UST FACILITY PLAN

Facility ID No.: *NA*

Halftime 1
3125 Summit Church Road
San Antonio, TX

Prepared for:

Karim Ali
Marshall and Bulverde, LLC
7410 Blanco Road, Suite 225
San Antonio, Texas 78216-4363

Prepared by:

GEO STRATA ENVIRONMENTAL CONSULTANTS, INC.
PO Box 830606
SAN ANTONIO, TEXAS 78283

Geo Strata Job # 1022-SA Other

REGISTERED CORRECTIVE ACTION SPECIALIST — RCAS #00093
EXP DATE 2/2024

Suzanne Green. P.G., Geo Strata Environmental Consultants

CORRECTIVE ACTION PROJECT MANAGER — CAPM #1550
P.G. License # 6511

Cheri Krieg, P.G.

February 2024

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APPENDIX E

Agent Authorization Form
Application Fee Form
Core Data Form

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: Halftime 1						**2. Regulated Entity No.:**			
3. Customer Name: Marshall and Bulverde, LLC						**4. Customer No.:**			
5. Project Type: **(Please circle/check one)**	New **X**		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST **X**	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential **X**			**8. Site (acres):**			12.3
9. Application Fee:	$650		**10. Permanent BMP(s):**						
11. SCS (Linear Ft.):			**12. AST/UST (No. Tanks):**			One 30,000 UST			
13. County:	**Bexar**		**14. Watershed:**			Unnamed Tributary 5 to Elm Waterhole Creek of Salado Creek			

Application Distribution

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

http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	__	__	__
Region (1 req.)	__	__	__
County(ies)	__	__	__
Groundwater Conservation District(s)	__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 __Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	_X_	__	__	__	__
Region (1 req.)	_X_	__	__	__	__
County(ies)	_X_	__	__	__	__
Groundwater Conservation District(s)	_X_ Edwards Aquifer Authority _X_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 X San Antonio (SAWS-ETJ) __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. Cheri Krieg, P.G.
Print Name of Customer/**Authorized Agent**
Signature of Customer/**Authorized Agent** Date 12/20/23

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):	

Appendix A

TECQ-0587
General Information Form

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: Cheri Krieg, PG

Date: 12/20/23

Signature of Customer/Agent:

Project Information

1. Regulated Entity Name: Halftime #1, 3125 Summit Church Road, San Antonio, TX
2. County: Bexar
3. Stream Basin: Salado Creek
4. Groundwater Conservation District (If applicable): Trinity Glen Rose
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

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

7. Customer (Applicant):

   Contact Person: Mr. Karim Ali
   Entity: Marshall and Bulverde, LLC
   Mailing Address: 7410 Blanco Road Suite 225
   City, State: San Antonio, TX Zip: 78216
   Telephone: 210-960-5540 FAX: _____
   Email Address: kns3bigs@gmail.com

8. Agent/Representative (If any):

   Contact Person: Cheri Krieg, PG
   Entity: Geo Strata Environmental Consultants, Inc.
   Mailing Address: PO Box 830606
   City, State: San Antonio, TX Zip: 78283
   Telephone: 210-492-7282 FAX: _____
   Email Address: ckrieg@geostrata.com

9. Project Location:

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

    The proposed Halftime is located on the northwest corner of Marshall Road and Bulverde Road, San Antonio

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.

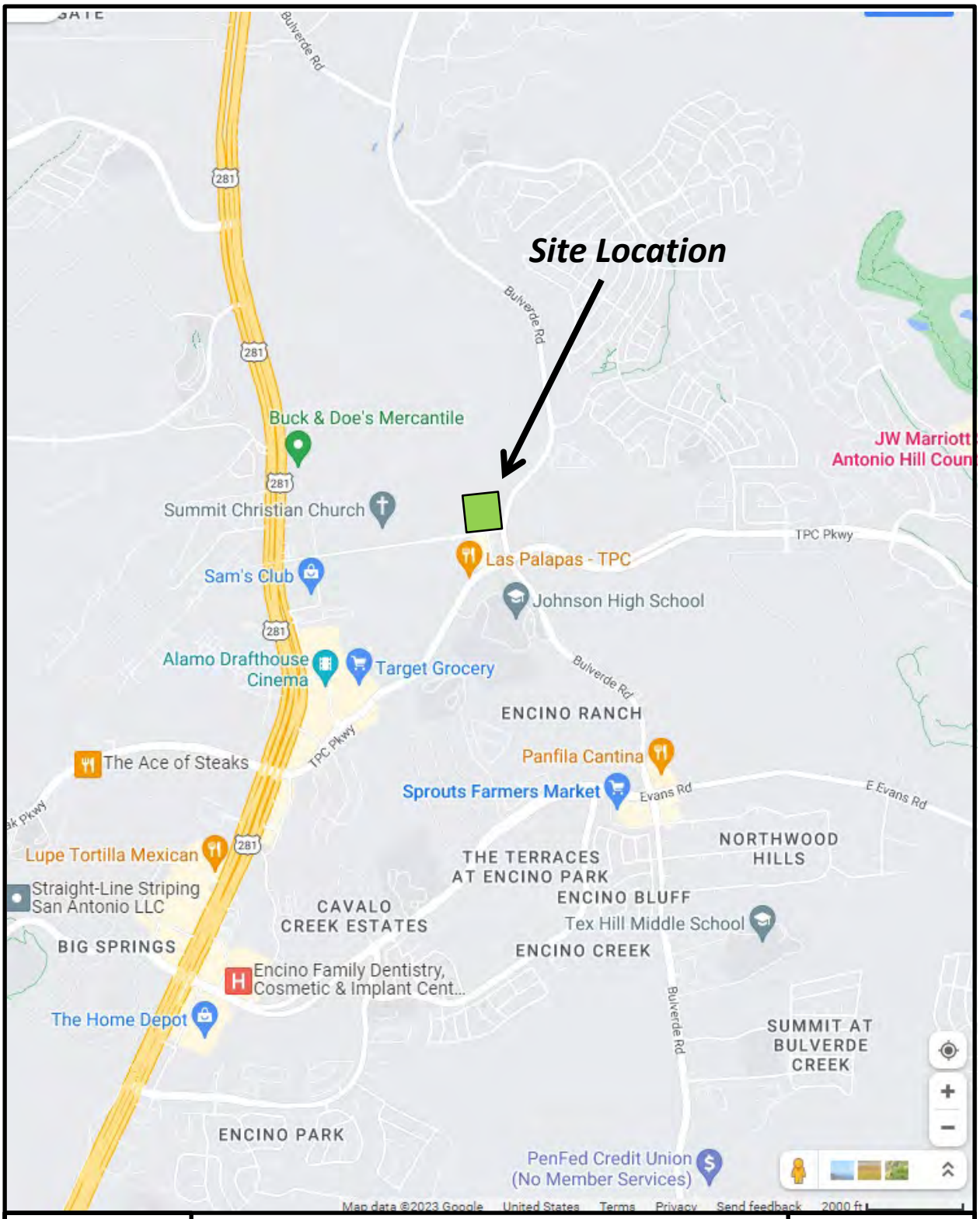
19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

- ☒ 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.

TCEQ-0587 Attachment A
Road Map



Geo Strata

TCEQ-0587 Attachment A
Road Map
Halftime 1
3125 Summit Church Road,
San Antonio, Texas

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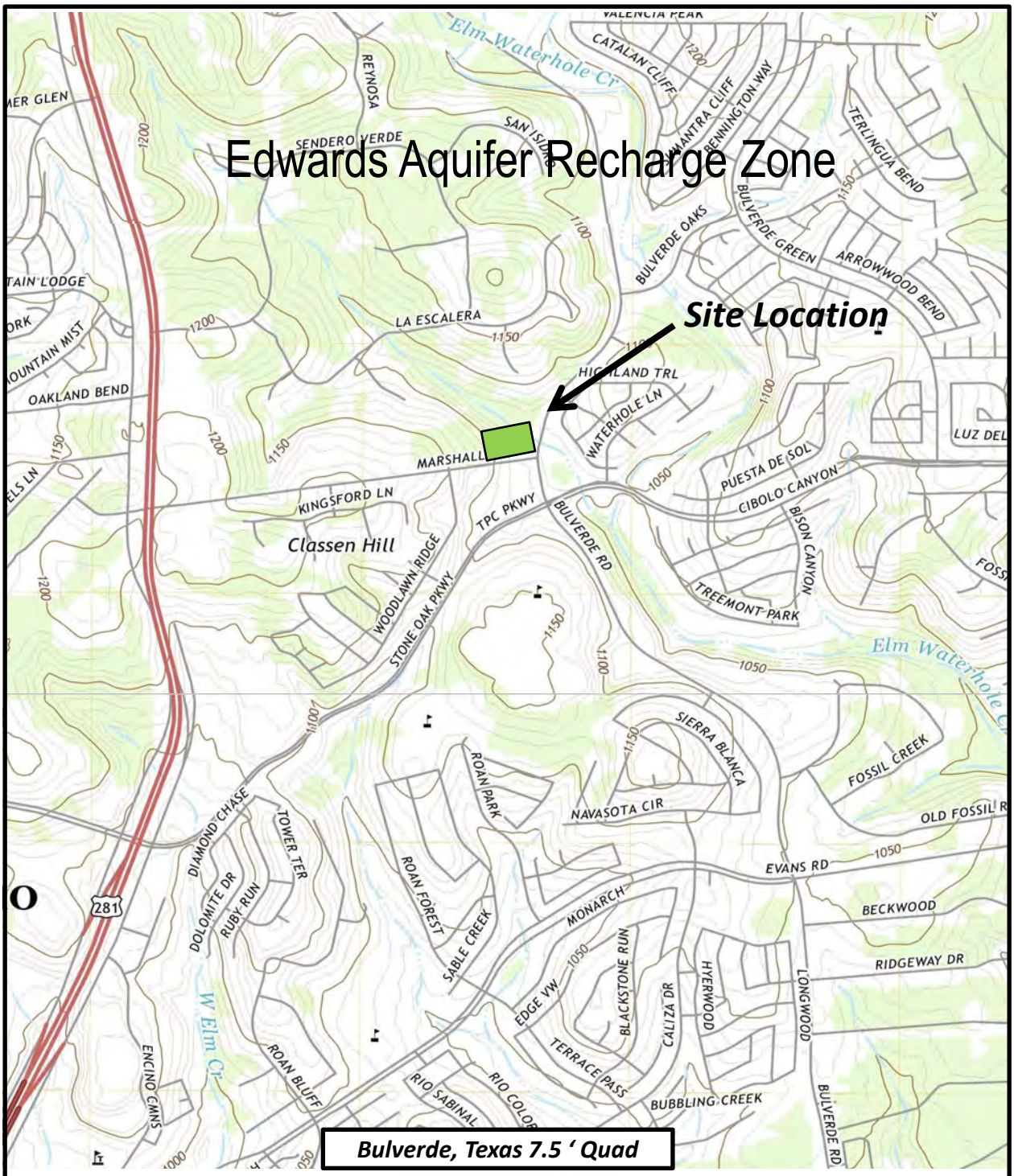
TCEQ-0587 Attachment B
USGS Edwards Aquifer Recharge Map



Geo Strata

TCEQ-0587 Attachment Bi
USGS Map
Halftime 1
3125 Summit Church Road
San Antonio, Texas

N
W E
S

TCEQ Edwards Aquifer

3/20/2023, 12:09:33 PM

Edwards Aquifer Label
City/Place
Groundwater Conservation Districts
Edwards Aquifer Authority
Trinity Glen Rose GCD
TX Counties
7.5 Minute Quad Grid
TCEQ_EDWARDS_OFFICIAL_MAPS

1:18,056
0 0.13 0.25 0.5 mi
0 0.2 0.4 0.8 km

BCAD, Comal County, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA, TCEQ

Web AppBuilder for ArcGIS

BCAD, Comal County, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA | TCEQ |

Geo Strata

TCEQ-0587 Attachment Bii
Edwards Aquifer Recharge Map – TCEQ Map Viewer
Halftime 1
3125 Summit Church Road
San Antonio, Texas

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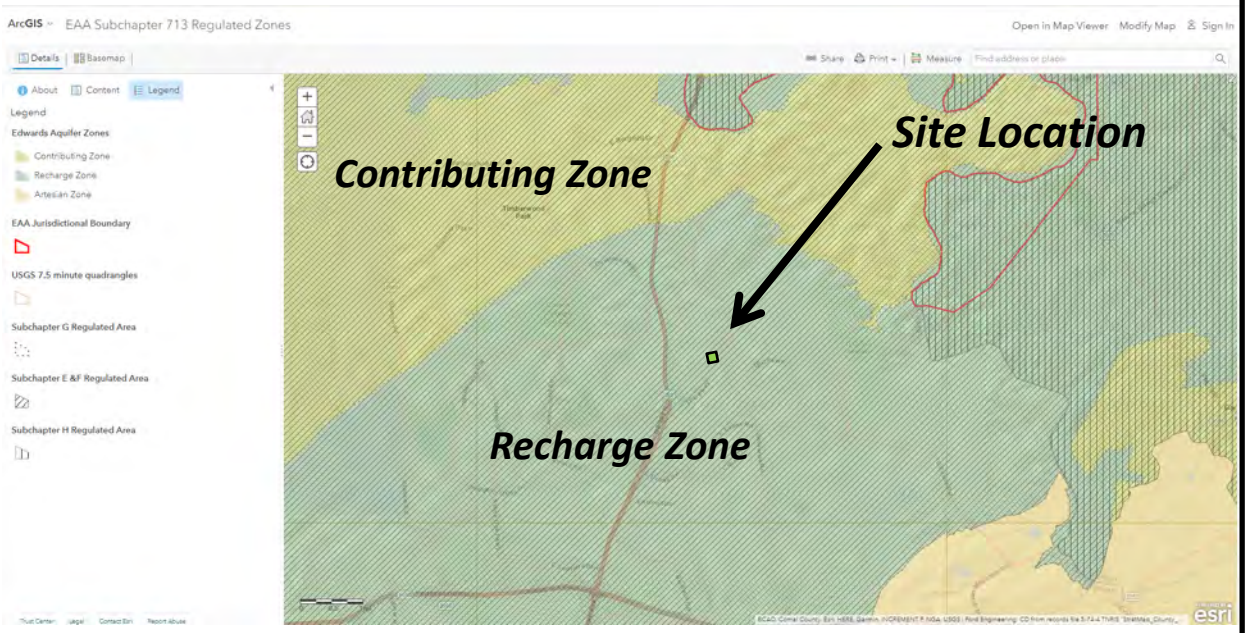

Geo Strata

TCEQ-0587 Attachment Biii
Edwards Aquifer Recharge Map – EEA Map Viewer
Halftime 1
3125 Summit Church Road
San Antonio, Texas

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TCEQ-0587 Attachment C

Project Description

General Information Form - TCEQ-0587
Attachment C – Project Description

Halftime 1
3125 Summit Church Rd.
San Antonio, Texas

The proposed Halftime 1 convenience store equipped with a single underground storage tank (UST), is to be located at 3125 Summit Church Rd. in San Antonio, as shown in **Attachment A, Site Location/Road Map**. The facility is located over the Edwards Aquifer Recharge Zone as shown on **Attachment B, USGS & Edwards Aquifer Zone Maps**. The 12.3-acre property is currently undeveloped and consists of native trees, plants and grasses. The new UST system will consist of a single UST with three compartments, which will be located at the southern end of the property. A total of ten dispensers, located on ten separate islands, will be located north of the UST tank hold and east of the convenience store. A Site Map of the facility is presented in **Appendix C, TCEQ-0583, Site Map and Site Plan.**

Facility diagrams, UST system and containment schematics and manufactures product sheets are attached. Additionally, A description of proposed UST system specifications also detailed below.

The proposed UST system will consist of a single 30,000 gallon Watco Triple Wall tank consisting of a steel primary tank, a steel secondary tank, and a F.R.P. jacketed third tank. The UST is a compartmentalized tank with one 16,000 gallon unleaded gasoline compartment, a 8,000 gallon super unleaded compartment, and a 6,000 gallon diesel compartment. Each compartment will be fitted with Red Jacket 2 hp fixed speed submersible pumps. Automatic shut-off valves (OPW-71SO) will provide the tank with overfill prevention. The automatic shut-off valves will be installed in the drop tubes and set to shut-off delivery at 95% of compartment capacities. Spill protection will be provided by double wall spill containment manholes installed on the fill risers.

Product and venting piping will be Ameron Dualloy 3000/LCX UL-Listed nonmetallic filament-wound, fiberglass reinforced pipe with integral liner (double-walled), which will be contained within 3-inch diameter fiberglass piping to provide “triple wall” protection. An OPW-10 Series safety shear valve will be installed on each product line at the dispenser island surface level to provide automatic shut-off product flow during emergencies. New Gilbarco Encore 700S dispensers will be installed with OPW nozzles, breakaways, and swivels.

Corrosion protection for the metallic components of the UST system will be provided by electrical isolation. The submersible pump housings and pump-end flexible connectors will be installed within a Bravo B-400 x 36-38T-DB-MW double wall, watertight fiberglass encapsulated sump with a 36-inch diameter reducer, which will provide isolation from the corrosive elements of the backfill material while also providing secondary containment for any leaks from these components. Note: The lower part of the sumps were “glassed” by the manufacturer, thus providing tertiary containment. The dispenser-end flexible connector will be electrically isolated from the corrosive elements of the backfill material by Bravo B-9000-D-AB water-tight containment sumps. The vapor recovery riser, the fill tube insert, and the riser for the automatic tank gauging system will be thoroughly coated with black mastic and wrapped with dielectric tape.

The proposed tanks and piping will be monitored for leaks by means of a Veeder-Root TLS-450 Automated Compliance and Site Management inventory control system, Mag Plus Probe leak detection monitors and a PLLD Pressurized Line Leak Detection System line pressure monitor. The tank will be equipped with Veeder-Root non-discriminating liquid sensors that will be installed in both the inner interstitial and outer interstitial spaces between the individual walls of the triple wall tank. The product piping systems will be monitored by non-discriminating liquid sensors, which will be installed in the interstitial of the sub pump sumps and dispenser sumps. Two 4-inch diameter slotted PVC observation wells will be installed in the corners of the tank pit excavation. The tank will also be equipped with an automatic tank-gauging probe (part of the TLS-450), which will automatically inventory the product volume in the tank. Each product piping line will be equipped with a pressurized line leak detection system that is designated to stop product flow in the event a leak in the product line is detected.

All probes and sensors from the tank and piping will be connected to the programmable TLS-450 Automated Compliance and Site Management inventory control system to be located in the store. An audio and visual alarm will be triggered if any liquids, or water is detected. If any liquid sensor is activated, the entire fuel system will be programmed to shutdown all submersible pumps and fuel dispensers until station personnel visually check the source of the problem. The station will remain inoperable until the liquid is removed. Events will be recorded along with the diagnosed problem solution, and the date it was fixed. If a release is suspected, a release determination investigation will be conducted, and a report will be submitted to TCEQ.

Appendix B

TECQ-0585
Geologic Assessment Form

Geologic Assessment of the 12.3-Acre Marshall and Bulverde Roads Project, San Antonio, Bexar County, Texas

MAY 2021

(REVISED JUNE 2022)

PREPARED FOR

UP Engineering + Surveying

PREPARED BY

SWCA Environmental Consultants

Texas Board of Professional Geoscientists, Firm Registration No. 50159

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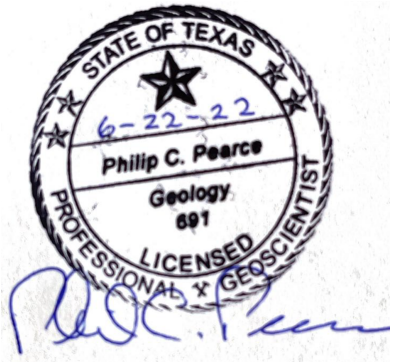
GEOLOGIC ASSESSMENT OF THE 12.3-ACRE MARSHALL AND BULVERDE ROADS PROJECT, SAN ANTONIO, BEXAR COUNTY, TEXAS

Prepared for

UP Engineering + Surveying
11903 Jones Maltsberger Rd.,
Suite 102
San Antonio, TX 78216

Prepared by

Philip Pearce, P.G.
Kenadi Sutton
SWCA ENVIRONMENTAL CONSULTANTS
Texas Board of Professional Geoscientists, Firm Registration No. 50159
4949 N Loop 1604 W, Suite 235
San Antonio, TX 78249
www.swca.com



SWCA Project Number 66055

May 2021
(Revised June 2022)

CONTENTS

FIGURES

APPENDICES

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1 INTRODUCTION

This narrative Geologic Assessment accompanies the Texas Commission on Environmental Quality (TCEQ) Geologic Assessment form TCEQ-0585 completed of a 12.3-acre tract, and a portion of a proposed off-site sanitary sewer line, located northwest of the intersection of Bulverde Road and Marshall Road (Project Site) in San Antonio, northern Bexar County, Texas (Figure 1).

2 METHODOLOGY

An SWCA scientist conducted field surveys on 5 April and 11 November 2021, and 14 and 22 June 2022. The pedestrian survey was completed by walking parallel transects spaced approximately 50 feet apart as directed by the TCEQ in the Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones (Rev. 10-01-04). Closer spacing was used where vegetation inhibited clear observation. The SWCA scientist carefully examined all potential karst features, including depressions, holes, and animal burrows, for subsurface extent evidence. SWCA used several techniques for this effort, including probing with a digging implement to determine the thickness and consistency of fill material and feeling for air flow which may indicate the presence of a sub-surface void space. Other techniques included recording notable feature site characteristics such as vegetation types or a semi-circular burrow mound produced by small mammal activity.

3 RESULTS

3.1 Site Overview

The Project Site lies within the Edwards Aquifer Recharge Zone (TCEQ 2020). Topography generally slopes to the east towards Elm Waterhole Creek, with elevations ranging from approximately 1,120 to 1,060 feet above mean sea level.

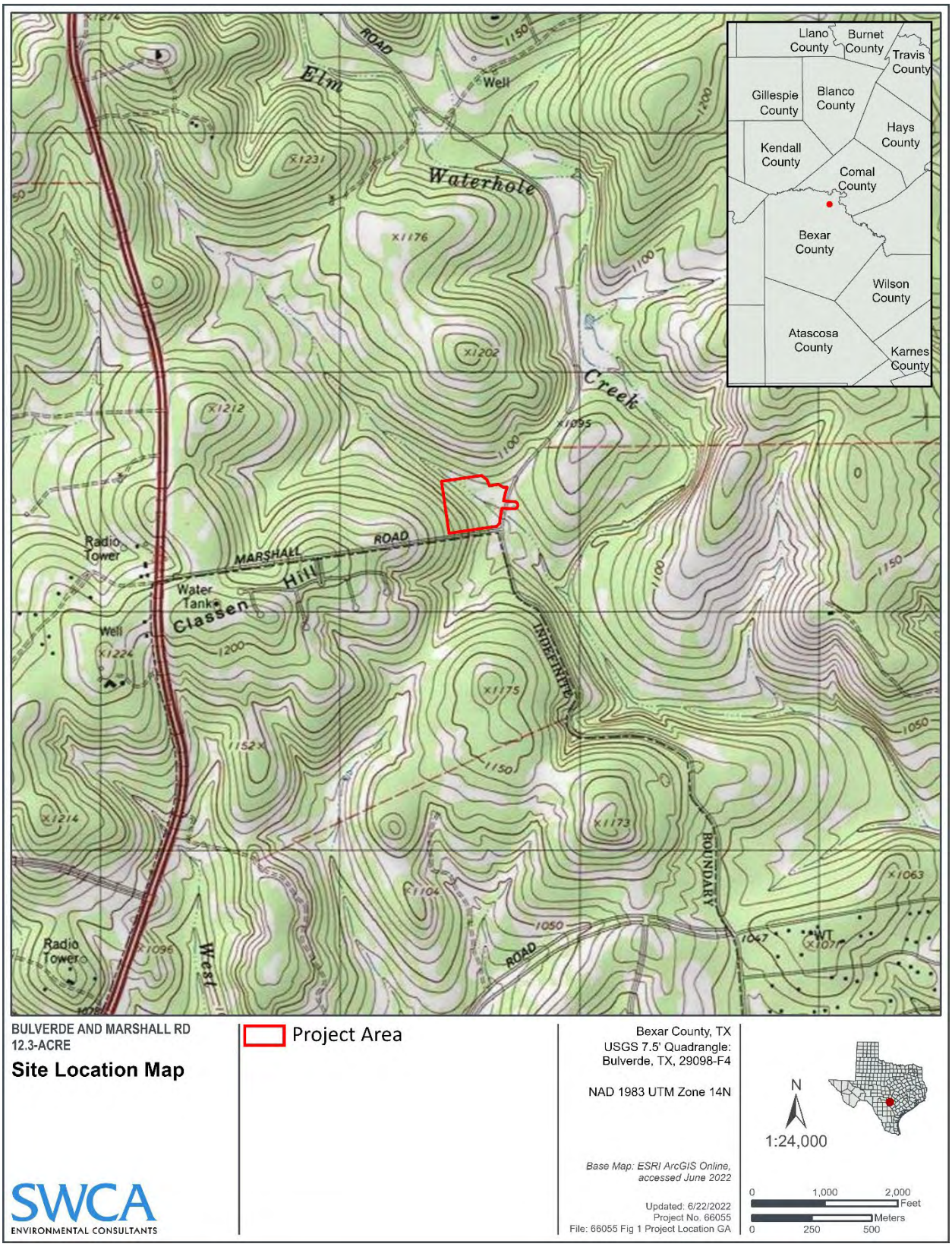

Figure 1. Project Site location map.

3.2 Geology

The Project Site is underlain by the Kainer Formation (Blome 2005) (Attachment D). The geology of the Project Site has been mapped most recently at a useful scale by Blome (2005) and SWCA finds this interpretation of the geology to be generally accurate. A Stratigraphic Column is included as Attachment B within Appendix A.

The Project Site occurs along the Balcones Fault Zone (BFZ) within the Edwards Aquifer Recharge Zone. Structural down-warping occurred with the Gulf of Mexico's ancestral formation during the middle Tertiary. The earth's crust was stretched in response and the BFZ formed along a zone of weakness, which currently marks the boundary between the Edwards Plateau and the Gulf Coastal Plain in central Texas. This zone is characterized by a series of northeast trending, predominantly normal, nearly vertical, en echelon faults. No faults cross the Project Site (Blome 2005).

The Project Site is within the Edwards Aquifer Recharge Zone (EARZ). Recharge into the Edwards Aquifer primarily occurs in areas where the Edwards Group and Georgetown Formation are exposed at the surface. Most recharge is from direct infiltration via precipitation and streamflow loss. Recharge occurs predominantly along secondary porosity features such as faults, fractures, and karst features (caves, solution cavities, sinkholes, etc.). Karst features are commonly formed along joints, fractures, and bedding plane surfaces in the Edwards Group and Georgetown Formation.

3.3 Soils

The Natural Resources Conservation Service (NRCS) identifies two soil unit within the Project Area (NRCS 2022).

- Eckrant very cobbly clay, 5 to 15 percent slopes (TaC)
- Eckrant cobbly clay, 1 to 8 percent slopes (TaD)

The TaC and TaD soil types are considered in the "D" hydrologic soil group classification, which have a very slow infiltration rate when thoroughly wet. A map of the Project Site displaying soil units is included in Attachment D.

3.4 Site Hydrogeologic Assessment

SWCA did not identify any geologic or manmade features on the Project Site, other than an existing sanitary sewer line that will be tied into (Feature S-1). The overall potential for fluid migration to the Edwards Aquifer for the site appears relatively low compared to background infiltration rates due to the presence of no geologic recharge features.

Feature S-1 is an existing sanitary sewer line that will be tied into. Typically trenches for sanitary sewer lines are cut into bedrock, and the trenches are backfilled with a mixture of fine and coarse material, which might have a greater probability for rapid infiltration than the surrounding undisturbed areas. Therefore, the probability of rapid infiltration is intermediate.

4 REFERENCES

Blome, C.D., Faith, J.R., Pedraza, D.E., Ozuna, G.B., Cole, J.C., Clark, A.K., Small, T.A., and Morris, R.R. 2005. Geologic Map of the Edwards Aquifer Recharge Zone, South-central Texas. U.S. Geological Survey, Scientific Investigations Map SIM-2873. 1:200,000.

Natural Resource Conservation Service (NRCS). 2022. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available at: http://websoilsurvey.nrcs.usda.gov/. Accessed June 2022.

Texas Commission on Environmental Quality. 2022. Edwards Aquifer Viewer v3.8. Available at: http://tceq.maps.arcgis.com/apps/webappviewer/index.html?id=2e5afa3ba8144c30a49d3dc1ab49edcd. Accessed June 2022.

Texas Water Development Board (TWDB). 2022. Water Data Interactive, interactive GIS database. Available at: http://www2.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer. Accessed June 2022.

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APPENDIX A

Texas Commission on Environmental Quality (TCEQ) Forms

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

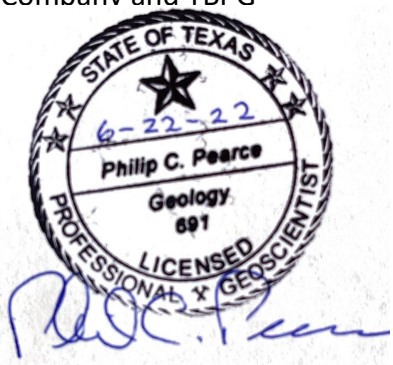
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Philip Pearce, P.G. Telephone: 210.877.2847

Date: June 22, 2022 Fax: 210.877.2848

Representing: SWCA Environmental Consultants- TBPG No. 50159 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: 12.3-acre Marshall and Bulverde Roads Project

Project Information

1. Date(s) Geologic Assessment was performed: April 5 and November 9, 2021, June 14 and 22, 2022
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)

Soil Name	Group*	Thickness(feet)
Eckrant very cobbly clay, 5 to 15 percent slopes (TaC)	D	<2.0
Eckrant cobbly clay, 1 to 8 percent slopes (TaD)	D	<2.0

** 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" = 416'

9. Method of collecting positional data:

   ☒ Global Positioning System (GPS) technology.

☐ Other method(s). Please describe method of data collection: _____

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.
12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

    ☐ Geologic or manmade features were not discovered on the project site during the field investigation.

13. ☒ The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☐ There are _____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
    - ☐ The wells are not in use and have been properly abandoned.
    - ☐ The wells are not in use and will be properly abandoned.
    - ☐ The wells are in use and comply with 16 TAC Chapter 76.

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

Administrative Information

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

ATTACHMENT A

Geologic Assessment Table

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: 12.3-Acre Marshall and Bulverde Roads Project

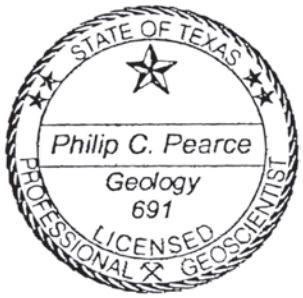
LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DIM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
S-1	29.663592°	-98.434756°	MB	30	Kek	2.5	100	?	--	0	--	--	Fine	20	50		X		X	Floodplain

* DATUM: NAD 83

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 6/22/2022

Sheet 1 of 1

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

ATTACHMENT B

Stratigraphic Column

Stratigraphic Column

Note: The shaded areas represent the lithology that outcrops on the property.[1]

Upper Cretaceous	Upper Confining Units			Navarro and Taylor Groups, undivided; 600 feet thick	
				Austin Group; 130-150 feet thick	
				Eagle Ford Group; 30-50 feet thick	
				Buda Limestone; 40-50 feet thick	
				Del Rio Clay; 40-50 feet thick	
Lower Cretaceous	I	Edwards Aquifer		Georgetown Formation	10-40 feet thick
	II		Edwards Group	Person Formation; 170-200 feet thick	Cyclic and Marine member, undivided
	III				Leached and Collapsed member, undivided
	IV				Regional Dense member
	V			Kainer Formation; 260-310 feet thick	Grainstone member
	VI				Kirschberg Evaporite member
	VII				Dolomitic member
	VIII				Basal Nodular member
	Lower Confining Units			Upper member of Glen Rose Formation; 350-500 feet thick	

[1] Blome, C.D., Faith, J.R., Pdraza, D.E, Ozuna, G.B, Cole, J.C., Clark, A.K., Small, T.A., and Morris, R.R. 2005. Geologic map of the Edwards aquifer recharge zone, south-central-Texas. U.S. Geological Survey SIM-2873. Scale 1:200,000.

ATTACHMENT C

Narrative Description of Site Geology

PLEASE REFER TO SECTION 3.0 OF THIS REPORT FOR GEOLOGIC NARRATIVE DESCRIPTION

ATTACHMENT D

Site Geologic and Soil Unit Maps

Kek

S-1

Bulverde Rd

24359

Valley Crk

Highline

3200

3209

Highline Rd

Western Mdw

3199

24361

Bulverde Rd

3039

3043

Marshall Rd

3199

Marshall Rd

3199

Marshall Rd

Woodlawn Rdg

24361

Bulverde Rd

STATE OF TEXAS
6-23-22
Philip C. Pearce
Geology
691
LICENSED
PROFESSIONAL X GEOSCIENTIST

BULVERDE AND MARSHALL RD 12.3-ACRE

Geology Map

1 inch = 60 feet

SWCA
ENVIRONMENTAL CONSULTANTS

Feature

Project Area

Geologic Unit

Kek - Kainer Formation

Bexar County, TX
USGS 7.5' Quadrangle:
Bulverde, TX, 29098-F4

NAD 1983 UTM Zone 14N

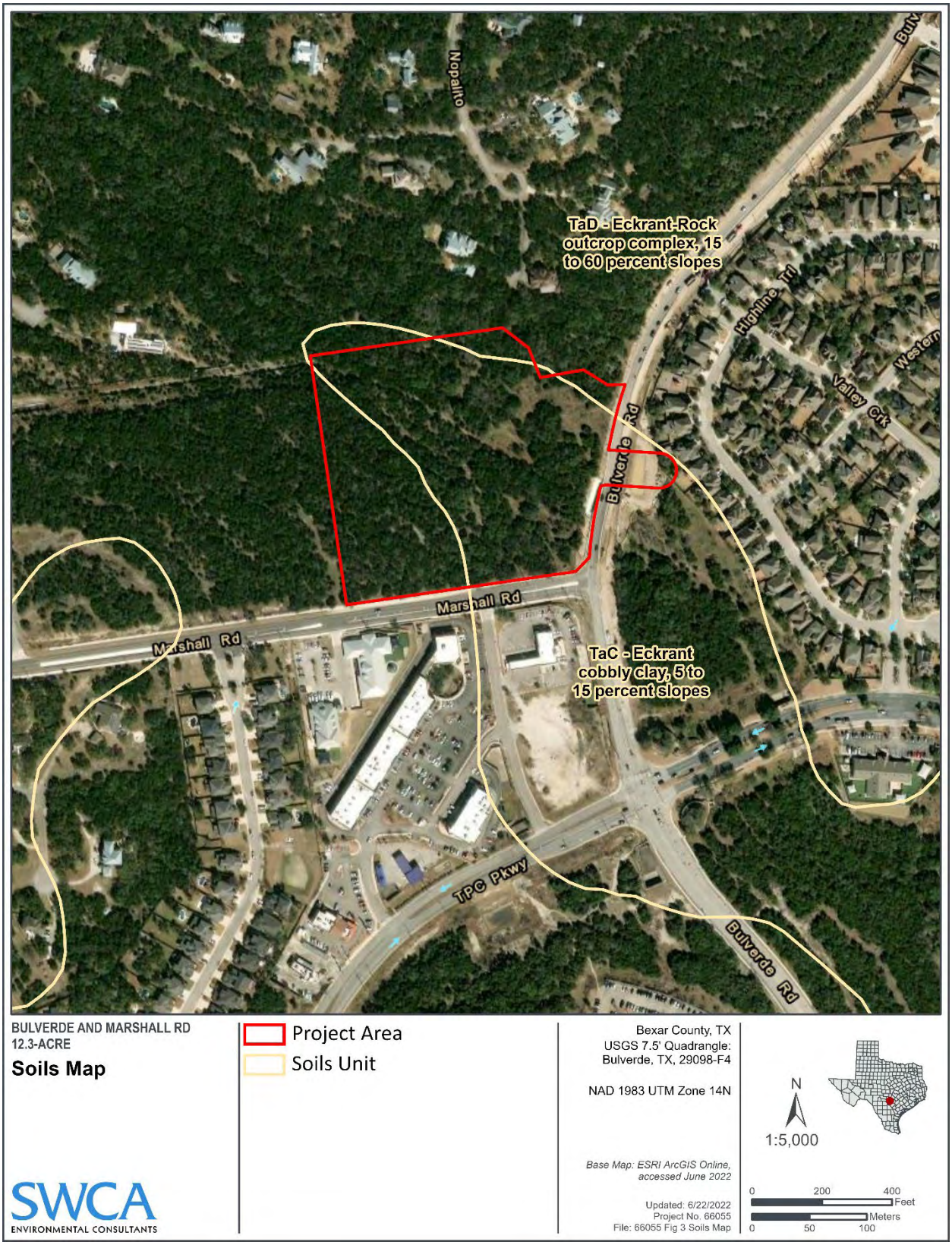
Base Map: ESRI ArcGIS Online, accessed June 2022

Updated: 6/22/2022
Project No. 65555
File: 65555 Fig 2 Geology Map

N

1:720

0 25 50 Feet
0 7.5 15 Meters


Nopalito
TaD - Eckrant-Rock outcrop complex, 15 to 60 percent slopes
Highline Trl
Western
Valley Crk
Bulverde Rd
Marshall Rd
Marshall Rd
TaC - Eckrant cobbly clay, 5 to 15 percent slopes
TPC Pkwy
Bulverde Rd
BULVERDE AND MARSHALL RD
12.3-ACRE
Soils Map
Project Area
Soils Unit
Bexar County, TX
USGS 7.5' Quadrangle:
Bulverde, TX, 29098-F4
NAD 1983 UTM Zone 14N
Base Map: ESRI ArcGIS Online, accessed June 2022
Updated: 6/22/2022
Project No. 66055
File: 66055 Fig 3 Soils Map
N
1:5,000
0 200 400
Feet
Meters
0 50 100
SWCA
ENVIRONMENTAL CONSULTANTS

Appendix C

TECQ-0583
Underground Storage Tank (UST) Facility Plan

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: Cheri Krieg, PG

Date: 12/19/23

Signature of Customer/Agent:

Regulated Entity Name: Halftime 1

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	Compartmented 1a) 16,000 1b) 8,000 1c) 6,000	1a) regular unleaded gasoline 1b) super unleaded 1c) diesel	Steel primary tank, steel secondary tank, fiberglass jacketed tertiary tank
2			
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	Double- wall steel tank with fiberglass jacketed tertiary tank
Product Delivery Piping	Double wall fiberglass with tertiary containment
Vapor Recovery Piping	NA
Submersible Pumps	Fiberglass isolation enclosure
Flex Connector (dispenser end)	Fiberglass isolation enclosure
Flex Connector (pump end)	Fiberglass isolation enclosure
Riser	Tarred and taped

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 14 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" (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" = 50.

