECTION OF S.A.W. GRIMES BOULEVARD AND LOUIS HENNA BLVD.
ELEVATION: 758.87

TEMPORARY BENCHMARK "B":

A BOX CUT SET ON THE BACK OF A CURB ±130 FEET NORTHEAST FROM THE CENTERLINE OF S.A.W. GRIMES BOULEVARD ROAD, ±245 FEET NORTHEAST FROM THE INTERSECTION OF S.A.W. GRIMES BOULEVARD AND LOUIS HENNA BLVD
ELEVATION: 767.26

GRAPHIC SCALE
30 0 15 30
1 INCH = 30 FEET

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUCH CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

THE DIMENSION GROUP
ARCHITECTURE · CIVIL ENGINEERING · MEP ENGINEERING
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TBPE FIRM REGISTRATION #F-8396

STATE OF TEXAS
KEATON L. MAI
125077
PROFESSIONAL ENGINEER

12/15/2025

#	DATE	REVISION DESCRIPTION	BY

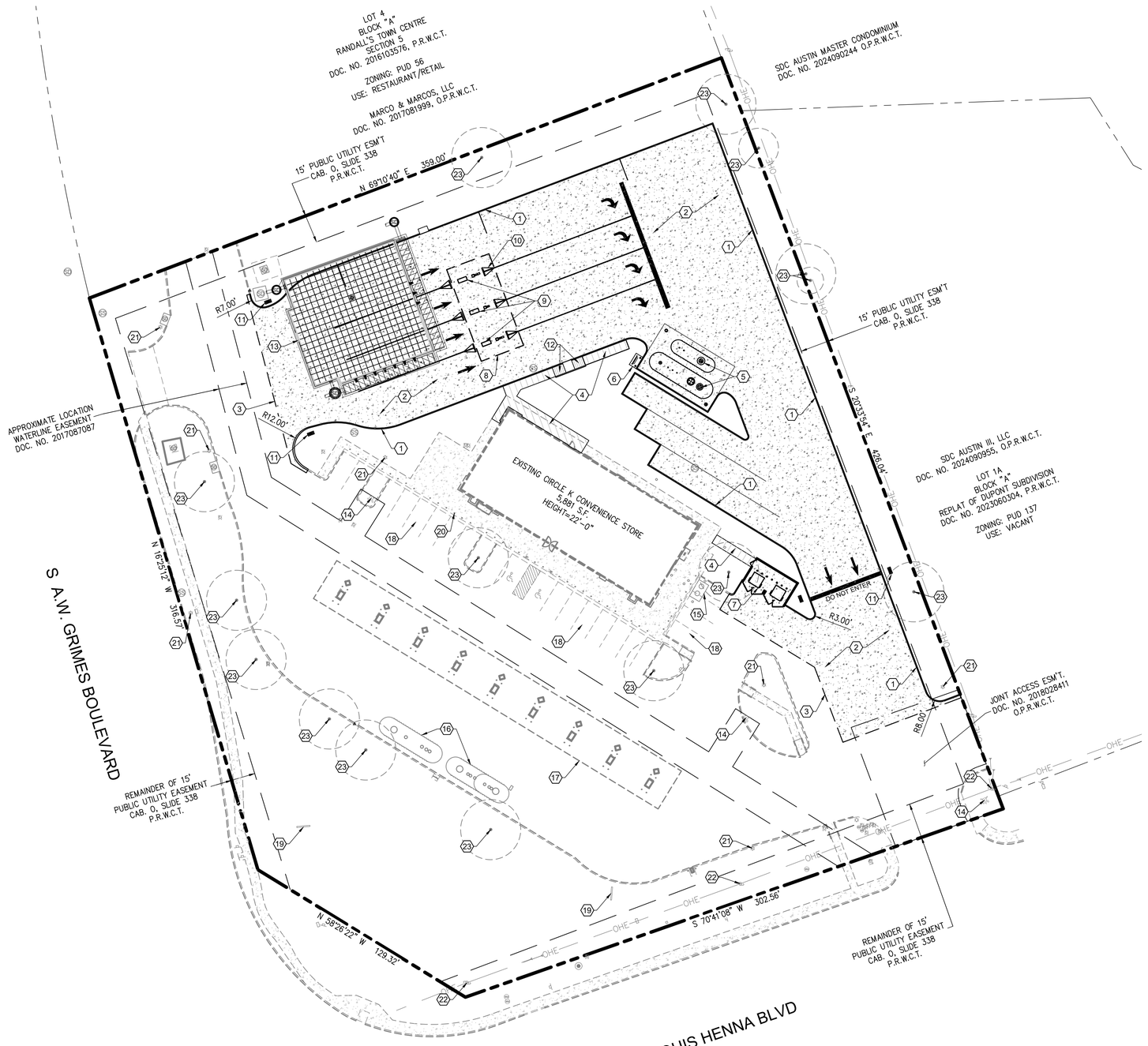
drawn by
designed by
approved by

project no. 230-817
date 12/15/2025 – 4:10 pm
dwg C2.0 DEMOLITION PLAN.dwg

DEMOLITION PLAN

CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

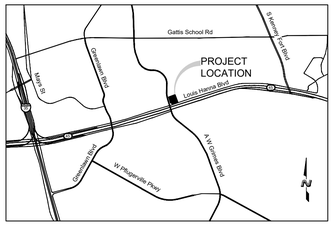
SHEET
C2.0



SITE PLAN KEYNOTES:

1. CONSTRUCT 6" CURB & GUTTER
2. CONSTRUCT CONCRETE PAVEMENT SECTION (REF. GEOTECH)
3. LIMITS OF SAWCUT & PAVEMENT REMOVAL
4. INSTALL PEDESTRIAN SIDEWALK PAVEMENT
5. NEW UNDERGROUND FUEL TANKS (REF. FUEL PLANS)
6. NEW TANK VENTS
7. DUMPSTER ENCLOSURE
8. NEW GASOLINE CANOPY (HEIGHT: 17'-6")
9. (3) NEW HSD DISPENSERS
10. PYRAMID BOLLARDS (REF. FUEL)
11. DIRECTIONAL SIGN (BY SEPARATE PERMIT)
12. NEW BARRIER FREE RAMPS
13. NEW UNDERGROUND DETENTION SYSTEM
14. EXISTING FIRE HYDRANT
15. EXISTING GREASE TRAP
16. EXISTING UNDERGROUND STORAGE TANKS
17. EXISTING FUEL CANOPY
18. EXISTING PARKING
19. EXISTING PYLON SIGN
20. EXISTING BOLLARD
21. EXISTING SITE LIGHT POLE
22. EXISTING POWER POLE
23. EXISTING TREE

GRAPHIC SCALE
30 0 15 30
1 INCH = 30 FEET



VICINITY MAP
1 IN. = 4,000 FT.

LEGEND

- PARCEL BOUNDARY
- ADJACENT PROPERTY
- SECTION LINE
- EASEMENT LINE
- CURB & GUTTER EXISTING
- PROPOSED CURB & GUTTER
- EXISTING SIDEWALK
- PROPOSED SIDEWALK
- PROPOSED CONCRETE PAVING

SITE DATA TABLE	
USE	CONVENIENCE STORE/GAS STATION + QSR
LOT AREA	153,181 S.F. (3.517 ACRES)
BUILDING SQUARE FOOTAGE	5,881 S.F.
F.A.R.	0.04:1
BUILDING HEIGHT	22'-0"
BUILDING OCCUPANCY TYPE	M
TYPE OF CONSTRUCTION	V-B
TOTAL PERVIOUS COVER	50,029 S.F. OR 33%
TOTAL IMPERVIOUS COVER	103,152 S.F. OR 67%
PARKING REQUIRED	24 SPACES (1 SPACE/250 S.F.)
PARKING PROVIDED	28 SPACES
TRUCK PARKING PROVIDED	5 SPACES
HANDICAP PARKING REQUIRED	2 SPACES
HANDICAP PARKING PROVIDED	2 SPACES

