Comal County Environmental Health
OSSF Inspection Sheet

Installer Name: Levi Mason **OSSF Installer #:** OS0038409

1st Inspection Date: 6/4/25 **2nd Inspection Date:** 6/27/25 **3rd Inspection Date:** 6/30/25

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

Permit#: 117696 **Address:** 2167 GLENN DR

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: **6/4/25 CH: Require design revision with actual location of tight line within 5' of slab with any protection, leave exposed to verify, tank good, ready for cover 6/27/25 CH: Tight line and supply/return line sleeving good, lift station is operational, liner installed to retaining wall, require as built revision for actual layout of tubing 6/30/25 CH: Installed to design, operational, ready for cover,** requires re-inspection fee

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						
13	PUMP TANK Volume Installed						
14	AEROBIC TREATMENT UNIT Size Installed	X			X		
15	AEROBIC TREATMENT UNIT Manufacturer AEROBIC TREATMENT UNIT Model Number	X X		Clearstream 600; as per design	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 Evapo-transpirative		285.33(a)(3) 285.33(a)(4) 285.33(a)(1) 285.33(a)(2)				

Comal County Environmental Health
OSSF Inspection Sheet

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
19	DISPOSAL SYSTEM Drip Irrigation	X	285.33(c)(3)(A)-(F)		X		
20	DISPOSAL SYSTEM Soil Substitution		285.33(d)(4)				
21	DISPOSAL SYSTEM Pumped Effluent		285.33(a)(4) 285.33(a)(3) 285.33(a)(1) 285.33(a)(2)				
22	DISPOSAL SYSTEM Gravelless Pipe		285.33(a)(3) 285.33(a)(2) 285.33(a)(4) 285.33(a)(1)				
23	DISPOSAL SYSTEM Mound		285.33(a)(3) 285.33(a)(1) 285.33(a)(2) 285.33(a)(4)				
24	DISPOSAL SYSTEM Other (describe) (Approved Design)		285.33(d)(6) 285.33(c)(4)				
25	DRAINFIELD Absorptive Drainline 3" PVC or 4" PVC						
26	DRAINFIELD Area Installed						
27	DRAINFIELD Level to within 1 inch per 25 feet and within 3 inches over entire excavation		285.33(b)(1)(A)(v)				
28	DRAINFIELD Excavation Width DRAINFIELD Excavation Depth DRAINFIELD Excavation Separation DRAINFIELD Depth of Porous Media DRAINFIELD Type of Porous Media						
29	DRAINFIELD Pipe and Gravel - Geotextile Fabric in Place		285.33(b)(1)(E)				
30	DRAINFIELD Leaching Chambers DRAINFIELD Chambers - Open End Plates w/Splash Plate, Inspection Port & Closed End Plates in Place (per manufacturers spec.)		285.33(c)(2)				
31	LOW PRESSURE DISPOSAL SYSTEM Adequate Trench Length & Width, and Adequate Separation Distance between Trenches		285.33(d)(1)(C)(i)				

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 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						

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)		X		
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)		X X		
42	APPLICATION AREA Area Installed	X			X		
43	PUMP TANK Meets Minimum Reserve Capacity Requirements						
44	PUMP TANK Material Type & Manufacturer						
45	PUMP TANK Type/Size of Pump Installed						

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:	117696
Issued This Date:	08/22/2024
This permit is hereby given to:	Christine K. Thompson

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

2167 GLENN DR
CANYON LAKE, TX 78133

Subdivision:	Astro Hills
Unit:	1
Lot:	134
Block:	-
Acreage:	0.4500

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 10:07 am, Jul 12, 2024

COMAL COUNTY
ENGINEER'S OFFICE

OSSF DEVELOPMENT APPLICATION CHECKLIST

Staff will complete shaded items

		117696
Date Received	*Initials*	*Permit Number*

Instructions:

Place a check mark next to all items that apply. For items that do not apply, place "N/A". This OSSF Development Application Checklist **must** accompany the completed application.

OSSF Permit

- ☒ Completed Application for Permit for Authorization to Construct an On-Site Sewage Facility and License to Operate
- ☒ Site/Soil Evaluation Completed by a Certified Site Evaluator or a Professional Engineer
- ☒ Planning Materials of the OSSF as Required by the TCEQ Rules for OSSF Chapter 285. Planning Materials shall consist of a scaled design and all system specifications.
- ☒ Required Permit Fee - See Attached Fee Schedule
- ☒ Copy of Recorded Deed
- ☒ Surface Application/Aerobic Treatment System
  - ☒ Recorded Certification of OSSF Requiring Maintenance/Affidavit to the Public
  - ☒ Signed Maintenance Contract with Effective Date as Issuance of License to Operate

I affirm that I have provided all information required for my OSSF Development Application and that this application constitutes a completed OSSF Development Application.

C Thompson
Signature of Applicant

5-15-2024
Date

___ COMPLETE APPLICATION

Check No. _____ Receipt No._____

INCOMPLETE APPLICATION
—— (Missing Items Circled, Application Refeused)

Revised: September 2019

RECEIVED
By Kathy Griffin at 10:06 am, Jul 12, 2024

COMAL COUNTY
ENGINEER'S OFFICE

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

ON-SITE SEWAGE FACILITY APPLICATION

Date _____ Permit Number 117696

1. APPLICANT / AGENT INFORMATION

Owner Name	Christine K. Thompson	Agent Name	Doug Dowlearn R.S.
Mailing Address	2200 Glenn Dr.	Agent Address	703 Oak Dr.
City, State, Zip	Canyon Lake, TX 78133	City, State, Zip	Blanco, TX 78606
Phone #	434-917-3289	Phone #	210-878-8100
Email	lakegastonrealtor@gmail.com	Email	TXSEPTIC@GMAIL.COM

2. LOCATION

Subdivision Name Astro Hills Unit 1 Lot 134 Block _____

Survey Name / Abstract Number _____ Acreage .4470

Address 2167 Glenn Dr City Canyon Lake State TX Zip 78133

3. TYPE OF DEVELOPMENT

☒ Single Family Residential

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

Number of Bedrooms ~~3~~ 4

Indicate Sq Ft of Living Area ~~2353~~ LESS THAN 3500 SF

☐ 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 _____

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

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: $ 725,000 (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.

C Thompson
Signature of Owner

5-15-2024
Date

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: Doug Dowlearn R.S.

System Description: Aerobic with drip disposal

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

Tank Size(s) (Gallons): 600 Absorption/Application Area (Sq Ft): 1500

Gallons Per Day (As Per TCEQ Table III): 300

(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.)

Is there at least one acre per single family dwelling as per 285.40(c)(1)? ☐ Yes ☑ No

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:

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.

Signature of Designer

7/10/2024
Date

Revised March 2024

1/SC

202406014814 05/16/2024 02:41:46 PM 1/1

COUNTY OF COMAL
STATE OF TEXAS

AFFIDAVIT TO THE PUBLIC

CERTIFICATION OF OSSF REQUIRING MAINTENANCE

According to Texas Commission on Environmental Quality (TCEQ) 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 (TCEQ) to regulate on-site sewage facilities (OSSFs). Additionally, the Texas Water Code (TWC), § 5.012 and § 5.013, give 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 or 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):

ASTRO HILLS, UNIT 1, LOT 134

The property is owned by (Insert owner's full name):

CHRISTINE K. THOMPSON

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 OSSF may be obtained from **Comal County Engineer's Office.**

WITNESS BY HAND(S) ON THIS 16 **DAY OF** MAY, 2024.

CHRISTINE K THOMPSON

Christine K Thompson — Owner

Owner(s) signature(s) — **(PRINTED NAME) /TITLE**

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 16TH **DAY OF** May, 2024

Annette Broussard

Notary Public, State of Texas
Notary's Printed Name: Annette Broussard
My Commission Expires: 8/24/2025

NOTARY PUBLIC STATE OF TEXAS
ANNETTE BROUSSARD
Notary ID #125410606
My Commission Expires
August 24, 2025

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
05/16/2024 02:41:46 PM
CASHONE 1 Page(s)
202406014814

COUNTY COURT COMAL COUNTY, TEXAS

Bobbie Koepp

Countryside Construction, Inc.
300 Chapman Parkway, Canyon Lake, TX. 78133
Phone: 830-899-2615 or 1-888-379-3721 Fax: 830-899-6662

SEPTIC SYSTEM SERVICE AGREEMENT

In consideration of payment for this service contract, we will abide by and agree to its terms and conditions:

Name: Christine Thompson **Address:** 2167 Glenn Dr. Canyon Lake, TX 78133
Sub-Div./County: COMAL
Permit #: _____ **Type:** _____ **Model #:** _____ **Serial #:** _____
Phone: 434-917-3289

(X) Initial Two Year Service Agreement & Two Year Limited Warranty

Legal Description: ASTRO HILLS, UNIT 1, LOT 134

The effective date of the initial maintenance contract shall be the date the License to Operate is issued.
This contract will be in effect **FROM: LICENSE TO OPERATE TO:** _____ and will provide the following:

A: An inspection/service call every (4) four months which will include: inspection, adjustments and servicing of the mechanical & electrical components as necessary to insure proper function of the system.
B: An effluent quality inspection consisting of a visual check for color, turbidity, scum, overflow and odor.
C: **The property owner is responsible for "purchasing and keeping chlorine"** in the chlorinator, (if applicable). If the chlorine test reveals "No Chlorine" in the system, the property owner may incur an additional cost.
D: If any improper operation is observed (which cannot be corrected at that time) the property owner will be notified immediately of the conditions and the estimated cost.
E: **ANY PARTS, WARRANTY OR NON-WARRANTY, FREIGHT CHARGES, LABOR OR SERVICE CALLS NOT PAID IN FULL AT THE END OF (30) DAYS SHALL REMAIN THE PROPERTY OF COUNTRYSIDE CONSTRUCTION AND AUTHORIZES CONTRACTOR TO REMOVE AND REPOSSESS ANY PARTS INSTALLED. CLIENT FURTHER AGREES TO PAY ANY LABOR COST OF THE INSTALLATION AND REASONABLE COST OF REMOVAL OF SAID PARTS.**
F: **THE SIGNING OF THIS SERVICE AGREEMENT AUTHORIZES COUNTRYSIDE CONSTRUCTION TO ENTER THE PROPERTY TO EXECUTE ALL TERMS OF THIS CONTRACT.**

Countryside Construction, Inc., **will warranty installation** of the septic system to be according to state and county regulations and the designs approved by the county. **HOMEOWNER WILL BE RESPONSIBLE FOR SERVICE CALLS, LABOR AND SHIPPING COSTS ON ANY "WARRANTIED PARTS" EXCHANGED DURING WARRANTY.** All other components will be according to manufacturer's warranties.

