

Preliminary Field Check For Drip Systems



COMAL COUNTY

ENGINEER'S OFFICE

RE: *2210 Grandview Forest*
Canon Lake Forest 1
Lot 221

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. Application Page 2:
 - a. The permit number shown on the tank size(s) (gallons) is for a different property.
2. 285.91(10) Is the ditch an area where slopes where seeps may occur?
3. 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 |



COMAL COUNTY
ENGINEER'S OFFICE

**OSSF DEVELOPMENT APPLICATION
CHECKLIST**

Staff will complete shaded items

		118564
<i>Date Received</i>	<i>Initials</i>	<i>Permit Number</i>

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.

Signature of Applicant

04/15/2025

Date

___ COMPLETE APPLICATION

Check No. _____ Receipt No. _____

INCOMPLETE APPLICATION

___ (Missing Items Circled, Application Refeused)



COMAL COUNTY
ENGINEER'S OFFICE

ON-SITE SEWAGE FACILITY APPLICATION

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

Date 04/10/2025

Permit Number 118564

1. APPLICANT / AGENT INFORMATION

Owner Name	TALAVERA HOMES
Mailing Address	8605 EXPLORER DR #250
City, State, Zip	COLORADO SPRINGS, CO 80920
Phone #	210-818-2916
Email	admin@talavera-homes.com

Agent Name	GREG JOHNSON, P.E.
Agent Address	170 HOLLOW OAK
City, State, Zip	NEW BRAUNFELS TEXAS 78132
Phone #	830-905-2778
Email	gregjohnsonpe@yahoo.com

2. LOCATION

Subdivision Name CANYON LAKE FOREST Unit 1 Lot 221 Block
Survey Name / Abstract Number Acreage
Address 2210 GRANDVIEW FOREST 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
--------------------	---

Indicate Sq Ft of Living Area 1296

☐ 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: \$ 240,000 (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 Collection

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

04/10/2025
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 GREG W. JOHNSON, P.E.

System Description PROPRIETARY; AEROBIC TREATMENT AND DRIP TUBING

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

Tank Size(s) (Gallons) SOLAR AIR SA600LP (#115119) Absorption/Application Area (Sq Ft) 2000

Gallons Per Day (As Per TCEQ Table III) 240

(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 P.E. or R.S. 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 app

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

If yes, indicate the city: _____



FIRM #2585

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

Date 03/19/2025

AFFIDAVIT**THE COUNTY OF COMAL
STATE OF TEXAS****CERTIFICATION OF OSSF REQUIRING MAINTENANCE**

According to Texas Commission on Environmental Quality Rules for On-Site Sewage Facilities (OSSF's), 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, 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 owner's 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):

1 UNIT/HASE/SECTION BLOCK 221 LOT CANYON LAKE FOREST SUBDIVISION

IF NOT IN SUBDIVISION: ACREAGE SURVEY

The property is owned by (insert owner's full name): TALAVERA HOMES, LLC,
a Colorado limited liability company

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 10 DAY OF APRIL, 20 25

Eric H. Stensrud
Owner(s) signature(s)

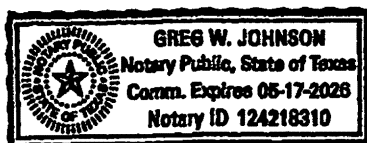
ERIC H. STENSRUD

Eric H. Stensrud - MANAGER
Owner(s) Printed name(s)

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 10 DAY OF

APRIL, 20 25

Greg W. Johnson
Notary Public Signature



Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
04/14/2025 08:18:23 AM
TERRI 1 Pages(s)
202506010543



Bobbie Koepp

PERMIT#



On-Site Sewage Facility (OSSF) Service Agreement

- I. **General:** This Work for Hire Agreement (hereinafter referred to as "Agreement") is entered into by and between TALAVERA HOMES, LLC, (hereinafter referred to as "Client") and SOTX Septic Services (hereinafter to as "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.
- II. **Effective Dates:** This agreement commences on receipt of full payment and runs for two (2) years. Agreement's... Starting Date: (Date License to Operate is Issued) Ending Date: (2yrs. From Date of LTO)
- III. **Services by Contractor:** Contractor will provide the following services (hereinafter referred to as the "Services"):
 1. In compliance with Agency (TCEQ and/or County) and manufacturer's requirements, inspect and perform routine maintenance on the On-Site Sewage Facility (hereinafter referred to as the "OSSF") three (3) times per year (approximately once every four (4) months).
 2. Report to the appropriate regulatory authority and to the Client, as is required by both the State's on-site rules and the local Agency's rules, if more stringent. All findings must be reported to the local Agency within 14 days.
 3. If any components of the OSSF are found to need repair during the inspection, the Contractor will notify the Client of the repairs needed.
 4. Visit in response to Client's request(s) for unscheduled service(s) within two business days from the date of Contractor's receipt of Client's request. All unscheduled responses are in addition to the fee covered by this Agreement and will be billed to the Client.
 5. Provide notification of arrival to site to the homeowner or to site personnel. Additionally, written notification of the visit will be left at the site or with site personnel upon completion or inspection, as well as, forwarded to agency within 14 days.
- IV. **Site Location:** The Services are to be performed at the property located at:
2210 GRANDVIEW FOREST, CANYON LAKE, TX 78133
- V. **Payment(s):** The fee for this Agreement only covers the Services describes herein. This fee does not cover equipment, parts or labor supplied for the repairs or charges for unscheduled Client-request trips to the site. Payments for such additional services are due when service is provided or rendered. Payments not received within 30 days from due date will be subjected to a \$20.00 late penalty and / or a 1.5% carrying charge, whichever is greater, in addition the 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 remove of said parts.

Initials...