14. 100-year floodplain boundaries:

    ☒ The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA Risk MAP Online Viewer 3/20/2023

    ☒ 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 08/30/23, 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.

TCEQ-0583 Attachment A

Detailed Narrative of UST Facility

TCEQ-0583 Attachment A
Detailed Narrative of UST Facility

Halftime 1
3125 Summit Church Rd.
San Antonio, Texas

The proposed Halftime 1 convenience store equipped with a single underground storage tank (UST), is to be located at 3125 Summit Church Rd. in San Antonio. The facility is located over the Edwards Aquifer Recharge Zone. The 12.3 acre property is currently undeveloped and consists of native trees, plants and grasses. The new UST system will consist of a single UST with three compartments, which will be located at the southern end of the property. A total of ten dispensers, located on ten separate islands, will be located north of the UST tank hold and east of the convenience store.

Facility diagrams, UST system and containment schematics and manufactures product sheets are attached. Additionally, A description of proposed UST system specifications also detailed below.

The proposed UST system will consist of a single 30,000 gallon Watco Triple Wall tank consisting of a steel primary tank, a steel secondary tank, and a F.R.P. jacketed third tank. The UST is a compartmentalized tank with one 16,000 gallon unleaded gasoline compartment, a 8,000 gallon super unleaded compartment, and a 6,000 gallon diesel compartment. Each compartment will be fitted with Red Jacket 2 hp fixed speed submersible pumps. Automatic shut-off valves (OPW-71SO) will provide the tank with overfill prevention. The automatic shut-off valves will be installed in the drop tubes and set to shut-off delivery at 95% of compartment capacities. Spill protection will be provided by double wall spill containment manholes installed on the fill risers.

Product and venting piping will be Ameron Dualloy 3000/LCX UL-Listed nonmetallic filament-wound, fiberglass reinforced pipe with integral liner (double-walled), which will be contained within 3-inch diameter fiberglass piping to provide “triple wall” protection. An OPW-10 Series safety shear valve will be installed on each product line at the dispenser island surface level to provide automatic shut-off product flow during emergencies. New Gilbarco Encore 700S dispensers will be installed with OPW nozzles, breakaways, and swivels.

Corrosion protection for the metallic components of the UST system will be provided by electrical isolation. The submersible pump housings and pump-end flexible connectors will be installed within a Bravo B-400 x 36-38T-DB-MW double wall, watertight fiberglass encapsulated sump with a 36-inch diameter reducer, which will provide isolation from the corrosive elements of the backfill material while also providing secondary containment for any leaks from these components. Note: The lower part of the sumps were “glassed” by the manufacturer, thus providing tertiary containment. The dispenser-end flexible connector will be electrically isolated from the corrosive elements of the backfill material by Bravo B-9000-D-AB water-tight containment sumps. The vapor recovery riser, the fill tube insert, and the riser for the automatic tank gauging system will be thoroughly coated with black mastic and wrapped with dielectric tape.

The proposed tanks and piping will be monitored for leaks by means of a Veeder-Root TLS-450 Automated Compliance and Site Management inventory control system, Mag Plus Probe leak

detection monitors and a PLLD Pressurized Line Leak Detection System line pressure monitor. The tank will be equipped with Veeder-Root non-discriminating liquid sensors that will be installed in both the inner interstitial and outer interstitial spaces between the individual walls of the triple wall tank. The product piping systems will be monitored by non-discriminating liquid sensors, which will be installed in the interstitial of the sub pump sumps and dispenser sumps. Two 4-inch diameter slotted PVC observation wells will be installed in the corners of the tank pit excavation. The tank will also be equipped with an automatic tank-gauging probe (part of the TLS-450), which will automatically inventory the product volume in the tank. Each product piping line will be equipped with a pressurized line leak detection system that is designated to stop product flow in the event a leak in the product line is detected.

All probes and sensors from the tank and piping will be connected to the programmable TLS-450 Automated Compliance and Site Management inventory control system to be located in the store. An audio and visual alarm will be triggered if any liquids, or water is detected. If any liquid sensor is activated, the entire fuel system will be programmed to shutdown all submersible pumps and fuel dispensers until station personnel visually check the source of the problem. The station will remain inoperable until the liquid is removed. Events will be recorded along with the diagnosed problem solution, and the date it was fixed. If a release is suspected, a release determination investigation will be conducted, and a report will be submitted to TCEQ.

TECQ-0583 Attachment B

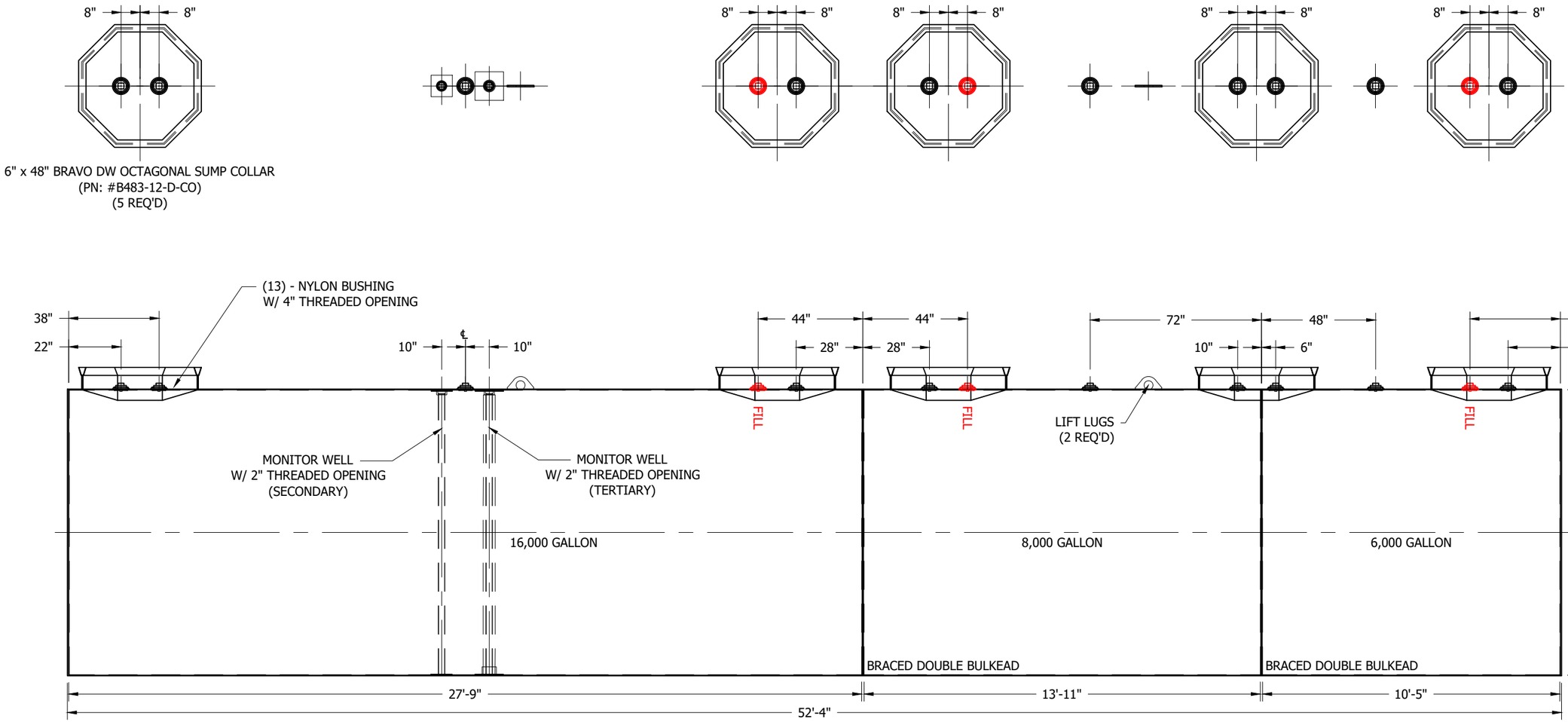
Manufacturer Information for Tanks

TCEQ-0583 Attachment B
Manufacturer Information for Tanks

Halftime 1
3125 Summit Church Rd.
San Antonio, Texas

The proposed UST will consist of a single 30,000 gallon a Watco Triple Wall tank consisting of a steel primary tank, a steel secondary tank, and a F.R.P. jacketed third tank. The UST is a compartmentalized tank with one 30,000 gallon unleaded gasoline compartment, a 8,000 gallon super unleaded compartment, and a 6,000 gallon diesel compartment.

Manufacturer information for tanks is attached.



TANK CONSTRUCTED PER UL-58 ACT-100 TYPE II DOUBLE WALL AND UL-1746 JACKETED PERMATANK FOR TERTIARY CONTAINMENT

30,000 GALLON

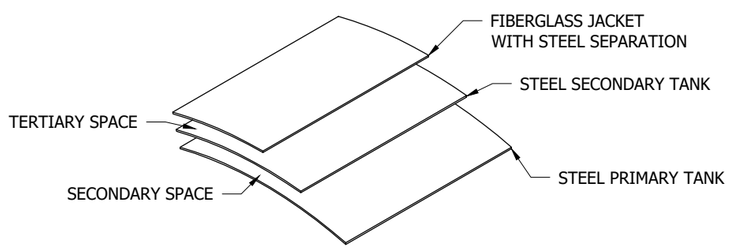
TERTIARY PERMATANK - UL 1746
120" X 52'-4"
(16,000/8,000/6,000)

CUST.:	JF PETROLEUM GROUP
LOC.:	SAN ANTONIO, TX
DWG NO:	40465

REV.	DATE	DWG BY	APP'D	DESCRIPTION
0	2/17/23	ZO	WH	ADJUSTED FITTINGS SPACING IN COLLARS
1	3/21/23	ZO	WH	ISSUED FOR APPROVAL
2				
3				
4				
5				
6				
7				
8				

NOTES:
EXTERNAL: 100 MILS FIBERGLASS JACKET
INTERNAL: BARE METAL
TESTING:
- PRIMARY: 5 PSIG SOAP & WATER
- SECONDARY: VACUUM
- TERTIARY: VACUUM
STRIKER PLATES UNDER "FILL" OPENINGS ONLY
ESTIMATED WEIGHT: 46,000 LBS (+/- 5%)

CONTAINMENT VIEW



TECHNICAL DATA

PERMATANK® MEETS REQUIREMENTS OF:

- U.S. ENVIRONMENTAL PROTECTION AGENCY UNDERGROUND STORAGE TANK REGULATIONS (40 CFR 280)

- STEEL TANK INSTITUTE F922, PERMATANK® FABRICATION SPECIFICATION

- UNDERWRITERS LABORATORIES UL 58 STANDARD FOR, STEEL UNDERGROUND TANKS FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS

- UNDERWRITERS LABORATORIES UL 1746 STANDARD FOR, EXTERNAL CORROSION PROTECTION SYSTEMS FOR STEEL UNDERGROUND STORAGE TANKS

WATCO TANKS INC. Est. 1944

The ACT-100® Steel/FRP composite tank features a strong inner steel tank for structural integrity, and a 100-mil fiberglass outer coating for long-lasting corrosion protection. Available from a worldwide network of STI licensed manufacturers, in single or double-wall design.

Steel Tank Institute

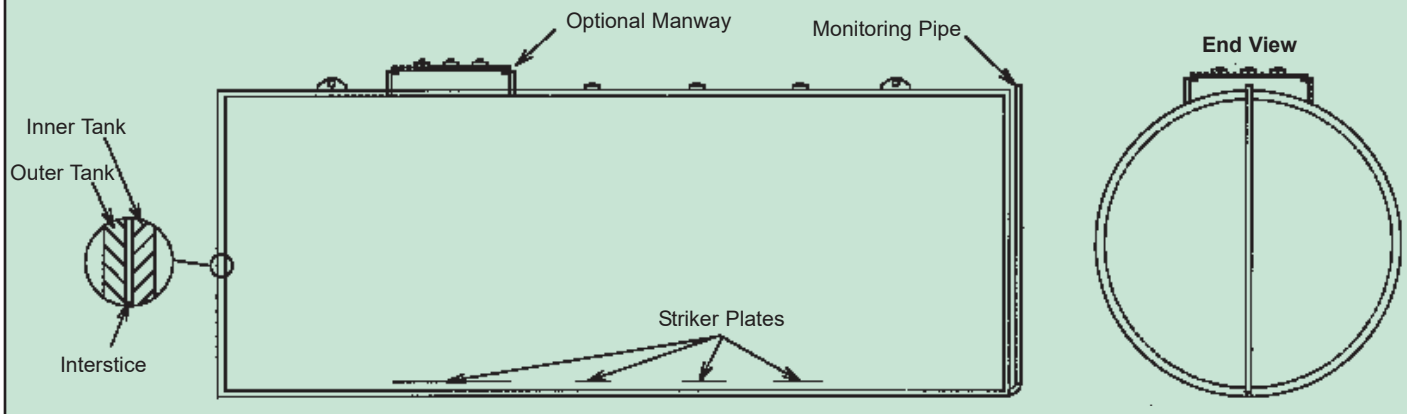
ACT-100®

- Structural strength and time-tested fuel compatibility of steel
- Corrosion-resistant fiberglass coating
  A high voltage holiday test of the coating assures that the steel is isolated from corrosive soils
- Single or double-wall construction available
- Double-wall design includes interstitial leak detection monitoring pipe
- UL 58 or UL 1746 labeled
- Built to nationally-recognized STI standards with strict third-party quality control inspection program

- Customized compartments can be provided for cost-effective multi-product storage
- Available from a large network of STI Licensed manufacturers
- Capacities range up to 50,000 gallons

The ACT-100® is available from an extensive group of STI fabricators who participate in the Steel Tank Institute's Quality Assurance Program. Under the program, independent quality control inspectors make unannounced visits to STI members, ensuring fabrication to highest possible standards.

ACT-100® Double-Wall Underground Steel Storage Tanks



- **Capacity ranges 300 to 50,000 gallons**
- **Steel Tank Institute ACT-100® and UL labeled**
- **Provides safe and effective secondary containment**
- **Utilizes strength of steel and corrosion resistance of fiberglass**
- **Employs striker plate beneath fill opening to protect tank bottom**

ACT-100® Guideline Specification

A) General

1. Provide ACT-100® external corrosion protected FRP composite steel underground storage tanks.

B) Labeling

1. Tanks shall bear the Steel Tank Institute ACT-100® identification label.
2. Underground tanks shall bear the appropriate Underwriters Laboratories (UL) or Underwriters Laboratories of Canada (ULC) label.

C) Product Description

1. Tanks shall be manufactured in accordance with Steel Tank Institute ACT-100® Specification for External Corrosion Protection of FRP Composite Steel Underground Storage Tanks.
2. Tanks shall be manufactured in accordance with and listed for Underwriters Laboratories UL 58, Steel Underground Storage Tanks for Flammable and Combustible Liquids, or Underwriters Laboratories of Canada ULC-S603, Standard for Underground Storage Tanks for Flammable and Combustible Liquids; and listed for UL 1746, External Corrosion Protection Systems for Steel Underground Storage Tanks, or ULC-S603.1, Standard for Corrosion Protection for Steel Underground Tanks for Flammable and Combustible Liquids.
3. Double-wall tanks shall provide testable secondary containment and access for interstitial leak detection monitoring.
4. Tanks shall have a minimum 100 mils of an approved FRP laminate on the tank exterior.

D) Manufacturer

1. Manufacturer shall be a licensed member company of the Steel Tank Institute and subject to Steel Tank Institute's Quality Assurance program.

Use the STI Technology Guide online for your next ACT-100® specification!

All you need in tanks!

Steel Tank Institute

A division of STI / SPFA

570 Oakwood Road Lake Zurich, IL 60047 Ph 847.438.8265 Fx 847.438.8766 Web www.steeltank.com

12/04-2.5M-Item #020-50-0001

TECQ-0583 Attachment C

Alternative Design and Protection Method for Tanks

TCEQ-0583 Attachment C
Alternative Design and Protection Method for Tanks

Halftime 1
3125 Summit Church Rd.
San Antonio, Texas

The proposed UST will consist of a single 30,000 gallon a Watco Triple Wall tank consisting of a steel primary tank, a steel secondary tank, and a F.R.P. jacketed third tank. The UST is a compartmentalized tank with one 16,000 gallon unleaded gasoline compartment, a 8,000 gallon super unleaded compartment, and a 6,000 gallon diesel compartment. The 16,000 gallon compartment will be fitted with two submersible pumps and the 8,000 gallon and 6,000 gallon compartment will each be fitted with one submersible pumps. The pumps will be Red Jacket 2 hp fixed speed submersible pumps. Automatic shut-off valves (OPW-71SO) will provide the tank with overfill prevention. The automatic shut-off valves will be installed in the drop tubes and set to shut-off delivery at 95% of compartment capacities. Spill protection will be provided by double wall spill containment manholes installed on the fill risers.

Corrosion protection for the metallic components of the UST system will be provided by electrical isolation. The submersible pump housings and pump-end flexible connectors will be installed within a Bravo B-400 x 36-38T-DB-MW double wall, watertight fiberglass encapsulated sump with a 36-inch diameter reducer, which will provide isolation from the corrosive elements of the backfill material while also providing secondary containment for any leaks from these components. The dispenser-end flexible connector will be electrically isolated from the corrosive elements of the backfill material by Bravo B-9000-D-AB water-tight containment sumps. The fill tube insert and the riser for the automatic tank gauging system will be thoroughly coated with black mastic and wrapped with dielectric tape.

The proposed tank and piping system will be monitored for leaks by means of a Veeder-Root TLS-450 Automated Compliance and Site Management inventory control system, Mag Plus Probe leak detection monitors and a PLLD Pressurized Line Leak Detection System line pressure monitor. The tank will be equipped with Veeder-Root non-discriminating liquid sensors that will be installed in both the inner interstitial and outer interstitial spaces between the individual walls of the triple wall tank. Two 4-inch diameter slotted PVC observation wells will be installed in the corners of the tank pit excavation. The tank will also be equipped with an automatic tank-gauging probe (part of the TLS-450), which will automatically inventory the product volume in the tank.

All probes and sensors from the tank and piping will be connected to the programmable TLS-450 Automated Compliance and Site Management inventory control system to be located in the store. An audio and visual alarm will be triggered if any liquids or water is detected. If any liquid sensor is activated, the entire fuel system will be programmed to shutdown all submersible pumps and fuel dispensers until station personnel visually check the source of the problem. The station will remain inoperable until the liquid is removed. Events will be recorded along with the diagnosed problem solution, and the date it was fixed. If a release is suspected, a release determination investigation will be conducted, and a report will be submitted to TCEQ.

TECQ-0583 Attachment D

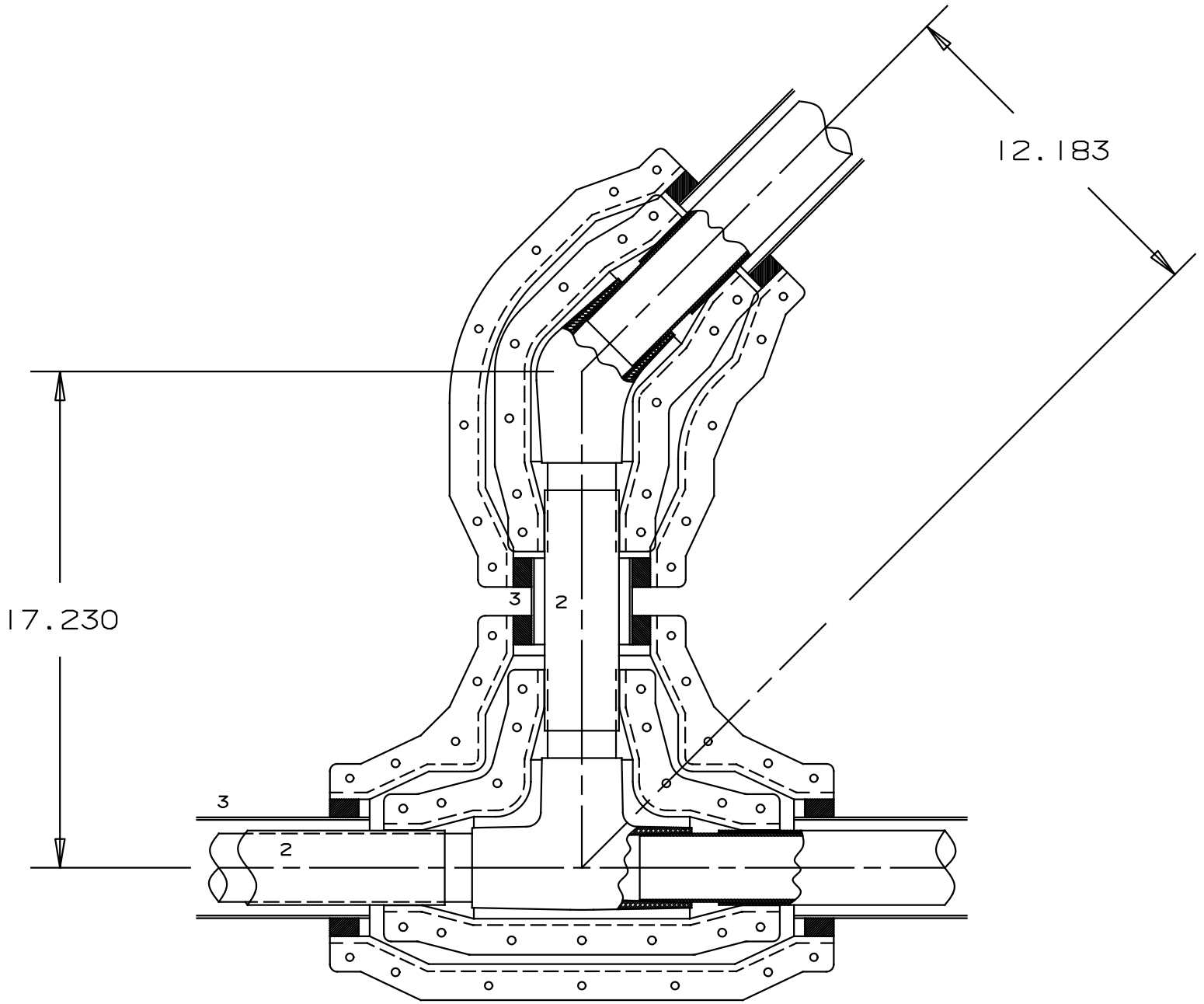
Manufacturer Information for Piping

TCEQ-0583 Attachment D
Manufacturer Information for Piping

Halftime 1
3125 Summit Church Rd.
San Antonio, Texas

Proposed product and venting piping will consist Ameron Dualloy 3000/LCX UL-Listed nonmetallic filament-wound, fiberglass reinforced pipe with integral liner, with both secondary and tertiary containment fittings. An OPW-10 Series safety shear valve will be installed on each product line at the dispenser island surface level to provide automatic shut-off product flow during emergencies. New Gilbarco Encore 700S dispensers will be installed with OPW nozzles, breakaways, and swivels.

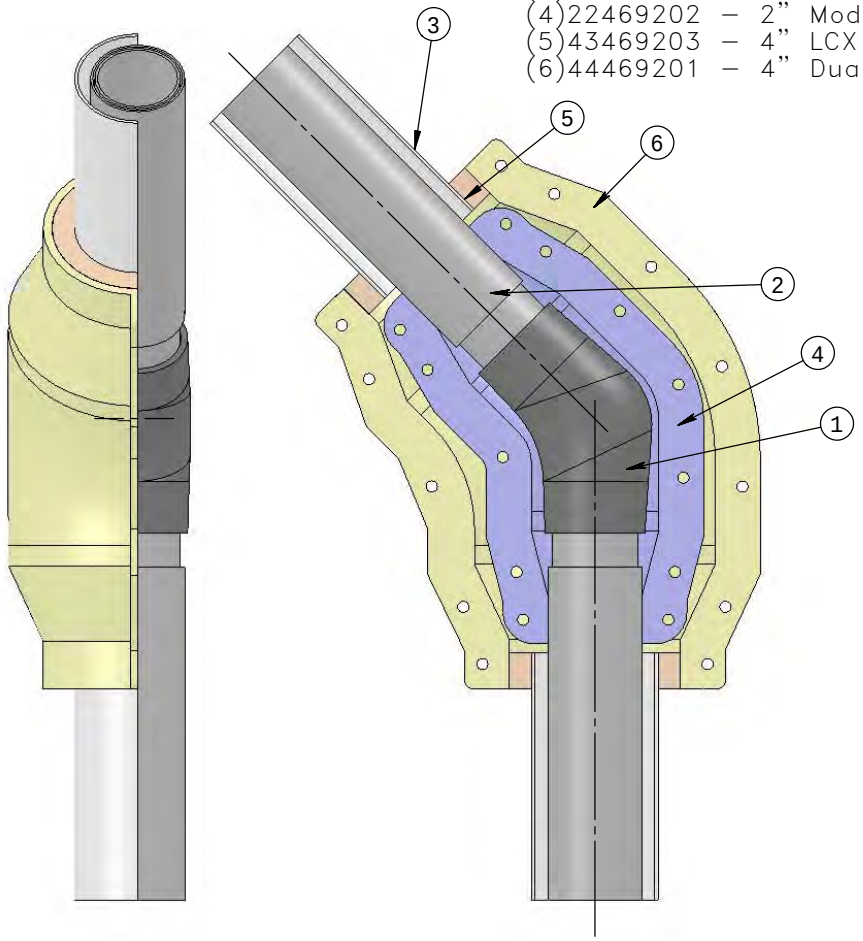
Manufacturer information for piping is attached.



TERTIARY JUMP-OVER
OPTION #1

(SHOWN IN FLAT PATTERN
FOR CLARITY)

(1)22371508 – 2" Dualoy 3000/L 45° Molded Elbow
(2)22464386 – 2" Dualoy 3000/LCX Pipe
(3)33854381 – 3" Dualoy 3000/L Pipe
(4)22469202 – 2" Modified 45° Dualoy 3000/LCX Clamshell
(5)43469203 – 4" LCX Clamshell x 3" 3000/L Pipe Closure Ring
(6)44469201 – 4" Dualoy 45° 3000/LCX Clamshell



HPM	10-2-12	DESCRIPTION OF REVISION	REV.
NAME	DATE	DESCRIPTION OF REVISION	REV.

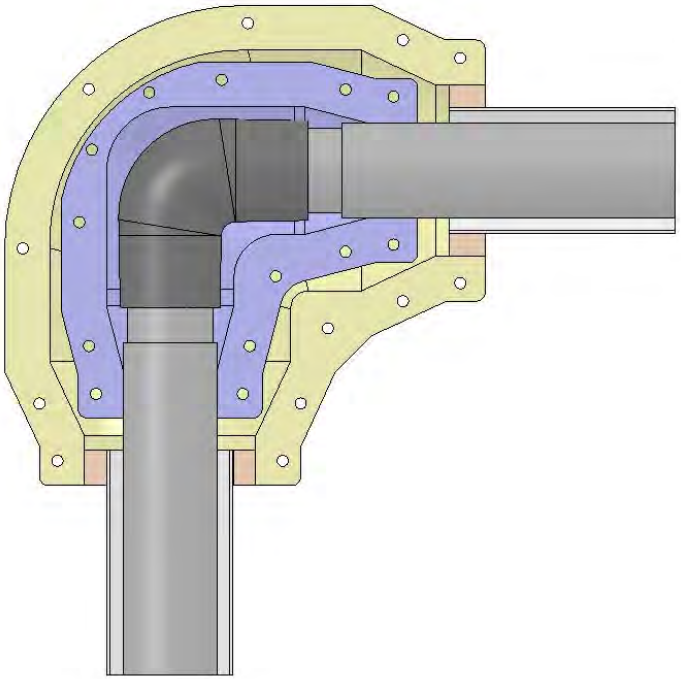
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			BREAK ALL SHARP EDGES 0.06 MAX	SCALE: NONE
FRACT. ± 1/16	.X ±0.060	.XX ±0.030	.XXX ±0.015	ANGLES ±1/2

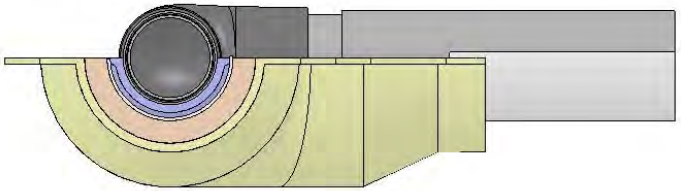
Fiber Glass Systems
A National Oilwell Varco Company
1004 Ameron Rd.
Burkburnett, Texas

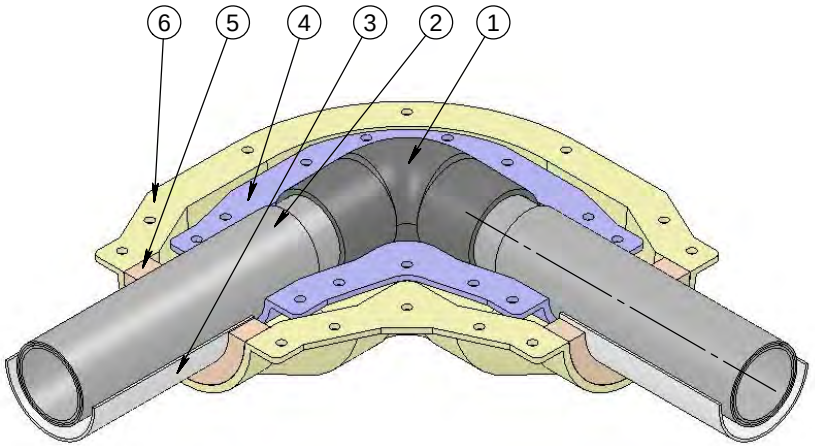
MATERIAL: SPECIFY MATERIAL

TITLE:
DUALOY 3000/LCX 45° ELBOW
TERTIARY CONTAINMENT

DRAWN BY:	HPM	DRAWING NUMBER	REV.
DATE:	10/30/12	NOV121030-45	00







(1)22372108 – 2" Dualoy 3000/L 90° Molded Elbow
(2)22464386 – 2" Dualoy 3000/LCX Pipe
(3)33854381 – 3" Dualoy 3000/L Pipe
(4)22469201 – 2" Modified Dualoy 3000/LCX Clamshell
(5)43469203 – 4" LCX Clamshell x 3" 3000/L Pipe Closure Ring
(6)44469201 – 4" Dualoy 3000/LCX Clamshell

HPM	10–30–12	DESCRIPTION OF REVISION	REV.
NAME	DATE	DESCRIPTION OF REVISION	REV.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			BREAK ALL SHARP EDGES 0.06 MAX	SCALE: NONE
FRACT. ± 1/16	.X ±0.060	.XX ±0.030	.XXX ±0.015	ANGLES ±1/2

Fiber Glass Systems
A National Oilwell Varco Company
1004 Ameron Rd.
Burkburnett, Texas

MATERIAL: SPECIFY MATERIAL

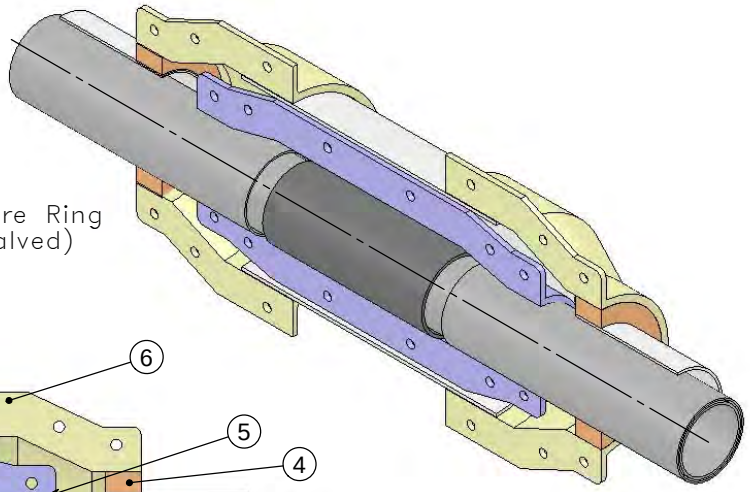
TITLE:

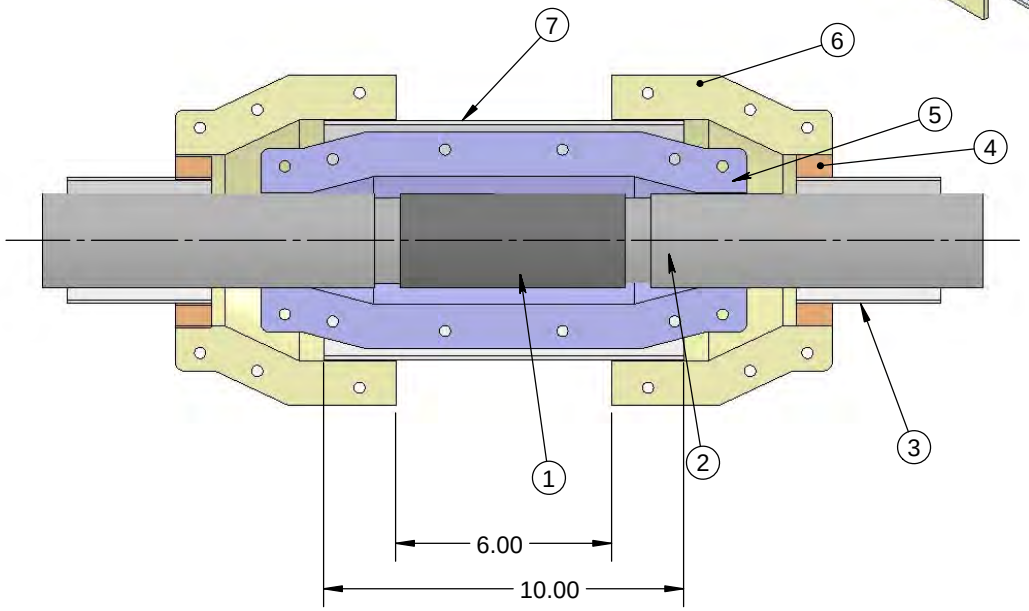
DUALOY 3000/LCX 90° ELBOW
TERTIEARY CONTAINMENT

DRAWN BY:	HPM	DRAWING NUMBER	REV.
DATE:	10/30/12	NOV121030–90	00

?