Important: As Countryside Construction, Inc. **cannot control what or how much effluent** goes into this septic system, we **cannot warranty** how the system will function. Refer to manufacturer's or installer's instructions for suggestions on septic operation. This service agreement **does not** cover the cost of **service calls, labor or materials** that are required or **parts out of warranty,** the failure to maintain electrical power to the system, **sprinklers that are broken,** leaking, stopped-up or otherwise mal-functioning, or sewage flows exceeding the hydraulic/organic design capabilities and the input of non-biodegradable materials (solvents, grease, oil, paints, etc.), or any usage contrary to the requirements as advised by authorized service representative. Laboratory test work is available at an additional cost. Chlorine, filters, or parts that are out of warranty are available at a reasonable cost.

This contract **does not** include the **pumping of a tank** or of any **compartment of a tank, or settlement of soil on or around any part of the system regardless of reason:**

Violations of the warranty also include: disconnecting the alarm, restricting ventilation to the aerator, overloading the system above its rated capacity, or flooding by external means. Rodent, insect or fire ant damage or any other form of unusual abuse is a violation.

A renewal service contract **should** be **"activated" (30) thirty days before expiration** of existing contract. We will contact property owner prior to expiration of existing contract.

Serviced by: COUNTRYSIDE CONSTRUCTION, INC.
Walker Chapman – Installer Licensee #OS0002929 Maintenance Provider Licensee #MP0000035

(X) C Thompson Print Name (X) C THOMPSON Date: 5-15-2024
Property Owner Signature

(X) Walker Chapman Date: _____ Authorized Service Representative *(revised 1/24/2022)*

Date: 7/10/2024
Applicant Information:
Name: Christine K. Thompson
Address: 2200 Glenn Dr
City, State & Zip Code: Canyon Lake, TX 78133
Phone:
Email:

Property Location:
Subdivision: Astro Hills **Unit:** 1 **Lot:** 134
Street/Road Address: 2167 Glenn Dr
City: Canyon Lake **Zip:** 78133
Additional Info: Comal County

Site Evaluator Information:
Name: Douglas R. Dowlearn
Company: D.A.D. Services, Inc.
Address: 703 Oak Drive
City, State & Zip: Blanco, TX 78606
Phone: (210)240-2101 **Fax:** (866)260-7687
Email: txseptic@gmail.com

Installer Information:
Name:
Company:
Address:
City, State & Zip:
Phone: **Fax:**

Depth	**Texture Class**	**Soil Texture**	**Structure** *(For Class III – blocky, platy or massive)*	**Drainage** *(Mottles/Water Table*	**Restrictive Horizon**	**Observation**
Soil Boring #1 60”	III	0-4” Clay Loam 4”+ Limestone	Blocky	<30% Gravel	4”+ Limestone	CLEAR SURFACE ROCK AND BOULDERS FROM DRAINFIELD AREA, AND ENSURE THAT THERE IS AT MINIMUM 12” OF SUITABLE SOIL BETWEEN THE BOTTOM OF THE DRIP LINES, AND THE RESTRICTIVE HORIZON. CLASS II SOIL MAY NEED TO BE IMPORTED IN ORDER TO MAINTAIN THE MINIMUM 12” OF SOIL BETWEEN THE BOTTOM OF THE DRIP LINES AND RESTRICTIVE HORIZON
Soil Boring #2 60”	III	0-6” Clay Loam 6”+ Limestone	Blocky	<30% Gravel	6”+ Limestone	

DESIGN SPECIFICATIONS

Application Rate (RA): 0.2
OSSF is designed for: 4 Bedroom <3500 Sq. Ft Residence
300 Gallons per day required
An aerobic treatment/drip disposal system is to be utilized based on the site evaluation.
1500 sq. ft. disposal area required
600 gallon per day aerobic tank required
Calculations: Absorption Area: Q/RA= 300/0.2= 1500 Sq. Ft.

FEATURES OF SITE AREA

Presence of 100-year flood zone: NO
Existing or proposed water well in nearby area: NO
Presence of adjacent ponds, streams, water impoundments: NO
Presence of upper water shed: NO
Organized sewage service available to lot: NO

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability. The site evaluation and OSSF design are subject to approval by the TCEQ or the local authorized agent. The planning materials and the OSSF design should not be considered final until a permit to construct has been issued.

Site Evaluator:
NAME: Douglas R. Dowlearn, R.S.
Signature:

License No. OS9902 – Exp. 6/30/2026
TDH: #2432 – Exp. 2/28/2025

RECEIVED
By Brandon Olvera at 4:23 pm, Jun 27, 2025

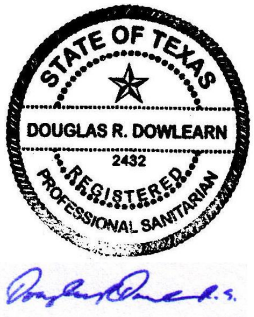
D.A.D SERVICES, INC.
DOUG DOWLEARN
PO BOX 212, BULVERDE, TX 78163
Designed for:
Thompson Christine K

The installation site is at lot 134 of the Astro Hills 1 Subdivision in Comal County, TX. The proposed OSSF will treat the wastewater from a 4 Bedroom (< 3500 sq. ft.) residence. The proposed method of wastewater treatment is aerobic treatment with drip irrigation. This method was chosen because of unsuitable soil conditions.

PROPOSED SYSTEM:
A 3" or 4" PVC pipe will discharge from the upper level of a structure to a Nuwater B-550 aerobic treatment plant containing a pre-treatment tank, a 600 gpd aerobic treatment plant, and a pump tank equipped with a 20 gpm submersible pump. A 3" or 4" PVC pipe will discharge from the lower level(consisting of 1 bedroom with a restroom and a wet bar) of a structure to a 70 gallon lift station with a Liberty LE102A2-2, 1 HP pump. Effluent is pumped through 2" SCH 80 PVC pipe to the previously mentioned aerobic treatment plant. The pump in the aerobic treatment unit pump tank is activated by a time controller allowing the distribution 8 times per day with a 10 minute run time per dose, with float switches set to pump 300 gallons per day. A high level audible and visual alarm will activate should the pump fail. Distribution from the pump is through a self flushing 100 micron, 140 mesh disc filter, then through a 1" SCH-40 manifold to 799 linear feet of drip tubing. The drip lines shall be set approximately two feet apart with 0.61 gph emitters set every two feet, as per the attached schematic. A threaded union will be installed in the pump tank on the supply manifold to the drip field, and a pressure regulator will be installed on the supply manifold to maintain a pressure of 30 psi. A 1" SCH-40 return line is installed to continuously flush the system back to the pump tank. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower parts of the field. The placement of the drip tubing will be on soil that has been scarified, and enough class II soil will be added so that there is 12" of soil under the drip tubing. The tubing will be covered with 6" of Class II soil.

DESIGN SPECIFICATIONS:

Daily Waste Flow: 300 gpd
Application rate: 0.2
Application area required: 300/.2 =1500 sq. ft.
Application area utilized: 1598 sq. ft. - 9 sq. ft.(impermeable lids) = 1589 sq. ft.
Pump tank reserve capacity: 100 gal minimum



SYSTEM COMPONENTS:
SCH 40 PVC sewer line
NuwWater B-550 aerobic treatment plant
- Pre treatment tank
- 600 gpd aerobic treatment plant
- Pump tank with timed controls
  - C1 Series, 20Xgpm - 0.5hp/115V, Model No. 20C1X-05P4-2W115 (or equivalent)

1" purple PVC supply line
30 PSI pressure regulator - Model PMR30MF
Netafim Bioline Drip tubing
70 Gallon Lift Station
- Liberty LE102A2-2, 1 HP pump

LANDSCAPING:
The native vegetation in the distribution area should consist of low level shrubs, plains grass, bluestem or bermuda. The entire area of the drip disposal must be covered with a ground cover such as grass seed or sod prior to the final inspection.

RECEIVED
By Brandon Olvera at 10:10 am, Aug 22, 2024

Douglas R. Dowlearn
D.A.D. Services, Inc.
PO Box 212
Bulverde, TX 78163
(210)240-2101
txseptic@gmail.com

August 19th, 2024

RE: 2167 Glenn Drive - Lift Station Line Variance Request

To Whom It May Concern:

I am requesting a variance for the placement of the 2" SCH 40 PVC pipe coming from the 70 gallon lift station to be placed within 10' of a steep slope. This variance is requested due to limitations presented by the overall steep nature of the lot.

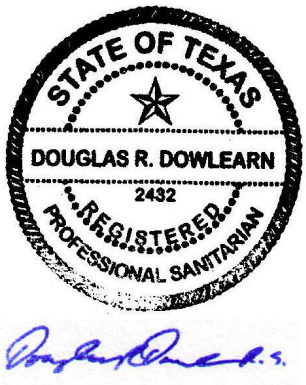
The 2" SCH 40 PVC pipe from the lift station will be sleeved in SCH 40 PVC pipe where it is within 10' of a steep slope. The sleeving of the pipe will prevent seepage in the event of a leak in the pipe; therefore, equivalent protection will be maintained.

In my professional opinion, this variance will not pose a threat to the environment or public health.

If there are any questions or concerns, please contact me at 210.240.2101 or by email at txseptic@gmail.com .

Sincerely,

Douglas R. Dowlearn, R.S.



RECEIVED
By Brandon Olvera at 10:10 am, Aug 22, 2024

Douglas R. Dowlearn
D.A.D. Services, Inc.
PO Box 212
Bulverde, TX 78163
(210)240-2101
txseptic@gmail.com

August 19th, 2024

RE: 2167 Glenn Drive - Supply and Flush Line Variance Request

To Whom It May Concern:

I am requesting a variance for the placement of supply and flush lines to be placed within 10' of a steep slope. This variance is requested due to limitations presented by the overall steep nature of the lot.

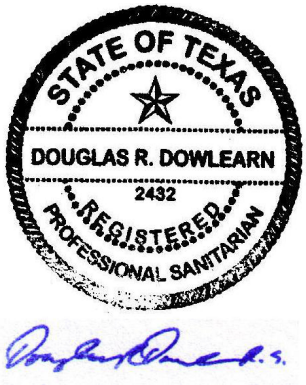
The supply and flush lines will be sleeved in SCH 40 PVC pipe where they are within 10' of a steep slope. The sleeving of the supply and flush lines will prevent seepage in the event of a leak in the lines; therefore, equivalent protection will be maintained.

In my professional opinion, this variance will not pose a threat to the environment or public health.

If there are any questions or concerns, please contact me at 210.240.2101 or by email at txseptic@gmail.com .

Sincerely,

Douglas R. Dowlearn, R.S.