Customer: EHS

Contractor: CDH

Client's Responsibilities: The Client is responsible for each and all the following:

1. Maintain chlorinator and provide proper chlorine supply, if OSSF is equipped with same.
2. 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.
3. Maintain a current license to operate and abide by the conditions and limitations of that license and all requirements for on-site sewage facilities (OSSF's) from the State and local regulatory agency, as well as manufacturer's recommendations.
4. Immediately notify the Contractor and Agency of all problems with, including the failure of the OSSF.
5. 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's responsible for ensuring the contractor holds the 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.
6. Provide the Contractor with water usage records, upon request, for evaluation by the Contractor of the OSSF performance.
7. Clients residing in Harris County 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 the testing plus pay the Contractor for all man-hours expended in providing this additional service at the rate of \$75.00 per hour measured from office to site, site to lab, and lab to office, otherwise known as portal to portal.
8. Not allow the backwash from water treatment or water conditioning equipment to enter the OSSF.
9. Provide for pumping of tanks, when needed, at Clients expense.
10. Maintain site drainage to prevent adverse effects on OSSF.
11. Promptly and fully pay Contractor's bills, fees, or invoices as described herein.
- VI. **Access by Contractor:** Contractor, or personnel authorized by the Contractor, may enter the property at reasonable times without prior notice for the purpose of performing the above-described Services. Contractor will require access to the OSSF electrical and physical components, including tanks, by means of manways or risers for the purpose of evaluations required by manufacturer, and/ or rules. If such manways or risers are not in place, excavation together with other labor and materials will be required and will be billed to Client as additional service at the rate of \$75.00 per hour, plus materials billed at list price. Excavated soil is to be replaced as best as reasonably possible.
- VII. **Application or Transfer of Payments:** The fees paid for this agreement may transfer to subsequent owner(s); however, this agreement will not transfer. The subsequent owner(s) must sign a similar agreement authorizing Contractor to perform the above-described Services and accepting Client's responsibilities. This replacement Agreement must be signed and received within 30 days of transfer of ownership. Contractor will apply all funds received from Client first to any past due obligations arising from this Agreement including late charges, return check charges, and charges for repairs or services not paid within 30 days of invoicing. The consumption of the payment in this manner may lead to early termination of the agreement by Contractor.
- VIII. **Termination of Agreement:** This Agreement may be terminated by either party within 30 days written notice in the event of substantial failure to perform in accordance with its terms by the other party without fault of the terminating party. If this Agreement is so terminated, Contractor shall be paid at the rate of \$75.00 per hour for any work performed, but not yet paid. The party terminating will immediately notify the other party, the equipment manufacturer, and the regulatory agency of the termination.
- IX. **Limits of Liability:** In no event shall the Contractor be liable for indirect, consequential, incidental or punitive damages, whether in contract tort or any other theory. In no event the Contractor's liability for direct damages exceed the price for the Services described in this Agreement.
- X. **Severability:** If any provision in the Agreement shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable. If court finds that any provision of this

Initials...

Customer: EHS

Contractor: CDH

Agreement is invalid or unenforceable, but that by limiting such provision it would become valid and enforceable, then such provision shall be written, construed, and enforced as so limited.

- XI. **Performance of Agreement:** Commencement of performance by Contractor under this agreement is contingent on the following conditions (1) Contractor receiving a fully execute original copy of this agreement. (2) Contractor receiving payment in full for the fee as described in Section V. If the above conditions are not met, then Contractor is not obligated to perform any portion of this agreement.
- XII. **Entire Agreement:** This agreement contains the entire agreement parties, and there are no other promises or conditions in any other agreement, oral or written.

Client... (And/or authorized agent)

Printed Name: ERIC H. STENSRUD Signature: *Eric H. Stensrud* Date: 04/10/2025

Printed Name: _____ Signature: _____ Date: _____

Physical Address: 2210 GRANDVIEW FOREST, CANYON LAKE Zip: 78133

Mailing Address: 8605 EXPLORER DR, COLORADO SPRINGS Zip: 80920

Phone # _____ Cell# 210-818-2916 County: COMAL

Email: admin@talavera-homes.com Gate Code: _____

=====Contractor=====Contractor=====

SOTX Septic Services

Clarence D. Hinds Jr *Clarence D Hinds Jr.*

15656 Cranes Mill Rd.

Lic #: OSSF Installer II #: OS0030965

Canyon Lake, TX 78133

Maintenance Provider #: MP0002439

830-481-3249

sotxservices@gmail.com

Installer Name: JESSE KLAERNER

Phone #: 210-838-3262

Email: impact.construction1@yahoo.com

Lic #: OS#0039407

Manufacturer: *Solar Air SA600LP*

GPD: 600 800 1000 Other: _____

Disposal: Spray Drip Other: _____

Initials...

Customer: *EHS*

Contractor: *CDH*

ON-SITE SEWERAGE FACILITY SOIL EVALUATION REPORT INFORMATION

Date Soil Survey Performed: March 17, 2025

Site Location: CANYON LAKE FOREST, UNIT 1, LOT 221

Proposed Excavation Depth: N/A

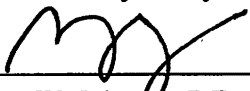
Requirements:

At least two soil excavations must be performed on the site, at opposite ends of the proposed disposal area.
Locations of soil boring or dug pits must be shown on the site drawing.
For subsurface disposal, soil evaluations must be performed to a depth of at least two feet below the proposed excavation depth. For surface disposal, the surface horizon must be evaluated.
Describe each soil horizon and identify any restrictive features on the form. Indicate depths where features appear.

SOIL BORING NUMBER <u> </u> SURFACE EVALUATION <u> </u>						
Depth (Feet)	Texture Class	Soil Texture	Gravel Analysis	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0	III	CLAY LOAM	N/A	NONE OBSERVED	LIMESTONE @ 6"	BROWN STONY
1						
2						
3						
4						
5						

SOIL BORING NUMBER <u> </u> SURFACE EVALUATION <u> </u>						
Depth (Feet)	Texture Class	Soil Texture	Gravel Analysis	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0	SAME		AS		ABOVE	
1						
2						
3						
4						
5						

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability.


