Comal County Environmental Health
OSSF Inspection Sheet

Installer Name: Robert Freeman **OSSF Installer #:** OS0008896

1st Inspection Date: 2/3/25 5/14/25 **2nd Inspection Date:** 5/20/25 8/4/25 **3rd Inspection Date:**

Inspector Name: Hendry Hendry **Inspector Name:** Hendry Hendry **Inspector Name:**

Permit#: 118208 **Address:** 118735 IH 35 N

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
1	SITE AND SOIL CONDITIONS & SETBACK DISTANCES Site and Soil Conditions Consistent with Submitted Planning Materials	X	285.31(a) 285.30(b)(1)(A)(iv) 285.30(b)(1)(A)(v) 285.30(b)(1)(A)(iii) 285.30(b)(1)(A)(ii) 285.30(b)(1)(A)(i)		X		
2	SITE AND SOIL CONDITIONS & SETBACK DISTANCES Setback Distances Meet Minimum Standards	X	285.91(10) 285.30(b)(4) 285.31(d)		X		
3	SEWER PIPE Proper Type Pipe from Structure to Disposal System (Cast Iron, Ductile Iron, Sch. 40, SDR 26)	X	285.32(a)(1)		X		
4	SEWER PIPE Slope from the Sewer to the Tank at least 1/8 Inch Per Foot	X	285.32(a)(3)		X		
5	SEWER PIPE Two Way Sanitary - Type Cleanout Properly Installed (Add. C/O Every 100' &/or 90 degree bends)	X	285.32(a)(5)		X		
6	PRETREATMENT Installed (if required) TCEQ Approved List PRETREATMENT Septic Tank(s) Meet Minimum Requirements		285.32(b)(1)(G) 285.32(b)(1)(E)(iii) 285.32(b)(1)(E)(iv) 285.32(b)(1)(F) 285.32(b)(1)(B) 285.32(b)(1)(C)(i) 285.32(b)(1)(C)(ii) 285.32(b)(1)(D) 285.32(b)(1)(E) 285.32(b)(1)(A) 285.32(b)(1)(E)(ii)(II) 285.32(b)(1)(E)(i) 285.32(b)(1)(E)(ii)(I)				
7	PRETREATMENT Grease Interceptors if required for commercial		285.34(d)				

Inspector Notes: **2/3/25 CH: Require revision for plumber installed tight lines, NuWater B1500 ATU and depth of trash tank with spacers for no traffic lids 5/14/25 CH: Supply and return lines not fully sleeved where it splits near pump tank, fully sleeve and leave exposed for inspection, designer to address depth of trash tank with no traffic lid, ATU manufacturer to Nu Water and set back of drip tubing on east side to a** slope where seeps may occur

SEE NOTES CONTINUED BOTTOM OF PAGE 2

Comal County Environmental Health
OSSF Inspection Sheet

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
8	SEPTIC TANK Tank(s) Clearly Marked SEPTIC TANK If SingleTank, 2Compartments Provided withBaffle SEPTIC TANK Inlet Flowline Greater than3" and " T " Provided on Inlet and OutletSEPTIC TANK Septic Tank(s) MeetMinimum Requirements		285.32(b)(1) (E)285.91(2)285.32(b)(1) (F)285.32(b)(1)(E) (iii)285.32(b)(1)(E)(ii) (II)285.32(b)(1)(E)(ii) (I)285.32(b)(1)(E) (i)285.32(b)(1) (D)285.32(b)(1)(C) (ii)285.32(b)(1)(C) (i)285.32(b)(1) (B)285.32(b)(1) (A)285.32(b)(1)(E)(iv)				
9	ALL TANKS Installed on 4" Sand Cushion/ Proper Backfill Used	X	285.32(b)(1)(F) 285.32(b)(1)(G) 285.34(b)		X		
10	SEPTIC TANK Inspection / Clean Out Port & Risers Provided on Tanks Buried Greater than 12" Sealed and Capped		285.38(d)				
11	SEPTIC TANK Secondary restraint system providedSEPTIC TANK Riser permanently fastened to lid or cast into tank SEPTIC TANK Riser cap protected against unauthorized intrusions		285.38(d) 285.38(e)				
12	SEPTIC TANK Tank Volume Installed			2000			
13	PUMP TANK Volume Installed			2000			
14	AEROBIC TREATMENT UNIT Size Installed	X		2000	X		
15	AEROBIC TREATMENT UNIT Manufacturer AEROBIC TREATMENT UNIT Model Number	X X		Delta	X X		
16	DISPOSAL SYSTEM Absorptive		285.33(a)(4) 285.33(a)(1) 285.33(a)(2) 285.33(a)(3)				
17	DISPOSAL SYSTEM Leaching Chamber		285.33(a)(1) 285.33(a)(3) 285.33(a)(4) 285.33(a)(2)				
18	DISPOSAL SYSTEM Drip Irrigation	X	285.33(c)(3)(A)-(F)		X		

5/20/25 CH: Supply and return lines fully sleeved, ready for cover

8/5/25 CH: Zones A1-A5 and D1-2 are operational, compressor and alarm require operational, ready for cover, require design revision for existing structures and installed portions of system and all previously stated revisions

Comal County Environmental Health
OSSF Inspection Sheet

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
32	EFFLUENT DISPOSAL SYSTEM Utilized Only by Single Family Dwelling EFFLUENT DISPOSAL SYSTEM Topographic Slopes < 2.0% EFFLUENT DISPOSAL SYSTEM Adequate Length of Drain Field (1000 Linear ft. for 2 bedrooms or Less & an additional 400 ft. for each additional bedroom) EFFLUENT DISPOSAL SYSTEM Lateral Depth of 18 inches to 3 ft. & Vertical Separation of 1ft on bottom and 2 ft. to restrictive horizon and ground water respectfully EFFLUENT DISPOSAL SYSTEM Lateral Drain Pipe (1.25 - 1.5" dia.) & Pipe Holes (3/16 - 1/4" dia. Hole Size) 5 ft. Apart		285.33(b)(3)(A) 285.33(b)(3)(A) 285.33(b)(3) (B)285.91(13) 285.33(b)(3)(D) 285.33(b)(3)(F)				
33	AEROBIC TREATMENT UNIT Is Aerobic Unit Installed According to Approved Guidelines.	X	285.32(c)(1)		X		
34	AEROBIC TREATMENT UNIT Inspection/Clean Out Port & Risers Provided AEROBIC TREATMENT UNIT Secondary restraint system provided AEROBIC TREATMENT UNIT Riser permanently fastened to lid or cast into tank AEROBIC TREATMENT UNIT Riser cap protected against unauthorized intrusions	X X X			X X X		
35	AEROBIC TREATMENT UNIT Chlorinator Properly Installed with Chlorine Tablets in Place.	X			X		
36	PUMP TANK Is the Pump Tank an approved concrete tank or other acceptable materials & construction PUMP TANK Sampling Port Provided in the Treated Effluent Line PUMP TANK Check Valve and/or Anti- Siphon Device Present When Required PUMP TANK Audible and Visual High Water Alarm Installed on Separate Circuit From Pump						
37	PUMP TANK Inspection/Clean Out Port & Risers Provided PUMP TANK Secondary restraint system provided PUMP TANK Riser permanently fastened to lid or cast into tank PUMP TANK Riser cap protected against unauthorized intrusions						
38	PUMP TANK Secondary restraint system provided						
39	PUMP TANK Electrical Connections in Approved Junction Boxes / Wiring Buried	X					

Comal County Environmental Health
OSSF Inspection Sheet

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
40	APPLICATION AREA Distribution Pipe, Fitting, Sprinkler Heads & Valve Covers Color Coded Purple?	X	285.33(d)(2)(G)(iii)(II) 285.33(d)(2)(G)(iii)(III) 285.33(d)(2)(G)(v) 285.33(d)(2)(G)(iii) 285.33(d)(2)(G)(iv) 285.33(d)(2)(G)(i) 285.33(d)(2)(G)(ii) 285.33(d)(2)(G)(iii)(I)				
41	APPLICATION AREA Low Angle Nozzles Used / Pressure is as required APPLICATION AREA Acceptable Area, nothing within 10 ft of sprinkler heads? APPLICATION AREA The Landscape Plan is as Designed	X X	285.33(d)(2)(G) (i)285.33(d)(2) (A)285.33(d)(2)(F)				
42	APPLICATION AREA Area Installed	X					
43	PUMP TANK Meets Minimum Reserve Capacity Requirements						
44	PUMP TANK Material Type & Manufacturer						
45	PUMP TANK Type/Size of Pump Installed						

Jamz
PLUMBING SERVICES
COMMERCIAL & RESIDENTIAL

M-43353

4011 Native Oak Dr
Elmendorf, TX 78112
(210) 372-3578 / (210) 849-9144
jamzplb210@yahoo.com

To whom it may concern: Re: Bedstone project
18735 IH 35 N
Schertz , Tx
Jamz plumbing license no. M43353
This is to notify that the tight lines/ sewer lines to the septic tank in this project is installed and tested by Jamz plumbing.

Carlos Alberto Tovar
Owner,

COMAL COUNTY

ENGINEER'S OFFICE

Permit of Authorization to Construct an On-Site Sewage Facility
Permit Valid For One Year From Date Issued

Permit Number:	118208
Issued This Date:	01/15/2025
This permit is hereby given to:	Bedstone, LLC - Federico Martinez

To start construction of a private, on-site sewage facility located at:

18735 IH 35 N
SCHERTZ, TX 78154

Subdivision:	Schertz IH 35 Warehouse
Unit:	0
Lot:	1
Block:	1
Acreage:	5.8900

APPROVED MINIMUM SIZES AS PER ATTACHED DESIGN

Type of System:	Aerobic
	Drip Irrigation

This permit gives permission for the construction of the above referenced on-site facility to commence. Installation must be completed by an installer holding a valid registration card from the Texas Commission on Environmental Quality (TCEQ). Installation and inspection must comply with current TCEQ and Comal County requirements.

Call (830) 608-2090 to schedule inspections.

RECEIVED
By Kathy Griffin at 11:09 am, Dec 18, 2024

COMAL COUNTY
ENGINEERING OFFICE

ON-SITE SEWAGE FACILITY APPLICATION

REVISED
7:50 am, Jul 03, 2023

Date March 22, 2023

Permit Number 118208

1. APPLICANT / AGENT INFORMATION

Owner Name	Bedstone, LLC - Federico Martinez	Agent Name	Derrick E. Lormand, R.S.
Mailing Address	3736 Bee Caves Road #1159	Agent Address	13508 Flat Top Ranch Road
City, State, Zip	West Lake Hills, Texas 78746	City, State, Zip	Austin, Texas 78732
Phone #	~~[illegible]~~ 512-632-9828	Phone #	512-583-1397
Email	federico@punchtualtx.com	Email	derrick@delconenvironmental.com

2. LOCATION

Subdivision Name ~~NA~~ Schertz IH 35 Warehouse IX Unit ~~NA~~ Lot ~~NA~~ | DK | Block ~~NA~~ | DK

Survey Name / Abstract Number R. Martin and J. F. Martin Survey #113, Abstract 414 Acreage 5.889

Address 18735 North Interstate Highway 35 City Schertz State Texas Zip 78154

3. TYPE OF DEVELOPMENT

☐ Single Family Residential

Type of Construction (House, Mobile, RV, Etc.) _____

Number of Bedrooms _____

Indicate Sq Ft of Living Area _____

☒ Non-Single Family Residential

(Planning materials must show adequate land area for doubling the required land needed for treatment units and disposal area)

Type of Facility Proposed office/warehouses

Offices, Factories, Churches, Schools, Parks, Etc. - Indicate Number Of Occupants 84

Restaurants, Lounges. Theaters - Indicate Number of Seats -

Hotel, Motel, Hospital, Nursing Home - Indicate Number of Beds -

Travel Trailer/RV Parks - Indicate Number of Spaces -

Miscellaneous -

Estimated Cost of Construction: $ $75,000.00 (Structure Only)

Is any portion of the proposed OSSF located in the United States Army Corps of Engineers (USACE) flowage easement?

☐ Yes ☒ No (If yes, owner must provide approval from USACE for proposed OSSF improvements within the USACE flowage easement)

Source of Water ☒ Public ☐ Private Well ☐ Rainwater

4. SIGNATURE OF OWNER

By signing this application, I certify that:

- The completed application and all additional information submitted does not contain any false information and does not conceal any material facts. I certify that I am the property owner or I possess the appropriate land rights necessary to make the permitted improvements on said property.
- Authorization is hereby given to the permitting authority and designated agents to enter upon the above described property for the purpose of site/soil evaluation and inspection of private sewage facilities.
- I understand that a permit of authorization to construct will not be issued until the Floodplain Administrator has performed the reviews required by the Comal County Flood Damage Prevention Order.
- I affirmatively consent to the online posting/public release of my e-mail address associated with this permit application, as applicable.

Signature of Owner _____ Date 3/31/2023

COMAL COUNTY
ENGINEER'S OFFICE

ON-SITE SEWAGE FACILITY APPLICATION

195 DAVID JONAS DR
NEW BRAUNFELS, TX 78132
(830) 608-2090
WWW.CCEO.ORG

Planning Materials & Site Evaluation as Required Completed By Derrick E. Lormand, R.S. - Delcon Environmental Systems, LLC

System Description Aerobic treatment train with subsurface drip emitter disposal

Size of Septic System Required Based on Planning Materials & Soil Evaluation

Tank Size(s) (Gallons) 2,000 septic and 2,000 GPD ATU Absorption/Application Area (Sq Ft) 12,000

Gallons Per Day (As Per TCEQ Table III) 1,200

(Sites generating more than 5000 gallons per day are required to obtain a permit through TCEQ.)

Is the property located over the Edwards Recharge Zone? ☐ Yes ☒ No

(If yes, the planning materials must be completed by a Registered Sanitarian (R.S.) or Professional Engineer (P.E.))

Is there an existing TCEQ approved WPAP for the property? ☐ Yes ☒ No

(If yes, the R.S. or P.E. shall certify that the OSSF design complies with all provisions of the existing WPAP.)

If there is no existing WPAP, does the proposed development activity require a TCEQ approved WPAP? ☐ Yes ☒ No

(If yes, the R.S. or P.E. shall certify that the OSSF design will comply with all provisions of the proposed WPAP. A Permit to Construct will not be issued for the proposed OSSF until the proposed WPAP has been approved by the appropriate regional office.)

Is the property located over the Edwards Contributing Zone? ☐ Yes ☒ No

Is there an existing TCEQ approval CZP for the property? ☐ Yes ☒ No

(If yes, the P.E. or R.S. shall certify that the OSSF design complies with all provisions of the existing CZP.)

If there is no existing CZP, does the proposed development activity require a TCEQ approved CZP? ☐ Yes ☒ No

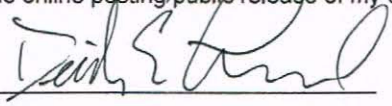
(If yes, the R.S. or P.E. shall certify that the OSSF design will comply with all provisions of the proposed CZP. A Permit to Construct will not be issued for the proposed OSSF until the CZP has been approved by the appropriate regional office.)

Is this property within an incorporated city? ☒ Yes ☐ No

If yes, indicate the city: Schertz

By signing this application, I certify that:

- The information provided above is true and correct to the best of my knowledge.
- I affirmatively consent to the online posting/public release of my e-mail address associated with this permit application, as applicable.

Derrick E. Lormand, R.S. 
Signature of Designer

March 22, 2023 3/22/2023
Date

202306010885 04/11/2023 11:46:08 AM 1/1

THE COUNTY OF COMAL
STATE OF TEXAS

CERTIFICATION OF OSSF REQUIRING MAINTENANCE

According to Texas Natural Resource Conservation Commission Rules for On-Site Sewage Facilities (OSSFs), this document is filed in the Deed Records of Comal County, Texas.

I

The Texas Health and Safety Code, Chapter 366 authorizes the Texas Commission on Environmental Quality (commission) to regulate on-site sewage facilities (OSSFs). Additionally, the Texas Water Code (TWC), § 5.012 and § 5.013, gives the commission primary responsibility for implementing the laws of the State of Texas relating to water and adopting rules necessary to carry out its powers and duties under the TWC. The commission, under the authority of the TWC and the Texas Health and Safety Code, requires owners to provide notice to the public that certain types of OSSFs are located on specific pieces of property. To achieve this notice, the commission requires a recorded affidavit. Additionally, the owner must provide proof of the recording to the OSSF permitting authority. This recorded affidavit is not a representation of warranty by the commission of the suitability of this OSSF, nor does it constitute any guarantee by the commission that the appropriate OSSF was installed.

II

An OSSF requiring a maintenance contract, according to 30 Texas Administrative Code §285.91 (12) will be installed on the property described as (insert legal description):

Site Address: 18735 North Interstate Highway 35, Schertz, Texas 78154

Legal Description: 5.889 acres, R. Martin and J. F. Martin Survey #113, Abstract 414

This property is owned by: Bedstone, LLC - Federico Martinez

This OSSF must be covered by a continuous maintenance contract for the first two years. After the initial two-year service policy, the owner of an aerobic treatment system for a single-family residence shall either obtain a maintenance contract within 30 days or maintain the system personally.

Upon sale or transfer of the above described property, the permit for the OSSF shall be transferred to the buyer or new owner. A copy of the planning materials for the OSSF can be obtained from the Comal County Engineer's office.

WITNESS BY HAND(S) ON THIS 31st DAY OF March 2023.

Owner Signature

Federico Martinez

Owner Signature

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 31st DAY OF March 2023.

Notary Public, State of Texas

Notary's Printed Name: Derrick E. Lormand

My commission Expires: March 6, 2025

DERRICK ETHAN LORMAND
My Notary ID # 12265247
Expires March 6, 2025

After recording, please return to:

Delcon Environmental Systems, LLC
13508 Flat Top Ranch Road
Austin, Texas 78732

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
04/11/2023 11:46:08 AM
TAMMY 1 Page(s)
202306010885

Bobbie Koepp

Sunset Construction & Excavation

REVISED
7:51 am, Jul 03, 2023

16910 Hamilton Pool Rd.
Austin, TX 78738
www.sunsetconstructionaustin.com

Ph. 512-565-3793
Fax 512-628-7184
sunsetconstjk@gmail.com

Two Year On-Site Sewage Facility (OSSF) Maintenance Agreement

This agreement is entered into by and between **Bedstone LLC** (Client) and **James C. Kuykendall Jr.** (Contractor). By this agreement, Contractor agrees to render services, as described herein, and the Client agrees to fulfill his/her/their responsibilities under this agreement as described herein.

Site Location: The services are to be performed at the property located at:
(Address:) **18735 North IH 35, Schertz, TX 78154**

INSPECTION ITEMS: Items to be inspected/serviced include the "TSS" Samples once a year, aerators, alarms, chlorine supply and disinfection system, drip emitters/spray heads, sludge volume, chlorine residual & periodic pH sampling, timer(s), filters and pumps.

FREQUENCY OF MAINTENANCE INSPECTION: Maintenance inspections will be performed to the Client's aerobic wastewater treatment system three (3) times a year at approximately four (4) month intervals. On each report the Client receives, it will indicate the status of the current inspection and when the next inspection is scheduled to occur.

REPORTS: A report will be generated during each visit with the original submitted to the required regulatory agency, one (1) copy will be sent to the Client, and one (1) copy retained for our records. The report will indicate the date the inspection was performed, Client name(s) and address, inspected items, sampling test results for Chlorine Residual and pH, comments, recommendations, and /or repairs performed, and the status of the inspection.

SAMPLING: A Chlorine Residual sample & pH reading will be conducted during each maintenance inspection visit. Results will be recorded on each report. A Total Suspended Solids "TSS" will be conducted once a year. The test results will be submitted to the required regulatory agency.

REPAIRS: The Client of the aerobic wastewater treatment system is responsible for any costs associated with repair or replacement of system components. Any repairs and/or replacement costs will be discussed with and accepted with the Client prior to any work performed. Any non-scheduled service calls will be responded to within 24 hours after notification from Client. Every effort will be made to resolve problems as quickly as possible. NON-SCHEDULED SERVICE CALLS WILL RESULT IN ADDITIONAL FEES - SEE BELOW.

FEES: The fees for this **Two Year agreement, $2,400.00 (TWO THOUSAND, FOUR HUNDRED & 00/100 DOLLARS)**, only covers the services described herein. This fee does not cover equipment, parts or labor supplied for repairs or charges for unscheduled client-requested trips to the site. Payments for such additional services are due when service is provided or rendered. Payments not received within 30 days from the due date will be subject to a $20.00 late penalty and/or a 1.5% carrying charge, whichever is greater, in addition to reasonable attorney's fees and all costs of collection incurred by Contractor in collection of any unpaid debt(s). By signing this contract, the Client is authorizing the Contractor to remove any parts which were installed but not paid for at the end of 30 days. The Client is still responsible for any labor costs associated with the installation and removal of said parts.

DISPUTE RESOLUTION: This agreement is governed by the laws of the State of Texas without regard to conflicts of laws provisions. Venue for any dispute arising hereunder shall be in Travis County, Texas.

Sunset Construction & Excavation

REVISED
7:52 am, Jul 03, 2023

16910 Hamilton Pool Rd.
Austin, TX 78738
www.sunsetconstructionaustin.com

Ph. 512-565-3793
Fax 512-628-7184
sunsetconstjk@gmail.com

Client's Responsibilities

Please initial each line to indicate your acknowledgement

___ Maintain chlorinator and provide proper chlorine supply, if OSSF is equipped with same.

___ Provide all necessary yard or lawn maintenance and removal of obstacles as needed to allow the OSSF to function properly, and to allow Contractor easy access to all parts of the OSSF.

___ Maintain a current license to operate, and abide by the conditions and limitations of that license and all requirements for on-sewage facilities (OSSF's) from the State and local regulatory agency, as well as, manufacturer's recommendations.

___ Immediately notify Contractor and Agency of any and all problems with, including failures of the OSSF.

___ Upon receiving a written notification of services needed from the Contractor, it becomes the Client's responsibility to contact the Contractor to authorize the service. If the Client chooses to use a different contractor to perform the service, the Client is responsible for ensuring the contractor holds a proper license (Installer II) and is certified by the manufacturer. Also, the Client is responsible for ensuring proper notification is given to the Agency, as required by the State and local Agency rules.

___ Provide the Contractor with water usage records, upon request, for evaluation by the Contractor of the OSSF performance.

___ Clients should allow for samples at both the inlet and outlet to the OSSF to be obtained by the Contractor for the purpose of evaluating the OSSF's performance when requested by the Client. If these samples are sent to the lab for testing, the Client will directly pay the lab for the cost of testing plus pay the Contractor for all man-hours expended in providing this additional service at the rate of $95.00 per hour measured from office to to site, site to lab, and lab to office, otherwise known as portal to portal.

___ Not allow the backwash from water treatment or water conditioning equipment to enter the OSSF.

___ Maintain site drainage to prevent adverse effects on OSSF.

___ Promptly and fully pay Contractor's bills, fees, or invoices as described herein.

___ The owner understands and agrees to have their system pumped out by a licensed waste hauler when the sludge volume reaches 65% in the aerobic tank or when the solids build up in the pump tank warrants pumping. Sunset Construction/James Kuykendall Jr. will provide an annual suspended solids test once per year and evaluate the condition of the pump tank on every inspection visit, advising the need for pumping when it arises.

REVISED
7:52 am, Jul 03, 2023

Sunset Construction & Excavation

16910 Hamilton Pool Rd.
Austin, TX 78738
www.sunsetconstructionaustin.com

Ph. 512-565-3793
Fax 512-628-7184
sunsetconstjk@gmail.com

Acknowledgement of Two Year Maintenance Agreement

Effective Date of License to Operate (~~Date of passing Final Inspection~~) and ending two years thereafter.

Site Address: **18735 North IH 35, Shertz, Texas 78154**

All Parties listed on this agreement must also sign the agreement

Client/Owner Name: **Bedstone, LLC**

Phone# ~~**512-543-1876**~~ 512-632-9828 Email: federico@punctualtx.com

Client/Owner Name: _____

Phone# _____ Email: _____

Billing Address (If different from Site Address):

3736 BEE CAVES RD STE 1243; W LAKE HILLS; 78746

Permit#:_____ Regulatory Agency: **Comal County**

Manufacturer: **Delta**

By signing below you hereby agree to the terms of this agreement. No E-Signature will be accepted.

_____ 03/31/2023
Client/Owner Signature Date

_____ _____
Client/Owner Signature Date

_____ 04/03/23
James C. Kuykendall, Jr. Date
Licensed Operator

Responsible inspecting party is James C. Kuykendall Jr. / Sunset Construction & Excavation
License Numbers: MP0002282 / OS0024698

DELCON
FOUNDED 1997
13508 Flat Top Ranch Road
Austin, Texas 78732
Office/Fax: (512) 583-1397
www.DelconEnvironmental.com

Revised
Efrain Gallegos
11/03/2025 9:56:51 AM

DELCON ENVIRONMENTAL SYSTEMS, LLC

September 11, 2025

Comal County Engineer's Office
195 David Jonas Drive
New Braunfels, Texas 78132
Attn: Ms. Brenda Ritzen, Environmental Health Coordinator

Re: **Permit Number** 118208
18735 North Interstate Highway 35, Schertz, Texas 78154
Lot 1, Block 1, Schertz IH 35 Warehouse (formerly 5.889 acres of land in the R. Martin and J. F. Martin Survey Number 113, Abstract 414)
Comal CAD ID: 78020

Ms. Ritzen,

Thank you for issuing the septic permit for the above referenced project. The development has progressed and a *portion* of the permitted system has been installed and inspected by your office. The full treatment train is in place along with all of drainfield Zone A, and three segments of Zone D. Zones B and C, and the balance of Zone D have not been installed. Buildings 1, 2, 3 and 4 have been constructed and are nearly ready for occupancy, but construction of the remaining buildings has not commenced, and the owner wishes to pause on the construction of these remaining buildings until some tenant revenue is received from the current structures. As a result of this "phased" development, the owner has requested that we pause on installing any more of the system's drainfield. Both the owner and general contractor are concerned that there is not adequate clearance between the drainfield zones and the buildings such that the balance of the drainfield cannot be installed without later sustaining damage from the construction of the subsequent buildings. It appears appropriate to construct the buildings first and the drainfields afterwards to avoid any potential damage. I have been asked by your inspector to present a modified design depicting the currently installed system, and to justify its reduced size with the anticipated occupancy from only the current buildings. Please refer to the following updated design pages that describe a system rated for 400 gallons per day. We are seeking a modified permit and subsequently a *License to Operate* this reduced system. At an appropriate later date the balance of the originally permitted system will be installed.

Please also note the treatment train was installed at an deeper depth than previously anticipated. This was necessary to achieve the required fall through the sewer collection lines. The updated tank cross-section detail page specifies the use of Styrofoam blocks above the tanks to reduce the overall volume and subsequent weight of the backfilled soil.

Please feel free to contact me with any questions or comments.

Respectfully,

Derrick E. Lormand, R.S.
Managing Partner
Delcon Environmental Systems, LLC

DELCON
FOUNDED 1997
13508 Flat Top Ranch Road
Austin, Texas 78732
Office/Fax: (512) 583-1397
www.DelconEnvironmental.com

Revised
Efrain Gallegos
11/03/2025 9:56:58 AM

DELCON ENVIRONMENTAL SYSTEMS, LLC

September 11, 2025

Comal County Engineer's Office
195 David Jonas Drive
New Braunfels, Texas 78132
Attn: Ms. Brenda Ritzen, Environmental Health Coordinator

Re: **Permit Number** 118208
18735 North Interstate Highway 35, Schertz, Texas 78154
Lot 1, Block 1, Schertz IH 35 Warehouse (formerly 5.889 acres of land in the R. Martin and J. F. Martin Survey Number 113, Abstract 414)
Comal CAD ID: 78020

Ms. Ritzen,

The following are revised and modified calculations and design drawings for an aerobic treatment unit with subsurface drip emitter disposal to serve a partially completed office/warehouse development located at the above referenced address. This system will serve the first phase of this development which only contains 6 of the proposed office/warehouse units spread across four buildings. The design assumes an occupancy of one person for approximately every 750 square feet of building space, plus a small allowance for visitor use. This translates to perhaps 6 or 7 occupants per unit. The updated flow rates and wastewater strengths are described in detail on the following pages. It is important to note that no industrial waste will enter this proposed on-site sewage facility. The site/soil evaluation revealed substantial Class IV soils thus the drainfield is sized to achieve a long-term soil loading rate of 0.10 gpd/sf as required for this soil texture. The system has been sized in accordance with Chapter 285 of the TCEQ OSSF Rule, updated June 203, effective September 1, 2023, and the additional criteria of Comal County.

For your reference, I have included a summary of the system components:

- One 2,000-gallon, two-compartment concrete septic tank with effluent filter
- One NuWater brand B-1500 aerobic treatment unit
- Duplex 1/2 horsepower effluent pumps with floats and controls for demand dosing
- One K-Rain Hydrotek indexing valve with two outlet zones
- 2,540 linear feet of subsurface drip emitter tubing developing 5,080 square feet of net application area

Please note the dosing volume is set for the smaller zone - currently Zone D. Zone A, although fully installed, will be "under-dosed" due to the variation in size between these two zones. This is necessary as the maximum soil application rate of 0.10 gpd/sf cannot be exceeded.

Please feel free to contact me with any questions or comments.

Respectfully,

Derrick E. Lormand, R.S.
Managing Partner
Delcon Environmental Systems, LLC

STATE OF TEXAS
DERRICK E. LORMAND
3441
REGISTERED
PROFESSIONAL SANITARIAN

Revised
Efrain Gallegos
11/03/2025 10:50:07 AM

Site Evaluation Form

Address: 18735 North IH 35, Schertz, Texas
Subdivision: Schertz IH 35 Warehouse Section: Lot: 1 Blk: 1
Or, Survey: R. Martin and J. F. Martin Survey Number 113 Abstract: 414 Acres: 5.889

Slope: Flat (Under 2%) [ ] Slight (2% to 15%) [X] Severe (Over 15%) [ ]

Site Drainage: Poor [ ] Adequate [ ] Good [X] Other [ ]

Outside 100-Year Flood Plain [X] In 100 Year Flood Plain [ ] In 100 Year Flood Plain/Floodway [ ]

Water Supply: Public [X] Community [ ] Private [ ]
Other wells within 100 feet of property lines: Yes [ ] No [ ] (If yes, shown on site plan)

Soil Evaluation

Profile Hole Number 1

Depth	Texture (USDA)	Description
0" – 5"	Class IV	Gray to brown silty clay with surface grass roots
5" - 30"	Class IV	Dark gray silty clay
@ 30"	Termination	

Profile Hole Number 2

Depth	Texture (USDA)	Description
0" – 5"	Class IV	Gray to brown silty clay with surface grass roots
5" - 30"	Class IV	Dark gray silty clay
@ 30"	Termination	

Indication of Seasonal Water Table: YES [ ] NO [X]
If yes, at what depth: None observed
Property Located Within Edwards Aquifer Recharge Zone: YES [ ] NO [X]
Indication of Recharge Features within 150 feet: YES [ ] NO [X]
Is Soil Suitable for a Standard System YES [ ] NO [X]
Application Rate: 0.10 Gal/SF*Day

I, Derrick E. Lormand, a Registered Professional Sanitarian and Licensed Site Evaluator, conducted the site evaluation at the referenced location. I certify that these results are true and correct for the property evaluated.