GENERAL NOTES

1. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THEIR MEANS AND METHODS OF CONSTRUCTION, JOB SITE CONDITIONS AND JOB SITE SAFETY, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS. THE CONTRACTOR SHALL SAVE, PROTECT, INDEMNIFY DEFEND AND HOLD HARMLESS THE OWNER, THE ARCHITECT AND THE ENGINEER FROM ANY CLAIM OF LIABILITY, REAL OR ALLEGED, ARISING OUT OF THE PERFORMANCE OF ANY WORK ON THIS PROJECT. THE CONTRACTOR SHALL NAME THE OWNER, THE ARCHITECT AND THE ENGINEER AS "ADDITIONAL INSURED" ON THEIR INSURANCE POLICIES.
2. EXISTING ABOVE GROUND UTILITIES HAVE BEEN SHOWN BASED ON INFORMATION SHOWN ON A SURVEY OF THE PROPERTY. UNDERGROUND UTILITIES ARE SHOWN BASED ON RECORDED DATA AND MAY NOT BE COMPLETE OR EXACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS AND DEPTHS OF ALL ABOVE GROUND AND UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE GROUND OR UNDERGROUND UTILITIES, INCLUDING THOSE NOT SHOWN ON THE PLANS. THE CONTRACTOR IS ADVISED TO CONTACT THE CITY AND ALL FRANCHISE UTILITY COMPANIES, EASEMENT HOLDERS, ETC. AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION IN THE VICINITY OF ANY UNDERGROUND UTILITY.
3. THE CONTRACTOR SHALL COMPLY WITH ALL BUILDING CODES AND REGULATIONS, FEDERAL, STATE, COUNTY, AND CITY SAFETY CODES AND INSPECTION REQUIREMENTS.
4. THE CONTRACTOR SHALL PROVIDE DUST PROTECTION DURING CONSTRUCTION. ALL TRASH AND DEBRIS SHALL BE PICKED UP AT ALL TIMES. COMMERCIAL CONSTRUCTION DEBRIS/SOLID WASTE HAULER PERMIT REQUIRED.
5. DETENTION WILL BE PROVIDED ON-SITE THROUGH A XERXES UNDERGROUND DETENTION SYSTEM WITH A STORAGE VOLUME OF 23,147 CUBIC FEET.

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUCH CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

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ELEVATION: 767.26

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TEMPE, AZ 85284
PHONE: (602) 728-8000
EMAIL: RICHELLE.BROUSSARD@CIRCLEK.COM
CONTACT: RICHELLE BROUSSARD

SURVEYOR
WINDROSE LAND SURVEYING / PLATTING
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SELMA, TX 78154
PHONE: (210) 787-1496
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STATE OF TEXAS
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PROFESSIONAL ENGINEER
12/15/2025

#	DATE	REVISION DESCRIPTION	BY

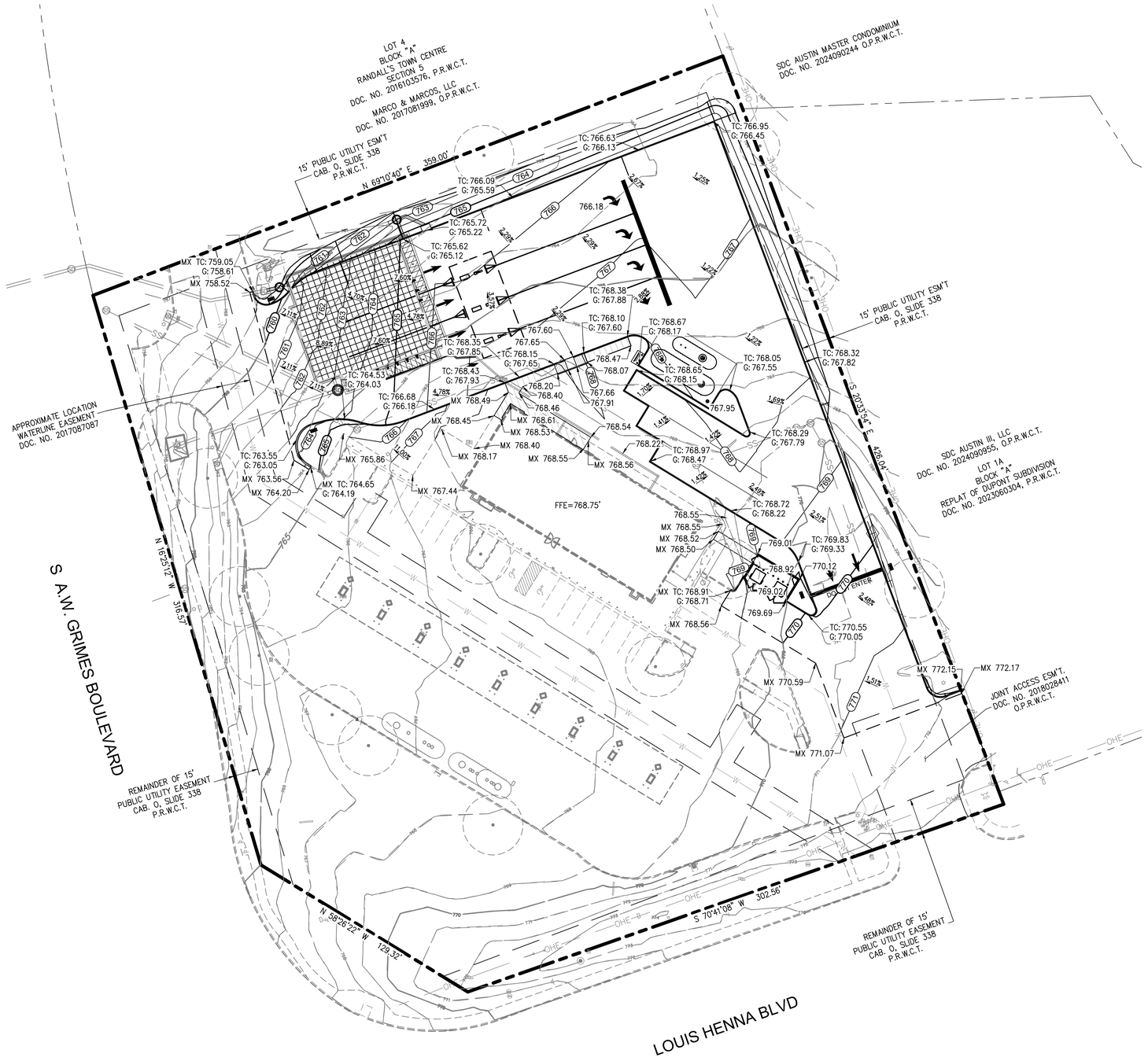
drawn by
designed by
approved by

project no. 230-817
date 12/15/2025 – 4:11 pm
dwg C3.0 SITE PLAN.dwg

SITE PLAN

CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

SHEET
C3.0



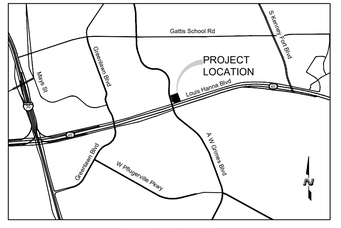
DETAILED GRADING NOTES:

1. THIS SHEET IS FOR DETAILED GRADING REFERENCE ONLY. ALL EROSION AND SEDIMENT CONTROL SHALL BE COMPLETE PER SHEET C10.1.
2. CURB SPOT ELEVATIONS ARE TO FLOWLINE OF CURB UNLESS OTHERWISE NOTED.
3. ALL ELEVATIONS ARE TO FINISHED GRADE OF SURFACE UNLESS OTHERWISE NOTED.
4. CONTRACTOR MUST OBTAIN CONSTRUCTION ACTIVITIES STORMWATER DISCHARGE PERMIT.
5. GRADE BREAKS ARE IDENTIFIED AS —— GB —— GB ——
6. TANK LID AND DISPENSER ELEVATIONS SHOWN ARE AT GRADE. RAISE LIDS AND DISPENSERS ONE INCH ABOVE THESE ELEVATIONS AND SLOPE CONCRETE AWAY FROM LIDS AND DISPENSERS DOWN TO NORMAL GRADE. REFER TO FUEL PLANS.