Greg W. Johnson, P.E. 67587-F2585, S.E. 11561

03/17/25
Date

Date: March 19, 2025

Name: **TALAVERA HOMES, LLC.**
Address: **8605 EXPLORER DRIVE #250**
City: **COLORADO SPRINGS** State: **COLORADO**
Zip Code: **80920** Phone: **(210) 818-2916**

Name: Greg W. Johnson, P.E., R.S. S.E. 11561
Address: 170 Hollow Oak
City: New Braunfels State: Texas
Zip Code: 78132 Phone & Fax (830)905-2778

Lot 221 **Unit** 1 **Blk** _____ **Subd.** CANYON LAKE FOREST
Street Address: 2210 GRANDVIEW FOREST
City: CANYON LAKE **Zip Code:** 78133
Additional Info.:

Name: _____
 Company: _____
 Address: _____
 City: _____ State: _____
 Zip Code: _____ Phone: _____

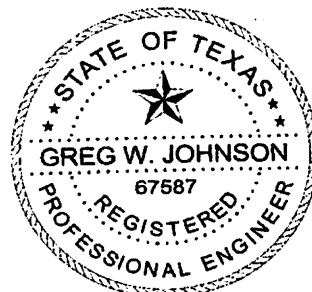
Topography: Slope within proposed disposal area: 6 to 8 %

Presence of 100 yr. Flood Zone:	YES <u> </u>	NO <u>X</u>
Existing or proposed water well in nearby area.	YES <u> </u>	NO <u>X</u>
Presence of adjacent ponds, streams, water impoundments	YES <u> </u>	NO <u>X</u>
Presence of upper water shed	YES <u> </u>	NO <u>X</u>
Organized sewage service available to lot	YES <u> </u>	NO <u>X</u>

I HAVE PERFORMED A THOROUGH INVESTIGATION BEING A REGISTERED PROFESSIONAL ENGINEER AND SITE EVALUATOR IN ACCORDANCE WITH CHAPTER 285, SUBCHAPTER D, §285.30, & §285.40 (REGARDING RECHARGE FEATURES), TEXAS COMMISSION OF ENVIRONMENTAL QUALITY (EFFECTIVE DECEMBER 29, 2016).

GREG W. JOHNSON, P.E. 67587 - S.E. 11561

DATE _____

**FIRM #2585**

DRIP TUBING SYSTEM
DESIGNED FOR:
TALavera HOMES, LLC
8605 EXPLORER DR, #250
COLORADO SPRINGS, CO 80920

SITE DESCRIPTION:

Located in Canyon Lake Forest, Unit 1, Lot 221 at 2210 Grandview Forest, the proposed system will serve a three bedroom residence (1296sf.) situated in an area with shallow Type-III soil as described in the Soil Evaluation Report. An aerobic treatment plant utilizing drip irrigation was chosen as the most appropriate system to serve the conditions on this lot.

PROPOSED SYSTEM:

A 3-inch SCH-40 pipe discharges from the residence into a Solar SA600 LP 600gpd aerobic plant containing a 376-gallon pretreatment tank, an aerobic treatment plant, and a 778-gallon pump chamber containing a submersible well pump. The well pump is activated by a time controller allowing the distribution ten times per day with an 8 minute run time with float setting at 240 gallons. A high level audible and visual alarm will activate should the pump fail. Distribution is through a self flushing 100 micron disc filter (Arkal) then through a 1" SCH-40 manifold to a 2000sf. drip tubing field, with *Netifim Bioline* drip lines set approximately two feet apart with *0.61 gph* emitters set every two feet, as per the attached schematic. A pressure regulator PMR-MF 30psi installed in the pump tank on the manifold to the field will maintain pressure at 30 psi. A 1" SCH-40 return line is installed to continuously flush the system to the pump tank by throttling a 1" ball valve. Solids caught in the disc filter are flushed each cycle back to the trash tank. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower parts of the field. Field area will be scarified and surface rocks removed then built up with 6" of Type II or Type III soil, then the drip tubing will be laid and capped with 6" of Type II or Type III soil (*NOT SAND*). (*A minimum of twelve inches required between tank/rock and drip tubing.*) The field area will be sodded with grass prior to system startup. Risers are required on tank inspection ports as per 30 TAC 285.38 (9/1/2023). This includes access limitation (<65lbs lid or hardware secured lid), inspection and cleanout ports shall have risers over the port openings which extend to a minimum of two inches above grade. A secondary plug, cap, or other suitable restraint system shall be provided below the riser cap to prevent tank entry if the cap is unknowingly damaged or removed.

DESIGN SPECIFICATIONS:

Daily waste flow: 240 GPD Table III

Pretreatment tank size: 376 Gal

Plant Size: Solar 600LP 600 gpd (TCEQ Approved)

Pump tank size: 778Gal

Reserve capacity after High Level: 80 Gal (>1/3 day Req'd)

Application Rate: $R_a = 0.2 \text{ gal/sf}$

Total absorption area: $Q/R_a = 240 \text{ GPD}/0.20 = 1200 \text{ sf. (Actual 2000 sf.)}$

Total linear feet drip tubing: 1000' *Netifim Bioline* drip tubing .61 GPH

Pump requirement: 500 emitters @ .61 gph @ 30 psi = 5.0833 gpm

Pump Requirement (cont.): FPS E-Series 20FEP4-2W115 submersible well pump

Dosing volume: 50-70 gal.

MINIMUM SCOUR VELOCITY (MSV) > 2 FPS

IN DRIP TUBING W/ NOM. DIA. 0.55" ID

$$\text{MSV} = 2 \text{ FPS } (\pi d^5 / 2) / 4 * 7.48 \text{ gal/cf} * 60 \text{ sec/min}$$

$$\text{MSV} = 2(3.14159((.55/12)^5 / 2) / 4) * 7.48 * 60$$

$$\text{MSV} = 1.5 \text{ gpm MIN FLOW RATE} \times 3 = 4.5 \text{ gpm}$$

IN RETURN MANIFOLD W/ NOM. DIA 1.049" ID

$$\text{MSV} = 2 \text{ FPS } (\pi d^5 / 2) / 4 * 7.48 \text{ gal/cf} * 60 \text{ sec/min}$$

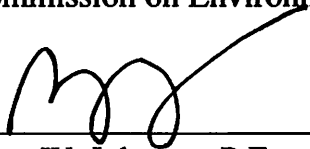
$$\text{MSV} = 2(3.14159((1.049/12)^5 / 2) / 4) * 7.48 * 60$$

$$\text{MSV} = 5.4 \text{ GPM}$$

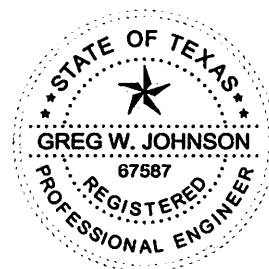
PIPE AND FITTINGS:

All pipes and fittings in this drip tubing system shall be 1" schedule 40 PVC. All joints shall be sealed with approved solvent-type PVC cement. Clipper type cutters are recommended to prevent PVC burrs during cutting of pipes causing possible plugging. Drip tubing 0.61 gph drip tubing to be used in field.