Date of Site Visit: December 14, 2022

STATE OF TEXAS
DERRICK E. LORMAND
5441
REGISTERED
PROFESSIONAL SANITARIAN

Derrick E. Lormand, R.S., OS# 0026727

Revised
Efrain Gallegos
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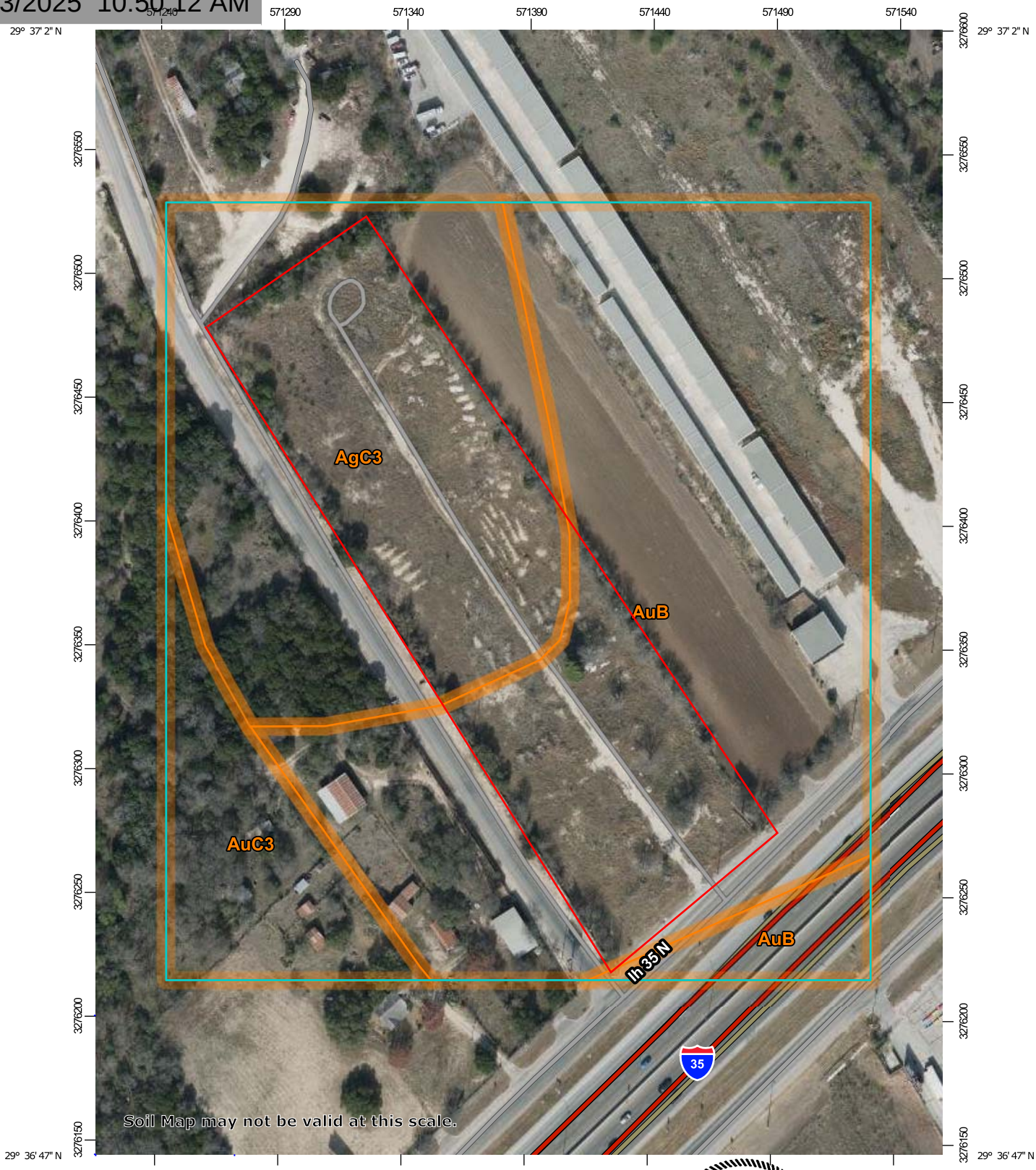
Soil Map—Comal and Hays Counties, Texas, and Guadalupe County, Texas



Map Scale: 1:2,220 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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

STATE OF TEXAS
DERRICK E. LORMAND
5441
REGISTERED PROFESSIONAL SANITARIAN

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AgC3	Altoga silty clay, 2 to 5 percent slopes, eroded	7.5	33.7%
AuB	Austin-Castephen complex, 1 to 3 percent slopes	11.9	53.6%
AuC3	Austin-Castephen complex, 2 to 5 percent slopes, eroded	2.1	9.4%
Subtotals for Soil Survey Area		**21.6**	**96.8%**
Totals for Area of Interest		**22.3**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AuB	Austin silty clay, 1 to 3 percent slopes	0.7	3.2%
Subtotals for Soil Survey Area		**0.7**	**3.2%**
Totals for Area of Interest		**22.3**	**100.0%**

Comal and Hays Counties, Texas

AgC3—Altoga silty clay, 2 to 5 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2ssgr
Elevation: 450 to 830 feet
Mean annual precipitation: 36 to 37 inches
Mean annual air temperature: 66 to 68 degrees F
Frost-free period: 221 to 278 days
Farmland classification: Not prime farmland

Map Unit Composition

Altoga, eroded, and similar soils: 92 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Altoga, Eroded

Setting

Landform: Stream terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous clayey alluvium derived from mudstone

Typical profile

Ap - 0 to 7 inches: silty clay
Bk - 7 to 36 inches: silty clay
BCk - 36 to 60 inches: silty clay

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 75 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R086AY007TX - Southern Clay Loam

Hydric soil rating: No

Minor Components

Heiden, eroded

Percent of map unit: 8 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Microfeatures of landform position: Linear gilgai
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R086AY008TX - Northern Eroded Blackland
Hydric soil rating: No

Data Source Information

Soil Survey Area: Comal and Hays Counties, Texas
Survey Area Data: Version 19, Aug 24, 2022

Soil Survey Area: Guadalupe County, Texas
Survey Area Data: Version 18, Aug 24, 2022

Comal and Hays Counties, Texas

AuB—Austin-Castephen complex, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: dq26
Elevation: 500 to 1,200 feet
Mean annual precipitation: 29 to 40 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 220 to 250 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Austin and similar soils: 60 percent
Castephen and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Austin

Setting

Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Residuum weathered from chalk

Typical profile

H1 - 0 to 11 inches: silty clay
H2 - 11 to 24 inches: silty clay
H3 - 24 to 34 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R086AY007TX - Southern Clay Loam

Hydric soil rating: No

Description of Castephen

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from austin chalk formation

Typical profile

H1 - 0 to 18 inches: silty clay loam
H2 - 18 to 20 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 8 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: D
Ecological site: R086AY002TX - Southern Chalky Ridge
Hydric soil rating: No

Minor Components

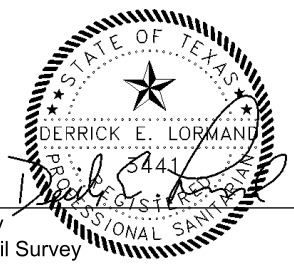
Unnamed

Percent of map unit: 10 percent
Hydric soil rating: No

Data Source Information

Soil Survey Area: Comal and Hays Counties, Texas
Survey Area Data: Version 19, Aug 24, 2022

Soil Survey Area: Guadalupe County, Texas
Survey Area Data: Version 18, Aug 24, 2022



Design Calculations

9/11/2025

Revised
Efrain Gallegos
11/03/2025 11:04:28 AM

Design Basis

Per The Texas Commission on Environmental Quality's (TCEQ) Health and Safety Code Chapter 366, On-Site Sewage Disposal Systems, September 11, 2007; and On-Site Sewage Facilities, Title 30, TAC Chapter 285, Revised June 2023, EffectiveSeptember 1, 2023

Flow Rate Determination

Proposed Office/Warehouse development

Anticipated Wastewater Flow Rate = 10 gpd/occupant

Per Chapter 285 Table III for office environment

Sunday	20 people =	200	gallons
Monday	40 people =	400	gallons
Tuesday	40 people =	400	gallons
Wednesday	40 people =	400	gallons
Thursday	40 people =	400	gallons
Friday	40 people =	400	gallons
Saturday	30 people =	300	gallons
	Weakly Total =	2,500	gallons
	Divide by 7 for Daily Average =	357	gallons
	Add 10% safety factor =	393	gallons
	Design Flow Rate, Q =	**400**	**gpd**

Wastewater Strength Determination

Anticipated BOD5 =	**299**	**mg/L**
Total Pounds BOD =	1.00	lbs/day

*Determined from the equation: Total Pounds = Q * BOD5 * 8.34 / 1,000,000*

Treatment Determination

Per TCEQ OSSF Title 30 TAC Chapter 285, Table II

The minimum required septic tank volume is derived from the maximum peak daily flow (surge flow) during the week.

Peak daily surge flow indicated in the weekly flow chart above = 400 gallons

Required Septic Treatment Volume = 1,250 gallons *Assuming "residential strength" influent < 300 mg/L*

Proposed Septic Tank Size =	**2,000**	**gallons**
Effective Retention Time =	5.0	days

Pasive septic tanks are assumed to treat (break down) wastewater only to a maximum amount of 30%, provided the treatment volume allows for a full 3 days of retention (treatment) time. The proposed tank size exceeds this 3-day value which should encourage that this treatment target is reached. Also, the tank format presented provides multiple chambers, which should offer increased capture of waste particles. Based on this information, the following conservative treatment determinatino is provided:

Anticipated Influent Strength = 299 mg/L minus 30% reakdown = 209 mg/L

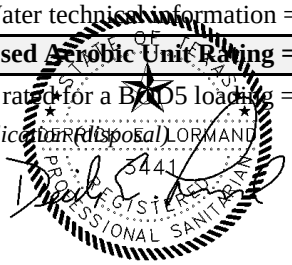
Total Pounds BOD = 0.70 lbs/day

*Again, determined from the equation: Total Pounds = Q * BOD5 * 8.34 / 1,000,000*

Minimum ATU size per NuWater technical information = 500 gpd

Proposed Aerobic Unit Rating =	**1,500**	**gpd**
This unit is rated for a BOD5 loading =	4.5	lbs/day

Note: Wastewater effluent must be treated to a level of 140 mg/L prior to soil application (disposal)



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11/03/2025 11:04:34 AM

Drainfield Calculation

Long-Term Soil Loading Rate, Ra = 0.1 gpd/sf

Note: Refer to Site Evaluation page for maximum long-term soil loading rate determination

Minimum Required Application Area = *Derived from the equation Q / Ra =* 4,000 sf

Per the Netafim design literature, emitters are assumed to provide 4 square feet of application area each

Thus, Required Number of Emitters =	1000	Emitters =	2,000	lf =	4,000	sf
Proposed Number of Emitters =	1,040	Emitters =	2,080	lf =	4,160	sf

Effective Application Area =	**4,160**	**SF**
Effective Soil Loading Rate =	0.096	gpd/sf

Effluent Pump Performance Requirements - Sourced from Zone D

Flow Rate per Emitter = 0.01 Gallons Per Minute (gpm)

Note: Refer to emitter tubing specifications for this flow rate determination

Flow Rate of Emitters =	5.2	gpm

Note: It is recommended to include an additional 1.6 gallons per minute for each emitter tubing connecting to a return line in order to achieve an appropriate flushing (scouring) velocity

Flow Rate per Return Line Connection =	1.6	gpm
Number of Return Line Connections =	3	Connections
Flow Rate for Connections =	4.8	gpm
System Required Flow Rate =	**10**	**GPM**

Total Dynamic Head Calculation - Sourced from Zone D

Total Dynamic Head (TDH) is the sum of all friction head losses, elevation head loss, and the minimum operating head for the system. Note the friction head loss is calculated from the pump to the drainfield (supply pipe) and through the header pipe. The calculation also includes the losses though the footer pipe, and through the return line back to the pump tank/chamber. This value includes a 20% safety factor to account for joints, couplings, elbows, unions, etc.

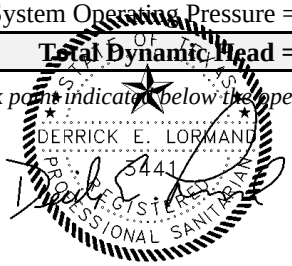
Total System Head = Friction Head + Elevation Head + Operating Head

	Length (ft)	Diameter (in)	Flow (gpm)	Head Loss (feet)
Supply Pipe =	328	1.25	10	4.9
Header Pipe =	65	1.25	6.6	0.4
Header Pipe =	66	1.25	3.3	0.2
	Friction Losses In Supply Side =			5.5 feet
Footer Pipe =	59	1	1.6	0.1
Footer Pipe =	46	1	3.2	0.3
Return Pipe =	348	1	4.6	3.6
	Friction Loss in Return Side =			4.0 feet

Total Pipe Friction Loss =	9.5	feet
Safety Factor - Increase By 20% =	11.4	feet
Elevation Head Loss =	9	feet
Filter Head Loss =	8	feet
Indexing Valve Head Loss =	8	feet
System Operating Pressure =	70	feet

System's Calculated Work Point =	**10.0**	**GPM with a**	**Total Dynamic Head =**	**106.4**	**FEET**

Refer to the specified pump's performance curve with the system's calculated work point indicated below the operating curve



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8:37 am, Jun 30, 2023

STA-RITE®

4" multi-stage submersible pump

SSPMA Certified Pump

C SA US

The ST.E.P Plus™ D Series 4" submersible pump in 10, 20 and 30 GPM models dominate with superior "DRAW-DOWN" capability.

The ST.E.P Plus D Series 4" submersible pump dominates with reduced AMP DRAW.

The ST.E.P Plus D Series 4" submersible pump dominates with COOLER and QUIETER operation.

APPLICATIONS

- **Clean and Gray Water…** for residential, commercial, and agricultural use.

SPECIFICATIONS

Motor – Available in 115 or 230 volt versions. Dry-wound, double ball-bearing, double-seal and thermal over-load protected, UL and CSA approved.
Shell – Stainless steel (300 grade)
Discharge – 1-1/4" Fiberglass-reinforced thermoplastic
Discharge Bearing – Nylatron®
Impellers – Acetel
Diffusers – Polycarbonate
Suction Caps – Polycarbonate with stainless steel wear ring
Thrust Pads – Proprietary spec.
Shaft and Coupling – Stainless steel 300 grade
Intake – Fiberglass-reinforced thermoplastic
Intake Screen – Stainless steel
Jacketed Cord – 600 Volt "SJOW" jacketed 10' leads, 2-wire with ground
Agency Listing – CSA

Nylatron® is a registered trademark of Polymer Corp. SignaSeal™ and ST.E.P. Plus™ are trademarks of Pentair Water.

In order to provide the best products possible, specifications are subject to change.

ORDERING INFORMATION

Catalog Number	HP	Max. Load Amps	Volts	Phase/ Cycles	Cord Length	Pallet Quantity	Weight (Lbs.)
10DOM05221	1/2	5.5	230	1/60	10'	80	16
10DOM05121	1/2	11.0	115	1/60	10'	80	16
20DOM05221	1/2	4.6	230	1/60	10'	80	16
20DOM05121	1/2	9.5	115	1/60	10'	80	16
30DOM05221	1/2	4.6	230	1/60	10'	80	16
30DOM05121	1/2	9.5	115	1/60	10'	80	16
20DOM05221+1	1/2	5.3	230	1/60	10'	80	16
20DOM05121+1	1/2	10.6	115	1/60	10'	80	16

ST.E.P. *Plus*™ D SERIES

FEATURES

ST.E.P. Plus™ DOMINATES with a…

Patented Stage System – The proven SignaSeal™ staging system utilizes a patented ceramic wear surface. When incorporated with STA-RITE's "true" independent floating impellers, dominates with 1st-in-class performance, superior sand handling, and a thrust management staging system with industry exclusive "dry-run" capabilities.
Superior "draw-down" capability – The ST.E.P. Plus™ Dominates in this class with the lowest draw-down of 4-1/2" (a standard 4" NEMA submersible only draws-down to 13-1/2").
Reduced amp draw – The ST.E.P. Plus™ Dominates in this class with less energy consumption – over 25% less amp draw (9.5 amps vs. 12.7 amps, 115 volt) than a 4" NEMA submersible, reducing operating costs and extending the service life of float switch contacts.
Cooler and quieter operation – The ST.E.P. Plus™ Dominates by using the pumped liquid to cool the motor as it passes over the motor. The water passing over the motor dampens the motor noise, eliminating expensive "flow-inducer sleeves" required when using a standard 4" NEMA submersible.
Impellers – Precision molded for perfect balance… ultra smooth for the highest performance and efficiency. Allows for .080" solids.
Shaft – Positive drive, hexagonal 7/16" – 300-grade stainless steel shaft offers generous impeller drive surfaces.
Shaft bearing – Exclusive self-lubricating Nylatron® bearing resists wear surface from sand and abrasives.
Shell – Heavy-walled, corrosion resistant 300-grade stainless steel.

STA-RITE

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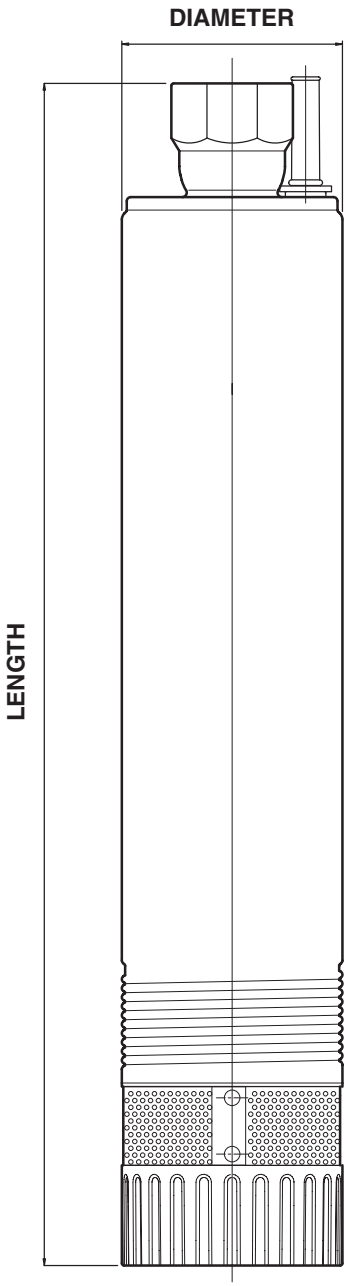
8:37 am, Jun 30, 2023

4" multi-stage submersible pump

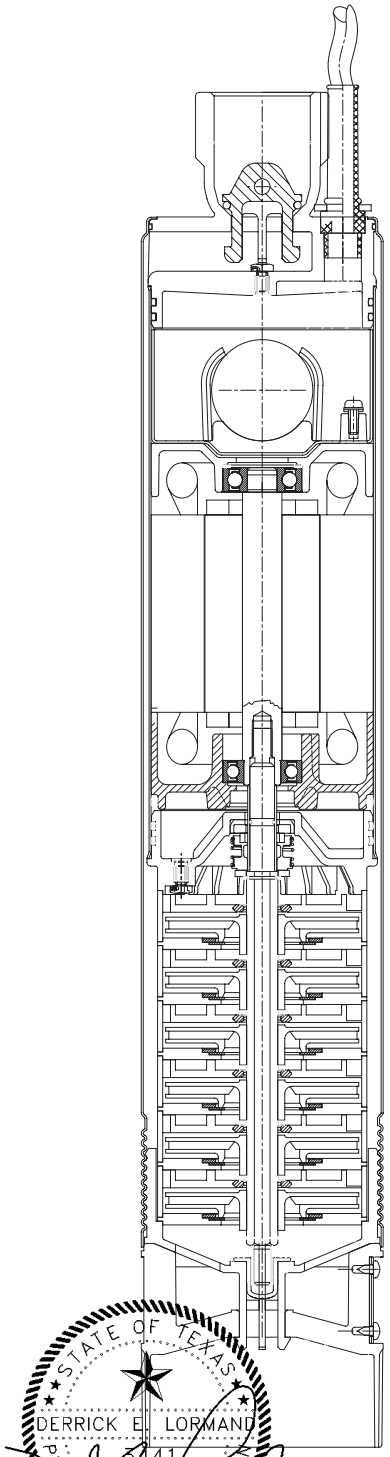
OUTLINE DIMENSIONS

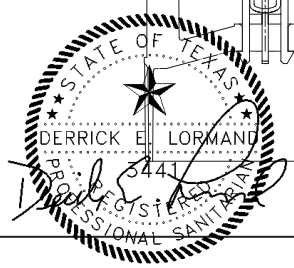


GPM	Length	Diameter
10	21.6" (549 mm)	3.86" (98 mm)
20	20.8" (529 mm)	3.86" (98 mm)
30	20.6" (523 mm)	3.86" (98 mm)
20+1	22.3" (567 mm)	3.86" (98 mm)

Dimensions are for estimating purposes only.

CROSS-SECTION





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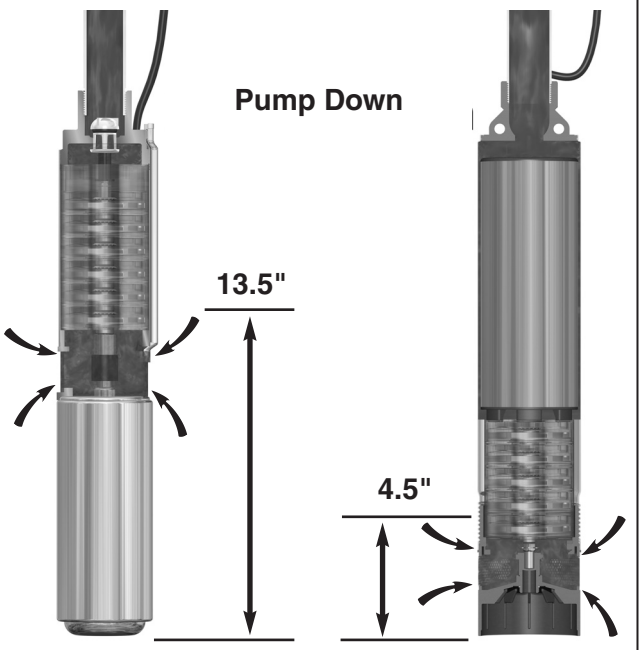
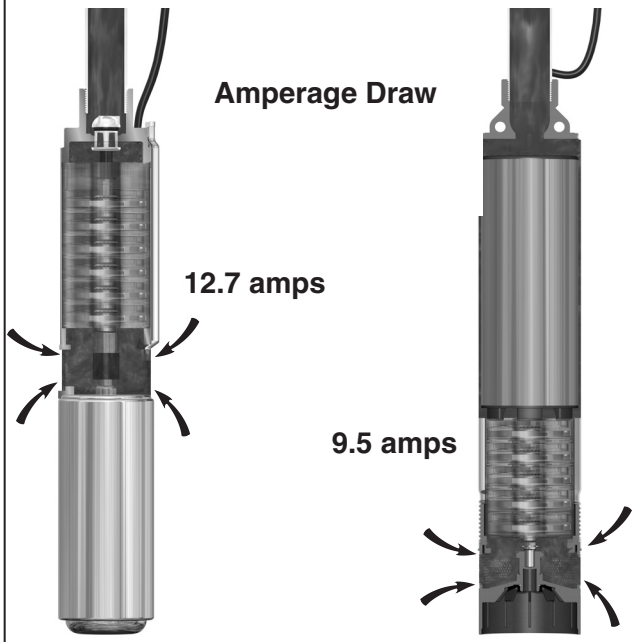
STA-RITE

4" multi-stage submersible pump

INCREASED DRAW-DOWN

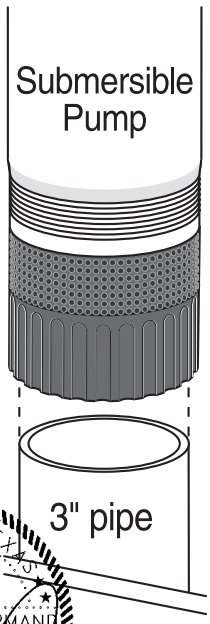


REDUCED AMP-DRAW

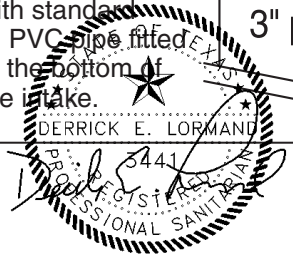


ELIMINATES FLOW-INDUCER

ADJUSTABLE DEPTH SETTING



Pump depth can be adjusted with standard 3" PVC pipe fitted to the bottom of the intake.



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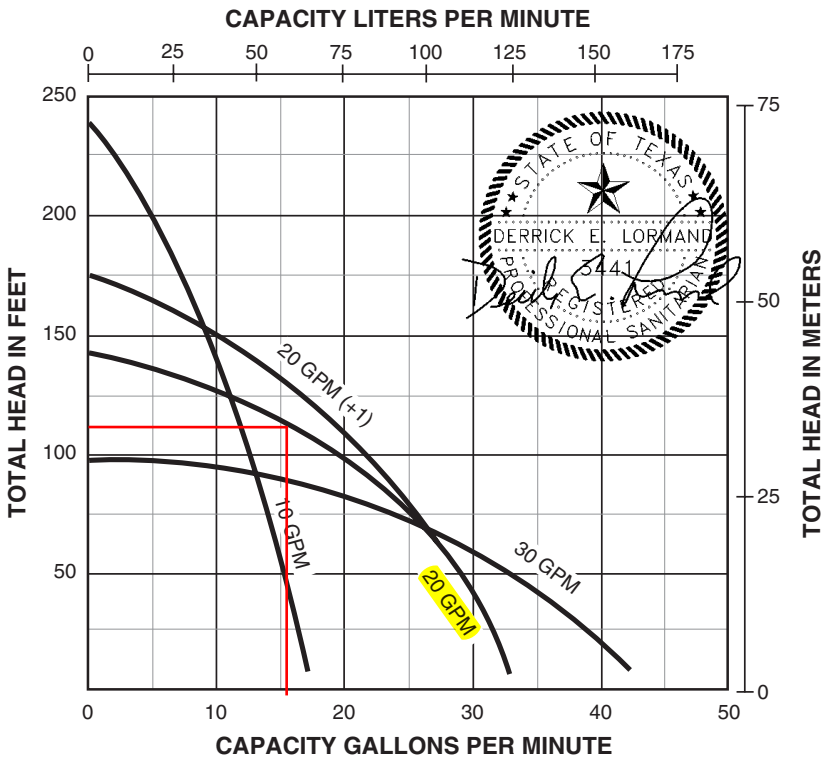
STA-RITE

4" multi-stage submersible pump

PUMP PERFORMANCE



Drainfield Pumps

PUMP PERFORMANCE *(Capacity in Gallons per Minute)*

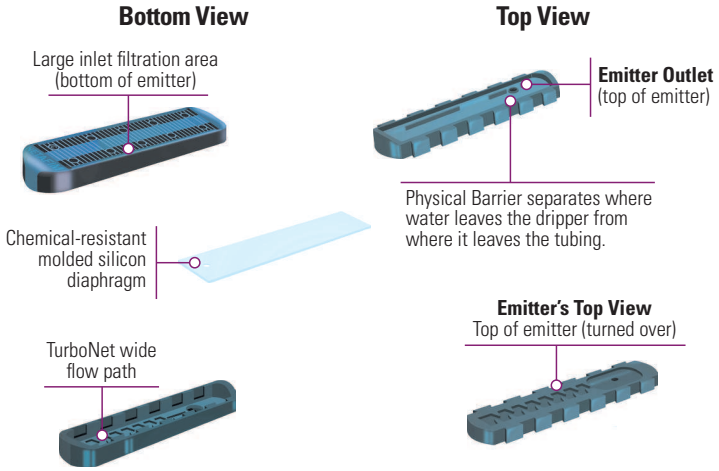
Pump Model	Flow Rate (GPM)	PSI											
		0	10	20	30	40	50	60	70	80	90	100	110
10DOM05221	10			15.0	13.7	12.7	11.5	10.2	8.4	6.5	4.3	1.0	
10DOM05121	10			15.0	13.7	12.7	11.5	10.2	8.4	6.5	4.3	1.0	
20DOM05221	20			30.0	26.0	21.5	14.2	4.4					
20DOM05121	20			30.0	26.0	21.5	14.2	4.4					
30DOM05221	30		38.5	33.3	25.8	16							
30DOM05121	30		38.5	33.3	25.8	16							
20DOM05221+1	20 + 1			30	27.5	24	20	13.5	6				
20DOM05121+1	20 + 1			30	27.5	24	20	13.5	6				

PUMP PERFORMANCE *(Capacity in Liters per Minute)*

Pump Model	Flow Rate (LPM)	Bar											
		0	.69	1.38	2.07	2.76	3.45	4.13	4.82	5.51	6.20	6.89	7.58
10DOM05221	37.85			56.8	51.9	48.1	43.5	38.6	31.8	24.6	16.3	3.8	
10DOM05121	37.85			56.8	51.9	48.1	43.5	38.6	31.8	24.6	16.3	3.8	
20DOM05221	75.7			113.6	98.4	81.4	53.7	16.7					
20DOM05121	75.7			113.6	98.4	81.4	53.7	16.7					
30DOM05221	113.55		145.7	126.0	97.7	60.6							
30DOM05121	113.55		145.7	126.0	97.7	60.6							
20DOM05221+1	75.7 + 1			113.4	103.9	90.7	75.6	51.0	22.6				
20DOM05121+1	75.7 + 1			113.4	103.9	90.7	75.6	51.0	22.6				

REVISED
8:37 am, Jun 30, 2023

EXPLODED VIEW OF BIOLINE EMITTER



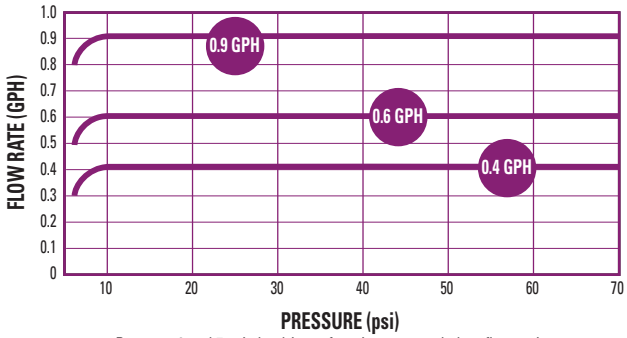
BIOLINE EMITTER OPERATION

Bioline® dripperline emitters are pressure compensating - delivering the water uniformly into the soil for further treatment or for reuse by the landscape. These unique emitters allow the tubing to be installed on flat topography or steep slopes.

Bioline emitters are protected against microbial slime. Each emitter is impregnated with an antimicrobial agent to resist biological build-up.

Netafim emitters are continuously self-cleaning during operation, not just at the beginning and end of a cycle. The result is dependable, clog-free operation, year after year.

DRIPPER FLOW RATE VS. PRESSURE



Between 0 and 7 psi, the dripper functions as a turbulent flow emitter, ensuring that the nominal design flow is not exceeded at system start-up.

FLOW PER 100 FEET

DRIPPER SPACING	0.4 GPH DRIPPER		0.6 GPH DRIPPER		0.9 GPH DRIPPER	
	GPH	GPM	GPH	GPM	GPH	GPM
12"	40.0	0.67	61.0	1.02	92.0	1.53
18"	26.7	0.44	41.0	0.68	61.0	1.02
24"	20.0	0.34	31.0	0.51	46.0	0.77

SPECIFYING INFORMATION

SAMPLE MODEL NUMBER

A Bioline Dripperline = **08WRAM**

08WRAM.6-24 V
(A) (1) (2) (3)

1 DRIPPER FLOW RATE
0.4 GPH = **.4**
0.6 GPH = **.6**
0.9 GPH = **.9**

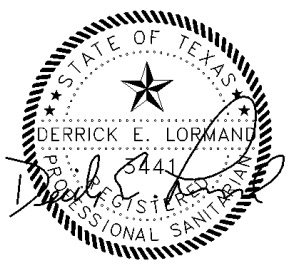
2 DRIPPER SPACING
12" = **12**
18" = **18**
24" = **24**

3 COIL LENGTH
500' = **V500**
1,000' = **V**

BLANK Tubing Model Number: 250' = 08WRAM-250

ORDERING INFORMATION

FLOW RATE	DRIPPER SPACING	COIL LENGTH	MODEL NUMBER
0.4 GPH	12"	1,000' 500'	08WRAM.4-12V 08WRAM.4-12V500
0.4 GPH	18"	1,000' 500'	08WRAM.4-18V 08WRAM.4-18V500
0.4 GPH	24"	1,000' 500'	08WRAM.4-24V 08WRAM.4-24V500
0.6 GPH	12"	1,000' 500'	08WRAM.6-12V 08WRAM.6-12V500
0.6 GPH	18"	1,000' 500'	08WRAM.6-18V 08WRAM.6-18V500
0.6 GPH	24"	1,000' 500'	08WRAM.6-24V 08WRAM.6-24V500
0.9 GPH	12"	1,000' 500'	08WRAM.9-12V 08WRAM.9-12V500
0.9 GPH	18"	1,000' 500'	08WRAM.9-18V 08WRAM.9-18V500
0.9 GPH	24"	1,000' 500'	08WRAM.9-24V 08WRAM.9-24V500
Blank Tubing 17mm		250'	08WRAM-250



PMR-MF[Regulators

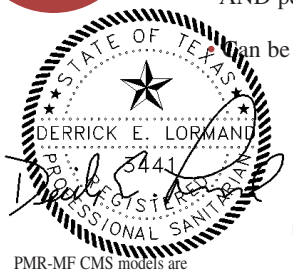
REVISED
8:37 am, Jun 30, 2023

NEW 1" BSP MODEL AVAILABLE!

The medium flow Pressure-Master Regulator® is ideal for installations requiring mid-range flows [2 - 20 gpm] including solid-set, drip or other low-volume irrigation systems as well as center pivot and other mechanical-move irrigation systems.

FEATURES:

- Maintains a constant preset outlet pressure while handling varying inlet pressures
- Very low hysteresis and friction losses
- Maximum flow path resists plugging
- 100% water-tested for accuracy (no adjustments ever needed)
- Two-year warranty on materials, workmanship AND performance
- Can be installed above or below ground.



PMR-MF CMS models are designed specifically for mining applications where pH solutions are less than or equal to 4.0
PMR-MF EFF models (lavender top) are designed specifically for wastewater applications.

CAUTION: Always install downstream from all shut off valves.

PMR-MF - Pressure-Master Regulator® Medium-Flow

Model Number	Preset Oper. Press. psi	[bar]	Maximum Inlet Press. psi	[bar]	Flow Range gpm	[L/hr]	Inlet Sizes	Outlet Sizes
PMR-6 MF	6	0.41	100	6.90	4 - 16	907.2 -3628.8	3/4" F NPT, 1" F NPT, 1"M NPT, 1"F BSP	3/4" F NPT, 1" F NPT, 1"F BSP
PMR-10 MF	10	0.69	120	8.28	4 - 16	907.2 -3628.8	3/4" F NPT, 1" F NPT, 1"M NPT, 1"F BSP	3/4" F NPT, 1" F NPT, 1"F BSP
PMR-12 MF	12	0.83	135	9.31	2-20	453.6-4536.0	3/4" F NPT, 1" FNPT, 1"M NPT, 1"F BSP	3/4" F NPT, 1" F NPT, 1"F BSP
PMR-15 MF	15	1.04	150	10.35	2-20	453.6-4536.0	3/4" F NPT, 1" F NPT, 1"M NPT, 1"F BSP	3/4" F NPT, 1" F NPT, 1"F BSP
PMR-20 MF	20	1.38	150	10.35	2-20	453.6-4536.0	3/4" F NPT, 1" FNPT, 1"M NPT, 1"F BSP	3/4" F NPT, 1" F NPT, 1"F BSP
PMR-25 MF	25	1.73	150	10.35	2-20	453.6-4536.0	3/4" F NPT, 1" F NPT, 1"M NPT, 1"F BSP	3/4" F NPT, 1" F NPT, 1"F BSP
PMR-30 MF	30	2.07	150	10.35	2-20	453.6-4536.0	3/4" F NPT, 1" F NPT, 1"M NPT, 1"F BSP	3/4" F NPT, 1" F NPT, 1"F BSP
PMR-35 MF	35	2.42	150	10.35	2-20	453.6-4536.0	3/4" F NPT, 1" F NPT, 1"M NPT, 1"F BSP	3/4" F NPT, 1" F NPT, 1"F BSP
PMR-40 MF	40	2.76	150	10.35	2-20	453.6-4536.0	3/4" F NPT, 1" F NPT, 1"M NPT, 1"F BSP	3/4" F NPT, 1" F NPT, 1"F BSP
PMR-50 MF	50	3.45	150	10.35	2-20	453.6-4536.0	3/4" F NPT, 1" F NPT, 1"M NPT, 1"F BSP	3/4" F NPT, 1" F NPT, 1"F BSP
PMR-60 MF	60	4.14	150	10.35	2-20	453.6-4536.0	3/4" F NPT, 1" F NPT, 1"M NPT, 1"F BSP	3/4" F NPT, 1" F NPT, 1"F BSP

[1] Regulated pressure is 1/2 psi (0.03 bar) higher with increasing inlet pressure than with decreasing inlet pressure

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8:37 am, Jun 30, 2023

POLYLOK™ Inc.
Innovations in Precast, Drainage & Wastewater Products
Zabel® A Division of Polylok Inc.