GRAPHIC SCALE
30 0 15 30
1 INCH = 30 FEET

GENERAL GRADING NOTES:

1. REFER TO GEOTECHNICAL ENGINEERING REPORT PREPARED BY RABA KISTNER, INC., PROJECT NO. AAA25-028-00 DATED APRIL 15, 2025 FOR SITE WORK.
2. TRENCH SAFETY: IF ANY TRENCH ON THIS JOB SITE, INCLUDING OPEN EXCAVATIONS WHOSE DIMENSIONS CAUSE THEM TO BE CONSIDERED TRENCHES BY O.S.H.A REGARDLESS OF WHETHER FOR THE INSTALLATION OF UTILITIES, FOUNDATIONS OR ANY OTHER SITE ELEMENT, IS EQUAL TO OR GREATER THAN 5.00' DEPTH, THEN THE CONTRACTOR SHALL NOT PERFORM ANY TRENCHING ON THIS SITE UNTIL HE HAS FIRST OBTAINED DETAILED PLANS AND SPECIFICATIONS FOR TRENCH SAFETY SYSTEMS CONFORMING TO O.S.H.A. REQUIREMENTS. SUCH PLANS AND SPECIFICATIONS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY OR CONTRACTED BY THE CONTRACTOR AND SHALL BE CONSIDERED A PART OF THE CONTRACTOR'S MEANS AND METHOD'S OF CONSTRUCTION . IF THIS PROJECT IS OFFERED FOR BID, THE BIDS MUST CONTAIN A SEPARATE UNIT PRICE PAY ITEM FOR TRENCH SAFETY.
3. ALL SURPLUS EXCAVATION AND WASTE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BE HIS SOLE RESPONSIBILITY TO REMOVE SUCH SURPLUS EXCAVATION AND WASTE MATERIAL FROM THE SITE TO A PUBLIC DUMP SITE APPROVED FOR THE DISPOSAL OF SUCH MATERIALS. IF SURPLUS EXCAVATION IS REMOVED FROM THIS SITE TO ANOTHER PROPERTY, IT SHALL BE PLACED ON SUCH PROPERTY WITH THE WRITTEN CONSENT OF THE OWNER(S) OF SUCH PROPERTY. A COPY OF SUCH WRITTEN CONSENT SHALL BE PROVIDED TO THE OWNER. IF THE CONTRACTOR WISHES TO DISPOSE OF SURPLUS EXCAVATION ON-SITE, IT SHALL BE ONLY WITH THE PRIOR APPROVAL OF THE OWNERS PROJECT REPRESENTATIVE AND CARE SHOULD BE TAKEN TO AVOID BLOCKING NATURAL DRAINAGE AND INCREASING STEEP SLOPES.
4. THE CONTRACTOR IS REQUIRED TO PROVIDE THEIR OWN STAKING AND TO VERIFY PROJECT ELEVATIONS. "MATCH EXISTING" SHALL BE UNDERSTOOD TO APPLY TO BOTH VERTICAL ELEVATION AND HORIZONTAL ALIGNMENT.
5. ANY EXISTING SITE IMPROVEMENTS OR UTILITIES REMOVED, DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND AS APPROVED BY THE OWNER OF SUCH UTILITY. ANY SUCH REPAIR OR REPLACEMENT SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE.
6. THE CONTRACTOR SHALL PREPARE ALL LANDSCAPE AREAS INCLUDING STREET RIGHT-OF-WAY AREAS TO AN ACCEPTABLE SUBGRADE CONDITION IN ACCORDANCE WITH THE LANDSCAPE PLANS. IF THE CONTRACTOR IS NOT EMPLOYED TO PROVIDE AND INSTALL LANDSCAPING, THE CONTRACTOR SHALL PREPARE A FINISHED AND COMPACTED SUBGRADE IN THE LANDSCAPING AREAS 4" BELOW NOMINAL FINISH GRADE AS SHOWN ON THE PLANS AND SHALL ADD 2" OF TOPSOIL TO BRING LANDSCAPING SUBGRADE AS PROVIDED TO THE LANDSCAPING CONTRACTOR, TO 2" BELOW NOMINAL FINISH GRADE.
7. THE CONTRACTOR SHALL STOCKPILE AN ADEQUATE QUANTITY OF TOPSOIL, FOR USE BY THE LANDSCAPER TO BRING FINISH GRADE IN THE LANDSCAPED AREAS TO NOMINAL FINISH GRADE AS SHOWN ON THESE PLANS. WHERE SOD IS PLACED, ADJUST GRADES SO THAT TOP OF SOD MATCHES TOP OF CURB AND FLOW LINES OF DRAINAGE SWALES, UNLESS OTHERWISE SPECIFIED ON THESE PLANS.



VICINITY MAP
1 IN. = 4,000 FT.

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUCH CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

TEMPORARY BENCHMARK "A":

A BOX CUT SET ON THE BACK OF A CURB ±140 FEET NORTHEAST FROM THE CENTERLINE OF S.A.W. GRIMES BOULEVARD ROAD, ±470 FEET NORTHEAST FROM THE INTERSECTION OF S.A.W. GRIMES BOULEVARD AND LOUIS HENNA BLVD.
ELEVATION: 758.87

TEMPORARY BENCHMARK "B":

A BOX CUT SET ON THE BACK OF A CURB ±130 FEET NORTHEAST FROM THE CENTERLINE OF S.A.W. GRIMES BOULEVARD ROAD, ±245 FEET NORTHEAST FROM THE INTERSECTION OF S.A.W. GRIMES BOULEVARD AND LOUIS HENNA BLVD
ELEVATION: 767.26

THE DIMENSION GROUP
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TEL: 214.343.5460 www.dimensiongroup.com

TBPE FIRM REGISTRATION #F-8396

STATE OF TEXAS
KEATON L. MAI
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SHEET
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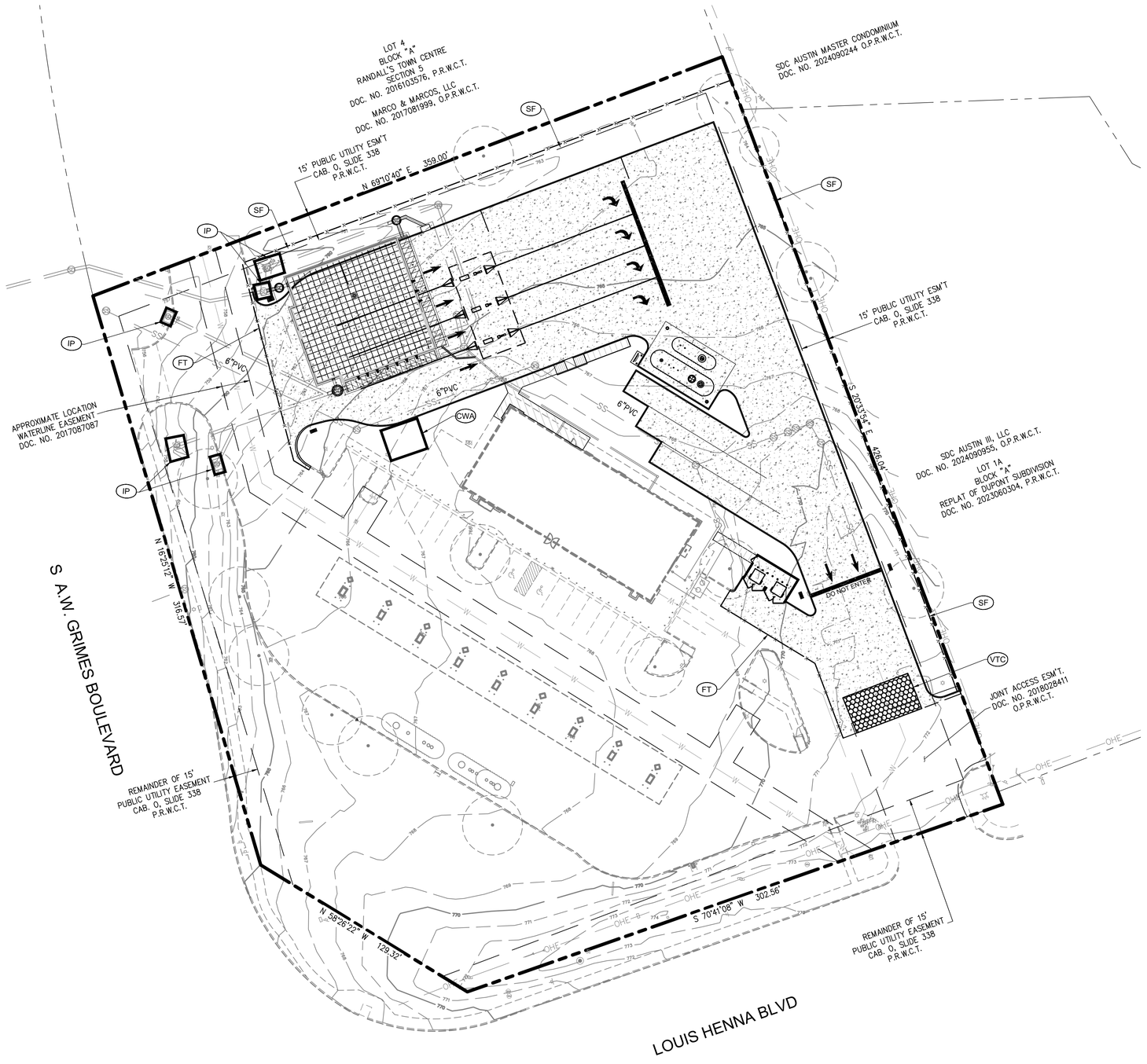