Douglas R. Dowlearn
D.A.D. Services, Inc.
PO Box 212
Bulverde, TX 78163
(210)240-2101
txseptic@gmail.com

May 14th, 2024

RE: 2167 Glenn Drive - Drip Field Within 25' of Steep Slope Variance Request

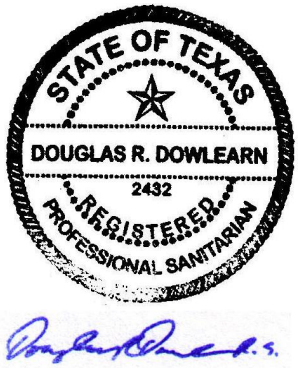
To Whom It May Concern:

I am requesting the variance for the placement of a drip disposal drainfield to be within 25' of a steep slope. This variance is requested due to limited space. Equivalent protection with respect to the requirements of TAC Chapter 285.91, Table X will be maintained by adding the impermeable liner where the drainfield is less than 25' of steep slopes. The addition of the impermeable liner will prevent seepage from occurring where the drainfield is within 25' of the steep slopes. In my professional opinion this variance will not pose a threat to the environment or public health.

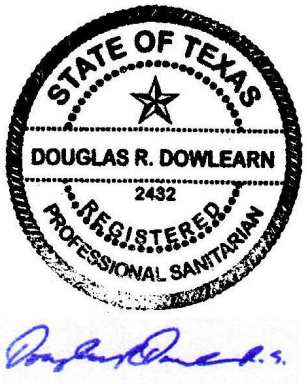
If you have any additional questions or concerns, I can be contacted by phone at 210.240.2101 or be email at txseptic@gmail.com.

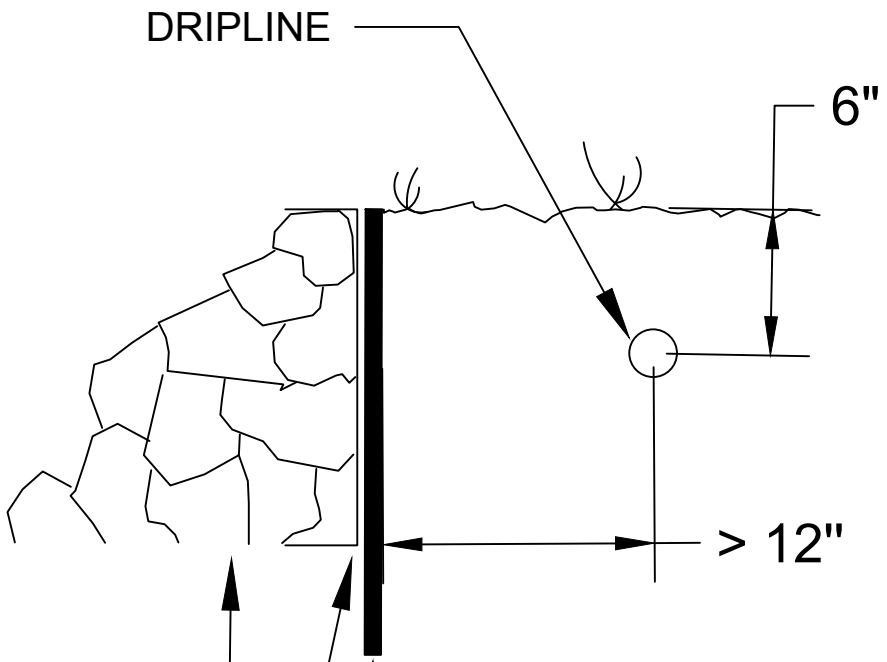
Respectfully,

Douglas R. Dowlearn, R.S.



RETAINING WALL SCHEMATIC





ROCK
RETAINING WALL

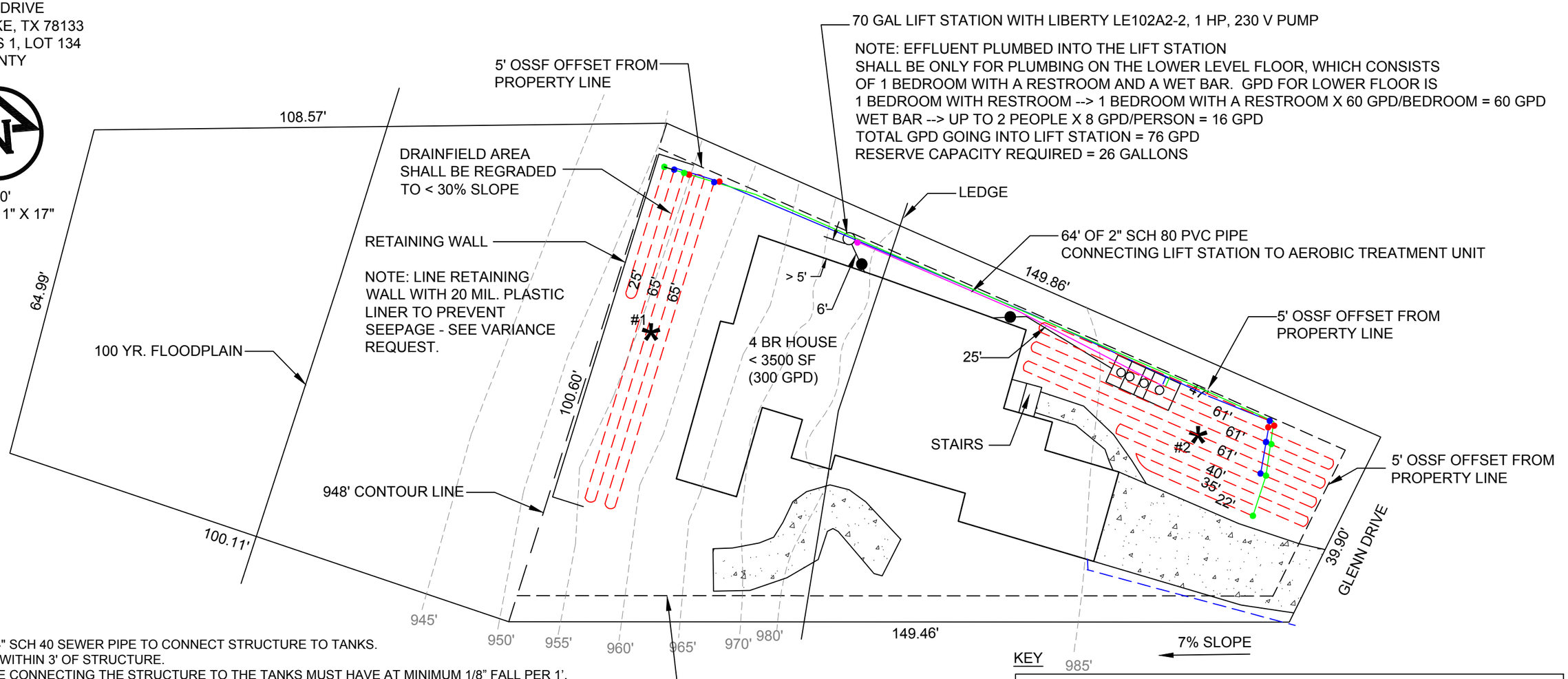
ADD FRENCH DRAIN TO INSIDE
OF RETAINING WALL

20 MIL PLASTIC LINER PLACED IN
A TRENCH THAT IS A MINIMUM
DEPTH OF 18" TO PREVENT
SEEPAGE

NOTE: NOT TO SCALE

THOMPSON CHRISTINE K
2167 GLENN DRIVE
CANYON LAKE, TX 78133
ASTRO HILLS 1, LOT 134
COMAL COUNTY

SCALE 1" = 20'
PRINT SIZE 11" X 17"



NOTES:
- USE 3" OR 4" SCH 40 SEWER PIPE TO CONNECT STRUCTURE TO TANKS.
- CLEANOUT WITHIN 3' OF STRUCTURE.
- SEWER PIPE CONNECTING THE STRUCTURE TO THE TANKS MUST HAVE AT MINIMUM 1/8" FALL PER 1'.
- SEWER LINE WILL BE SCH 80 PVC OR SLEEVED WITH SCH 40 PVC WHERE IT IS WITHIN 5' OF OR CROSSES UNDER DRIVE, STRUCTURES, AND SURFACE IMPROVEMENTS AND 5' BEYOND TO PROVIDE EQUIVALENT PROTECTION UNDER SETBACK REQUIREMENTS OF TAC 285.
- INSTALL VACUUM BREAKERS AT HIGHEST POINTS ON THE SUPPLY AND FLUSH LINES.
- TANKS TO BE > 5' FROM STRUCTURES AND SURFACE IMPROVEMENTS. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE SETBACK REQUIREMENTS OF TAC 285.
- TANKS WILL BE WATER TIGHT AND MANUFACTURED ACCORDING TO ASTM DESIGNATION: C 1227.
- DRAINFIELD SHALL BE GREATER THAN 100' FROM PRIVATE WELLS, AND GREATER THAN 150' FROM PUBLIC WELLS. VERIFY WELL LOCATION(S) ON SITE.
- CLEAR SURFACE ROCK AND BOULDERS FROM DRAINFIELD AREA, AND ENSURE THAT THERE IS AT MINIMUM 12" OF SUITABLE SOIL BETWEEN THE BOTTOM OF THE DRIP LINES, AND THE RESTRICTIVE HORIZON. CLASS II SOIL MAY NEED TO BE IMPORTED IN ORDER TO MAINTAIN THE MINIMUM 12" OF SOIL BETWEEN THE BOTTOM OF THE DRIP LINES AND RESTRICTIVE HORIZON.
- AEROBIC TREATMENT UNIT TO BE BURIED AT DEPTH TO ALLOW FOR 12" SEPARATION BETWEEN TOP OF THE AEROBIC TREATMENT UNIT AND BOTTOM OF DRIP LINES.
- 9 SF OF DRAINFIELD AREA DEDUCTED FOR IMPERMEABLE AEROBIC TREATMENT UNIT LIDS.
- LINE RETAINING WALL WITH 20 MIL. PLASTIC LINER TO PREVENT SEEPAGE - SEE VARIANCE REQUEST.
- SUPPLY AND FLUSH LINES WILL BE SLEEVED IN SCH 40 PVC PIPE WHERE STEEP SLOPES OCCUR(LEDGE) AND 10' BEYOND. THIS WILL PROVIDE EQUIVALENT PROTECTION TO THE LINES - SEE VARIANCE REQUEST.
- 2" SCH 40 PVC PIPE FROM THE LIFT STATION WILL BE SLEEVED IN SCH 40 PVC PIPE WHERE STEEP SLOPES OCCUR(LEDGE) AND 10' BEYOND. THIS WILL PROVIDE EQUIVALENT PROTECTION TO THE LINE - SEE VARIANCE REQUEST.