PL-525 Effluent Filter

PL-525 Filter

The PL-525 Filter is rated for 10,000 GPD (gallons per day) making it one of the largest filters in its class. It has 525 linear feet of 1/16″ filtration slots. Like the Polylok PL-122, the Polylok PL-525 has an automatic shut-off ball installed with every filter. When the filter is removed for cleaning, the ball will float up and temporarily shut off the system so the effluent won't leave the tank.

Features:

- Rated for 10,000 GPD (gallons per day).
- 525 linear feet of 1/16″ filtration.
- Accepts 4″ and 6″ SCHD 40 pipe.
- Built in gas deflector.
- Automatic shut-off ball when filter is removed.
- Alarm accessibility.
- Accepts PVC extension handle.

PL-525 Installation:

Ideal for residential and commercial waste flows up to 10,000 gallons per day (GPD).

1. Locate the outlet of the septic tank.
2. Remove the tank cover and pump tank if necessary.
3. Glue the filter housing to the 4″ or 6″ outlet pipe. If the filter is not centered under the access opening use a Polylok Extend & Lok or piece of pipe to center filter.
4. Insert the PL-525 filter into its housing.
5. Replace and secure the septic tank cover.

PL-525 Maintenance:

The PL-525 Effluent Filters will operate efficiently for several years under normal conditions before requiring cleaning. It is recommended that the filter be cleaned every time the tank is pumped, or at least every three years. If the installed filter contains an optional alarm, the owner will be notified by an alarm when the filter needs servicing. Servicing should be done by a certified septic tank pumper or installer.

1. Locate the outlet of the septic tank.
2. Remove tank cover and pump tank if necessary.
3. Do not use plumbing when filter is removed.
4. Pull PL-525 cartridge out of the housing.
5. Hose off filter over the septic tank. Make sure all solids fall back into septic tank.
6. Insert the filter cartridge back into the housing making sure the filter is properly aligned and completely inserted.
7. Replace and secure septic tank cover.

Outdoor SmartFilter® Alarm
Polylok, Zabel & Best filters accept the SmartFilter® switch and alarm.

Extend & Lok™
Easily installs into existing tanks.

Polylok, Inc. 3 Fairfield Blvd. Wallingford, CT 06492 Toll Free: 877.765.9565 Fax: 203.284.8514 www.polylok.com

TUF-TITE Installation & Maintenance: EF Series

Installation:

Tuf-Tite Effluent Filters are designed to extend the life of your drainfield by preventing solids from leaving the septic tank. The filter fits into either a 4" or 6" Tee Baffle which in many cases is already attached to the outlet pipe. If a Tee Baffle is not installed, install as shown in Figure 2, allowing enough clearance from the end of the tank to permit easy filter access.

1. Insert the filter into the Tee Baffle with arrow on the top of the filter pointing toward the outlet pipe (as shown in Figure 1 and Figure 2).
2. Push down firmly until top of the filter seats into hub of the Baffle Tee.

Maintenance:

Tuf-Tite Effluent Filters will, under normal conditions, operate efficiently for several years or more before requiring removal and cleaning. It is suggested that the unit be cleaned every time the tank is pumped or at least every three years.

1. Do not use plumbing during filter cleaning.
2. Pull the filter straight out of the Tee.
3. Hose filter off, making sure that all solids fall back into the septic tank, not back into the Tee Baffle.
4. Replace filter as in installation instructions above.

For replacement parts and warranty information, contact Tuf-Tite, Inc. 800-382-7009

EF-4 EF-6 NSF ANSI/NSF Standard 46 **TB-4 TB-6** NSF ANSI/NSF Standard 46 COMPONENT

Figure 1:
Arrow on top of filter unit must point in the direction of the outlet pipe. Top rim of filter will seat in hub of Tee.

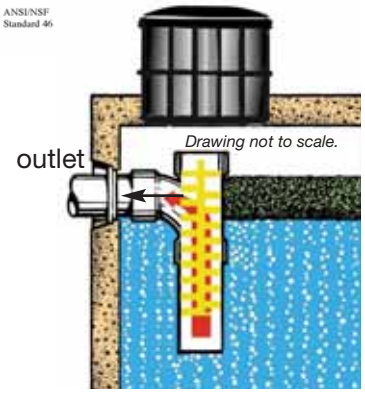
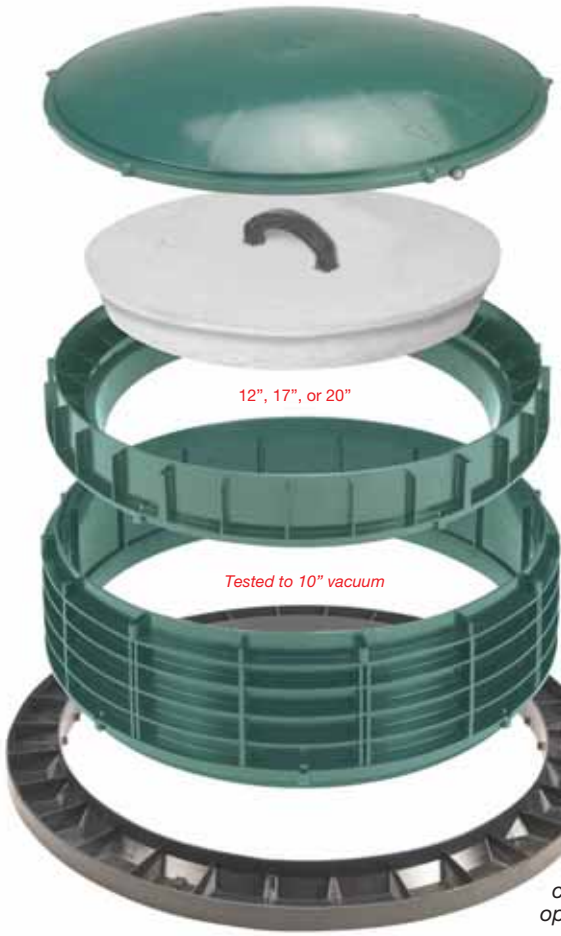


Figure 2:
Diagram of installed filter and Tee Baffle. Note: drawing is not to scale.

The Tuf-Tite® Riser System:



Riser Lid
with Molded-in gasket. Available in 12", 16", 20" and 24" diameters.

Concrete Lid w/handle

Safety Pan™
Safety Pan™ available in 16", 20" and 24" diameters.

Riser
For septic tanks. Stackable in 6" increments. Available in 12", 16", 20" and 24" diameters.

Tank Adapter Ring
For mounting riser flush to top of tank when casting-in is not an option.

12, 16, 20, & 24" Dia.

Pat.Nos.: 5,617,679 5,852,90; other pats. pending.

TUF-TITE®
Drainage and Septic Products

Tuf-Tite® Inc.
500 Capital Drive
Lake Zurich, Illinois 60047

Water-tight Lids and Risers by Tuf-Tite®

REVISED
8:37 am, Jun 30, 2023

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8:38 am, Jun 30, 2023

delta
treatment systems

DUPLEX BLOWERS
DUPLEX EQ PUMPS
SEWER TREATMENT PLANT
CONTROL PANEL

PROJECT SUBMITTAL

PLEASE REVIEW THOROUGHLY. THESE DRAWINGS ARE OUR INTERPRETATION OF THE PROJECT'S REQUIREMENTS. ANY CHANGES AFTER FABRICATION WILL BE DONE AT EXTRA COST.

FEBRUARY 22, 2023

Delta Treatment Systems
9125 Comar Drive
Walker, LA 70785
(225) 665-6162 Fax (800) 219-9183

CP-6972

REVISED
8:38 am, Jun 30, 2023

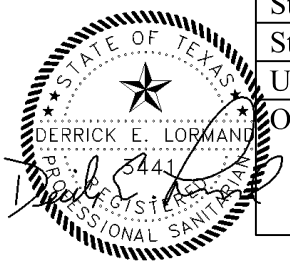
SOLD TO:
TAG: Duplex Blowers Duplex EQ Pumps
Sewer Treatment Plant Control Panel

SHIP TO:
-
-

SPECIAL NOTES:
panel includes 4-50' weighted Opti-Float Minis

Panel Type	2+2
Voltage	120/240
Phase/HZ	1/60
No. Motors	4
HP	1.5, 1/2
FLA	7.3,7.3est.
Pump Manufacturer	Blower/EQ
Type of Pump	FPZ, -
Catalog Number	K04, -
Capacitors	No
Control Voltage	120
Control Power Transformer VA=	No
Enclosure NEMA Rating	4X
Enclosure Material	Fiberglass
Enclosure Size	30x24x12
Inner Swing Panel	Yes
Conrol Sensor	Varies
UL508A Labeling	No
UL698A Labeling	No

Alarm Light - Panel Door Mount	
Alarm Light - Panel Top Mount	X
Alarm Light - Remote	
Alarm Test Switch	
Alarm Silence Switch	X
Alarm Acknowledge Switch	
Alternator with Lead Pump Selector Switch	X
Audible Alarm - Bell	
Audible Alarm - Horn	
Audible Alarm - Piezo	X
COX™ CAMO™ System	
Cycle Counters	
Economy Version	
Elapsed Time Meter	
Flasher	
Green Run Lights vs. Red	
Ground Fault Receptacle	
High Temp Lights	
High Temp Blower Shutdown - Auto Reset	X
High Temp Pump Shutdown - Manual Reset	
Intrinsically Safe Relays Pts.	
Lightning Arrestor	
Main Disconnect without Door Mt. Handle	X
Opti-Float® Level Dectector Pts. 4	X
Panel Heater / Thermostat W=	
Phase Monitor	
Pole, Box, Seal	
Seal Fail Lights	
Seal Fail Relay - Fixed	
Seal Fail Relay - Adjustable	
Seal Fail Shutdown	
Starters - IEC	X
Starters - NEMA	
Unpowered Alarm Circuits #3	X
OTHERS: blower overload indication	



Drawing Title
PANEL DESCRIPTION

DATE: 02/22/23

-						
REFERENCE DRAWING		NO.	REVISION - LOCATION	ECN	DATE	BY

S/N	Sales Engineer	Application Engineer	DRAWN	APPROVED	
	A.D.	A.D.	BY: NCR	BY:	DATE:

Project Title
SEWER TREATMENT PLANT CONTROL PANEL

delta treatment systems

9125 Comar Drive
Walker, LA
70785

Ph. (225) 665-6162
Fax (225) 219-9183

PURCHASE ORDER NUMBER

DRAWING NUMBER
CP-6972

SHEET NUMBER
1

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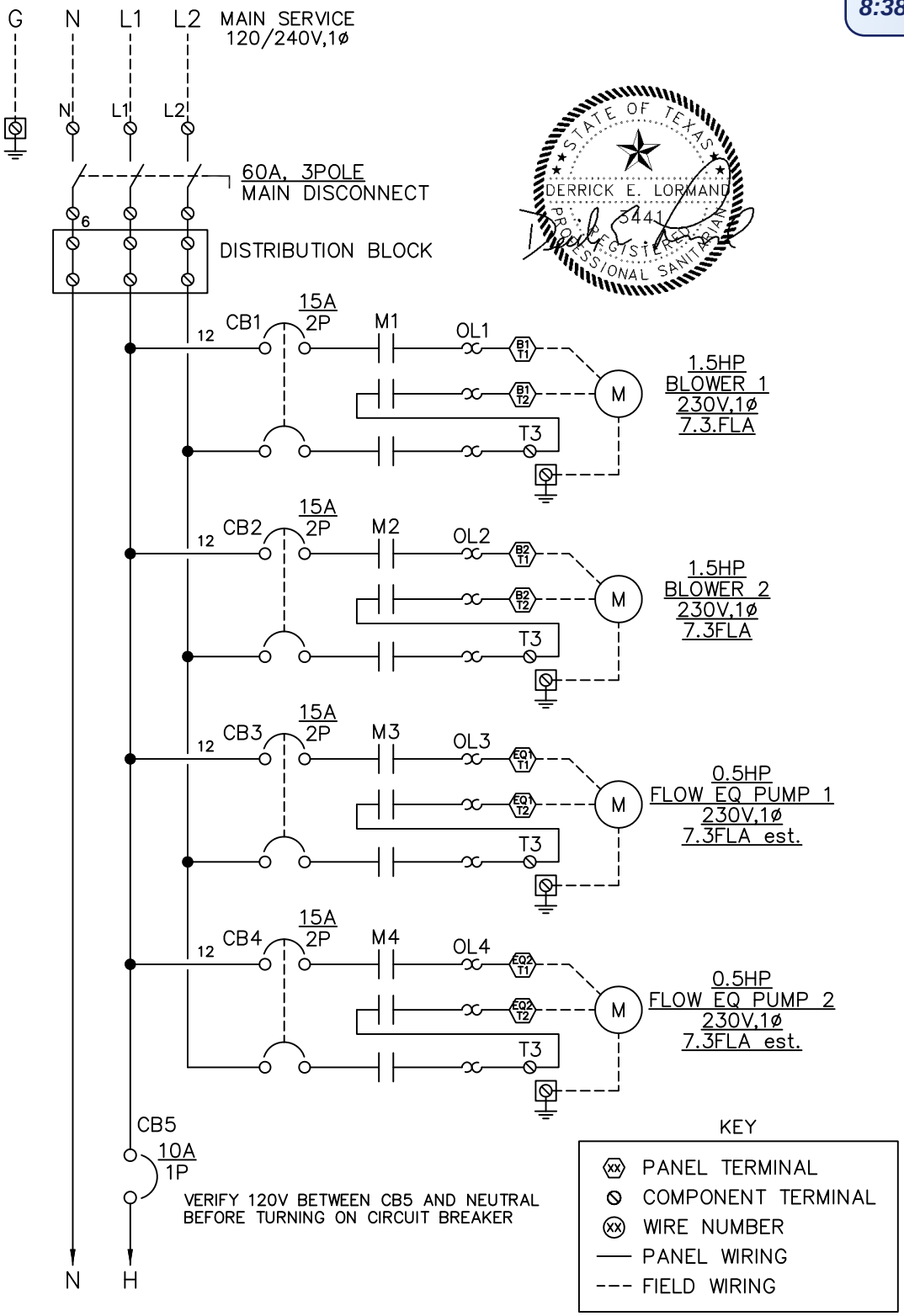

STATE OF TEXAS
DERRICK E. LORMAND
3441
REGISTERED PROFESSIONAL SANITARIAN

	Drawing Title: POWER DIAGRAM							
		-						
DATE: 02/22/23		REFERENCE DRAWING		NO.	REVISION - LOCATION	ECN	DATE	BY
		S/N	Sales Engineer: A.D.	Application Engineer: A.D.	DRAWN: BY: NCR	APPROVED BY:	APPROVED DATE:	
	Project Title: SEWER TREATMENT PLANT CONTROL PANEL					PURCHASE ORDER NUMBER		
						DRAWING NUMBER: CP-6972		
						SHEET NUMBER: 2		

delta treatment systems
9125 Comar Drive
Walker, LA
70785
Ph. (225) 665-6162
Fax (225) 219-9183

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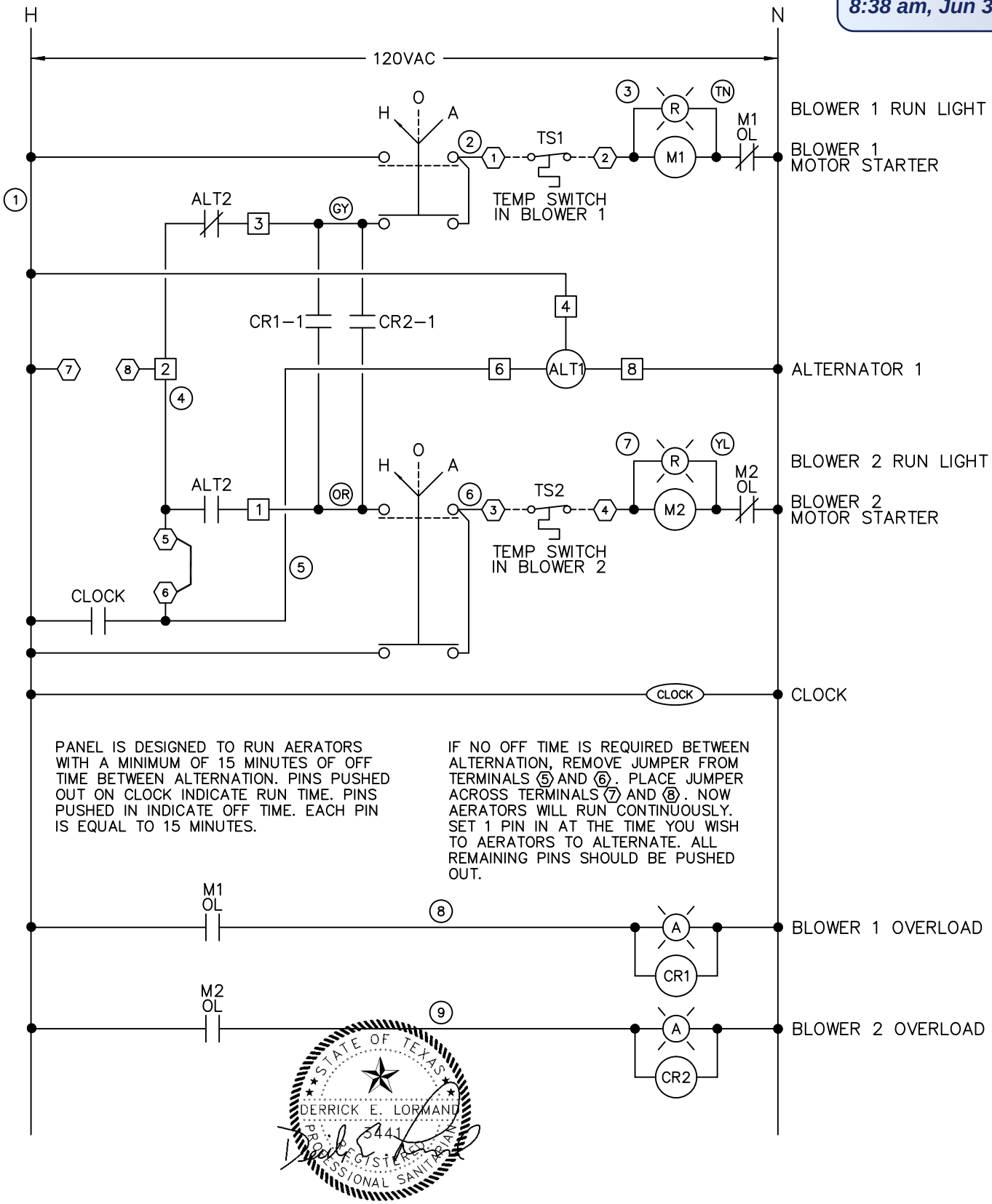

PANEL IS DESIGNED TO RUN AERATORS WITH A MINIMUM OF 15 MINUTES OF OFF TIME BETWEEN ALTERNATION. PINS PUSHED OUT ON CLOCK INDICATE RUN TIME. PINS PUSHED IN INDICATE OFF TIME. EACH PIN IS EQUAL TO 15 MINUTES.

IF NO OFF TIME IS REQUIRED BETWEEN ALTERNATION, REMOVE JUMPER FROM TERMINALS ⑤ AND ⑥. PLACE JUMPER ACROSS TERMINALS ⑦ AND ⑧. NOW AERATORS WILL RUN CONTINUOUSLY. SET 1 PIN IN AT THE TIME YOU WISH TO AERATORS TO ALTERNATE. ALL REMAINING PINS SHOULD BE PUSHED OUT.

Drawing Title: BLOWER CONTROL DIAGRAM							
	-						
	REFERENCE DRAWING	NO.	REVISION - LOCATION		ECN	DATE	BY
DATE: 02/22/23	S/N	Sales Engineer: A.D.	Application Engineer: A.D.	DRAWN: BY: NCR	APPROVED BY:	DATE:	
Project Title: SEWER TREATMENT PLANT CONTROL PANEL	delta treatment systems	9125 Comar Drive, Walker, LA 70785; Ph. (225) 665-6162, Fax (225) 219-9183			PURCHASE ORDER NUMBER		
					DRAWING NUMBER: CP-6972		
					SHEET NUMBER: 3		

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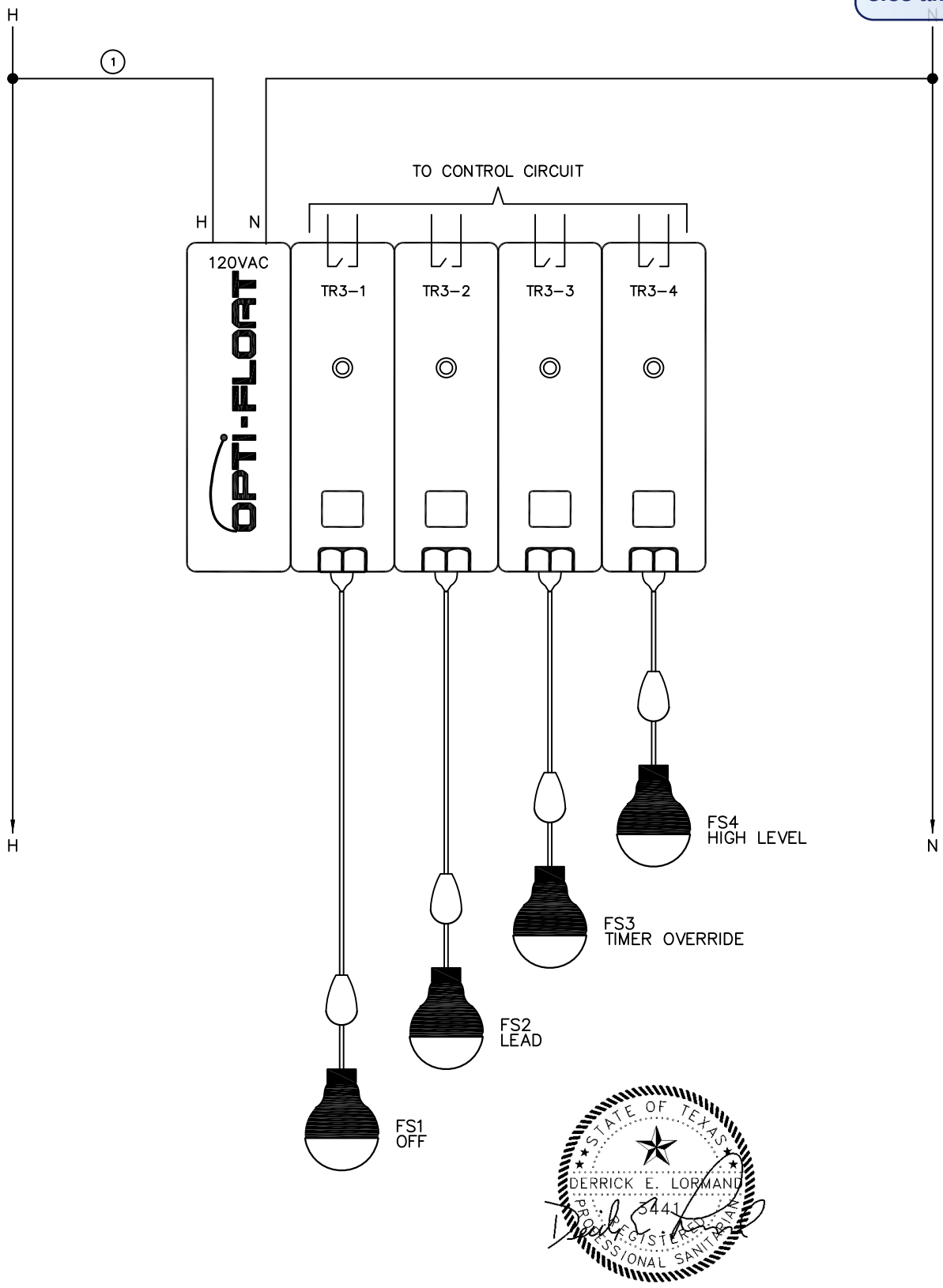

	Drawing Title: FLOW EQ. PUMPS CONTROL DIAGRAM							
		-						
DATE: 02/22/23		REFERENCE DRAWING		NO.	REVISION - LOCATION	ECN	DATE	BY
		S/N	Sales Engineer: A.D.	Application Engineer: A.D.	DRAWN: BY: NCR	APPROVED BY:	APPROVED DATE:	
	Project Title: SEWER TREATMENT PLANT CONTROL PANEL		delta treatment systems		9125 Comar Drive Walker, LA 70785 Ph. (225) 665-6162 Fax (225) 219-9183	PURCHASE ORDER NUMBER		
						DRAWING NUMBER: CP-6972		
						SHEET NUMBER: 4		

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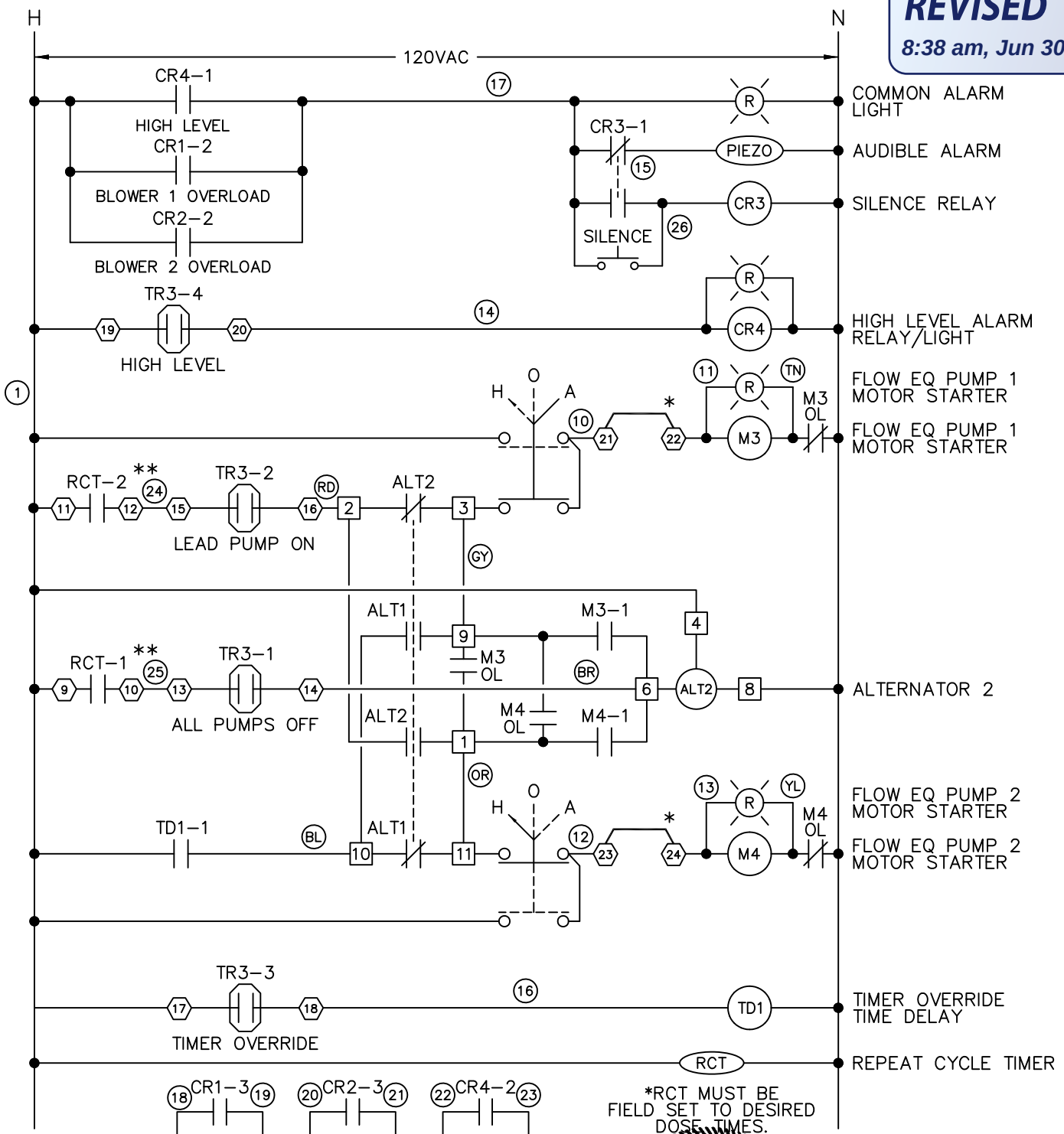
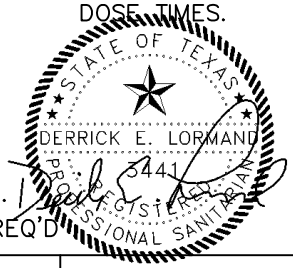
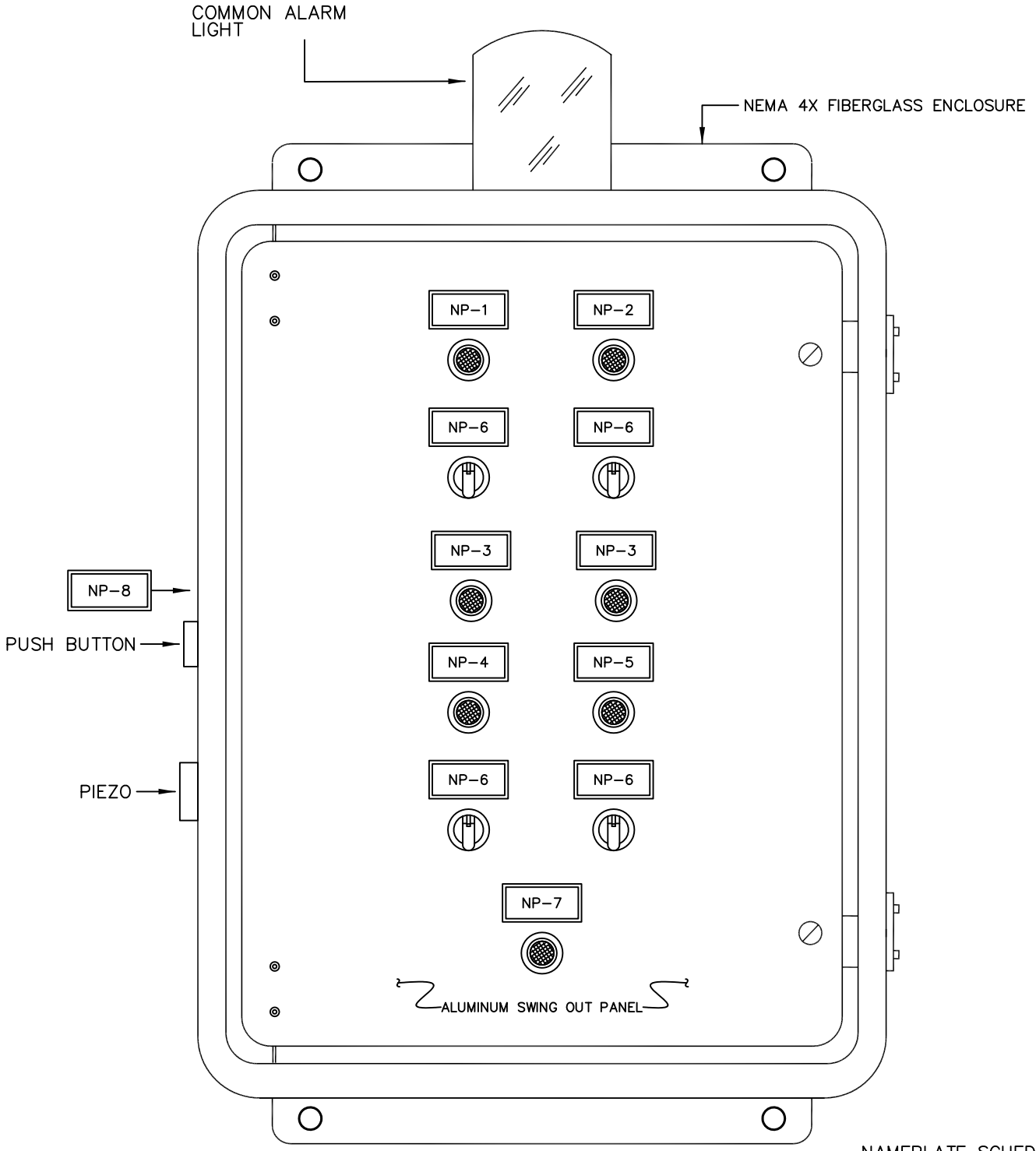




* REMOVE JUMPERS AND INSTALL LOCKOUT DEVICES IF REQUIRED.
** ADD JUMPERS TO (9) & (10) ALSO (11) & (12) IF TIME DOSE IS NOT REQ'D

	Drawing Title: FLOW EQ. PUMPS CONTROL DIAGRAM							
		-						
DATE: 02/22/23		REFERENCE DRAWING	NO.	REVISION - LOCATION		ECN	DATE	BY
		S/N	Sales Engineer: A.D.	Application Engineer: A.D.	DRAWN: BY: NCR		APPROVED BY:	DATE:
	Project Title: SEWER TREATMENT PLANT CONTROL PANEL		delta treatment systems		9125 Comar Drive, Walker, LA 70785, Ph. (225) 665-6162, Fax (225) 219-9183		PURCHASE ORDER NUMBER	
							DRAWING NUMBER: CP-6972	
							SHEET NUMBER: 5	



VIEW OF INNER SWING PANEL

NAMEPLATE SCHEDULE

NP-1	BLOWER 1/RUN
NP-2	BLOWER 2/RUN
NP-3	OVERLOAD
NP-4	EQ. PUMP 1/RUN
NP-5	EQ. PUMP 2/RUN
NP-6	HAND-OFF-AUTO
NP-7	HIGH LEVEL
NP-8	SILENCE

NOTE:
SEWER GASSES WILL DESTROY COMPONENTS IN PANEL. PROPER SEALS MUST BE INSTALLED EXTERNAL TO THE PANEL TO PREVENT ENTRY OF GASSES.