(1)22850707 – 2" Dualoy 3000/L Sleeve Coupling
(2)22464386 – 2" Dualoy 3000/LCX Pipe
(3)33854381 – 3" Dualoy 3000/L Pipe
(4)22469201 – 2" Dualoy 3000/LCX Coupling Camshell
(5)43469203 – 4" LCX Clamshell x 3" 3000/L Pipe Closure Ring
(6)44469201 – 4" Dualoy 3000/LCX Coupling Clamshell(halved)
(7)66854381 – 6" Dualoy 3000/L Pipe





HPM	10-2-12	DESCRIPTION OF REVISION	REV.
NAME	DATE	DESCRIPTION OF REVISION	REV.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES | BREAK ALL SHARP EDGES 0.06 MAX | SCALE: NONE

FRACT. ± 1/16	.X ±0.060	.XX ±0.030	.XXX ±0.015	ANGLES ±1/2

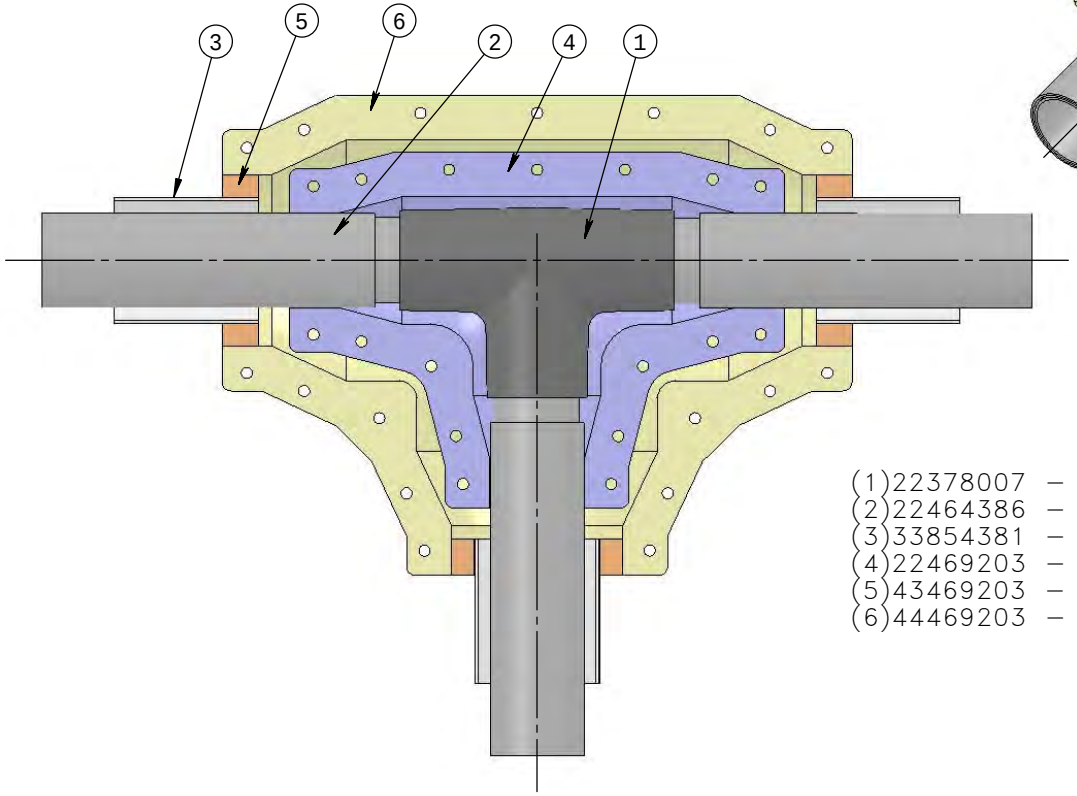
Fiber Glass Systems
A National Oilwell Varco Company
1004 Ameron Rd.
Burkburnett, Texas

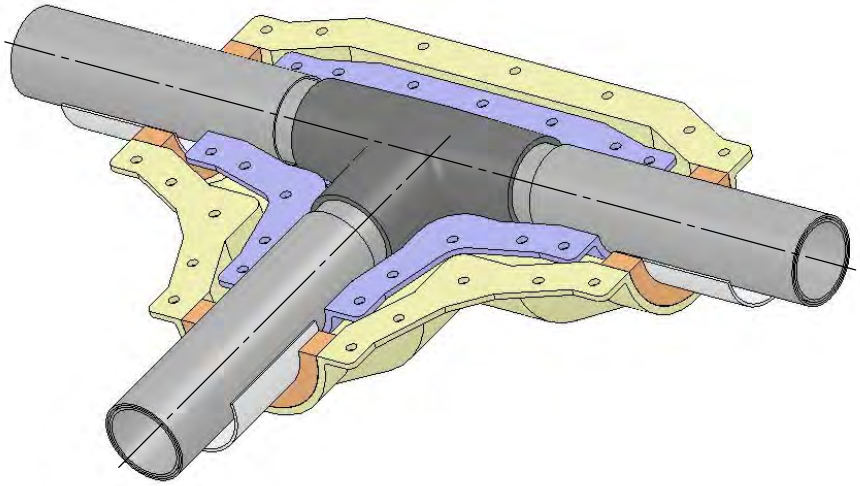
MATERIAL: SPECIFY MATERIAL

TITLE:

DUALOY 3000/LCX 2-INCH COUPLING
TERTIARY CONTAINMENT

DRAWN BY:	HPM	DRAWING NUMBER	REV.
DATE:	10/30/12	NOV121030-CPL	00





(1)22378007 – 2" Dualoy 3000/L Molded Tee
(2)22464386 – 2" Dualoy 3000/LCX Pipe
(3)33854381 – 3" Dualoy 3000/L Pipe
(4)22469203 – 2" Dualoy 3000/LCX Tee Clamshell
(5)43469203 – 4" LCX Clamshell x 3" 3000/L Pipe Closure Ring
(6)44469203 – 4" Dualoy 3000/LCX Clamshell

HPM	10-2-12	DESCRIPTION OF REVISION	REV.
NAME	DATE	DESCRIPTION OF REVISION	REV.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			BREAK ALL SHARP EDGES 0.06 MAX	SCALE: NONE
FRACT. ± 1/16	.X ±0.060	.XX ±0.030	.XXX ±0.015	ANGLES ±1/2

Fiber Glass Systems
A National Oilwell Varco Company
1004 Ameron Rd.
Burkburnett, Texas

MATERIAL: SPECIFY MATERIAL

TITLE: DUALOY 3000/LCX 2-INCH TEE TERTIARY CONTAINMENT

DRAWN BY:	HPM	DRAWING NUMBER	REV.
DATE:	10/30/12	NOV121030-T	00

TECQ-0583 Attachment E

Alternative Design and Protection Method for Piping

TCEQ-0583 Attachment E
Alternative Design and Protection Method for Piping

Halftime 1
3125 Summit Church Rd.
San Antonio, Texas

Proposed product and venting piping will consist Ameron Dualloy 3000/LCX UL-Listed nonmetallic filament-wound, fiberglass reinforced pipe with integral liner, with both secondary and tertiary containment fittings. An OPW-10 Series safety shear valve will be installed on each product line at the dispenser island surface level to provide automatic shut-off product flow during emergencies. New Gilbarco Encore 700S dispensers will be installed with OPW nozzles, breakaways, and swivels.

The proposed tanks and piping will be monitored for leaks by means of a Veeder-Root TLS-450 Automated Compliance and Site Management inventory control system, Mag Plus Probe leak detection monitors and a PLLD Pressurized Line Leak Detection System line pressure monitor. The product piping systems will be monitored by non-discriminating liquid sensors, which will be installed in the interstitial of the sub pump sumps and dispenser sumps. Each product piping line will be equipped with a pressurized line leak detection system that is designated to stop product flow in the event a leak in the product line is detected.

All probes and sensors from the tank and piping will be connected to the programmable TLS-450 Automated Compliance and Site Management inventory control system to be located in the store. An audio and visual alarm will be triggered if any liquids, or water is detected. If any liquid sensor is activated, the entire fuel system will be programmed to shutdown all submersible pumps and fuel dispensers until station personnel visually check the source of the problem. The station will remain inoperable until the liquid is removed. Events will be recorded along with the diagnosed problem solution, and the date it was fixed. If a release is suspected, a release determination investigation will be conducted, and a report will be submitted to TCEQ.

TCEQ-0583 Attachment F

Tertiary Containment Method

TCEQ-0583 Attachment F
Tertiary Containment Method

Halftime 1
3125 Summit Church Rd.
San Antonio, Texas

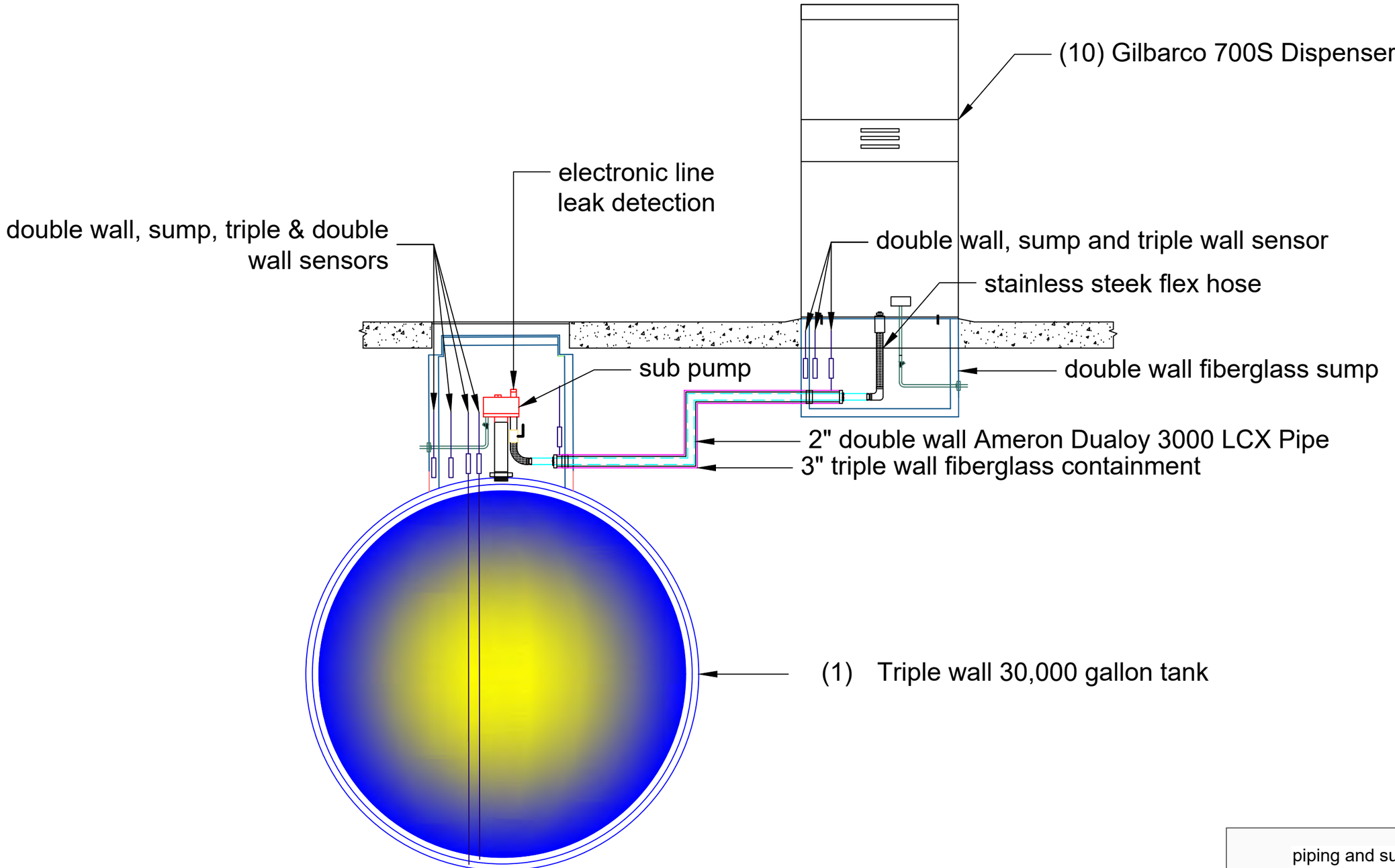
Tertiary containment for the proposed UST system will be provided by the use of a triple-walled glass-steel tank and double-walled fiberglass-reinforced piping utilizing both secondary and tertiary containment fittings.

The UST will consist of a single 30,000 gallon Watco Triple Wall tank consisting of a steel primary tank, a steel secondary tank, and a F.R.P. jacketed third tank. Spill protection will be provided by double wall spill containment manholes installed on the fill risers.

Product and venting piping will be Ameron Dualloy 3000/LCX UL-Listed nonmetallic filament-wound, fiberglass reinforced pipe with integral liner, with both secondary and tertiary containment fittings. An OPW-10 Series safety shear valve will be installed on each product line at the dispenser island surface level to provide automatic shut-off product flow during emergencies.

TCEQ-0583 Attachment H

Profile Drawing



piping and sump detail

customer: Karim Ali	location: Half Time #1 3125 Summit Church Road San Antonio, Texas 78259	Date: 2-9-2023	Rev. No.
		Scale: NA	Drawn By: DD

TECQ-0583 Attachment I

Initial and Continuing Training

TCEQ-0583 Attachment I
Initial and Continuing Training

Halftime 1
3125 Summit Church Rd.
San Antonio, Texas

The tank installation contractor for this project, Petroleum Solutions, Inc., will provide training to the owner/operator and management of the Halftime 1 facility. Using the information provided in the owner's manual for the tank system, the tank contractor will train the owner/operator to monitor the system and conduct inventory checks. The electronic leak and inventory system is a computerized continuous detection system. The leak detection system will be monitored daily. If an anomalous condition or reading is detected, store personnel will immediately contact the tank contractor to inspect the tank system.

The owner/operator and/or site manager will be thoroughly trained regarding the operating procedures, maintenance, record keeping, calibration and emergency response activities regarding the tank system. The owner/operator and/or site manager will receive annual refresher training for the tank system operation and monitoring. The owner/operator and/or site manager will be adequately familiar with the tank monitoring system and will be responsible for providing training to other site personnel. The owner/operator will properly train each new employee the procedures for monitoring the release detection equipment.

Should the alarm system activate, the monitoring system will automatically shut-off the product flow to the dispensers. The tank contractor will be contacted to conduct a thorough inspection of the tank system. If it is found that a reportable quantity of fuel was released, the TCEQ will be notified immediately.

TECQ-0583 Attachment J

Release Detection Maintenance

TCEQ-0583 Attachment J
Release Detection Maintenance

Halftime 1
3125 Summit Church Rd.
San Antonio, Texas

Inventory control will be monitored daily via an electronic monitoring system. The equipment will be maintained in accordance with the manufacturer's specifications. The tank contractor for this project, Petroleum Solutions, Inc., will provide annual certification and compliance inspections of the tank and leak detection systems as well as providing routine maintenance.

TCEQ-0583

Equipment Literature Provided by
Petroleum Solutions, Inc.
(Tank Installer)

Petroleum Solutions, Inc.
14833 Bulverde Road
San Antonio, Texas 78217
(210) 661-2489
(210) 6617904 Fax

www.petroleumsolutionsinc.com

Equipment Data Submittal

Project:
Half Time #1
3125 Summit Church Rd
San Antonio, Texas

Prepared for:
Karim Ali
San Antonio, Texas

Document Status			
Rev		Date	Approval
	Submittal	3/13/2023	DD

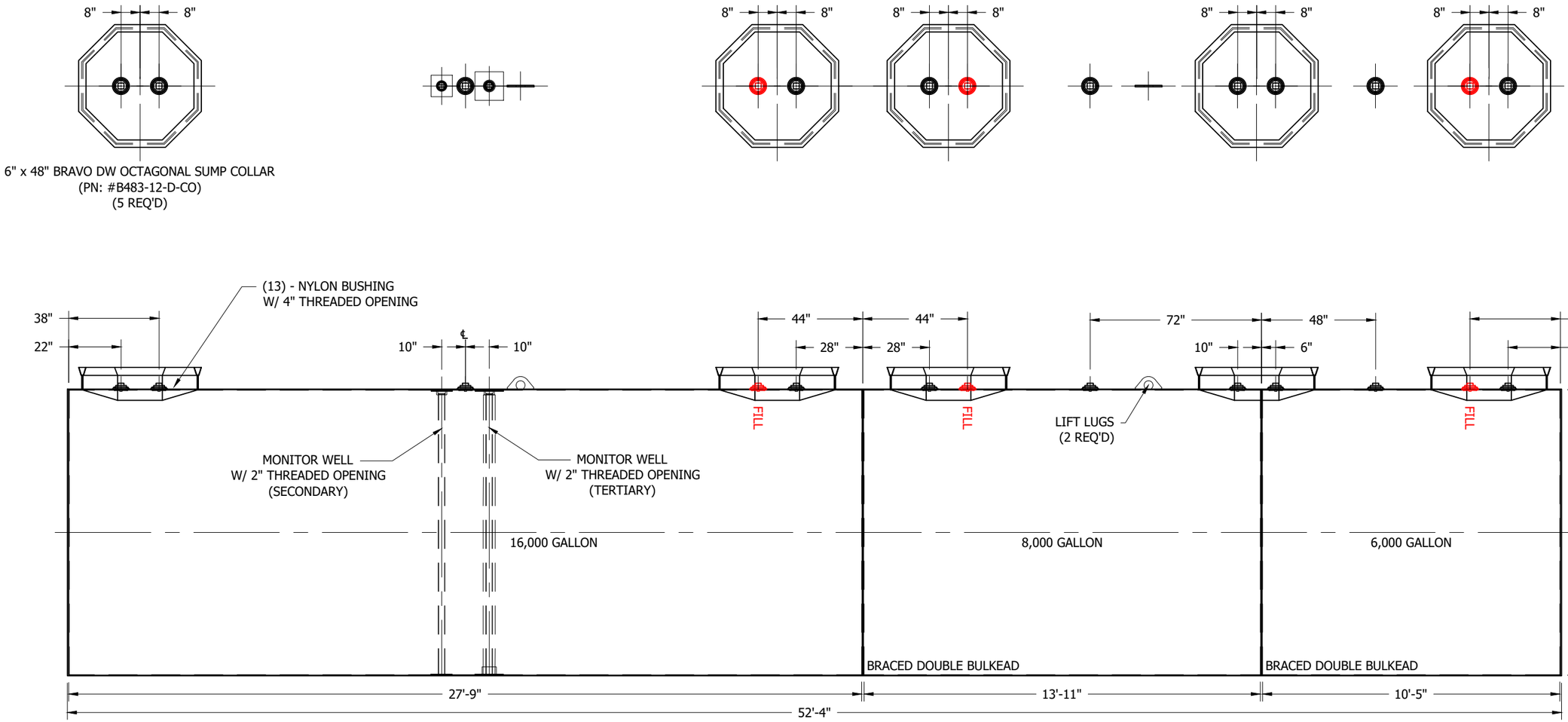
Half Time #1
3125 Summit Church Rd
Equipment Data Submittal

Item	Qty	Manufacture	Discription	Notes
1			**Tanks**	
	1	WATCO	Triple Wall	
2			**Sumps & Entry Boots**	
	4	Bravo	B-400x36-38T-DB-MW	sub pump sumps
	8	Bravo	B-9000-D-AB	dispenser sumps
		Bravo	Entry Boots	
3			**Sub Pumps**	
	4	Red Jacket	2 HP Fixed speed	
4			**Tank Fittings**	
	3	OPW	Edge 1 Spill bucket	
	3	OPW	71SO Overfill Protection	
5			**Piping & Impact Valves**	
		Ameron	LCX DW Pipe w/ Containment	
	30	OPW	Double Poppet Impact Valves	
6			**Tank Monitor**	
	1	Veeder Root	TLS 450 Tank Monitor	
	3		Mag 1 Probe	
	1		Interstitial Sensors	
	15		Sump Sensor	
	4		PLLD Electronic Leak Detection	
7			**Dispenser and accessories**	
	10	Gilbarco	Encore 700S	
	40	CATLOW	Nozzle	
	40	CATLOW	Breakaways	
	40	CATLOW	Swivels	
	40	CATLOW	Hoses	
8			**Pump Controls**	
	2	Gilbarco	Passport	

Half Time #1
3125 Summit Church Rd

Equipment Data Submittal

Item	Qty	Manufacture	Discription	Notes
1	1	Watco	30,000 split 16/8/6	Triple Wall



TANK CONSTRUCTED PER UL-58 ACT-100 TYPE II DOUBLE WALL AND UL-1746 JACKETED PERMATANK FOR TERTIARY CONTAINMENT

30,000 GALLON

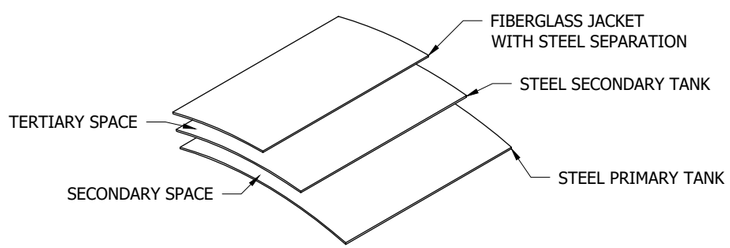
TERTIARY PERMATANK - UL 1746
120" X 52'-4"
(16,000/8,000/6,000)

CUST.:	JF PETROLEUM GROUP
LOC.:	SAN ANTONIO, TX
DWG NO:	40465

REV.	DATE	DWG BY	APP'D	DESCRIPTION
0	2/17/23	ZO	WH	ADJUSTED FITTINGS SPACING IN COLLARS
1	3/21/23	ZO	WH	ISSUED FOR APPROVAL
2				
3				
4				
5				
6				
7				
8				

NOTES:
EXTERNAL: 100 MILS FIBERGLASS JACKET
INTERNAL: BARE METAL
TESTING:
- PRIMARY: 5 PSIG SOAP & WATER
- SECONDARY: VACUUM
- TERTIARY: VACUUM
STRIKER PLATES UNDER "FILL" OPENINGS ONLY
ESTIMATED WEIGHT: 46,000 LBS (+/- 5%)

CONTAINMENT VIEW



TECHNICAL DATA

PERMATANK® MEETS REQUIREMENTS OF:

- U.S. ENVIRONMENTAL PROTECTION AGENCY UNDERGROUND STORAGE TANK REGULATIONS (40 CFR 280)

- STEEL TANK INSTITUTE F922, PERMATANK® FABRICATION SPECIFICATION

- UNDERWRITERS LABORATORIES UL 58 STANDARD FOR, STEEL UNDERGROUND TANKS FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS

- UNDERWRITERS LABORATORIES UL 1746 STANDARD FOR, EXTERNAL CORROSION PROTECTION SYSTEMS FOR STEEL UNDERGROUND STORAGE TANKS

WATCO TANKS INC. Est. 1944

The ACT-100® Steel/FRP composite tank features a strong inner steel tank for structural integrity, and a 100-mil fiberglass outer coating for long-lasting corrosion protection. Available from a worldwide network of STI licensed manufacturers, in single or double-wall design.

Steel Tank Institute

ACT-100®

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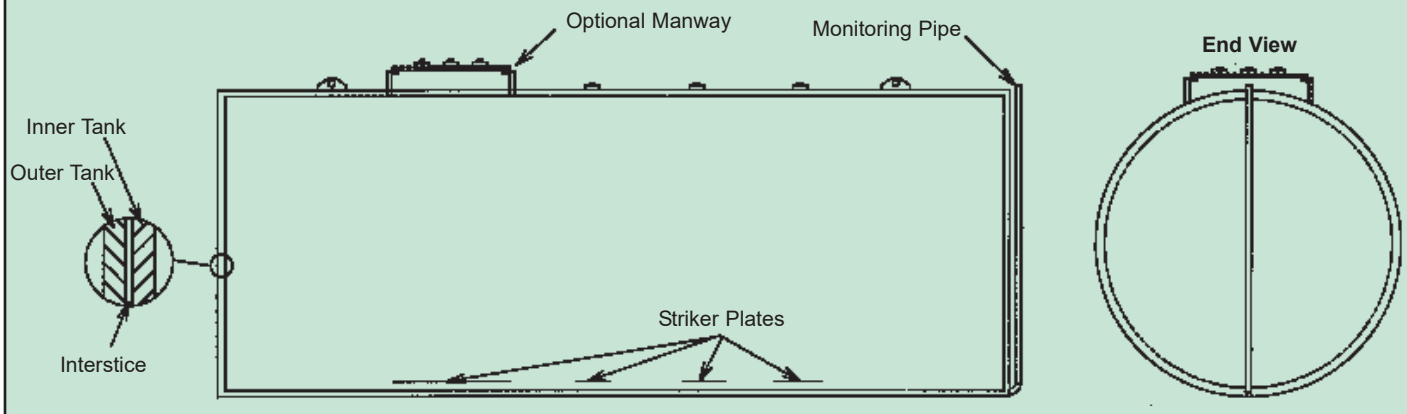
- Corrosion-resistant fiberglass coating
  A high voltage holiday test of the coating assures that the steel is isolated from corrosive soils
- Single or double-wall construction available
- Double-wall design includes interstitial leak detection monitoring pipe
- UL 58 or UL 1746 labeled
- Built to nationally-recognized STI standards with strict third-party quality control inspection program

- Customized compartments can be provided for cost-effective multi-product storage
- Available from a large network of STI Licensed manufacturers
- Capacities range up to 50,000 gallons

The ACT-100® is available from an extensive group of STI fabricators who participate in the Steel Tank Institute's Quality Assurance Program. Under the program, independent quality control inspectors make unannounced visits to STI members, ensuring fabrication to highest possible standards.

ACT-100® Double-Wall Underground Steel Storage Tanks



- **Capacity ranges 300 to 50,000 gallons**
- **Steel Tank Institute ACT-100® and UL labeled**
- **Provides safe and effective secondary containment**
- **Utilizes strength of steel and corrosion resistance of fiberglass**
- **Employs striker plate beneath fill opening to protect tank bottom**

ACT-100® Guideline Specification

A) General

1. Provide ACT-100® external corrosion protected FRP composite steel underground storage tanks.

B) Labeling

1. Tanks shall bear the Steel Tank Institute ACT-100® identification label.
2. Underground tanks shall bear the appropriate Underwriters Laboratories (UL) or Underwriters Laboratories of Canada (ULC) label.

C) Product Description

1. Tanks shall be manufactured in accordance with Steel Tank Institute ACT-100® Specification for External Corrosion Protection of FRP Composite Steel Underground Storage Tanks.
2. Tanks shall be manufactured in accordance with and listed for Underwriters Laboratories UL 58, Steel Underground Storage Tanks for Flammable and Combustible Liquids, or Underwriters Laboratories of Canada ULC-S603, Standard for Underground Storage Tanks for Flammable and Combustible Liquids; and listed for UL 1746, External Corrosion Protection Systems for Steel Underground Storage Tanks, or ULC-S603.1, Standard for Corrosion Protection for Steel Underground Tanks for Flammable and Combustible Liquids.
3. Double-wall tanks shall provide testable secondary containment and access for interstitial leak detection monitoring.
4. Tanks shall have a minimum 100 mils of an approved FRP laminate on the tank exterior.

D) Manufacturer

1. Manufacturer shall be a licensed member company of the Steel Tank Institute and subject to Steel Tank Institute's Quality Assurance program.

Use the STI Technology Guide online for your next ACT-100® specification!

All you need in tanks!

Steel Tank Institute

A division of STI / SPFA

570 Oakwood Road Lake Zurich, IL 60047 Ph 847.438.8265 Fx 847.438.8766 Web www.steeltank.com

12/04-2.5M-Item #020-50-0001

Half Time #1
3125 Summit Church Rd

Equipment Data Submittal

Item	Qty	Manufacture	Discription	Notes
2			**Sumps**	
	5	Bravo	B-400x36-38T-DB-MW	Double Wall
	10	Bravo	B-9000-D-AB	Double Wall
		Bravo	Entry Boots	Double Wall

B-400-DB-MW Tall-Collar Tank Sump

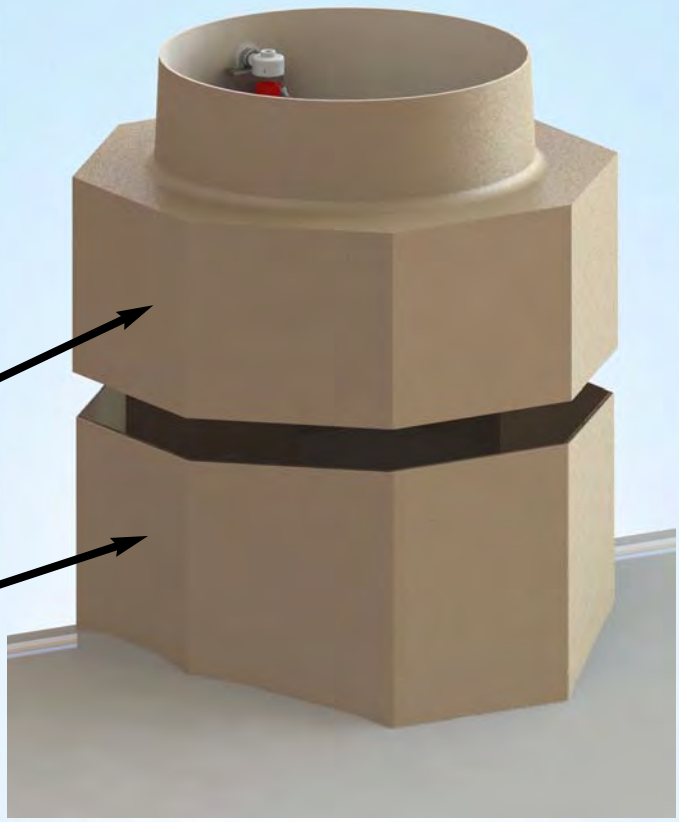
DOUBLEWALL SUMP (1-PIECE) FOR MODERN WELDING TANKS

42" OR 48" DIAMETERS WITH 32" OR 36" REDUCERS

MANUFACTURED OF FIBERGLASS

TRUE DOUBLEWALL TECHNOLOGY
AB-2481 COMPLIANT

AB-2481 Compliant
Third Party Approved



Eight Sided Sump
Great for 45° & 90°
Fiberglass Fittings

With a "Tall Collar" installed by your Tank manufacturer, begin piping as soon as your tank arrives

E85

Compatible with and warranted for continuous exposure to all common fuels and alternative fuels including ethanol and biodiesel.

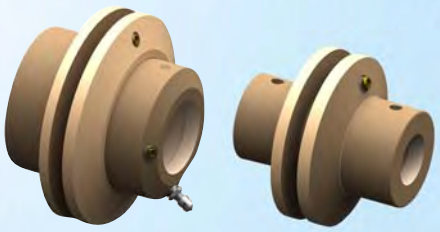
All sumps ship under 20"Hg for continuous testing

UL 21MU LISTED

EQ# 615

FEATURES:

- > Tank-Spec Fiberglass Construction
- > AB-2481 Compliant Monitored DoubleWall
- > Ships under a continuous 20"Hg vacuum test
- > Large flat walls for more entry fittings
- > Octagonal walls with "Tall Collar" mount
- > Begin piping as soon as the tank arrives
- > 42" or 48" Diameters
- > 32" or 36" Diameter reducers
- > Includes Manometers and interstitial fluid
- > Height adjustable in the field



RECOMMENDED:
F-Series-D FRP Fittings Only

Patent# 6,823,886 - Other Patents Pending

PATENTS PENDING

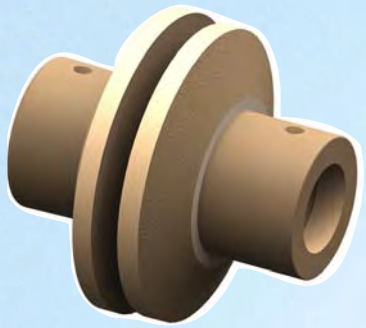
F-Series Fiberglass Entry Fittings

FOR FLAT DOUBLEWALL FIBERGLASS SUMPS

F-1X-SS-D / F-1X-RR-D / F-XX-TS-D / F-XX-LS-D

DOUBLEWALL FITTING FOR CONDUIT AND FIBERGLASS PIPE

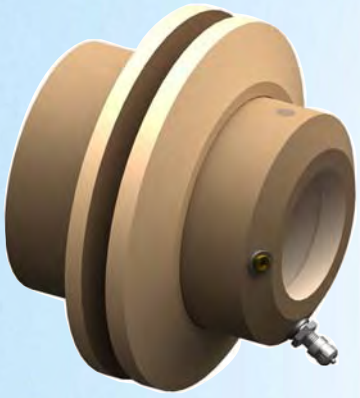
True AB-2481 Compliance !



Conduit Pass-through Fittings

PART #	Description
F-17-SS-D * :	Fitting for 3/4” galvanized steel conduit
F-10-SS-D * :	Fitting for 1” galvanized steel conduit
F-17-RR-D:	Fitting for 3/4” RobRoy brand PVC-coated steel conduit
F-10-RR-D:	Fitting for 1” RobRoy brand PVC-coated steel conduit

✱ IF BRINE (SALINE) IS USED - YOU MUST USE “RR” MODELS



Size over Size / LCX Fittings

PART #	Description
F-32-TS-D:	Fitting for 3” over 2” FRP pipe w/ dual test ports
F-43-TS-D:	Fitting for 4” over 3” FRP pipe w/ dual test ports
F-64-TS-D:	Fitting for 6” over 4” FRP pipe w/ dual test ports
For Ameron LCX Coaxial pipe	
F-22-LS-D:	Fitting for 2” LCX Coaxial FRP pipe w/ dual test ports
F-33-LS-D:	Fitting for 3” LCX Coaxial FRP pipe w/ dual test ports

FEATURES:

- > Reduce Labor & Material
- > Tank-Spec FRP material
- > No metal or rubber parts
- > Port for testing sump interstice
- > Warranted for fuel submersion
- > 30 Year Corrosion Warranty

CONTACT FACTORY FOR ROUND SUMPS

c UL US LISTED

Third Party Approved

PRESSURE RATED 50 PSI

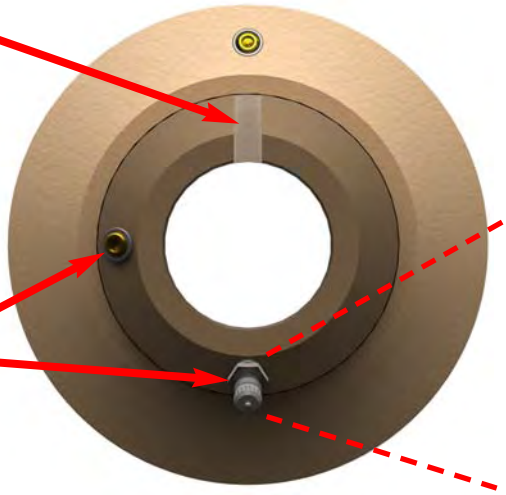
E85

NO -Plastic -Rubber -Clamps -Sealant -Nuts -Bolts

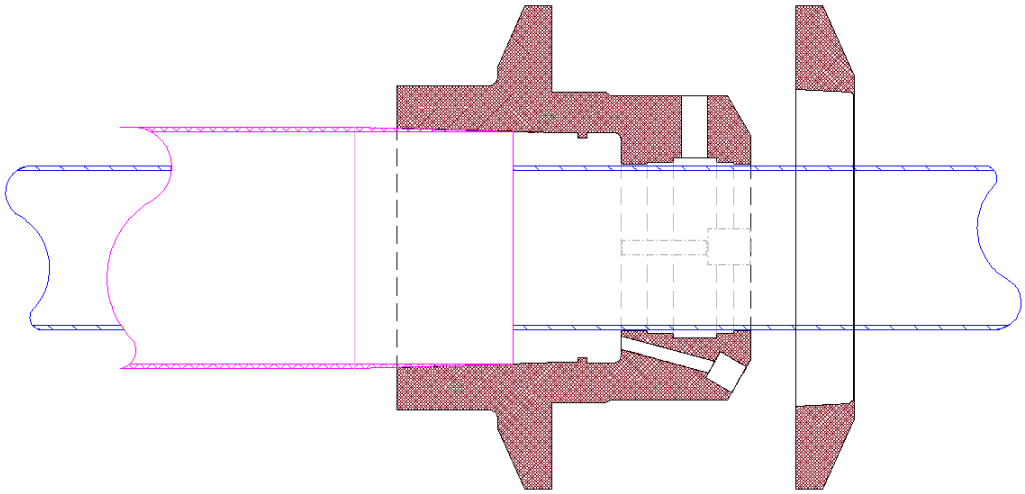
F-SERIES-D FITTING

Adhesive Injection Port always installed at 12 ‘o-clock

Dual test ports at 9 and 6 ‘o-clock



The F-Series-D entry fitting has two test / drain port locations. One at 9 ‘o-clock and one at 6 ‘o-clock. This allows installers to choose the position that is compliant with their local regulatory requirements.



Primary passes through fitting for testing, while not permanently installed

After primary passes testing, the primary is then sealed to the fitting by adhesive injection

The secondary is then

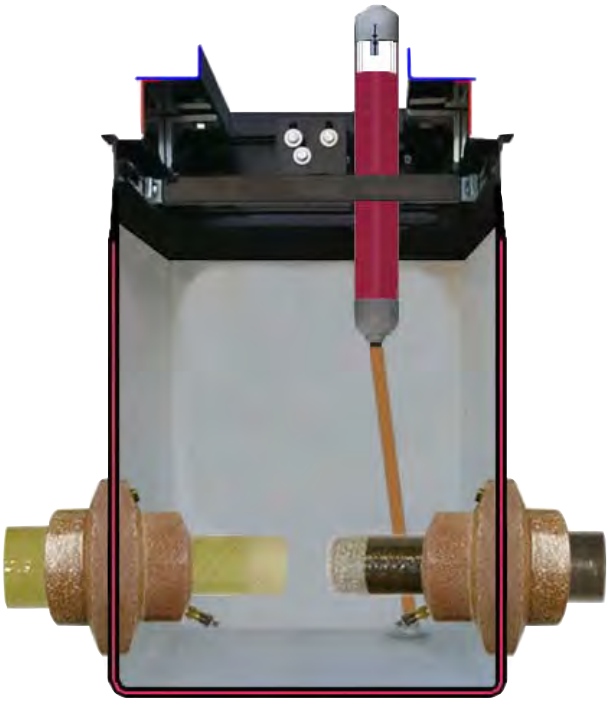
RECOMMENDED TOOLS FOR INSTALLATION: Refer to Instruction Manual

T-FS-SAND-GUN	Sanding Gun (5/8”)
T-FS-SAND-KIT	Steel disc set for fittings

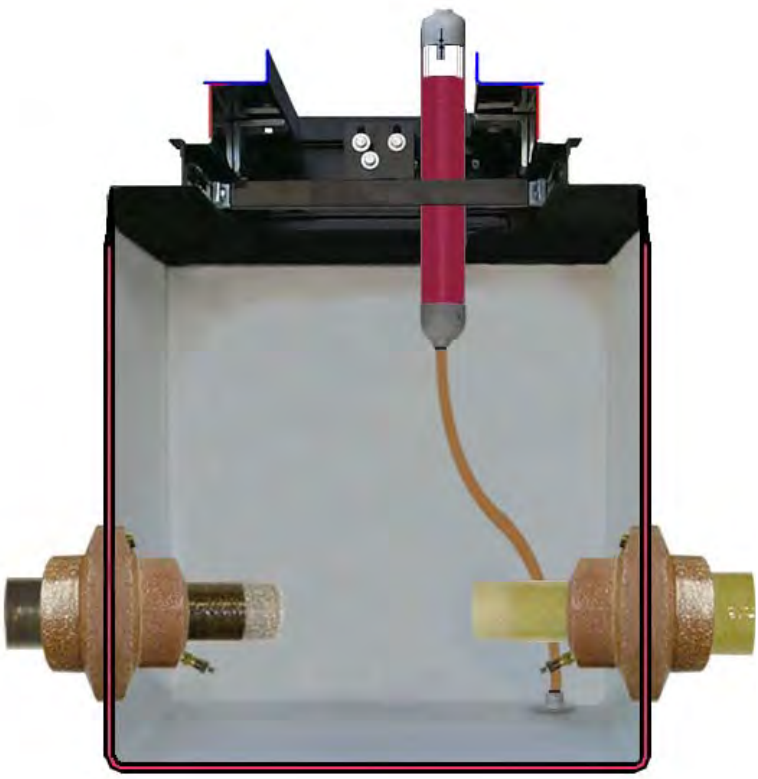
T-FS-SAND-KIT

T-FS-SAND-GUN

B-8000/9000 D-AB
DOUBLE WALL
UDC INSTALLATION INSTRUCTIONS
For Hydrostatic and Vacuum Monitoring



B-8000-D-AB



B-9000-D-AB

REQUIRED TOOLS
(NOT PROVIDED)

Power/air Sanders. Acetone to clean up tools/applicators. Power Cutting Tools.