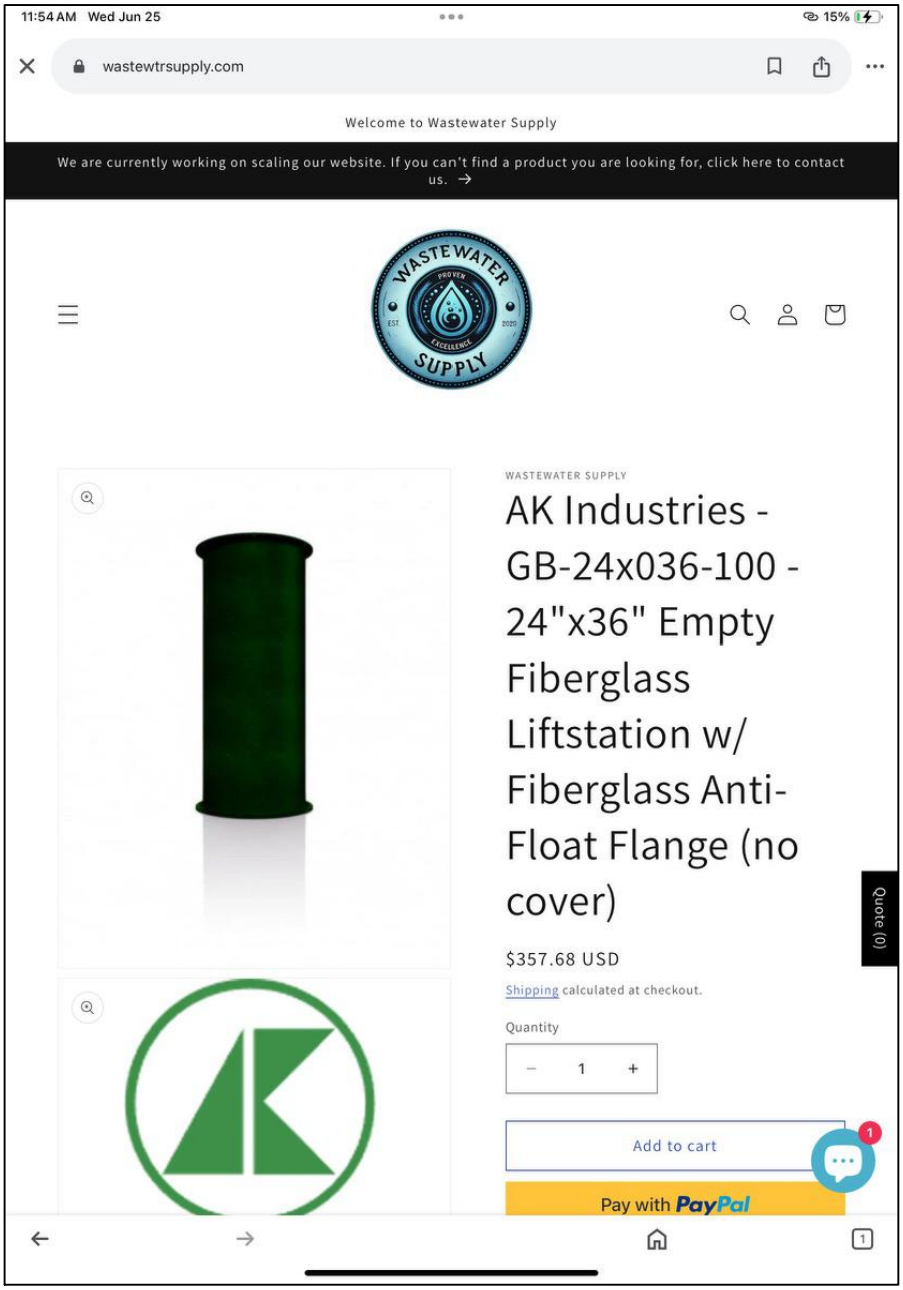
DRAINFIELD DETAILS
799 L.F. OF DRIP TUBING SPACED 2' APART.
1 ROW @ 47 L.F.
5 ROWS @ 61 L.F. EACH
2 ROWS @ 40 L.F. EACH
1 ROW @ 35 L.F.
1 ROW @ 22 L.F.
4 ROWS @ 65 L.F. EACH
2 ROWS @ 25 L.F. EACH

KEY
- TWO WAY CLEANOUT
- 1" VACUUM BREAKER
- CHECK VALVE
- SUPPLY LINE
- FLUSH LINE
- 2" SCH 40 PVC PIPE (SLEEVED)
- SUPPLY LINE CONNECTION
- FLUSH LINE CONNECTION
- PROPOSED WATER LINE(VERIFY LOCATION ON SITE)
- TEST HOLE
- 600 GPD AEROBIC TREATMENT UNIT
- DRIVE/WALKWAY

RECEIVED
By Brandon Olvera at 4:28 pm, Jun 27, 2025

70 GAL LIFT STATION

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN



WORKING LEVEL = 36"
GALLONS/INCH = 1.96 GAL/INCH

22" - 36" - RESERVE - 27.44 GAL
22" - ALARM ON
20" - 10" - PUMP ON TO PUMP OFF - 19.6 GAL
0 - 10" - SUMP - 19.6 GAL

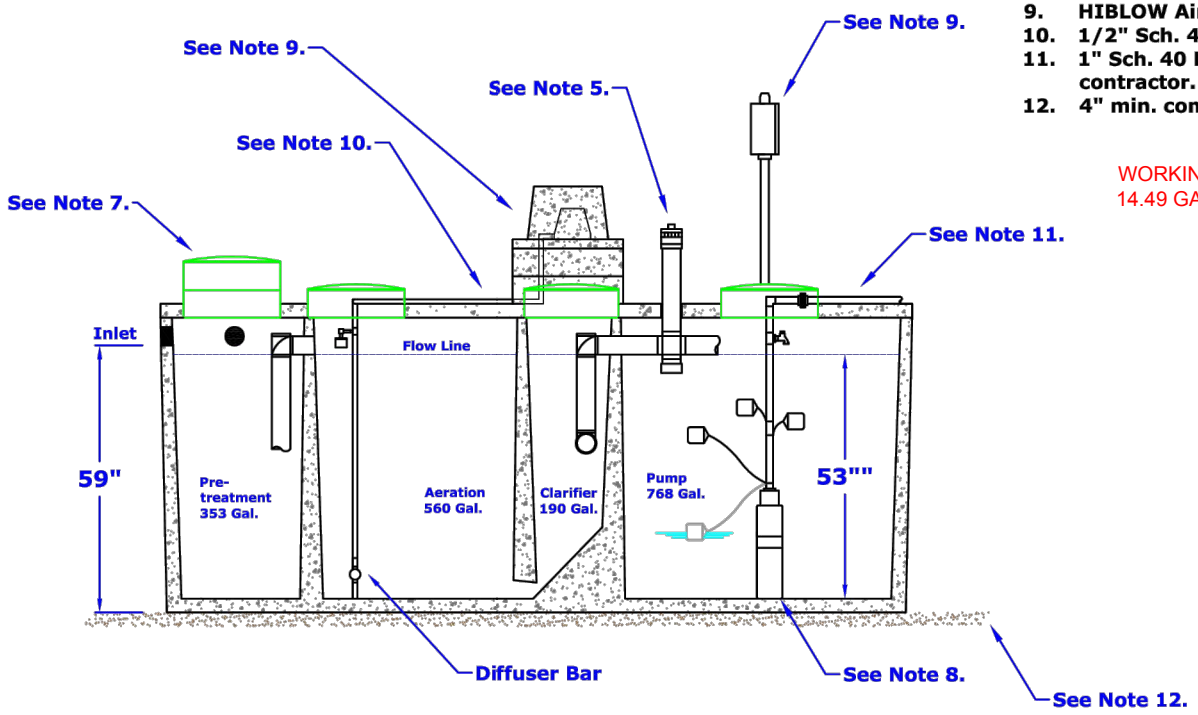
NOTES:
- SET TO ACTIVATE ON DEMAND.
- USE LIBERTY LE102A2-2, 1 HP, 208-230 V PUMP.
- EFFLUENT PLUMBED INTO THE LIFT STATION SHALL BE ONLY FOR PLUMBING ON THE LOWER LEVEL FLOOR, WHICH CONSISTS OF 1 BEDROOM WITH A RESTROOM, AND A WET BAR. GPD FOR LOWER FLOOR IS
1 BEDROOM WITH A RESTROOM --> 1 BEDROOM WITH A RESTROOM X 60 GPD/BEDROOM = 60 GPD
WET BAR --> UP TO 2 PEOPLE X 8 GPD/PERSON = 16 GPD
TOTAL GPD GOING INTO LIFT STATION = 76 GPD
RESERVE CAPACITY REQUIRED = 26 GALLONS

Assembly Details

OSSF

37" - 53" - RESERVE - 231.84 GAL
12" - 37" - PUMP ON TO ALARM ON - 362.25 GAL
10" - 12" - PUMP OFF TO PUMP ON - 28.89 GAL
0 - 10" - SUMP- 144.9 GAL

NOTE: SET ON A TIMER TO DOSE 8 TIMES PER DAY AT 10 MINUTES PER DOSE.



GENERAL NOTES:

1. Plant structure material to be precast concrete and steel.
2. Maximum burial depth is 30" from slab top to grade.
3. Weight = 14,900 lbs.
4. Treatment capacity is 600 GPD. Pump compartment set-up for a 360 GPD Flow Rate (4 beedroom, < 4,000 sq/ft living aera). Please specify for additional set-up requirements. BOD Loading = 1.62 lbs. per day.
5. Standard tablet chlorinator or Optional Liquid chlorinator. NSF approved chlorinators (tablet & liquid) available.
6. Bio-Robix B-550 Control Center w/ Timer for night spray application. Optional Micro Dose (min/sec)timer available for drip applications. Electrical Requirement to be 115 Volts, 60 Hz, Single Phase, 30 AMP, Grounded Receptacle.
7. 20" Ø acess riser w/ lid (Typical 4). Optional extension risers available.
8. 20 GPM 1/2 HP, high head effluent pump.
9. HIBLOW Air Compressor w/ concrete housing.
10. 1/2" Sch. 40 PVC Air Line (Max. 50 Lft from Plant).
11. 1" Sch. 40 PVC pipe to distribution system provided by contractor.
12. 4" min. compacted sand or gravel pad by Contractor

WORKING LEVEL = 53"
14.49 GAL/INCH

DIMENSIONS:
Outside Height: 67"
Outside Width: 63"
Outside Length: 164"

MINIMUM EXCAVATION DIMENSIONS:
Width: 76"
Length: 176"

NuWater B-550 (600 GPD) Aerobic Treatment Plant (Assembled)

Model: B-550-PC-400PT

March, 2012 - Rev 1
By: A.S.

Scale:
* All Dimensions subject to allowable specification tolerances.