STATE OF TEXAS
DERRICK E. LORMAND
5441
REGISTERED PROFESSIONAL SANITARIAN

Drawing Title: ENCLOSURE						
-						
REFERENCE DRAWING		NO.	REVISION - LOCATION		ECN	DATE	BY
DATE: 02/22/23	S/N	Sales Engineer A.D.	Application Engineer A.D.	DRAWN BY: NCR	APPROVED BY:	DATE:
Project Title: SEWER TREATMENT PLANT CONTROL PANEL	delta treatment systems	9125 Comar Drive Walker, LA 70785 Ph. (225) 665-6162 Fax (225) 219-9183			PURCHASE ORDER NUMBER	
					DRAWING NUMBER: CP-6972	
					SHEET NUMBER: 6	

REVISED
8:38 am, Jun 30, 2023

BILL OF MATERIALS

ITEM	QTY.	MANUFACTURER	PART NUMBER	DESCRIPTION
1	1	ATTABOX	M3024HPL	ENCLOSURE
2	1	CMW	CAMOM3024HPL	BACKPLATE/SWING PANEL
3	1	ABB	OT63F3	MAIN DISCONNECT
4	1	ERIFLEX	UDJ-160A	DISTRIBUTION BLOCK
5	4	SQUARE D	QOU215	CB1-4
6	4	ABB	AF16-30-10-13	MOTOR STARTER 3,4
7	4	ABB	TF42-10	O.L. RELAY 3,4(7.6-10A)
8	1	SQUARE D	QOU110	CB5
9	4	ABB	C3SS110B-20	H.O.A. SWITCH
10	5	ABB	CL513R	RED PILOT LIGHT
11	2	DIVERSIFIED	ARB-120-ADA	ALTERNATOR 1,2
12	1	OMRON	H3CR-F8N	REPEAT CYCLE TIMER
13	1	GRASSLIN	FM/1 STUZH-120V	CLOCK
14	2	ABB	CL513Y	AMBER PILOT LIGHT
15	4	FINDER	55.34.8.120.0050	CR1-4
16	4	COX RESEARCH	MINI-F50/WT2	50' OPTI-FLOAT MINI
17	4	COX RESEARCH	MINI-TR3	TRANSCEIVER
18	1	COX RESEARCH	MINI-PS2	POWER SUPPLY
19	1	FINDER	85.04.0.125.0000	TD1
20	5	FINDER	94.04	CR/TD BASE
21	1	INGRAM	PW120AB	PIEZO
22	1	ABB	CP110B-20	PUSH BUTTON
23	1	CONERY	R40-XLS	ALARM LIGHT
24				
25				
26				
27				
28				
29				
30				

	Drawing Title							
	BILL OF MATERIALS							
		-						
		REFERENCE DRAWING		NO.	REVISION - LOCATION	ECN	DATE	BY
DATE: 02/22/23		S/N	Sales Engineer A.D.	Application Engineer A.D.	DRAWN BY: NCR	APPROVED BY:	DATE:	
	Project Title							
	SEWER TREATMENT PLANT CONTROL PANEL							

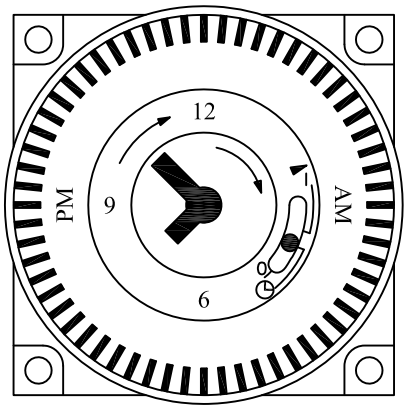
delta treatment systems
9125 Comar Drive
Walker, LA
70785
Ph. (225) 665-6162
Fax (225) 219-9183

PURCHASE ORDER NUMBER

DRAWING NUMBER CP-6972

SHEET NUMBER 7

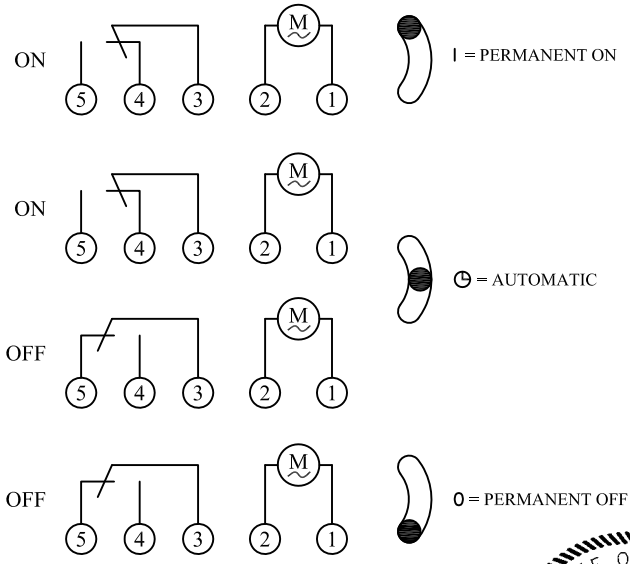
REVISED
8:38 am, Jun 30, 2023



"OFF" POSITION - TRIPPERS PUSHED INWARD
"ON" POSITION - TRIPPERS PUSHED OUTWARD

3 - WAY MANUAL OVERRIDE SWITCH

I = PERMANENT ON
◷ = AUTOMATIC
0 = PERMANENT OFF



TIME SETTING

TURN THE PROGRAM DIAL GRADUALLY CLOCKWISE UNTIL THE DAY OF THE WEEK (7-DAY TIMER) AND TIME OF DAY ON THE OUTER DIAL IS ALIGNED WITH THE TRIANGLE MARKER ON THE INNER DIAL (TWO O'CLOCK POSITION.) FOR TO-THE-MINUTE SETTING TURN THE MINUTE HAND CLOCKWISE TO THE EXACT TIME OF DAY.

EXAMPLE FOR 7-DAY PROGRAM DIAL. MONDAY 10:30AM. TURN PROGRAM DIAL OR MINUTE HAND CLOCKWISE UNTIL MONDAY 10:30AM. IS ALIGNED WITH THE TRIANGLE ON THE INNER DIAL. THE HOUR AND MINUTE HAND WILL SHOW EXACTLY 10:30.

EXAMPLE FOR 24-HOUR PROGRAM DIAL. MONDAY 10:30AM. TURN MINUTE HAND CLOCKWISE UNTIL 10:30AM. IS ALIGNED WITH TRIANGLE ON THE INNER DIAL. THE HOUR AND MINUTE HAND WILL SHOW EXACTLY 10:30.

PROGRAMMING

THE WEEKLY PROGRAM DIAL REFLECTS THE SEVEN DAYS OF THE WEEK AND AM / PM IMPRINTS FOR EACH DAY. THE 24-HOUR DIAL HAS QUARTER - HOUR DIVISIONS AND AM / PM INDICATIONS.

THE TIME SWITCH IS PROGRAMMED BY PUSHING THE CAPTIVE TRIPPERS TO THE OUTER RING POSITION FOR THE ENTIRE PERIOD THAT THE LOAD IS TO BE TURNED "ON" I.E. FIFTEEN MINUTES FOR EACH TRIPPER ON THE TWENTY-FOUR DIAL AND TWO HOURS FOR EACH TRIPPER ON THE SEVEN DAY DIAL. WHEN THE TRIPPER IS PUSHED TO THE INSIDE THE SWITCH IS IN THE "OFF" POSITION.

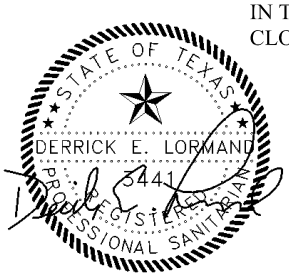
HAND WILL SHOW EXACTLY 10:30.

AUTOMATIC MODE

IN ORDER TO OPERATE THE TIME SWITCH MODULE IN THE AUTOMATIC MODE THE MANUAL SWITCH MUST BE IN THE CENTER POSITION (AUTOMATIC) - SEE DIAGRAM ABOVE.

MANUAL MODE

WITH THE MANUAL SWITCH SELECTOR LEVER THE SELECTED PROGRAMS CAN BE OVERRIDEN. IN THE LOWER POSITION MARKED O, TERMINALS 3 AND 5 ARE CLOSED - PERMANENT OFF. IN THE UPPER POSITION MARKED L, TERMINALS 3 AND 4 ARE CLOSED - PERMANENT ON (SEE DIAGRAM ABOVE.)



	Drawing Title							
	CLOCK INSTRUCTIONS							
		-						
		REFERENCE DRAWING	NO.	REVISION - LOCATION		ECN	DATE	BY
DATE: 02/22/23		S/N / Sales Engineer A.D.	Application Engineer A.D.	DRAWN BY: NCR		APPROVED BY:	DATE:	
	Project Title					PURCHASE ORDER NUMBER		
	SEWER TREATMENT PLANT CONTROL PANEL					DRAWING NUMBER		CP-6972
						SHEET NUMBER		8

delta treatment systems
9125 Comar Drive
Walker, LA
70785
Ph. (225) 665-6162
Fax (225) 219-9183

REVISED
8:38 am, Jun 30, 2023

HOW TO SET THE REPEAT CYCLE TIMER

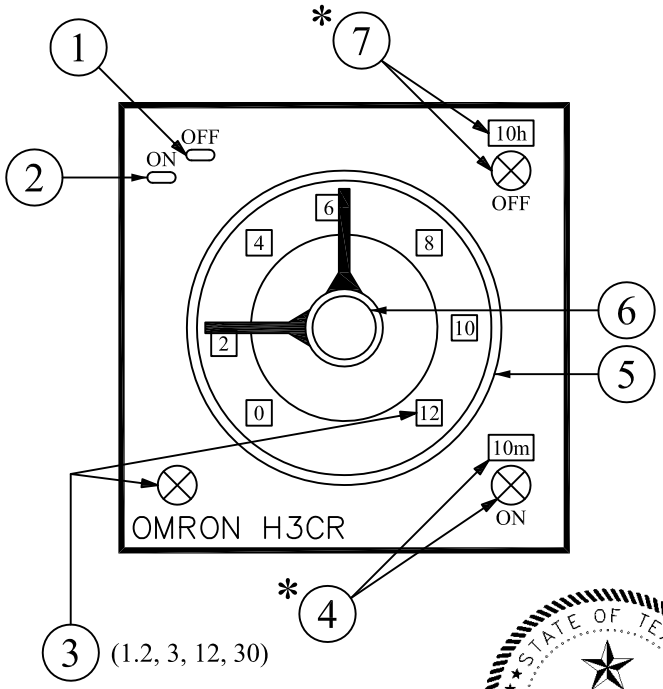
EXAMPLES OF SETTINGS

	Selector			Dial		Time On	Time Off
	3	4 (On)	7 (Off)	Orange (On)	Green (Off)		
*	1.2	10m	10h	.7	.2	7min	2hours
	1.2	10m	10h	1.2	1.2	12min	12hours
	3.0	10m	hrs	2.0	2.0	20min	2hours
	3.0	10m	hrs	3.0	3.0	30min	3hours

* = Factory Settings

Time On = 4(On) Setting x Orange Setting
Time Off = 7(Off) Setting x Green Setting

Factory Setting:
Time On = 10m x 0.7 = 7 Minutes
Time Off = 10h x 0.2 = 2 Hours



* H3CR-F8
(10s, 10m, hrs, 10h)

1. OFF Indicator (Green)
2. ON Indicator (Orange)
3. Range Time Selector
4. ON Time Unit Selector
5. Setting dial for OFF (Green pointer)
6. Setting dial for ON (Orange pointer)
7. OFF Time Unit Selector

Note: If pointer is turned counterclockwise until overranged, instantaneous output will be set.

STATE OF TEXAS
DERRICK E. LORMAND
3441
REGISTERED PROFESSIONAL SANITARIAN

	Drawing Title							
	RCT INSTRUCTIONS							
		-						
		REFERENCE DRAWING	NO.	REVISION - LOCATION		ECN	DATE	BY
DATE: 02/22/23		S/N	Sales Engineer A.D.	Application Engineer A.D.	DRAWN BY: NCR		APPROVED BY:	DATE:
	Project Title						PURCHASE ORDER NUMBER	
	SEWER TREATMENT PLANT CONTROL PANEL						DRAWING NUMBER	CP-6972
							SHEET NUMBER	9

delta treatment systems
9125 Comar Drive
Walker, LA
70785
Ph. (225) 665-6162
Fax (225) 219-9183

REVISED
8:38 am, Jun 30, 2023

NETAFIM™
GROW MORE WITH LESS

WATER METERS

THE MOST RELIABLE AND ACCURATE WATER METERS

MEASUREMENT IS THE KEY TO GOOD, EFFECTIVE WATER MANAGEMENT

It is a fact that all crops are affected if irrigation is not consistent and accurate. The use of water meters ensures growers are able to measure and effectively manage the watering of their crops. Netafim Water Meters provide the confidence and assurance that the correct amount of water and fertilizer (nutrients) are being delivered to the crop maximizing yields and reducing energy costs.

- Measuring your irrigation water with a Water Meter is a more accurate way to deliver water to a crop.
- Water Meters monitor system performance and record total water applied.
- Water Meters ensure verification of water received versus water pumped or purchased.
- Provide accurate water measurement if required by private or governmental agency.

NETAFIM FAMILY OF WATER METERS

OCTAVE ULTRASONIC WATER METER
(CAST IRON BODY)

SADDLE METER
(STAINLESS STEEL BODY)

'IRT' WATER METER
(CAST IRON BODY)

'WST' WATER METERS
(CAST IRON BODY)

'WMR' WATER METER
(COPPER ALLOY BODY)

HYDROMETER
(CAST IRON BODY)

'M' WATER METER
(COPPER ALLOY BODY)

'M' WATER METER
(PLASTIC BODY)

FERTILIZER METER
(PVC BODY)

FERTILIZER METER
(PLASTIC BODY)

APPLICATION & INSTALLATION CONSIDERATIONS

REVISED
8:38 am, Jun 30, 2023

Determining the appropriate water meter for your application involves several requirements: Water Quality, Flow Range and Straight Pipe Installation Requirement. The following information will help with the selection of the right water meter for your site requirements.

WATER QUALITY

The quality of irrigation water is an important consideration when choosing the right water meter for your system. Netafim has a full line of water meters for accurate measuring in good or poor water conditions.

GOOD WATER CONDITIONS

- Water with minimal organic materials
- Well water with minimal sand

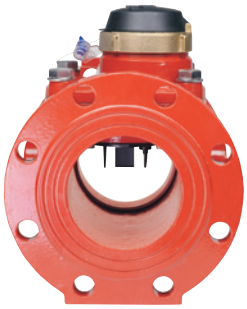
A water meter with a full diameter impeller is recommended for good water conditions.

POOR WATER CONDITIONS

- Water with moderate organic materials
- Well water with sand

A water meter with a paddle wheel is recommended for poor water conditions. The water is measured with a paddle wheel located at the top of the water passage providing a free water passage eliminating clogging from debris. Paddle wheel water meters can also be used in good water conditions. However, water meters should always be installed downstream of a filter.

FULL DIAMETER IMPELLER
(SIDE VIEW)



PADDLE WHEEL
(SIDE VIEW)

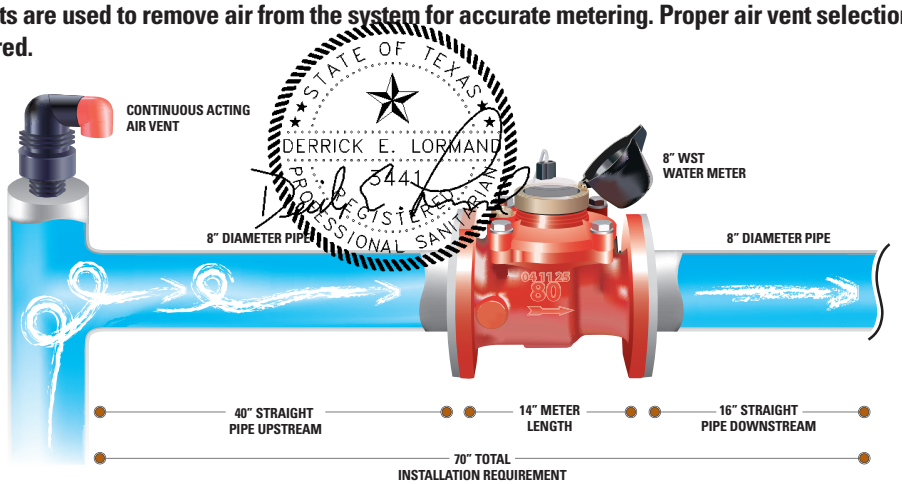
FLOW RANGE

Water meter functionality and accuracy is dependent on minimum and maximum flow ranges. Netafim water meters accurately measure water from a minimum of 0.9 GPM up to a maximum of 5,500 GPM.

STRAIGHT PIPE INSTALLATION REQUIREMENT

When water flows through a pipe, any transition through a fitting, elbow or change in pipe size causes turbulence in the water. In order to eliminate water turbulence, some water meters require straight pipe before and after the water meter. Straight pipe installation refers to the length of straight pipe needed before (upstream of the water meter) and after (downstream of the water meter). When the straight pipe installation requirement refers to D (diameter), this is the size of the water meter.

Continuous Acting Air Vents are used to remove air from the system for accurate metering. Proper air vent selection and placement within the system is required.



CONFIGURING STRAIGHT PIPE INSTALLATION EXAMPLE:

Water Meter:	8" WST
Upstream:	5 x 8" diameter meter = 40" (5 x D) 40" of straight pipe required upstream of the meter
Downstream:	2 x 8" diameter meter = 16" (2 x D) 16" of straight pipe required downstream of the meter
Meter Length:	14"
Total:	70" total installation requirement

REVISED
8:39 am, Jun 30, 2023

WATER METER SELECTION

OCTAVE ULTRASONIC WATER METERS
STRAIGHT PIPE REQUIREMENT: 2 D X 2 D

SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
2"	0.25 GPM	250 GPM	16" TOTAL
3"	1 GPM	500 GPM	21" TOTAL
4"	1.5 GPM	1,000 GPM	25" TOTAL
6"	3 GPM	2,000 GPM	36" TOTAL
8"	5 GPM	3,500 GPM	46" TOTAL
10"	14 GPM	5,500 GPM	68" TOTAL
12"	14 GPM	5,500 GPM	68" TOTAL

HYDROMETERS
STRAIGHT PIPE REQUIREMENT: 0 D X 0 D

SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
1.5"	4.4 GPM	55 GPM	6 15/16" TOTAL
2"	20 GPM	95 GPM	8 11/16" TOTAL
3"	53 GPM	220 GPM	11 1/4" TOTAL
4"	79 GPM	380 GPM	14 13/16" TOTAL
6"	198 GPM	860 GPM	9 11/16" TOTAL
8"	357 GPM	1,500 GPM	23 9/16" TOTAL

SADDLE METERS
STRAIGHT PIPE REQUIREMENT: 10 D X 5 D

SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
6"	88 GPM	1,805 GPM	101 3/4" TOTAL
8"	132 GPM	3,212 GPM	132 5/8" TOTAL
10"	176 GPM	6,160 GPM	162 5/8" TOTAL
12"	264 GPM	8,800 GPM	192 5/8" TOTAL

'WMR' WATER METERS
STRAIGHT PIPE REQUIREMENT: 10 D X 5 D

SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
2"	8.8 GPM	110 GPM	44" TOTAL

'IRT' WATER METERS
STRAIGHT PIPE REQUIREMENT: 10 D X 5 D

SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
3"	45 GPM	500 GPM	54" TOTAL
4"	50 GPM	688 GPM	70" TOTAL
6"	65 GPM	1,375 GPM	102" TOTAL
8"	130 GPM	2,475 GPM	134" TOTAL
10"	300 GPM	4,125 GPM	166" TOTAL

'M' WATER METERS
STRAIGHT PIPE REQUIREMENT: 0 D X 0 D

SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
3/4" PLASTIC	0.9 GPM	14 GPM	11 1/4" TOTAL
3/4" IRON	0.9 GPM	14 GPM	11 1/4" TOTAL
1" PLASTIC	1.2 GPM	20 GPM	14 3/4" TOTAL
1" IRON	1.2 GPM	20 GPM	14 3/4" TOTAL
1 1/2" IRON	3.5 GPM	55 GPM	17 1/4" TOTAL

'WST' WATER METERS
STRAIGHT PIPE REQUIREMENT: 5 D X 2 D

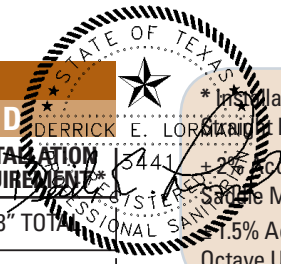
SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
3"	4.0 GPM	660 GPM	30" TOTAL
4"	8.0 GPM	1,266 GPM	38" TOTAL
6"	15 GPM	1,431 GPM	54" TOTAL
8"	38 GPM	2,475 GPM	70" TOTAL

FERTILIZER METERS
STRAIGHT PIPE REQUIREMENT: 0 D X 0 D

SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
3/4"	0.3 GPM	2.2 GPM	4 3/8" TOTAL
1"	1.8 GPM	44 GPM	6" TOTAL

'WST' WATER METERS
STRAIGHT PIPE REQUIREMENT: 10 D X 5 D

SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
10"	44 GPM	4,125 GPM	168" TOTAL
12"	51 GPM	5,500 GPM	200" TOTAL



* Installation Requirement = Straight Pipe Upstream + Meter Length + Straight Pipe Downstream

1% Accuracy Rate for Minimum and Maximum Flow Rates for: Sapphire Meter, 'IRT', 'WST', 'WMR', 'M' and Fertilizer Meters

1.5% Accuracy Rate for Minimum and Maximum Flow Rates for: Octave Ultrasonic Water Meters

WATER METER REGISTERS

REVISED
8:39 am, Jun 30, 2023

Netafim registers are simple to operate while providing reliable and accurate readings. Features include:

- Hermetically sealed - guaranteed not to accumulate moisture or fog.
- Mounted in a dry compartment - no contact with the water.
- Instantaneous readings - easy to read.
- Removable - even when the meter is operating.
- Electrical output - driven by a magnetic coupling that activates a reed switch creating a pulsed output for communicating with control and monitoring equipment.
- Interchangeable and easily replaced with common tools.

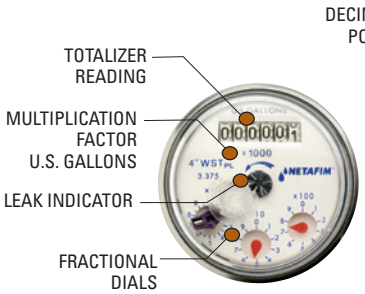
REED SWITCH REGISTER

GALLON OR ACRE FEET TOTALIZER

The Reed Switch Register has a low frequency pulse output for communicating with control and monitoring equipment. A leak indicator in the center of the dial registers the lowest flow through the meter. Flows are totalled in U.S. Gallons and each dial face indicates the multiplication factor (located directly under the totalizer reading) or flows are totalled in Acre Feet with the decimal point indicated in blue on the register. Three small fractional dials measure quantities smaller than the totalizer reading.

ELECTRICAL SPECIFICATIONS

- Maximum contact current: 50 mA
- Maximum contact voltage: 48 VDC



REED SWITCH GALLON TOTALIZER

REED SWITCH ACRE FEET TOTALIZER

ELECTRONIC (ER) DIGITAL REGISTER

GPM RATE OF FLOW WITH GALLON OR ACRE FEET TOTALIZER

Combines standard digital register features with dry pulse output capabilities. Clearly displays the rate of flow and volume readings in Gallons or Acre Feet. Mounted inside an IP68 stainless steel glass encapsulated cap. Multi-line digital LCD readout displays 9 digits for Total Volume in U.S. Gallons (U.S.G.) or Acre Feet and 4 digits for Rate of Flow in Gallons per Minute (GPM). It's programmable to a wide variety of pipe sizes. Register is interchangeable with common tools.

ELECTRICAL SPECIFICATIONS

- Minimum voltage: 3.6 VDC
- Maximum contact current: 200 mA
- Maximum contact voltage: 40 VDC
- Maximum distance between meter and control board: 65'

ER REGISTER

ER REGISTER WITH PULSE OUTPUT CONNECTION

PHOTO DIODE REGISTER

GALLON TOTALIZER

A sensor combines an IR light source and a light sensitive diode in one package. Signals are created when the light beam created by the IR light is interrupted by a rotating element. The Photo Diode Register includes pulse output (open collector) for communicating with control and monitoring equipment. This register requires a constant supply of DC power. Flows are totalled in U.S. Gallons based on the multiplication factors indicated on the dial face.

ELECTRICAL SPECIFICATIONS

- Positive (Yellow wire): 20-30 mA through a resistor
- Output (Transparent wire): Open collector, max. load 2 mA
- Ground (Bare wire)

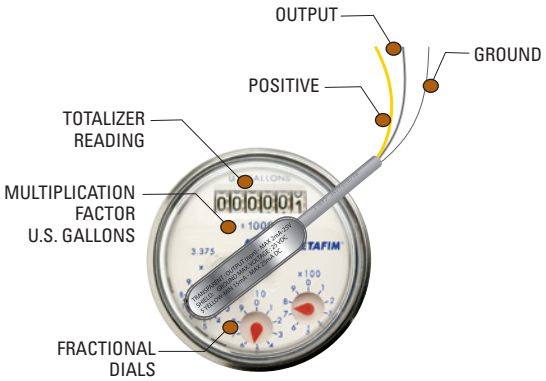


PHOTO DIODE GALLON TOTALIZER

PULSE OUTPUT

WITH PULSE REED SWITCH

The Pulse Reed Switch is activated by a magnet installed on a fractional dial. It acts as a 'dry contact' and consumes very little power. The reed switch sensor is installed in the transparent plastic cover over the register and can be mounted in any of three positions facing the pointer with the magnet.

NETAFIM™
GROW MORE WITH LESS

NETAFIM USA
5470 E. HOME AVE.
FRESNO, CA 93727
CS 888 638 2346
www.netafimusa.com

REVISED
8:39 am, Jun 30, 2023

DELCON
FOUNDED 1997
13508 Flat Top Ranch Road
Austin, Texas 78732
Office/Fax: (512) 583-1397
www.DelconEnvironmental.com

DELCON ENVIRONMENTAL SYSTEMS, LLC

The on-site sewage facility (OSSF) system has been designed to treat and dispose of the specified wastewater strength and average daily volume. In addition to the proper design and construction of the system, it is the owner's responsibility to properly maintain the system to ensure the intended performance targets are achieved. The following care should be taken to help ensure proper operation and support acceptable results, and to encourage a long-lasting system.

Do Not:

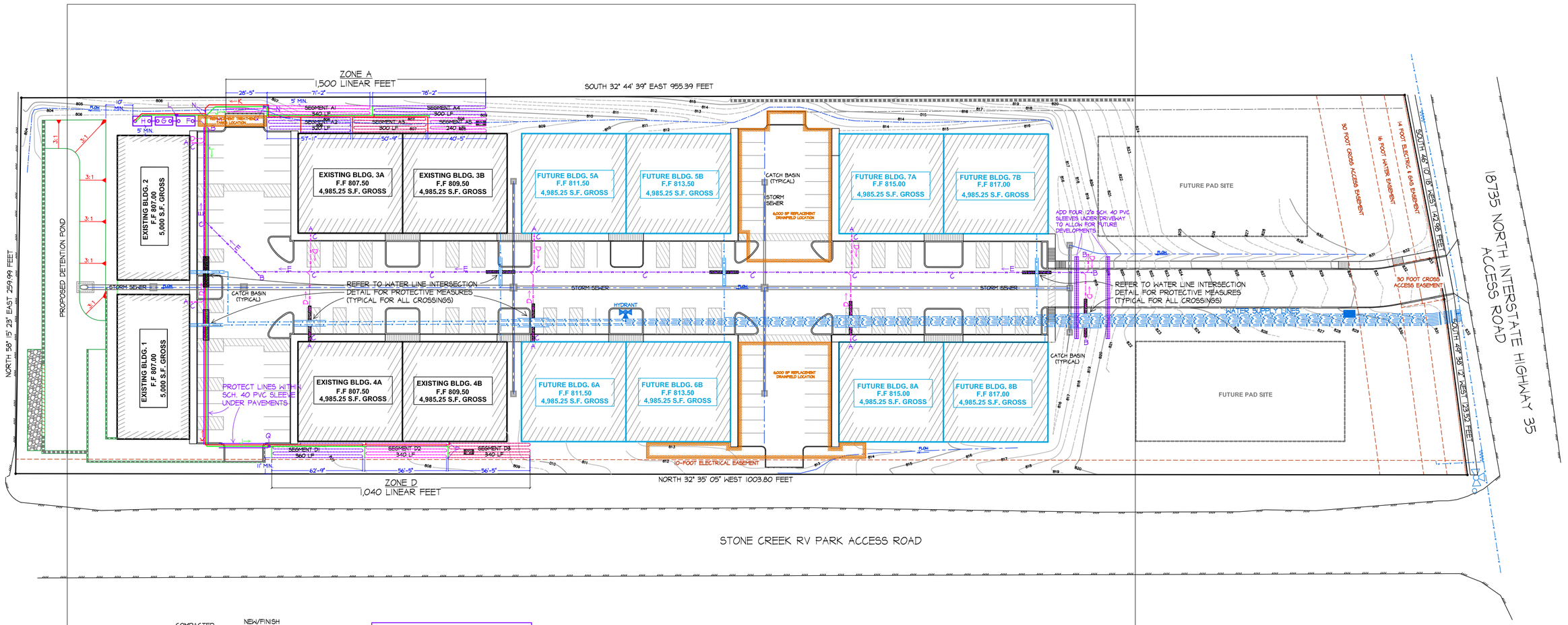
1. Pour strong disinfectants or bleaches, other than small amounts used in day to day house cleaning and laundries into the system.
2. Discharge from any type of water softener into the system.
3. Put coffee grounds, chemical wastes, paint or paint thinner, oils or grease (such as used cooking grease), pet shampoo or pet dip disinfectant into the system.
4. Permit disposable diapers, tampons, sanitary napkins, large quantities of paper products, tobacco products or similar items to enter the system.
5. Overload the system with large volumes of wastewater.
6. Plant large trees or shrubs near the system tanks or disposal field – the root systems may damage the installed system components.

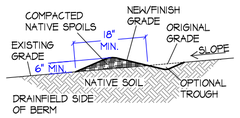
Do:

1. Maintain the vegetation in and immediately adjacent to the disposal field area.
2. Conserve water usage as much as possible. Maintain low-flow plumbing fixtures throughout the structure.
3. Monitor the drainfield periodically for signs of effluent surfacing and odors.
4. Use care when digging in the vicinity of the system tanks or disposal field to avoid damaging any of the system's components.
5. Direct surface drainage away from both the tank(s) and the disposal area to prevent stagnant water or ponding conditions.

It is recommended that the system be inspected at least annually (or more frequently if stipulated by a service/maintenance agreement) by a trained service person to monitor the performance of all system components and to determine the frequency of solids removal. Effluent filters (if included) should be cleaned at least every 3 months in perpetuity. Pump performance (if included), including electrical components such as breakers, float switches, and electrical connections should be reviewed during each inspection. The high water alarm's (if included) audio and visual notifications should be checked during routine inspections.

Revised
Efrain Gallegos
11/03/2025 11:05:38 AM





RAINWATER DIVERSION BERM
NOT TO SCALE

LEGEND:

A. SEWAGE STUB-OUT
B. ONE-WAY CLEAN-OUT
C. TWO-WAY CLEAN-OUT
D. 4"ø SCH. 40 PVC SEWER LINE
E. 6"ø SCH. 40 PVC SEWER LINE
F. 2,000-GALLON 2/C SEPTIC TRASH TANK
G. NUWATER B-1500 AEROBIC TREATMENT UNIT
H. 2,000-GALLON PUMP TANK
J. 1 1/2"ø SCH. 40 PVC SUPPLY LINE
K. 1 1/4"ø SCH. 40 PVC RETURN LINE
L. FLOW METER WITHIN FIELD BOX
M. K-RAIN INDEXING VALVE MODEL 4402-RCW
N. ONE-WAY "SWING" STYLE CHECK VALVE
P. VACUUM BREAKER VALVE
Q. PRESSURE REGULATOR WITHIN FIELD BOX

SHEET 1.1

SETBACK REQUIREMENTS:

INSTALLER SHALL ACHIEVE ALL MINIMUM REQUIRED SEPARATION DISTANCES AS SET FORTH BY THE TCEQ IN TITLE 30, TAC CHAPTER 285, EFFECTIVE DECEMBER 2016, AND ANY ADDITIONAL LOCAL REQUIREMENTS.

MINIMUM SEPARATION FROM TANK: 5 FEET TO FOUNDATIONS, SWIMMING POOLS AND PROPERTY LINES, ONE FOOT TO EASEMENTS, 5 FEET TO DRAINAGE EASEMENTS AND GRADE BREAKS, 10 FEET TO WATER LINES, 50 FEET TO EXISTING OR PROPOSED WATER WELLS.

MINIMUM SEPARATION FROM DRAINFIELD: ONE FOOT TO FOUNDATIONS, EASEMENTS AND SWIMMING POOLS, 5 FEET TO PROPERTY LINES, 10 FEET TO GRADE BREAKS, 10 FEET TO WATER LINES, 100 FEET TO EXISTING OR PROPOSED WATER WELLS.

NO PORTION OF THIS PROPERTY LIES WITHIN A 100-YEAR FLOOD PLAIN PER F.I.R.M. RATE MAPS.

INSTALLER SHALL PLACE CURLEX BRAND EROSION CONTROL BLANKETS OVER NEWLY CONSTRUCTED SEPTIC SYSTEM TO HELP STABILIZE DISTURBED SOILS AND TO PROMOTE VEGETATIVE GROWTH.

PLAN NORTH

REVISED SHEET 1.0 – OVERALL SITE PLAN

STATE OF TEXAS
DERRICK E. LORMAND
94411
LICENSED SANITARIAN
PROFESSIONAL SANITARIAN

DELCON
FOUNDED 1997
DELCON ENVIRONMENTAL SYSTEMS, LLC
13508 FLAT TOP RANCH ROAD
AUSTIN, TEXAS 78732
OFFICE/FAX: (512) 583-1397
WWW.DELCONENVIRONMENTAL.COM

CLIENT:	BEDSTONE WAREHOUSE	
ADDRESS:	18735 NORTH IH 35, SCHERTZ, TEXAS 78154	
LEGAL DESCRIPTION:	LOT 1, BLOCK 1, SCHERTZ IH 35 WAREHOUSE	
PERMIT AUTHORITY:	COMAL COUNTY	
DRAWN BY:	DATE:	SCALE: 1" = 50'
D. E. LORMAND, R.S.	09/11/2025	

Revised
Efrain Gallegos
11/03/2025 11:05:42 AM

ZONE A
1,500 LINEAR FEET

SOUTH 32° 44' 39" EAST 955.39 FEET

28'-5" | 71'-2" | 78'-2"

10' MIN. FLOW

5' MIN.