Designed in accordance with Chapter 285, Subchapter D, §285.30 and §285.40 Texas Commission on Environmental Quality (Effective December 29, 2016)



Greg W. Johnson, P.E. No. 67587 - F-2585
170 Hollow Oak
New Braunfels, Texas 78132
830/905-2778



INSTALL 2000sf OF FIELD
USING 1000' OF DRIP
TUBING. THERE SHALL BE
NO PARKING, DRIVING OR
STORAGE ON THE SEPTIC
FIELD AT ANY TIME FOR
ANY REASON.

*USE TWO WAY CLEAN OUT
**USE SCH-40 OR SDR-26
TO TANK

X= TEST HOLE

SOLAR AIR
SA-600 - LP 778
AEROBIC
TREATMENT
PLANT

1" VACUUM
BREAKERS

GRANDVIEW FOREST

LOT 221

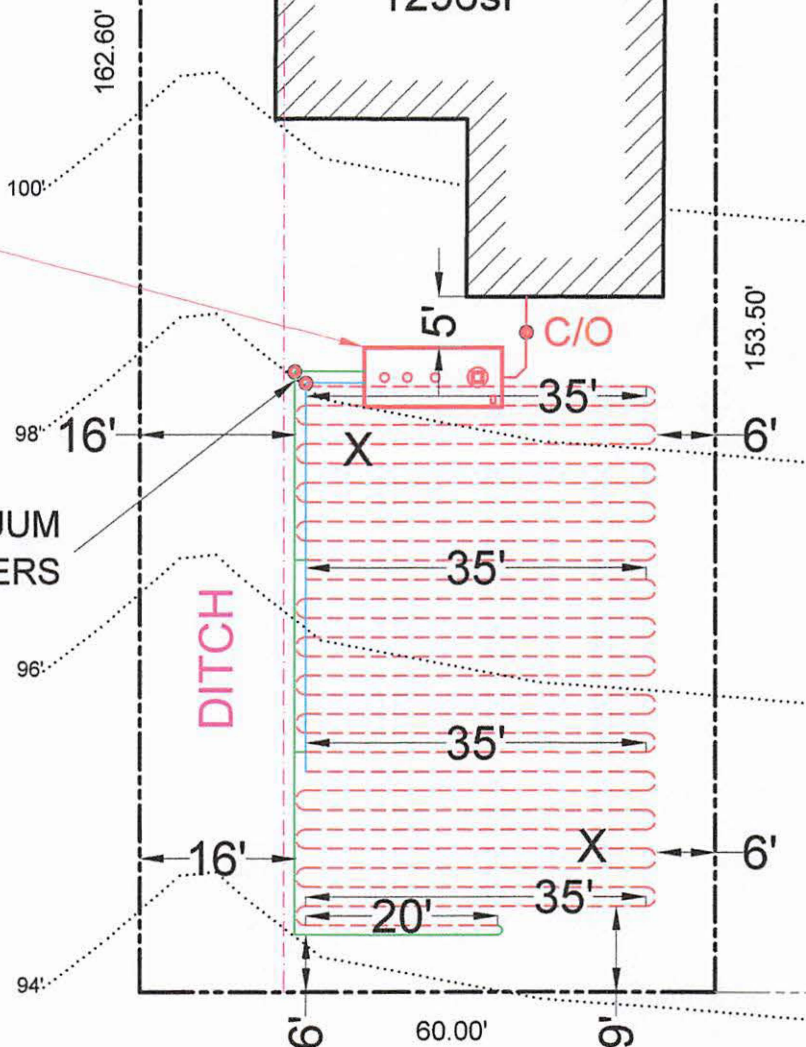
DRIVEWAY

3 BDRM RES.
1296sf

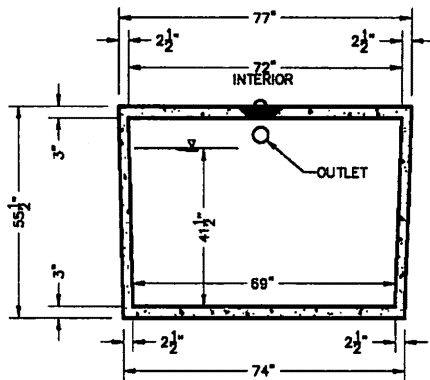
LOT 220

DITCH

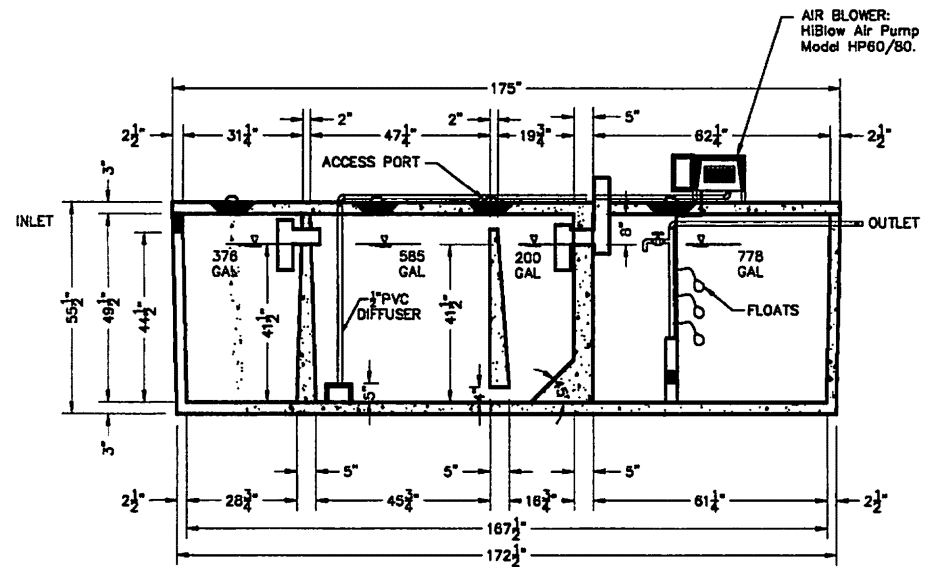
DITCH



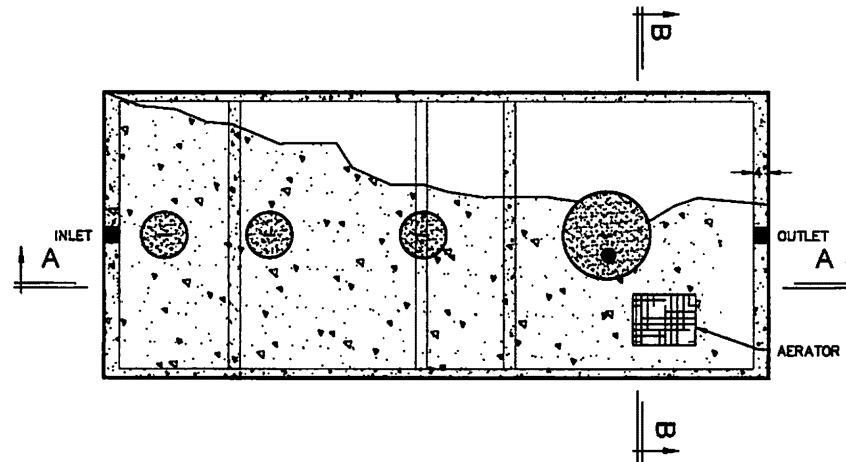