VAC-KIT-D-AB **per site**

RECOMMENDED:
(NOT PROVIDED)

Bravo FS Sand Kit

ii-B8000-9000-DW-11B

S. Bravo Systems, Inc. - The Leader in Secondary Containment

2929 Vail Ave. | Commerce, CA | 323-888-4133 | FAX: 323-888-4123 | www.sbravo.com

PEI MEMBER

MANDATORY

The B8000/9000 DoubleWall UDC Sump Series from S. Bravo Systems, Inc. MUST be installed by, and only by, **Bravo Certified Installation Contractors.**
Details can be found at www.sbravo.com/cert.htm

IMPORTANT

READ THESE INSTRUCTIONS - KEEP FOR FUTURE REFERENCE

TABLE OF CONTENTS

- Closely adhere to all directions and warnings indicated on the product or contained in these instructions.

- Warranty is void if there is any evidence of modification, abuse, negligence or improper installation.

- For assistance please call Bravo for technical support at (800) 28-BRAVO. Outside the U.S.A. please call (323) 888-4133.

⚠WARNING

Filling Bravo Systems Double Wall Products with Brine (saline) solution will void the product warranty. You must use only Bravo-Supplied Interstitial Fluid.

SAFETY FIRST! S. Bravo Systems, Inc. urges you to carefully adhere to the normal safety procedures and precautions followed by your company. Please follow the mandates and compliances decreed by OSHA, local, State and federal regulations regarding the use of this product.

WARRANTY

All containment systems sold by S. Bravo Systems, Inc. are warranted to be free from defects in material and workmanship for a period of one year from date of purchase. This warranty will be limited to the repair and replacement of Bravo parts only and will exclude all claims for labor or consequential damage. No other express warranties given and no affirmation of S. Bravo Systems, Inc., or its agents and/or representatives, by words or action, will constitute a warranty. IT IS EXPRESSLY AGREED THAT THIS WARRANTY WILL BE IN LIEU OF ALL WARRANTIES OF FITNESS AND IN LIEU OF THE WARRANTY OF MERCHANTABILITY.

This warranty is void if there is any evidence of modification, abuse, negligence, or improper installation. If any fittings or components, other than S. Bravo Systems approved fittings or components, are used in conjunction with any S. Bravo Systems product, the warranty pertaining to these products is immediately void.

EQUIPMENT DRY-FIT

- BEFORE INSTALLING PENETRATION FITTINGS

- BEFORE CUTTING OPEN SUMP INTERSTICE

DRY-FIT YOUR SUMP PIECES AND INTERNAL EQUIPMENT.

WARNING

BEFORE PENETRATING FIBERGLASS WALLS ENSURE THAT THE DOUBLE WALL FRP SUMP IS HOLDING VACUUM

It is **REQUIRED** to visually check the Vacuum gauge on each and every BravoSystems Double Wall product and write on its packaging report **Vacuum level**, **signature of observer**, **date** and **time** the shipment is received **at every destination**.

WARRANTY IS VOID:

IF ANY OF THE FOLLOWING OCCUR

A) There is a failure to comply with the Required written report guidelines as stated above.

B) Double Wall Products are DOUBLE-STACKED, stored or shipped in a negligent way.

C) There is a failure to handle Bravo Systems equipment with the utmost care.

D) Any packaging or wrapping materials are removed before the item reaches It's destination.

E) Double Wall Sump Products, Failure to call Bravo Systems If Vacuum level on product is less than 12" HG (Vacuum) (323) 888-4133, refer to sump for further details.

F) If there is any indication or suspect damage, you must mark the freight paperwork *"Suspect Freight Damage"*

NEW INSTALLATION

IMPORTANT **During Installation, cover the UniBox with cardboard, plastic sheeting or equivalent to keep debris from falling into the box. Cover all threaded connections to prevent damage to threads.**

A - Sump Positioning

A.1- Determine the permanent position of the UniBox inside the island according to your specs. Place two support bars across the island widthwise. **(Fig. A.1)**

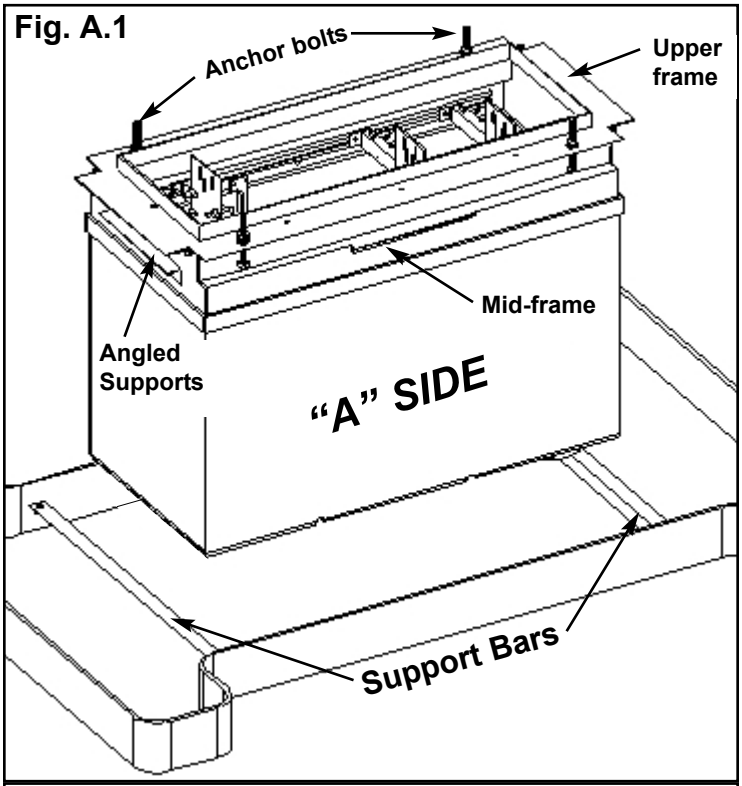
A.2- Rest UniBox on top of a bed of peagravel and ensure the UniBox is level. The Angled supports should make contact with the support bars of the island **(Fig. A.1).**

NOTICE **Containment boxes are marked "A" for Junction box side. Refer to dispenser manufacturers Junction box position.**

IMPORTANT **Box should be approximately 1/4" above top edge of island to allow water to drain away from containment box.**

A.3 - After positioning dispenser box, secure with tie wire to the island support to prevent shifting during concrete pour. Bolting angled supports to the support bars through provided 1/4" holes is recommended. **(Fig. A.4)**

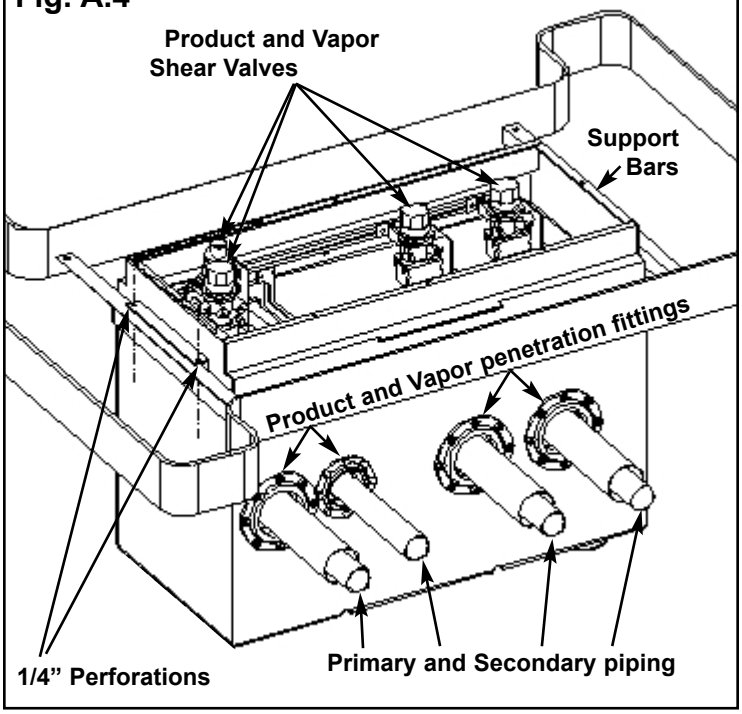
Fig. A.1



PRODUCT AND VAPOR SHEAR VALVE

A.4 - Remove top frame. If not factory installed, connect either the flex connector and/or riser pipe to the bottom of the shear valves outside the sump, then install all product and vapor shear valve assemblies according to the dispenser configuration to the provided brackets. If adjustments to the position of the shear valves are required, check with dispenser manufacturer's configuration **(Fig. A.4)**. See also "**Section D"** on page 8.

Fig. A.4



A.5 - PRIOR TO CUTTING OPEN DISPENSER SUMP ENSURE THAT THE SUMP IS HOLDING VACUUM.

READ PAGE 4 & 5 CAREFULLY !!!

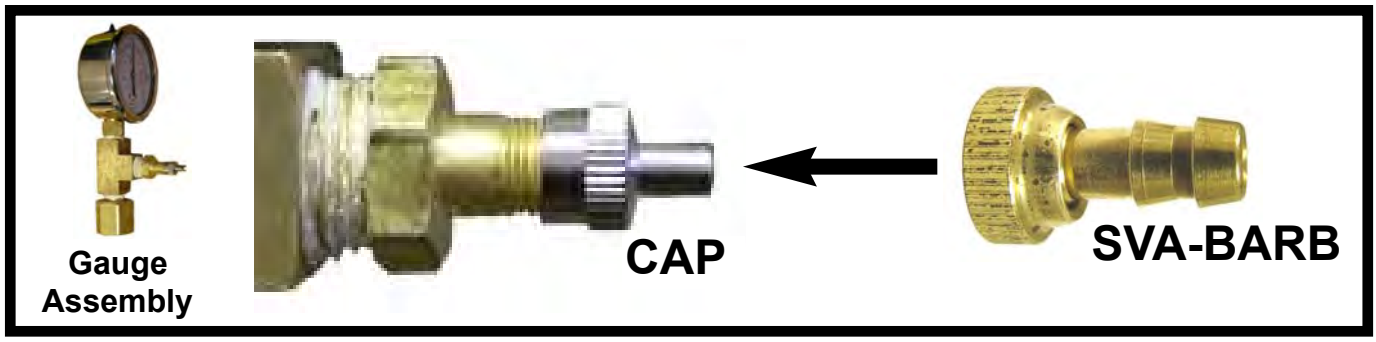
If the gauge reads at or **ABOVE 12 INCHES OF MERCURY** at this time, break vacuum and proceed to **Step A.6**.

If the gauge reads **BELOW 12 INCHES OF MERCURY** at this time **CONTACT THE FACTORY AT 323-888-4133**.
Follow **Step B.2** to repair leaks.

⚠WARNING Pressure test the primary line following the pipe manufacturer's Installation Instructions. Refer to shear valve manufacturer's Installation Instructions for details on testing.

IMPORTANT **While Fiberglassing, curing, or sitting overnight, keep the SVA-BARB in place. This will relieve stress on the Interstice while the sumps are heating up or cooling off.**

SAVE THESE PIECES, DO NOT LOSE THEM! Remove the SVA-BARB when ready to test.



PRIMARY LINE PENETRATION FITTINGS

A.6 - Install all the required number of doublewall penetration fittings per their respective Installation Instructions **(Fig. A.4).**

IMPORTANT **DO NOT FILL DOUBLE WALL PENETRATION FITTINGS WITH FOREIGN MATERIALS, SEALANTS or ADHESIVES!**

ELECTRICAL FITTINGS & CONDUITS

A.7 - Next generation Bravo UDC's feature an electrical offset frame that allows you to install your conduits on the exterior of the sump and up into the side panel of your dispenser.

A.8 - Following your installation of the doublewall penetration fittings, you must **FIRST TEST THE INTEGRITY OF THE BOX, SINCE THE INITIAL VACUUM HAS BEEN LOST.**

A.9 - Using the factory-provided & installed pressure/vacuum combination gauge, Pressure the sump to **4 PSI** and soap **ALL** fittings, and any field repairs, inside and outside. **If foaming leaks are found, Skip to Step B.2.**

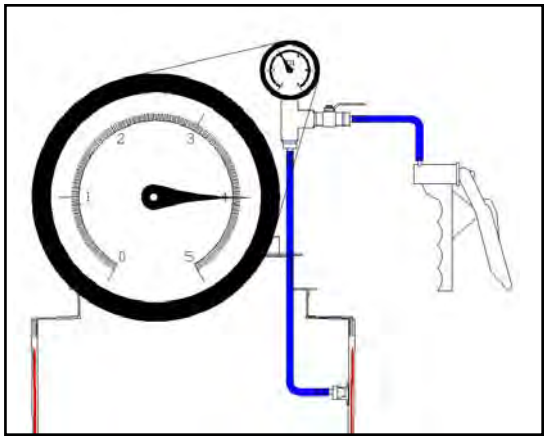
PRIMARY AND SECONDARY PIPING

A.10 - Please refer to your pipe manufacturer's Installation Instructions.

A.11 - When finished with the installation of pipe lines, pressure sump again to no more than **4 PSI and soap** all penetration fittings, inside and outside. Again, if leaks are found, skip to **Step B.2**

IMPORTANT **S. Bravo Systems, Inc. Highly recommends the Air Integrity Test (Step B.1) to be completed at this time, after the penetration fittings have been installed correctly.**

B - Air Integrity Test



Remove & save the SVA-BARB from the Gauge Assembly Schrader Valve

B.1 - Use test assembly and pressure sump to **4 PSI.** Close off with ball valve and resume other work.

Allow **1 Hour** before recording pressure.

NOTICE

BRAVO QUALITY STANDARD

FIELD AIR INTEGRITY INSPECTION TEST : Hold pressure for a **minimum of 1 hour for a Field Integrity Inspection Test.** ***After passing the pressure test, the sump should immediately be filled with interstitial monitoring fluid for the rest of the construction period.***

Hold pressure for a minimum of 1 hour for a Field Integrity Inspection Test. The Under Dispenser Containment Sump *PASSES* the integrity test if the Sump shows *NO* signs of continuous pressure decay. IF TEST PASSES - CONTINUE ON TO THE HYDROSTATIC FILL & INTEGRITY TEST, outlined in **SECTION C.**

IMPORTANT

S. Bravo Systems Highly Recommends an Extended pressure test.

B.2 - IF ANY LEAKS ARE FOUND!!

a: On factory-installed gauge, **pressure** sump Interstice to **EXACTLY 4 PSI.**

b: Close off interstice with ball valve and soap exterior of dispenser sump body, paying close attention to penetration fittings, edges and corners.

e: Locate leak point(s) and mark with marker so you can locate it / monitor it.

c: Repair or reinstall penetration fittings according to your doublewall penetration fitting manufacturers' Installation / Maintenance Instructions.

d: **Occasionally...** Bravo Fiberglass Series Products may suffer mild damage in transit or field installation. Please take a close look at edges and corners.

f: Abrade a 2" diameter area centered on the leak point until flow coat is gone and natural resin/fiberglass material can be seen. Dust with shop brush or compressed air and do not use shop towels or acetone. S. Bravo Systems recommends **"Smith Fibercast Adhesive Kit #8014"** to repair and reinforce Bravo Fiberglass products. Make sure area is completely dry and apply resin generously while pulling -2 PSI vacuum to suck adhesive into pinhole leak for 1 minute. For anything larger than pinhole leaks you must consult the factory.

g: Let cure for a minimum of 4 hours @ or above 75° Fahrenheit.

B.3 - IF ANY REPAIRS ARE MADE, After Cure, Repeat **Steps B.1 to B.2**

FOR HYDROSTATIC MONITORING - PROCEED TO STEP B.4.

FOR CONTINUOUS VACUUM MONITORING - The B8000 and 9000 Series Sump cannot exceed 16" of Mercury. Follow your vacuum system manufacturer's installationinstructions to install, seal, and monitor the doublewall system with vacuum. Continue on to Step E.

⚠WARNING

Ensure that the fittings that are being used with the Vacuum Monitored System can withstand the amount of Vacuum your Monitoring System will generate.

Mandatory Hydrostatic Fill Instructions

IMPORTANT

FIELD AIR INTEGRITY INSPECTION TEST :
YOUR PRODUCT WARRANTY WILL BE VOID IF YOU DO NOT Hold pressure for a **minimum of 1 hour for a Field Integrity Inspection Test.** ***After passing the pressure test, it is HIGHLY RECOMMENDED that the 4 PSI is maintained for as long as possible, up until the time of backfill.***

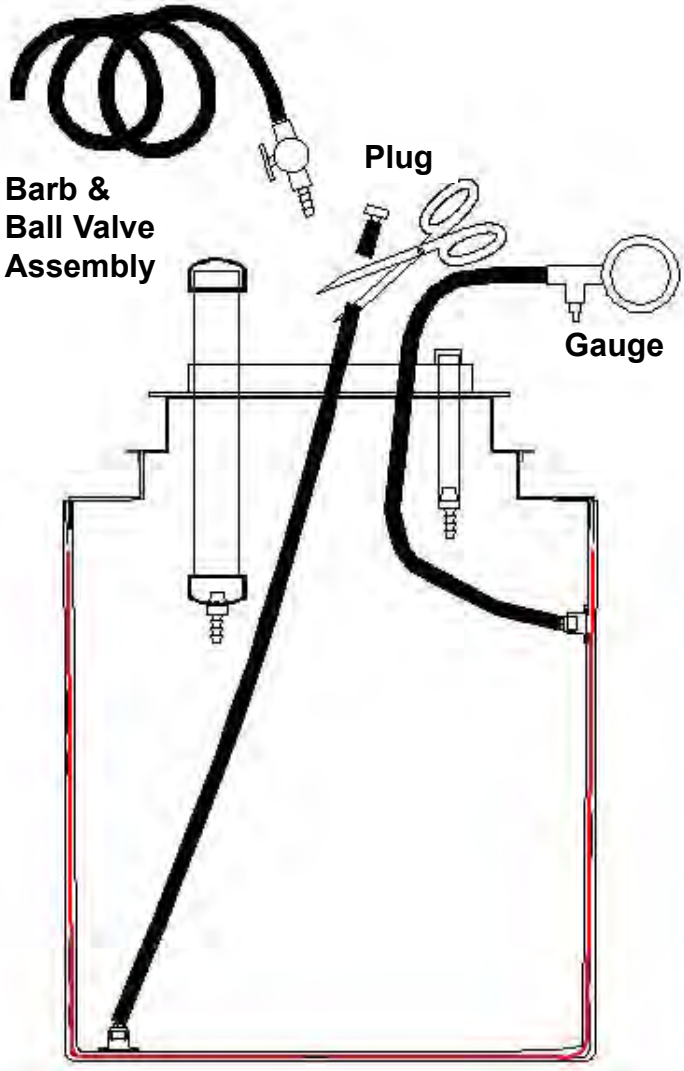
⚠WARNING **YOUR PRODUCT WARRANTY WILL BE REVOKED IF YOU CHOOSE TO SKIP THE AIR INTEGRITY TEST OUTLINED IN YOUR COPY OF YOUR PRODUCT INSTALLATION INSTRUCTIONS. YOU *MUST* COMPLETE THE PRESSURE TEST PRIOR TO HYDROSTATIC FILLING OF THE SUMPS.**

NOTICE The Bravo Double Wall product's ship from the factory with a combination gauge factory-installed and held under 20" of mercury / vacuum.

B.4 - After passing the Field Air Integrity Test per the Installation Instructions and not one of the penetration fittings are showing signs of leaks, you must cut the pipe plug from the tubing connected to the bottom of the box. This assembly is provided by the factory and the connection at the bottom is not to be tampered with.

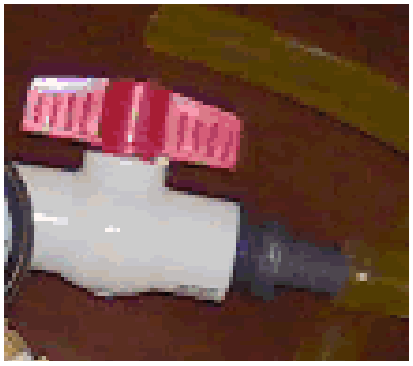
B.5 - Connect (newly cut) open end of tubing to barb-and-ball-valve assembly.
(sold seperately)
A 36" length of clear tubing is factory installed to the barb-and-ball-valve assembly.

After the penetration fittings have been installed, the vacuum has been lost. Pressure/soap tests should have been conducted prior to filling the sumps with liquid.



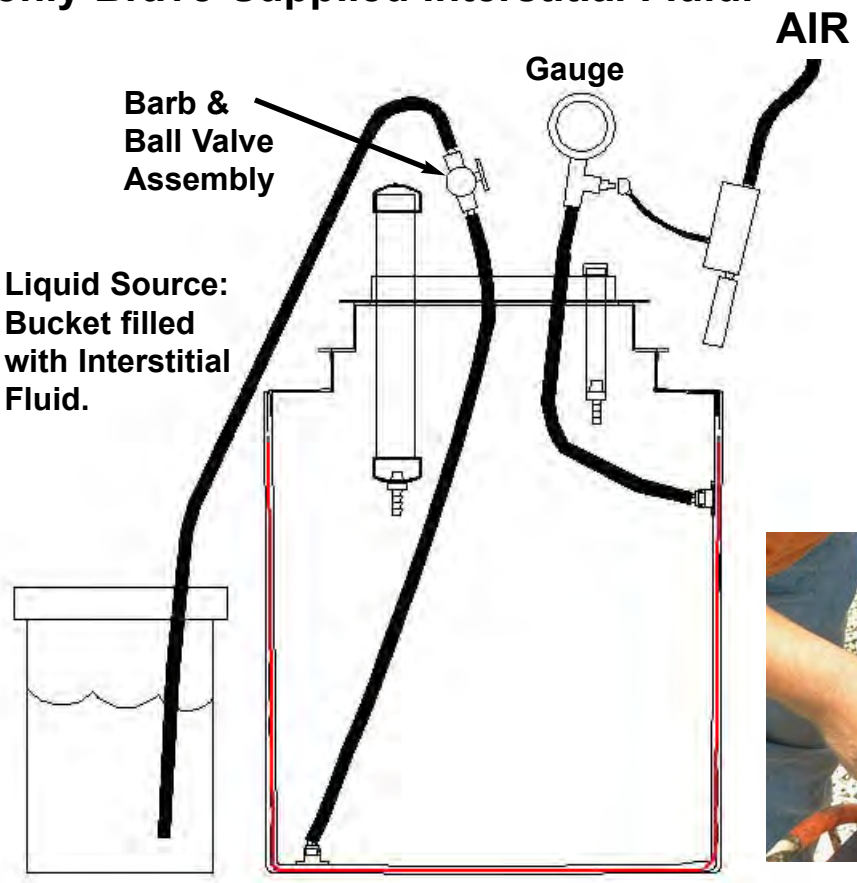
You must cut off the barbed plug and connect the provided Barb & Ball Valve Assembly. Close off the ball valve and prepare the Venturi Vacuum Generator and air supply to be used to fill Sump with liquid.

B.6 - Close off ball valve completely and **prime the open ended 36" length of clear tubing** with provided Interstitial Fluid. A liquid funnel is recommended.



⚠WARNING

Filling Bravo Systems Double Wall Products with Brine (saline) solution will void the product warranty. You must use only Bravo-Supplied Interstitial Fluid.



B.7 - After filling the tubing all the way to the ball valve, **insert open end into your liquid source.** (5 gallon bucket filled with fluid is recommended.)

B.8 - When ready, pull vacuum using the Venturi Vacuum Assembly (sold seperately) to 20 Inches of mercury. Then **SLOWLY** open ball valve and allow Interstitial fluid to flow freely into the system.

⚠CRITICAL ...SLOWLY open ball valve...

B.9 - STOP PULLING VACUUM WHEN THE LIQUID IS 2-3 INCHES FROM THE VERY TOP OF THE INTERSTITIAL SPACE / TEST PORT. This is easily visible while filling the DoubleWall Product.

C) ADVANCED LEAK DETECTION PROCEDURE

A Bravo Systems Exclusive detection method

C.1 - Clear debris from the top open area of the DoubleWall Product and ensure that the interior walls are clean of debris and visible.

C.2 - Apply Vacuum to the sealed interstitial space with the Venturi Vacuum Assembly, and generate 20”-30” of vacuum for a *MINIMUM* of Five [5] Minutes.

⚠WARNING **CHECK WITH YOUR EQUIPMENT MANUFACTURERS INSTALLATION MANUALS FOR INSTALLATION GUIDELINES AND/OR EQUIPMENT LIMITS REGARDING VACUUM AND PRESSURE LEVELS.**

C.3 - As stated in your Instructions, the liquid level is deliberately not filled to the very top of the interstitial space. This pocket of air is necessary to visually check the topmost level of liquid all the way around the Sump for indication of a leak.

C.4 - Visually inspect the interior walls for signs of trailing (very small) bubbles floating to the top of the liquid level within the interstitial space.

NOTICE **These air bubbles are visible within the vertical and horizontal channels of the walls. For Tank Sumps look below the reducer.**

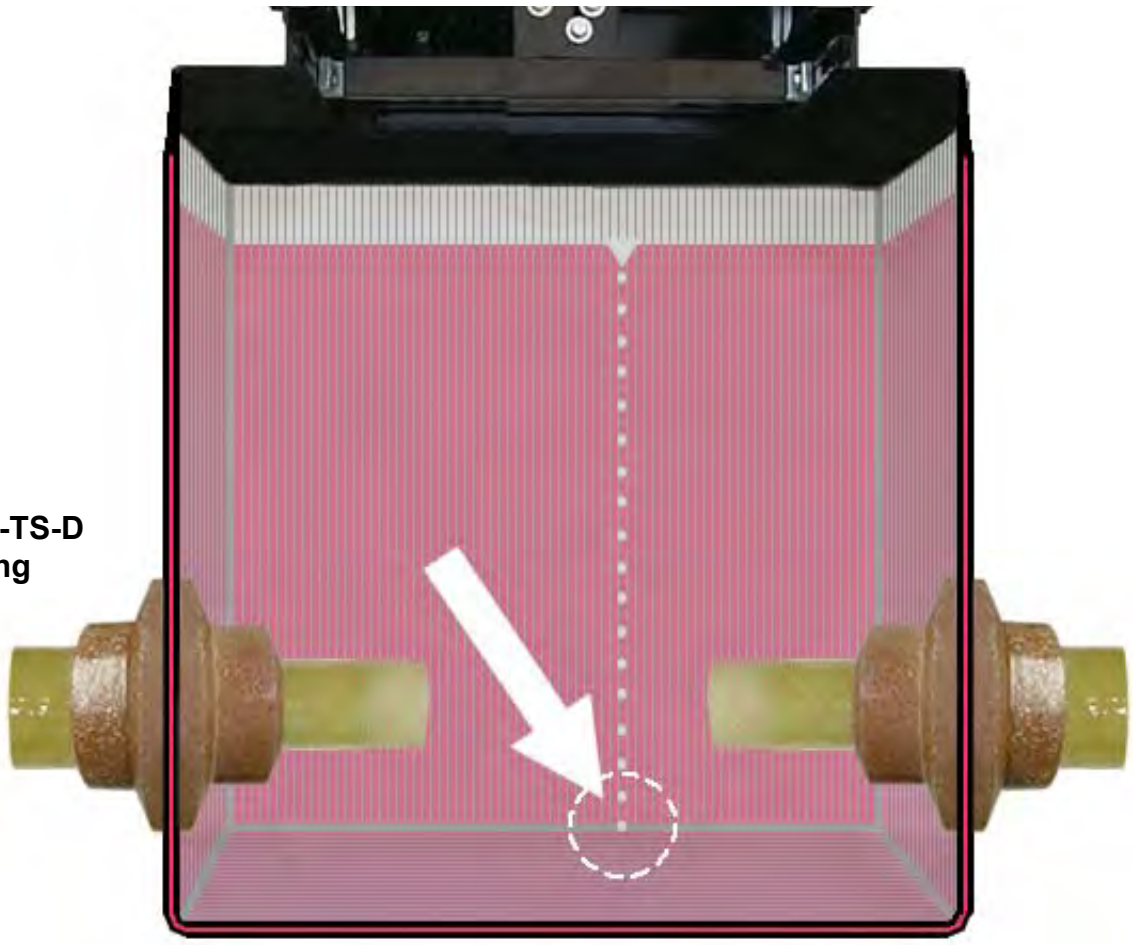
NOTICE **On the top hat reducer of a Tank Sump, any bubbles will burp consistently.**

⚠CRITICAL **PAY CLOSE AND SPECIAL ATTENTION TO FIELD-INSTALLED PENETRATION FITTINGS and FRP JOINTS ON TANK SUMPS. THESE ARE COMMON LEAK POINTS.**

⚠CAUTION

Even though Bravo DoubleWall product corners and edges are thicker than the rest of the Containment sump, These areas are most susceptible to physical damage by Installing Contractors. You would do well to be extremely careful with these DoubleWall products while storing, moving, transporting and Installing these critical environmental components.

ALDP In Action Diagram



F-32-TS-D Fitting

Here a leak is visible while a strong vacuum is pulled on the Interstitial space, forcing tiny air bubbles into the interstitial space to travel upwards. These streams of bubbles are easily spotted and can be traced down to its leak point or area.

⚠ CRITICAL

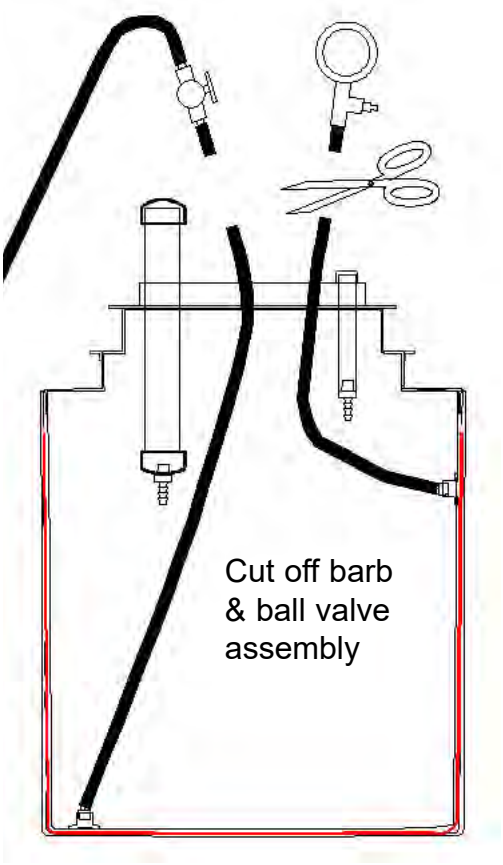
PAY CLOSE AND SPECIAL ATTENTION TO FIELD-INSTALLED PENETRATION FITTINGS and FRP JOINTS ON TANK SUMPS. THESE ARE COMMON LEAK POINTS.

⚠ CAUTION

Even though Bravo DoubleWall product corners and edges are thicker than the rest of the Containment sump, These areas are most susceptible to physical damage by Installing Contractors. You would do well to be extremely careful with these DoubleWall products while storing, moving, transporting and Installing these critical environmental components.

D) ATTACHING THE MANOMETER

D.1 - At this point, after the ALDP test, the interstice should still be holding vacuum. Maintain 20" of Vacuum and **slowly** open ball valve to let fluid into the interstice until it exits the venturi assembly. Visually check whether the fluid level reaches the top of the interstitial space.



D.2 - Cut the barb & ball valve assembly free by cutting the tubing just below it and **connect** open end of tubing to the bottom of the primary Manometer.

D.3 - Cut the Tee and Gauge assembly free by cutting the tubing just below it and **connect** open end of tubing to the bottom of the atmospheric manometer. adjust atmospheric manometer bracket so the manometer is in a position clear of obstructions.

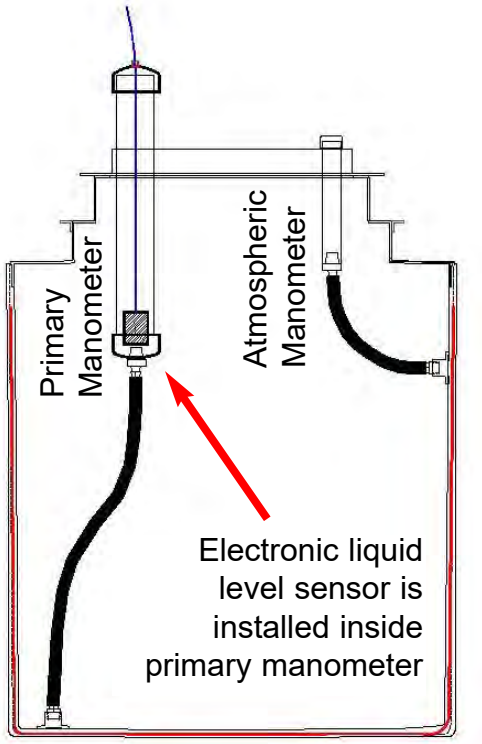
D.4 - It is not uncommon for some interstitial fluid to be lost while connecting the tubing to the primary manometer. This is ok. Replace lost fluid by topping off manometer with interstitial fluid until the liquid level reaches just 2 inches below the top of manometer.

D.5 - Hydrostatic Field Integrity Test

Mark the date and time of test and manometer level. **Allow 1 hour to look for a change in level.** No change in level or visible leaking means box passes test.

D.6 - If interstitial test fluid changes its level more than 1/4", visually look for any signs of leaking around fittings both interior and exterior to sump. Pay special attention to field installed fittings.

<u>NOTE:</u> If you have completed the Air Integrity Test without problems, and completed the Vacuum Hydrostatic Method of filling and still have problems with sump integrity, Contact the Factory.



D.7 - If interstitial monitoring is required, install a California Listed Hydrostatic Sensor (LG-113) using the sensor manufacturer's fitting. Run the sensor cable through the cap assembly. The electronic liquid level sensor should be set at the bottom of the primary (larger) manometer reservoir. Follow your leak detector manufacturer's installation instructions. Cover the manometer with cap and fasten with wire and lead crimp seal.

P-Traps OK since vacuum fill method leaves no room for air.

E-Upper Frame Installation

E.1 - Clean all surfaces. Apply a generous bead of provided Vulkem to the top edge of the Midframe. Be sure to apply Vulkem to the bolt holes. **(Fig. E.1)**

E.2 - Place the dispenser frame on top of the midframe and align the holes. Secure using provided truss head screws. Apply Vulkem to threads and between parts you are bolting to. **Apply Vulkem to the external gap between the midframe and upper frame.** After tightening bolts and/or nuts provided and upper frame is secure, apply generous amount of vulkem to seal the nut and threads.

E.3 - Loosen valve bolts on bracket to allow for adjustability for when you align dispenser and make valve connections.