H O G O Fo

REMEDIAL TREATMENT TANKS LOCATION

5' MIN.

SEGMENT A1 340 LF

SEGMENT A2 320 LF

SEGMENT A3 300 LF

SEGMENT A4 300 LF

SEGMENT A5 240 LF

57'-11" | 50'-9" | 40'-5"

EXISTING BLDG. 2
F.F 807.00
5,000 S.F. GROSS

EXISTING BLDG. 3A
F.F 807.50
4,985.25 S.F. GROSS

EXISTING BLDG. 3B
F.F 809.50
4,985.25 S.F. GROSS

FUTURE BLDG. 5A
F.F 811.50
4,985.25 S.F. GROSS

FUTURE BLDG. 5B
F.F 813.50
4,985.25 S.F. GROSS

CATCH BASIN (TYPICAL)

STORM SEWER

6,000 SF REPLACEMENT DRAINFIELD LOCATION

FUTURE BLDG. 7A
F.F 815.00
4,985.25 S.F. GROSS

FUTURE BLDG. 7B
F.F 817.00
4,985.25 S.F. GROSS

ADD FOUR 12"ø SLEEVES UNDER TO ALLOW FOR DEVELOPMENTS

STORM SEWER FLOW

CATCH BASIN (TYPICAL)

REFER TO WATER LINE INTERSECTION DETAIL FOR PROTECTIVE MEASURES (TYPICAL FOR ALL CROSSINGS)

HYDRANT

EXISTING BLDG. 1
F.F 807.00
5,000 S.F. GROSS

PROTECT LINES WITHIN SCH. 40 PVC SLEEVE UNDER PAVEMENTS

EXISTING BLDG. 4A
F.F 807.50
4,985.25 S.F. GROSS

EXISTING BLDG. 4B
F.F 809.50
4,985.25 S.F. GROSS

FUTURE BLDG. 6A
F.F 811.50
4,985.25 S.F. GROSS

FUTURE BLDG. 6B
F.F 813.50
4,985.25 S.F. GROSS

6,000 SF REPLACEMENT DRAINFIELD LOCATION

FUTURE BLDG. 8A
F.F 815.00
4,985.25 S.F. GROSS

FUTURE BLDG. 8B
F.F 817.00
4,985.25 S.F. GROSS

CATCH BASIN (TYPICAL)

SEGMENT D1 360 LF

SEGMENT D2 340 LF

SEGMENT D3 340 LF

11' MIN.

62'-9" | 56'-5" | 56'-5"

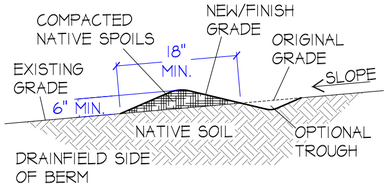
10-FOOT ELECTRICAL EASEMENT

FLOW

NORTH 32° 35' 05" WEST 1003.80 FEET

ZONE D
1,040 LINEAR FEET

STONE CREEK RV PARK ACCESS ROAD



RAINWATER DIVERSION BERM
NOT TO SCALE

LEGEND:

A. SEWAGE STUB-OUT
B. ONE-WAY CLEAN-OUT
C. TWO-WAY CLEAN-OUT
D. 4"ø SCH. 40 PVC SEWER LINE
E. 6"ø SCH. 40 PVC SEWER LINE
F. 2,000-GALLON 2/C SEPTIC TRASH TANK
G. NuWATER B-1500 AEROBIC TREATMENT UNIT
H. 2,000-GALLON PUMP TANK
J. 1 1/2"ø SCH. 40 PVC SUPPLY LINE
K. 1 1/4"ø SCH. 40 PVC RETURN LINE
L. FLOW METER WITHIN FIELD BOX
M. K-RAIN INDEXING VALVE MODEL 4402-RCW
N. ONE-WAY "SWING" STYLE CHECK VALVE
P. VACUUM BREAKER VALVE
Q. PRESSURE REGULATOR WITHIN FIELD BOX

PLAN NORTH

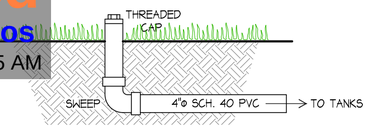
STATE OF TEXAS
DERRICK E. LORMAND
94411
PROFESSIONAL SANITARIAN

REVISED SHEET 1.1 - DETAIL SITE PLAN

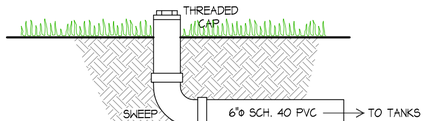
DELCON
FOUNDED 1997
DELCON ENVIRONMENTAL SYSTEMS, LLC
13508 FLAT TOP RANCH ROAD
AUSTIN, TEXAS 78732
OFFICE/FAX: (512) 583-1397
WWW.DELCONENVIRONMENTAL.COM

CLIENT:	BEDSTONE WAREHOUSE	
ADDRESS:	18735 NORTH IH 35, SCHERTZ, TEXAS 78154	
LEGAL DESCRIPTION:	LOT 1, BLOCK 1, SCHERTZ IH 35 WAREHOUSE	
PERMIT AUTHORITY:	COMAL COUNTY	
DRAWN BY:	DATE:	SCALE: 1" = 30'
D. E. LORMAND, R.S.	09/11/2025	

Revised
Efrain Gallegos
11/03/2025 11:07:35 AM

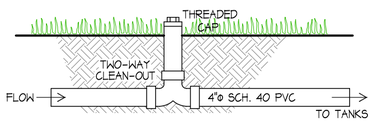


TYPICAL 4" ONE-WAY CLEAN-OUT

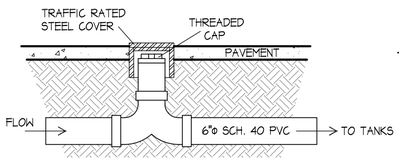


TYPICAL 6" ONE-WAY CLEAN-OUT

INSTALLER SHALL MAINTAIN A MINIMUM OF 1/4" OF ELEVATION DROP PER LINEAR FOOT OF LINE BETWEEN SOURCE AND TANKS.

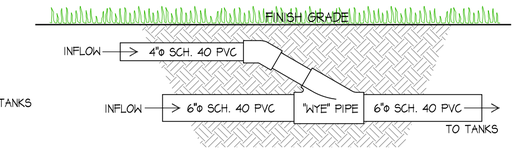


TYPICAL 4" TWO-WAY CLEAN-OUT DETAIL

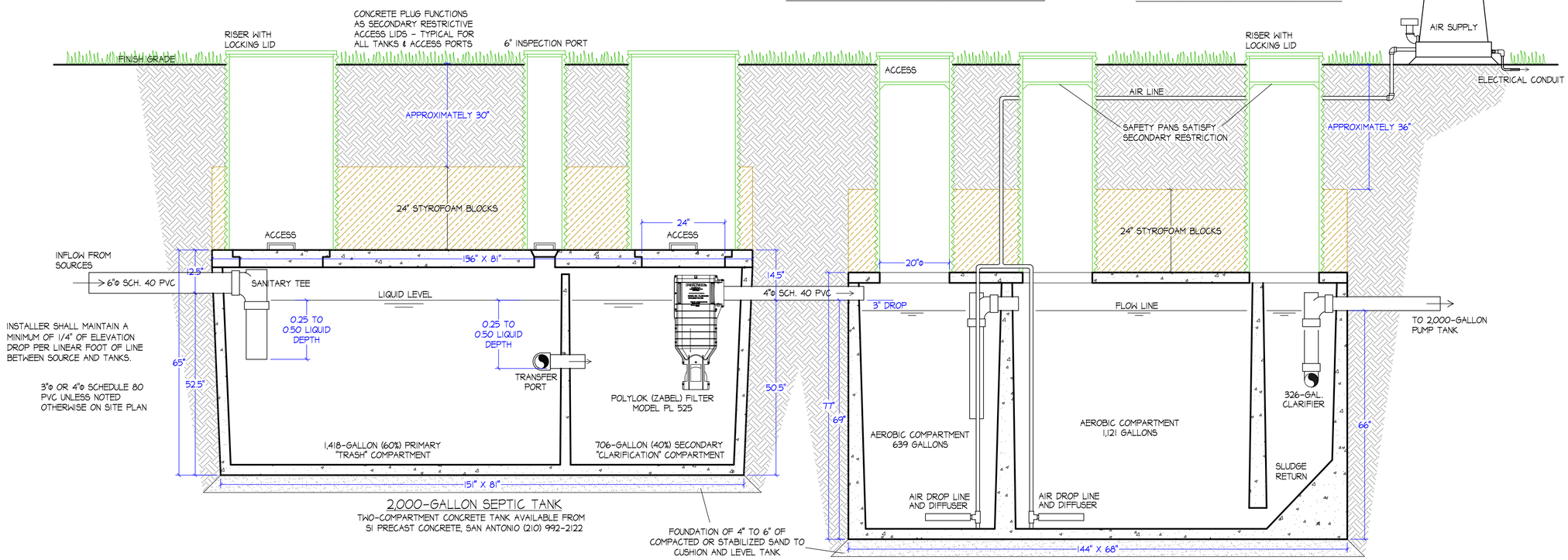


TYPICAL 6" TWO-WAY CLEAN-OUT

NOTE: SEWER LINES SHALL MAINTAIN A MINIMUM OF 1/8" ELEVATION FALL PER LINEAR FOOT OF RUN (1% SLOPE) WITH NO LOCAL DIPS OR VALLEYS



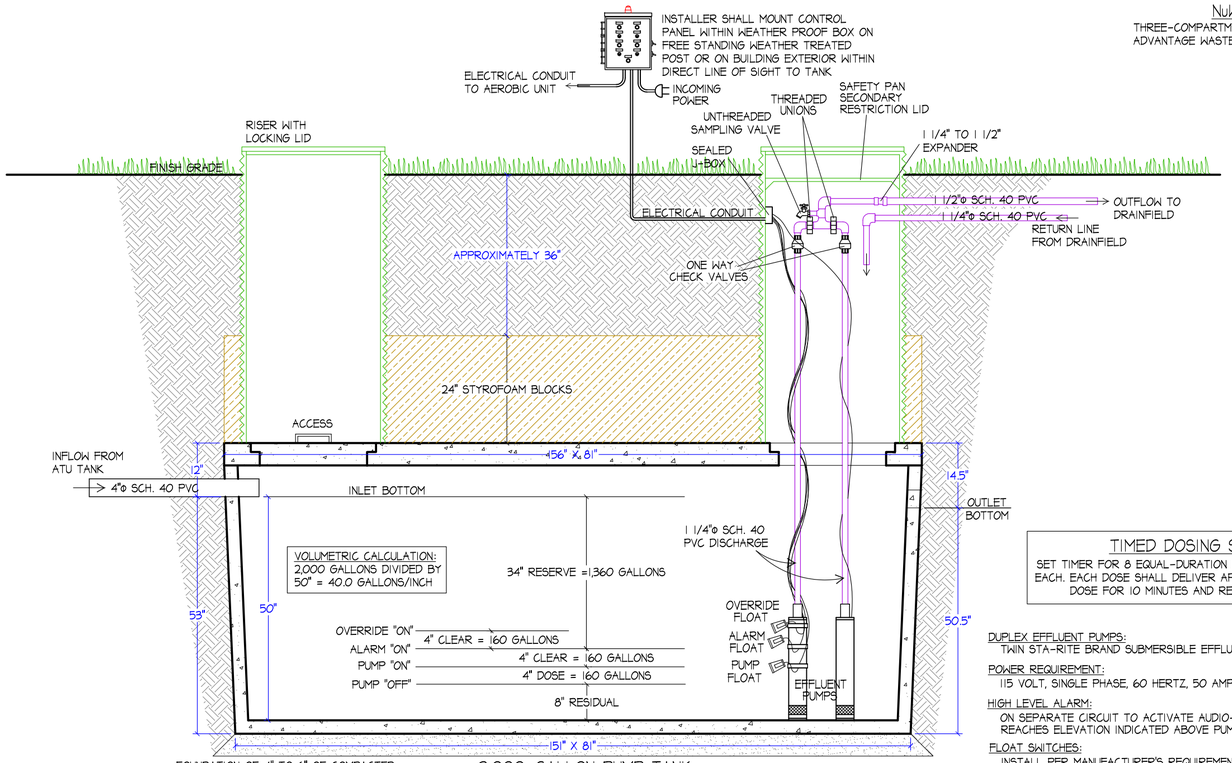
SEWER CONNECTION DETAIL



2,000-GALLON SEPTIC TANK
TWO-COMPARTMENT CONCRETE TANK AVAILABLE FROM SI PRECAST CONCRETE, SAN ANTONIO (210) 992-2122

FOUNDATION OF 4" TO 6" OF COMPACTED OR STABILIZED SAND TO CUSHION AND LEVEL TANK

NuWATER B-1,500
THREE-COMPARTMENT CONCRETE TANK AVAILABLE FROM ADVANTAGE WASTEWATER SOLUTIONS, LLC (830) 995-3189



FOUNDATION OF 4" TO 6" OF COMPACTED OR STABILIZED SAND TO CUSHION AND LEVEL TANKS (TYPICAL FOR ALL TANKS)

2,000-GALLON PUMP TANK
SINGLE-COMPARTMENT CONCRETE TANK AVAILABLE FROM SI PRECAST CONCRETE, SAN ANTONIO (210) 992-2122

TIMED DOSING SCHEDULE:

SET TIMER FOR 8 EQUAL-DURATION DOSES LASTING 10 MINUTES EACH. EACH DOSE SHALL DELIVER APPROXIMATELY 50 GALLONS. DOSE FOR 10 MINUTES AND REST FOR 170 MINUTES.

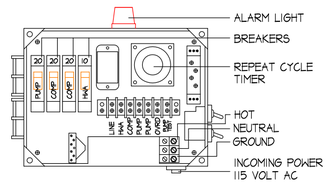
DUPLEX EFFLUENT PUMPS:
TWIN STA-RITE BRAND SUBMERSIBLE EFFLUENT PUMPS MODEL 20 DOM 05121.

POWER REQUIREMENT:
115 VOLT, SINGLE PHASE, 60 HERTZ, 50 AMP BREAKER, DEDICATED CIRCUIT.

HIGH LEVEL ALARM:
ON SEPARATE CIRCUIT TO ACTIVATE AUDIO-VISUAL ALARM AT CONTROL PANEL WHEN WATER LEVEL REACHES ELEVATION INDICATED ABOVE PUMP "ON" POSITION OF PUMP FLOAT SWITCH.

FLOAT SWITCHES:
INSTALL PER MANUFACTURER'S REQUIREMENTS AND ADJUST FLOATS TO HAVE THE OPERATING RANGE AS INDICATED.

ALL WIRING SHALL BE IN ELECTRICAL CONDUIT AND CONFORM TO THE NATIONAL ELECTRIC CODE



CONTROL PANEL BOX
SPI A-AV MODEL AEROBIC CONTROL PANEL
50B138-BIO-A-AV WITH REPEAT CYCLE TIMER
INTERMATIC FMID20E SERIES ELECTRIC TIME SWITCH

PUMP TANK DUPLEX CONTROL PANEL:

ONE PANEL SHALL CONTROL BOTH EFFLUENT PUMPS CONTAINED WITHIN THE PUMP TANK. PANEL SHALL ACTIVATE PUMPS IN AN ALTERNATING FASHION. IF A HIGH LEVEL ALARM IS ACTIVATED, A LOCKING MECHANISM SHALL KEEP THE ALARM ACTIVE UNTIL ADDRESSED BY A MAINTENANCE PROVIDER. THE SECOND EFFLUENT PUMP MAY DISCHARGE EFFLUENT TO THE DRAINFIELD, BUT NOT DISENGAGE THE ALARM. A MANUAL SILENCE SWITCH MAY BE INCLUDED TO RESET THE ALARM.

REVISED SHEET 2.0 - TANKS SECTION DETAIL

STATE OF TEXAS
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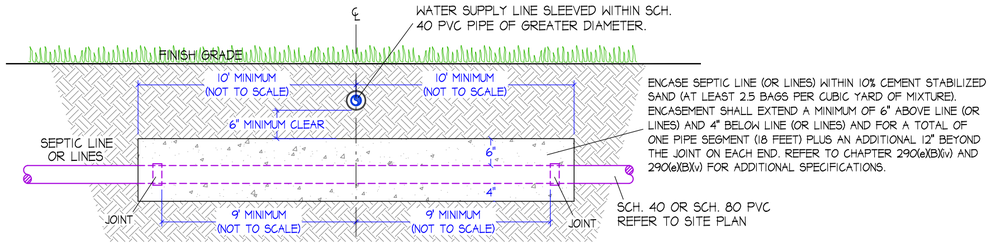
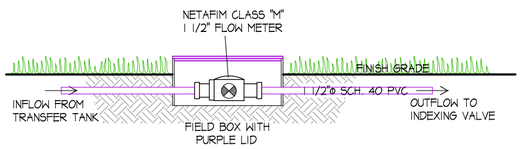
DATE:	09/11/2025
SCALE:	1/2" = 1'-0"

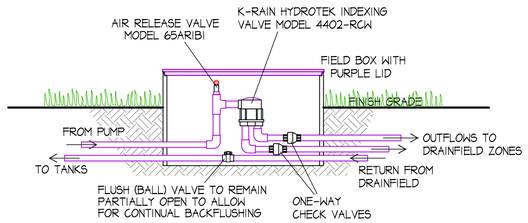
Revised
Efrain Gallegos
11/03/2025 11:07:40 AM



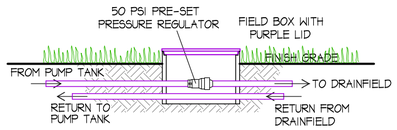
WATER LINE INTERSECTION DETAIL



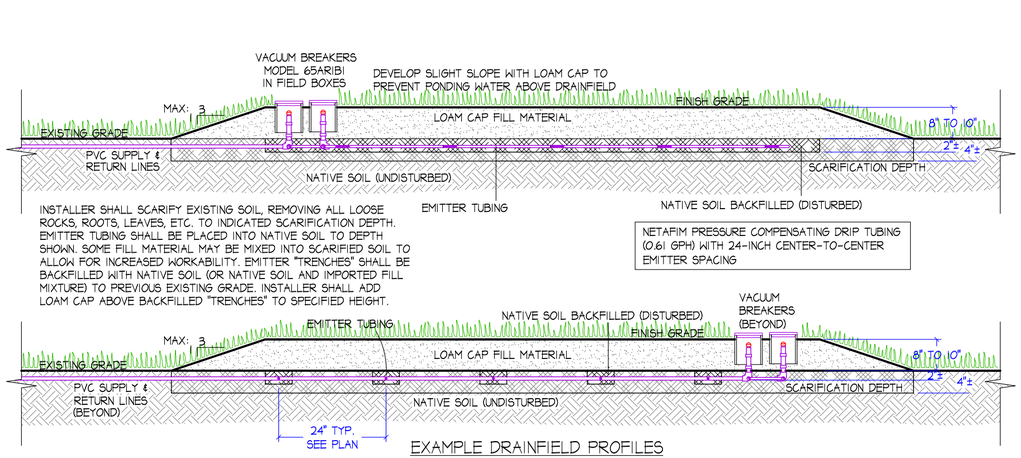
FLOW METER DETAIL



DRAINFIELD INDEXING VALVE FIELD BOX DETAIL
NOTE: FOUR OUTLETS REQUIRED. ONLY TWO SHOWN FOR CLARITY



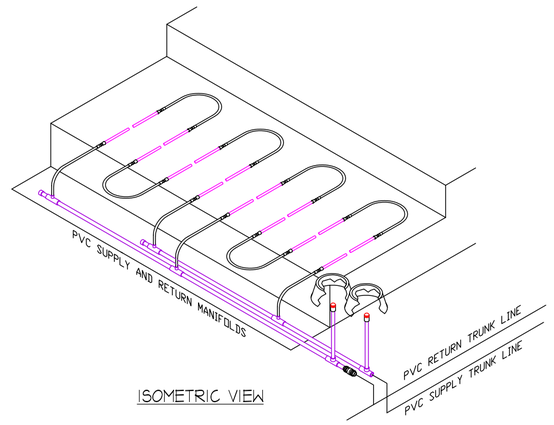
PRESSURE REGULATOR FIELD BOX DETAIL



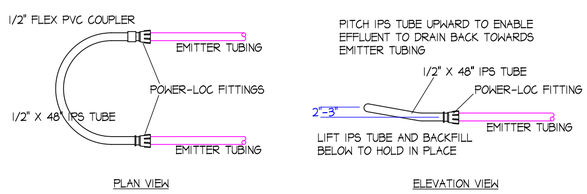
EXAMPLE DRAINFIELD PROFILES

DRAINFIELD SHALL HAVE GRASS COVER. THE EXISTING SOIL IS SUITABLE TO SUPPORT VEGETATIVE GROWTH. THE OWNER IS RESPONSIBLE FOR MAINTAINING THE VEGETATION AT THE DRAINFIELD LOCATION. ALL ROCKS SHALL BE REMOVED FROM DRAINFIELD PRIOR TO COVERING WITH FILL MATERIAL. INSTALLER SHALL SEED, HYDROMULCH OR PLACE SANDY LOAM-BACKED SOD AT DRAINFIELD TO HELP DEVELOP VEGETATION AND REDUCE EROSION.

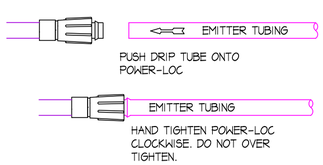
AEROBIC TREATMENT UNIT WITH SUBSURFACE DRIP EMITTER APPLICATION. SOIL APPLICATION RATE = 0.10 GALLONS PER SQUARE FOOT PER DAY - PER TCEQ OSSF WORKSHOPS RG-276/EV-01 REVISED DECEMBER 2016; TABLE I, APPENDIX B.



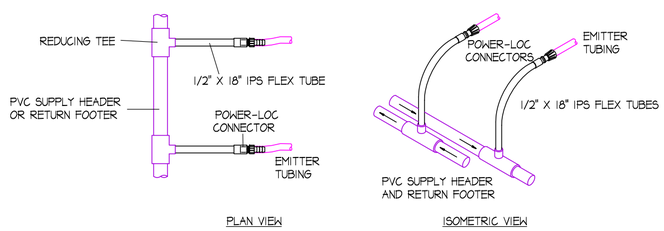
ISOMETRIC VIEW



TYPICAL 2-FOOT LOOP INSTALLATION DETAIL
NOT TO SCALE



POWER-LOC INSTALLATION
NOT TO SCALE



TYPICAL MANIFOLD CONNECTION DETAIL
NOT TO SCALE

REVISED SHEET 2.1 - DRAINFIELD SECTION DETAIL

STATE OF TEXAS
DERRICK E. LORMAND
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DELCON
FOUNDED 1997

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DRAWN BY:	DATE:	SCALE: 1/2" = 1'-0"
D. E. LORMAND, R.S.	09/11/2025	

GENERAL NOTES:

1. ON-SITE SEWAGE FACILITY PERMIT OR AUTHORIZATION TO CONSTRUCT SHALL BE OBTAINED FROM THE LOCAL PERMITTING AUTHORITY AND POSTED ON SITE IN A HIGHLY VISIBLE LOCATION PRIOR TO THE COMMENCEMENT OF THE INSTALLATION OF THIS SYSTEM. NO WORK MAY BEGIN UNTIL THE PERMIT TO CONSTRUCT HAS BEEN POSTED ON SITE.
2. THE INSTALLATION OF THIS SYSTEM MUST BE PERFORMED BY A STATE LICENSED INSTALLER HOLDING A CURRENT CLASS I OR CLASS II CERTIFICATE, OR BY A STATE LICENSED APPRENTICE OPERATING UNDER THE DIRECT SUPERVISION OF A STATE LICENSED INSTALLER. THE LICENSED INDIVIDUAL MUST MAINTAIN CURRENT PROOF OF LICENSE AT THE JOB SITE. THIS LICENSE MUST BE MADE AVAILABLE FOR REVIEW UPON REQUEST.
3. THIS PLAN IS SITE SPECIFIC. THIS DESIGN AND THE INFORMATION CONTAINED WITHIN REMAIN THE OWNERSHIP OF THE DESIGNER AND DELCON ENVIRONMENTAL SYSTEMS, LLC. ADDITIONAL COPIES OF THIS DESIGN MAY BE PRINTED AND REPRODUCED OR OBTAINED FROM DELCON ENVIRONMENTAL SYSTEMS, LLC. FOR CONVENIENCE ASSOCIATED WITH THE PERMIT REVIEW, INSPECTION, INSTALLATION AND LICENSING OF THIS SYSTEM. ADDITIONAL FEES MAY BE REQUIRED. ELECTRONIC COPIES OF THIS DESIGN THAT INCLUDE THE SEAL AND SIGNATURE OF THE DESIGNER ARE VALID AND SHALL BE CONSIDERED AS ORIGINAL COPIES.
4. THE LAWS AND REGULATIONS CONTAINED IN THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S TITLE 30 TEXAS ADMINISTRATIVE CODE CHAPTER 285 FOR ON-SITE SEWAGE FACILITIES ADOPTED MAY 2001, EFFECTIVE JUNE 2001 AND MOST RECENTLY REVISED DECEMBER 29, 2016 GOVERN THE DESIGN, PERMIT AND INSTALLATION OF THIS SYSTEM. ANY ADDITIONAL REGULATIONS ADOPTED BY THE LOCAL PERMITTING AUTHORITY ABOVE AND BEYOND THE REQUIREMENTS OF THE STATE MINIMUM SHALL SUPERSEDE. ANY ADDITIONAL REQUIREMENTS AND/OR SPECIFIC STIPULATIONS LISTED IN THE PERMIT TO CONSTRUCT OR THIS DESIGN SHALL BE STRICTLY FOLLOWED.
5. IT IS THE RESPONSIBILITY OF THE INSTALLER TO READ AND UNDERSTAND THE LAWS REGARDING THE INSTALLATION OF ON-SITE SEWAGE FACILITIES, THE SPECIAL CONDITIONS (IF ANY) CONTAINED IN THE PERMIT OR AUTHORIZATION TO CONSTRUCT AND THE REQUIREMENTS AND SPECIFICATIONS OF THIS DESIGN.
6. THIS PLAN IS INTENDED FOR USE AS A SEPTIC SYSTEM INSTALLATION GUIDE. THE PROPERTY DESCRIPTION, DIMENSIONS AND LOCATION OF ALL SITE FEATURES HAVE BEEN DEVELOPED FROM SURVEYS (IF PROVIDED), GLOBAL INFORMATION SYSTEM DATA, AERIAL PHOTOGRAPHY, SITE PLANS, SITE VISITS, FIELD MEASUREMENTS AND ANY ADDITIONAL INFORMATION PROVIDED BY THE BUILDER, INSTALLER AND OWNER. THIS SITE PLAN IS NOT A LEGAL LAND SURVEY OR PLAT MAP AND SHOULD NOT BE TREATED AS SUCH.
7. TREES AND VEGETATION WITHIN THE VICINITY OF THE PROPOSED SYSTEM SHALL BE PROTECTED. IT IS POSSIBLE THAT DAMAGE MAY OCCUR TO TREES AND VEGETATION DURING THE INSTALLATION OF THIS SYSTEM. NEITHER THE DESIGNER NOR THE INSTALLER SHALL BE RESPONSIBLE FOR DAMAGE TO VEGETATION AND/OR TREES CAUSED DURING CONSTRUCTION. NEITHER THE DESIGNER NOR THE INSTALLER SHALL BE RESPONSIBLE FOR VEGETATION REPLACEMENT ABOVE AND BEYOND THE SPECIFIC STIPULATIONS CONTAINED IN THIS DESIGN. REMOVAL AND/OR TRIMMING OF TREES AND VEGETATION MAY BE REQUIRED TO PROPERLY INSTALL AND OPERATE THIS SYSTEM.
8. NO WATER WELLS MAY BE INSTALLED CLOSER THAN 50 FEET FROM THIS SYSTEM. ALL WATER SUPPLY LINES (INCLUDING IRRIGATION SYSTEM LINES) SHALL REMAIN AT LEAST 10 FEET AWAY FROM ALL SEPTIC SYSTEM COMPONENTS UNLESS NOTED OTHERWISE ON PLAN AND SPECIFICALLY ADDRESSED AND APPROVED BY THE PERMITTING AUTHORITY.
9. NO AUTOMATIC WATER SPRINKLER SYSTEM MAY BE INSTALLED TO DIRECTLY IRRIGATE THE VEGETATION ABOVE THE APPLICATION FIELD. HAND WATERING IS PERMISSIBLE TO HELP MAINTAIN APPLICATION FIELD VEGETATION.
10. A MAINTENANCE CONTRACT WITH AN LICENSED AND CERTIFIED MAINTENANCE PROVIDER MAY BE REQUIRED BY STATE LAW WITH THIS SYSTEM. REGARDLESS, PERIODIC MAINTENANCE IS NECESSARY TO MAINTAIN OPTIMUM SYSTEM PERFORMANCE AND ENVIRONMENTAL PROTECTION. IT IS HIGHLY RECOMMENDED THAT PERIODIC ROUTINE MAINTENANCE BE PERFORMED AT THREE-MONTH INTERVALS.
11. TO THE BEST OF MY KNOWLEDGE THERE APPEAR TO BE NO EDWARD'S AQUIFER RECHARGE FEATURES WITHIN 150 FEET OF THIS SYSTEM.
12. IT IS MY PROFESSIONAL OPINION THAT THIS ON-SITE SEWAGE FACILITY CAN BE OPERATED WITHOUT CAUSING A THREAT OR HARM TO THE PUBLIC HEALTH OR TO THE ENVIRONMENT. THIS SYSTEM MUST BE PROPERLY INSTALLED AND MAINTAINED TO ACHIEVE THE DESIRED LEVEL OF TREATMENT AND DISPOSAL TO PREVENT THREATS OR HARM TO THE PUBLIC HEALTH OR TO THE ENVIRONMENT.

INSPECTION AND COORDINATION NOTES:

1. THE INSTALLER SHALL COORDINATE WITH THE PERMITTING AUTHORITY TO SCHEDULE ALL REQUIRED INSPECTIONS THROUGHOUT THE INSTALLATION PROCESS. THE INSTALLER MAY CONTACT THE PERMITTING AUTHORITY TO OBTAIN A SCHEDULE OF INSPECTIONS REQUIRED FOR THIS SYSTEM. SEVERAL INSPECTIONS MAY BE REQUIRED AT GIVEN INTERVALS DURING CONSTRUCTION. ADDITIONAL INSPECTION FEES MAY BE REQUIRED IF INSPECTIONS ARE NOT APPROVED OR IF THE INSTALLATION DEVIATES FROM THE PERMITTED DESIGN WITHOUT PRIOR APPROVAL FROM BOTH THE PERMITTING AUTHORITY AND DELCON ENVIRONMENTAL SYSTEMS, LLC.
2. NO PORTION OR COMPONENT OF THIS SYSTEM SHALL BE COVERED UNTIL REVIEWED AND APPROVED BY THE PERMITTING AUTHORITY. THE DESIGNER SHALL BE NOTIFIED TO PERFORM AN INSPECTION AT LEAST 48 HOURS IN ADVANCE PRIOR TO COVERING ANY SYSTEM COMPONENTS.
3. PERMANENT UTILITIES INCLUDING WATER, ELECTRIC AND POSSIBLY TELEPHONE SERVICE SHALL BE CONNECTED TO THIS SYSTEM AS A CONDITION OF FINAL APPROVAL.
4. THE DESIGNER SHALL DELIVER TO THE PERMITTING AUTHORITY AN APPROVAL/CERTIFICATION LETTER UPON REVIEWING THE INSTALLED SYSTEM INDICATING COMPLIANCE WITH THE DESIGN. AN AS BUILT DRAWING MAY BE REQUIRED AND INCLUDED WITH THE FINAL APPROVAL LETTER. APPROVAL SHALL NOT BE GRANTED UNTIL ALL INSPECTIONS ARE PERFORMED, ALL REQUIREMENTS ARE ACHIEVED AND ALL FEES TO THE DESIGNER AND PERMITTING AUTHORITY ARE PAID IN FULL.
5. A LICENSE TO OPERATE WILL BE ISSUED BY THE PERMITTING AUTHORITY UPON INSTALLATION COMPLETION AND WRITTEN APPROVAL/CERTIFICATION FROM DELCON ENVIRONMENTAL SYSTEMS, LLC. USE OF THIS ON-SITE SEWAGE FACILITY WITHOUT A LICENSE TO OPERATE IS A VIOLATION OF STATE AND LOCAL LAW AND IS SUBJECT TO FINES AND ADDITIONAL LEGAL ACTION INCLUDING PROPERTY CONDEMNATION AND INCARCERATION.

FIELD MODIFICATION AND ALTERATION NOTES:

1. THE INSTALLER SHALL FIELD VERIFY ALL DIMENSIONS (INCLUDING TOPOGRAPHICAL INFORMATION OF CURRENT GRADES) OF THIS DESIGN PRIOR TO CONSTRUCTION, AS SITE CONDITIONS MAY CHANGE DURING THE INTERIM TIME BETWEEN THE PERMIT ISSUANCE AND SYSTEM INSTALLATION.
2. THE INSTALLER SHALL STRICTLY ADHERE TO THE DESIGN (BOTH DIMENSIONS AND EQUIPMENT SPECIFICATIONS) AND TO ANY ADDITIONAL REQUIREMENTS OF THE PERMIT TO CONSTRUCT. ANY DISCREPANCIES BETWEEN THE DESIGN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED BY THE INSTALLER TO THE DESIGNER AND/OR THE PERMITTING AUTHORITY PRIOR TO CONSTRUCTION.
3. THE INSTALLER IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE INSTALLER SHALL CONTACT DIG TESS OR OTHER UTILITY LOCATING ORGANIZATION TO CONFIRM THE LOCATION OF ALL PERTINENT UTILITIES WITHIN THE VICINITY OF THIS ON-SITE SEWAGE FACILITY. ANY UNFORESEEN UTILITIES DISCOVERED SHALL BE REPORTED TO DELCON ENVIRONMENTAL SYSTEMS, LLC AND/OR THE PERMITTING AUTHORITY. DESIGN MODIFICATIONS MAY BE REQUIRED TO ACCOMMODATE DISCOVERED UTILITIES.
4. IF A FIELD DISCREPANCY IS DISCOVERED DURING CONSTRUCTION, WORK SHALL STOP UNTIL THE ISSUE IS RESOLVED BY DELCON ENVIRONMENTAL SYSTEMS, LLC AND THE PERMITTING AUTHORITY. DESIGN CHANGES REQUIRED DUE TO FIELD MODIFICATIONS MAY REQUIRE ADDITIONAL DESIGN FEES, ADDITIONAL PERMITTING FEES AND ADDITIONAL TIME. FIELD CHANGES MADE WITHOUT PRIOR APPROVAL AND AUTHORIZATION FROM BOTH DELCON ENVIRONMENTAL SYSTEMS, LLC AND THE PERMITTING AUTHORITY MAY VOID PERMIT AND COULD RESULT IN LEGAL ACTIONS AGAINST THE INSTALLER.