Dwg. #: ADV-B550-3

Advantage Wastewater Solutions llc
444 A Old Hwy No 9
Comfort, TX 78013
830-995-3189
fax 830-995-4051

Liberty Pumps®

LE100-Series

Sewage Pumps

1 hp
2" Solids-Handling
2" or 3" Flanged Discharge

Features:

- Rugged 2 vane, semi-open cast iron impellers
- Cast iron housings and volute with all stainless and brass fasteners
- Stainless steel shaft
- Oil-filled, hermetically sealed motors
- Built-in thermal protection on single phase models
- 2" or 3" flanged discharge
- Permanently lubricated upper and lower ball bearings
- Unitized shaft seals
- Single float mechanical level control with series plug for manual bypass operation–standard on single-phase automatic models
- Adjustable pumping range
- Quick-connect 10' standard power cord allows replacement of cord in seconds without breaking seals to motor (Optional longer cord lengths available)

Models:

SINGLE PHASE

LE102M	208-230V, 8a, manual
LE102A	208-230V, 8a, automatic

3-PHASE

LE103M	208-230V, 5.3a, manual*
LE104M	440-480V, 2.5a, manual*
LE105M	575V, 1.9a, manual*

***NOTE:** 3-phase models require control panel for automatic operation. See sewage accessories literature for complete information on all Simplex and Duplex controls.

innovate. evolve.

LE100-SERIES TECHNICAL SPECIFICATIONS

PUMP

The pump(s) shall be model _____ as manufactured by Liberty Pumps, Bergen, N.Y. or equal. The pump(s) shall have a capacity of _____ GPM at a total dynamic head of _____ feet. Motor size shall be 1 horsepower, _____ phase, 60 hz. and _____ volt operation.

MOTOR

The pump motor shall be of the submersible type, oil filled, and hermetically sealed. Single phase motors shall have thermal overload protection embedded in the windings, and shall automatically reset when motor cools. Three-phase motors shall have overloads incorporated into the control panel, properly sized for the horsepower and amperage of the pump(s).

The rotor shaft shall be made of stainless steel and shall be supported by upper and lower ball bearings.

The power cord shall be of the quick-connect design.

IMPELLER

The pump impeller shall be cast iron, 2 vane, semi-open, and shall be capable of passing a 2" spherical solid.

SEAL

On single phase the shaft seal shall be of the carbon/ ceramic unitized design, with BUNA N elastomers and stainless housings. The 3 phase shall be silicon carbide.

EXTERNAL CONSTRUCTION

The pump volute, legs and motor housing shall be heavy gray iron castings, class 25 or better. All castings shall be powder coated before assembly. All fasteners shall be of 300-series stainless steel.

LEVEL CONTROL

The pump shall be controlled by an adjustable mechanical switch sealed in a PVC float, and shall have a series plug for manual bypass operation.

ALL MODELS: 1 HP, 1725 RPM

	MODELS	VOLTS	PHASE	AMPS	DISCHARGE	AUTOMATIC
SINGLE PHASE	LE102M2	208-230	1	8	2" FLANGED	NO
	LE102A2	208-230	1	8	2" FLANGED	YES
	LE102M3	208-230	1	8	3" FLANGED	NO
	LE102A3	208-230	1	8	3" FLANGED	YES
3-PHASE	LE103M2-2	208-230	3	5.3	2" FLANGED	NO
	LE104M2-2	440-480	3	2.5	2" FLANGED	NO
	LE105M2-2	575	3	1.9	2" FLANGED	NO
	LE103M3-2	208-230	3	5.3	3" FLANGED	NO
	LE104M3-2	440-480	3	2.5	3" FLANGED	NO
	LE105M3-2	575	3	1.9	3" FLANGED	NO

10' cord standard on single phase models. For 25' cord option, add a "-2" suffix to model number. Example: LE102A2-2
For 35' cord option add "-3" suffix to model number. Example: LE102A2-3.

NOTE: 25' cord is standard on 3-Phase models. 3-Phase models require panel for automatic operation. See sewage accessories literature for complete information on all simplex and duplex controls. 50' cord option available on single phase models only. (Bare leads, no plug.) Add "-5" suffix to model number. Example LE102M3-5.

DIMENSIONAL DATA:

Weight: LE102M: 64 LBS.

Height: 18.9"

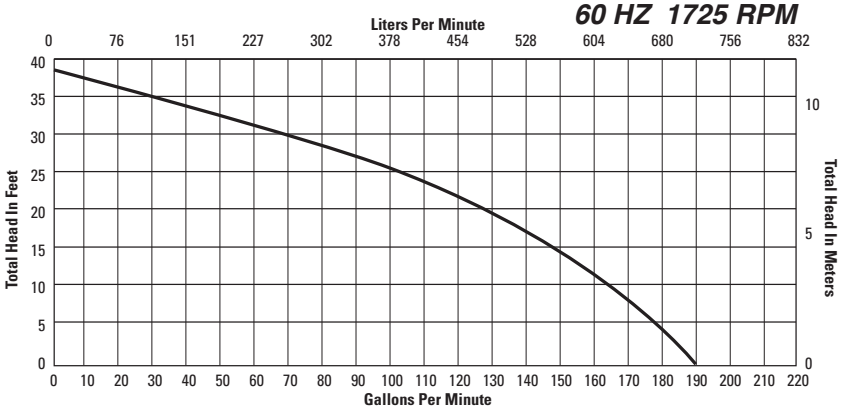
Major Width: 12.5"

Maximum fluid temperature:
140 degrees F.

SSPMA CERTIFIED C CSA US

Specifications are subject to change without notice.

PERFORMANCE CURVE



Liberty Pumps • 7000 Apple Tree Avenue • Bergen, New York 14416 • Phone 800-543-2550 Fax (585) 494-1839
www.libertypumps.com

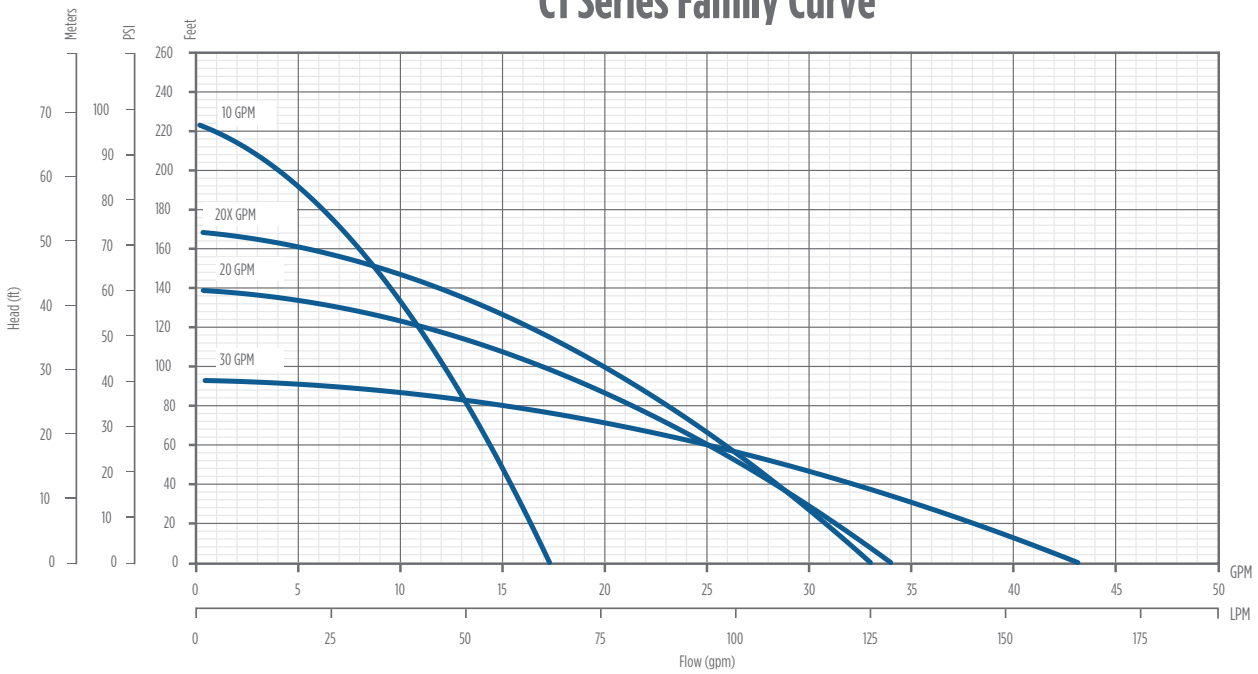
C1 SERIES
CISTERN PUMPS

Designed for use in gray water / filtered effluent service applications, the C1 Series cistern pump provides high performance and long life in less than ideal water conditions. The C1 Series pump is able to pass solids up to 1/8" without having a negative effect on the internal hydraulic components.

The pump's unique bottom suction design allows for maximum fluid drawdown without compromising durability or overall life, and it does not require the use of a flow induction sleeve. Intended specifically for use in a cistern or tank, C1 Series pumps are suitable for use in agricultural, residential, and commercial installations.

Franklin Electric

C1 Series Family Curve



FEATURES

- Supplied with a removable 5" base for secure and reliable mounting
- Bottom suction design
- Robust thermoplastic discharge head design resists breakage during installation and operation
- Single shell housing design provides a compact unit while ensuring cool and quiet operation
- Hydraulic components molded from high quality engineered thermoplastics
- Optimized hydraulic design allows for increased performance and decreased power usage
- All metal components are made of high grade stainless steel for corrosion resistance
- Available with a high quality 115 V or 230 V, ½ hp motor
- Fluid flows of 10, 20, and 30 gpm, with a max shut-off pressure of over 100 psi
- Heavy duty 600 V 10 foot SJOOW jacketed lead

APPLICATIONS

- Gray water pumping
- Filtered effluent service water pumping
- Water reclamation projects such as pumping from rain catchment basins
- Aeration and other foundation or pond applications
- Agriculture and livestock water pumping

ORDERING INFORMATION

C1 Series Pumps							
GPM	HP	Volts	Stage	Model No.	Order No.	Length (in)	Weight (lbs)
10	1/2	115	7	10C1-05P4-2W115	90301005	26	17
		230	7	10C1-05P4-2W230	90301010	26	17
20		115	5	20C1-05P4-2W115	90302005	25	16
		230	5	20C1-05P4-2W230	90302010	25	16
20X		115	6	20XC1-05P4-2W115	90302015	26	17
		230	6	20XC1-05P4-2W230	90302020	26	17
30		115	4	30C1-05P4-2W115	90303005	25	16
		230	4	30C1-05P4-2W230	90303010	25	16

Note: All units have 10 foot long SJOOW leads.

Douglas R. Dowlearn
D.A.D. Services, Inc.
PO Box 212
Bulverde, TX 78163
(210)240-2101
txseptic@gmail.com

May 14th, 2024

VOID

RE: 2167 Glenn Drive - Supply and Flush Line Variance Request

To Whom It May Concern:

I am req[illegible]ing a va[illegible]e for [illegible] of suppl[illegible]d flus[illegible]es to [illegible]red within 1[illegible] a stee[illegible]pe. T[illegible]ariance is [illegible]este[illegible] to li[illegible]tions pro[illegible]ed by the ov[illegible]l stee[illegible]ure [illegible]e lot.