OWNER: TALAVERA HOMES, LLC.				DRAWN BY: EJS III	
STREET ADDRESS: 2210 GRANDVIEW FOREST					
LEGAL DESC: CANYON LAKE FOREST			UNIT/SECTION/PHASE: 1	BLOCK:	LOT: 221
PREPARED BY: GREG W. JOHNSON, P.E. F#002585		SCALE: 1"=20'	DATE: 3/19/2025		REVISED:



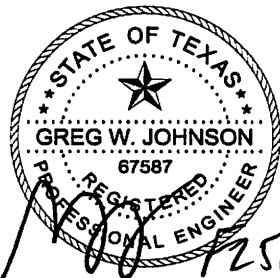
SECTION B-B



SECTION A-A



PLAN VIEW



12505
03/24/25

DATE DEC 2016	PROJECT NO.	SCALE 3/8" = 1'-0"	SHEET SA-3
REVISION	DATE	BY	
SOLAR AEROBIC 6754 HWY 80 EAST LAKE CHARLES, LA 70615 PHONE: (337) 439-0680	MODEL SA 600LP RESIDENTIAL WASTEWATER TREATMENT SYSTEM		
DESIGNER: ESC			
DRAWN: ESC			
CHECKED: ESC			

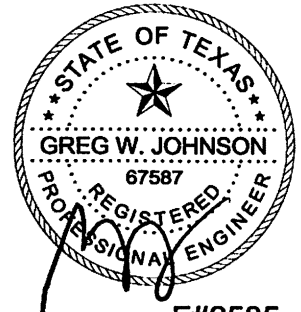
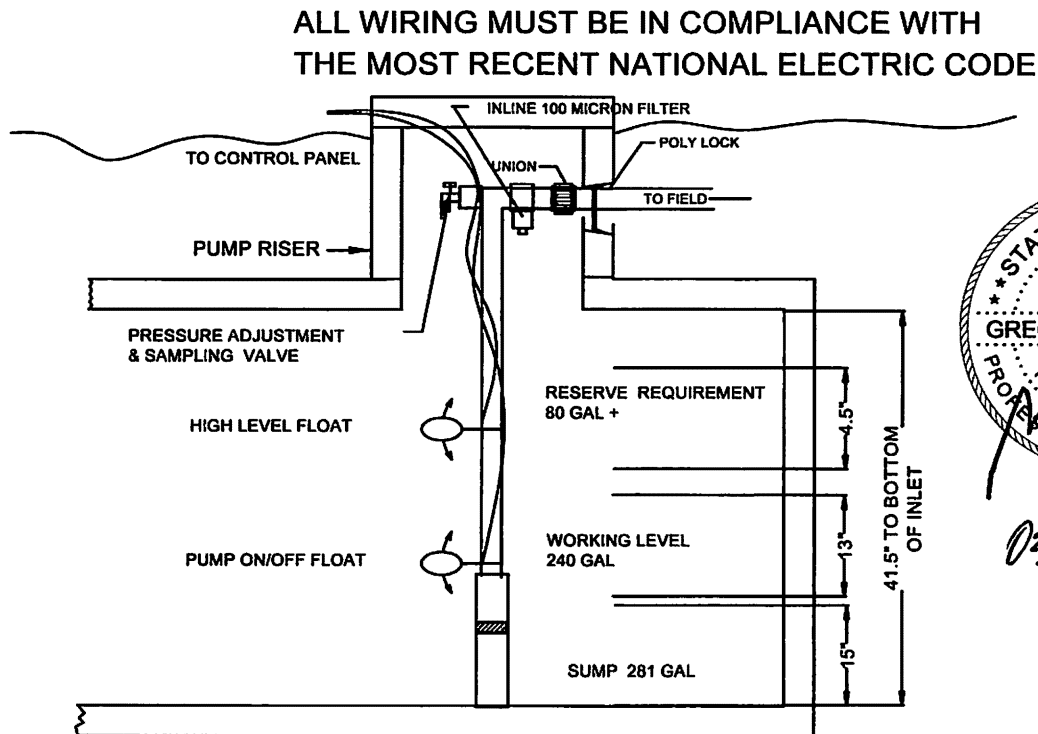
TANK NOTES:

Tanks must be set to allow a minimum of 1/8" per foot fall from the residence.