Revised
Efrain Gallegos
11/03/2025 11:07:49 AM

PIPING NOTES:

1. ALL PIPING INCLUDED WITH THIS SYSTEM SHALL CONSIST OF SCHEDULE 40 PVC UNLESS NOTED OTHERWISE ON SITE PLAN OR SECTION DETAILS. ALL CONNECTIONS SHALL BE PROPERLY JOINED USING APPROPRIATE PRIMER AND SEALER/CEMENT. ALL LINES AND CONNECTIONS SHALL BE WATER-TIGHT AND MAY BE PRESSURE TESTED TO VERIFY INTEGRITY.
2. GRAVITY-FED SEWER AND TRANSMISSION LINES SHALL MAINTAIN AT LEAST 1/8" OF VERTICAL FALL PER LINEAR FOOT OF RUN THROUGHOUT ENTIRE RUN. NO LOCAL LOW SPOTS OR DIPS WITHIN LINES. NO HARD 90 DEGREE ELBOWS ON FITTINGS SHALL BE USED WITH GRAVITY-FED SEWER LINES. A PAIR OF 45 DEGREE SWEEPING ELBOWS SHALL BE USED.
3. SEWER LINES SHALL FROM THE SOURCE(S) TO THE TREATMENT TANK(S) AND FROM THE TREATMENT TANK(S) TO THE DISPOSAL AREA(S) SHALL BE EMBEDDED IN A MINIMUM OF 4 INCHES OF CLEAN CLASS Ib, CLASS II, OR CLASS III TYPE SOIL CONTAINING LESS THAN 30% GRAVEL AND CLEAN OF ANY ORGANIC MATERIAL, TRASH AND ROCKS/GRAINS LARGER THAN 1/2" IN ORDER TO TO AVOID SHIFTING, SETTLING AND PUNCTURES.
4. A MINIMUM OF 4" OF SOIL COVER SHALL BE PLACED ABOVE ALL PVC PIPES FOR PROTECTION.
5. INSTALLER SHALL VERIFY ON PLAN THE SPECIFIC USE OF PURPLE COLORED PVC PIPE.

TANK NOTES:

1. CONCRETE TANKS SHALL BE MANUFACTURED IN COMPLIANCE WITH ASTM C 1227, STANDARD SPECIFICATION FOR PRECAST CONCRETE SEPTIC TANKS ADOPTED 2000 AND AS AMENDED.
2. PLASTIC (POLYETHYLENE) OR FIBERGLASS TANKS SHALL BE RATED FOR USE AS UNDERGROUND SEPTIC EFFLUENT AND/OR PUMP TANKS. SPECIFIC INSTRUCTIONS ASSOCIATED WITH INSTALLATION AND BACK-FILLING SHALL BE STRICTLY FOLLOWED.
3. TANKS SHALL BE BEDDED ON SPECIFIED SAND CUSHION AND SET LEVEL TO WITHIN AN OVERALL TOLERANCE OF ONE INCH FROM INLET TO OUTLET.
4. TANKS SHALL BE FILLED TO THE FLOW LINE TO DETERMINE INTEGRITY. ANY LEAKS OR WEEPS SHALL BE PATCHED TO HOLD WATER. ONCE TANKS ARE REVIEWED AND APPROVED BY THE PERMITTING AUTHORITY, THE WATER LEVEL WITHIN THE PUMP TANK (OR PUMP CHAMBER) MUST BE LOWERED TO THE NORMAL OPERATING LEVEL. DO NOT DISCHARGE EXCESS WATER INTO THE DRAINFIELD. EXCESS WATER SHALL BE REMOVED FROM TANK WITHOUT ENTERING DRAINFIELD.
5. INLET PIPES AND OUTLET PIPES SHALL BE SEALED WITH GROUT, EXPANSIVE FOAM OR SILICONE TO PREVENT LEAKING. RISERS AND INSPECTION PORTS SHALL BE SEALED WITH GROUT, EXPANSIVE FOAM OR SILICONE TO PREVENT WATER, SOIL OR INSECT INTRUSION INTO TANKS.
6. TANK EXCAVATION SHALL BE BACKFILLED WITH CLEAN CLASS II OR CLASS III SOIL FREE OF ROCK. ROCKS, CONSTRUCTION DEBRIS, TRASH, ORGANICS AND CLASS IV SOIL ARE UNACCEPTABLE BACKFILL MATERIAL.
7. DEPTH OF SOIL ABOVE TANK LIDS SHALL NOT EXCEED 12 INCHES UNLESS SPECIFICALLY ADDRESS BY THIS DESIGN AND APPROVED BY THE MANUFACTURER.

DRAINFIELD NOTES:

1. ALL ROCKS AND EXISTING VEGETATION (EXCEPT DESIRED TREES) SHALL BE REMOVED FROM PROPOSED DRAINFIELD LOCATION AS PREPARATION FOR SYSTEM INSTALLATION. ANY REMAINING ROCK EXPOSURES SHALL BE CAPPED WITH AT LEAST 3" OF LOAM TOPSOIL TO PROMOTE VEGETATIVE GROWTH.
2. INSTALLER SHALL IMMEDIATELY ESTABLISH VEGETATION ON NEWLY CONSTRUCTED DRAINFIELD. ACCEPTABLE GRASSES INCLUDE BERMUDA, SAINT AUGUSTINE, RYE, ZOIZA, TIFF OR A COMBINATION FOR MULTI-SEASON GROWTH. CLAY LOAM BACKED SOD MAY NOT BE USED. HYDROMULCH, RAW SEED OR SANDY LOAM BACKED SOD ARE ACCEPTABLE METHODS FOR ESTABLISHING VEGETATION.
3. APPLICATION AREA SHALL BE CROWNED SLIGHTLY TO SHED RAINWATER. REFER TO SITE PLAN FOR THE USE OF DIVERSION BERMS OR TROUGHS.

STATE OF TEXAS
DERRICK E. LORMAND
3441
LICENSED PROFESSIONAL SANITARIAN

202306007323 03/09/2023 10:32:40 AM 1/3

SUBDIVISION PLAT
(PLAT)

NAME OF SUBDIVISION:

SCHERTZ IH 35 WAREHOUSE

PLAT MAP IMAGE(S) LOCATED IN PLAT MAP RECORDS

PREPARED IN THE OFFICE OF THE COMAL COUNTY CLERK

BY: Tracy Abs
Deputy Clerk

FOR RECORDING PURPOSES

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
03/09/2023 10:32:40 AM
TRACY 3 Page(s)
202306007323

REV

Bobbie Koepp

Through Tax Year
2022

TAX CERTIFICATE

Certificate #
14831

Issued By:
Comal County Tax Office
PO Box 659480
San Antonio, TX 78265-9480

CCEO COPY

Property Information

Property ID: 78020 Geo ID: 740414000100
Legal Acres: 5.8890
Legal Desc: A-414 SUR-113 R MARTIN & J F WALKER, ACRES 5.889
Situs: 18735 N IH 35 SCHERTZ, TX 78154
DBA:
Exemptions:

Owner ID: 1016911 100.00%
BEDSTONE LLC
3736 BEE CAVES ROAD #1159
WEST LAKE HILLS, TX 78746

For Entities
COMAL COUNTY
COMAL COUNTY LATERAL ROAD
COMAL ISD
Credit

Value Information	
Improvement HS:	0
Improvement NHS:	0
Land HS:	0
Land NHS:	1,192,841
Productivity Market:	0
Productivity Use:	0
Assessed Value	1,192,841

Current/Delinquent Taxes

This is to certify that, after a careful check of the tax records of this office, the following delinquent taxes, penalties, interest and any known costs and expenses as provided by Tax Code §33.48, are due on the described property for the following taxing unit(s):

Year Entity	Taxable	Tax Due	Disc./P&I	Attorney Fee	Total Due
Totals:		**0.00**	**0.00**	**0.00**	**0.00**

Effective Date: 02/28/2023 Total Due if paid by: 02/28/2023 0.00

Tax Certificate Issued for:	Taxes Paid in 2022
COMAL COUNTY	2,968.98
COMAL COUNTY LATERAL ROAD	427.22
COMAL ISD	15,203.95

2023 PROPERTY TAXES WILL BE CALCULATED IN OCTOBER 2023 AND ARE DUE WHEN RENDERED. THE LAST DAY TO PAY BEFORE PENALTY AND INTEREST START TO ACCRUE IS JANUARY 31, 2024..

If applicable, the above-described property has/is receiving special appraisal based on its use, and additional rollback taxes may become due based on the provisions of the special appraisal (Comptroller Rule 9.3040) or property omitted from the appraisal roll as described under Tax Code Section 25.21 is not included in this certificate [Tax Code Section 31.08(b)].

Pursuant to Tax Code Section 31.08, if a person transfers property accompanied by a tax certificate that erroneously indicates that no delinquent taxes, penalties or interest are due a taxing unit on the property or that fails to include property because of its omission from an appraisal roll, the unit's tax lien on the property is extinguished and the purchaser of the property is absolved of liability to the unit for delinquent taxes, penalties or interest on the property or for taxes based on omitted property. The person who was liable for the tax for the year the tax was imposed or the property was omitted remains personally liable for the tax and for any penalties or interest.

A tax certificate issued through fraud or collusion is void.

This certificate does not clear abuse of granted exemptions as defined in Section 11.43 Paragraph(1) of the Texas Property Tax Code.

May Be Subject to Court Costs if Suit is Pending

Signature of Authorized Officer of Collecting Office

COMAL COUNTY TAX ASSESSOR-COLLECTOR

Date of Issue: 02/28/2023
Requested By: INK CIVIL
Fee Amount: 10.00
Reference #:

#20230600 7323

TXDOT NOTES:

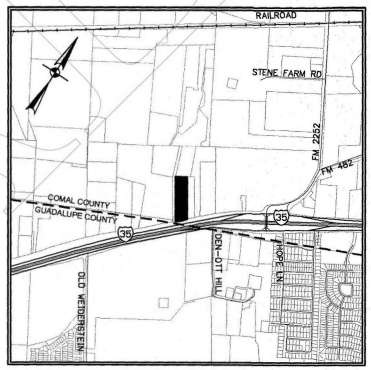
1. FOR RESIDENTIAL DEVELOPMENT DIRECTLY ADJACENT TO STATE RIGHT-OF-WAY, THE DEVELOPER SHALL BE RESPONSIBLE FOR ADEQUATE SETBACK AND/OR SOUND ABATEMENT MEASURES FOR FUTURE NOISE MITIGATION.
2. OWNER/DEVELOPER IS RESPONSIBLE FOR PREVENTING ANY ADVERSE IMPACT TO THE EXISTING DRAINAGE SYSTEM WITHIN THE HIGHWAY RIGHT-OF-WAY.
3. MAXIMUM ACCESS POINTS TO STATE HIGHWAY FROM THIS PROPERTY WILL BE REGULATED AS DIRECTED BY TXDOT'S, "ACCESS MANAGEMENT MANUAL". THE PROPERTY IS ELIGIBLE FOR MAXIMUM COMBINED TOTAL OF 1 (ONE) ACCESS POINT, BASED ON AN OVERALL PLATTED HIGHWAY FRONTAGE OF APPROXIMATELY 266.5 FEET. WHERE TOPOGRAPHY OR OTHER EXISTING CONDITIONS MAKE IT INAPPROPRIATE OR NOT FEASIBLE TO CONFORM TO THE CONNECTION SPACING INTERVALS, THE LOCATION OF REASONABLE ACCESS WILL BE DETERMINED WITH CONSIDERATION GIVEN TO TOPOGRAPHY, ESTABLISHED PROPERTY OWNERSHIPS, UNIQUE PHYSICAL LIMITATIONS, AND/OR PHYSICAL DESIGN CONSTRAINTS. THE SELECTED LOCATION SHOULD SERVE AS MANY PROPERTIES AND INTERESTS AS POSSIBLE TO REDUCE THE NEED FOR ADDITIONAL DIRECT ACCESS TO THE HIGHWAY. IN SELECTING LOCATIONS FOR FULL MOVEMENT INTERSECTIONS, PREFERENCE WILL BE GIVEN TO PUBLIC ROADWAYS THAT ARE ON LOCAL THOROUGHFARE PLANS.
4. IF SIDEWALKS ARE REQUIRED BY APPROPRIATE CITY ORDINANCE, A SIDEWALK PERMIT MUST BE APPROVED BY TXDOT, PRIOR TO CONSTRUCTION WITHIN STATE RIGHT-OF-WAY. LOCATIONS OF SIDEWALKS WITHIN STATE RIGHT-OF-WAY SHALL BE AS DIRECTED BY TXDOT.
5. ANY TRAFFIC CONTROL MEASURE (LEFT TURN LANE, RIGHT TURN LANE, SIGNAL, ETC.) FOR ANY ACCESS FRONTING A STATE MAINTAINED ROADWAY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/OWNER.

NOTES:

1. THIS LOT WILL BE PROVIDED WATER BY THE CITY OF SCHERTZ. THIS LOT WILL BE SERVICED BY AN ON-SITE SEWAGE FACILITY. ELECTRIC SERVICE WILL BE PROVIDED BY CPS ENERGY.
2. ALL BEARINGS AND COORDINATES SHOWN HEREON ARE IN GRID BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM 1983. DISTANCES SHOWN HEREON ARE SURFACE USING COMBINED SCALE FACTOR OF 1.00015.
3. MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION. MONUMENTS AND MARKERS WILL BE SET WITH 1/2" IRON PIN WITH PLASTIC CAP STAMPED "DAM #5348 PROP. COR." IMMEDIATELY AFTER COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.
4. THE ELEVATION OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE A FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE AND SHALL PREVENT WATER FROM LEAVING THE STREET.
5. NOTICE: SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF CITY ORDINANCES AND STATE LAW AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND PERMITS.
6. ACCORDING TO FLOOD INSURANCE RATE MAP, PANEL NUMBER 48091C0485F, REVISED SEPTEMBER 02, 2009, THE PROPERTY IS LOCATED IN ZONE X AND IS NOT WITHIN THE 100-YEAR FLOODPLAIN.
7. THIS PLAT ESTABLISHES A TOTAL OF 1 BUILDABLE LOT.
8. ALL OPEN SPACE, COMMON AREAS, GREENBELTS, DRAINAGE EASEMENTS OR OTHER AREAS IDENTIFIED AS PRIVATE SHALL BE THE RESPONSIBILITY OF OWNER OR OWNERS SUCCESSORS AND OR/ASSIGNS PROVIDED SUCH SUCCESSOR OR ASSIGN IS APPROVED BY THE CITY.
9. A WAIVER TO NOT CONNECT TO PUBLIC SANITARY SEWER WAS REVIEWED AND APPROVED BY THE CITY OF SCHERTZ PLANNING AND ZONING COMMISSION ON JANUARY 12, 2022. ANY ON SITE SEWAGE FACILITIES ARE TO BE PERMITTED THROUGH COMAL COUNTY.

ADJOINING PROPERTY INFORMATION		
PROPERTY #	SUBDIVISION NAME	RECORDING INFORMATION
1	N/A	DOC. 202199014392, OPRGCT
2	N/A	DOC. 20210602227, OPRCCT
3	DOUG CAMPBELL SUBDIVISION	DOC. 202106061322, OPRCCT
4	STONE CREEK RV PARK	DOC. 201206042305, MPRCCT
5	N/A	DOC. 201406010219, OPRCCT
6	N/A	DOC. 201406042727 OPRCCT
7	N/A	VOL. 356 PG. 729, OPRCCT

Line Table		
Line #	Length	Direction
L1	142.96	S46° 00' 54"W
L2	123.49	S49° 28' 47"W



LOCATION MAP

STATE OF TEXAS
COUNTY OF COMAL

I, THE UNDERSIGNED OWNER OF THE LAND SHOWN ON THIS PLAT, AND DESIGNATED HEREIN AS THE SCHERTZ IH 35 WAREHOUSE PLAT TO THE CITY OF SCHERTZ, COUNTY OF COMAL, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY SUBDIVIDE SUCH PROPERTY AND DEDICATE TO THE USE OF THE PUBLIC ALL STREETS, ALLEYS, PARKS, DRAINS, EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

OWNER:
FEDERICO MARTINEZ
MANAGING MEMBER
BEDSTONE LLC
(512)-632-9828
3736 BEE CAVES RD 1159
WEST LAKE HILLS, TX 78746

STATE OF TEXAS
COUNTY OF Comal

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS 27 DAY OF February 2023

BY Federico Martinez

Jennifer A Harrison
NOTARY PUBLIC, STATE OF TEXAS
MY COMMISSION EXPIRES: 01-04-2025

JENNIFER A HARRISON
Notary ID #130949303
My Commission Expires
January 4, 2025

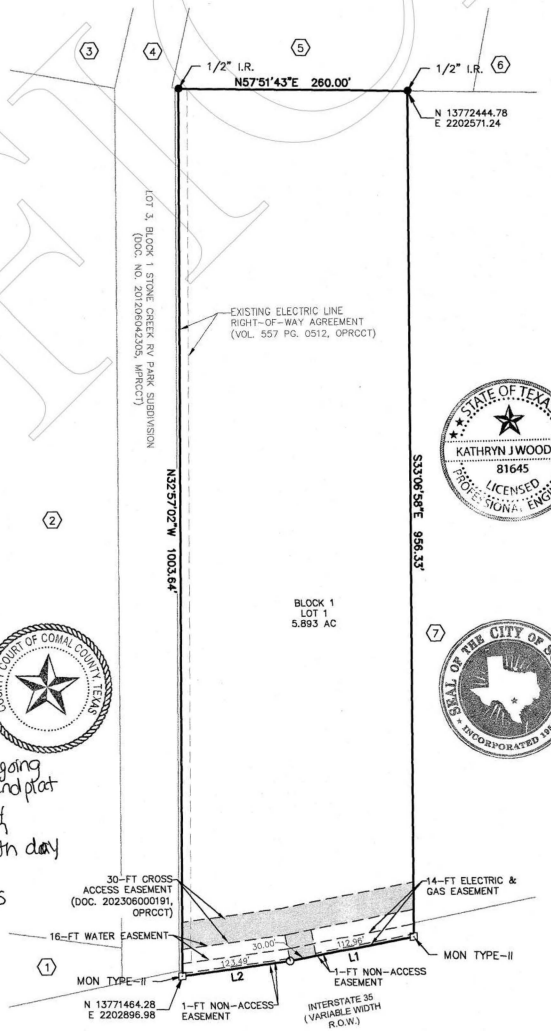
STATE OF TEXAS
COUNTY OF COMAL

I, THE UNDERSIGNED, A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, HEREBY CERTIFY THAT PROPER ENGINEERING CONSIDERATION HAS BEEN GIVEN TO THIS PLAT.

Melanie Norris
MELANIE NORRIS, P.E.
LICENSED PROFESSIONAL ENGINEER NO. 140721
INK CIVIL
(830)-358-7127
2021 W SH 46, STE. 105
NEW BRAUNFELS, TEXAS 78132

CPS NOTES:

1. THE CITY OF SAN ANTONIO, AS PART OF ITS ELECTRIC AND GAS SYSTEM, – CITY PUBLIC SERVICE BOARD (CPS ENERGY) IS HEREBY DEDICATED EASEMENTS AND RIGHT-OF-WAY FOR UTILITY, TRANSMISSION, AND DISTRIBUTION INFRASTRUCTURE AND SERVICE FACILITIES IN THE AREAS DESIGNATED ON THIS PLACE AS "ELECTRIC EASEMENT," "ANCHOR EASEMENT," "SERVICE EASEMENT," "OVERHANG EASEMENT," "UTILITY EASEMENT," "GAS EASEMENT," OR "TRANSFORMER EASEMENT" FOR THE PURPOSE OF INSTALLING, CONSTRUCTING, RECONSTRUCTING, MAINTAINING, REMOVING, INSPECTING, PATROLLING, AND ERECTING UTILITY INFRASTRUCTURE AND SERVICE FACILITIES FOR THE REASONS DESCRIBED ABOVE. CPS ENERGY SHALL ALSO HAVE THE RIGHT TO RELOCATE SAID INFRASTRUCTURE AND SERVICE FACILITIES WITHIN EASEMENT AND RIGHT-OF-WAY AREAS, TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS OVER GRANTOR'S ADJACENT LANDS FOR THE PURPOSE OF ACCESSING SUCH INFRASTRUCTURE AND SERVICE FACILITIES AND THE RIGHT TO REMOVE FROM SAID LAND ALL TREES OR PARTS THEREOF, OR OTHER OBSTRUCTIONS WHICH ENDANGER OR MAY INTERFERE WITH THE EFFICIENCY OF ELECTRIC INFRASTRUCTURE AND SERVICE FACILITIES. NO BUILDINGS, STRUCTURES, CONCRETE SLABS, OR WALLS WILL BE PLACED WITHIN EASEMENT AREAS WITHOUT AN ENCROACHMENT AGREEMENT WITH THE RESPECTIVE UTILITY.
2. ANY CPS ENERGY MONETARY LOSS RESULTING FROM MODIFICATIONS REQUIRED OF CPS ENERGY INFRASTRUCTURE AND SERVICE FACILITIES, LOCATED WITHIN SAID EASEMENTS, DUE TO GRADE CHANGES OR GROUND ELEVATION ALTERATIONS SHALL BE CHARGED TO THE PERSON OR PERSONS DEEMED RESPONSIBLE FOR SAID GRADE CHANGES OR GROUND ELEVATION ALTERATIONS.
3. THIS PLAT DOES NOT AMEND, ALTER, RELEASE, OR OTHERWISE AFFECT ANY EXISTING ELECTRIC, GAS, WATER, SEWER, DRAINAGE, TELEPHONE, CABLE TV EASEMENTS OR ANY OTHER EASEMENTS FOR UTILITIES UNLESS THE CHANGES TO SUCH EASEMENTS ARE DESCRIBED HEREON.
4. CONCRETE DRIVEWAY APPROACHES ARE ALLOWED WITHIN FIVE (5) AND TEN (10) FOOT WIDE ELECTRIC AND GAS EASEMENTS WHEN LOTS ARE SERVED BY ONLY UNDERGROUND ELECTRIC AND GAS FACILITIES.
5. ROOF OVERHANG ARE ALLOWED WITH THE FIVE (5) AND TEN (10) FOOT WIDE ELECTRIC AND GAS EASEMENTS WHEN ONLY UNDERGROUND ELECTRIC AND GAS FACILITIES ARE PROPOSED OR EXISTING WITHIN THOSE FIVE (5) AND TEN (10) FOOT WIDE EASEMENTS.



CERTIFICATION BY CITY ENGINEER:

I, THE UNDERSIGNED, CITY ENGINEER OF THE CITY OF SCHERTZ, TEXAS HEREBY CERTIFY THAT THIS SUBDIVISION PLAT CONFORMS TO ALL REQUIREMENTS OF THE SUBDIVISION REGULATION AND THE CITY AS TO WHICH THIS APPROVAL IS REQUIRED.

STATE OF TEXAS
KATHRYN J WOODLEE
81645
LICENSED PROFESSIONAL ENGINEER

Kathryn J Woodlee 3.8.23
CITY ENGINEER

PLANNING AND ZONING COMMISSION:

THIS PLAT OF SCHERTZ IH 35 WAREHOUSE PLAT HAS BEEN SUBMITTED TO AND CONSIDERED BY THE PLANNING & ZONING COMMISSION OF THE CITY OF SCHERTZ, AND HEREBY APPROVED BY SUCH COMMISSION.

BY _____ 02/08/2023
CHAIRMAN

BY _____
SECRETARY

KNOW ALL MEN BY THESE PRESENTS:

I, THE UNDERSIGNED, DREW A. MAWYER, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE UNDER MY SUPERVISION AND IN COMPLIANCE WITH CITY AND STATE SURVEY REGULATIONS AND LAWS AND MADE ON THE GROUND AND THAT THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

DREW A. MAWYER
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5348
D.A. MAWYER LAND SURVEYING, INC.
5151 W. SH46
NEW BRAUNFELS, TEXAS 78132
FIRM #10191500

STATE OF TEXAS
REGISTERED
DREW A. MAWYER
5348
PROFESSIONAL
LAND SURVEYOR

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 . ink-civil.com
TBPE FIRM F-13351

LEGEND:
R.O.W. = RIGHT-OF-WAY
OPRCCT = OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS
MPRCCT = MAP AND PLAT RECORDS OF COMAL COUNTY, TEXAS
OPRGCT = OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS
○ = 1/2" IRON PIN SET WITH CAP STAMPED "DAM #5348 PROP. COR."
● = IRON PIN FOUND
⊡ = TXDOT MONUMENT FOUND
▭ = SHARED ACCESS EASEMENT

COUNTY COURT OF COMAL COUNTY, TEXAS

CCEO COPY

State of Texas
County of Comal
I, Bobbie Koepp, do hereby certify that the foregoing instrument was filed for record in the map and plat records, doc# 202306007323 of Comal county on the 9th Day of March, 2023, at 10:32 AM
witness my hand official seal, this the 9th day of march, 2023.
County Clerk, Comal County, TEXAS
Tracy Gillis
Deputy

SEAL OF THE CITY OF SCHERTZ
INCORPORATED 1958

FINAL PLAT ESTABLISHING

SCHERTZ IH 35 WAREHOUSE

SURVEY OF A 5.893 ACRE TRACT OF LAND SITUATED IN THE MARTIN AND WALKER SURVEY NO. 113, ABSTRACT NO. 414, IN THE CITY OF SCHERTZ, COMAL COUNTY, TEXAS, BEING ALL OF A CALLED 5.889 ACRE TRACT OF LAND AS RECORDED IN DOCUMENT NO. 201906043715 OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS.

PREPARED: February 21, 2023

From: Samuel Haas
To: Hernandez, Sandra; federico@punchtualtx.com
Cc: derrick@delconenvironment.com; Ritzen, Brenda; Olvera,Brandon; Vollbrecht, David
Subject: RE: Property ID #78020 - Permit 116167
Date: Tuesday, May 2, 2023 9:51:30 AM
Attachments: image001.png

Good morning,

The City of Schertz shows that this plat has been recorded with Comal County (Doc# 202306007323). It is complaint with our subdivision requirements.

Thanks,

Samuel Haas
Senior Planner
Planning & Community Development
City of Schertz
1400 Schertz Parkway
Schertz, TX 78154
Office: 210-619-1783
Schertz.com

From: Hernandez, Sandra <rabsah@co.comal.tx.us>
Sent: Tuesday, May 2, 2023 9:21 AM
To: federico@punchtualtx.com
Cc: Samuel Haas <shaas@schertz.com>; derrick@delconenvironment.com; Ritzen, Brenda <rabbjr@co.comal.tx.us>; Olvera,Brandon <Olverb@co.comal.tx.us>; Vollbrecht, David <vollbd@co.comal.tx.us>
Subject: Property ID #78020 - Permit 116167

RE: 18735 North IH 35

Good morning Mr. Martinez,

We received a septic permit application in our office for the referenced property yesterday. This property shows to be in the jurisdiction of the City of Schertz, so we are including the city in this email. Please be advised that you will need to contact Sam Hass (210-619-1750) with the City of Schertz to verify this tract is compliant with their subdivision regulations and provide confirmation to our office that indicates this tract is compliant.

Thank you,

Sandra Ann Hernandez
Subdivision Coordinator
Comal County Engineer's Office
195 David Jonas Drive | 830-608-2090 | www.cceo.org

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER

Insider Title Co. GF# 19-1400-C

GENERAL WARRANTY DEED

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF COMAL §

That WLW LLC, a Texas limited liability company ("Grantor"), for and in consideration of the sum of TEN DOLLARS ($10.00) and other valuable consideration to the undersigned paid by BEDSTONE LLC, a Texas limited liability company ("Grantee"), the receipt of which is hereby acknowledged, has GRANTED, SOLD AND CONVEYED, and by these presents does GRANT, SELL AND CONVEY unto Grantee the following described real property (the "Property"), to-wit:

> Being 5.889 acres of land, more or less, in the MARTIN & WALKER SURVEY NO. 113, ABSTRACT 414, situated in Comal County, Texas, being that same tract conveyed to WLW, LLC in instrument recorded in Document No. 201606042768, of the Official Public Records of Comal County, Texas and as more particularly described by metes and bounds in Exhibit "A" attached hereto.

TO HAVE AND TO HOLD the above described premises, together with all and singular the rights and appurtenances thereto in anywise belonging unto Grantee, Grantee's heirs, executors, successors and assigns forever; and Grantor does hereby bind Grantor, Grantor's heirs, executors, successors and assigns, to WARRANT AND FOREVER DEFEND all and singular the said premises unto Grantee, Grantee's heirs, executors, successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof.

This conveyance is made subject to all and singular the restrictions, easements, conditions, reservations, exceptions and covenants, if any, applicable to and enforceable against the Property as shown by the records of Comal County, Texas.

Current ad valorem taxes on the Property having been prorated, the payment thereof is assumed by Grantee.

[SIGNATURE PAGE FOLLOWS]

EXECUTED effective as of the 3rd day of December, 2019.

GRANTOR:

WLW, LLC
a Texas limited liability company

By: _____
Elijah Woolsey, Managing Member

By: _____
Cole Leinneweber, Managing Member

By: _____
Blake Warren, Managing Member

Address of Grantee:

3730 Bee Caves Road #1159
West Lake Hills, TX 78746

STATE OF TEXAS §
§
COUNTY OF Comal §

This instrument was acknowledged before me this 3rd day of December, 2019 by Elijah Woolsey, Cole Leinneweber, and Blake Warren, Managing Members of WLW, LLC, a Texas limited liability company, on behalf of said limited liability company.

_____
Notary Public, State of Texas

CYNTHIA A. CARROLL
My Notary ID # 5863336
Expires June 27, 2022

AFTER RECORDING, RETURN TO:

CORRIDOR TITLE, LLC

GF No. 19-1400-C

Ace Surveying, Inc.
RHONDA K. BUTLER
REGISTERED PROFESSIONAL
LAND SURVEYOR #5409
FIRM #10160700

EXHIBIT "A"

P. O. BOX 597
DEVINE, TEXAS 78016
Phone: 830-334-7264
Fax: 830-665-5796
Email: acesurveying@sbcglobal.net

5.889 ACRES
COMAL COUNTY, TEXAS

A field note description of a 5.889 acre tract of land situated in the City of Schertz, Comal County, Texas, out of the Martin & Walker Survey 113, Abstract 414, being the same tract of land called 5.851 acres and described in deed recorded in Document #200906018773 of the Official Public Records of Comal County, Texas and being more particularly described by metes and bounds as follows: (Note: All iron pins set are ½" rebar with pink plastic cap stamped "RKB 5409", Basis of bearing is WGS 84)

Beginning at a TxDot Type II monument found for the south corner of the herein described tract and said 5.851 acres, in the northwest right-of-way line of Interstate Highway 35;

Thence N 32°35'05" W, along the southwest line of the herein described tract and said 5.851 acres and a northeast line of said Lot 3, at 4.77 feet pass a TxDot Type II monument found in the northwest right-of-way line of said Interstate Highway 35 and an east corner of Lot 3, Block 1 of the Stone Creek RV Park Subdivision according to plat recorded in Document #201206042305 of the Official Public Records of Comal County, Texas and continuing on the same course for a total distance of 1003.80 feet to an iron pin found for the west corner of the herein described tract and said 5.851 acre tract, an angle point of said Lot 3 and the south corner of a 5.404 acre tract of land described in deed recorded in Volume 739, Page 804;

Thence N 58°15'23" E, 259.99 feet along the northwest line of the herein described tract and said 5.851 acre tract and the southeast line of said 5.404 acre tract to an iron pin found for the north corner of the herein described tract and said 5.851 acres and the west corner of a 3.527 acre tract of land described in deed recorded in Volume 356, Page 729 of the Official Public Records of Comal County, Texas;

Thence S 32°44'39" E, along the northeast line of the herein described tract and said 5.851 acres and the southwest line of said 3.527 acres, at 941.47 feet pass an TxDot Type II monument found for the south corner of said 3.527 acre tract, in the northwest right-of-way line of aforesaid Interstate Highway 35, and continuing on the same course for a total distance of 955.39 feet to a nail found in concrete for the east corner of the herein described tract and said 5.851 acres and the northwest right-of-way line of said Interstate Highway 35;

Thence along the southeast boundary of the herein described tract and said 5.851 acres and the northwest right-of-way line of said Interstate Highway 35 the following 2 calls:

1) S 46°10'18" W, 142.98 feet to a nail found in concrete for an angle point;
2) S 49°38'12" W, 123.52 feet to the place of beginning and containing 5.889 acres of land according to a survey made on the ground on April 1, 2016 by Ace Surveying, Inc.

Rhonda K. Butler
Registered Professional
Land Surveyor #5409
File: I35 K Wing & E Woolsey
Corresponding Drawing Prepared

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
12/04/2019 01:04:12 PM
TERRI 4 Pages(s)
201906043715

Bobbie Koepp

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

Inspections Division

Inspection Report

Report Issued:	August 22, 2024	**Inspection Result:**	PARTIAL PASS
Inspection Type:	Plumbing Yard Line Inspection		
Permit Number:	PRNR202300488		
Permit Type:	Commercial/Non-Residential - New		
Property Address:	18735 IH 35 N, SCHERTZ, TX 78154		
Subdivision:	SCHERTZ IH 35 WAREHOUSE, 1, 1		
Contractors:	General Contractor - GoAllStar LLc 907 Cedar Glen Electrical Contractor - ICM SERVICES INC DBA ION ELECTRICAL SERVICES 409 W. Front St. #100-213 Plumbing Contractor - JAMZ Plumbing Services 4011 Native Oak Dr.		