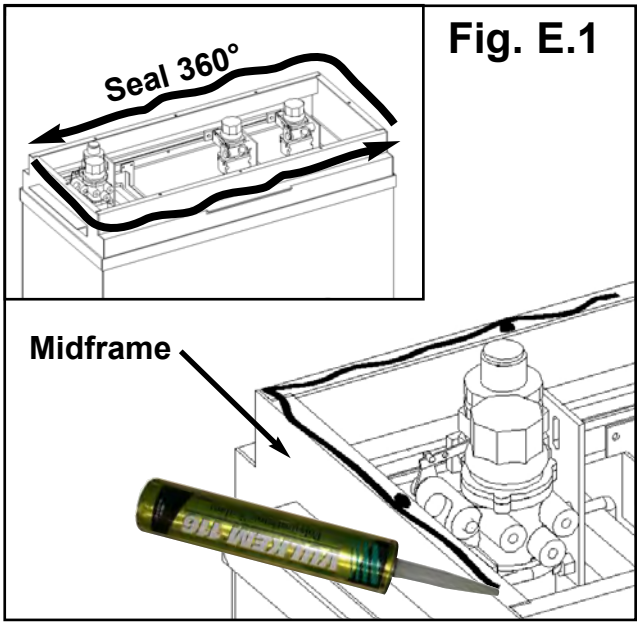


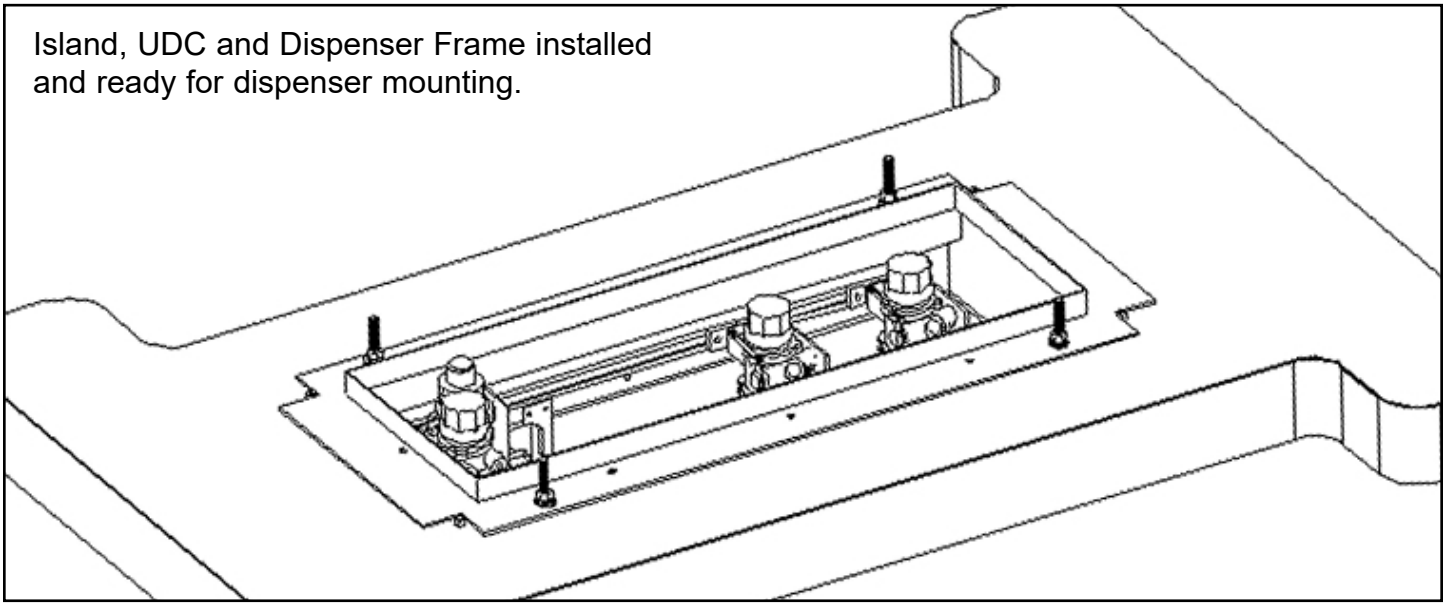
Fig. E.1

⚠WARNING

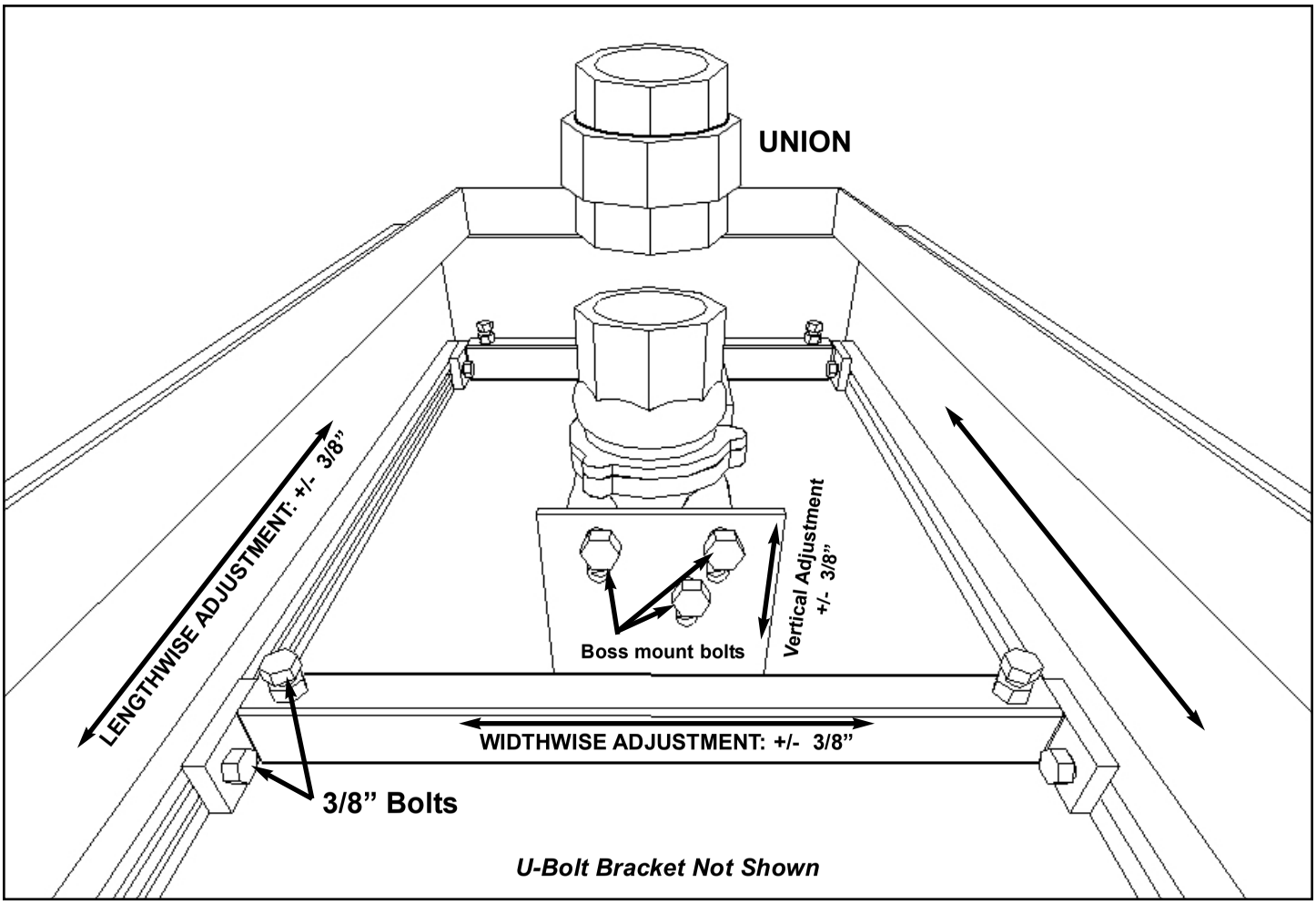
While it is common to bead silicone caulk or other sealant along the bottom edge of the dispenser paneling where it meets the island ***YOU SHOULD NOT DO THIS !!***

Bravo Systems dispenser frames and conversion frames are purpose built with a tailored Water Splash lip to prevent water from water entering the bottom seams of the dispenser and into the sump below. When you seal this edge, it will cause water from rain or heavy fog to accumulate on the interior of the dispenser and, when it runs down the interior of the dispenser panels, it will accumulate between your seal and our water splash lip, and drain into the sump causing an alarm. If you MUST seal this area on the traffic-facing sides of the dispenser, we suggest leaving a 2-3” gap on the ends to allow water drainage from within.

Island, UDC and Dispenser Frame installed and ready for dispenser mounting.



F - ADJUSTING THE PRODUCT SHEAR VALVE



F.1 - When the dispenser is anchored properly, the dispenser inlet or pump inlet should be plumb with the product shear valve. If the product shear valves are positioned correctly, connect them with a union.

F.2 - If the valve and inlet are not aligned, determine the distance necessary for the valve to be moved. To adjust the valve lengthwise and/or widthwise, loosen the 3/8” bolts on the bracket ends and on the bracket inserts. Align valve to dispenser inlet and retighten bolts.

F.3 - Connect dispenser riser pipe to the product shear valve. A nipple may be required to extend the dispenser riser.

IMPORTANT **For rigid piping apply a UL classified pipe sealant for use and handling of gasoline and petroleum oils to externally threaded connections.**

F.4 - Now retighten bolts and/or nuts attaching the shear valves to the bracket. Use provided washers.

F.5 - Connect electrical and vapor lines to the dispenser as required by local regulations. Always follow electrical and vapor component manufacturers’ Installation Instructions.

BRAVO ELECTRICAL OFFSET FRAME INSTALLATION INSTRUCTIONS

IMPORTANT Make sure all electrical conduits and piping are clear of any equipment or other obstructions in the dispenser. Physically check your hydraulic cabinet for obstructions before any installation begins.

BRAVO UNDER DISPENSER CONTAINMENT ELECTRICAL OFFSET INSTRUCTIONS

1) The Frame should be fully installed and sealed with provided Vulkem before conduit installation.

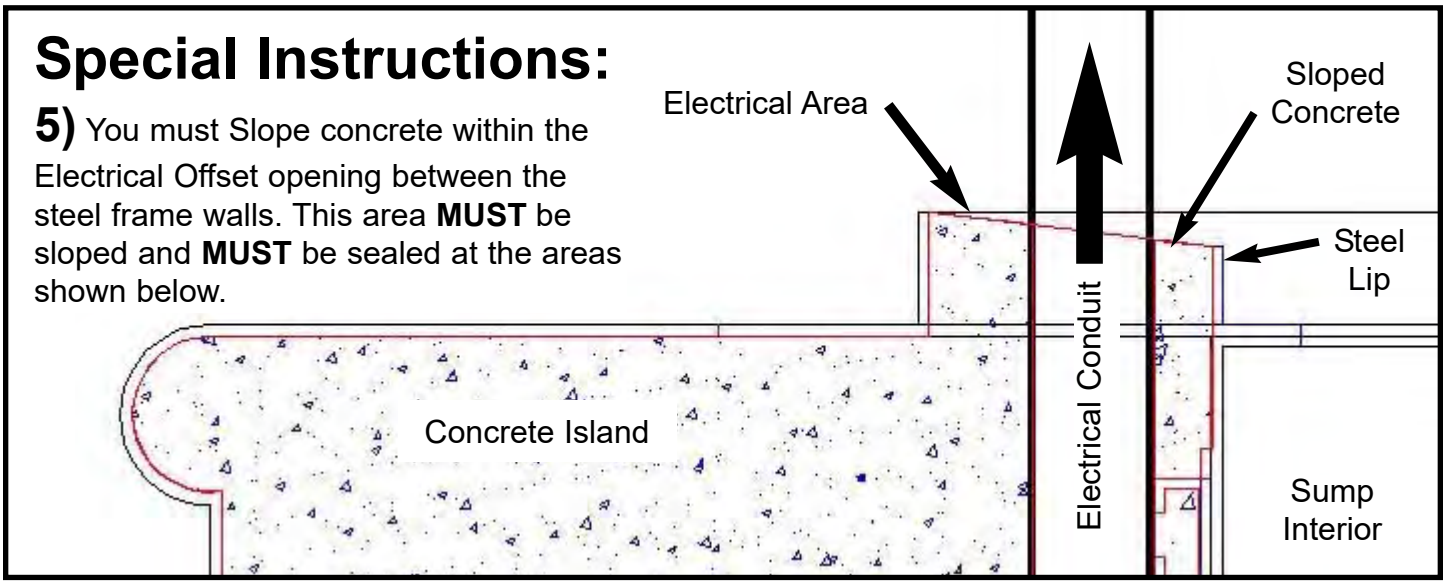
2) Make sure all electrical conduits (piping) are clear of any equipment in the dispenser. Physically check your hydraulic cabinet for obstructions before any installation begins.

3) Conduits must be run and tightly secured to the sump.

4) Pour concrete around outside of Dispenser Sump and within the conduit area.

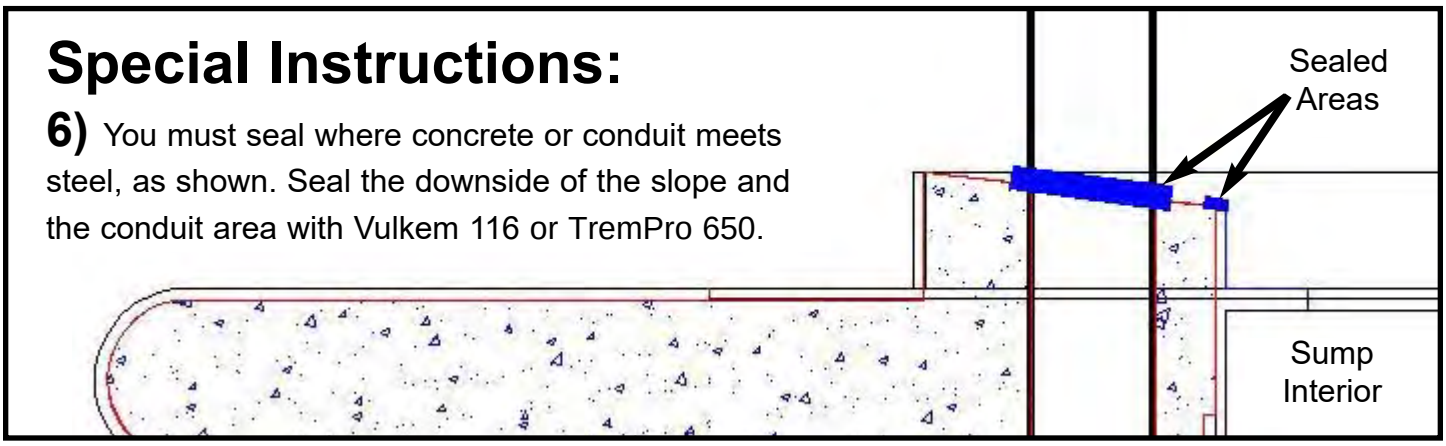
Special Instructions:

5) You must Slope concrete within the Electrical Offset opening between the steel frame walls. This area **MUST** be sloped and **MUST** be sealed at the areas shown below.



Special Instructions:

6) You must seal where concrete or conduit meets steel, as shown. Seal the downside of the slope and the conduit area with Vulkem 116 or TremPro 650.



Half Time #1
3125 Summit Church Rd
Equipment Data Submittal

Item	Qty	Manufacture	Discription	Notes
3			**Sub Pumps**	
	4	Red Jacket	2 HP fixed speed	

Red Armor™ STP for Corrosive Environments

Key Features:

- Specialty coating on all cast surfaces withstands acetic acid exposure to prevent pitting and deterioration over time
- Stainless Steel construction on all exposed surfaces ensures easy maintenance for the life of the pump

The ultimate survivor in your fueling infrastructure. The Red Jacket Red Armor series submersible turbine pumps are built to last in the harshest corrosive environments created by ULSD and ethanol blends.

Specifications:

In-sump protection includes powder coated packer manifold, stainless steel riser, nuts, springs, screws, check valve seat, eye bolt, and check valve guide

In-tank protection includes powder-coated discharge head, stainless column pipe and quick-set connector.

Specialty coating selected as the toughest performer across a battery of abrasion, immersion and impact standards.

Fuel Compatibility

- 100% Gasoline
- 100% Diesel
- 0-100% Biodiesel blends
- Jet fuel
- AVGAS
- Kerosene and Fuel Oil
- Methanol concentrations up to 100%
- Ethanol concentrations up to 90%
- MTBE, ETBE, or TAME concentrations up to 20%

Fits installations from 3 ½′ to 19′ in depth

Built upon the same field proven Red Jacket STP platform with identical sizes as the long standing "Red Jacket" and the "Red Jacket AG" models.

4 Motor Sizes Available:

- ¾ HP, 60 Hz, 1 – phase
- 1 ½ HP, 60 Hz, 1 – phase
- X3 1 ½ HP, 60 Hz, 1 – phase, high pressure
- 2 HP, 60 Hz, 1 – phase

Siphon Ports:

- 2 available, ¼" NPT
- Optional stainless siphon cartridge for survivability in corrosive fuels (410151-002)

Compatible with check valve housing models:

- Standard VR ready check valve for PLLD (410153-001)

Vent Port: 1 available, ¼" NPT

Optional stainless steel trapper intake screen blocks corroded tank debris from clogging dispenser filters (144-194-5)

Quick Set Final Assemblies (Adjustable)

Horsepower	KW	Length	Floating Suction Adapter	Model Number	Part Number
0.75	0.56	72" - 102"		AGP75S1 RA1	410140-086
0.75	0.56	102" - 162"		AGP75S1 RA2	410140-087
0.75	0.56	162" - 222"		AGP75S1 RA3	410140-088
0.75	0.56	74.3" - 104.3"	•	AGP75S1 RA1 FSA	410140-089
0.75	0.56	104.3" - 164.3"	•	AGP75S1 RA2 FSA	410140-090
0.75	0.56	164.3" - 224.3"	•	AGP75S1 RJ3 FSA	410140-091
1.5	1.13	74.5" - 105"		AGP150S1 RA1	410141-088
1.5	1.13	104.5" - 165"		AGP150S1 RA2	410141-089
1.5	1.13	164.5" - 225"		AGP150S1 RA3	410141-090
1.5	1.13	76.8" - 107.3"	•	AGP150S1 RA1 FSA	410141-091
1.5	1.13	106.8" - 167.3"	•	AGP150S1 RA2 FSA	410141-092
1.5	1.13	166.8" - 227.3"	•	AGP150S1 RA3 FSA	410141-093
1.5	1.13	75.5" - 105.5"		X3AGP150S1 RA1	410143-083
1.5 HIGH PRESSURE	1.13	105.5" - 165.5"		X3AGP150S1 RA2	410143-084
1.5 HIGH PRESSURE	1.13	165.5" - 225.5"		X3AGP150S1 RA3	410143-085
1.5 HIGH PRESSURE	1.13	77.8" - 107.8"	•	X3AGP150S1 RA1 FSA	410143-086
1.5 HIGH PRESSURE	1.13	107.8" - 167.8"	•	X3AGP150S1 RA2 FSA	410143-087
1.5 HIGH PRESSURE	1.13	167.8" - 227.8"	•	X3AGP150S1 RA3 FSA	410143-088
2	1.5	78.5" - 108.5"		AGP200S1-3RA1	410142-063
2	1.5	108.5" - 168.5"		AGP200S1-3RA2	410142-064
2	1.5	168.5" - 228.5"		AGP200S1-3RA3	410142-065
2	1.5	80.8" - 110.8"	•	AGP200S1-3RA1 FSA	410142-066
2	1.5	110.8" - 170.8"	•	AGP200S1-3RA2 FSA	410142-067
2	1.5	170.8" - 230.8"	•	AGP200S1-3RA3 FSA	410142-068

Fixed-Speed, single phase STP assemblies. Length measured from the top of the eyebolt to the bottom of the motor inlet. All 208/230 Volts.

Fixed Length Final Assemblies (Non-Adjustable)

Horsepower	KW	Length	Floating Suction Adapter	Model Number	Part Number
0.75	0.56	42" - 132"		AGP75S1 RA	410166-073
0.75	0.56	133" - 168"		AGP75S1 RA	410166-074
0.75	0.56	169" - 222"		AGP75S1 RA	410166-075
0.75	0.56	44.3" - 134.3"	•	AGP75S1 RA FSA	410166-076
0.75	0.56	135.3" - 170.3"	•	AGP75S1 RA FSA	410166-077
0.75	0.56	171.3" - 224.3"	•	AGP75S1 RA FSA	410166-078
1.5	1.13	45" - 135"		AGP150S1 RA	410173-073
1.5	1.13	136" - 171"		AGP150S1 RA	410173-074
1.5	1.13	172" - 225"		AGP150S1 RA	410173-075
1.5	1.13	47.3" - 173.3"	•	AGP150S1 RA FSA	410173-076
1.5	1.13	138.3" - 173.3"	•	AGP150S1 RA FSA	410173-077
1.5	1.13	174.3" - 227.3"	•	AGP150S1 RA FSA	410173-078
1.5	1.13	46" - 135"		X3AGP150S1 RA	410175-085
1.5 HIGH PRESSURE	1.13	136" - 171"		X3AGP150S1 RA	410175-086
1.5 HIGH PRESSURE	1.13	172" - 225"		X3AGP150S1 RA	410175-087
1.5 HIGH PRESSURE	1.13	48.3" - 137.3"	•	X3AGP150S1 RA FSA	410175-088
1.5 HIGH PRESSURE	1.13	138.3" - 173.3"	•	X3AGP150S1 RA FSA	410175-089
1.5 HIGH PRESSURE	1.13	174.3" - 227.3"	•	X3AGP150S1 RA FSA	410175-090
2	1.5	49" - 138"		AGP200S1-3RA	410174-049
2	1.5	139" - 174"		AGP200S1-3RA	410174-050
2	1.5	174.9" - 227.9"		AGP200S1-3RA	410174-051
2	1.5	51.3" - 140.3"	•	AGP200S1-3RA FSA	410174-052
2	1.5	141.3" - 176.3"	•	AGP200S1-3RA FSA	410174-053
2	1.5	177.2" - 230.2"	•	AGP200S1-3RA FSA	410174-054

Five standard length Stainless Steel Risers are available. Fixed length pumps may not be returned to stock.

Standard vs. Upgraded Red Armor Components

To learn more, contact us at 888.561.7942
or visit www.redjacket.com

RED JACKET™ VEEDER-ROOT™

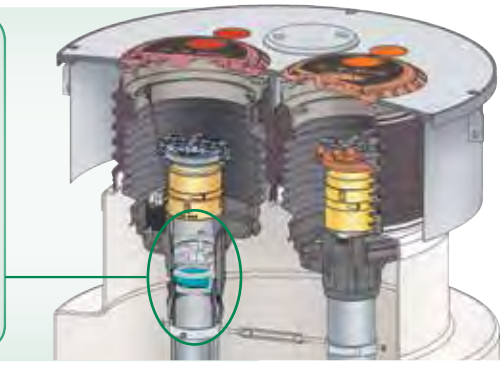
Half Time #1
3125 Summit Church Rd

Equipment Data Submittal

Item	Qty	Manufacture	Discription	Notes
4			**Tank Fittings**	
	3	OPW	Edge 1 Spill bucket	
	3	OPW	71SO Overfill Protection	

FSA400 61JSK

See page 57 for ordering specifications on the FSA-400 & 61JSK



Model Descriptions

- **OPW 411 Series –** features a flush-mounted manhole lid and raised dual dam and groove spill container rings, with P2105 Buckets using OPW 1-2105 Style Slip-On 5-gallon containers. Base is standard 1" offset from center and can be used for 12", 14", 16" or wider riser spacing. Optional 1P-2105 Hand Pump available.
- **OPW 500 Series (511 / 521) EVR Multi-Port –** features a flush-mounted manhole lid and raised dual dam and groove spill container ring, with P511-EVR Buckets using OPW 1-2100 Style Thread-On Spill Containers. All Fill Ports in these spill containers feature an enhanced 1DK-2100-EVR vapor tight drain valve. The Vapor Return Spill Container features a permanent plug in the drain port as per EVR requirements. EVR Multi-Port Thread-On Spill containers are available in Composite or Cast Iron bases with 5 gallon buckets. Drain Valve Spill Bucket & Plug Spill Bucket standard on Dual Ports, Drain Valve Spill Bucket standard on Single Port.
- **Required for EVR APPLICATIONS –** the FSA-400 Threaded Riser Face Seal Adaptor is installed on the fill pipe below the spill container to provide a true sealing for the drop tube flange on the 71SO overfill prevention valve. The 61SO and/or 71SO series valve is installed in the base of the OPW EVR spill container with the patent pending 61JSK jack screw device. This configuration allows liquid in the spill container to be drained directly into the drop tube, thereby isolating the drain valve from the tank ullage, eliminating a notorious leak point in previous systems.

Features

- **Contractor-Friendly Installation –** studded mounting ring simply bolts together inside the spill containment bucket. No need to align bolt holes in the manhole cover.
- **Raintight Service –** nitrile gaskets on the manhole and spill bucket mounting rings help prevent contamination of the sump area from surface water intrusion.
- **Highway 20 Load Rating –** the rugged diamond plate steel manhole covers, as well as the ductile iron (RT) or aluminum (SC) spill container covers meet H20 Load Rating requirements.
- **Spill Container and Manhole Positive I.D. System –** special recesses cast into spill container covers allow product I.D. tags to be attached to the lids. Matching bucket tags can be affixed to the inside of the spill container to prevent covers from getting switched.
- **Fill/Vapor Ports –** configurations are available to accommodate a single fill riser, dual ports for both a fill and vapor riser, and triple and quad ports for multiple fill and vapor risers. Ports can be supplied with or without containment buckets.
- **Port Configurations –** standard port locations match the popular riser spacings (16" or 24") and bung configurations on underground storage tanks. Custom port locations are easily accommodated. For riser spacings less than 16", old style buckets must be used.
- **CARB Certified –** 500 Series CARB EVR Approved Executive Order #VR-102
- **Manhole Cover Sizes –** standard bolt-down manhole cover diameters of 30" (76 cm), 37" (94 cm), 42" (107 cm) and 48" (122 cm) allow ample access to the sump area. Heavy-duty reinforced lid options are also available upon request.

OPW 400 and 500 Series Multi-Port Spill Containment Manholes

OPW Multi-Port Spill Containment Manholes provide spill containment for underground storage tank (UST) fill pipes and vapor recovery risers in a completely integrated single manhole package. Multi-ports are installed over the top of tank sumps to preserve future access to the tank top and to facilitate containment of tank bung fittings. OPW offers a vast array of standard multi-port configurations and options, in addition to an almost unlimited ability to provide custom solutions for virtually any spill containment application.

- **Spill Container Cover Options –** standard spill container options include the patented OPW dam and groove raintight (RT) design and the watertight Sealable Cover (SC) "plumber's plug" design. The raintight cover features a finger-grip lifting facility and an integral seal. The sealable cover features a cam-operated mechanism that expands the seal against the vertical wall of the mounting ring. Both of these water-shedding covers are protected by raised mounting rings.
- **Fastener Options –** two types of fasteners are available to secure the manhole lid and monitoring port to mounting rings. Standard are 5/16"-18 hex head bolts. Optional are OPW Roto-Lock Fasteners. The OPW Roto-Lock system enables a secure, watertight connection without the need to locate threaded bolt holes on the mounting ring.
- **Powder Coated Rings & Covers –** available upon request.
- **Replacement Covers –** see Part Number Configurations at **www.opwglobal.com**.

Listings and Certifications

Look for this label for authentic OPW EVR Approved products.

CARB EVR Executive Order #VR-102
NYCFD Certified (6571Series) #5053
Florida EQ-145

OPW Multi-Port Spill Containment Ordering Specifications

Product Number

6 5 2 1 EVR B – _ _ 1 6 4 0 4 2

EVR (500 Series Only) Do Not Enter "EVR" for old style multiports

Bolt Down Model Number

511EVR - HDPE Bellows, Thread-On Composite Base, Bolt-Down

561EVR - HDPE Bellows, Thread-On Cast Iron Base, Bolt-Down

411- HDPE Bellows, Slip-On Composite Base

Roto-Lock Model Number

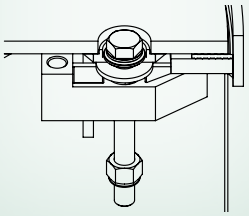
521EVR - HDPE Bellows, Thread-On Composite Base, Roto-Lock

571EVR - HDPE Bellows, Thread-On Cast Iron Base, Roto-Lock

421- HDPE Bellows, Slip-On Composite Base with Roto-Lock Fasteners

Optional Roto-Lock Fastener System

The OPW Roto-Lock system enables a secure raintight connection without the need to locate threaded bolt holes on the mounting ring.



Fill/Vapor Port Configurations

A (Dead Center)

B

E

G (42" Minimum Cover)

L (Offset Single Port)

T

NOTE: 43 or 49 style Gauge Port must be used if a water shroud is to be used with L style

Replacement / Retrofit Manhole

RP* - (No Ring / Skirt)

*RP cover orders must be accompanied by an up-to-date OPW field survey form.

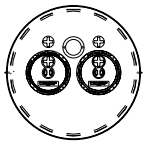
Riser Spacing

00 - Single Port (A Configurations)

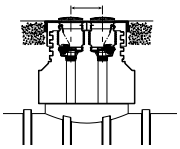
16 - 16" Centers

24 - 24" Centers (42" Minimum Cover)

Old Style - 14" Centers Available

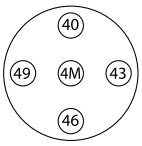


Riser Spacing



Gauge Port Location

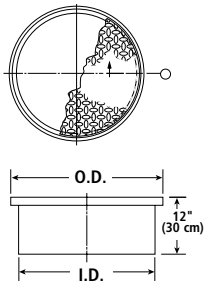
00 - No Gauge Port
40 - Port at 12 o'clock
43 - Port at 3 o'clock
46 - Port at 6 o'clock
49 - Port at 9 o'clock
4M - Port in Center
7X - Flush Mount



Port Location Example

NOTE: 3M Style gauge port must be used with port in the center of "G" Style

Manhole Cover Size*
30" (Configurations)
36 - 36" Retrofit Only
37 - 37"
39 - 39" Retrofit Only
42 - 42"
48 - 48"
* 42" is standard



Dimensions

O.D.		I.D.		Thickness	
in.	cm	in.	cm	in.	cm
30	76	26 5/8	68	3/8	0.952
37	94	34 5/8	88	3/8	0.952
42	107	39 5/8	101	1/2	1.27
48	122	44 5/8	113	1/2	1.27

EVR Multi-Ports

Thread-On Spill Containers are available in composite or cast iron bases with either 5 or 15-gallon buckets. (1) Drain Valve Spill Bucket & (1) Plug Spill Bucket standard on Dual Ports. Drain Valve Spill Bucket standard on Single Port.

Optional Accessories

Part #	Description
6511-RB16	12" to 18" Riser Spacer
6511-RB24	20" to 26" Riser Spacer
H15144M	4" NPT Nipple, 4" Length
H12806M	4" NPT Nipple, 5" Length
VPN4X7	4" NPT Nipple, 7" Length
H15271M	4" NPT Nipple, 8" Length
H15268M	4" NPT Nipple, 10" Length
TC-400	4" Torque Cap for 4" Nipples
6521-XAR37	36", 37" OR 38" Roto-Lock Adaptor Ring to convert from Bolt Down
6521-XAR42	39" OR 42" Roto-Lock Adaptor to convert from Bolt Down
6521-XAR48	48" OR 52" Roto-Lock Adaptor to convert from Bolt Down

6511-RB16 Riser Spacer

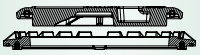
Torque Cap

4" Nipple

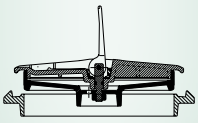
OPW A DOVER COMPANY 9393 Princeton-Glendale Road ◆ Hamilton, Ohio USA 45011 Phone: (800) 422-2525 ◆ Fax: (800) 421-3297

R T | 0 5 | 2 | W

Spill Container Cover Style**
RT - Raintight
SC - Sealable Cover
00 - No Ring or Cover



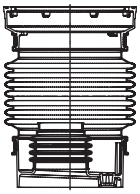
RT - Raintight



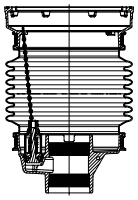
SC - Sealable Cover (Lid in open position)

** Raintight cover is standard

Spill Container Capacity***
00 - No Containment
05 - 5-Gallon
15 - 15-Gallon
*** 5-Gallon bucket is standard



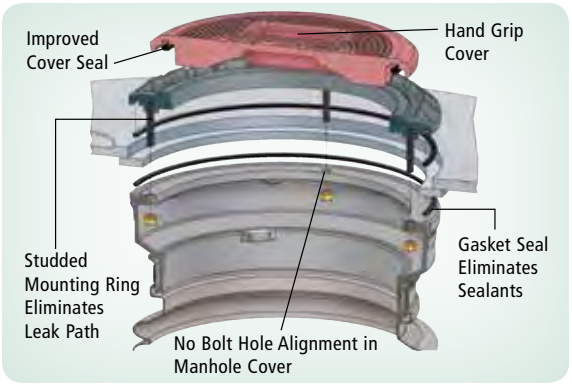
411-5-gallon (Slip-On)



511-5-gallon (Thread-On)

 # Of Ports With Containment
0
1
2
3
4

Powder Coated Manhole Covers
R - (1) Red
(1) Orange
W - (1) White
(1) Orange
Y - (1) Yellow



Current Replacement Parts

For New 500 Series EVR Multi-Ports 6511/6521, 6561/571 made post 11/2003

Part #	Description
P711-EVRDV	Replacement 5-Gallon Bucket, w/ Drain Valve
P711-EVRPL	Replacement 5-Gallon Bucket, w/Plug (Vapor)
P761C-EVRDV	Replacement 5-Gallon Bucket, C.I. Base w/Drain Valve
P761C-EVRPL	Replacement 5-Gallon Bucket, C.I.
P411-EVRPL	Replacement 5-Gallon Slip-On Bucket
P511-15-EVRDV	Replacement 15-Gallon Bucket, Comp Base, W/ Drain Valve
C05170M	Gasket, Spill Bucket & Mounting Ring
H15187M	Replacement Seal for New Rain Tight Cover

Note: New P711 & P761 EVR buckets will only work with New "EVR" Multi-Port covers. (made post 11/2003)

See page 53 for replacement rings and covers part numbers.

Old Style Replacement Parts
311/411/511/521 Series Multi-Ports
Note: 511/521 parts are for Multi-Ports made prior to Nov. 2003

	Part #	Description
ALL	1DK-2100-EVR	511/521 Series Drain Valve
	H13931M	Replacement Seal for SC Cover
	P110-37G	34"-37" Manhole Gasket
	P110-42G	42" Manhole Gasket
	P110-48G	48" Manhole Gasket
	PROTO-LOCK	(1) Roto-Lock
	P40-ROTOLID	Replacement 40 Style Gauge Port Roto-Lock Lid
	H15240M	Replacement Gasket for 40 Style Gauge Port
	P511-BK	Steel Cover Bolt & Gasket Kit, (4 each) for complete cover
	P-30L	Replacement 30 Style Bolt Down Gauge Port Lid
	P311-G	Bucket Top Flange Gasket
	P511BUCKETBOLT	Spill Bucket RT Ring Kit (4) Bolts, Washers & Gaskets
	H15238M	Replacement Gasket, 30 Style (Bolt Down)
	1-2100-DSH	5 Gallon Fill Bucket with Composite Base & Drain Valve
	1-2100-PSH	5 Gallon Vapor Bucket with Composite Base & Plug

	Part #	Description
411 Parts	P2105BUCKET	411 Replacement Bucket 5-Gallon
	1P-2105	H& Pump Kit for 411/P2105
511/521 Parts	P111-WTL	Replacement Cover (RT)
	P111WTL-S	Replacement Seal for RT Cover
	P311-1R	Replacement RT Ring
	P311-14	RT Ring for 14" Riser
	P511YBUCKET	Replacement Waste Oil Bucket
	P511-DEVRBUCKET	Replacement 5-Gallon Bucket with Drain Valve
	P511-G14	Bucket Top Flange Gasket for Notched Gasket Set
	P511-PEVRBUCKET	Replacement 5-Gallon Bucket with Plug
	P511C-DEVRBUCKET	Replacement 5-Gallon Bucket With C.I. Base & Drain Valve
	P511C-PEVRBUCKET	Replacement 5-Gallon Bucket With C.I. Base & Plug
	P511-DEVRB-14	Replacement 5-Gallon Bucket with Drain Valve 12" & 14" Risers
	P511-PEVRB-14	Replacement 5-Gallon Bucket with Plug – 12" & 14" Risers
	P511C-DEVRB-14	Replacement 5-Gallon Bucket W/ C.I. Base, Drain Valve for 12" & 14" Risers
	P511C-PEVRB-14	Replacement 5-Gallon Bucket W/ C.I. Base, Plug, for 12" & 14" Risers
	P521-GKIT	521 Multi-Port Complete Gasket Kit
	P511-GKIT	511 Multi-Port Complete Gasket Kit

See page 73 for additional cover options.

Multi-Port Manhole Water Shroud System Option

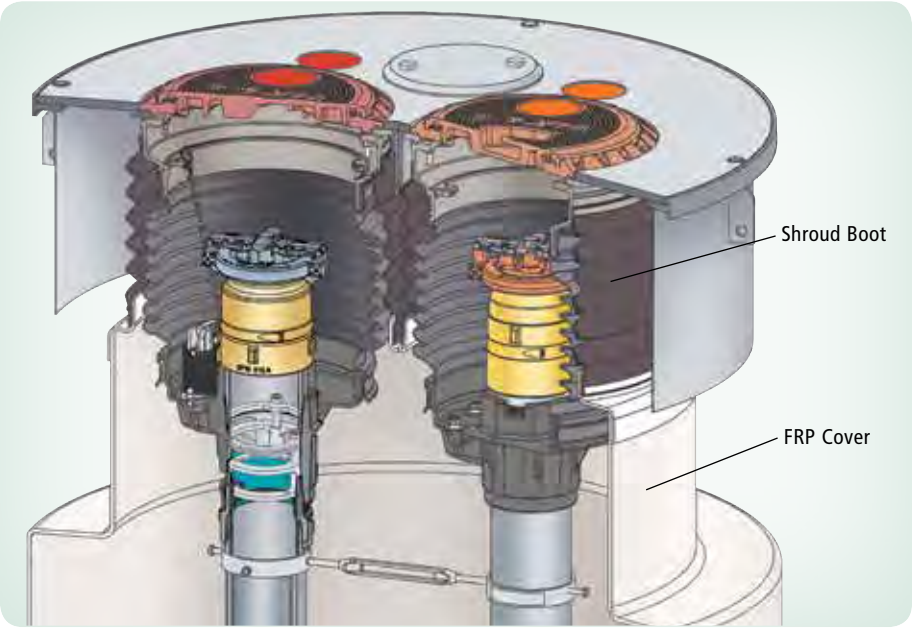
The new OPW Multi-Port Manhole Water Shroud System (MPWS) is designed to completely isolate surface water and condensation from the tank sump. The MPWS features an injection-molded fiberglass Water Shroud lid that mates to a standard tank sump top hat reducer. This new bolt down design allows even compression to facilitate water-tight sump access. Shroud Boots isolate the spill container buckets using stainless steel band clamps, which provide a tight seal between the water shroud top hat and the underside of the spill container mounting rings. A 6" Sump Inspection Port is provided on each FRP Cover, allowing full inspection access through the Multi-Port Gauge Port. The OPW Water Shroud system is available in 33" and 36" models. The MPWS Water Shroud is sold separately.