Tightlines to the tank shall be SCH-40 PVC.

A two way sanitary tee is required between residence and tank.

A minimum of 4" of sand, sandy loam, clay loam free of rock shall be placed under and around tanks



F#2585

03/24/25

TYPICAL PUMP TANK CONFIGURATION SOLAR-AIR SA-600 LP 778 GAL PUMP TANK

Arkal 1" Super Filter

Catalog No. 1102 0 _ _ _

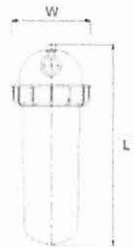
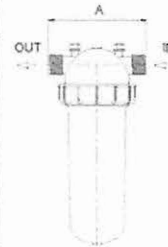
Features

- ♦ A "T" shaped filter with two 1" male threads.
- ♦ A "T" volume filter for in-line installation on 1" pipelines.
- ♦ The filter prevents clogging due to its enlarged filtering area that collects sediments and particles.
- ♦ Manufactured entirely from fiber reinforced plastic.
- ♦ A cylindrical column of grooved discs constitutes the filter element.
- ♦ Spring keeps the discs compressed.
- ♦ Screw-on filter cover.
- ♦ Filter discs are available in various filtration grades.



Technical Data

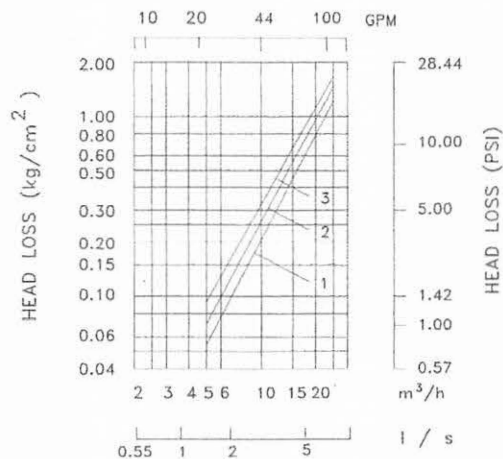
Inlet/outlet diameter	1" BSPT (male)	1" NPT (male)
	25.0 mm – nominal diameter	
	33.6 mm – pipe diameter (O. D.)	
Maximum pressure	10 atm	145 psi
Maximum flow rate	8 m ³ /h (1.7 l/sec)	35 gpm
General filtration area	500 cm ²	77.5 in ²
Filtration volume	600 cm ³	37 in ³
Filter length L	340 mm	13 13/32"
Filter width W	130 mm	5 3/32"
Distance between end connections A	158 mm	6 7/32"
Weight	1.420 kg	3.13 lbs.
Maximum temperature	70° C	158 °F
pH	5-11	5-11



Filtration Grades

- Blue (400 micron / 40 mesh)
- Yellow (200 micron / 80 mesh)
- Red (130 micron / 120 mesh)
- Black (100 micron / 140 mesh)
- Green (55 micron)

Head Loss Chart



PMR-MF

PRESSURE-MASTER REGULATOR - MEDIUM FLOW

Specifications

The pressure regulator shall be capable of operating at a constant, factory preset, non-adjustable outlet pressure of 6, 10, 12, 15, 20, 25, 30, 35, 40, 50, or 60 PSI (0.41, 0.69, 0.83, 1.03, 1.38, 1.72, 2.07, 2.41, 2.76, 3.45, or 4.14 bar) with a flow range between:

- 4 - 16 GPM (909 - 3634 L/hr) for 6 - 10 PSI models or
- 2 - 20 GPM (454 - 4542 L/hr) for 12 - 60 PSI models.

The pressure regulator shall maintain the nominal pressure at a minimum of 5 PSI (0.34 bar) above model inlet pressure and a maximum of 80 PSI (5.52 bar) above nominal model pressure*. Refer to the PRU performance curve to establish specific outlet pressures based on relative inlet pressure and flow rate. Always install downstream from all shut off valves. Recommended for outdoor use only. Not NSF certified.

All pressure regulator models shall be equipped with one of these inlet-x-outlet configurations:

Inlet

- ¾-inch Female National Pipe Thread (FNPT)
- 1-inch Female National Pipe Thread (FNPT)
- 1-inch Female British Standard Pipe Thread (FBSPT)

Outlet

- ¾-inch Female National Pipe Thread (FNPT)
- 1-inch Female National Pipe Thread (FNPT)
- 1-inch Female British Standard Pipe Thread (FBSPT)

The upper housing, lower housing, and internal molded parts shall be of engineering-grade thermoplastics with internal elastomeric seals and a reinforced elastomeric diaphragm. Regulation shall be accomplished by a fixed stainless steel compression spring, which shall be enclosed in a chamber isolated from the normal water passage.

Outlet pressure and flow shall be clearly marked on each regulator.

The pressure regulator shall carry a two-year manufacturer's warranty on materials, workmanship, and performance. Each pressure regulator shall be water tested for accuracy before departing the manufacturing facility.

The pressure regulator shall be manufactured by Senninger Irrigation in Clermont, Florida. Senninger is a Hunter Industries Company.

Physical

¾" FNPT x ¾" FNPT model (shown on right)

- Overall Length 5.2 inches (13.1 cm)
- Overall Width 2.5 inches (6.4 cm)

1" FNPT x 1" FNPT model

1" FBSPT x 1" FBSPT model

- Overall Length 5.8 inches (14.6 cm)
- Overall Width 2.5 inches (6.4 cm)



* Please consult factory for applications outside of recommended guidelines.