Inspector Comments:

Plumbing yardline for sewer utility pass. Marked off on plans.

8/22/2024 9:31 am

Corrections:

If you have any questions or concerns, please contact me at (210) 619-1767 or by email at wcaraway@schertz.com.

Sincerely,

Waylin Caraway

Waylin Caraway

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

Inspections Division

Inspection Report

Report Issued:	August 22, 2024	**Inspection Result:**	PARTIAL PASS
Inspection Type:	Plumbing Yard Line Inspection		
Permit Number:	PRNR202300489		
Permit Type:	Commercial/Non-Residential - New		
Property Address:	18735 IH 35 N, SCHERTZ, TX 78154		
Subdivision:	SCHERTZ IH 35 WAREHOUSE, 1, 1		
Contractors:	General Contractor - Punctual LLC 3736 Bee Caves Rd 1243 Electrical Contractor - ICM SERVICES INC DBA ION ELECTRICAL SERVICES 409 W. Front St. #100-213 Plumbing Contractor - JAMZ Plumbing Services 4011 Native Oak Dr.		

Inspector Comments:

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8/22/2024 9:31 am

Corrections:

If you have any questions or concerns, please contact me at (210) 619-1767 or by email at wcaraway@schertz.com.

Sincerely,

Waylin Caraway

Waylin Caraway

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

Inspections Division

Inspection Report

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Sincerely,

Waylin Caraway

Waylin Caraway

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

Inspections Division

Inspection Report

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Permit Type:	Commercial/Non-Residential - New		
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Subdivision:	SCHERTZ IH 35 WAREHOUSE, 1, 1		
Contractors:	General Contractor - Punctual LLC 3736 Bee Caves Rd 1243 Electrical Contractor - ICM SERVICES INC DBA ION ELECTRICAL SERVICES 409 W. Front St. #100-213 Plumbing Contractor - JAMZ Plumbing Services 4011 Native Oak Dr.		

Inspector Comments:

Plumbing yardline for sewer utility pass. Marked off on plans.

8/22/2024 9:31 am

Corrections:

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Sincerely,

Waylin Caraway

Waylin Caraway

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

Inspections Division

Inspection Report

Report Issued: August 30, 2024 **Inspection Result:** PARTIAL PASS

Inspection Type: Plumbing Yard Line Inspection

Permit Number: PRNR202300489

Permit Type: Commercial/Non-Residential - New

Property Address: 18735 IH 35 N, SCHERTZ, TX 78154

Subdivision: SCHERTZ IH 35 WAREHOUSE, 1, 1

Contractors: General Contractor - Punctual LLC 3736 Bee Caves Rd 1243
Electrical Contractor - ICM SERVICES INC DBA ION ELECTRICAL SERVICES 409 W. Front St. #100-213
Plumbing Contractor - JAMZ Plumbing Services 4011 Native Oak Dr.

Inspector Comments:

Plumbing yard line for sewer line partial pass for Phase 2 master plan was signed and dated. JP#I-4243

Corrections:

If you have any questions or concerns, please contact me at (210) 619-1758 or by email at jperez@schertz.com.

Sincerely,

Jerry Perez
Building Inspector, #I-4243

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

Inspections Division

Inspection Report

Report Issued:	August 30, 2024	**Inspection Result:**	PARTIAL PASS
Inspection Type:	Plumbing Yard Line Inspection		
Permit Number:	PRNR202300488		
Permit Type:	Commercial/Non-Residential - New		
Property Address:	18735 IH 35 N, SCHERTZ, TX 78154		
Subdivision:	SCHERTZ IH 35 WAREHOUSE, 1, 1		
Contractors:	General Contractor - GoAllStar LLc 907 Cedar Glen Electrical Contractor - ICM SERVICES INC DBA ION ELECTRICAL SERVICES 409 W. Front St. #100-213 Plumbing Contractor - JAMZ Plumbing Services 4011 Native Oak Dr.		

Inspector Comments:

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Corrections:

If you have any questions or concerns, please contact me at (210) 619-1758 or by email at jperez@schertz.com.

Sincerely,

Jerry Perez
Building Inspector, #I-4243

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

Inspections Division

Inspection Report

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Sincerely,

Jerry Perez
Building Inspector, #I-4243

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

Inspections Division

Inspection Report

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JP#I-4243

Corrections:

If you have any questions or concerns, please contact me at (210) 619-1758 or by email at jperez@schertz.com.

Sincerely,

Jerry Perez
Building Inspector, #I-4243

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

Inspections Division

Inspection Report

Report Issued:	September 19, 2024	**Inspection Result:**	PARTIAL PASS
Inspection Type:	Plumbing Yard Line Inspection		
Permit Number:	PRNR202300491		
Permit Type:	Commercial/Non-Residential - New		
Property Address:	18735 IH 35 N, SCHERTZ, TX 78154		
Subdivision:	SCHERTZ IH 35 WAREHOUSE, 1, 1		
Contractors:	General Contractor - Punctual LLC 3736 Bee Caves Rd 1243 Electrical Contractor - ICM SERVICES INC DBA ION ELECTRICAL SERVICES 409 W. Front St. #100-213 Plumbing Contractor - JAMZ Plumbing Services 4011 Native Oak Dr.		

Inspector Comments:

main water line inspection from the city right way at the meter to the building

all 2" lines under air test.

ok to cover up

*** make sure to have City STAMPED approved city plans on site, plans on site match what contractor Chris had on site but not the approved city set. ***

aa i3843 09/19/24 300pm

Corrections:

If you have any questions or concerns, please contact me at (210) 619-1761 or by email at aalcala@schertz.com.

Sincerely,

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

Inspections Division

Inspection Report

Report Issued:	September 19, 2024	**Inspection Result:**	PARTIAL PASS
Inspection Type:	Plumbing Yard Line Inspection		
Permit Number:	PRNR202300489		
Permit Type:	Commercial/Non-Residential - New		
Property Address:	18735 IH 35 N, SCHERTZ, TX 78154		
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aa i3843 09/19/24 300pm

Corrections:

If you have any questions or concerns, please contact me at (210) 619-1761 or by email at aalcala@schertz.com.

Sincerely,

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

Inspections Division

Inspection Report

Report Issued:	September 19, 2024	**Inspection Result:**	PARTIAL PASS
Inspection Type:	Plumbing Yard Line Inspection		
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Subdivision:	SCHERTZ IH 35 WAREHOUSE, 1, 1		
Contractors:	General Contractor - GoAllStar LLc 907 Cedar Glen Electrical Contractor - ICM SERVICES INC DBA ION ELECTRICAL SERVICES 409 W. Front St. #100-213 Plumbing Contractor - JAMZ Plumbing Services 4011 Native Oak Dr.		

Inspector Comments:

main water line inspection from the city right way at the meter to the building

aa i3843 09/19/24 300pm

Corrections:

If you have any questions or concerns, please contact me at (210) 619-1761 or by email at aalcala@schertz.com.

Sincerely,

Armando Alcala

SCHERTZ | COMMUNITY SERVICE OPPORTUNITY

Inspections Division

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aa i3843 09/19/24 300pm

Corrections:

If you have any questions or concerns, please contact me at (210) 619-1761 or by email at aalcala@schertz.com.

Sincerely,

REVISED
8:37 am, Jun 30, 2023

Drainfield Design Calculations

Drainfield Calculation

Minimum Required Application Area = Q / Ra = 12000 SF

Emitters are assumed to achieve 4 square feet of application area each.

Thus, Required Number of Emitters = 3000 Emitters

Proposed Number of Emitters = 3000 Emitters = 12000 SF

The following calculations are derived from the zone with the greatest pump requirement. Zone A has the greatest elevation gradient and the longest distance and is demonstrated in the charts below.

Effluent Pump Performance Requirements - Zone C

Flow Rate per Emitter = 0.01 Gallons Per Minute

(Refer to emitter tubing specifications for this flow rate determination)

Flow Rate of Emitters = 30 GPM

It is recommended to include an additional 1.6 gallons per minute for each emitter tubing connecting to a return line in order to achieve an appropriate flushing velocity

Flow Rate per Return Line Connection = 1.6 GPM

Number of Return Line Connections = 5 Connections

Flow Rate for Connections = 8 GPM

Required Flow Rate = 15.5 GPM

VOID

STATE OF TEXAS
DERRICK E. LORMAND
3441
REGISTERED
PROFESSIONAL SANITARIAN

REVISED
8:37 am, Jun 30, 2023

Total System Head = Friction Head + Elevation Head + Operating Head

Pipe Friction Head Determination	Pipe Length (Feet)	Pipe Diameter (Inches)	Flow Rate (GPM)	Head Loss (Feet)
Supply Pipe	415	1.5	15.5	5.5
	62	1.5	12.3	0.7
	1	1.5	9.25	0.1
	74	1.5	5.85	0.2
	7	1.5	3.2	0.1
			Friction Loss in Supply Pipe =	6.6
Return Pipe	12	1.25	1.6	0.1
		1.25	3.2	0.1
	3	1.25	4.8	0.1
	62	1.25	6.4	0.4
	20	1.25	8	4.2
			Friction Loss in Return Pipe =	4.9
			Total Pipe Friction Loss =	11.5
			Add 20% for joints, elbows, tees, etc. =	13.8

VOID

Total Pipe Friction Head =	13.8	Feet	
Elevation Head Loss =	15	Feet	
Flow Meter Head Loss =	3	Feet	
Indexing Valve Head Loss =	8	Feet	
Operating Head =	70	Feet	
Total System Head =	109.8	Feet	(47.2 psi)

Calculated System Work Point =		
	15.5	GPM Operating At
	109.8	Feet of Head

STATE OF TEXAS
DERRICK E. LORMAND
3441
REGISTERED
PROFESSIONAL SANITARIAN

Site Evaluation Form

Address: 18735 North IH 35, Schertz, Texas
Subdivision: _____ Section: _____ Lot: _____ Blk: _____
Or, Survey: R. Martin and J. F. Martin Survey Number 113 Abstract: 414 Acres: 5.889

Slope: Flat (Under 2%) [ ] Slight (2% to 15%) [X] Severe (Over 15%) [ ]

Site Drainage: Poor [ ] Adequate [ ] Good [X] Other [ ]

Outside 100-Year Flood Plain [X] In 100 Year Flood Plain [ ] In 100 Year Flood Plain/Floodway [ ]

Water Supply: Public [X] Community [ ] Private [ ]
Other wells within 100 feet of property lines: Yes [ ] No [ ] (If yes, shown on site plan)

Soil Evaluation

Profile Hole Number 1

Depth	Texture (USDA)	Description
0" – 5"	Class IV	Gray to brown silty clay with surface grass roots
5" - 30"	Class IV	Dark gray silty clay
@ 30"	Termination	

Profile Hole Number 2

Depth	Texture (USDA)	Description
0" – 5"	Class IV	Gray to brown silty clay with surface grass roots
5" - 30"	Class IV	Dark gray silty clay
@ 30"	Termination	

Indication of Seasonal Water Table:	YES [ ]	NO [X]
If yes, at what depth: None observed		
Property Located Within Edwards Aquifer Recharge Zone:	YES [ ]	NO [X]
Indication of Recharge Features within 150 feet:	YES [ ]	NO [X]
Is Soil Suitable for a Standard System	YES [ ]	NO [X]

Application Rate: 0.10 Gal/SF*Day

I, Derrick E. Lormand, a Registered Professional Sanitarian and Licensed Site Evaluator, conducted the site evaluation at the referenced location. I certify that these results are true and correct for the property evaluated.

Date of Site Visit: December 14, 2022

Derrick E. Lormand, R.S., OS# 0026727

DELCON
FOUNDED 1997
13508 Flat Top Ranch Road
Austin, Texas 78732
Office/Fax: (512) 583-1397
www.DelconEnvironmental.com

REVISED
8:36 am, Jun 30, 2023

DELCON ENVIRONMENTAL SYSTEMS, LLC

June 13, 2023

Comal County Engineer's Office
195 David Jonas Drive
New Braunfels, Texas 78132
Attn: Ms. Brenda Ritzen, Environmental Health Coordinator

Re: **Permit Number 116167**
18735 North Interstate Highway 35, Schertz, Texas 78154
Lot 1, Block 1, Schertz IH 35 Warehouse, being 2.289 acres of land in the R. Martin and J. F. Martin Survey Number 3, Abstract 1
Comal CAD ID: 7

VOID

Ms. Ritzen,

Thank you for your review comments received via e-mail on May 11 regarding the septic design submittal for the above referenced project. The following responses correspond in numerical order to the items listed in your review:

1. Yes, I have been informed that the land has been platted. The design now describes the land as Lot 1, Block 1, Schertz IH 35 Warehouse.
2. The maintenance agreement has been adjusted to reflect a start date of the date for the License to Operate.
3. The future developments planned for this property have been removed from the updated site plan as instructed.
4. Dimensions for the emitter tubing lengths have been added to the updated site plan as requested.
5. The water line intersection detail specifies the additional protective measures required to provide equivalent protection from cross-contamination. This detail is derived directly from the requirements detailed in TAC Chapter 290.
6. I added the minimum five-foot dimensions from the property line to the septic components. This requirement is also stipulated in the *Setback Requirements* table. Additionally, I added an eleven-foot minimum dimension to the south property line in order to provide the required one-foot setback to the easement.
7. Replacement areas for both the treatment train and a full-size drainfield have been designated on the updated site plan included with this response.
8. I have signed all pages within this revised/response design.
9. A flow meter was shown in the original design on the supply line exiting the pump tank. Meter readings will be provided to your office as required.
10. I have elected to reduce the assumed wastewater influent strength to below 300 mg/L. I have seen some indicators recently that would suggest the original wastewater strength assumption of 400 mg/L was perhaps overly conservative. As a result, I don't think this design would be considered "high strength" nor would the treatment process be considered "non-standard".

REVISED
8:36 am, Jun 30, 2023

Please feel free to contact me with any questions or comments.

Respectfully,

Derrick E. Lormand, R.S.
Managing Partner
Delcon Environmental Systems, LLC

VOID

DELCON
FOUNDED 1997
13508 Flat Top Ranch Road
Austin, Texas 78732
Office/Fax: (512) 583-1397
www.DelconEnvironmental.com

REVISED
8:36 am, Jun 30, 2023

DELCON ENVIRONMENTAL SYSTEMS, LLC

February 23, 2023

Comal County Engineer's Office
195 David Jonas Drive
New Braunfels, Texas 78132
Attn: Ms. Kathy Griffin

Re: Proposed Septic System for Bedstone Office/Warehouse Development
18735 North Interstate Highway 35, Schertz, Texas 78154
Lot 1, Block 1, Schertz IH 35 Warehouse (formerly 5.889 acres of land in the R. Martin and J. F. Martin Survey Number 113, Abstract 414)
Comal CAD ID: 78020

Ms. Griffin,

The following are calculations and design drawings for an aerobic treatment unit with subsurface drip emitter disposal to serve a proposed office/warehouse development located at the above referenced address. This proposed system will serve the first phase of this development which will contain 14 proposed office/warehouse units designed assuming an occupancy of one person for approximately every 800 square feet of building space plus adequate allowance for visitor use. This translates to perhaps 6 occupants per unit. Wastewater flow rates and wastewater strengths are described in detail on the following pages. It is important to note that no industrial waste will enter this proposed on-site sewage facility. A recent site evaluation revealed substantial Class IV soils thus the drainfield is sized to achieve a long-term soil loading rate of 0.10 gpd/sf as required for this soil texture. The system has been sized in accordance with Chapter 285 of the TCEQ OSSF Rule, December 2016, and the additional criteria of Comal County.

VOID

For your reference, I have included a summary of the system components:

- One 2,000-gallon, two-compartment concrete septic tank with effluent filter
- One Delta brand E200S aerobic treatment unit
- Duplex 1/2 horsepower effluent pumps with floats and controls for demand dosing
- One K-Rain Hydrotek indexing valve with four outlet zones
- 6,000 linear feet of subsurface drip emitter tubing developing 12,000 square feet of net application area

Please feel free to contact me with any questions or comments.

Respectfully,

Derrick E. Lormand, R.S.
Managing Partner
Delcon Environmental Systems, LLC

STATE OF TEXAS
DERRICK E. LORMAND
3441
REGISTERED
PROFESSIONAL SANITARIAN

REVISED
8:36 am, Jun 30, 2023

Site Evaluation Form

Address: 18735 North IH 35, Schertz, Texas
Subdivision: Schertz IH 35 Warehouse Section: Lot: 1 Blk: 1
Or, Survey: R. Martin and J. F. Martin Survey Number 113 Abstract: 414 Acres: 5.889

Slope: Flat (Under 2%) [ ] Slight (2% to 15%) [X] Severe (Over 15%) [ ]

Site Drainage: Poor [ ] Adequate [ ] Good [X] Other [ ]

Outside 100-Year Flood Plain [X] In 100 Year Flood Plain [ ] In 100 Year Flood Plain/Floodway [ ]

Water Supply: Public [X] Community [ ] Private [ ]
Other wells within 100 feet of property lines: Yes [ ] No [ ] (If yes, shown on site plan)

Soil Evaluation

VOID

Profile Hole Number 1

Depth	Texture (USDA)	Description
0" – 5"	Class IV	Gray to brown silty clay with surface grass roots
5" - 30"	Class IV	Dark gray silty clay
@ 30"	Termination	

Profile Hole Number 2

Depth	Texture (USDA)	Description
0" – 5"	Class IV	Gray to brown silty clay with surface grass roots
5" - 30"	Class IV	Dark gray silty clay
@ 30"	Termination	

Indication of Seasonal Water Table: YES [ ] NO [X]
If yes, at what depth: None observed
Property Located Within Edwards Aquifer Recharge Zone: YES [ ] NO [X]
Indication of Recharge Features within 150 feet: YES [ ] NO [X]
Is Soil Suitable for a Standard System YES [ ] NO [X]
Application Rate: 0.10 Gal/SF*Day

I, Derrick E. Lormand, a Registered Professional Sanitarian and Licensed Site Evaluator, conducted the site evaluation at the referenced location. I certify that these results are true and correct for the property evaluated.

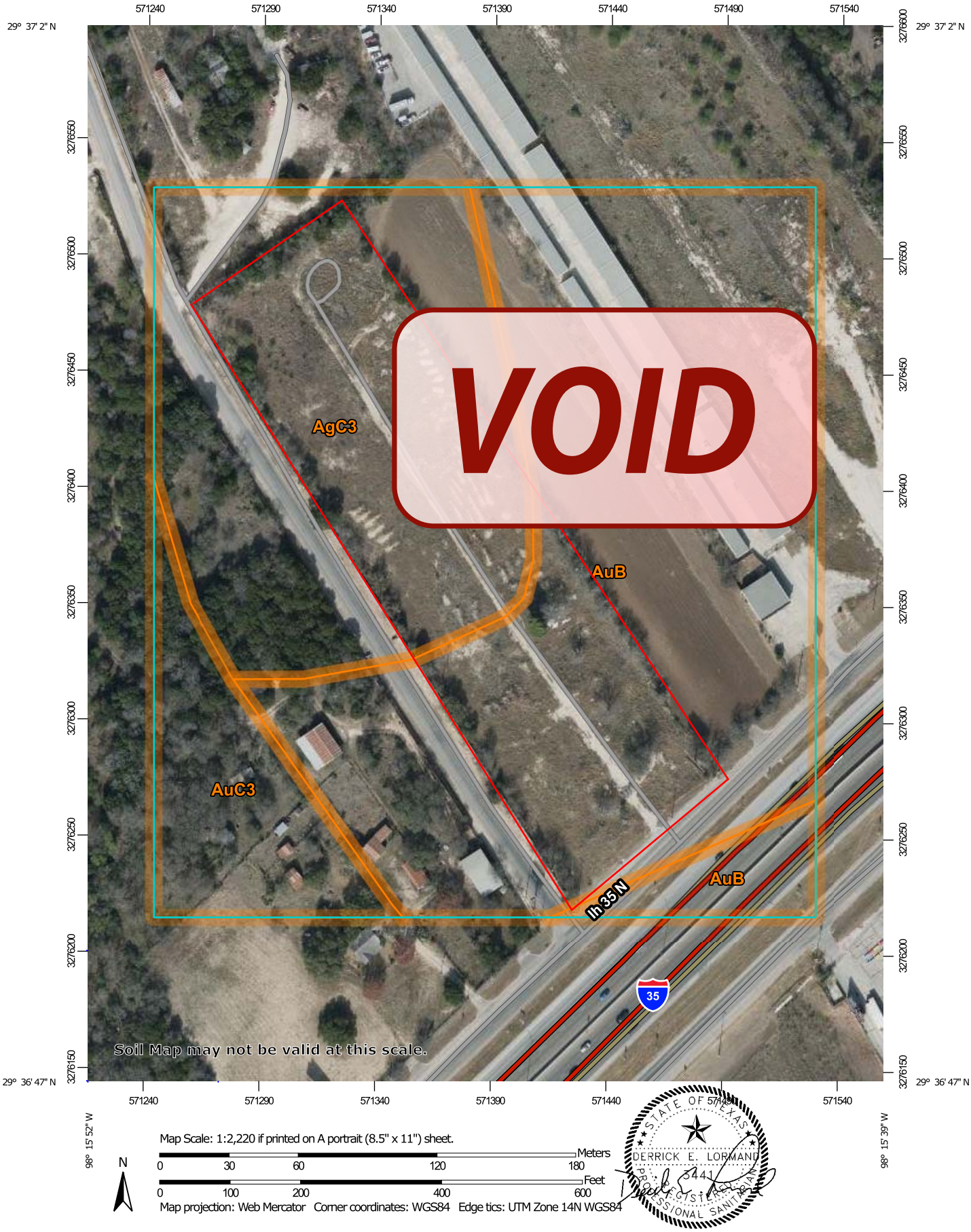
Date of Site Visit: December 14, 2022

STATE OF TEXAS
DERRICK E. LORMAND
3441
REGISTERED
PROFESSIONAL SANITARIAN

Derrick E. Lormand, R.S., OS# 0026727

REVISED
8:36 am, Jun 30, 2023

Soil Map—Comal and Hays Counties, Texas, and Guadalupe County, Texas



Map Scale: 1:2,220 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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

STATE OF TEXAS
DERRICK E. LORMAND
5441
REGISTERED PROFESSIONAL SANITARIAN

REVISED
8:36 am, Jun 30, 2023

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AgC3	Altoga silty clay, 2 to 5 percent slopes, eroded	7.5	33.7%
AuB	Austin-Castephen complex, 1 to 3 percent slopes	11.9	53.6%
AuC3	Austin-Castephen complex, 2 to 5 percent slopes, eroded	2.1	9.4%
Subtotals for Soil Survey Area		**21.6**	**96.8%**
Totals for Area of Interest		**22.3**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AuB	Austin silty clay, 1 to 3 percent slopes	0.7	3.2%
Subtotals for Soil Survey Area		**0.7**	**3.2%**
Totals for Area of Interest		**22.3**	**100.0%**

VOID

STATE OF TEXAS
DERRICK E. LORMAND
5441
REGISTERED
PROFESSIONAL SANITARIAN

REVISED
8:36 am, Jun 30, 2023

Comal and Hays Counties, Texas

AgC3—Altoga silty clay, 2 to 5 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2ssgr
Elevation: 450 to 830 feet
Mean annual precipitation: 36 to 37 inches
Mean annual air temperature: 66 to 68 degrees F
Frost-free period: 221 to 278 days
Farmland classification: Not prime farmland

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Map Unit Composition

Altoga, eroded, and similar soils: 82 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Altoga, Eroded

Setting

Landform: Stream terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous clayey alluvium derived from mudstone

Typical profile

Ap - 0 to 7 inches: silty clay
Bk - 7 to 36 inches: silty clay
BCk - 36 to 60 inches: silty clay

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 75 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R086AY007TX - Southern Clay Loam

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Hydric soil rating: No

Minor Components

Heiden, eroded

Percent of map unit: 8 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Microfeature of landform position: Linear gilgai
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R086AY008TX - Northern Eroded Blackland
Hydric soil rating: No

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Data Source Information

Soil Survey Area: Comal and Hays Counties, Texas
Survey Area Data: Version 19, Aug 24, 2022

Soil Survey Area: Guadalupe County, Texas
Survey Area Data: Version 18, Aug 24, 2022

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Comal and Hays Counties, Texas

AuB—Austin-Castephen complex, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: dq26
Elevation: 500 to 1,200 feet
Mean annual precipitation: 29 to 32 inches
Mean annual air temperature: 63 to 68 degrees F
Frost-free period: 230 to 250 days
Farmland classification: Prime farmland if irrigated and not statewide importance

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Map Unit Composition

Austin and similar soils: 60 percent
Castephen and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Austin

Setting

Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Residuum weathered from chalk

Typical profile

H1 - 0 to 11 inches: silty clay
H2 - 11 to 24 inches: silty clay
H3 - 24 to 34 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R086AY007TX - Southern Clay Loam

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Hydric soil rating: No

Description of Castephen

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from austin chalk formation

Typical profile

H1 - 0 to 18 inches: silty clay loam
H2 - 18 to 20 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 8 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: D
Ecological site: R086AY002TX - Southern Chalky Ridge
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 10 percent
Hydric soil rating: No

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Data Source Information

Soil Survey Area: Comal and Hays Counties, Texas
Survey Area Data: Version 19, Aug 24, 2022

Soil Survey Area: Guadalupe County, Texas
Survey Area Data: Version 18, Aug 24, 2022

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Treatment Calculations

6/13/2023
Bedstone Warehouses

Design Basis
Per The Texas Commission on Environmental Quality's (TCEQ)
Health and Safety Code Chapter 366, On-Site Sewage Disposal Systems, September 11, 2007
On-Site Sewage Facilities, Title 30, TAC Chapter 285, Effective December 2016

Proposed Office/Warehouse Development

Expected occupants per unit =	6	@	12	GPD Each
=	72	Gallons per day per unit		
Number of customers per unit =	2	@	4	GPD Each
=	8	Gallons per day per unit		
=	80	Gallons per day per unit		
Proposed number of units =	14			
=	1120	Gallons Per Day		

(Per TCEQ OSSF Title 30 TAC Chapter 285, Table III)

Proposed Design Flow Rate, Q = 1,200 Gallons Per Day (GPD)

Long-Term Soil Loading Rate, Ra 0.1 GPD/SF
(Refer to Site Evaluation for soil loading rate determination)

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Treatment Tank Determination

Assumed Wastewater Strength = 299 mg/L
Flow Rate = 1,200 Gallons Per Day (GPD)
BOD5 = 2.99 Pounds Per Day

Per Delta technical data each treatment pod (or block) may treat 1.25 pounds per day of waste.

Number of Blocks Required =	2.39	Blocks
Proposed number of Blocks =	4	Blocks

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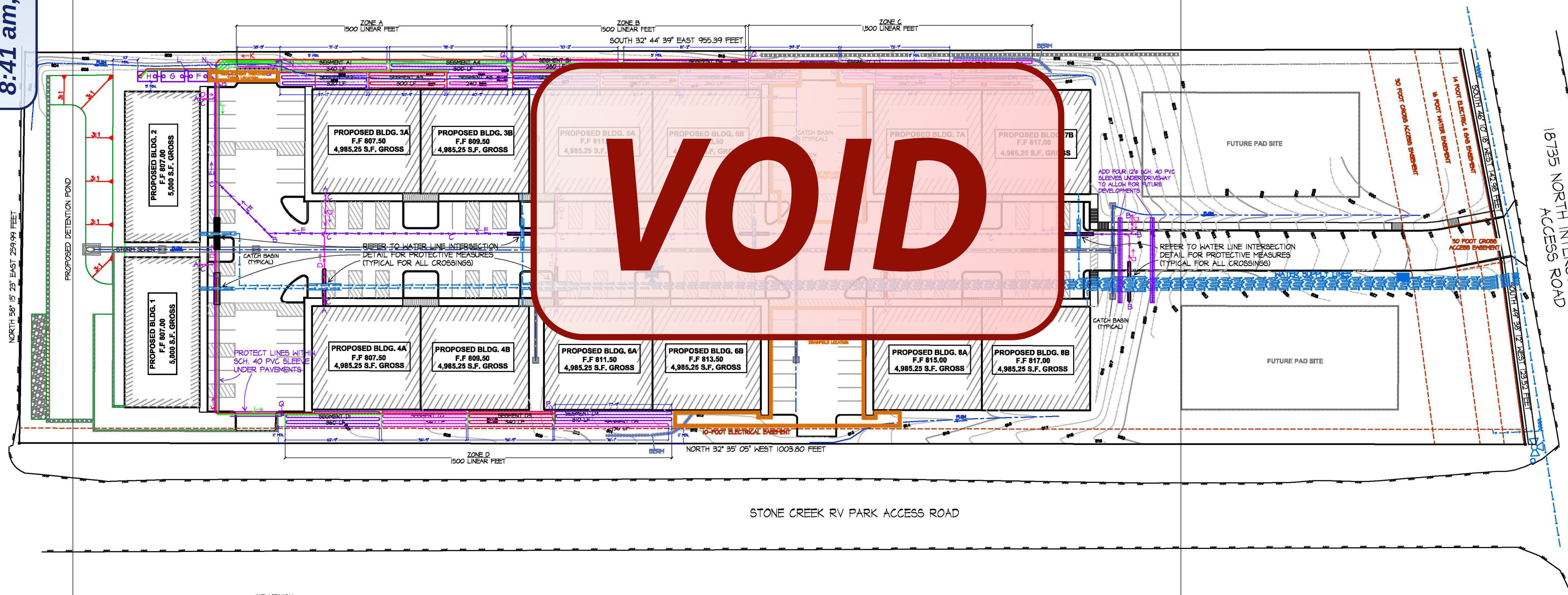

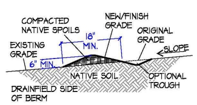

RAINWATER DIVERSION BERM
NOT TO SCALE

LEGEND:
A. SEWAGE STUB-OUT
B. ONE-WAY CLEAN-OUT
C. TWO-WAY CLEAN-OUT
D. 4"Φ SCH. 40 PVC SEWER LINE
E. 6"Φ SCH. 40 PVC SEWER LINE
F. 2,000-GALLON 2/C SEPTIC TRASH TANK
G. DELTA E200S AEROBIC TREATMENT UNIT
H. 2,000-GALLON PUMP TANK
J. 1 1/2"Φ SCH. 40 PVC SUPPLY LINE
K. 1 1/4"Φ SCH. 40 PVC RETURN LINE
L. FLOW METER WITHIN FIELD BOX
M. K-RAIN INDEXING VALVE MODEL 4404-RCW
N. ONE-WAY "SWING" STYLE CHECK VALVE
P. VACUUM BREAKER VALVE
Q. PRESSURE REGULATOR WITHIN FIELD BOX

DRAINFIELD SHALL CONSIST OF A TOTAL OF 6,000 LINEAR FEET OF EMITTER TUBING CONTAINING 3,000 EMITTERS DEVELOPING 12,000 SQUARE FEET OF APPLICATION AREA.

SHEET 1.1

SETBACK REQUIREMENTS:

INSTALLER SHALL ACHIEVE ALL MINIMUM REQUIRED SEPARATION DISTANCES AS SET FORTH BY THE TCEQ IN TITLE 30, TAC CHAPTER 285, EFFECTIVE DECEMBER 2016, AND ANY ADDITIONAL LOCAL REQUIREMENTS.

MINIMUM SEPARATION FROM TANK: 5 FEET TO FOUNDATIONS, SWIMMING POOLS AND PROPERTY LINES, ONE FOOT TO EASEMENTS, 5 FEET TO DRAINAGE EASEMENTS AND GRADE BREAKS, 10 FEET TO WATER LINES, 50 FEET TO EXISTING OR PROPOSED WATER WELLS.

MINIMUM SEPARATION FROM DRAINFIELD: ONE FOOT TO FOUNDATIONS, EASEMENTS AND SWIMMING POOLS, 5 FEET TO PROPERTY LINES, 10 FEET TO GRADE BREAKS, 10 FEET TO WATER LINES, 100 FEET TO EXISTING OR PROPOSED WATER WELLS.

NO PORTION OF THIS PROPERTY LIES WITHIN A 100-YEAR FLOOD PLAIN PER F.I.R.M. RATE MAPS.

INSTALLER SHALL PLACE CURLEX BRAND EROSION CONTROL BLANKETS OVER NEWLY CONSTRUCTED SEPTIC SYSTEM TO HELP STABILIZE DISTURBED SOILS AND TO PROMOTE VEGETATIVE GROWTH.