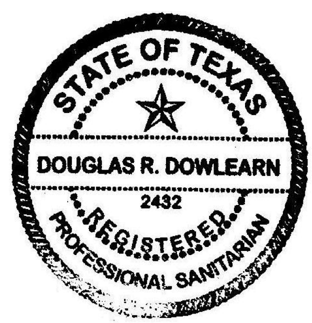
The supp[illegible]d [illegible] lines [illegible]be SCH 80 [illegible]ipe [illegible]eeve[illegible]CH 40 PV[illegible]e where the[illegible]in 10' [illegible]eep slope[illegible] SC[illegible] PVC [illegible] or sleevi[illegible] the supply an[illegible]nes will p[illegible]t seep[illegible] the [illegible] of a[illegible] in th[illegible] therefore, [illegible]lent protecti[illegible]aintaine[illegible]

In my professional opinion, this variance will not pose a threat to the environment or public health.

If there are any questions or concerns, please contact me at 210 240 2101 or by email at txseptic@gmail.com .

Sincerely,

Douglas R. Dowlearn, R.S.



THOMPSON CHRISTINE K
2167 GLENN DRIVE
CANYON LAKE, TX 78133
ASTRO HILLS 1, LOT 134
COMAL COUNTY

SCALE 1" = 20'
PRINT SIZE 11" X 17"

5' OSSF OFFSET FROM PROPERTY LINE

70 GAL LIFT STATION WITH LE 100 SERIES 1 HP PUMP

NOTE: EFFLUENT PLUMBED INTO THE LIFT STATION SHALL BE ONLY FOR PLUMBING ON THE LOWER LEVEL FLOOR, WHICH CONSISTS OF 1 BEDROOM WITH A RESTROOM AND A WET BAR. GPD FOR LOWER FLOOR IS
1 BEDROOM WITH RESTROOM --> 1 BEDROOM WITH A RESTROOM X 60 GPD/BEDROOM = 60 GPD
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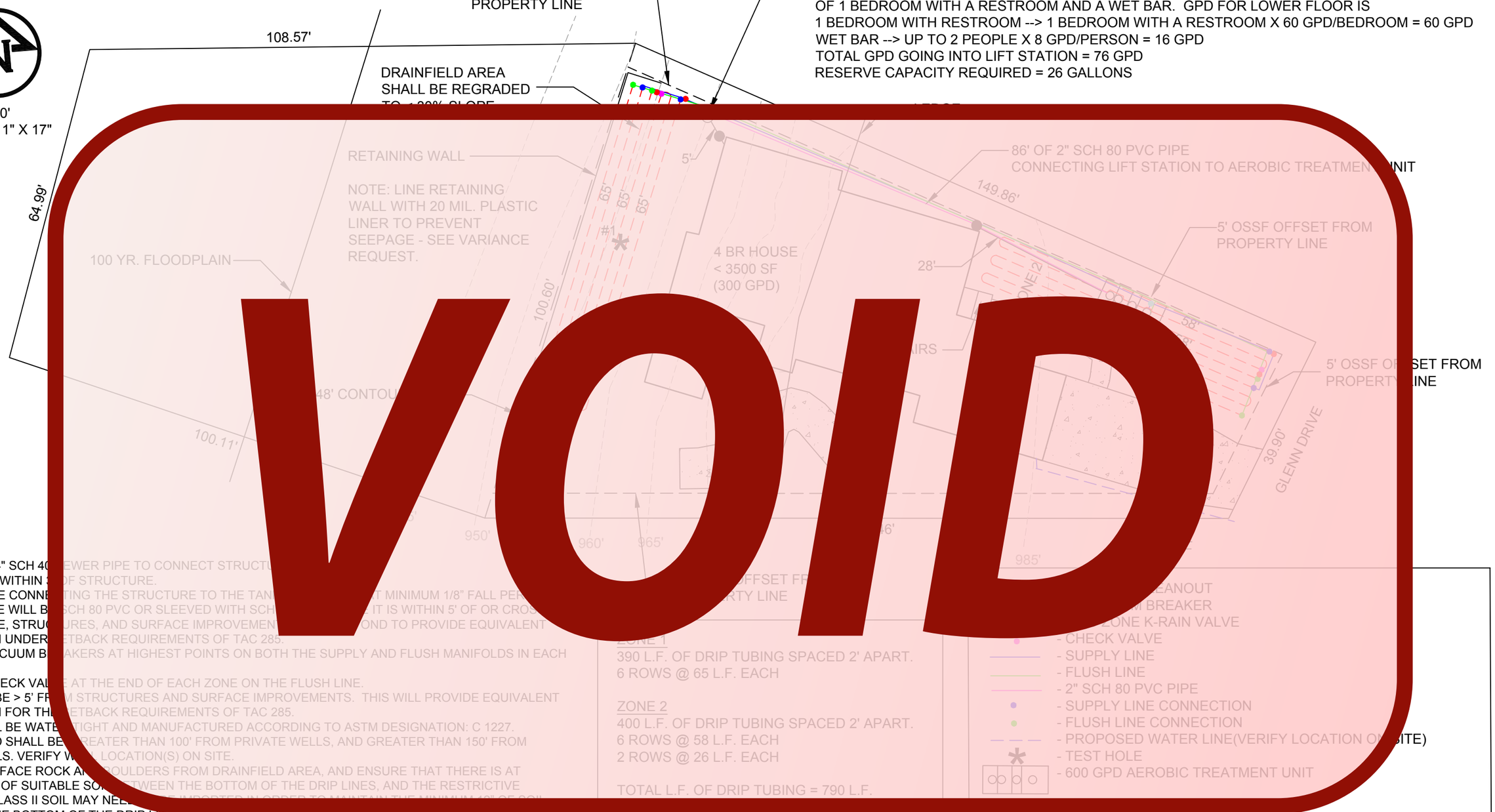
TOTAL GPD GOING INTO LIFT STATION = 76 GPD
RESERVE CAPACITY REQUIRED = 26 GALLONS



STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

5.20.2024

NOTES:
- USE 3" OR 4" SCH 40 EWER PIPE TO CONNECT STRUCTU
- CLEANOUT WITHIN 5 OF STRUCTURE.
- SEWER PIPE CONNE TING THE STRUCTURE TO THE TAN T MINIMUM 1/8" FALL PER
- SEWER LINE WILL B SCH 80 PVC OR SLEEVED WITH SCH IT IS WITHIN 5' OF OR CRO
UNDER DRIVE, STRUC URES, AND SURFACE IMPROVEMEN OND TO PROVIDE EQUIVALENT
PROTECTION UNDER ETBACK REQUIREMENTS OF TAC 285.
- INSTALL VACUUM B AKERS AT HIGHEST POINTS ON BOTH THE SUPPLY AND FLUSH MANIFOLDS IN EACH ZONE.
- INSTALL CHECK VAL E AT THE END OF EACH ZONE ON THE FLUSH LINE.
- TANKS TO BE > 5' FR M STRUCTURES AND SURFACE IMPROVEMENTS. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR TH ETBACK REQUIREMENTS OF TAC 285.
- TANKS WILL BE WATE TIGHT AND MANUFACTURED ACCORDING TO ASTM DESIGNATION: C 1227.
- DRAINFIELD SHALL BE REATER THAN 100' FROM PRIVATE WELLS, AND GREATER THAN 150' FROM PUBLIC WELLS. VERIFY W LOCATION(S) ON SITE.
- CLEAR SURFACE ROCK A BOULDERS FROM DRAINFIELD AREA, AND ENSURE THAT THERE IS AT MINIMUM 12" OF SUITABLE SO TWEEN THE BOTTOM OF THE DRIP LINES, AND THE RESTRICTIVE HORIZON. CLASS II SOIL MAY NEE BETWEEN THE BOTTOM OF THE DRIP LINES AND RESTRICTIVE HORIZON.
- AEROBIC TREATMENT UNIT TO BE BURIED AT DEPTH TO ALLOW FOR 12" SEPARATION BETWEEN TOP OF THE AEROBIC TREATMENT UNIT AND BOTTOM OF DRIP LINES.
- 9 SF OF DRAINFIELD AREA DEDUCTED FOR IMPERMEABLE AEROBIC TREATMENT UNIT LIDS.
- LINE RETAINING WALL WITH 20 MIL. PLASTIC LINER TO PREVENT SEEPAGE - SEE VARIANCE REQUEST.
- SUPPLY AND FLUSH LINES WILL BE SCH 80 PVC PIPE OR SLEEVED IN SCH 40 PVC PIPE WHERE STEEP SLOPES OCCUR(LEDGE) AND 10' BEYOND. THIS WILL PROVIDE EQUIVALENT PROTECTION TO THE LINES - SEE VARIANCE REQUEST.

70 GAL LIFT STATION WITH LE 100 SERIES 1 HP PUMP

NOTE: EFFLUENT PLUMBED INTO THE LIFT STATION SHALL BE ONLY FOR PLUMBING ON THE LOWER LEVEL FLOOR, WHICH CONSISTS OF 1 BEDROOM WITH A RESTROOM AND A WET BAR. GPD FOR LOWER FLOOR IS
1 BEDROOM WITH RESTROOM --> 1 BEDROOM WITH A RESTROOM X 60 GPD/BEDROOM = 60 GPD
WET BAR --> UP TO 2 PEOPLE X 8 GPD/PERSON = 16 GPD
TOTAL GPD GOING INTO LIFT STATION = 76 GPD
RESERVE CAPACITY REQUIRED = 26 GALLONS

5' OSSF OFFSET FROM PROPERTY LINE

108.57'

DRAINFIELD AREA

TO < 30% SLOPE

LEDGE

RETAINING WALL

NOTE: LINE RETAINING WALL WITH 20 MIL. PLASTIC LINER TO PREVENT SEEPAGE - SEE VARIANCE REQUEST.

86' OF 2" SCH 80 PVC PIPE CONNECTING LIFT STATION TO AEROBIC TREATMENT UNIT

5' OSSF OFFSET FROM PROPERTY LINE

DDPLAIN

48' CONTOUR LINE

100.11'

100.60'

149.86'

28'

39.90'

GLENN DRIVE

945' 950' 955' 960' 965' 970' 980' 985'

149.46'

7% SLOPE

SCALE 1" = 16'
PRINT SIZE 11" X 17

5' OSSF OFFSET FROM PROPERTY LINE

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

5.20.2024

VOID

NNECT STRUCTURE TO TANKS.