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30 0 15 30
1 INCH = 30 FEET

EROSION CONTROL KEYNOTES:

- (CWA) CONCRETE WASHOUT AREA
- (DC) DIVERSION CHANNEL
- (SF) SILT FENCE
- (SSA) STABILIZED STAGING AREA
- (ST) SEDIMENT TRAP
- (VTC) VEHICLE TRACKING CONTROL

SEDIMENT AND EROSION CONTROL NOTES:

1. SEE GENERAL NOTES ON SHEET C1.0
2. ALL EROSION AND SEDIMENT CONTROL PRACTICES AND OTHER PROTECTIVE MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION. REGULAR INSPECTION AND MAINTENANCE OF BMPs SHOULD BE LOGGED AND REMEDIAL ACTION TAKEN AS SOON AS PRACTICAL.
3. PERIMETER EROSION CONTROL BMPs ARE TO REMAIN IN PLACE UNTIL PERMANENT GROUND COVERAGE IS ACHIEVED.
4. ALL DISTURBED AREAS NOT TO BE LANDSCAPED ARE TO BE SEEDED AND MULCHED WITHIN 14 DAYS OF FINAL GRADING. SURFACE IS TO BE AMENDED WITH TOPSOIL AND SEEDED WITH LOCAL DRYLAND GRASS SEED MIX.
5. CONTRACTOR IS RESPONSIBLE TO OBTAINING AN CITY OF ROUND ROCK STORMWATER CONSTRUCTION PERMIT.

SITE PREPARATION / INITIAL CBMPs

1. INSTALL ALL PERIMETER CBMPs PRIOR TO BEGINNING SITE GRADING.
2. INSTALL ALL SILT FENCE IMMEDIATELY BEHIND BACK OF CURB, SIDEWALK, AND/OR ROADWAY. IF A GAP OF EXPOSED SOIL EXISTS, A STRIP OF EROSION CONTROL BLANKETING MAY BE NECESSARY.
3. INSTALL PTP, SSA, VTC IMMEDIATELY UPON ESTABLISHMENT OF NEAR GRADE CONDITIONS IN THOSE AREAS.
4. CONTACT PUBLIC WORKS TO SCHEDULE A PRE-CONSTRUCTION INSPECTION.
5. MAINTAIN EXISTING SEDIMENTATION BASIN AS LONG AS POSSIBLE DURING OVERLOT GRADING AND BUILDING CONSTRUCTION.

UTILITY / INFRASTRUCTURE / BUILDING CONSTRUCTION INTERIM CBMPs

1. MAINTAIN / REPAIR / REPLACE ALL CBMPs INSTALLED DURING INITIAL PHASE.
2. INSTALL INLET PROTECTION FOR NEW ON-SITE INLETS.
3. CONDUCT INSPECTIONS OF ALL CBMPs EVERY 14 DAYS AND AFTER ALL PRECIPITATION EVENTS.
   LOG INSPECTIONS ON LOG SHEET.
4. WALK PERIMETER OF SITE TO ENSURE NO SEDIMENT IS BYPASSING CBMPs.
5. INSPECT DISCHARGE POINTS.
6. MAINTAIN EXISTING SEDIMENTATION BASIN AS LONG AS POSSIBLE DURING OVERLOT GRADING AND BUILDING CONSTRUCTION.

PERMANENT SITE STABILIZATION / LANDSCAPING FINAL CBMPs

1. MAINTAIN / REPAIR / REPLACE ALL EROSION AND SEDIMENT CONTROL CBMPs INSTALLED DURING INITIAL AND INTERIM PHASES.
2. CONDUCT FINAL INSPECTION OF ALL PERIMETER BMPs. LOG INSPECTIONS ON LOG SHEET.
3. ENSURE ALL DISTURBED AREAS NOT LANDSCAPED ARE SEEDED AND PROPERLY MULCHED AND SECURELY CRIMPED.
4. INSTALL EROSION CONTROL BLANKET ON ALL SLOPE GREATER THE 4:1.
5. CONTACT PUBLIC WORKS TO SCHEDULE A FINAL INSPECTION.
6. LANDSCAPE SHOWN ONLY FOR INFORMATIONAL PURPOSES.
   REFER TO LANDSCAPE PLAN FOR DESIGN.

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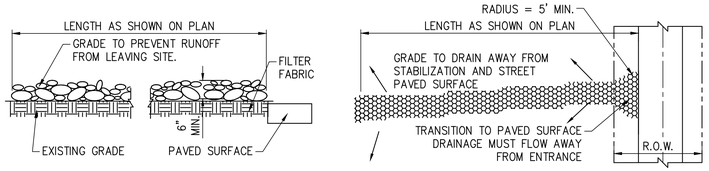


PROFILE VIEW
N.T.S.

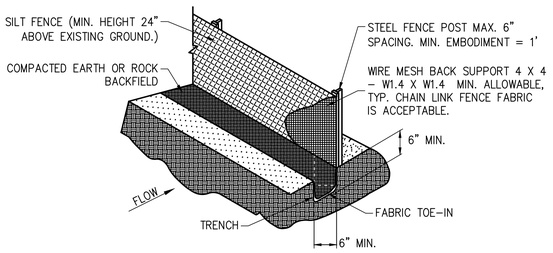
PLAN VIEW
N.T.S.

STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

1. STONE SHALL BE 3 TO 6 INCH DIAMETER CRUSHED ROCK OR ACCEPTABLE CRUSHED PORTLAND CEMENT CONCRETE.
2. LENGTH SHALL BE SHOWN ON PLANS, WITH A MINIMUM LENGTH OF 30 FEET FOR LOTS WHICH ARE LESS THAN 150 FEET FROM EDGE OF PAVEMENT. THE MINIMUM DEPTH IN ALL OTHER CASES SHALL BE 50 FEET.
3. THE THICKNESS SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH SHALL BE NO LESS THAN THE FULL WIDTH OF ALL POINTS ON INGRESS OR EGRESS.
5. WHEN NECESSARY, VEHICLES SHALL BE CLEANED. REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE STREET AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF FLOWING SEDIMENT ON TO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PAVED SURFACES MUST BE REMOVED IMMEDIATELY.
7. THE ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

1 / C10.1 TYPICAL CONSTRUCTION ENTRANCE DETAILS
N.T.S.



SILT FENCE - ISOMETRIC PLAN VIEW
N.T.S.

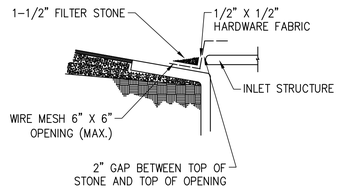
GENERAL NOTES

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLIDE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFIELD WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. INSPECTION SHALL BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

2 / C10.1 TYPICAL SILT FENCE DETAIL
N.T.S.