Rubber Shroud Cap

Shroud Boots Vinyl Plastisol

Sump Inspection Port (SIP) – Clear ABS Construction Inspection Port

FRP Cover Injection Molded Fiberglass Cover



Ordering Specifications

Part #	Description
MPWS-33	33" FRP Cover with (2) 5-gallon Water Shroud Boots & Clamps
MPWS-33BD	33" Bolt Down Water Shroud
MPWS-33BDD	33" Bolt Down Water Shroud for Diesel
MPWS-36	36" FRP Cover with (2) 5-gallon Water Shroud Boots & Clamps
MPWS-39BD	39" Bolt Down Water Shroud

Replacement Parts

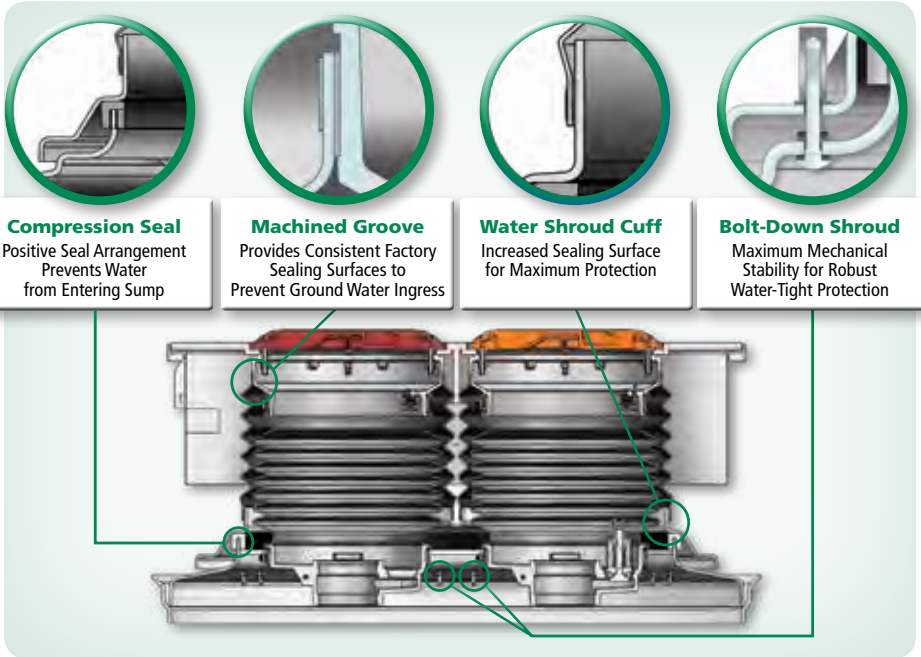
Part #	Description
C05223M	Shroud Boot Cap to Isolate One FRP Cover Port
D02571M	33" FRP Replacement Cover
D02586M	36" FRP Replacement Cover
D02575M	5-gallon Shroud Boot
H15188M	Lower Clamp for 5-gallon Shroud Boot
H15190M	Upper Clamp for 5 or 15-gallon Shroud Boot
SIP-6	6" Sump Inspection Port Sight Glass
SLPK	Gasket and Sealant Kit for Shroud
205181	Lower Clamp for 5 Gallon Shroud
205183	Upper Clamp for 5 Gallon Shroud

Listings and Certifications

Florida EQ-145
NY Approval

NOTE: Part numbers do not include rings or covers. Rings and Covers must be ordered separately.

OPW A DOVER COMPANY 9393 Princeton-Glendale Road ◆ Hamilton, Ohio USA 45011 Phone: (800) 422-2525 ◆ Fax: (800) 421-3297



Bolt Down Manhole Water Shroud System Option

The Bolt Down Multi-Port Water Shroud (MPWS-BD) is designed to mate with the OPW Multi-Port. The MPWS-BD isolates surface water and condensation from Tank Sumps.

Shroud boots isolate the spill container buckets using stainless steel band clamps, providing a tight seal between the water shroud top hat and the underside of the spill container-mounting ring. Bolts on the outer edge of the shroud cover secure it to the top hat. Available in 33" and 39" Diameter Covers.

Ordering Specifications

Part #	Description
Bolt-Down FRP Top Hat Options	
203246	42" x 33" FRP Bolt-Down Top Hat
203272	42" x 39" FRP Bolt-Down Top Hat

Replacement Parts

Part #	Description
C05223M	Shroud Boot Cap to Isolate One FRP Cover Port
D02571M	33" FRP Replacement Cover
D02586M	36" FRP Replacement Cover
D02575M	5-gallon Shroud Boot
H15188M	Lower Clamp for 5-gallon Shroud Boot
H15190M	Upper Clamp for 5 or 15-gallon Shroud Boot
SIP-6	6" Sump Inspection Port Sight Glass
SLPK	Gasket and Sealant Kit for Shroud
205181	Lower Clamp for 5 Gallon Shroud
205183	Upper Clamp for 5 Gallon Shroud

New Ring and Cover Part Numbers

Raintight Covers
RTC-WHITE
RTC-RED
RTC-YELLOW
RTC-GREEN
RTC-ORANGE
RTC-BLACK

Raintight Cover Rings
RTR-WHITE
RTR-RED
RTR-YELLOW
RTR-GREEN
RTR-ORANGE
RTR-BLACK

Sealable Covers
SC-WHITE
SC-RED
SC-YELLOW
SC-ORANGE
SC-BLACK
SC-PLAIN

Sealable Cover Rings
SCR-WHITE
SCR-RED
SCR-YELLOW
SCR-ORANGE
SCR-BLACK

OPW 71SO Overfill Prevention Valves

The CARB-certified OPW 71SO vapor-tight Overfill Prevention Valve is designed to prevent the overfill of underground storage tanks by providing a positive shut-off of product delivery. The shut-off valve is an integral part of the drop tube used for gravity filling. The OPW 71SO allows easy installation (without breaking concrete) and requires no special manholes.

The OPW 71SO is a vapor-tight two-stage shut-off valve. When the liquid level rises to about 95% of tank capacity, the valve mechanism is released, closing automatically with the flow. This reduces the flow rate to approximately 5 gpm through a bypass valve. The operator may then stop the filling process and disconnect and drain the delivery hose. As long as the liquid exceeds the 95% level, the valve will close automatically each time delivery is attempted.

If the delivery is not stopped and the liquid rises to about 98% of tank capacity, the bypass valve closes completely. No additional liquid can flow into the tank until the level drops below a reset point.

NOTE: The 71SO Overfill Prevention Valve can be adjusted to shutoff at any desired tank capacity. Please contact the Authority Having Jurisdiction (AHJ) and review local, state, and national codes to determine the regulatory requirements governing shut-off capacity in your region, as well as take into account other considerations such as extreme tank tilt. In all cases, the upper tube must protrude into the tank at least 6 1/2" to ensure that the valve can shut off flow into the tank completely before the top of the tank is wetted as per EPA requirements.

71SO Instruction Sheet Order Number: **H15524PA**

Listings and Certifications

California Air Resources Board

Materials

Valve Body: Cast aluminum
Float: Nitrile rubber, closed cell foam
Valve: Aluminum
Seals: Viton®
Upper & lower Drop Tube: Aluminum
Plastic parts: Acetal
Hardware: Stainless steel

Features

- **Simple, Easy and Quick Installation –** no excavation or special manholes required.
- **Economical –** costs a fraction of expensive, complicated and difficult-to-install valves.
- **Furnished Complete –** supplied with new upper and lower drop tubes, mounting hardware and thorough instructions for quick job site time.
- **Completely Automatic Operation –** no prechecks to perform, no resets and no overrides to be broken or abused.
- **No Pressurization of the Tank –** operates directly from liquid level.
- **Will Accept a Dipstick for Gauging**
- **Retrofits Directly –** for both new and existing tanks with 4" fill risers.
- **Quick Drain Feature –** automatically drains hose when head pressure is relieved.
- **Best Flow Rate in The Industry***

*** OPW Test Lab results**

Important

In order to prevent product spillage from the Underground Storage Tank (UST), properly maintained delivery equipment and a proper connection at the tight-fill adaptor are essential. Delivery personnel should be managed and trained to inspect delivery elbows and hoses for damaged and missing parts. They should always make certain there is a positive connection between the adaptor and elbow. If delivery equipment is not properly maintained, or the elbow is not securely coupled to the adaptor, a serious spill may result when the OPW 71SO closes, causing a hazard and environmental contamination.

NOTE: The OPW 71SO is designed for use on tight-fill gravity drop applications only. Do not use for pressure fill applications.

Advantages of Overfill Prevention Compared to Overfill Warning Systems:

- **Completely Automatic Operation –** does not rely on the alertness or speed of response of the delivery attendant for certainty of overfill prevention.
- **Keeps the Top of UST "Dry," per EPA Requirements –** eliminating possible leaks at loose bung fittings and the need for double containment on vent lines.
- **Does Not Rely on Pressure in the UST to Stop Flow –** allowing faster fill times and reducing spill risk.
- **Speeds Delivery Operations –** product flows unimpeded into the tank until the hose "kick" that accompanies the valve shut-off provides a clear signal that the liquid has reached the shut-off level.
- **Simple and Inexpensive Installation –** in both two-point and coaxial fill applications, no additional excavation, manholes or vent piping are required.

Look for this label for authentic OPW EVR Approved products.
OPW 71SOM is EVR Approved for E85

Raising The Standard In Overfill Prevention

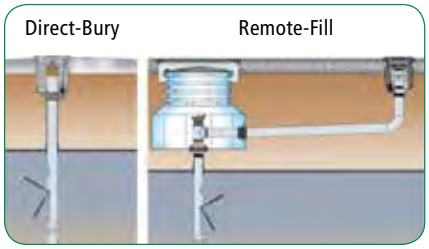
From the company that brought you the industry standard OPW 61SO, OPW raises the standard with the introduction of the **71SO Overfill Prevention Valve** – breakthrough innovation that takes overfill prevention to a whole new level of overfill perfection.

- **Eliminates curing issues due to hot or cold temperatures**
- **Easier, quicker, installation**
- **Higher quality, more reliable installation**
- **Lower costs**
- **Greater protection against fugitive emissions and pressure decay**
- **Fastest flow rate in the industry**

The new 71SO is a two-stage, positive shut-off valve, providing completely automatic operation with no pre-checks to perform, no resets, and no overrides to be broken or abused. The valve closes when the tank level rises to 95% capacity and provides a special bypass valve so the tank can be filled to a maximum capacity of 98%. The 71SO is available for direct-bury and remote applications.

All Vapor-Tight Overfill Valves are CARB EVR Certified

No Epoxy Sealants Required!



Replacement Parts

Part #	Description
61SOK-0001	Replacement Float Kit
H11931M	Drop Tube Seal
H14840M	Lower Tube Seal
C05117	Lower Tube
D02508	Vapor-Tight Inlet Tube
C03899M	Non-Vapor-Tight Inlet Tube
D02508	Vapor-Tight Inlet Tube (Blue)

71SO Ordering Specifications

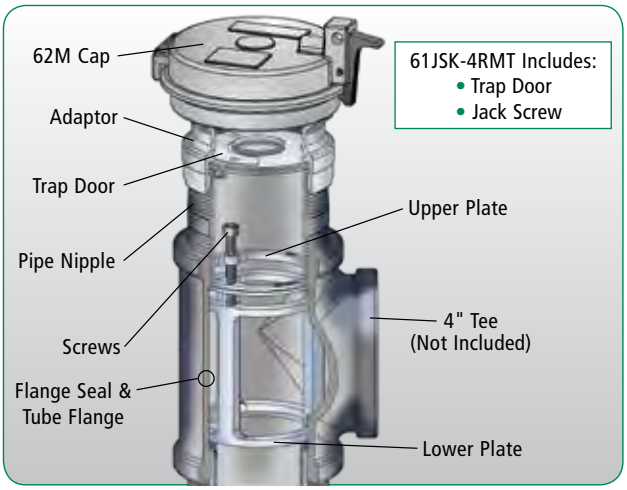
Product #	Description	Bury Depth ft.	Bury Depth m	Tank Diameter ft.	Tank Diameter m	Upper Tube Length in.	Upper Tube Length m	Lower Tube Length in.	Lower Tube Length m	Overall Length in.	Overall Length m	Max. Riser Length in.	Max. Riser Length m	Max. Nominal Tank Dia. in.	Max. Nominal Tank Dia. m	Max. Actual Tank Dia. in.	Max. Actual Tank Dia. m	Weight lbs.	Weight kg
71SO-400CB*	Vapor-Tight Overfill Valve	5	1.5	8	2.4	60	1.5	83	2.1	155 3/4	3.9	53 1/2	1.4	96	2.4	107	2.7	16	7
71SO-410CB*	Vapor-Tight Overfill Valve	10	3.0	10	3.0	120	3.1	102	2.6	234 3/4	5.9	113 1/2	2.9	120	3.1	126	3.2	25	11
71SO-420CB*	Vapor-Tight Overfill Valve	10	3.0	12	3.6	120	3.1	126	3.2	258 3/4	6.5	113 1/2	2.9	144	3.7	150	3.8	26	12
71SO-4000	Non Vapor-tight Overfill Valve	5	1.5	8	2.4	60	1.5	83	2.1	155 3/4	3.9	53 1/2	1.4	96	2.4	107	2.7	16	7
71SO-4010	Non Vapor-tight Overfill Valve	10	3.0	10	3.0	120	3.1	102	2.6	234 3/4	5.9	113 1/2	2.9	120	3.1	126	3.2	25	11
71SOM-412C	E85 Vapor-tight Overfill Valve	10	3.0	10	3.0	120	3.1	102	2.6	234 3/4	5.9	113 1/2	2.9	120	3.1	126	3.2	38	17.3
71SO-TOOLCT	71SO Installation Tool																	2.5	1
61JSK-4RMT	Jack Screw Kit For Vapor-Tight Remote Applications																	1.5	0.7
61JSK-4410	Jack Screw Kit For Composite Base Spill Bucketst																	1	0.5
61JSK-44CB	Jack Screw Kit For Cast Iron Base Spill Buckets																	1	0.5
71JSK-4RMT	E85 Jack Screw for Remote-Fill Applications																	1	0.5
71JSK-44MA	E85 Jack Screw for Direct-Fill Applications																	1.5	0.7

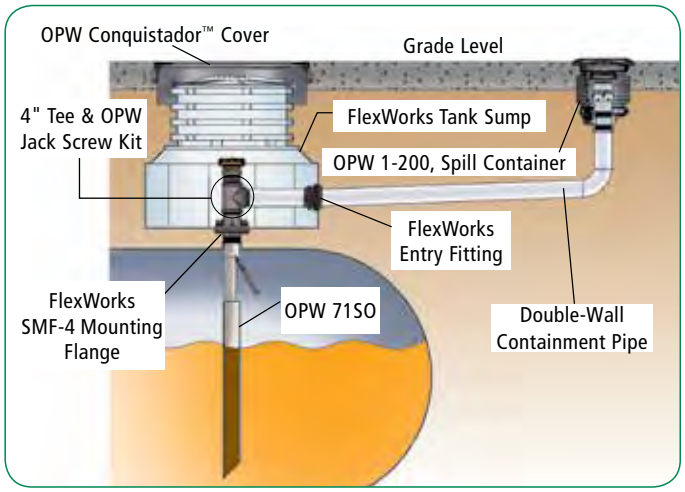
61JSK-4410 AND 61JSK-44CB Instruction Sheet Order Number: **H15289M**

*ULC B100 Compatible

71SO Vapor-Tight Remote Fill

The OPW Vapor-Tight Remote Fill is designed for two-point vapor-tight remote-fill applications, where the fill point is not directly over the UST. A CARB approved vapor-tight 71SO overfill valve is installed in the sump through a riser pipe directly over the tank.

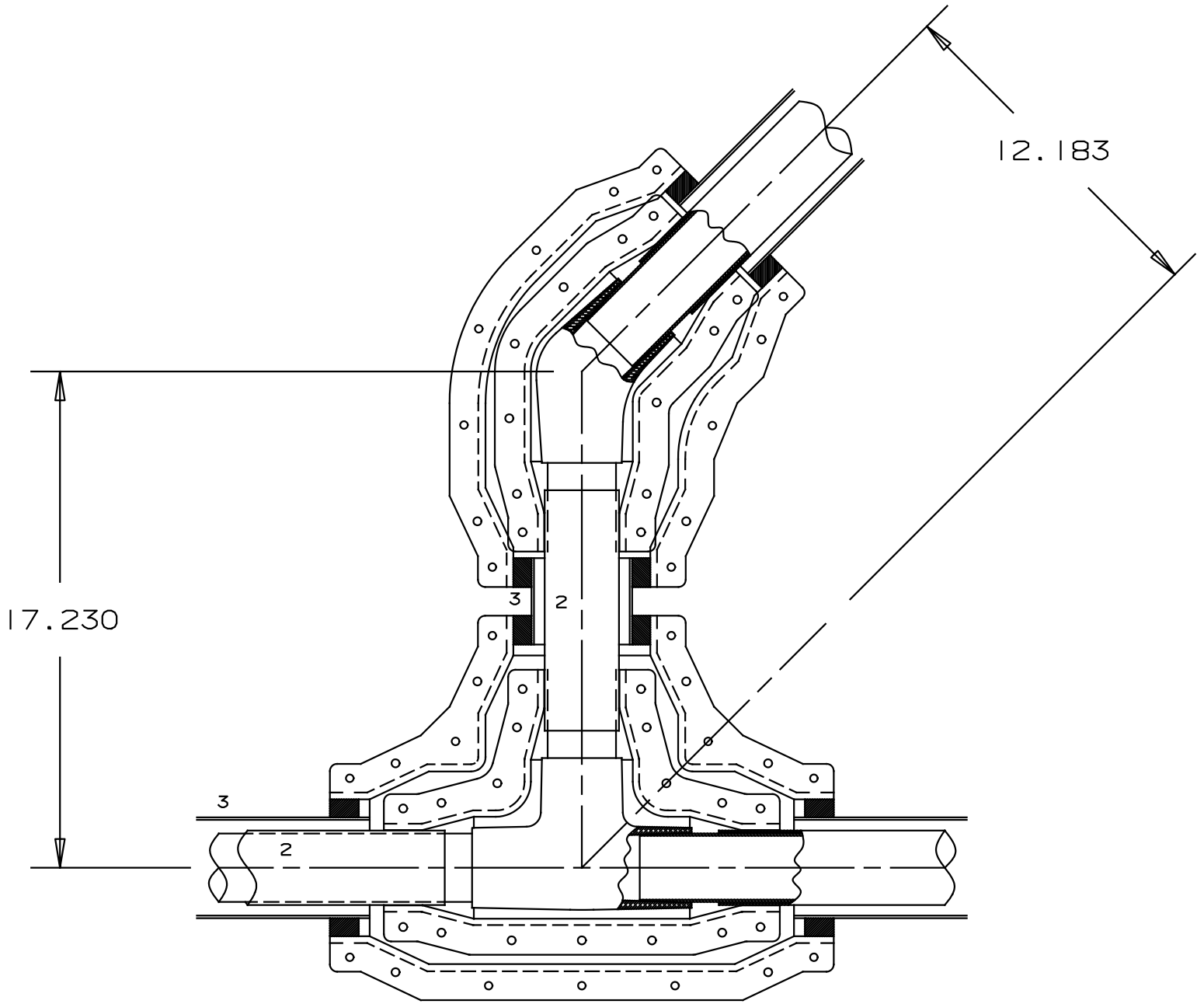




9393 Princeton-Glendale Road ◆ Hamilton, Ohio USA 45011 ◆ Phone: (800) 422-2525 ◆ Fax: (800) 421-3297

Half Time #1
3125 Summit Church Rd
Equipment Data Submittal

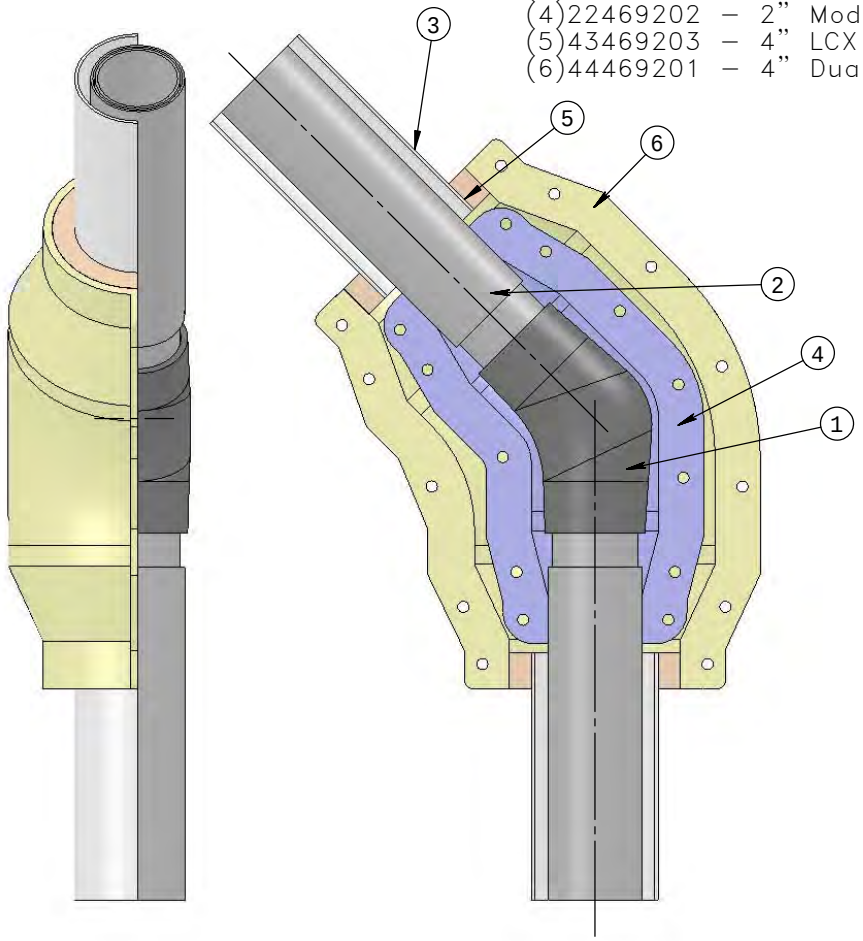
Item	Qty	Manufacture	Discription	Notes
5			**Piping & Impact Valves**	
		Ameron	LCX DW Pipe w/ Containment	
		OPW	Double Popptet	



TERTIARY JUMP-OVER
OPTION #1

(SHOWN IN FLAT PATTERN
FOR CLARITY)

(1)22371508 – 2" Dualoy 3000/L 45° Molded Elbow
(2)22464386 – 2" Dualoy 3000/LCX Pipe
(3)33854381 – 3" Dualoy 3000/L Pipe
(4)22469202 – 2" Modified 45° Dualoy 3000/LCX Clamshell
(5)43469203 – 4" LCX Clamshell x 3" 3000/L Pipe Closure Ring
(6)44469201 – 4" Dualoy 45° 3000/LCX Clamshell



HPM	10-2-12	DESCRIPTION OF REVISION	REV.
NAME	DATE	DESCRIPTION OF REVISION	REV.

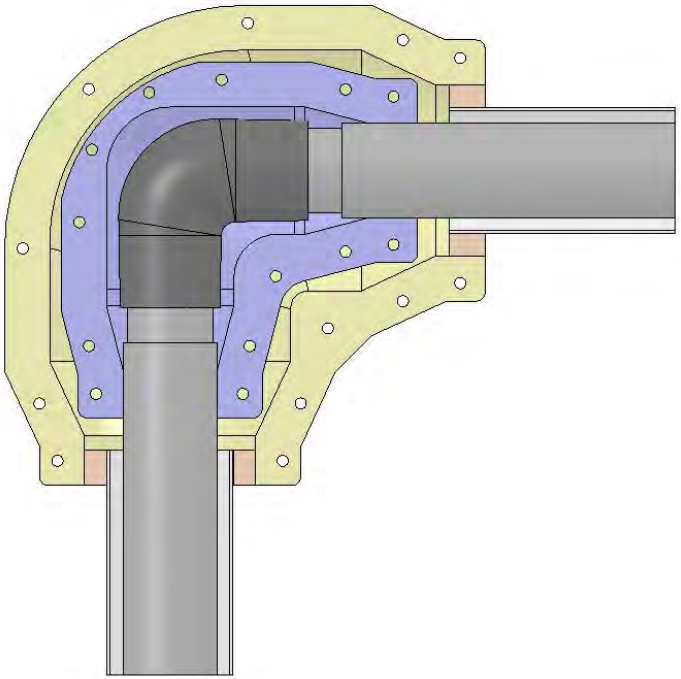
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			BREAK ALL SHARP EDGES 0.06 MAX	SCALE: NONE
FRACT. ± 1/16	.X ±0.060	.XX ±0.030	.XXX ±0.015	ANGLES ±1/2

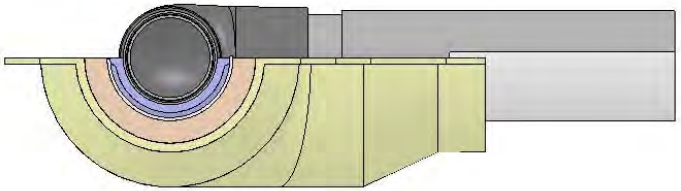
Fiber Glass Systems
A National Oilwell Varco Company
1004 Ameron Rd.
Burkburnett, Texas

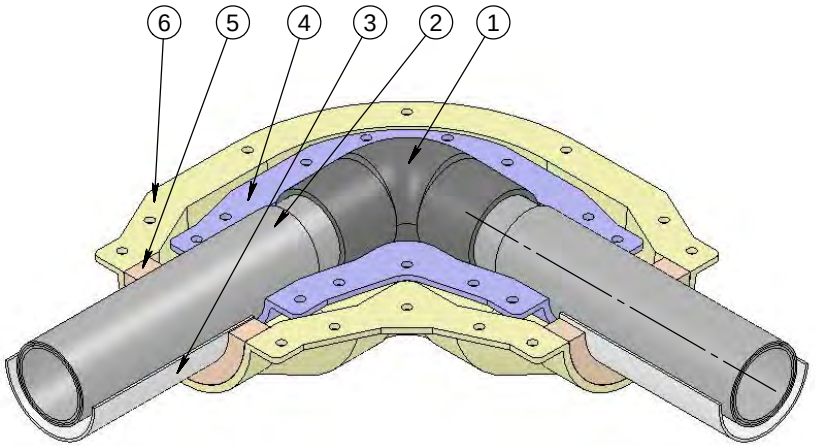
MATERIAL: SPECIFY MATERIAL

TITLE:
DUALOY 3000/LCX 45° ELBOW
TERTIARY CONTAINMENT

DRAWN BY:	HPM	DRAWING NUMBER	REV.
DATE:	10/30/12	NOV121030-45	00







(1)22372108 – 2" Dualoy 3000/L 90° Molded Elbow
(2)22464386 – 2" Dualoy 3000/LCX Pipe
(3)33854381 – 3" Dualoy 3000/L Pipe
(4)22469201 – 2" Modified Dualoy 3000/LCX Clamshell
(5)43469203 – 4" LCX Clamshell x 3" 3000/L Pipe Closure Ring
(6)44469201 – 4" Dualoy 3000/LCX Clamshell

HPM	10–30–12	DESCRIPTION OF REVISION	REV.
NAME	DATE	DESCRIPTION OF REVISION	REV.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			BREAK ALL SHARP EDGES 0.06 MAX	SCALE: NONE
FRACT. ± 1/16	.X ±0.060	.XX ±0.030	.XXX ±0.015	ANGLES ±1/2

Fiber Glass Systems
A National Oilwell Varco Company
1004 Ameron Rd.
Burkburnett, Texas

MATERIAL: SPECIFY MATERIAL

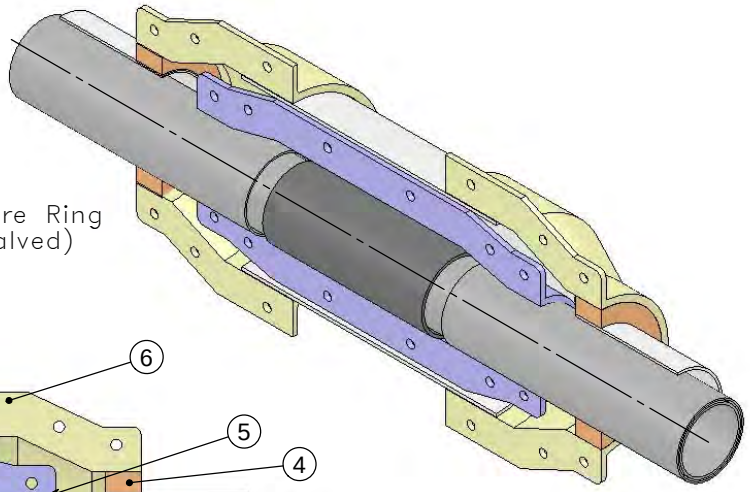
TITLE:

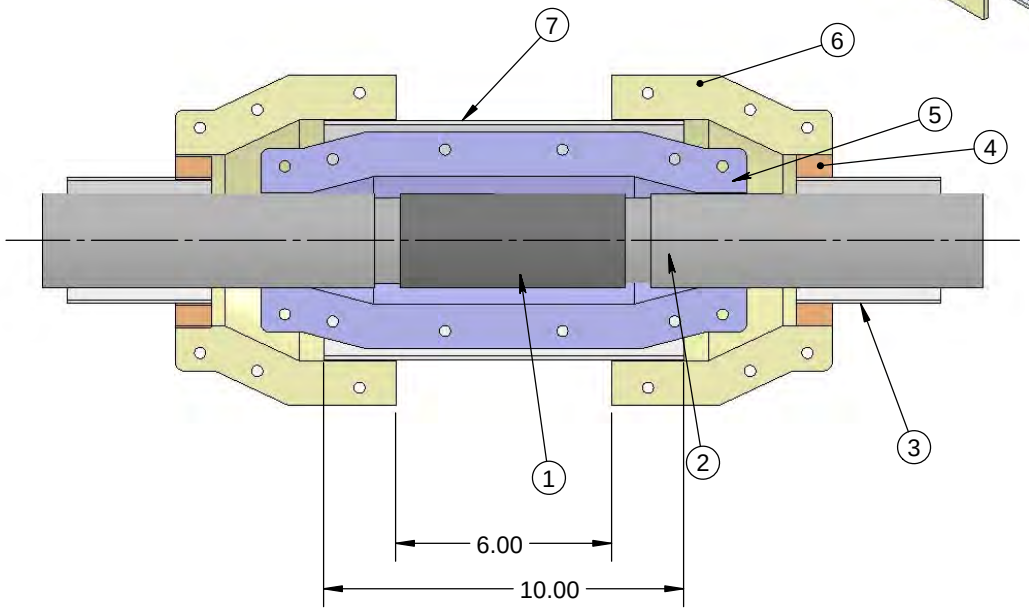
DUALOY 3000/LCX 90° ELBOW
TERTIEARY CONTAINMENT

DRAWN BY:	HPM	DRAWING NUMBER	REV.
DATE:	10/30/12	NOV121030–90	00

?

(1)22850707 – 2" Dualoy 3000/L Sleeve Coupling
(2)22464386 – 2" Dualoy 3000/LCX Pipe
(3)33854381 – 3" Dualoy 3000/L Pipe
(4)22469201 – 2" Dualoy 3000/LCX Coupling Camshell
(5)43469203 – 4" LCX Clamshell x 3" 3000/L Pipe Closure Ring
(6)44469201 – 4" Dualoy 3000/LCX Coupling Clamshell(halved)
(7)66854381 – 6" Dualoy 3000/L Pipe





HPM	10-2-12	DESCRIPTION OF REVISION	REV.
NAME	DATE	DESCRIPTION OF REVISION	REV.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES | BREAK ALL SHARP EDGES 0.06 MAX | SCALE: NONE

FRACT. ± 1/16	.X ±0.060	.XX ±0.030	.XXX ±0.015	ANGLES ±1/2

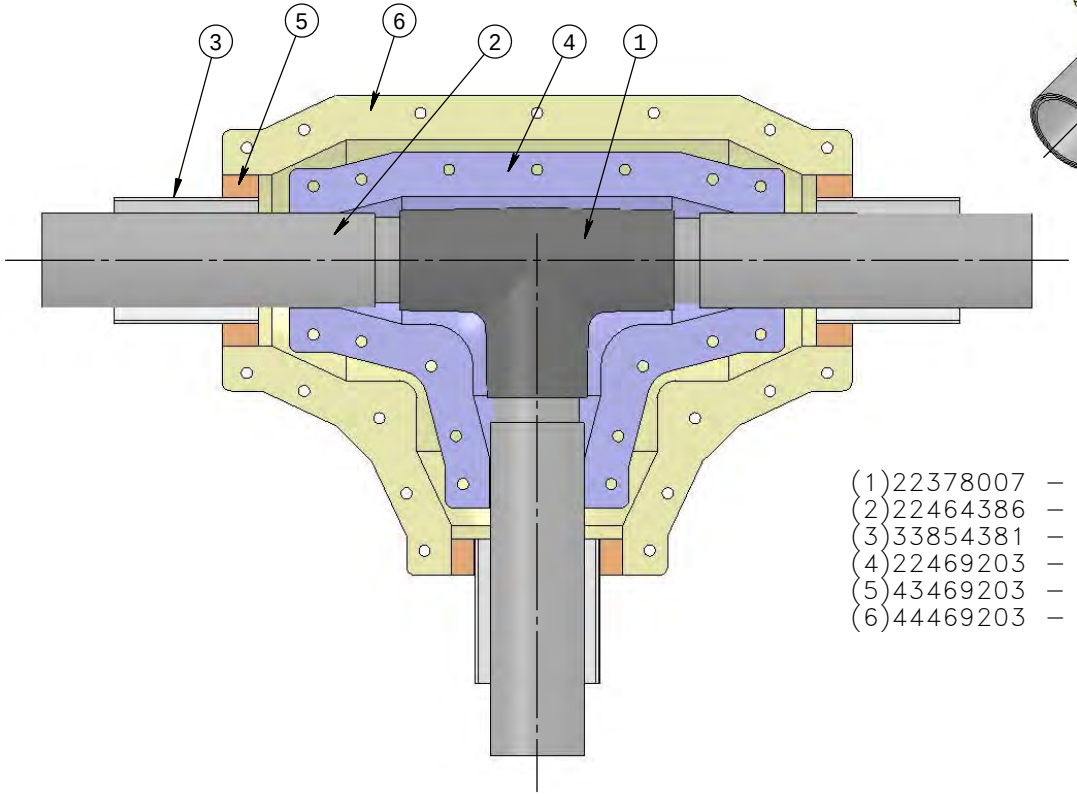
Fiber Glass Systems
A National Oilwell Varco Company
1004 Ameron Rd.
Burkburnett, Texas

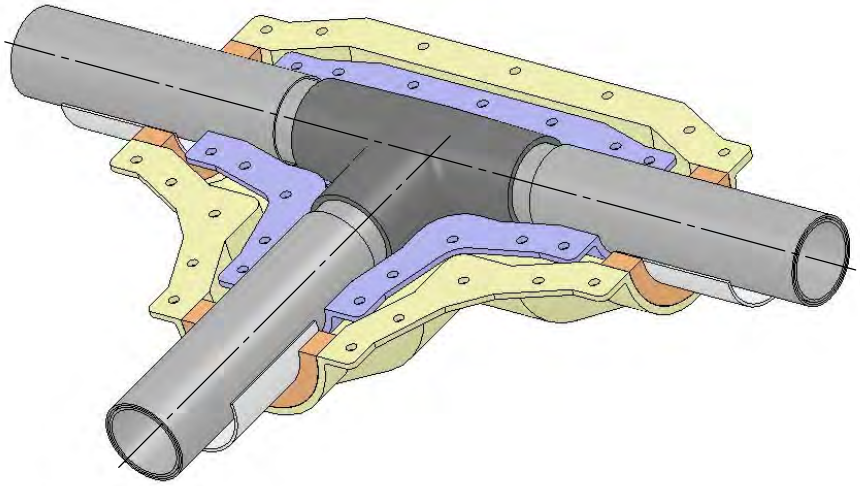
MATERIAL: SPECIFY MATERIAL

TITLE:

DUALOY 3000/LCX 2-INCH COUPLING
TERTIARY CONTAINMENT

DRAWN BY:	HPM	DRAWING NUMBER	REV.
DATE:	10/30/12	NOV121030-CPL	00





(1)22378007 – 2" Dualoy 3000/L Molded Tee
(2)22464386 – 2" Dualoy 3000/LCX Pipe
(3)33854381 – 3" Dualoy 3000/L Pipe
(4)22469203 – 2" Dualoy 3000/LCX Tee Clamshell
(5)43469203 – 4" LCX Clamshell x 3" 3000/L Pipe Closure Ring
(6)44469203 – 4" Dualoy 3000/LCX Clamshell

HPM	10-2-12	DESCRIPTION OF REVISION	REV.
NAME	DATE	DESCRIPTION OF REVISION	REV.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			BREAK ALL SHARP EDGES 0.06 MAX	SCALE: NONE
FRACT. ± 1/16	.X ±0.060	.XX ±0.030	.XXX ±0.015	ANGLES ±1/2

Fiber Glass Systems
A National Oilwell Varco Company
1004 Ameron Rd.
Burkburnett, Texas

MATERIAL: SPECIFY MATERIAL

TITLE: DUALOY 3000/LCX 2-INCH TEE TERTIARY CONTAINMENT

DRAWN BY:	HPM	DRAWING NUMBER	REV.
DATE:	10/30/12	NOV121030-T	00

Half Time #1
3125 Summit Church Rd

Equipment Data Submittal

Item	Qty	Manufacture	Discription	Notes
6			**Tank Monitor**	
	1	Veeder Root	TLS 450 Tank Monitor	
	3	Veeder Root	Mag 1 Probe	
	1	Veeder Root	Interstitial Sensors	
	15	Veeder Root	Sump Sensor	
	4	Veeder Root	PLLD Electronic Leak Detection	

TLS-450PLUS

VEEDER-ROOT

Proven Wet Stock Management

The Veeder-Root **TLS-450PLUS** automatic tank gauge provides the most comprehensive site data for advanced fuel asset management.