URE TO THE TANKS MUST HAVE AT MINIMUM 1/8" FALL PER 1'.
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CE IMPROVEMENTS AND 5' BEYOND TO PROVIDE EQUIVALENT
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ACH ZONE ON THE FLUSH LINE.
ND SURFACE IMPROVEMENTS. THIS WILL PROVIDE EQUIVALENT
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FACTURED ACCORDING TO ASTM DESIGNATION: C 1227.
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) ON SITE.
FROM DRAINFIELD AREA, AND ENSURE THAT THERE IS AT
THE BOTTOM OF THE DRIP LINES, AND THE RESTRICTIVE

390 L.F. OF DRIP TUBING SPACED 2' APART.
6 ROWS @ 65 L.F. EACH

ZONE 2
400 L.F. OF DRIP TUBING SPACED 2' APART.
6 ROWS @ 58 L.F. EACH
2 ROWS @ 26 L.F. EACH

TOTAL L.F. OF DRIP TUBING = 790 L.F.

KEY

- TWO WAY CLEANOUT
- 1" VACUUM BREAKER
- TWO ZONE K-RAIN VALVE
- SUPPLY LINE
- FLUSH LINE
- 2" SCH 80 PVC PIPE
- SUPPLY LINE CONNECTION
- FLUSH LINE CONNECTION
- PROPOSED WATER LINE(VERIFY LOCATION ON SITE)
- TEST HOLE
- 600 GPD AEROBIC TREATMENT UNIT

August 13, 2024

Permit: 117696

COMAL COUNTY
ENGINEER'S OFFICE

RE: ***2167 Glenn Dr.***
Astro Hills
Lot 134

Dear Property Owner & Agent,

Thank you for your submission. We have reviewed the planning materials for the referenced permit application, and unfortunately, they are insufficient. To proceed with processing this permit, we require the following:

1. Our office will be conducting a site visit on 08-14-2024.
2. Based on the purposed wastewater coming from the lower level, how will the 70 gal pump tank capture all of the 76 gallons generated?
3. Variance request:
    a. We will approve the use of sleeving for the sewer pipe with water tight joints proximity to slopes where seeps may occur.
4. The tight line from the grinder pump to the ATU also has a 10 ft separation distance from Slopes where seeps may occur. 285.91(10) Table X
5. Revise accordingly and resubmit.

If you have any questions, you can email me or call the office.

Thank You,

| **Brandon Olvera** | **Designated Representative OS0034792** |

| Comal County | www.cceo.org | f: 830-608-2078 | e: olverb@co.comal.tx.us |

195 David Jonas Dr, New Braunfels, Texas 78132 - Phone (830) 608-2090

70 GAL LIFT STATION WITH LE 100 SERIES 1 HP PUMP

NOTE: EFFLUENT PLUMBED INTO THE LIFT STATION SHALL BE ONLY FOR PLUMBING ON THE LOWER LEVEL FLOOR, WHICH CONSISTS OF 1 BEDROOM WITH A RESTROOM AND A WET BAR. GPD FOR LOWER FLOOR IS
1 BEDROOM WITH RESTROOM --> 1 BEDROOM WITH A RESTROOM X 60 GPD/BEDROOM = 60 GPD
WET BAR --> UP TO 2 PEOPLE X 8 GPD/PERSON = 16 GPD
TOTAL GPD GOING INTO LIFT STATION = 76 GPD
RESERVE CAPACITY REQUIRED = 26 GALLONS

5' OSSF OFFSET FROM PROPERTY LINE

108.57'

DRAINFIELD AREA SHALL BE REGRADED TO < 30% SLOPE

LEDGE

RETAINING WALL

NOTE: LINE RETAINING WALL WITH 20 MIL. PLASTIC LINER TO PREVENT SEEPAGE - SEE VARIANCE REQUEST

86' OF 2" SCH 80 PVC PIPE CONNECTING LIFT STATION TO AEROBIC TREATMENT UNIT

149.86'

5' OSSF OFFSET FROM PROPERTY LINE

4 BR HOUSE

#1

#2

5' OSSF OFFSET FROM PROPERTY LINE

GLENN DRIVE

39.90'

948' CONTOU

955'

960'

985'

SCALE 1" = 16'
PRINT SIZE 11" X 17"

5' OSSF OFFSET FROM PROPERTY LINE

ZONE 1
390 L.F. OF DRIP TUBING SPACED 2' APART.
6 ROWS @ 65 L.F. EACH

ZONE 2
400 L.F. OF DRIP TUBING SPACED 2' APART.
6 ROWS @ 58 L.F. EACH
2 ROWS @ 26 L.F. EACH

TOTAL L.F. OF DRIP TUBING = 790 L.F.

KEY

- TWO WAY CLEANOUT
- 1" VACUUM BREAKER
- TWO ZONE K-RAIN VALVE
- CHECK VALVE
- SUPPLY LINE
- FLUSH LINE
- 2" SCH 40 PVC PIPE (SLEEVED)
- SUPPLY LINE CONNECTION
- FLUSH LINE CONNECTION
- PROPOSED WATER LINE(VERIFY LOCATION ON SITE)
- TEST HOLE
- 600 GPD AEROBIC TREATMENT UNIT

NNECT TRUCTURE TO TANKS.

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IMPORTED IN ORDER TO MAINTAIN THE MINIMUM 12" OF SOIL
S AND RESTRICTIVE HORIZON.

THOMPSON CHRISTINE K
2167 GLENN DRIVE
CANYON LAKE, TX 78133
ASTRO HILLS 1, LOT 134
COMAL COUNTY

70 GAL LIFT STATION WITH LE 100 SERIES 1 HP PUMP

NOTE: EFFLUENT PLUMBED INTO THE LIFT STATION SHALL BE ONLY FOR PLUMBING ON THE LOWER LEVEL FLOOR, WHICH CONSISTS OF 1 BEDROOM WITH A RESTROOM AND A WET BAR. GPD FOR LOWER FLOOR IS
1 BEDROOM WITH RESTROOM --> 1 BEDROOM WITH A RESTROOM X 60 GPD/BEDROOM = 60 GPD
WET BAR --> UP TO 2 PEOPLE X 8 GPD/PERSON = 16 GPD
TOTAL GPD GOING INTO LIFT STATION = 76 GPD

5' OSSF OFFSET FROM PROPERTY LINE

108.57'

SCALE: 1" = 20'
PRINT SIZE 11" X 17"

DRAINFIELD AREA SHALL BE REGRADED TO < 30% SLOPE

LEDGE

86' OF 2" SCH 80 PVC PIPE CONNECTING LIFT STATION TO AEROBIC TREATMENT UNIT

149.86'

RETAINING WALL

NOTE: LINE RETAINING WALL WITH 20 MIL. PLASTIC LINER TO PREVENT SEEPAGE - SEE VARIANCE REQUEST.

5'

65' 65' 65'

#1

64.99'

100 YR. FLOODPLAIN

4 BR HOUSE
< 3500 SF
(300 GPD)

28'

5' OSSF OFFSET FROM PROPERTY LINE

58' 58' 58'

5' OSSF OFFSET FROM PROPERTY LINE

ZONE 1

39.90'

GLENN DRIVE

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

955' 960' 970' 980' 985'

149.4

KEY

- CLEANOUT
- VACUUM BREAKER
- TWO ZONE K-RAIN VALVE
- CHECK VALVE
- SUPPLY LINE
- FLUSH LINE
- 2" SCH 40 PVC PIPE (SLEEVED)
- SUPPLY LINE CONNECTION
- FLUSH LINE CONNECTION
- PROPOSED WATER LINE(VERIFY LOCATION AT SITE)
- TEST HOLE
- 600 GPD AEROBIC TREATMENT UNIT
- DRIVE/WALKWAY

ZONE 1
390 L.F. OF DRIP TUBING SPACED 2' APART.
6 ROWS @ 65 L.F. EACH

ZONE 2
400 L.F. OF DRIP TUBING SPACED 2' APART.
6 ROWS @ 58 L.F. EACH
2 ROWS @ 26 L.F. EACH

TOTAL L.F. OF DRIP TUBING = 790 L.F.

NOTES:
USE 3" OR 4" SCH 40 SEWER PIPE TO ... TO TANKS.
CLEANOUT WITHIN 3' OF STRUCTURE
SEWER PIPE CONNECTING THE STRU... MUST HAVE AT MIN... PER 1'.
SEWER LINE WILL BE SCH 80 PVC OR ... 40 PVC WHERE IT IS W... CROSSES
UNDER DRIVE, STRUCTURES, AND SUR... NTS AND 5' BEYOND TO P...
PROTECTION UNDER SETBACK REQUIR... 285.
INSTALL VACUUM BREAKERS AT HIGHE... BOTH THE SUPPLY AND FLUSH M...
ZONE.
INSTALL CHECK VALVE AT THE END OF EACH ZONE ON THE FLUSH LINE.
TANKS TO BE > 5' FROM STRUCTURES AND SURFACE IMPROVEMENTS. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE SETBACK REQUIREMENTS OF TAC 285.
TANKS WILL BE WATER TIGHT AND MANUFACTURED ACCORDING TO ASTM DESIGNATION: C 1227.
DRAINFIELD SHALL BE GREATER THAN 100' FROM PRIVATE WELLS, AND GREATER THAN 150' FROM PUBLIC WELLS. VERIFY WELL LOCATION(S) ON SITE.
CLEAR SURFACE ROCK AND BOULDERS FROM DRAINFIELD AREA, AND ENSURE THAT THERE IS AT MINIMUM 12" OF SUITABLE SOIL BETWEEN THE BOTTOM OF THE DRIP LINES, AND THE RESTRICTIVE HORIZON. CLASS II SOIL MAY NEED TO BE IMPORTED IN ORDER TO MAINTAIN THE MINIMUM 12" OF SOIL BETWEEN THE BOTTOM OF THE DRIP LINES AND RESTRICTIVE HORIZON.
- AEROBIC TREATMENT UNIT TO BE BURIED AT DEPTH TO ALLOW FOR 12" SEPARATION BETWEEN TOP OF THE AEROBIC TREATMENT UNIT AND BOTTOM OF DRIP LINES.
- 9 SF OF DRAIN...
- LINE RETAINING WALL WITH 20 MIL. PLASTIC LINER TO PREVENT SEEPAGE - SEE VARIANCE REQUEST.
- SUPPLY AND FLUSH LINES WILL BE SLEEVED IN SCH 40 PVC PIPE WHERE STEEP SLOPES OCCUR(LEDGE) AND 10' BEYOND. THIS WILL PROVIDE EQUIVALENT PROTECTION TO THE LINES - SEE VARIANCE REQUEST.
- 2" SCH 40 PVC PIPE FROM THE LIFT STATION WILL BE SLEEVED IN SCH 40 PVC PIPE WHERE STEEP SLOPES OCCUR(LEDGE) AND 10' BEYOND. THIS WILL PROVIDE EQUIVALENT PROTECTION TO THE LINE - SEE VARIANCE REQUEST.