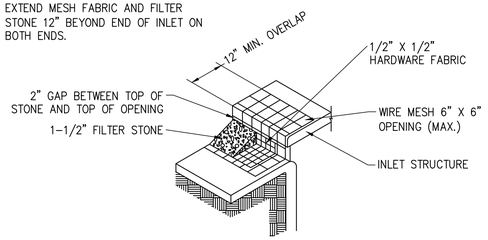
EROSION GENERAL NOTES

1. EROSION CONTROL DEVICES AS SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBING ACTIVITIES ON THE PROJECT.
2. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER FOR THE CITY OF ROUND ROCK.
3. IF THE EROSION CONTROL PLANS AS APPROVED CANNOT CONTROL EROSION AND OFF-SITE SEDIMENTATION FROM THE PROJECT, THE EROSION CONTROL PLAN WILL BE REQUIRED TO BE REVISED AND/OR ADDITIONAL EROSION CONTROL DEVICES WILL BE REQUIRED ON SITE.
4. IF OFF-SITE SOIL BORROW OR SPOIL SITES ARE USED IN CONJUNCTION WITH THIS PROJECT, THIS INFORMATION SHALL BE DISCLOSED AND SHOWN ON THE EROSION CONTROL PLAN. OFF-SITE BORROW AND SPOIL AREAS ARE CONSIDERED A PART OF THE PROJECT SITE AND THEREFORE SHALL COMPLY WITH THE CITY OF ROUND ROCK EROSION CONTROL REQUIREMENTS. THESE AREAS SHALL BE STABILIZED WITH PERMANENT GROUND COVER PRIOR TO FINAL APPROVAL OF THE PROJECT.
5. ALL EROSION CONTROL DEVICES SHALL BE INSPECTED WEEKLY BY THE CONTRACTOR AND AFTER ALL MAJOR RAIN EVENTS.
6. ALL NON-IMPERVIOUS AREAS AFTER CONSTRUCTION SHALL BE COVERED WITH SOD OR LANDSCAPED IN ACCORDANCE WITH THE LANDSCAPE DRAWINGS. ALL OTHER REMAINING AREAS SHALL BE HYDRO-MULCHED OR COVERED WITH CURLEX BLANKET (WHERE SHOWN) AND MAINTAINED UNTIL ESTABLISHED.
7. TEMPORARY STONE STABILIZED CONSTRUCTION ENTRANCE SHALL HAVE THE FOLLOWING MINIMUM DIMENSIONS: 25' WIDE X 50' LONG X 6" DEEP. (3"-5" COURSE AGGREGATE). PLACE FILTER FABRIC UNDER STONE PER N.C.T.C.O.G. ITEM 2.23.3.
8. THE STABILIZED CONSTRUCTION ENTRANCE IS TO BE USED AS A VEHICLE WASH DOWN AREA FOR DEBRIS AND SOIL REMOVAL PRIOR TO EXITING THE SITE. THIS STABILIZED ENTRANCE SHALL BE TOP DRESSED WITH ADDITIONAL STONE AS NECESSARY. LOCATION OF STABILIZED ENTRANCE MAY BE MODIFIED IF APPROVED BY THE CITY OF ROUND ROCK AND THE DESIGN ENGINEER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE, AS THE ENTITY EXERCISING OPERATIONAL CONTROL, FOR ALL PERMITTING AS REQUIRED BY THE EPA/TCEQ. THIS INCLUDES, BUT IS NOT LIMITED TO, PREPARATION OF N.O.I. AND NOT AND PAYMENT OF ALL ASSOCIATED FEES.
10. INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN STORM EVENTS TO INSURE THAT THE DEVICES ARE FUNCTIONING PROPERLY. WHEN SEDIMENT OR MUD HAS CLOGGED THE VOID SPACES BETWEEN STONES OR MUD IS BEING TRACKED ONTO A PUBLIC ROADWAY THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASH DOWN OPERATION HALL NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRST LOWING THROUGH ANOTHER BMP TO CONTROL OFF SITE SEDIMENTATION. PERIODIC RE-GRADING OR THE ADDITION OF NEW STONE MAY BE REQUIRED TO MAINTAIN THE EFFICIENCY OF THE INSTALLATION.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTAL OF N.O.I., N.O.T. & ANY ADDITIONAL INFORMATION REQUIRED BY THE E.P.A.. CONTRACTOR SHALL COMPLY WITH ALL E.P.A. STORM WATER POLLUTION PREVENTION REQUIREMENTS.
12. EROSION CONTROL MEASURES MAY ONLY BE PLACED IN FRONT OF INLETS, OR IN CHANNELS, DRAINAGEWAYS OR BORROW DITCHES AT RISK OF THE CONTRACTOR. THE CONTRACTOR SHALL REMAIN LIABLE FOR ANY DAMAGE CAUSED BY THE MEASURES, INCLUDING FLOODING DAMAGE, WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE. AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGEWAYS AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREDGED OF ANY SEDIMENT GENERATED BY THE PROJECT OR DEPOSITED AS A RESULT OF EROSION CONTROL MEASURES.



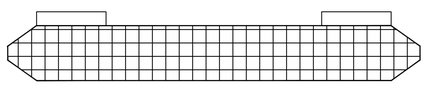
INLET PROTECTION
N.T.S.

NOTE:
EXTEND MESH FABRIC AND FILTER STONE 12" BEYOND END OF INLET ON BOTH ENDS.



INLET PROTECTION
ISOMETRIC PLAN VIEW
N.T.S.

3 / C10.1 TYPICAL INLET PROTECTION DETAILS
N.T.S.



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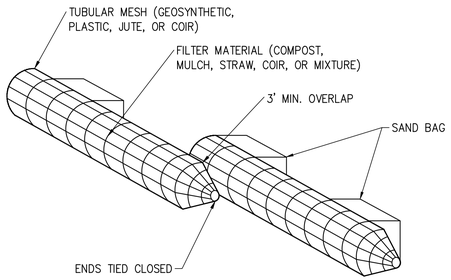
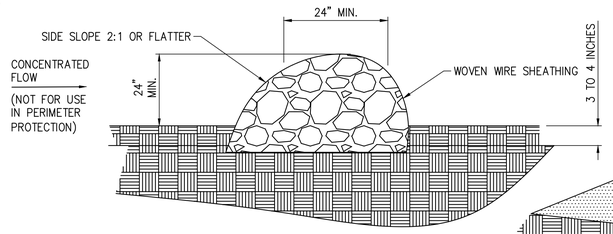


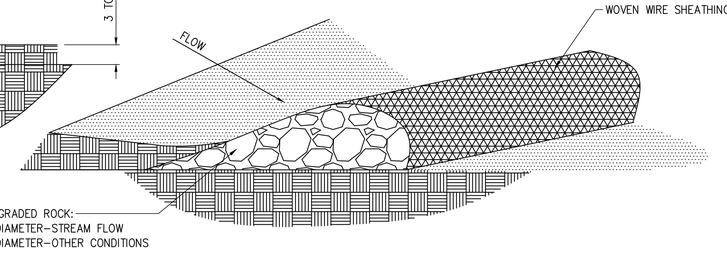
GENERAL NOTES

1. CONTRACTOR SHALL PLACE ORGANIC FILTER TUBE IN CURB AND GUTTER DIRECTLY DOWNSTREAM OF ACTIVITY WORK AREA AND STOCKPILES.
2. SNAD BAGS SHALL BE USED IN LIEU OF STAKES ON ORGANIC FILTER TUBES.

4 / C10.1 FILTER TUBE NOTES & DETAILS
N.T.S.



CROSS SECTION

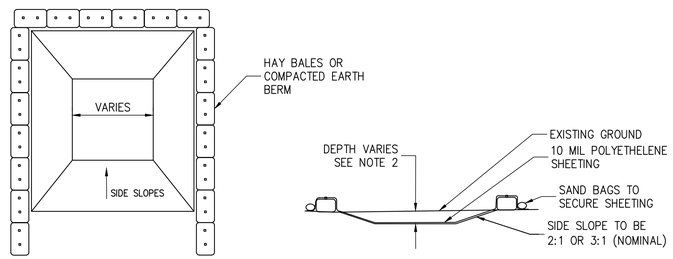


ISOMETRIC VIEW

ROCK CHECK DAM GENERAL NOTES

1. WOVEN WIRE SHEATHING SHALL HAVE MAXIMUM OPENING OF ONE (1) INCH AND A MINIMUM WIRE SIZE OF 20 GAUGE AND SHALL BE SECURED WITH SHOAT RINGS.
2. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN AND SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION PROPERLY.
3. WHEN SILT REACHES A DEPTH EQUAL TO ONE–THIRD OF THE HEIGHT OF THE BERM OR ONE FOOT. WHICHEVER IS LESS. THE SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.
4. WHEN THE SITE IS COMPLETELY STABILIZED. THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

5 / C10.1 ROCK CHECK DAM
N.T.S.



6 / C10.1 CONCRETE WASHOUT AREA DETAIL
N.T.S.