Combining industry leading algorithms with a proven reputation for compliance and reliabiltiy, the **TLS-450PLUS** keeps your site running profitably.

Proven Protection | **Proven Precision** | **Proven Profit** | **Proven Partner**

Proven Protection

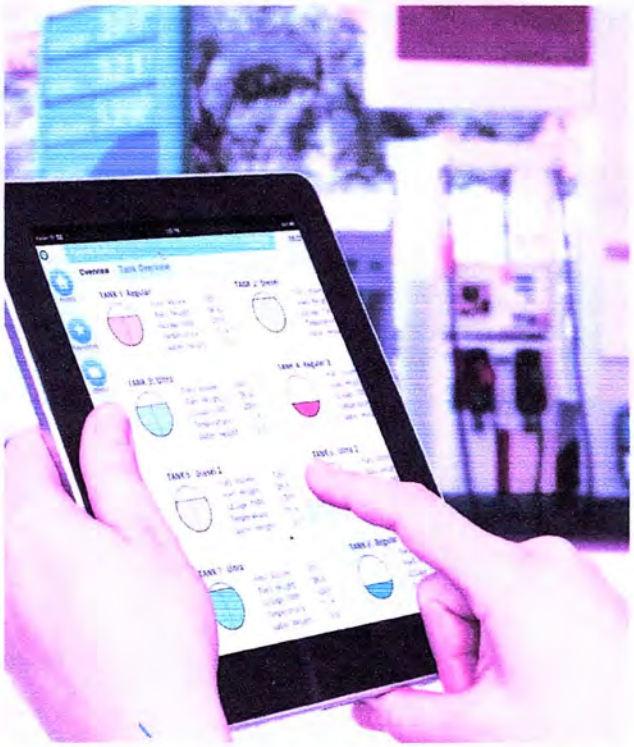
Maintain control of your fueling operations using the automated compliance and site management solutions of the **TLS-450PLUS** to always know the status of your business.

Inspector ready compliance – easy access to all federal, state, and local agency reports.

Web-enabled remote connectivity – monitor your site performance, receive real time alerts, and access compliance data via web-enabled devices–anytime, anywhere.

Data protection – store up to 3 years of data and protect it from power outages, battery replacements or software upgrades.

Security controls – partitioned Ethernet networks, customized user access, and Secure Socket layer (SSL) encrypted connectivity to keep your network safe.

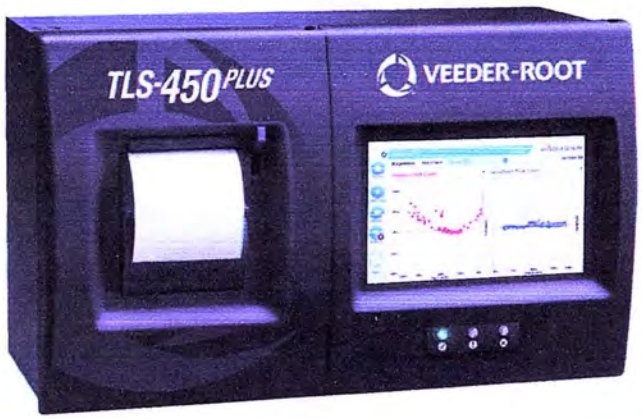


Remote connectivity allows users to access site data and receive alerts anytime and anywhere on any web enabled device.

VEEDER-ROOT

Proven Precision

Remote connectivity on the *TLS-450PLUS* allows access to accurate wet stock management and leak detection information at all times.



AccuChart – reconcile tank tilt, dents and out-of-round tank conditions using advanced tank chart calibration technology and have the most precise picture of your inventory – all day, every day.

Business Inventory Reconciliation (BIR) – improve business decisions by combining meter transaction sales with AccuChart to better understand site variance.

Continuous Statistical Leak Detection (CSLD) – avoid site shutdown for compliance with the robust 0.2 gph (0.76 lph) monthly tank leak detection.

Enhanced performance – significant improvement in system response time over the TLS-450 with 5x processing speed, 8x memory and 2x data storage.

Data logger – built-in data logging enables improved data transfer for wet stock management.

Timed Sudden Loss Detection – monitor changes in inventory due to theft during quiet periods via programmable scheduling.

Proven Partner

Veeder-Root products are the highest quality wet stock management solutions available with a long history of reliability and precision. Our products help achieve results that matter and the protection your business deserves.

Proven Profit

Operate at peak efficiency with the *TLS-450PLUS* monitoring system, reducing inventory shortages and site downtime.

Remote software download – hassle free access to software updates.

Logistics visibility – increase inventory management awareness to avoid spreads and fillbacks.

Faster problem resolution – diagnose and troubleshoot issues remotely to understand ongoing situations better and avoid unnecessary dispatch.

Customized alarms – preprogram alarm alerts to provide scenario-specific information to predetermined individuals.

Graphical User Interface – designed with features for ease of use including workflow wizard, context sensitive help and user defined favorites.

TLS-450PLUS (UL/cUL) Part Numbers

Application Software

333545-001 *TLS-450PLUS* application software

Hardware: Includes a 2-port RS-232 Module, a 3-Port Ethernet Module and a 2-Port USB Module

860091-301 *TLS-450PLUS* touch screen console with printer
860091-401 *TLS-450PLUS* touch screen console without printer
860091-001 *TLS-450PLUS* console without display, without printer

Interface Modules

332812-001 Universal sensor/probe interface module
332813-001 Universal input/output interface module
333564-001 10-amp controller module

Communication Modules

332818-001 Sitefax interface module
332866-001 Single RS-232 interface module
332868-001 RS-232 dual interface module
332870-001 RS-232/RS-485 dual interface module

Feature Enhancement Software

332972-006 Continuous Statistical Leak Detection (CSLD)
332972-007 Ultimate Testing Line Leak Detection for DPLLD
332972-008 Risk Management Line Leak Detection for DPLLD
332972-009 Base Compliance Line Leak Detection for DPLLD
332972-018 Timed Sudden Loss Detection
333149-001 BIR/AccuChart *TLS-450PLUS* EDIM factory installed
333580-001 BIR/AccuChart *TLS-450PLUS* CDIM factory installed
333581-001 BIR/AccuChart *TLS-450PLUS* LVDIM factory installed
333582-001 BIR/AccuChart *TLS-450PLUS* MDIM factory installed

Call 888.561.7942 or visit **www.veeder.com**
125 Powder Forest Drive • PO Box 2003 • Simsbury, CT 06070 • P/N 576047-209 REV D

Half Time #1
3125 Summit Church Rd

Equipment Data Submittal

Item	Qty	Manufacture	Discription	Notes
7			**Dispenser and accessories**	
	10	Gilbarco	Encore 700S	
	40	CATLOW	Nozzle	
	40	CATLOW	Breakaways	
	40	CATLOW	Swivels	

Encore® 700 S

The industry's most trusted dispenser

Secure your competitive advantage and increase profits with Gilbarco Veeder-Root's Encore 700 S – your best dispenser investment for today and tomorrow.

Highly secure, powerful CRIND® electronics build a flexible and innovative platform for your changing forecourt marketing and payment needs. Enjoy peace of mind with a leading foundation that is highly secure today and upgradeable to meet the payment security and technology needs of tomorrow.

> **Reliable**
Gilbarco's proven and time-tested design guarantees most forecourts and widest range of conditions

> **Flexibility**
Encore 700 S offers most configurations and options to fit your forecourt

> **EMV-Ready**
The industry's most secure Encore 700 S is the cornerstone of Gilbarco's EMV® suite of products

> **Easy Service**
Engineered with easy access and quick turntime for servicing and maintenance

> **Rich Media**
Encore 700 S runs a variety of marketing and rich multimedia programs including Applause TV at the pump.

> **Connectivity**

GILBARCO VEEDER-ROOT

Technology with a human touch.

Options. Uptime. Reliability.

Proven design guarantees uptime.

You get the best of Gilbarco's field-proven Encore® 700 S series:

- Familiar ATM-style customer interface
- Full range of alternative fuel options
- Industry's most comprehensive warranty

Enhanced, upgradeable security.

You'll benefit from Gilbarco's global EMV® leadership and experience, including the largest installed base of EMV® fueling pay points in North America. The Payment Card Industry Unattended Payment Terminal (PCI-UPT) and EMV® certified platform in Encore 700 S include:

- FlexPay™ Encrypting PIN Pad (EPP) to protect PIN data
- FlexPay™ Secure Card Reader (SCR) to encrypt card data
- EMV® certification (requires software and EMV® Chip and PIN reader upgradefor EMV® transactions*)
- PCI-UPT certification
- Secure Controller to protect the entire electronics platform

* Note: Based on known EMV® specifications today. The US EMV® specifications have not yet been announced by Visa.

Superior merchandising improves profits.

Encore® 700 S gives you field-proven tools to inform, persuade, and motivate your fuel customers to come inside your store and buy higher-margin goods, through:

- Flexible content management options, with the industry leading Applause merchandising system
- Superior image clarity, resolution and video performance
- 5.7" color screen as standard for clear, effective communication
- 10.4" color upgrade option for maximum impact

Platform for continued growth.

Encore® 700 S provides a strong foundation for growth with powerful, future ready electronics to support your innovation needs, such as mobile payments, enhanced loyalty, expanded merchandising and other applications:

- Enhanced applications processor for future growth
- Enhanced CRIND® memory for improved application speed
- CAT-5 connectivity for ultimate flexibility

Encore® 700 S Specifications

Regulatory / Governmental Approvals:
UL, cUL
Measurement Canada, Weights & Measures, FCC
PCI PED 2.x
PCI UPT 1.x
EMV® Compatible

Environmental:
- 30°C to +55°C
A cabinet or keypad heater option is available to avoid ice accumulation.

Processor:
Up to 720-MHz ARM A8 Core for enhanced CRIND applications speed
Up to 520-MHz DSP Core for high performance audio and video capability
Secure processor for data encryption and tamper responsiveness
Memory: NAND Flash: 512 MB DDR SRAM: 256 MB eMMC: 4GB

Component Options:
Complete Encore S Bezel
5.7" QVGA (10.4" VGA upgrade option available)
Door switches to notify the POS to limit access and prevent tampering*
Key components that self-disable in the event of tampering
High Speed Graphic Thermal Printer
Encrypted Pulser (optional)

*POS Dependent

P-2397F | Printed in the U.S.A. | © 2015 | 0915 | 7300 W. Friendly Ave., Greensboro, NC 27410 (336) 547-5000

Half Time #1
3125 Summit Church Rd
Equipment Data Submittal

Item	Qty	Manufacture	Discription	Notes
8			**Pump Controls**	
	2	Gilbarco	Passport	

Gilbarco Inc.
7300 W. Friendly Avenue
PO Box 22087
Greensboro NC 27420-2087
www.gilbarco.com

Gilbarco Passport PX60 Marketing Sales Release (MSR)

1.0 Purpose

This Marketing Sales Release announces the release of Gilbarco's latest Point of Sale hardware platform - Passport PX60 All-in-One. This new platform integrates the Touchscreen and PC into a common chassis that resides above the counter to make installation and serviceability simple. All around system performance has also been increased dramatically – leading to faster transactions, rapid processing of the store's pricebook data, and reduced store close times.

2.0 Product Description and Benefits Overview

The Passport PX60 All-in-One is specifically designed for retailers looking for a POS solution with a zero under-counter footprint and delivers exceptional performance. Passport PX60 incorporates a large 15" Projected Capacitive Touchscreen with superior optics that is both brighter and easier to read. Projected Capacitive technology outperforms older IR and Resistive touchscreen technologies because it's not susceptible to accidental activations, it never needs calibration, and will not display wear patterns on frequently touched areas of the screen.

PERFORMANCE

- Ultra-fast response time, so when the screen is touched, the system responds instantaneously and accurately to serve your customers
- Utilizes Intel's Q67 chipset and takes full advantage of multi-core processor and SATA drive technologies

- PassMark®, the world's largest CPU benchmarking Software Company, rates the processor in the PX60 over 13 times more powerful than that in the PX52 platform.
- The time to perform a day close and reopen the store has been reduced to a mere 17 seconds.
- Full Price Book imports complete in less than 10 minutes using minimal CPU cycles and without impacting store sales operations.

SERVICABILITY

- All-in-One design brings the Point of Sale above counter to free up under counter space and decrease the installation and service times.
- Cable Management Feature to secure and simplify cable routing.
- Easily accessible internal components to enable future upgrades or parts replacement.
- Four integrated COM ports means the 8 Port USB Converter is no longer required

3.0 Performance Specifications

Hardware

- Intel® Core I3-2120 (standard), I7-2600 (max)
- Intel® Q67 Chipset
- 4G DDR3 SDRAM DIMM (standard), 16 G (max)
- Dual SATA drives (Server), Single SATA drive (Client)
- Integrated PCAP Touchscreen

Operating System:

- Microsoft® Windows Embedded POSReady 7

I/O Connectivity

- Parallel Port (1)
- Serial Ports (4)
- USB Ports (4)
- EPSON Printer Power Port: One power port and 5' cable provided
- Intel 1GB LAN (2)

Environmental

- Operating Temperature - 5°C ~ 35°C (41°F ~ 108°F)
- Storage Temperature - -20°C ~ 55°C (-4°F ~ 140°F)
- Operating Humidity - 20% ~ 80% RH non condensing
- Storage Humidity - 20% ~ 80% RH non condensing

Forecourt Control

- Fault tolerant forecourt control

Dimensions and Weight

- 23 lbs
- 15" W x 13.3" H x 10.5"D

4.0 General Information

PSO Update for PX60 Systems:

- Summary:
  With the release of the new Passport® All-In-One point of sale (POS) system, Gilbarco is providing increased flexibility for distributors and customers to choose their level of first year Passport Service Offering (PSO). This incremental flexibility is designed to allow distributors greater flexibility to quote customers on an apples-to-apples basis for service offering in competitive bidding situations.

- Details:
  The Passport system purchase *includes* one year of parts-only warranty, as per MDE-4101G Warranty Statement.

  The required option for first year PSO has changed to PLUS. PLUS service provides:
  - Annual Software Maintenance: provides service pack and version application software for upgrades at no additional charge (incremental charge applies for infrequent OS changes).
  - 24x7x365 Help Desk staffed by trained professionals in Gilbarco's Greensboro, NC headquarters: helps customers with "how to" and issue resolution calls. Over 80% of calls are answered within 60 seconds.
  - Remote diagnostics and remote fix: addresses over 90% of Help Desk calls without requiring a technician to visit the site.

  Customers may also add the option of first year PREMIUM PSO which adds mileage, travel, and labor to the first year service.

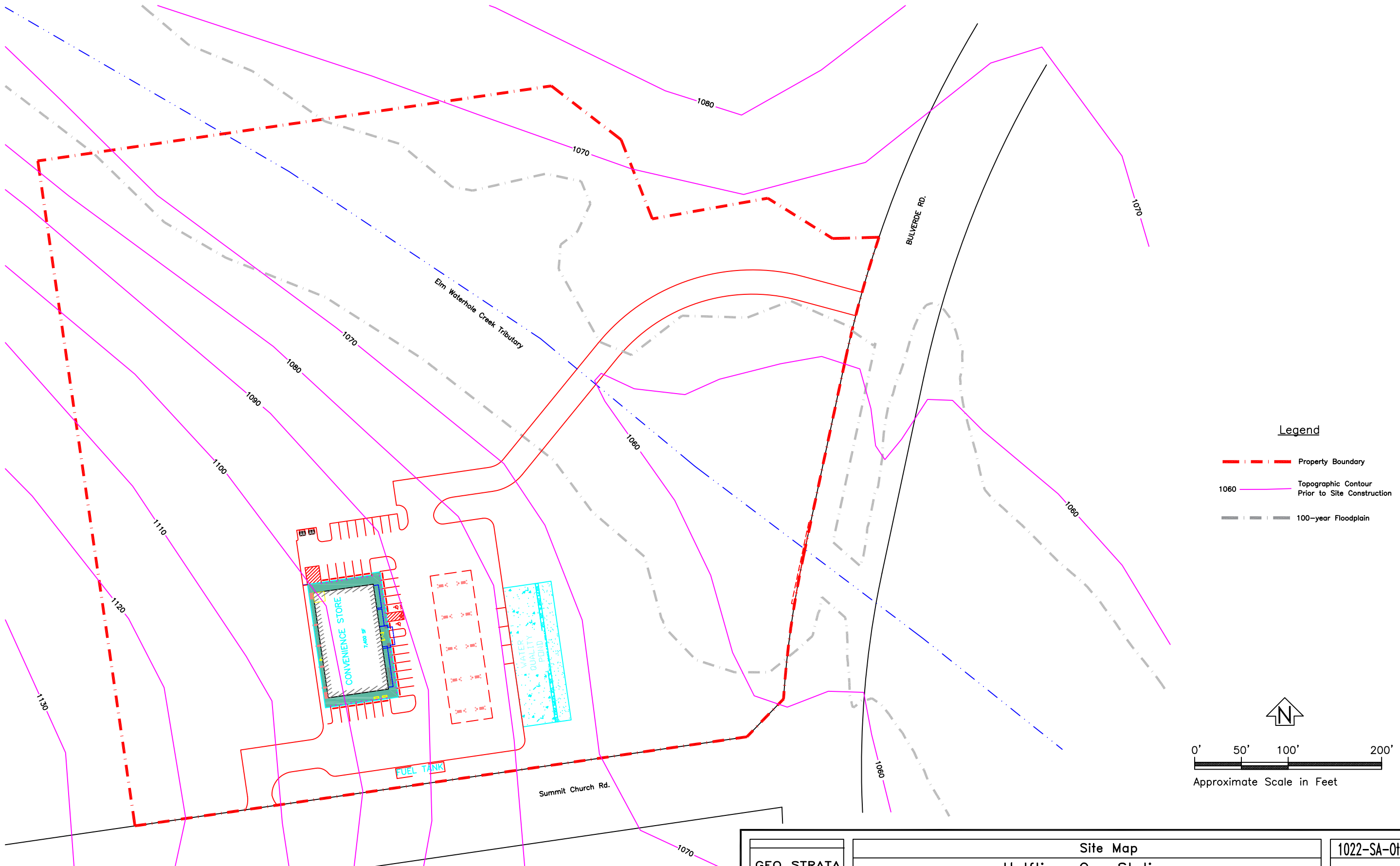
- PX52 – No change to PSO Program for PX52 orders (1st Year Premium PSO Service required).

Recovery Image USB Drive:

The Passport v10 Recovery Images for the PX60 platform are different from the PX52. Therefore, a new Thumb Drive part has been created. Technicians will need this new drive to reimage v10 on the PX60 platform. Information on the part number and pricing can be found below.

TCEQ-0583

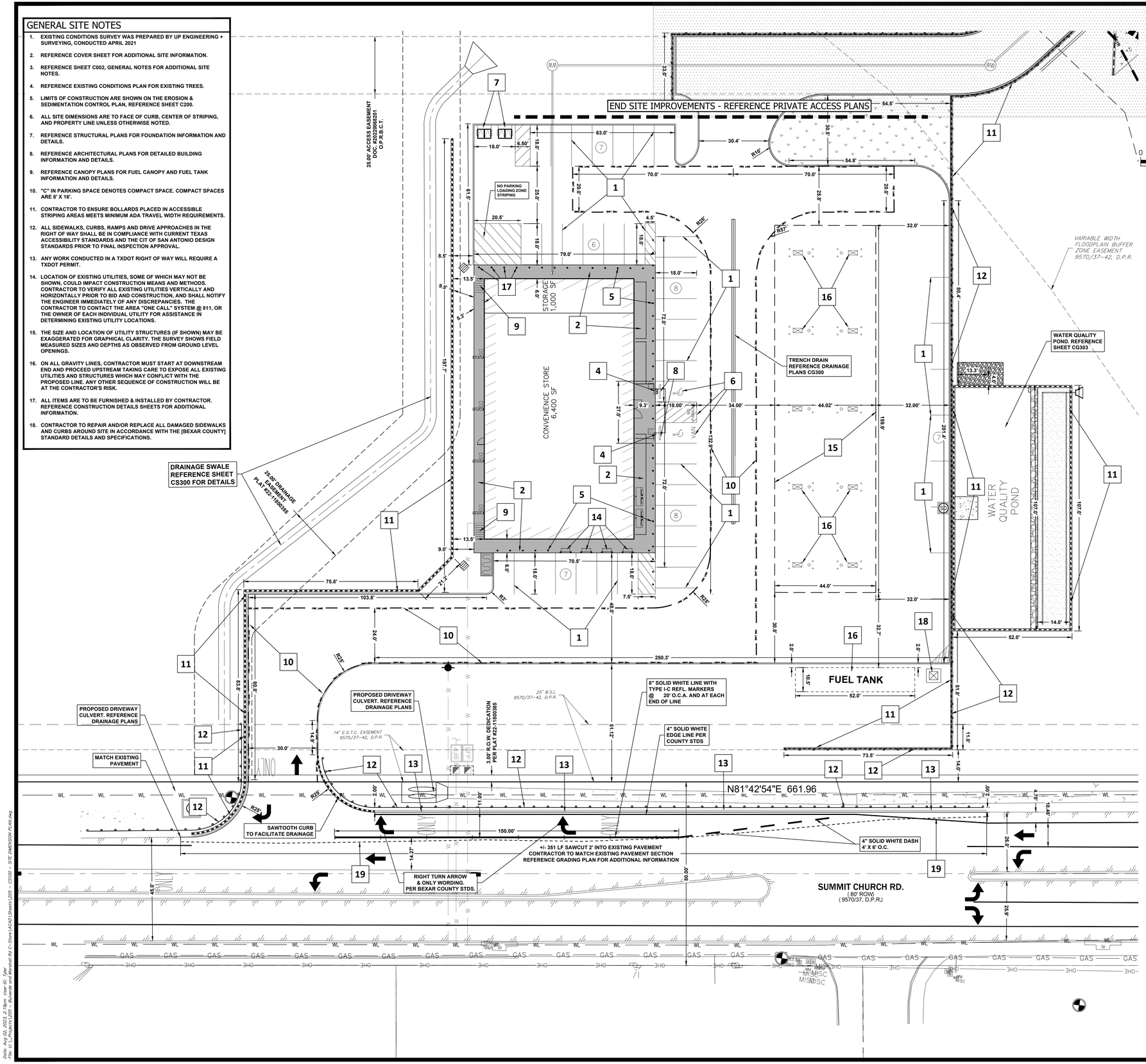
Site Map and Site Plan



GEO STRATA	Site Map Halftime Gas Station 3125 Summit Church Rd., San Antonio, Texas	1022-SA-Other Figure 1

GENERAL SITE NOTES

1. EXISTING CONDITIONS SURVEY WAS PREPARED BY UP ENGINEERING + SURVEYING, CONDUCTED APRIL 2021
2. REFERENCE COVER SHEET FOR ADDITIONAL SITE INFORMATION.
3. REFERENCE SHEET C002, GENERAL NOTES FOR ADDITIONAL SITE NOTES.
4. REFERENCE EXISTING CONDITIONS PLAN FOR EXISTING TREES.
5. LIMITS OF CONSTRUCTION ARE SHOWN ON THE EROSION & SEDIMENTATION CONTROL PLAN, REFERENCE SHEET C200.
6. ALL SITE DIMENSIONS ARE TO FACE OF CURB, CENTER OF STRIPING, AND PROPERTY LINE UNLESS OTHERWISE NOTED.
7. REFERENCE STRUCTURAL PLANS FOR FOUNDATION INFORMATION AND DETAILS.
8. REFERENCE ARCHITECTURAL PLANS FOR DETAILED BUILDING INFORMATION AND DETAILS.
9. REFERENCE CANOPY PLANS FOR FUEL CANOPY AND FUEL TANK INFORMATION AND DETAILS.
10. "C" IN PARKING SPACE DENOTES COMPACT SPACE. COMPACT SPACES ARE 8' X 16'.
11. CONTRACTOR TO ENSURE BOLLARDS PLACED IN ACCESSIBLE STRIPING AREAS MEETS MINIMUM ADA TRAVEL WIDTH REQUIREMENTS.
12. ALL SIDEWALKS, CURBS, RAMPS AND DRIVE APPROACHES IN THE RIGHT OF WAY SHALL BE IN COMPLIANCE WITH CURRENT TEXAS ACCESSIBILITY STANDARDS AND THE CIT OF SAN ANTONIO DESIGN STANDARDS PRIOR TO FINAL INSPECTION APPROVAL.
13. ANY WORK CONDUCTED IN A TXDOT RIGHT OF WAY WILL REQUIRE A TXDOT PERMIT.
14. LOCATION OF EXISTING UTILITIES, SOME OF WHICH MAY NOT BE SHOWN, COULD IMPACT CONSTRUCTION MEANS AND METHODS. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO BID AND CONSTRUCTION, AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. THE CONTRACTOR TO CONTACT THE AREA "ONE CALL" SYSTEM @ 811, OR THE OWNER OF EACH INDIVIDUAL UTILITY FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS.
15. THE SIZE AND LOCATION OF UTILITY STRUCTURES (IF SHOWN) MAY BE EXAGGERATED FOR GRAPHICAL CLARITY. THE SURVEY SHOWS FIELD MEASURED SIZES AND DEPTHS AS OBSERVED FROM GROUND LEVEL OPENINGS.
16. ON ALL GRAVITY LINES, CONTRACTOR MUST START AT DOWNSTREAM END AND PROCEED UPSTREAM TAKING CARE TO EXPOSE ALL EXISTING UTILITIES AND STRUCTURES WHICH MAY CONFLICT WITH THE PROPOSED LINE. ANY OTHER SEQUENCE OF CONSTRUCTION WILL BE AT THE CONTRACTOR'S RISK.
17. ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
18. CONTRACTOR TO REPAIR AND/OR REPLACE ALL DAMAGED SIDEWALKS AND CURBS AROUND SITE IN ACCORDANCE WITH THE [BEXAR COUNTY] STANDARD DETAILS AND SPECIFICATIONS.



TRAFFIC SUMMARY TABLE

SITE USE	
CONVENIENCE STORE	7,400 SF
PARKING STORAGE STANDARDS	
MINIMUM PARKING RATIO	6 PER 1,000 SF GFA
MAXIMUM PARKING RATIO	10 PER 1,000 SF GFA
REGULAR	
MINIMUM REQUIRED PARKING	45
PARKING SPACES	37
PARKING BY GAS PUMPS	20
ACTUAL/PROPOSED PARKING (INCLUDING H.C. PARKING)	57
HANDICAPPED (ADA)	
REQUIRED REGULAR H.C. PARKING	2 TOTAL
PROPOSED H.C. PARKING	2 (1 V.A. INCLUDED)
REQUIRED V.A. PARKING	1 (1 INCLUDED IN TOTAL)

LEGEND

	BOUNDARY / RIGHT OF WAY LINE
	CONCRETE CURB
	EASEMENT / SETBACK LINE
FIRE LANE	FIRE LANE
OE	OVERHEAD UTILITIES
	PROPOSED RETAINING WALL
E.G.T.C.	ELECTRIC, GAS, TELEPHONE AND CABLE T.V. EASEMENT
D.P.R.	DEED AND PLAT RECORDS OF BEXAR COUNTY, TEXAS
O.P.R.B.C.T.	OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS
20001/659	VOLUME/PAGE
V.N.A.E.	VEHICULAR NON-ACCESS EASEMENT DOCUMENT
DOC.	
ROW	RIGHT OF WAY
	PROPOSED LIGHT POLES
	EXISTING LIGHT POLE
	UTILITY POLE
	WATER VALVE
	WATER VAULT
	EXISTING FIRE HYDRANT
	PROPOSED FIRE HYDRANT
CO	WASTEWATER CLEAN-OUT
T	TELEPHONE MANHOLE
T	TELEPHONE PEDESTAL
	CONCRETE WHEEL STOP
	SIGN
	BICYCLE RACK
9	PARKING STALL COUNT
	ACCESSIBLE PARKING

CIVIL KEY NOTES

1	PAVEMENT STRIPING (TYPICAL) (REFERENCE SHEET C500)
2	CONCRETE SIDEWALK (REFERENCE SHEET C500)
3	6" CONCRETE CURB (TYPICAL) (REFERENCE SHEET C500)
4	HANDICAP SIGN (REFERENCE ARCHITECTURAL PLANS FOR DETAILS)
5	BOLLARDS (REFERENCE SHEET C500)
6	ACCESSIBILITY STRIPING (REFERENCE SHEET C500)
7	GARBAGE DUMPSTER (REFERENCE ARCHITECTURAL PLANS FOR DETAILS)
8	CONCRETE WHEEL STOP (REFERENCE SHEET C500)
9	CURB RAMP (REFERENCE SHEET C500)
10	FIRE LANE STRIPING (TYPICAL) (REFERENCE DETAILS)
11	STRUCTURAL RETAINING WALL. REFERENCE GRADING PLAN FOR WALL ELEVATIONS, AND STRUCTURAL PLANS FOR DETAILS
12	FENCE / GUARDRAIL ON TOP OF WALL OR AS DESIGNATED. REFERENCE ARCHITECTURAL PLANS FOR DETAILS
13	CITY OF SAN ANTONIO STANDARD 7" CURB IN PUBLIC RIGHT-OF-WAY, REFERENCE TURN LANE SHEET.
14	APPROXIMATE LOCATION OF EV CHARGING STATION - TO BE DESIGNED BY OTHERS. CONTRACTOR TO COORDINATE CHARGER AND BOLLARD LOCATION WITH INSTALLATION PRIOR TO CONSTRUCTION
15	FUEL CANOPY-TO BE DESIGNED BY OTHERS. REFERENCE FUEL CANOPY PLANS
16	APPROXIMATE LOCATION OF FUEL STATIONS AND FUEL TANK - TO BE DESIGNED BY OTHERS. REFERENCE FUEL PLANS
17	REMOVABLE BOLLLARD OR OWNER APPROVED EQUIVALENT
18	AIR & WATER REFILL STATION
19	SAWCUT EXISTING PAVEMENT TO FACILITATE EXTENSION OF ROAD FOR TURN LANE

UP ENGINEERING + SURVEYING
11903 JONES MALTSBERGER, SUITE 102
SAN ANTONIO, TX 78216 TEL: 210-774-5504
WWW.UPENGINEERING.COM TBPE F-17992
TBPELS F-10194605

STATE OF TEXAS
NATASHA L. UHLRICH
89502
LICENSED PROFESSIONAL ENGINEER
8/19/23

MARSHALL AND BULVERDE , LLC
7410 BLANCO RD.
SAN ANTONIO, TEXAS 78216

HALFTIME 1
3125 SUMMIT CHURCH ROAD, SAN ANTONIO, TX 78259

SITE DIMENSION PLAN

REV	DATE	DESCRIPTION	BY

DESIGNED BY: JOS/TS
DRAFTED BY: JOS
CHECKED BY: NFU/TS

SHEET
CS100
07 OF 21

Date: Aug 02, 2021, 2:19pm User ID: Tyler
File: C:_Projects\1205 - Bulverde and Marshall Rd C-Store\4CAD\Sheets\1205 - CS100 - SITE DIMENSION PLAN.dwg

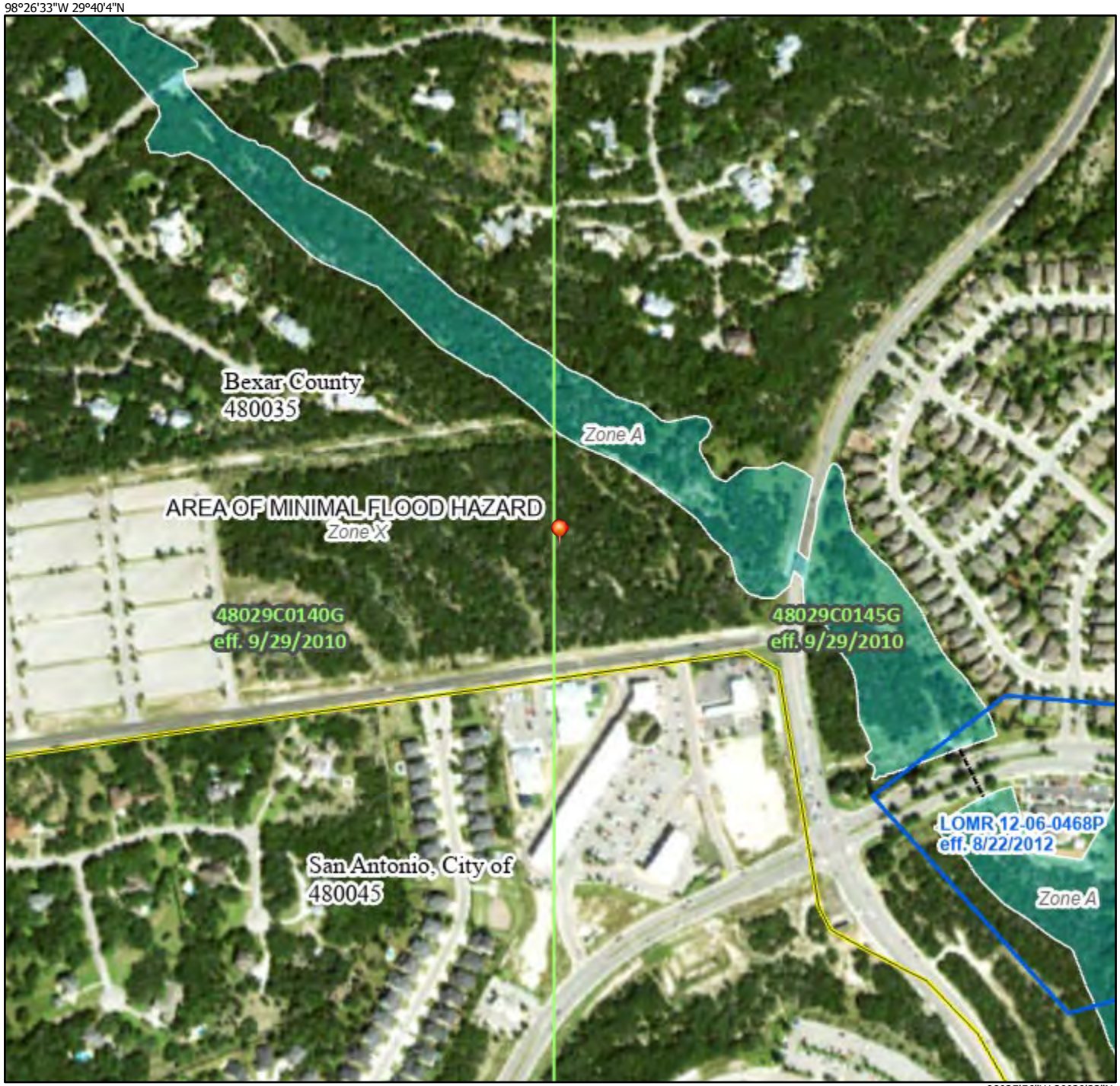
TCEQ-0583

FEMA Flood Map

National Flood Hazard Layer FIRMette

FEMA

98°26'33"W 29°40'4"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

98°25'56"W 29°39'33"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

Ü

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

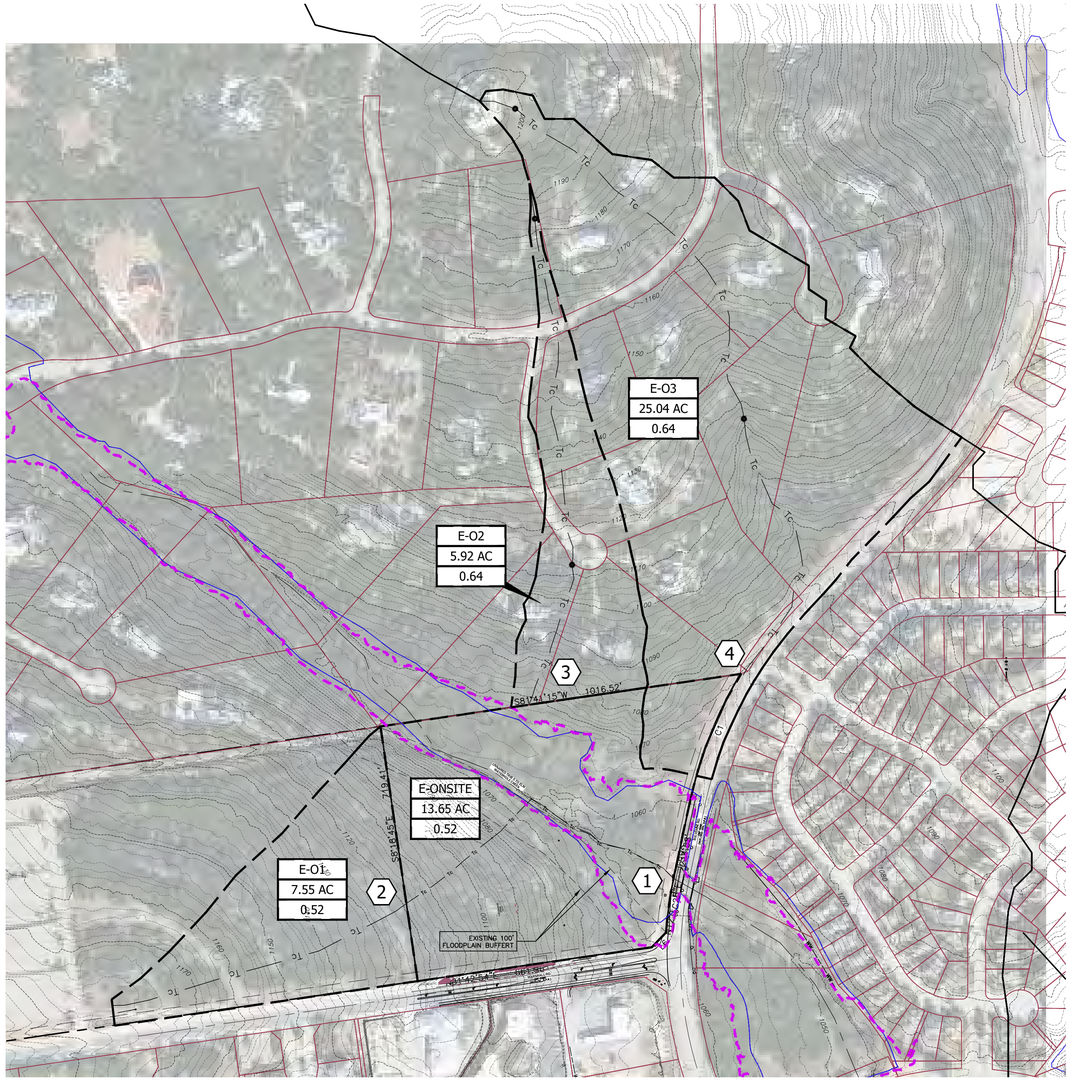
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