PUMP STATION

70 GALLON FIBERGLASS
LIFT STATION TANK

STRONG FIBERGLASS DESIGN

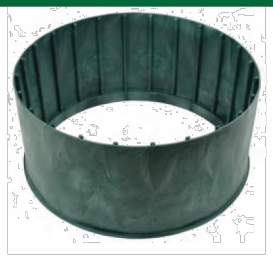
This 70 gallon fiberglass tank is designed to be directly buried outside of the home. This tank can be used for collection of wastewater that will then be pumped using a submersible sewage, effluent, or grinder pump.

DEFAULT TANK DIMENSIONS

- 28" Diameter x 52" Tall
- 70 Gallon Capacity
- 4" inlet hole with rubber gasket
- 2" or 1-1/2" outlet PVC hub (pump size)
- 28" from tank bottom to bottom of inlet
- 23" from tank access lid to bottom of inlet
- 30" from tank bottom to bottom of outlet
- 21.5" from tank access lid to bottom of outlet

Custom Inlet & Outlet Configurations Available

RISERS AND HEAVY DUTY COVERS AVAILABLE


Septic Solutions Inc.®
(877)-925-5132
www.septicsolutions.com

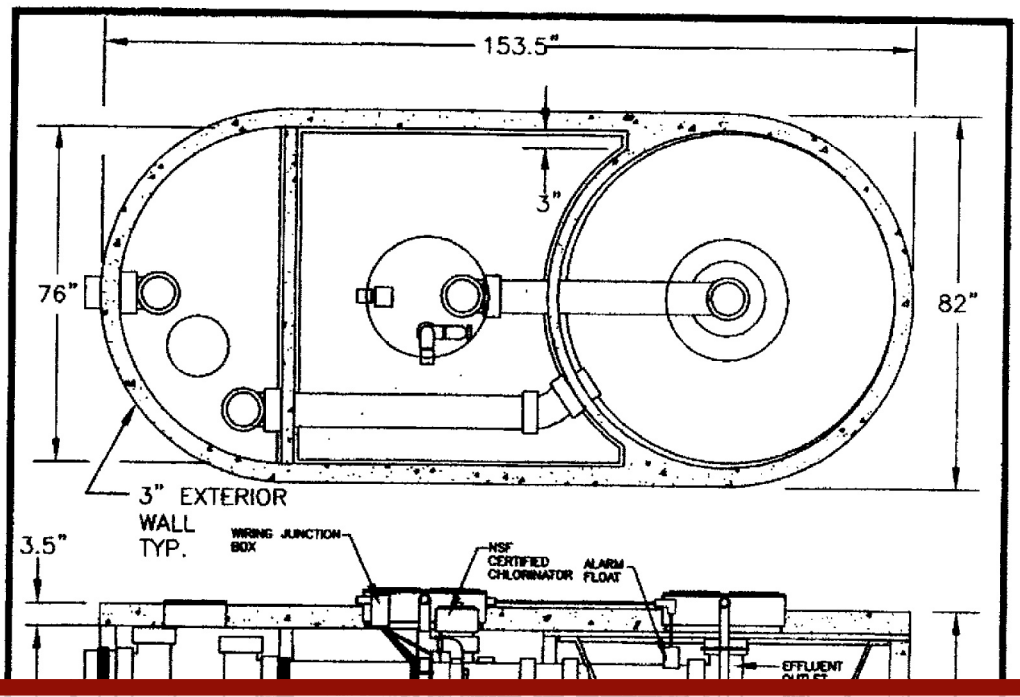
WORKING LEVEL = 28.5"
GALLONS/INCH = 2.456 GAL/INCH

17" - 28.5" - RESERVE - 28.24 GAL
17" - ALARM ON
15" - PUMP ON
8" - 15" - WORKING LEVEL - 17.192 GAL
0 - 8" - SUMP - 19.65 GAL

NOTES:
- SET TO ACTIVATE ON DEMAND.
- USE LIBERTY LE 100 SERIES, 1 HP PUMP.
- EFFLUENT PLUMBED INTO THE LIFT STATION

SHALL BE ONLY FOR PLUMBING ON THE LOWER LEVEL FLOOR, WHICH CONSISTS OF 1 BEDROOM WITH A RESTROOM, AND A WET BAR. GPD FOR LOWER FLOOR IS
1 BEDROOM WITH A RESTROOM --> 1 BEDROOM WITH A RESTROOM X 60 GPD/BEDROOM = 60 GPD
WET BAR --> UP TO 2 PEOPLE X 8 GPD/PERSON = 16 GPD
TOTAL GPD GOING INTO LIFT STATION = 76 GPD
RESERVE CAPACITY REQUIRED = 26 GALLONS

CLEARSTREAM 600NC3T SCHEMATIC



12.3 GALLONS/INCH

43" - 57" - RESERVE - 172.2 GALLONS
43" - ALARM ON
12" - 43" - PUMP ON TO ALARM ON - 381.3 GALLONS
10" - 12" - PUMP OFF TO PUMP ON - 24.6 GALLONS
0 - 10" - SUMP - 123 GALLONS

NOTE: SET ON A TIMER TO DOSE 15 TIMES PER DAY AT 10 MINUTES PER DOSE.

D.A.D SERVICES, INC.
DOUG DOWLEARN
PO BOX 212, BULVERDE, TX 78163
Designed for:
Thompson Christine K

The installation site is at lot 134 of the Astro Hills 1 Subdivision in Comal County, TX. The proposed OSSF will treat the wastewater from a 4 Bedroom (< 3500 sq. ft.) residence. The proposed method of wastewater treatment is aerobic treatment with drip irrigation. This method was chosen because of unsuitable soil conditions.

PROPOSED SYSTEM:
A 3" or 4" PVC pipe will discharge from the upper level of a structure to a Clearstream Model 600NC3T aerobic treatment plant containing a pre-treatment tank, a 600 gpd aerobic treatment plant, and a pump tank equipped with a 20 gpm submersible pump. A 3" or 4" PVC pipe will discharge from the lower level(consisting of 1 bedroom with a restroom and a wet bar) of a structure to a 70 gallon lift station with a LE 100 Series 1 HP pump. Effluent is pumped through 2" SCH 80 PVC pipe to the previously mentioned Clearstream Model 600NC3T aerobic treatment plant. The pump in the aerobic treatment unit pump tank is activated by a time controller allowing the distribution 15 times per day with a 10 minute run time per dose, with float switches set to pump 300 gallons per day. A high level audible and visual alarm will activate should the pump fail. Distribution from the pump is through a self flushing 100 micron, 140 mesh disc filter, then through a 1" SCH-40 manifold to a two zone K-Rain valve, which distributes effluent to two zones, Zone 1 and Zone 2. Zone 1 shall have 390 L.F. of drip tubing, while Zone 2 shall have 400 L.F. of drip tubing, totaling 790 L.F. The drip lines shall be set approximately two feet apart with 0.61 gph emitters set every two feet, as per the attached schematic. A threaded union will be installed in the pump tank on the supply manifold to the drip field, and a pressure regulator will be installed on the supply manifold to maintain a pressure of 30 psi. A 1" SCH-40 return line is installed to continuously flush the system back to the pump tank. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher elevations of the field. A check valve installed on the flush line, which will isolate each zone. The drip tubing will be placed on soil that has been undisturbed, and enough Class II soil will be added so that there is 6" of soil over the drip tubing. The trenching will be covered with 6" of Class II soil.

DESIGN SPECIFICATIONS:
Daily Waste Flow: 300 gpd
Application rate: 0.2 gpd/sq. ft.
Application area required: 300/.2 =1500 sq. ft.
Application area utilized: 1580 sq. ft. - 9 sq. ft.(impermeable lids) = 1571 sq. ft.
Pump tank reserve capacity: 100 gal minimum

VOID

SYSTEM COMPONENTS:
SCH 40 PVC sewer line
Clearstream Model 600NC3T aerobic treatment plant
- Pre treatment tank
- 600 gpd aerobic treatment plant
- Pump tank with timed controls
  - C1 Series, 20Xgpm - 0.5hp/115V, Model No. 20C1X-05P4-2W115 (or equivalent)

1" purple PVC supply line
30 PSI pressure regulator - Model PMR30MF
Netafim Bioline Drip tubing
Two Zone K-Rain Valve
70 Gallon Lift Station
- Liberty LE 100 Series 1 hp pump

STATE OF TEXAS
DOUGLAS R. DOWLEARN
REGISTERED
PROFESSIONAL SANITARIAN

5.20.2024

LANDSCAPING:
The native vegetation in the distribution area should consist of low level shrubs, plains grass, bluestem or bermuda. The entire area of the drip disposal must be covered with a ground cover such as grass seed or sod prior to the final inspection.

2/C5 (18)
1668
CV 1DW3

General Warranty Deed

Date: September 17, 2018

Grantor: Klaus Adam and Joyce M. Miller

Grantor's Mailing Address:

17026 Bowline Rd. Houston TX 77062

Grantee: Christine K. Thompson

Grantee's Mailing Address:

2200 Glenn Dr., Canyon Lake, Tx 78133

Consideration:

Cash and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged.

Property (including any improvements):

Lot 134, Astro Hills Unit No. 1, a subdivision in Comal County, Texas, according to the map or plat thereof recorded in Volume 2, Page 32, of the Map and Plat Records of Comal County, Texas

Reservations from Conveyance: None

Exceptions to Conveyance and Warranty:

Validly existing easements, rights-of-way, and prescriptive rights, whether of record or not; all presently recorded and validly existing instruments, other than conveyances of the surface fee estate, that affect the Property; and taxes for 2018, which Grantee assumes and agrees to pay, but not subsequent assessments for that and prior years due to change in land usage, ownership, or both, the payment of which Grantor assumes.

Grantor, for the Consideration and subject to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty, grants, sells, and conveys to Grantee the Property, together with all and singular the rights and appurtenances thereto in any way belonging, to have and to hold it to Grantee and Grantee's heirs, successors, and assigns forever. Grantor binds Grantor and Grantor's heirs and successors to warrant and forever defend all and singular the Property to Grantee and Grantee's heirs,

successors, and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof, except as to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty.

When the context requires, singular nouns and pronouns include the plural.

Klaus Adam

Joyce M. Miller

STATE OF TEXAS)

COUNTY OF Harris)

This instrument was acknowledged before me on September 17, 2018, by Klaus Adam and Joyce M. Miller.

Notary Public, State of Texas

NANCY CARRIZALES
Notary Public
STATE OF TEXAS
NOTARY ID # 129474932
My Comm. Expires 06-28-2021

PREPARED IN THE OFFICE OF:

DWAIN W BLASCHKE
P.O. Box 1744
Canyon Lake, TX 78133
Tel: (830) 964-4442
Fax: (830) 964-4426

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
11/01/2018 11:11:40 AM
TERRI 2 Page(s)
201806042583

Bobbie Koepp