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EROSION CONTROL NOTES & DETAILS

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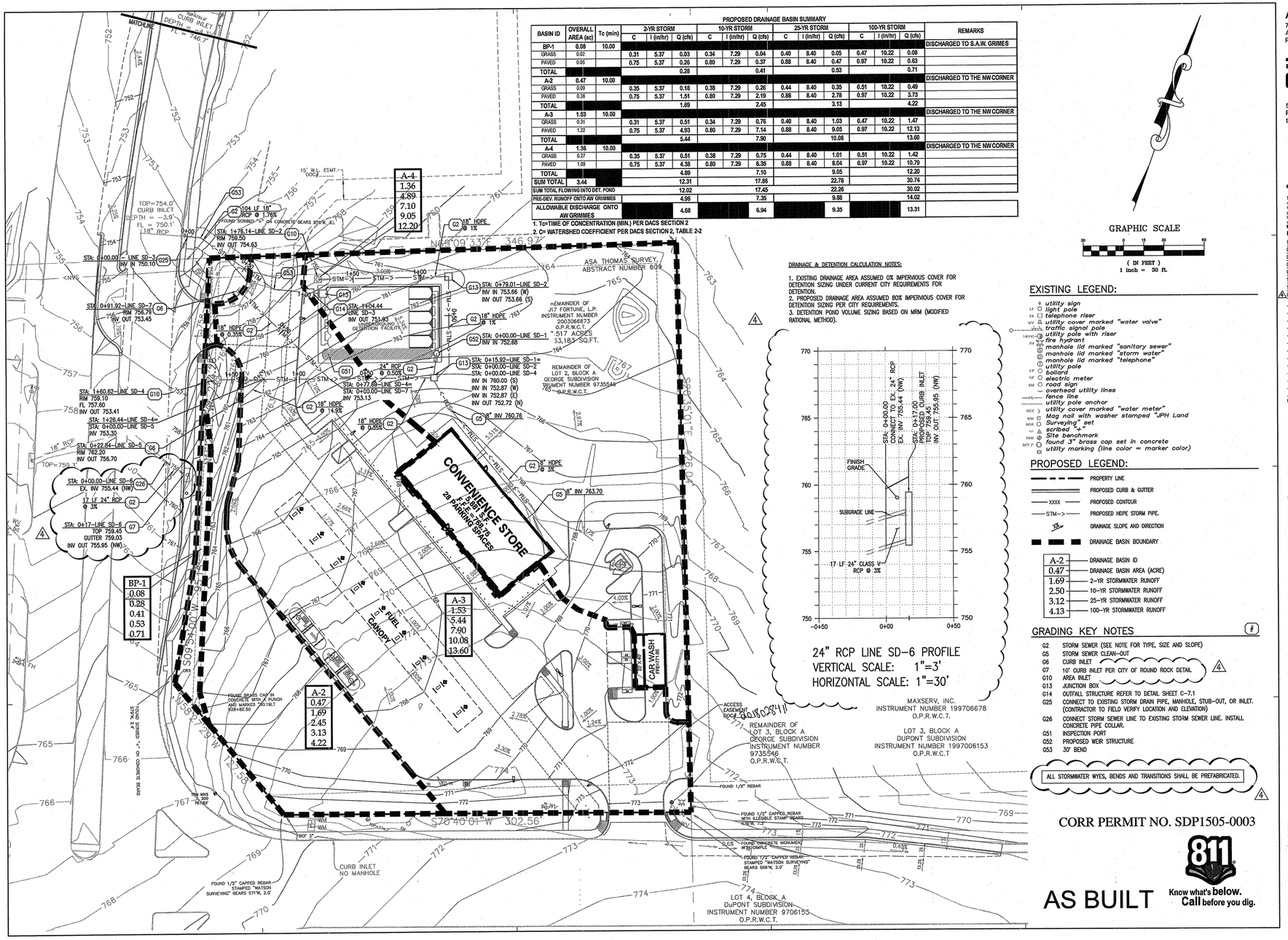
C10.1

TEMPORARY STORMWATER SECTION

Drainage Area Map

ATTACHMENT "G"

FOR REFERENCE ONLY



PROPOSED DRAINAGE BASIN SUMMARY

BASIN ID	OVERALL AREA (ac)	Tc (min)	2-YR STORM C	2-YR STORM I (in/hr)	2-YR STORM Q (cfs)	10-YR STORM C	10-YR STORM I (in/hr)	10-YR STORM Q (cfs)	25-YR STORM C	25-YR STORM I (in/hr)	25-YR STORM Q (cfs)	100-YR STORM C	100-YR STORM I (in/hr)	100-YR STORM Q (cfs)	REMARKS
BP-1	0.08	10.00													DISCHARGED TO S.A.W. GRIMES
GRASS	0.02		0.31	5.37	0.03	0.34	7.29	0.04	0.40	8.40	0.05	0.47	10.22	0.08	
PAVED	0.05		0.75	5.37	0.26	0.80	7.29	0.37	0.88	8.40	0.47	0.97	10.22	0.63	
TOTAL					0.28			0.41			0.53			0.71	
A-2	0.47	10.00													DISCHARGED TO THE NW CORNER
GRASS	0.09		0.35	5.37	0.18	0.38	7.29	0.26	0.44	8.40	0.35	0.51	10.22	0.49	
PAVED	0.38		0.75	5.37	1.51	0.80	7.29	2.19	0.88	8.40	2.78	0.97	10.22	3.73	
TOTAL					1.69			2.45			3.13			4.22	
A-3	1.53	10.00													DISCHARGED TO THE NW CORNER
GRASS	0.31		0.31	5.37	0.51	0.34	7.29	0.76	0.40	8.40	1.03	0.47	10.22	1.47	
PAVED	1.22		0.75	5.37	4.93	0.80	7.29	7.14	0.88	8.40	9.65	0.97	10.22	12.13	
TOTAL					5.44			7.90			10.08			13.60	
A-4	1.36	10.00													DISCHARGED TO THE NW CORNER
GRASS	0.27		0.35	5.37	0.51	0.38	7.29	0.75	0.44	8.40	1.01	0.51	10.22	1.42	
PAVED	1.09		0.75	5.37	4.38	0.80	7.29	6.35	0.88	8.40	8.04	0.97	10.22	10.78	
TOTAL					4.89			7.10			9.05			12.20	
SUM TOTAL	3.44				12.31			17.35			22.76			30.74	
SUM TOTAL FLOWING INTO DET. POND					12.02			17.45			22.26			30.02	
PRE-DEV. RUNOFF ONTO AW GRIMMES					4.96			7.35			9.88			14.02	
ALLOWABLE DISCHARGE ONTO AW GRIMMES					4.68			6.94			9.35			13.31	

1. Tc=TIME OF CONCENTRATION (MIN.) PER DACS SECTION 2
2. C= WATERSHED COEFFICIENT PER DACS SECTION 2, TABLE 2-2

DRAINAGE & DETENTION CALCULATION NOTES:

1. EXISTING DRAINAGE AREA ASSUMED 0% IMPERVIOUS COVER FOR DETENTION SIZING UNDER CURRENT CITY REQUIREMENTS FOR DETENTION.
2. PROPOSED DRAINAGE AREA ASSUMED 80% IMPERVIOUS COVER FOR DETENTION SIZING PER CITY REQUIREMENTS.
3. DETENTION POND VOLUME SIZING BASED ON MRM (MODIFIED RATIONAL METHOD).

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)

1 inch = 30 ft.

EXISTING LEGEND:

- utility sign
- light pole
- telephone riser
- utility cover marked "water valve"
- traffic signal pole
- utility pole with riser
- fire hydrant
- manhole lid marked "sanitary sewer"
- manhole lid marked "storm water"
- manhole lid marked "telephone"
- utility pole
- bollard
- electric meter
- road sign
- overhead utility lines
- fence line
- utility pole anchor
- utility cover marked "water meter"
- Mag nail with washer stamped "JPH Land Surveying" set
- scribed "+"
- Site benchmark
- found 3" brass cap set in concrete
- utility marking (line color = marker color)

PROPOSED LEGEND:

- PROPERTY LINE
- PROPOSED CURB & GUTTER
- XXXX PROPOSED CONTOUR
- STM—> PROPOSED HDPE STORM PIPE.
- DRAINAGE SLOPE AND DIRECTION
- DRAINAGE BASIN BOUNDARY

A-2	DRAINAGE BASIN ID
0.47	DRAINAGE BASIN AREA (ACRE)
1.69	2-YR STORMWATER RUNOFF
2.50	10-YR STORMWATER RUNOFF
3.12	25-YR STORMWATER RUNOFF
4.13	100-YR STORMWATER RUNOFF

GRADING KEY NOTES

G2	STORM SEWER (SEE NOTE FOR TYPE, SIZE AND SLOPE)
G5	STORM SEWER CLEAN-OUT
G6	CURB INLET
G7	10' CURB INLET PER CITY OF ROUND ROCK DETAIL
G10	AREA INLET
G13	JUNCTION BOX
G14	OUTFALL STRUCTURE REFER TO DETAIL SHEET C-7.1
G25	CONNECT TO EXISTING STORM DRAIN PIPE, MANHOLE, STUB-OUT, OR INLET. (CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION)
G26	CONNECT STORM SEWER LINE TO EXISTING STORM SEWER LINE. INSTALL CONCRETE PIPE COLLAR.
G51	INSPECTION PORT
G52	PROPOSED WEIR STRUCTURE
G53	30° BEND

ALL STORMWATER WYES, BENDS AND TRANSITIONS SHALL BE PREFABRICATED.

CORR PERMIT NO. SDP1505-0003

AS BUILT

Know what's below. Call before you dig.