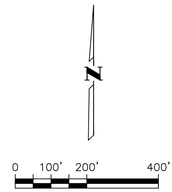
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/20/2023 at 11:30 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

TCEQ-0583

Site Layout and Drainage





1 DRAINAGE POINT

1 / 5.2 / 0.47 DRAINAGE AREA / ACREAGE / C-VALUE

920 EXIST. CONTOUR

Tc PATH

FEMA REGULATORY 100-YR FLOODPLAIN

ATLAS 14 ULTIMATE 100-YR FLOODPLAIN

Existing Runoff Flow Rates

Ref Point	Drainage Areas	C	Drainage Area (ac)	Tc (min)	I_5 (in/hr)	I_{10} (in/hr)	I_{25} (in/hr)	I_{100} (in/hr)	Q_5 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)
1	E-ONSITE	0.52	13.65	15.0	5.31	6.19	7.39	9.26	37.7	44.0	52.5	65.7
2	E-O1	0.52	7.55	25.4	4.04	4.70	5.61	6.99	15.9	18.5	22.0	27.4
3	E-O2	0.64	5.92	24.9	4.09	4.75	5.68	7.07	15.5	18.0	21.5	26.8
4	E-O3	0.64	25.04	26.2	3.98	4.63	5.53	6.88	63.8	74.2	88.5	110.3

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HALFTIME 1
3125 SUMMIT CHURCH ROAD, SAN ANTONIO, TX 78259

EXISTING CONDITIONS
DRAINAGE AREA MAP

FIG 5

Date: Sep 18, 2023, 10:04am User ID: mark
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Proposed Runoff Flow Rates												
Ref Point	Drainage Areas	C	Drainage Area (ac)	Tc (min)	I_5 (in/hr)	I_{10} (in/hr)	I_{25} (in/hr)	I_{100} (in/hr)	Q_5 cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)
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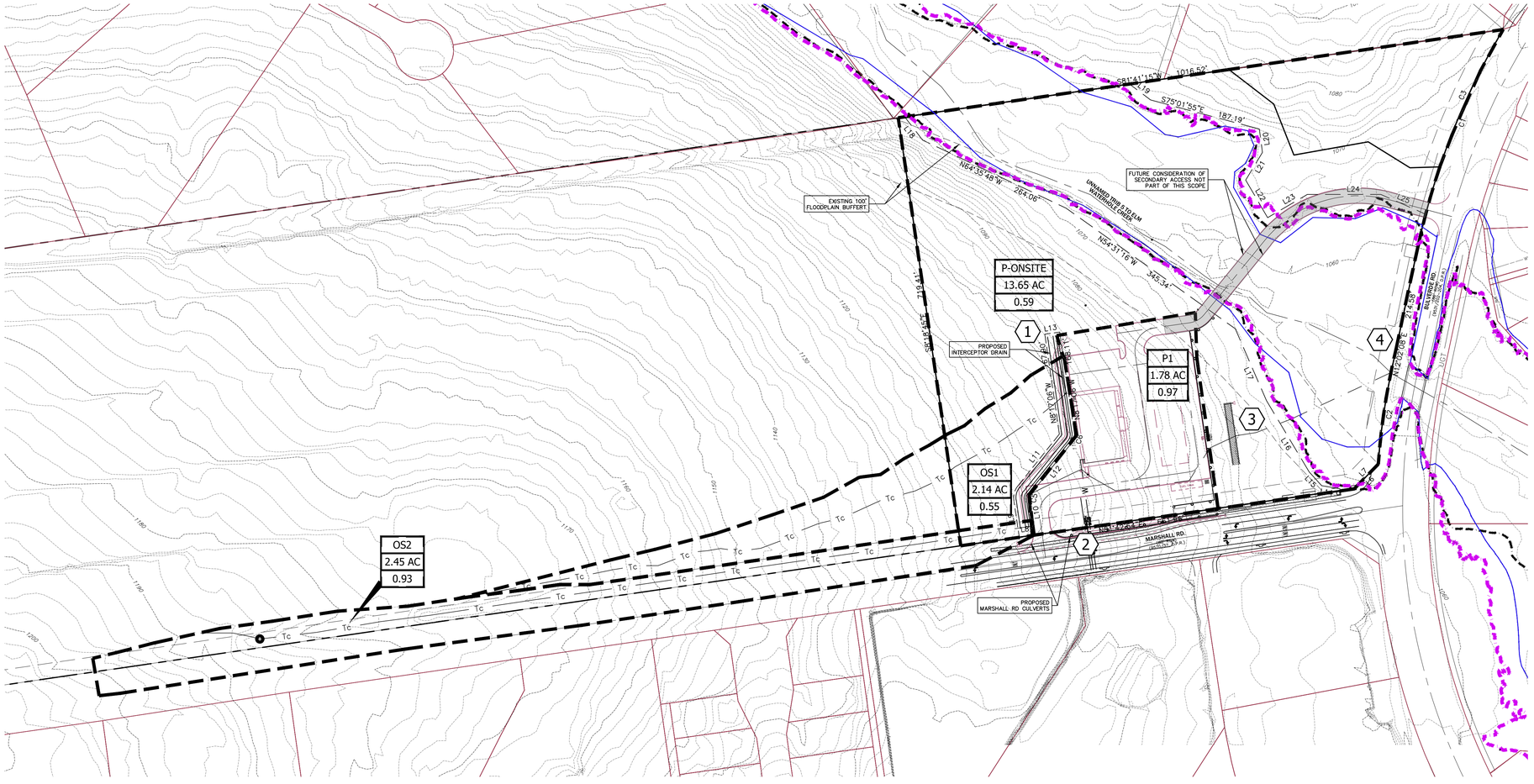
3	P1	0.97	1.78	15.8	5.18	6.03	7.19	9.01	8.9	10.4	12.4	15.5
4	P-ONSITE	0.58	13.65	11.9	5.94	6.94	8.28	10.45	47.0	54.9	65.6	82.7



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PROPOSED/ULTIMATE CONDITIONS DRAINAGE AREA MAP

FIG 6

Date: Aug 08, 2023, 10:16am User ID: mark
File: I:_Projects\205 – Burverde and Marshall Rd C-Store\ACAD\Exhibits\04 Map.dwg

Appendix D

TECQ-0602
Temporary Stormwater Section

Temporary Stormwater Section

In this Section:

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.

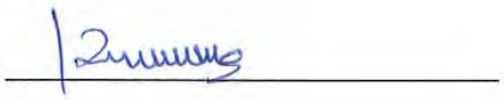
Signature

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: Karim Ali

Date: 03/24/22

Signature of Customer/Agent:



Regulated Entity Name: Halftime 1

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. N/A 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: Mud 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.

Attachment A

Spill Response Actions

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Spill Response Action

Spill Prevention and Control

The objective of this section is to describe measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

The following steps will help reduce the stormwater impacts of leaks and spills:

Education

1. Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is an appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spills must be reported to the TCEQ. Information available in 30 TAC 372.4 and 40 CFR 302.4.
2. Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
3. Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
4. Establish a continuing education program to indoctrinate new employees.
5. Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

1. To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110, 117, and 302, and sanitary and septic wastes should be contained and cleaned u immediately.
2. Store hazardous materials and wastes in covered containers and protect from vandalism.
3. Place a stockpile of spill cleanup materials where it will be readily accessible.
4. Train employees in spill prevention and cleanup.
5. Designate responsible individuals to oversee and enforce control measures.
6. Spills should be covered and protected from stormwater run-on during rainfall to the extent that it doesn't compromise cleanup activities.
7. Do not bury or wash spills with water.
8. Store and dispose of used cleanup materials, contaminated materials and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.

9. Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
10. Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
11. Place Safety Data Sheets (SDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
12. Keep waste storage areas clean, well-organized, and equipment with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

1. Clean up leaks and spills immediately.
2. Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
3. Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

1. Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
2. Use absorbent material on small spills rather than hosing down or burying the spill.
3. Absorbent material should be promptly removed and disposed of properly.
4. Follow the practice below for a minor spill:
    a. Contain the spread of the spill.
    b. Recover spilled material.
    c. Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Spills should be cleaned up immediately:

1. Contain spread of the spill.

2. Notify the project foreman immediately.
3. If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
4. If the spill occurs in dirt areas, immediately contain the spill before constructing an earthen dike. Dig up and properly dispose of contaminated soil.
5. If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills, that are in reportable quantities:

1. Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
2. For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
3. Notification should first be made by telephone and followed up with a written report.
4. The services of a spill contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
5. Other agencies which may need to be consulted include, but are not limited to, the County Sheriff's Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at:
https://www.tceq.texas.gov/response/spills

Vehicle and Equipment Preventative Maintenance

1. If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.
2. Regularly inspect onsite vehicles and equipment for leaks and repair immediately.
3. Check incoming vehicles and equipment (including delivery trucks and employee/subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.

4. Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
5. Place drip pans or absorbent materials under paving equipment when not in use.
6. Use absorbent materials on small spills rather than hosing down or burying the spill. Remove absorbent materials promptly and dispose of properly.
7. Promptly transfer used fluids to the proper waste or recycle drums. Don't leave full drip pans or other open containers lying around.
8. Oil filters disposed of in trash cans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
9. Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

1. If fueling must occur onsite, use designated areas, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.
2. Discourage "topping off" of fuel tanks.
3. Always use secondary containment, such as a drain pan, when fueling to catch spills/leaks.

Attachment B

Potential Sources of Contamination

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Potential Sources of Contamination

1. Oil, grease, fuel and hydraulic contamination from construction equipment and vehicle leakage.
   Remedy: Lubrication and fueling will be performed in a designated area. This area will be monitored daily for contamination.

2. Miscellaneous trash and litter from construction works.
   Remedy: Designated receptacles will be strategically located, and works will be directed to deposit trash there.

3. Construction debris.
   Remedy: Debris will be collected weekly and deposited in bins for offsite disposal. Situations requiring immediate attention will be handled on a case-by-case basis.

4. Asphalt products.
   Remedy: After placement of asphalt, emulsion or coatings, the contractor will be responsible for immediate cleanup should an unexpected rain occur. For the duration of the asphalt product curing time, the contractor will maintain standby personnel and equipment to control asphalt wash-off should an unexpected rain occur. The contractor will be instructed not to place asphalt products on the ground within 48 hours of a forecasted rain.

5. Tar, fertilizers, cleaning solvents, detergents, and petroleum-based products.
   Remedy: The contractor will be responsible for immediate cleanup should an unexpected rain occur. Debris will be collected weekly and deposited in bins for offsite disposal. Situations requiring immediate attention will be handled on a case-by-case basis.

Attachment C

Sequence of Major Activities

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Sequence of Major Activities

1. Install erosion and sedimentation controls (i.e. silt fences and stabilized construction entrances) as indicated on the approved construction plans.
2. Perform mass grading of the site (+/- 1.63 acres).
3. Install utilities.
4. Establish building foundation and pour concrete.
5. Install landscaping or hydromulch to disturbed areas.
6. Re-vegetate disturbed areas.
7. Remove temporary erosion and sedimentation controls.

Attachment D

Temporary Best Management Practices and Measures

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Temporary Best Management Practices and Measures

The temporary Best Management Practices (BMP's) shall be installed as the first construction activity and will remain in place until all construction activities are complete and 70% of the vegetative cover has been established. Construction will be conducted in one phase, with a designated construction exit, a silt fence along the down gradient side of the tract, and tree protection for the undisturbed trees where applicable. The existing native grasses will be left undisturbed in areas not under construction. Rock berms will be placed where streets end at discharge points and flood plain crossings are to be installed. The temporary BMP's shall be installed according to details on the Water Pollution Abatement Plan detail sheet. The silt fences will be anchored six (6) inches into the soil and shall be monitored weekly for any failures of the silt fence or problems associated with silt build up. Buffer areas for recharge features shall be established prior to any construction on the site.

a. To prevent pollution of surface water, groundwater or storm water that originates upgradient from the site and flows across the site, silt fencing will be placed along the down gradient side of the site and around indicated sensitive features.

b. To prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated storm water runoff from the site, silt fencing will be placed along the down gradient sides of the site and rock berms will be placed at the grade-to-drain areas at the ends of the streets (if applicable). A construction exit will also be installed at the entrance to the location and a storage and refueling area will be designated on the site for the unit.

c. To prevent pollutants from entering surface streams, sensitive features, or the aquifer, the silt fence and rock berms mentioned in item b above will be installed. Once identified, sensitive features will be protected using hay bale dikes, sand bag berms or other methods acceptable to TCEQ.

d. To maintain flow to naturally occurring sensitive features identified in the geologic assessment, inspections, or during construction, the hay bale dikes or sand bag berms mentioned in item c above will be installed. If a feature must be sealed, when possible the feature will be filled with boulders and gravel and capped with concrete.

Attachment E

Request to Temporarily Seal a Feature

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Request to Temporarily Seal a Feature

Not Applicable

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Attachment F

Structural Practices

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STRUCTURAL PRACTICES

Silt fences will be used on site to trap sediments and pollutants from leaving the areas of construction. A rock berm will trap excess sediment and debris from travelling downstream and filter the storm water that passes through it.

Attachment G

Drainage Area Map

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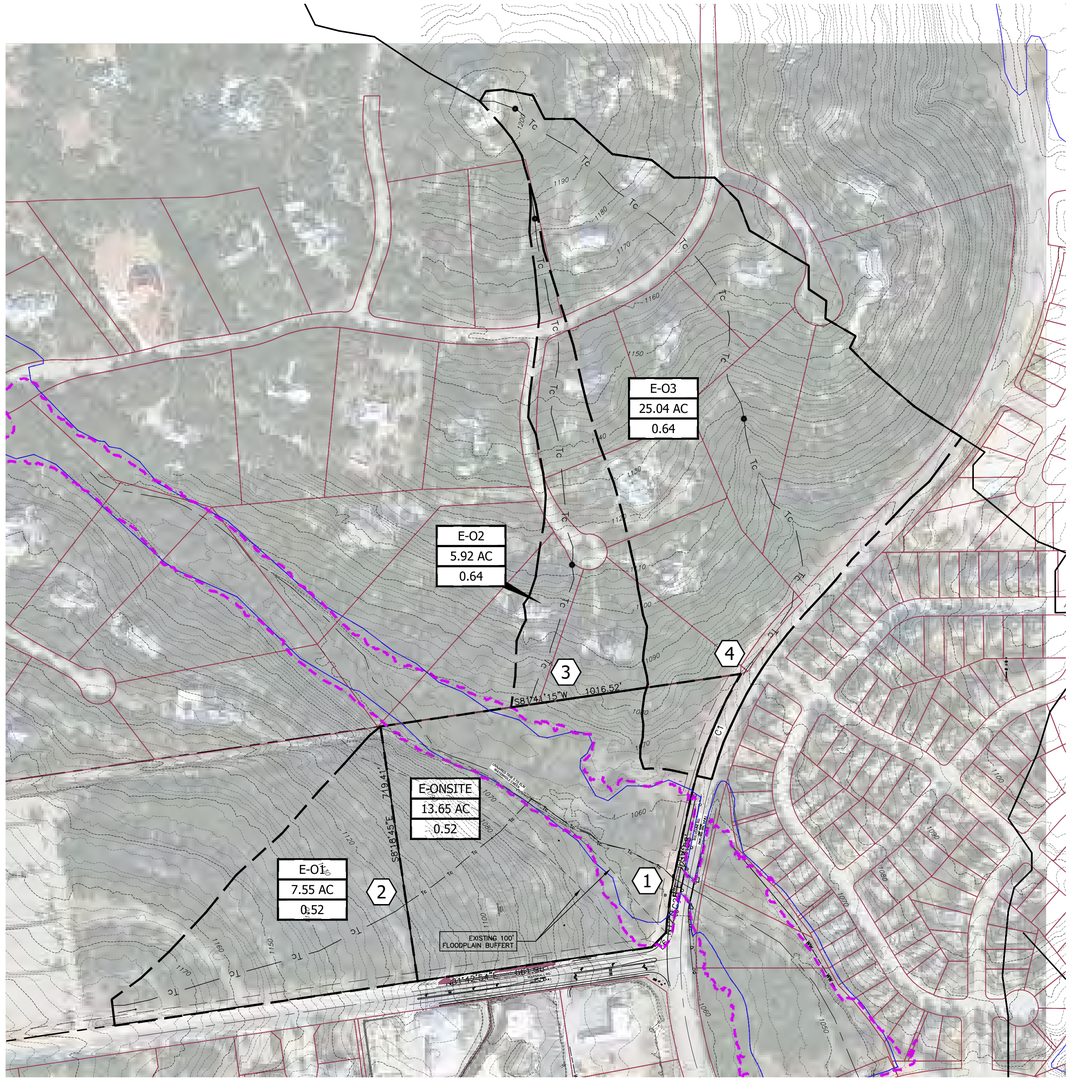
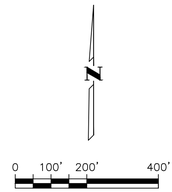
Drainage Area Map

The drainage area is not greater than 10 acres that will be disturbed at one time. A water quality pond and silt fences will be used to limit pollutant discharges before becoming concentrated channel flow. A rock berm will be used to further limit runoff discharge of pollutants from the site.





1 DRAINAGE POINT

1 / 5.2 / 0.47 DRAINAGE AREA / ACREAGE / C-VALUE

920 EXIST. CONTOUR

Tc PATH

FEMA REGULATORY 100-YR FLOODPLAIN

ATLAS 14 ULTIMATE 100-YR FLOODPLAIN

Existing Runoff Flow Rates

Ref Point	Drainage Areas	C	Drainage Area (ac)	Tc (min)	I_5 (in/hr)	I_{10} (in/hr)	I_{25} (in/hr)	I_{100} (in/hr)	Q_5 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)
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FIG 5

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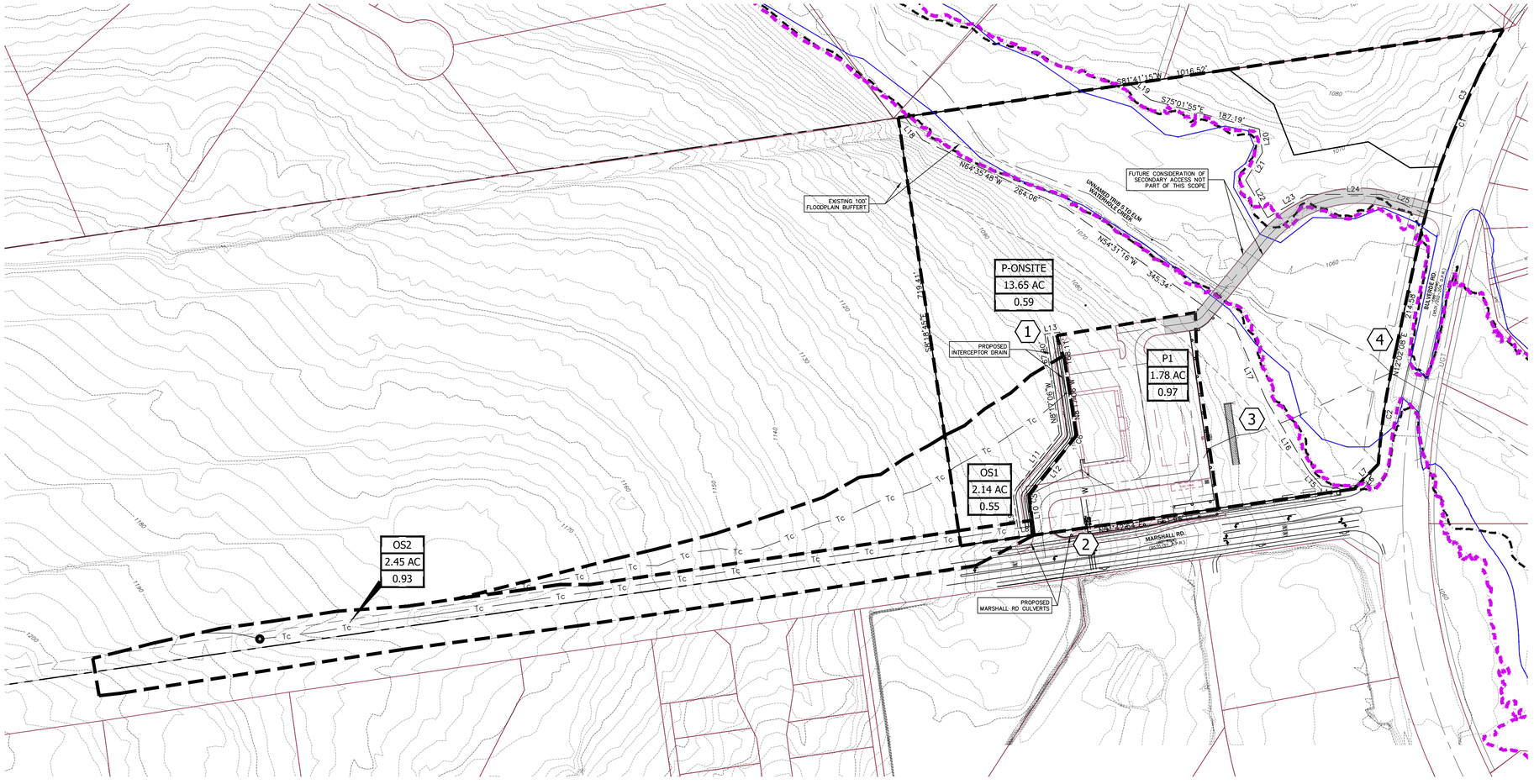

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PROPOSED/ULTIMATE CONDITIONS DRAINAGE AREA MAP

FIG 6

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Attachment H

Temporary Sediment Pond(s) Plans and Calculations

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Temporary Sediment Pond(s) Plans and Calculations

Not Applicable

Attachment I

Inspection and Maintenance for BMPs

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INSPECTION AND MAINTENANCE FOR BMP'S

The temporary BMP's will be scheduled for inspection and repair once every week (7 days) and following any rainfall event that is greater than 0.5 inch. The contractor is responsible for logging all inspections, rainfall events and repairs. The contractor is also responsible for cleaning up any sediment that is released onto adjacent roadways after any rainfall event. The following forms shall be used for inspection and maintenance reports that are required to be kept on the project site by the contractor.

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

_____

_____

_____

_____

REASONS FOR CHANGES:

_____

_____

_____

_____

INSPECTOR'S SIGNATURE:_____ DATE:_____

UP ENGINEERING + SURVEYING

Silt Fence

Description

This item shall consist of providing and placing a filter fabric fence including maintenance of the fence, removal of accumulated silt and removal of the fence upon completion of the project.

Materials

(1) Fabric

(a) General: The filter fabric shall be of nonwoven polypropylene, polyethylene or polyamide thermoplastic fibers with non-raveling edges. The fabric shall be non-biodegradable, inert to most soil chemicals, ultraviolet resistant, unaffected by moisture or other weather conditions, and permeable to water while retaining sediment. The filter fabric shall be supplied in rolls a minimum of 36 inches wide.

(b) Physical Requirements: The fabric shall meet the following requirements when sampled and tested in accordance with the methods indicated.

Physical Properties	Method	Requirements
Fabric Weight(oz/sy)	TEX-616-J	4.5 minimum
Water Flow Rate (gal/sq. ft/minute)	TEX-616-J	40 maximum
Equivalent Opening Size: US Standard sieve(number)	CW-02215, US Army Corps of Engineers	40 to 100
Mullen Burst Strength(psi)	ASTM D 3786	300 minimum
Ultraviolet Resistance; Strength retention (%)	ASTM D 1682	70 minimum

(2) Posts: Posts shall be painted or galvanized steel Tee or Y-posts with anchor plates, not less than 4 feet in length with a minimum weight of 1.25 pounds per foot with a minimum Brinell Hardness of 140. Hangers shall be adequate to secure fence and fabric to posts. Posts and anchor plates shall conform to ASTM A 702.

(3) Wire Fence: Wire fence shall be woven wire backing to support the fabric should be 2” x 4” welded wire, 12 gauge minimum.

Construction Methods

The silt fence fabric shall be securely attached to the posts and the wire support fence with the bottom 12 inches of the filter material buried in a trench a minimum of 6 inches deep and 6 inches wide to prevent sediment form passing under the fence. When the silt fence is constructed on impervious material, a 12-inch flap of fabric shall be extended upstream from the bottom of the silt fence and weighted to limit particulate loss. No horizontal joints will be allowed in the filter fabric. Vertical joints shall be overlapped a minimum of 12 inches with the ends sewn or otherwise securely tied.

The silt fence shall be a minimum of 24 inches high. Posts shall be embedded a minimum of 12 inches in the ground, placed a maximum of 8 feet apart and set on a slight angle toward the anticipated runoff source. When directed by the Engineer, posts shall be set at specified intervals to support concentrated loads.

The silt fence shall be repaired, replaced, and/or relocated when necessary or as directed by the Engineer. Accumulated silt shall be removed when it reaches a depth of 6 inches.

Measurement

The work performed, and the materials furnished under this item will be measured by the linear foot of “Silt Fence”, complete in place.

Stabilized Construction Exit

Description

This item involves constructing a stabilized pad of crushed stone located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking or deposition of sediment onto public right-of-way.

Materials

Aggregate for construction shall conform to the following gradation:

Table 1: Aggregate Gradation Chart (TEX 401-A, Percent Retained)		
8 inch	5 inch	2 inch
0	90-100	100

Construction Methods

All trees, brush, stumps, obstructions and other objectionable material shall be removed and disposed of so as not to interfere with the excavation and construction of the entrance as indicated. The entrance shall not drain onto the public right-of-way or leave the construction site.

When necessary, vehicle wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch or watercourse through use of sand bags, gravel, boards, silt fence or other approved methods.

The entrance shall be maintained in a condition which will prevent tracking or disposition of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public right-of-way must be removed immediately.

Measurement

Acceptable work performed as prescribed in this item will be measured by unit of each stabilized construction entrance installed.

Rock Filter Dams

Description

This Item shall govern for the materials to be furnished and for the installation, maintenance and removal of rock filter dams of the dimensions shown on the plans. The rock filter dams shall be constructed at the locations shown on the plans and as directed by the Engineer. This Item will be used during construction to control erosion and sedimentation.

Materials

Unless otherwise specified, all aggregate used for the construction of the rock filter dams shall be hard, durable, clean, open-graded, and shall naturally resist crumbling, flaking and eroding. Aggregate gradation shall be 3 to 6 inches for rock filter dams Types 1, 2 and 4 and shall be 4 to 8 inches for Type 3.

The galvanized steel wire mesh and tie wires for Types 2 and 3 shall be a minimum 20 gauge unless specified otherwise on the plans.

For Type 4: Steel wire mesh shall utilize a double twisted hexagonal weave; mesh opening shall be a nominal 2.50" x 3.25"; steel wire for netting shall be 0.0866" (U.S. Gauge No. 13) minimum; steel wire for selvedges and corners shall be 0.1063" (U.S. Gauge No. 110 minimum; and binding or tie wire shall be 0.0866" (U.S. Gauge No. 13) minimum.

Unless otherwise specified, the sandbag material shall be made of polypropylene, polyethylene or polyamide woven fabric, minimum unit weight four (4) ounces per square yard, Mullen burst strength exceeding 300 psi and ultraviolet stability exceeding 70 percent. The sandbag size shall be 24 to 30 inches in length, 16 to 18 inches in width, six (6) to eight (8) inches thick and weight 90 to 125 pounds. The sand shall be course grade.

Construction Methods

Trees, brush, stumps and other objectionable material shall be removed and disposed of as necessary so as not to interfere with the construction of the filter dams.

The filter dams shall be constructed according to the following criteria unless otherwise shown on the plans:

1. Type 1 (non-reinforced)
    a. Height -
        i. 18 inches minimum, measured vertically from existing ground to top of filter dam.
    b. Top Width

i. 2 feet minimum

c. Slopes

i. 2:1 maximum

2. Type 2 (reinforced)

a. Height

i. 18 inches minimum, measured vertically from existing ground to top of filter dam.

b. Top Width

i. 2 feet minimum

c. Slopes

i. 2:1 maximum

The aggregate shall be placed on the galvanized wire mesh to the lines, height and slopes specified without resulting in undue voids, and to the satisfaction of the Engineer. The mesh shall be folded at the upstream side over the aggregate and secured to itself on the downstream side. The mesh shall be attached to itself with wire ties, hog rings, or as directed by the Engineer.

3. Type 3 (reinforced)

a. Height

i. 36 inches minimum, measured vertically from existing ground to top of filter dam.

b. Top Width

i. 2 feet minimum

c. Slopes

i. 2:1 maximum

The aggregate shall be placed on the galvanized wire mesh to the lines, height and slopes specified without resulting in undue voids, and to the satisfaction of the Engineer. The mesh shall be folded at the upstream side over the aggregate and secured to itself on the downstream side. The mesh shall be attached to itself with wire ties, hog rings, or as directed by the Engineer.

4. Type 4 (Sack Gabions)

Sack gabions are supplied folded flat, packed in bundles. Single sacks shall be removed from the bundle, unfolded flat on the ground, and all kinks and bends stepped out.

For vertical filling, the two sides edge wires are connected by using the lacing wire in a “single loop – double loop” pattern on a 4” to 5” spacing. At one end, the “end lacing rod” must be pulled tight, wrapped around the end and twisted 4 times. At the filling end, the rod shall be pulled tight, cut, leaving about 6” length and twisted 4 times.

For horizontal filling, the sack shall be placed flat in a filling trough, filled with stone and then sides connected as described above. The ends shall be secured as described above.

Lifting and placing shall be accomplished by placing a No. 6 rebar (or equal) 5' long in the mesh, perpendicularly to the longitudinal axis and close to the knot of one end. Lifting should be made from the central point. Sack gabions shall conform to existing contours.

5. Type 5. Type 5 as shown on the plans.

Maintenance

The area upstream from the filter dams shall be maintained in a condition which will allow sediment to be removed following the runoff of a rainfall event. When the silt reaches a depth equal to 1/3 the height of the dam or 1 foot, whichever is less, the Contractor shall remove the accumulated sediment and dispose of it at an approved site in a manner that will not contribute to additional siltation. The filter dams shall be reshaped as needed and as directed by the Engineer.

The filter dams shall be maintained in place until all upstream areas are adequately stabilized. When the special Specification, "Temporary Erosion, Sedimentation and Water Pollution Prevention and Control" is in the contract, stabilization shall be as described in Subarticle 4.C of that specification. The area beneath the filter dams and area damaged by the removal process shall then be stabilized by the Contractor using appropriate methods as approved by the Engineer.

Measurement

This Item will be measured by the linear foot or by the cubic yard, as shown on the plans. When measured by the linear foot, measurement will be along the centerline of the top of the dam. When measured by the cubic yard, measurement will be the volume for rock computed in its final position by the method of average end areas or in vehicles at the point of delivery. The measured volume will include sandbags, if they are used.

Each time the Engineer directs that the filter dam (or portions thereof) be removed or removed and replaced, it will be measured for payment.

INSPECTIONS

DATE OF INSPECTION	CONTROL INSPECTED	OBSERVATIONS	COMPLIANCE WITH SWPPP		INSPECTOR'S SIGNATURE	TITLE/ QUALIFICATIONS
			YES	NO		

RECORD OF CONSTRUCTION ACTIVITY

DATE STARTED	DATE ENDED	TYPE OF ACTIVITY	CONTROL MEASURES	INSPECTOR SIGNATURE	TITLE/ COMPANY

NON-STORMWATER DISCHARGES

DATE	INSPECTOR	TITLE	COMPANY	DISHARGE TYPE	POLLUTION CONTROL MEASURE

CONSTRUCTION MATERIALS

DATE STORED ONSITE	DATE REMOVED FROM SITE	DESCRIPTION	INSPECTOR'S SIGNATURE	TITLE	COMPANY

STABILIZATION RECORD

CONSTRUCTION/GRADING		STABILIZATION			SIGNATURE		
DATE BEGAN	DATE ENDED	DATE BEGAN	AREA OF SITE STABILIZATION	TYPE OF STABILIZATION USED	INSPECTOR	TITLE	COMPANY

RAINFALL DATA

DATE OF RECORDED RAINFALL	AMOUNT OF RAINFALL (INCHES)	SIGNATURE OF INSPECTOR	TITLE/COMPANY

SUBCONTRACTOR RESPONSIBILITIES

				INITIALS	
DATE	**SUBCONTRACTOR COMPANY**	**CONSTRUCTION ACTIVITY TO BE PERFORMED**	**DESCRIPTION OF POLLUTION PREVENTION RESPONSIBILITY**	**SUBCONTRACTOR**	**CONTRACTOR**

Attachment J

Schedule of Interim and Permanent Soil Stabilization Practices

Schedule of Interim and Permanent Soil Stabilization Practices

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.

After all sanitary sewer construction has been completed, final stabilization of the construction area on all unpaved areas and areas not covered by permanent structures shall be completed by even distribution of 70% of the native background vegetative cover or equivalent permanent stabilization measures.

Revegetation will be necessary for soil stabilization of any offsite sanitary sewer construction. Seeding should be used for these areas. The specified seeding requirements are based on the seasonal San Antonio District Seeding Requirement as specified by Item 164 of the 2004 Texas Department of Transportation specifications Book.

Appendix E

Agent Authorization Form
Application Fee Form
Core Data Form

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

I Karim Ali,
Print Name

President / Owner,
Title - Owner/President/Other

of Marshall and Bulverde, LLC,
Corporation/Partnership/Entity Name

have authorized Cheri Krieg, P.G./Suzanne Green
Print Name of Agent/Engineer

of Geo Strata Environmental Consultants, 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

12-22-2023
Date

THE STATE OF Texas §

County of Bexar §

BEFORE ME, the undersigned authority, on this day personally appeared Kacim Ali 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 22nd day of December, 2023

PATRICIA LARA
Notary ID #7448933
My Commission Expires
July 17, 2025

NOTARY PUBLIC

Patricia Lara
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 07/17/2025

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Halftime 1
Regulated Entity Location: 3125 Summit Church Road, San Antonio, TX
Name of Customer: Bulverde and Marshall, LLC
Contact Person: Karim Ali Phone: 210-960-5504
Customer Reference Number (if issued):CN _____
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☐ Williamson

San Antonio Regional Office (3362)

☒ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

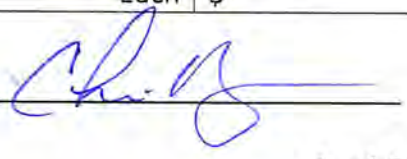
☐ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☒ 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	1 Tanks	$ 650
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: 

Date: 12/20/23

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

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ 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		RN

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:*

Marshall and Bulverde, LLC

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (*if applicable*)
803843003			

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ State ☐ Other ☐ Sole Proprietorship ☒ Other: LLC

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 ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:

7410 Blanco Road
Suite 225

City	State	ZIP	ZIP + 4
San Antonio	TX	78216	4363

16. Country Mailing Information (*if outside USA*) | **17. E-Mail Address** (*if applicable*)

18. Telephone Number	19. Extension or Code	20. Fax Number (*if applicable*)
(210) 960- 5540		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (*If 'New Regulated Entity" is selected below this form should be accompanied by a permit application*)

☒ 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 Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name (*Enter name of the site where the regulated action is taking place.*)

Halftime 1

23. Street Address of the Regulated Entity: *(No PO Boxes)*	3125 Summit Church Road							
	City	San Antonio	State	TX	ZIP	78259	ZIP + 4	2189
24. County	Bexar							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	NW corner of Summit Church Road and Bulverde Road

26. Nearest City	State	Nearest ZIP Code
San Antonio	TX	78261

27. Latitude (N) In Decimal:	29.66306	28. Longitude (W) In Decimal:	- 98.43639

Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	39	47	98	26	11

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)
5983	5541	457110	N/A

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

Convenience Store with Fuel Sales

34. Mailing Address:	7410 Blanco Road							
	Suite 225							
	City	San Antonio	State	TX	ZIP	78216	ZIP + 4	4363
35. E-Mail Address:	kns3bigs@gmail.com							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(210)960- 5540		( ) -

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	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	UP Engineering + Surveying	41. Title:	Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210) 774- 5504		( ) -	

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:	Marshall and Bulverde, LLC	Job Title:	President/Owner
Name *(In Print)*:	Karim Ali	Phone:	(210) 960-5504
Signature:		Date:	5/16/2023