PLAN NORTH

REVISED SHEET 1.0 - OVERALL SITE PLAN

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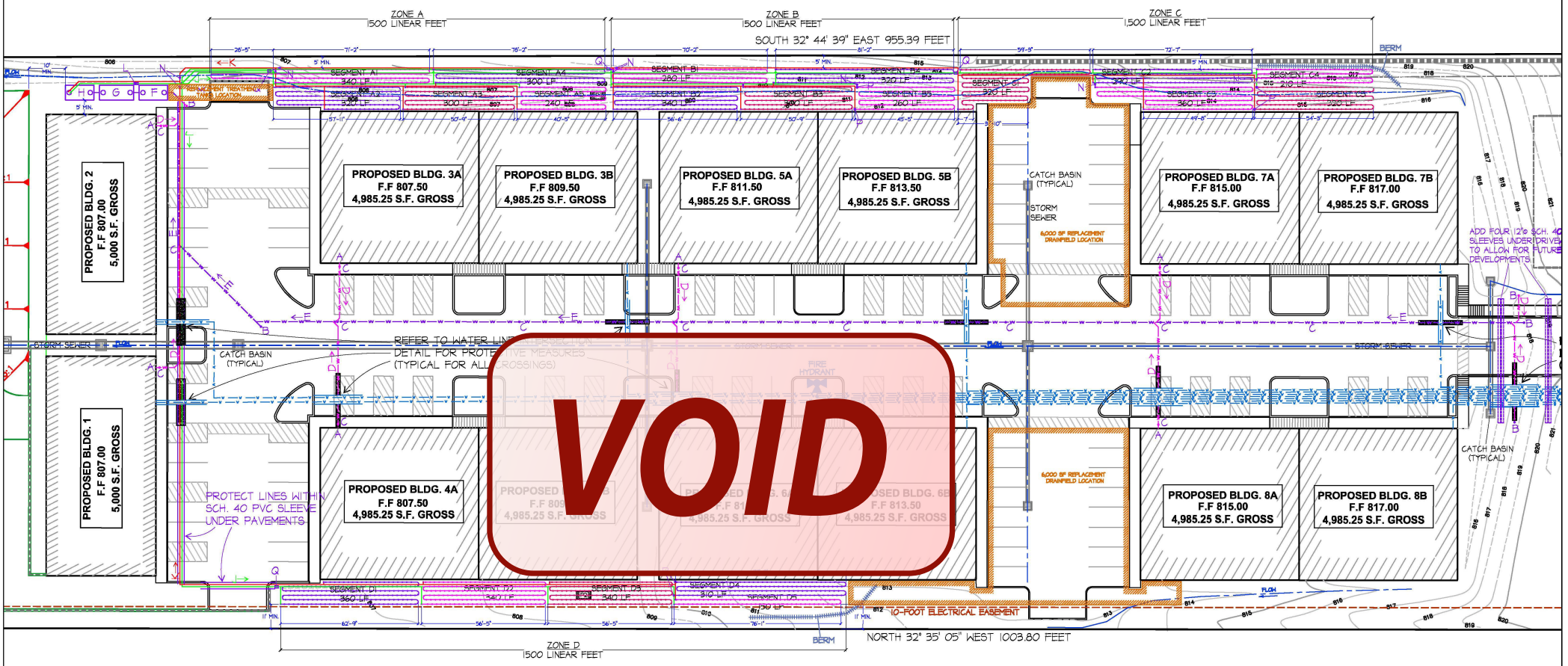
LEGAL DESCRIPTION:	LOT 1, BLOCK 1, SCHERTZ IH 35 WAREHOUSE	
PERMIT AUTHORITY:	COMAL COUNTY	
DRAWN BY:	DATE:	SCALE: 1" = 50'
D. E. LORMAND, R.S.	06/13/2023	



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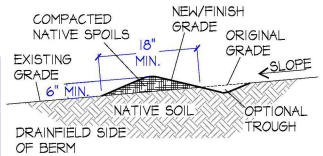

RAINWATER DIVERSION BERM
NOT TO SCALE

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- F. 2,000-GALLON 2/C SEPTIC TRASH TANK
- G. DELTA E200S AEROBIC TREATMENT UNIT
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- L. FLOW METER WITHIN FIELD BOX
- M. K-RAIN INDEXING VALVE MODEL 4404-RCW
- N. ONE-WAY "SWING" STYLE CHECK VALVE
- P. VACUUM BREAKER VALVE
- Q. PRESSURE REGULATOR WITHIN FIELD BOX

DRAINFIELD SHALL CONSIST OF A TOTAL OF 6,000 LINEAR FEET OF EMITTER TUBING CONTAINING 3,000 EMITTERS DEVELOPING 12,000 SQUARE FEET OF APPLICATION AREA.

REVISED SHEET 1.1 - DETAIL SITE PLAN

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	SCALE: 1" = 30'

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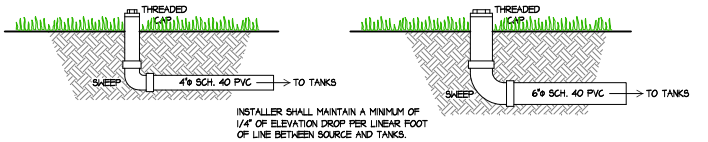
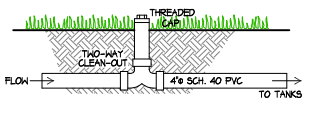


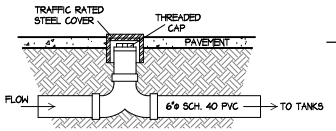
INSTALLER SHALL MAINTAIN A MINIMUM OF 1/4" OF ELEVATION DROP PER LINEAR FOOT OF LINE BETWEEN SOURCE AND TANKS.

TYPICAL 4" ONE-WAY CLEAN-OUT

TYPICAL 6" ONE-WAY CLEAN-OUT

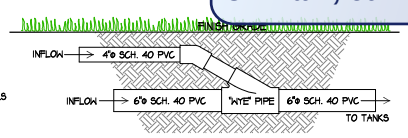


TYPICAL 4" TWO-WAY CLEAN-OUT DETAIL

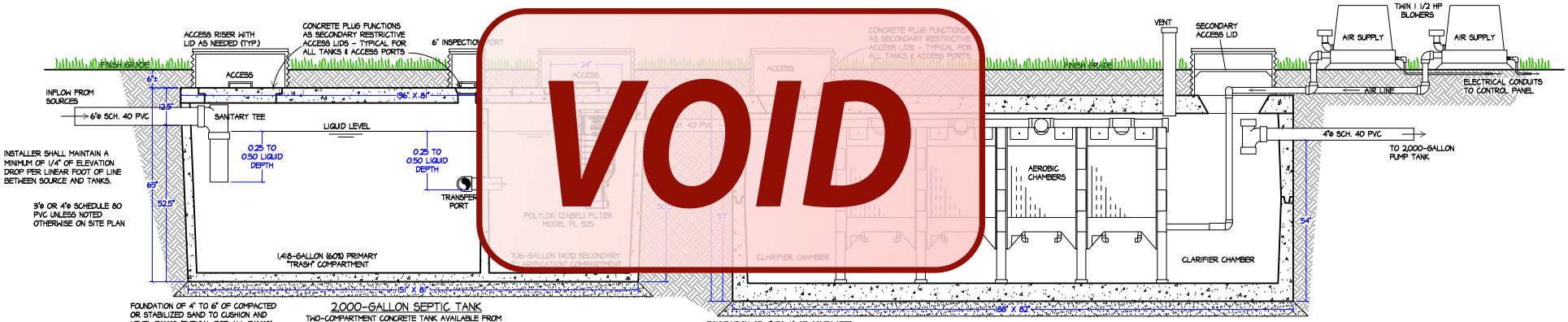


NOTE: SEWER LINES SHALL MAINTAIN A MINIMUM OF 1/8" ELEVATION FALL PER LINEAR FOOT OF RUN (1% SLOPED) WITH NO LOCAL DIPS OR VALLEYS

TYPICAL 6" TWO-WAY CLEAN-OUT



SEWER CONNECTION DETAIL



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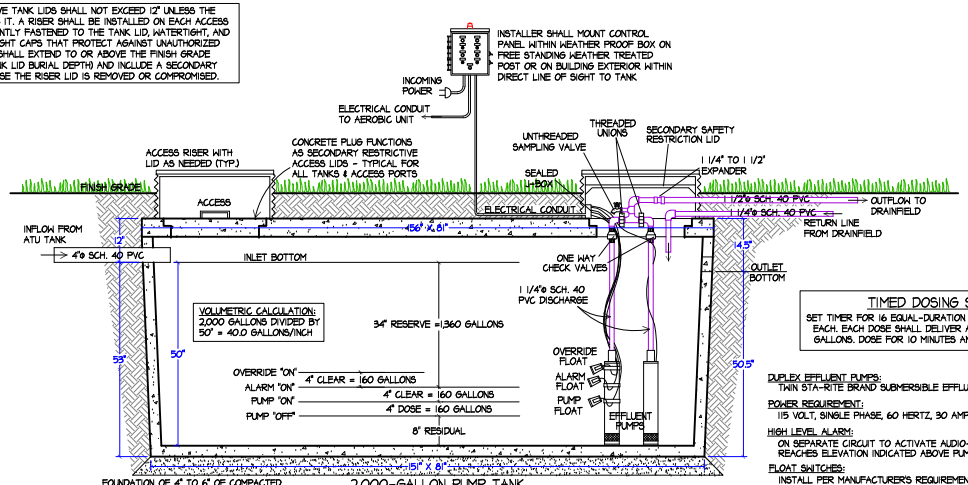
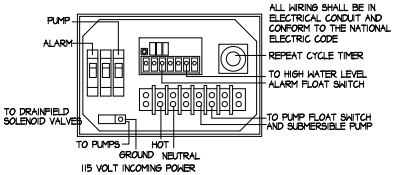
DEPTH OF SOIL ABOVE TANK LIDS SHALL NOT EXCEED 12" UNLESS THE MANUFACTURER ALLOWS IT. A RISER SHALL BE INSTALLED ON EACH ACCESS PORT THAT IS PERMANENTLY FASTENED TO THE TANK LID, WATERTIGHT, AND FITTED WITH WATERTIGHT CAPS THAT PROTECT AGAINST UNAUTHORIZED INTRUSION. RISERS SHALL EXTEND TO OR ABOVE THE FINISH GRADE (REGARDLESS OF TANK LID BURIAL DEPTH) AND INCLUDE A SECONDARY SAFETY DEVICE IN CASE THE RISER LID IS REMOVED OR COMPROMISED.





EXAMPLE DUPLEX CONTROL PANEL BOX
DELTA PANEL MODEL CP-6972

TIMED DOSING SCHEDULE:
SET TIMER FOR 16 EQUAL-DURATION DOSES LASTING 10 MINUTES EACH. EACH DOSE SHALL DELIVER AN AVERAGE TOTAL OF 75 GALLONS. DOSE FOR 10 MINUTES AND REST FOR 80 MINUTES.

DUPLEX EFFLUENT PUMPS:
TWIN STA-RITE BRAND SUBMERSIBLE EFFLUENT PUMPS MODEL 20 DOM 0512.

POWER REQUIREMENT:
115 VOLT, SINGLE PHASE, 60 HERTZ, 30 AMP BREAKER.

HIGH LEVEL ALARM:
ON SEPARATE CIRCUIT TO ACTIVATE AUDIO-VISUAL ALARM AT CONTROL PANEL WHEN WATER LEVEL REACHES ELEVATION INDICATED ABOVE PUMP "ON" POSITION OF PUMP FLOAT SWITCH.

FLOAT SWITCHES:
INSTALL PER MANUFACTURER'S REQUIREMENTS AND ADJUST FLOATS TO HAVE THE OPERATING RANGE AS INDICATED.

PUMP TANK DUPLEX CONTROL PANEL:
ONE PANEL SHALL CONTROL BOTH EFFLUENT PUMPS CONTAINED WITHIN THE PUMP TANK. PANEL SHALL ACTIVATE PUMPS IN AN ALTERNATING FASHION. IF A HIGH LEVEL ALARM IS ACTIVATED, A LOCKING MECHANISM SHALL KEEP THE ALARM ACTIVE UNTIL ADDRESSED BY A MAINTENANCE PROVIDER. THE SECOND EFFLUENT PUMP MAY DISCHARGE EFFLUENT TO THE DRAINFIELD, BUT NOT DISENGAGE THE ALARM. A MANUAL SILENCE SWITCH MAY BE INCLUDED TO RESET THE ALARM.

REVISED SHEET 2.0 - TANKS SECTION DETAIL

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DATE:	06/13/2023
SCALE:	1/2" = 1'-0"

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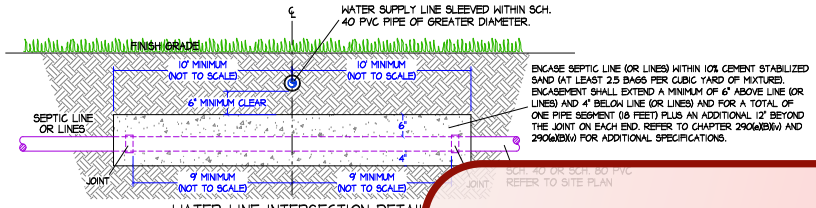
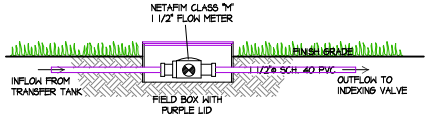
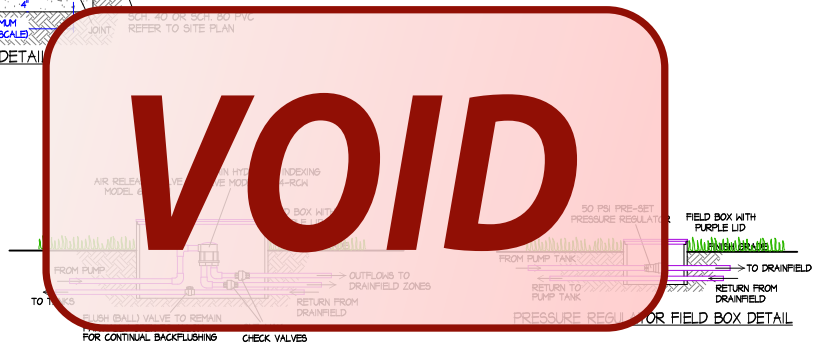


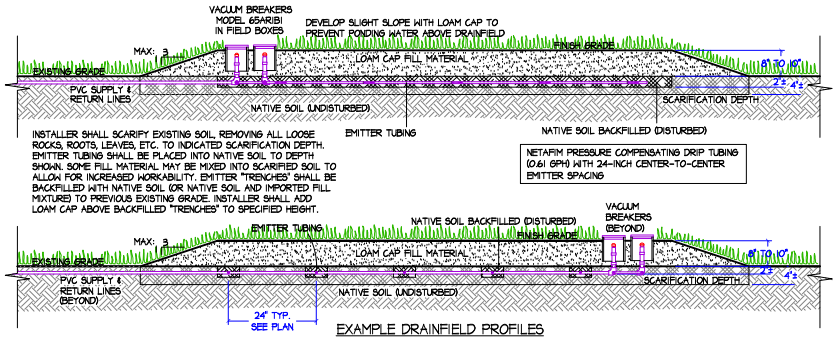
WATER LINE INTERSECTION DETAIL



FLOW METER DETAIL



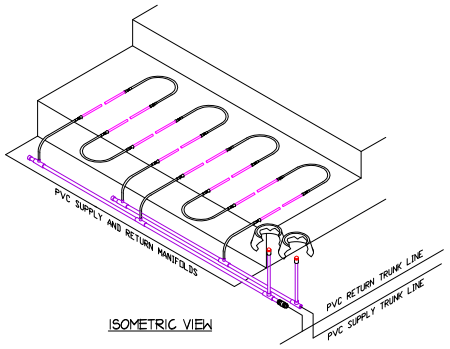
DRAINFIELD INDEXING VALVE FIELD BOX DETAIL
NOTE: FOUR OUTLETS REQUIRED. ONLY TWO SHOWN FOR CLARITY



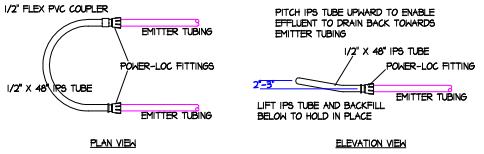
EXAMPLE DRAINFIELD PROFILES

DRAINFIELD SHALL HAVE GRASS COVER. THE EXISTING SOIL IS SUITABLE TO SUPPORT VEGETATIVE GROWTH. THE OWNER IS RESPONSIBLE FOR MAINTAINING THE VEGETATION AT THE DRAINFIELD LOCATION. ALL ROCKS SHALL BE REMOVED FROM DRAINFIELD PRIOR TO COVERING WITH FILL MATERIAL. INSTALLER SHALL SEED, HYDROMULCH OR PLACE SANDY LOAM-BACKED SOD AT DRAINFIELD TO HELP DEVELOP VEGETATION AND REDUCE EROSION.

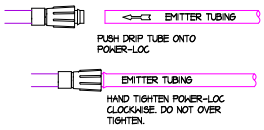
AEROBIC TREATMENT UNIT WITH SUBSURFACE DRIP EMITTER APPLICATION. SOIL APPLICATION RATE = 0.10 GALLONS PER SQUARE FOOT PER DAY - PER TCEQ OSSF WORKSHOPS RG-276/EV-01 REVISED DECEMBER 2016; TABLE I, APPENDIX B.



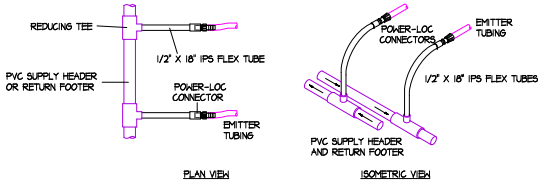
ISOMETRIC VIEW



TYPICAL 2-FOOT LOOP INSTALLATION DETAIL
NOT TO SCALE



POWER-LOC INSTALLATION
NOT TO SCALE



TYPICAL MANIFOLD CONNECTION DETAIL
NOT TO SCALE

REVISED SHEET 2.1 - DRAINFIELD SECTION DETAIL

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DATE:	06/13/2023
SCALE:	1/2" = 1'-0"

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GENERAL NOTES:

1. ON-SITE SEWAGE FACILITY PERMIT OR AUTHORIZATION TO CONSTRUCT SHALL BE OBTAINED FROM THE LOCAL PERMITTING AUTHORITY AND POSTED ON SITE IN A HIGHLY VISIBLE LOCATION PRIOR TO THE COMMENCEMENT OF THE INSTALLATION OF THIS SYSTEM. NO WORK MAY BEGIN UNTIL THE PERMIT TO CONSTRUCT HAS BEEN POSTED ON SITE.
2. THE INSTALLATION OF THIS SYSTEM MUST BE PERFORMED BY A STATE LICENSED INSTALLER HOLDING A CURRENT CLASS I OR CLASS II CERTIFICATE, OR BY A STATE LICENSED APPRENTICE OPERATING UNDER THE DIRECT SUPERVISION OF A STATE LICENSED INSTALLER. THE LICENSED INDIVIDUAL MUST MAINTAIN CURRENT PROOF OF LICENSE AT THE JOB SITE. THIS LICENSE MUST BE MADE AVAILABLE FOR REVIEW UPON REQUEST.
3. THIS PLAN IS SITE SPECIFIC. THIS DESIGN AND THE INFORMATION CONTAINED WITHIN REMAIN THE OWNERSHIP OF THE DESIGNER AND DELCON ENVIRONMENTAL SYSTEMS, LLC. ADDITIONAL COPIES OF THIS DESIGN MAY BE PRINTED AND REPRODUCED OR OBTAINED FROM DELCON ENVIRONMENTAL SYSTEMS, LLC. FOR CONVENIENCE ASSOCIATED WITH THE PERMIT REVIEW, INSPECTION, INSTALLATION AND LICENSING OF THIS SYSTEM. ADDITIONAL FEES MAY BE REQUIRED. ELECTRONIC COPIES OF THIS DESIGN THAT INCLUDE THE SEAL AND SIGNATURE OF THE DESIGNER ARE VALID AND SHALL BE CONSIDERED AS ORIGINAL COPIES.
4. THE LAWS AND REGULATIONS CONTAINED IN THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S TITLE 30 TEXAS ADMINISTRATIVE CODE CHAPTER 285 FOR ON-SITE SEWAGE FACILITIES ADOPTED MAY 2001, EFFECTIVE JUNE 2001 AND MOST RECENTLY REVISED DECEMBER 29, 2016 GOVERN THE DESIGN, PERMIT AND INSTALLATION OF THIS SYSTEM. ANY ADDITIONAL REGULATIONS ADOPTED BY THE LOCAL PERMITTING AUTHORITY ABOVE AND BEYOND THE REQUIREMENTS OF THE STATE MINIMUM SHALL SUPERSEDE. ANY ADDITIONAL REQUIREMENTS AND/OR SPECIFIC STIPULATIONS LISTED IN THE PERMIT TO CONSTRUCT OR THIS DESIGN SHALL BE STRICTLY FOLLOWED.
5. IT IS THE RESPONSIBILITY OF THE INSTALLER TO READ AND UNDERSTAND THE LAWS REGARDING THE INSTALLATION OF ON-SITE SEWAGE FACILITIES, THE SPECIAL CONDITIONS (IF ANY) CONTAINED IN THE PERMIT OR AUTHORIZATION TO CONSTRUCT AND THE REQUIREMENTS AND SPECIFICATIONS OF THIS DESIGN.
6. THIS PLAN IS INTENDED FOR USE AS A SEPTIC SYSTEM INSTALLATION GUIDE. THE PROPERTY DESCRIPTION, DIMENSIONS AND LOCATION OF ALL SITE FEATURES HAVE BEEN DEVELOPED FROM SURVEYS (IF PROVIDED), GLOBAL INFORMATION SYSTEM DATA, AERIAL PHOTOGRAPHY, SITE PLANS, SITE VISITS, FIELD MEASUREMENTS AND ANY ADDITIONAL INFORMATION PROVIDED BY THE BUILDER, INSTALLER AND OWNER. THIS SITE PLAN IS NOT A LEGAL LAND SURVEY OR PLAT MAP AND SHOULD NOT BE TREATED AS SUCH.
7. TREES AND VEGETATION WITHIN THE VICINITY OF THE PROPOSED SYSTEM SHALL BE PROTECTED. IT IS POSSIBLE THAT DAMAGE MAY OCCUR TO TREES AND VEGETATION DURING THE INSTALLATION OF THIS SYSTEM. NEITHER THE DESIGNER NOR THE INSTALLER SHALL BE RESPONSIBLE FOR DAMAGE TO VEGETATION AND/OR TREES CAUSED DURING CONSTRUCTION. NEITHER THE DESIGNER NOR THE INSTALLER SHALL BE RESPONSIBLE FOR VEGETATION REPLACEMENT ABOVE AND BEYOND THE SPECIFIC STIPULATIONS CONTAINED IN THIS DESIGN. REMOVAL AND/OR TRIMMING OF TREES AND VEGETATION MAY BE REQUIRED TO PROPERLY INSTALL AND OPERATE THIS SYSTEM.
8. NO WATER WELLS MAY BE INSTALLED CLOSER THAN 50 FEET FROM THIS SYSTEM. ALL WATER SUPPLY LINES (INCLUDING IRRIGATION SYSTEM LINES) SHALL REMAIN AT LEAST 10 FEET AWAY FROM ALL SEPTIC SYSTEM COMPONENTS UNLESS NOTED OTHERWISE ON PLAN AND SPECIFICALLY ADDRESSED AND APPROVED BY THE PERMITTING AUTHORITY.
9. NO AUTOMATIC WATER SPRINKLER SYSTEM MAY BE INSTALLED TO DIRECTLY IRRIGATE THE VEGETATION ABOVE THE APPLICATION FIELD. HAND WATERING IS PERMISSIBLE TO HELP MAINTAIN APPLICATION FIELD VEGETATION.
10. A MAINTENANCE CONTRACT WITH AN LICENSED AND CERTIFIED MAINTENANCE PROVIDER MAY BE REQUIRED BY STATE LAW WITH THIS SYSTEM. REGARDLESS, PERIODIC MAINTENANCE IS NECESSARY TO MAINTAIN OPTIMUM SYSTEM PERFORMANCE AND ENVIRONMENTAL PROTECTION. IT IS HIGHLY RECOMMENDED THAT PERIODIC ROUTINE MAINTENANCE BE PERFORMED AT THREE-MONTH INTERVALS.
11. TO THE BEST OF MY KNOWLEDGE THERE APPEAR TO BE NO EDWARD'S AQUIFER RECHARGE FEATURES WITHIN 150 FEET OF THIS SYSTEM.
12. IT IS MY PROFESSIONAL OPINION THAT THIS ON-SITE SEWAGE FACILITY CAN BE OPERATED WITHOUT CAUSING A THREAT OR HARM TO THE PUBLIC HEALTH OR TO THE ENVIRONMENT. THIS SYSTEM MUST BE PROPERLY INSTALLED AND MAINTAINED TO ACHIEVE THE DESIRED LEVEL OF TREATMENT AND DISPOSAL TO PREVENT THREATS OR HARM TO THE PUBLIC HEALTH OR TO THE ENVIRONMENT.

INSPECTION AND COORDINATION NOTES:

1. THE INSTALLER SHALL COORDINATE WITH THE PERMITTING AUTHORITY TO SCHEDULE ALL REQUIRED INSPECTIONS THROUGHOUT THE INSTALLATION PROCESS. THE INSTALLER MAY CONTACT THE PERMITTING AUTHORITY TO OBTAIN A SCHEDULE OF INSPECTIONS REQUIRED FOR THIS SYSTEM. SEVERAL INSPECTIONS MAY BE REQUIRED AT GIVEN INTERVALS DURING CONSTRUCTION. ADDITIONAL INSPECTION FEES MAY BE REQUIRED IF INSPECTIONS ARE NOT APPROVED OR IF THE INSTALLATION DEVIATES FROM THE PERMITTED DESIGN WITHOUT PRIOR APPROVAL FROM BOTH THE PERMITTING AUTHORITY AND DELCON ENVIRONMENTAL SYSTEMS, LLC.
2. NO PORTION OR COMPONENT OF THIS SYSTEM SHALL BE COVERED UNTIL REVIEWED AND APPROVED BY THE PERMITTING AUTHORITY. THE DESIGNER SHALL BE NOTIFIED TO PERFORM AN INSPECTION AT LEAST 48 HOURS IN ADVANCE PRIOR TO COVERING ANY SYSTEM COMPONENTS.
3. PERMANENT UTILITIES INCLUDING WATER, ELECTRIC AND POSSIBLY TELEPHONE SERVICE SHALL BE CONNECTED TO THIS SYSTEM AS A CONDITION OF FINAL APPROVAL.
4. THE DESIGNER SHALL DELIVER TO THE PERMITTING AUTHORITY AN APPROVAL CERTIFICATION LETTER UPON REVIEWING THE INSTALLED SYSTEM INDICATING COMPLIANCE WITH THE DESIGN. AN AS BUILT DRAWING MAY BE REQUIRED AND INCLUDED WITH THE FINAL APPROVAL LETTER. APPROVAL SHALL NOT BE GRANTED UNTIL ALL INSPECTIONS ARE PERFORMED, ALL REQUIREMENTS ARE ACHIEVED AND ALL FEES TO THE DESIGNER AND PERMITTING AUTHORITY ARE PAID IN FULL. A LICENSE TO OPERATE WILL BE ISSUED BY THE PERMITTING AUTHORITY UPON INSTALLATION COMPLETION AND WRITTEN APPROVAL/CERTIFICATION FROM DELCON ENVIRONMENTAL SYSTEMS, LLC. USE OF THIS ON-SITE SEWAGE FACILITY WITHOUT A LICENSE TO OPERATE IS A VIOLATION OF STATE AND LOCAL LAW AND IS SUBJECT TO FINES AND ADDITIONAL LEGAL ACTION INCLUDING PROPERTY CONDEMNATION AND INCARCERATION.

FIELD MODIFICATION AND ALTERATION NOTES:

1. THE INSTALLER SHALL FIELD VERIFY ALL DIMENSIONS (INCLUDING TOPOGRAPHICAL INFORMATION OF CURRENT GRADES) OF THIS DESIGN PRIOR TO CONSTRUCTION, AS SITE CONDITIONS MAY CHANGE DURING THE INTERIM TIME BETWEEN THE PERMIT ISSUANCE AND SYSTEM INSTALLATION.
2. THE INSTALLER SHALL STRICTLY ADHERE TO THE DESIGN (BOTH DIMENSIONS AND EQUIPMENT SPECIFICATIONS) AND TO ANY ADDITIONAL REQUIREMENTS OF THE PERMIT TO CONSTRUCT. ANY DISCREPANCIES BETWEEN THE DESIGN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED BY THE INSTALLER TO THE DESIGNER AND/OR THE PERMITTING AUTHORITY PRIOR TO CONSTRUCTION.
3. THE INSTALLER IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE INSTALLER SHALL CONTACT DIG TESS OR OTHER UTILITY LOCATING ORGANIZATION TO CONFIRM THE LOCATION OF ALL PERTINENT UTILITIES WITHIN THE VICINITY OF THIS ON-SITE SEWAGE FACILITY. ANY UNFORESEEN UTILITIES DISCOVERED SHALL BE REPORTED TO DELCON ENVIRONMENTAL SYSTEMS, LLC AND/OR THE PERMITTING AUTHORITY. DESIGN MODIFICATIONS MAY BE REQUIRED TO ACCOMMODATE DISCOVERED UTILITIES.
4. IF A FIELD DISCREPANCY IS DISCOVERED DURING CONSTRUCTION, WORK SHALL STOP UNTIL THE ISSUE IS RESOLVED BY DELCON ENVIRONMENTAL SYSTEMS, LLC AND THE PERMITTING AUTHORITY. DESIGN CHANGES REQUIRED DUE TO FIELD MODIFICATIONS MAY REQUIRE ADDITIONAL DESIGN FEES, ADDITIONAL PERMITTING FEES AND ADDITIONAL TIME. FIELD CHANGES MADE WITHOUT PRIOR APPROVAL AND AUTHORIZATION FROM BOTH DELCON ENVIRONMENTAL SYSTEMS, LLC AND THE PERMITTING AUTHORITY MAY VOID PERMIT AND COULD RESULT IN LEGAL ACTIONS AGAINST THE INSTALLER.

PIPING NOTES:

1. ALL PIPING INCLUDED WITH THIS SYSTEM SHALL CONSIST OF SCHEDULE 40 PVC UNLESS NOTED OTHERWISE ON SITE PLAN OR SECTION DETAILS. ALL CONNECTIONS SHALL BE PROPERLY JOINED USING APPROPRIATE PRIMER AND SEALER/CEMENT. ALL LINES AND CONNECTIONS SHALL BE WATER-TIGHT AND MAY BE PRESSURE TESTED TO VERIFY INTEGRITY.
2. GRAVITY-FED SEWER AND TRANSMISSION LINES SHALL MAINTAIN AT LEAST $\frac{1}{8}$" OF VERTICAL FALL PER LINEAR FOOT OF RUN THROUGHOUT ENTIRE RUN. NO LOCAL LOW SPOTS OR DIPS WITHIN LINES. NO HARD 90 DEGREE ELBOWS ON FITTINGS SHALL BE USED WITH GRAVITY-FED SEWER LINES. A PAIR OF 45 DEGREE SWEEPING ELBOWS SHALL BE USED.
3. SEWER LINES SHALL FROM THE SOURCE(S) TO THE TREATMENT TANK(S) AND FROM THE TREATMENT TANK(S) TO THE DISPOSAL AREA(S) SHALL BE EMBEDDED IN A MINIMUM OF 4 INCHES OF CLEAN CLASS Ib, CLASS II, OR CLASS III TYPE SOIL CONTAINING LESS THAN 30% GRAVEL AND CLEAN OF ANY ORGANIC MATERIAL, TRASH AND ROCKS/GRAINS LARGER THAN 1/2" IN ORDER TO TO AVOID SHIFTING, SETTLING AND PUNCTURES.
4. A MINIMUM OF 4" OF SOIL COVER SHALL BE PLACED ABOVE ALL PVC PIPES FOR PROTECTION.
5. INSTALLER SHALL VERIFY ON PLAN THE SPECIFIC USE OF PURPLE COLORED PVC PIPE.

TANK NOTES:

1. CONCRETE TANKS SHALL BE MANUFACTURED IN COMPLIANCE WITH ASTM C 1227, STANDARD SPECIFICATION FOR PRECAST CONCRETE SEPTIC TANKS ADOPTED 2000 AND AS AMENDED.
2. PLASTIC (POLYETHYLENE) OR FIBERGLASS TANKS SHALL BE RATED FOR USE AS UNDERGROUND SEPTIC EFFLUENT AND/OR PUMP TANKS. SPECIFIC INSTRUCTIONS ASSOCIATED WITH INSTALLATION AND BACK-FILLING SHALL BE STRICTLY FOLLOWED.
3. TANKS SHALL BE BEDDED ON SPECIFIED SAND CUSHION AND SET LEVEL TO WITHIN AN OVERALL TOLERANCE OF ONE INCH FROM INLET TO OUTLET.
4. TANKS SHALL BE FILLED TO THE FLOW LINE TO DETERMINE INTEGRITY. ANY LEAKS OR WEEPS SHALL BE PATCHED TO HOLD WATER. ONCE TANKS ARE REVIEWED AND APPROVED BY THE PERMITTING AUTHORITY, THE WATER LEVEL WITHIN THE PUMP TANK (OR PUMP CHAMBER) MUST BE LOWERED TO THE NORMAL OPERATING LEVEL. DO NOT DISCHARGE EXCESS WATER INTO THE DRAINFIELD. EXCESS WATER SHALL BE REMOVED FROM TANK WITHOUT ENTERING DRAINFIELD.
5. INLET PIPES AND OUTLET PIPES SHALL BE SEALED WITH GROUT, EXPANSIVE FOAM OR SILICONE TO PREVENT LEAKING. RISERS AND INSPECTION PORTS SHALL BE SEALED WITH GROUT, EXPANSIVE FOAM OR SILICONE TO PREVENT WATER, SOIL OR INSECT INTRUSION INTO TANKS.
6. TANK EXCAVATION SHALL BE BACKFILLED WITH CLEAN CLASS II OR CLASS III SOIL FREE OF ROCK. ROCKS, CONSTRUCTION DEBRIS, TRASH, ORGANICS AND CLASS IV SOIL ARE UNACCEPTABLE BACKFILL MATERIAL.
7. DEPTH OF SOIL ABOVE TANK LIDS SHALL NOT EXCEED 12 INCHES UNLESS SPECIFICALLY ADDRESS BY THIS DESIGN AND APPROVED BY THE MANUFACTURER.

DRAINFIELD NOTES:

1. ALL ROCKS AND EXISTING VEGETATION (EXCEPT DESIRED TREES) SHALL BE REMOVED FROM PROPOSED DRAINFIELD LOCATION AS PREPARATION FOR SYSTEM INSTALLATION. ANY REMAINING ROCK EXPOSURES SHALL BE CAPPED WITH AT LEAST 3" OF LOAM TOPSOIL TO PROMOTE VEGETATIVE GROWTH.
2. INSTALLER SHALL IMMEDIATELY ESTABLISH VEGETATION ON NEWLY CONSTRUCTED DRAINFIELD. ACCEPTABLE GRASSES INCLUDE BERMUDA, SAINT AUGUSTINE, RYE, ZOIZA, TIFF OR A COMBINATION FOR MULTI-SEASON GROWTH. CLAY LOAM BACKED SOD MAY NOT BE USED. HYDROMULCH, RAW SEED OR SANDY LOAM BACKED SOD ARE ACCEPTABLE METHODS FOR ESTABLISHING VEGETATION.
3. APPLICATION AREA SHALL BE CROWNED SLIGHTLY TO SHED RAINWATER. REFER TO SITE PLAN FOR THE USE OF DIVERSION BERMS OR TROUGHS.