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUCH CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

AECOM
7400 Amberglen Blvd., Bldg. E
Austin, Texas 78729
Phone: (512) 454-8807

PROJECT TEAM
GreenbergFarrow
FIRM#: F-4380
5500 Democracy Drive, Suite 125
Plano, TX 75024
t: 972 362 6118

THE DIMENSION GROUP
ARCHITECTURE · CIVIL ENGINEERING · MEP ENGINEERING
10755 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL: 214.343.8460 · www.thedimensiongroup.com

TBPE FIRM REGISTRATION #F-8396
STATE OF TEXAS · KEATON L. MAI · 125077 · PROFESSIONAL ENGINEER
12/15/2025

ISSUE/REVISION RECORD

DATE	DESCRIPTION
03-03-16	PRELIM SITE PLAN SUBMISSION
04-27-16	SDP SUBMITTAL #1
05-24-16	BID SET
08-08-16	CITY COMMENTS 5-18-16
10-17-16	ASAP MEETING
10-24-16	PRE-CON MEETING
05-01-17	STORM SEWER REVISION

STATE OF TEXAS · KEATON L. MAI · 125077 · LICENSED PROFESSIONAL ENGINEER
10/3/2017

PROFESSIONAL IN CHARGE
KIEW KAM, PE
PROFESSIONAL ENGINEER
LICENSE NO. 92808

PROJECT MANAGER
KIEW KAM, PE

QUALITY CONTROL
KIEW KAM, PE

DRAWN BY
ORLANDO RODRIGUEZ

PROJECT NAME
CIRCLE K STORES, INC.
12911 N. TELECOM PKWY.
TAMPA, FL 33637
213-910-6800
WWW.CIRCLE K.COM

ROUND ROCK
TEXAS
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS

PROJECT NUMBER
20151264

SHEET TITLE
DRAINAGE PLAN

SHEET NUMBER
C-4.0

#	DATE	REVISION DESCRIPTION	BY
1	05-01-17	STORM SEWER REVISION	

drawn by
designed by
approved by

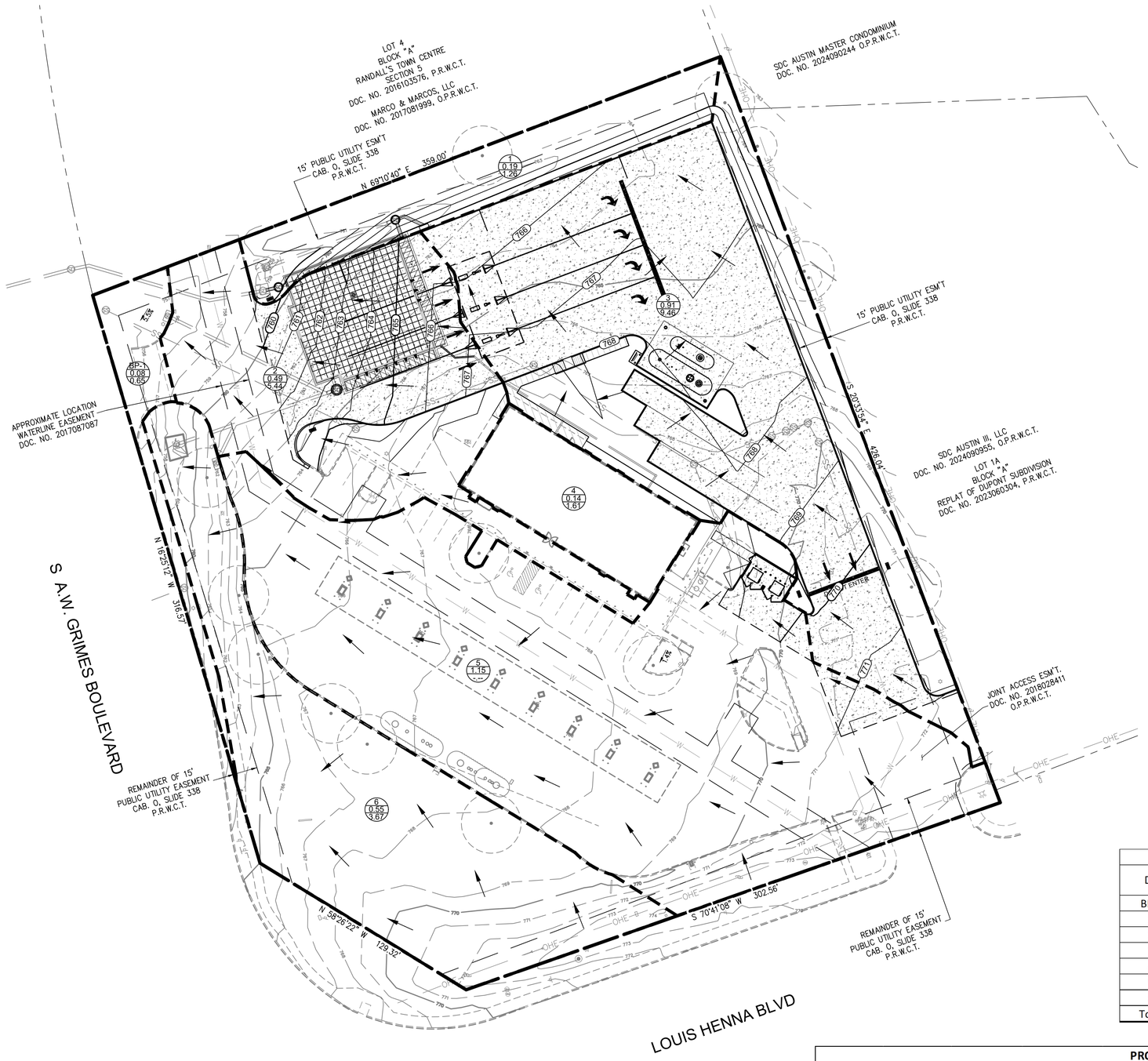
project no. 230-817
date 12/15/2025 – 4:11 pm
dwg C9.0 EXISTING DRAINAGE AREA MAP.dwg

EXISTING DRAINAGE AREA MAP

CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

SHEET
C9.0

[24x36TBs.dwg] [V-BASE.dwg]
Drawing name: L:\Circle K\2023 PWF Projects\230-817 – Round Rock, TX – Louis Henna Blvd & A. W. Grimes Blvd, NEC (900 Louis Henna Blvd)\02 Civil\C3D\Sheet\02\C9.0 EXISTING DRAINAGE AREA MAP.dwg Dec 15, 2025 – 4:11pm



STORM DRAIN NOTES:

1. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR HIS MEANS AND METHODS OF CONSTRUCTION, JOB SITE CONDITIONS AND JOB SITE SAFETY, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS. THE CONTRACTOR SHALL SAVE, PROTECT, INDEMNIFY, DEFEND AND HOLD HARMLESS THE OWNER, THE ARCHITECT AND THE ENGINEER FROM ANY CLAIM OF LIABILITY, REAL OR ALLEGED, ARISING OUT OF THE PERFORMANCE OF ANY WORK ON THIS PROJECT. THE CONTRACTOR SHALL NAME THE OWNER, THE ARCHITECT AND THE ENGINEER AS "ADDITIONAL INSURED" ON HIS INSURANCE POLICIES.
2. EXISTING ABOVE GROUND UTILITIES HAVE BEEN SHOWN BASED ON INFORMATION SHOWN ON A SURVEY OF THE PROPERTY BY OTHERS. UNDERGROUND UTILITIES ARE SHOWN BASED ON RECORD DATA AND MAY NOT BE COMPLETE OR EXACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS AND DEPTHS OF ALL ABOVE GROUND AND UNDERGROUND UTILITIES AND ESTABLISHING THEIR EXACT LOCATION AND DEPTH PRIOR TO SETTING ANY FINISH GRADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE GROUND OR UNDERGROUND UTILITIES, INCLUDING THOSE NOT SHOWN ON THE PLANS. THE CONTRACTOR IS ADVISED TO CONTACT THE CITY AND ALL FRANCHISE UTILITY COMPANIES, EASEMENT HOLDERS, ETC. AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION IN THE VICINITY OF ANY UNDERGROUND UTILITY.
3. CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF ROUND ROCK STANDARDS, SPECIFICATIONS AND DETAILS FOR STORM SEWER CONSTRUCTION.
4. THE CONTRACTOR SHALL COMPLY WITH ALL BUILDING CODES AND REGULATIONS, FEDERAL STATE, COUNTY AND CITY SAFETY CODES AND INSPECTION REQUIREMENTS.
5. TRENCH SAFETY: IF ANY TRENCH ON THIS JOB SITE, INCLUDING OPEN EXCAVATIONS WHOSE DIMENSIONS CAUSE THEM TO BE CONSIDERED TRENCHES BY OSHA, REGARDLESS OF WHETHER FOR THE INSTALLATION OF UTILITIES, FOUNDATIONS OR ANY OTHER SITE ELEMENT, IS EQUAL TO OR GREATER THAN 5.00' DEPTH, THEN THE CONTRACTOR SHALL NOT PERFORM ANY TRENCHING ON THIS SITE UNTIL HE HAS FIRST OBTAINED DETAILED PLANS AND SPECIFICATIONS FOR TRENCH SAFETY SYSTEMS CONFORMING TO OSHA REQUIREMENTS. SUCH PLANS AND SPECIFICATIONS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY OR CONTRACTED BY THE CONTRACTOR AND SHALL BE CONSIDERED A PART OF THE CONTRACTOR'S MEANS AND METHOD'S OF CONSTRUCTION. IF THIS PROJECT IS OFFERED FOR BID, THE BIDS MUST CONTAIN A SEPARATE UNIT PRICE PAY ITEM FOR TRENCH SAFETY.
6. WHERE CONSTRUCTION DETAILS AND SPECIFICATIONS ARE NOT NOTED ON THESE PLANS USE CITY OF ROUND ROCK STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION.