PMR-MF

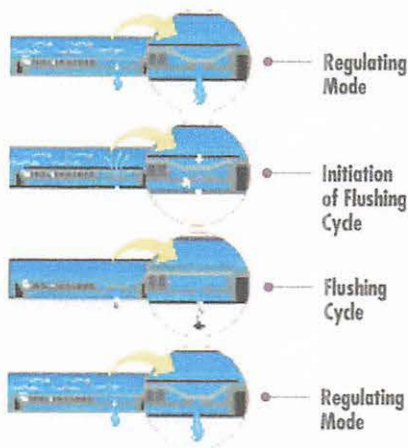
PRESSURE-MASTER REGULATOR - MEDIUM FLOW

Model Numbers

Model #	Flow Range	Preset Operating Pressure	Maximum Inlet Pressure
PMR-6 MF	4 - 16 GPM (909 - 3634 L/hr)	6 PSI (0.41 bar)	80 psi (5.51 bar)
PMR-10 MF	4 - 16 GPM (909 - 3634 L/hr)	10 PSI (0.69 bar)	90 psi (6.20 bar)
PMR-12 MF	2 - 20 GPM (454 - 4542 L/hr)	12 PSI (0.83 bar)	90 psi (6.20 bar)
PMR-15 MF	2 - 20 GPM (454 - 4542 L/hr)	15 PSI (1.03 bar)	95 psi (6.55 bar)
PMR-20 MF	2 - 20 GPM (454 - 4542 L/hr)	20 PSI (1.38 bar)	100 psi (6.89 bar)
PMR-25 MF	2 - 20 GPM (454 - 4542 L/hr)	25 PSI (1.72 bar)	105 psi (7.24 bar)
PMR-30 MF	2 - 20 GPM (454 - 4542 L/hr)	30 PSI (2.07 bar)	110 psi (7.58 bar)
PMR-35 MF	2 - 20 GPM (454 - 4542 L/hr)	35 PSI (2.41 bar)	115 psi (7.93 bar)
PMR-40 MF	2 - 20 GPM (454 - 4542 L/hr)	40 PSI (2.76 bar)	120 psi (8.27 bar)
PMR-50 MF	2 - 20 GPM (454 - 4542 L/hr)	50 PSI (3.45 bar)	130 psi (8.96 bar)
PMR-60 MF	2 - 20 GPM (454 - 4542 L/hr)	60 PSI (4.14 bar)	140 psi (9.65 bar)

NETAFIM™ Bioline® Dripperline

Pressure Compensating Dripperline for Wastewater



Bioline's Self-Cleaning, Pressure Compensating Dripper is a fully self-contained unit molded to the interior wall of the dripper tubing.

As shown at left, Bioline is 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.



Product Advantages

The Proven Performer

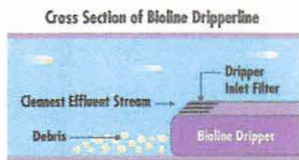
- Tens of millions of feet used in wastewater today.
- Bioline is permitted in every state allowing drip disposal.
- Backed by the largest, most quality-driven manufacturer of drip products in the U.S.
- Preferred choice of major wastewater designers and regulators.
- Proven track record of success for many years of hard use in wastewater applications.

Quality Manufacturing with Specifications Designed to Meet Your Needs

- Pressure compensating drippers assure the highest application uniformity - even on sloped or rolling terrain.
- Excellent uniformity with runs of 400 feet or more - reducing installation costs.
- Highest quality-control standards in the industry: Cv of 0.25 (coefficient of manufacturer's variation).
- A selection of flows and spacings to satisfy the designer's demand for almost any application rate.

Long-Term Reliability

- Protection against plugging:
 - Dripper inlet raised 0.27" above wall of tubing to prevent sediment from entering dripper.
 - Drippers impregnated with Vinyzene to prevent buildup of microbial slime.
 - Unique self-flushing mechanism passes small particles before they can build up.



Root Safe

- A physical barrier on each BioLine dripper helps prevent root intrusion.
- Protection never wears out - never depletes - releases nothing to the environment.
- Working reliably for up to 15 years in subsurface wastewater installations.
- Additional security of chemical root inhibition with Techfilter - supplies Trifluralin to the entire system, effectively inhibiting root growth to the dripper outlets.



Applications

- For domestic strength wastewater disposal.
- Installed following a treatment process.
- Can be successfully used on straight septic effluent with proper design, filtration and operation.
- Suitable for reuse applications using municipally treated effluent designated for irrigation water.

Specifications

Wall thickness (mil): .45*

Nominal flow rates (GPH): .4, .6, .9*

Common spacings: 12", 18", 24"*

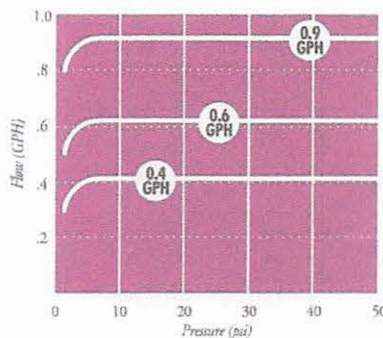
Recommended filtration: 120 mesh

Inside diameter: .570*

Color: Purple tubing indicates non-potable source

*Additional flows, spacings, and pipe sizes available by request. Please contact Netafim USA Customer Service for details.