GRAPHIC SCALE
30 0 15 30
1 INCH = 30 FEET

COMPOSITE RUNOFF COEFFICIENT CALCULATIONS

DA	Undeveloped			Developed			Composite	
	C25	C100	A (SF)	C25	C100	A (SF)	C25	C100
BP-1	0.48	0.54	0.05	0.88	0.97	0.03	0.61	0.68
1	0.48	0.54	0.19	0.88	0.97	0.01	0.49	0.55
2	0.48	0.54	0.05	0.88	0.97	0.44	0.84	0.93
3	0.48	0.54	0.21	0.88	0.97	0.70	0.79	0.87
4	0.48	0.54	0.00	0.88	0.97	0.14	0.88	0.97
5	0.48	0.54	0.13	0.88	0.97	1.02	0.84	0.92
6	0.48	0.54	0.53	0.88	0.97	0.02	0.50	0.56
Total	0.48	0.54	1.15	0.88	0.97	2.37	0.75	0.83

PROPOSED DRAINAGE AREA MAP CALCULATIONS

DA	AREA (acres)	Tc (min)	25-YR STORM C	25-YR STORM I (in/hr)	25-YR STORM Q (cfs)	100-YR STORM C	100-YR STORM I (in/hr)	100-YR STORM Q (cfs)	Description
BP-1	0.08	10	0.61	9.06	0.44	0.68	11.90	0.65	Sheet flows to S A.W. Grimes Blvd
1	0.19	10	0.49	9.06	0.85	0.55	11.90	1.26	Sheet flows to existing wye inlet
2	0.49	10	0.84	9.06	3.75	0.93	11.90	5.44	Sheet flows to existing curb inlet
3	0.91	10	0.79	9.06	6.51	0.87	11.90	9.46	Sheet flows to proposed curb inlet
4	0.14	10	0.88	9.06	1.11	0.97	11.90	1.61	Sheet flows to roof drains
5	1.15	10	0.84	9.06	8.72	0.92	11.90	12.65	Sheet flows to existing curb inlet
6	0.55	10	0.50	9.06	2.48	0.56	11.90	3.67	Sheet flows to existing wye inlet
Total	3.517				23.87			34.71	

CAUTION NOTICE TO CONTRACTORS

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TEL: 214.343.4640 · www.dimensiongroup.com

TBPE FIRM REGISTRATION #F-8396

STATE OF TEXAS
KEATON L. MAI
125077
PROFESSIONAL ENGINEER

12/15/2025

THESE PLANS ARE INSTRUMENTS OF PROFESSIONAL SERVICE AND ARE PROTECTED BY COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS INCLUDING COPYRIGHT. THEY SHALL NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF THE DIMENSION GROUP.

#	DATE	REVISION DESCRIPTION	BY

drawn by
designed by
approved by

project no. 230-817
date 12/15/2025 – 4:11 pm
dwg C9.1 PROPOSED DRAINAGE AREA MAP.dwg

PROPOSED DRAINAGE AREA MAP

CIRCLE K
900 LOUIS HENNA BLVD
ROUND ROCK, TEXAS 78664

SHEET
C9.1

TEMPORARY STORMWATER SECTION

Inspection and Maintenance for BMP's

ATTACHMENT "I"

The temporary BMP's will be inspected on a weekly basis and after rainfall events, for their compliance with TCEQ. The contractor will be responsible for maintenance of these items. If cited by inspection, the contractor will have 24 hours to bring the delinquent items up to standard. The contractor will keep a record of these items on site in the construction trailer. A Stormwater Pollution Prevention Plan will be filed prior to commencement of construction.

TEMPORARY STORMWATER SECTION

Schedule of Interim and Permanent Soil Stabilization Practices

ATTACHMENT "J"

The project's limits of construction are primarily confined to the project site. The project will begin with rough cutting of site. The utilities will be installed. The backfill behind paving will be completed and within 120 days. The site will be revegetated with hydro mulch mix to be determined by the City of Dripping Springs to stabilize the soil. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.

IV. AGENT AUTHORIZATION FORM

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

I Marcella Rocha,
Print Name

Assistant Secretary,
Title - Owner/President/Other

of Circle K Gas Station,
Corporation/Partnership/Entity Name

have authorized Lee A. Whited
Print Name of Agent/Engineer

of Carlson Brigance and Doering, 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:

Applicant's Signature

01-19-2026
Date

THE STATE OF Texas §

County of Bexar §

BEFORE ME, the undersigned authority, on this day personally appeared Marcella Rocha 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 19th day of January, 2026.

NOTARY PUBLIC

Susan Lee Krill
My Commission Expires
1/5/2030
Notary ID133517032

Susan Krill
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 1.5.2030

V. APPLICATION FEE FORM

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Circle K Gas Station
Regulated Entity Location: 900 Louis Henna Blvd, Round Rock, TX 78664
Name of Customer: Circle K Stores Inc.
Contact Person: Marcella Rocha Phone: 602 782 8000
Customer Reference Number (if issued):CN 6001344
Regulated Entity Reference Number (if issued):RN 101489805

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
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
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	Acres	$
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	2 Tanks	$ 1,300
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: _____

Date: 01/19/2026

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

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

Organized Sewage Collection Systems and Modifications

Project	*Cost per Linear Foot*	*Minimum Fee-Maximum Fee*
Sewage Collection Systems	$0.50	$650 - $6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	*Cost per Tank or Piping System*	*Minimum Fee-Maximum Fee*
Underground and Aboveground Storage Tank Facility	$650	$650 - $6,500

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

VI. TCEQ CORE DATA FORM

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions on completing 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.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal *(Core Data Form should be submitted with the renewal form)*

☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 6001344		**RN 101489805**

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy)

☐ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

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:*

Circle K Stores, Inc

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
		74-1149540	

11. Type of Customer: ☒ Corporation ☐ Individual ☐ Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees

☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☒ 501 and higher

13. Independently Owned and Operated?

☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:

Real Estate Dept / DC 17 / PO Box 52085

City	Phoenix	**State**	AZ	**ZIP**	85072	**ZIP + 4**	2085

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	marcella.rocha@circlek.com

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(855) 276-1947		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core 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.)*

Circle K Stores, Inc.

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	900 Louis Henna Blvd.							
	City	Round Rock	**State**	TX	**ZIP**	78664	**ZIP + 4**	7223
24. County	Williamson							

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:	

26. Nearest City	**State**	**Nearest ZIP Code**

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

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)
5500	5412	457110	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Gas station and convenience store.

34. Mailing Address:	**1130 West Warner Rd.**							
	City	**Tempe**	**State**	**AZ**	**ZIP**	**85284**	**ZIP + 4**	**2816**
35. E-Mail Address:	**marcella.rocha@circleK.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(602) 728-8000	**N/A**	( ) -

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.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Lee A. Whited, P.E.	**41. Title:**	Senior Manager

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512 **)** 280-5160		**(** 512 **)** 280-5165	lee@cbdeng.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:	Carlson, Brigance & Doering, Inc.	**Job Title:**	Senior Manager
Name *(In Print):*	Lee A. Whited, P.E.	**Phone:**	**(** 512 **)** 280- **5160**
Signature:		**Date:**	1/27/26