BIOLINE Flow Rate vs. Pressure



NETAFIM USA

5470 E. Home Ave. • Fresno, CA 93727
 888.638.2346 • 559.453.6800
 FAX 800.695.4753
www.netafimusa.com

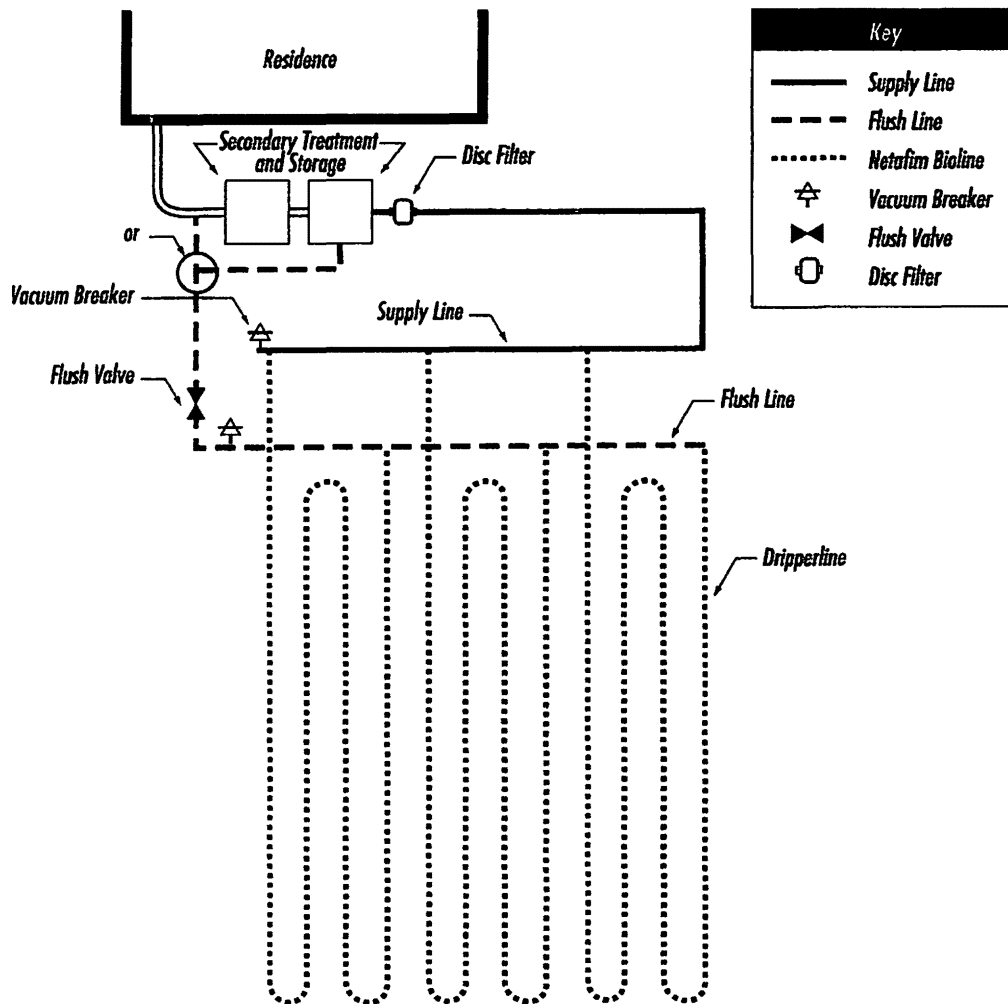
NETAFIM WASTEWATER DISPERSAL SYSTEM DESIGN GUIDE

SAMPLE DESIGNS

SINGLE TRENCH LAYOUT

Rectangular field with supply and flush manifold on same side and in same trench;

- Locate supply and flush manifold in same trench
- Dripperlines are looped at the end opposite the supply and flush manifolds
- The longest Bioline length should not exceed 400 ft. Drip fields 200 ft. in length might loop the Bioline once; drip dispersal fields under 100 ft. might be looped twice, as illustrated



Independence Title/GF# 2436183-SBSA/KY

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 TRANSFERS 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

Warranty Deed with Vendor's Lien

Date: December 9, 2024

Grantor: Ignacio E. Lerma, an unmarried person

Grantor's Mailing Address: 2198 Grandville Forest Canyon Lake Tx 78853

Grantee: Talavera Homes, LLC

Grantee's Mailing Address: 8605 Explorer Dr., Suite 250, Colorado Springs, El Paso County, Colorado 80920

Consideration: Ten and no/100 (\$10.00) Dollars and other good and valuable consideration to the undersigned paid by the Grantee herein named, the receipt of which is hereby acknowledged and the further consideration of a Promissory Note of even date herewith in the principal amount of Five Hundred Seventy Four Thousand Five Hundred and 00/100 Dollars (\$574,500.00) executed by Grantee, payable to the order of All Pro Funding V LLC. The note is secured by a vendor's lien retained in favor of All Pro Funding V LLC to the extent of \$100,000.00 in this deed, and by a deed of trust of even date, from Grantee to Tyler Flynn, Trustee.

All Pro Funding V LLC, at Grantee's request, having paid in cash to Grantor that portion of the purchase price of the property that is evidenced by the note described, the vendor's lien to the extent of \$100,000.00 and superior title to the property are retained for the benefit of All Pro Funding V LLC and are transferred to All Pro Funding V LLC, without recourse on Grantor.

Property (including any improvements): Lot(s) 220, and 221, CANYON LAKE FOREST, UNIT NO. 1, situated in Comal County, according to the map or plat thereof, recorded in Volume 1, Page 53, Map and Plat Records, Comal County, Texas.

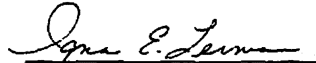
Reservations from and Exceptions to Conveyance and Warranty: This conveyance, however, is made and accepted subject to the following matters, to the extent same are in effect at this time: any and all restrictions, covenants, assessments, reservations, outstanding mineral interests held by third parties, conditions, and easements, if any, relating to the hereinabove described property, but only to the extent they are still in effect and shown of record in the hereinabove mentioned County and State or to the extent that they are apparent upon reasonable inspection of the property; and to all zoning laws, regulations and ordinances of municipal and/or other governmental authorities, if any, but only to the extent they are still in effect and relating to the hereinabove described property.

The Contract between Grantor as the Seller and Grantee as the Buyer, if any, may contain limitations as to warranty or other agreed matters; to the extent that the Contract provides for any such limitations or other agreed matters to survive closing and this conveyance, then such limitations or other agreed matters are hereby deemed incorporated by reference. The warranty of title contained in this Deed is hereby expressly excluded from the limitations or other agreed matters referenced in this paragraph.

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.

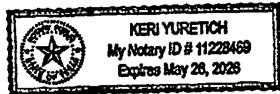
When the context requires, singular nouns and pronouns include the plural.

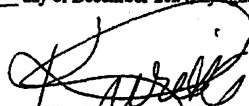

Ignacio E. Lerma

STATE OF TEXAS

COUNTY OF 

This instrument was acknowledged before me on this  day of December 2024, by Ignacio E. Lerma.




Notary Public, State of Texas

AFTER RECORDING RETURN TO:
Talavera Homes, LLC
8605 Explorer Dr., Suite 250
Colorado Springs, Colorado 80920

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
12/10/2024 02:52:39 PM
TRACY 2 Pages(s)
202406037509





