Comal County Environmental Health
OSSF Inspection Sheet

Installer Name: MJ Septic **OSSF Installer #:** DATE: 5/5/25

1st Inspection Date: 7/14/25 **2nd Inspection Date:** _____ **3rd Inspection Date:** _____

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

Permit#: 118549 **Address:** 2186 SIERRA MADRE

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: **7/14/25 CH: Tank good, no tight line, ready for cover leave tight line and penetration into tank exposed for inspection**

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		ProFlo 5060; 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:	118549
Issued This Date:	05/09/2025
This permit is hereby given to:	DAVID & JEANNINE MCMASTERS

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

2186 SIERRA MADRE
CANYON LAKE, TX 78133

Subdivision:	ENSENADA SHORES AT CANYON LAKE
Unit:	4
Lot:	89
Block:	0
Acreage:	1.0600

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.

Preliminary Field Check For Drip Systems

DATE: 5/5/25

MJ Septic

7/14/25 CH: Tank good, no tight line, ready for cover leave tight line and penetration into tank exposed for inspection

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 March 18, 2025

Permit Number 118549

1. APPLICANT / AGENT INFORMATION

Owner Name	DAVID & JEANNINE MCMASTERS	Agent Name	GREG JOHNSON, P.E.
Mailing Address	6442 FM 306 # 1201	Agent Address	170 HOLLOW OAK
City, State, Zip	NEW BRAUNFELS TEXAS 78130	City, State, Zip	NEW BRAUNFELS TEXAS 78132
Phone #	830-643-0501	Phone #	830-905-2778
Email	riverhillscustomhomes@gmail.com	Email	gregjohnsonpe@yahoo.com

2. LOCATION

Subdivision Name ENSENADA SHORES AT CANYON LAKE Unit 4 Lot 89 Block

Survey Name / Abstract Number Acreage 1.051

Address 2186 SIERRA MADRE 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 5

Indicate Sq Ft of Living Area 3688

☐ 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: $ 720,000 (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

Date March 24, 2025

Revised January 2021

ENSENADA SHORES AT CANYON LAKE, UNIT 4, LOT 89

COMALCOUNTY
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) PRO-FLO MODEL 5060, 600 GPD Absorption/Application Area (Sq Ft) 3000

Gallons Per Day (As Per TCEQ Table 111) 360

(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

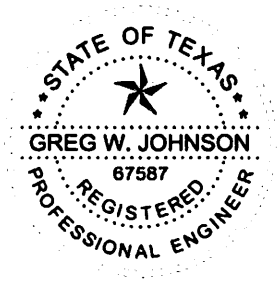
(if yes, the P.E. or R.S. shall certify that the OSSF design complies with all provisions of the existing CZP.)

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 UP has been approved by the appropriate reg

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

March 21, 2025
Date

Revised March 2024

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):

4 (UNIT) PHASE/SECTION _____ BLOCK 89 LOT ENSENADA SHORES AT CANYON LAKE SUBDIVISION

IF NOT IN SUBDIVISION: _____ ACREAGE _____ SURVEY

The property is owned by (insert owner's full name): DAVID MCMASTERS & JEANNINE MCMASTERS

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 MY HAND(S) ON THIS 24th DAY OF March ,20 25

DAVID MCMASTERS

JEANNINE MCMASTERS

Owner(s) signature(s)

Owner (s) Printed name (s)

DAVID MCMASTERS & JEANNINE MCMASTERS SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 24 DAY OF March ,20 25

Notary Public Signature

THERESA L. APOSTOLO NOTARY PUBLIC STATE OF TEXAS ID. 3175726 EXP. 06-15-2027 (Notary Seal Here)

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
04/08/2025 01:09:17 PM
TERRI 1 Pages(s)
202506009921

Bobbie Koepp

MJ SEPTIC
1328 W Borgfeld Dr.
San Antonio, TX 78260
(210) 875-3625
mjseptic@mjseptic.com

Michael J. Long
TCEQ Maintenance Provider #0001294
Expiration Aug 31 2025

ENSENADA SHORES AT CANYON LAKE, UNIT 4, LOT 89

Residential OSSF Maintenance Agreement, New Installation 3 Year Initial Membership

Customer Name: DAVID & JEANNINE MCMASTERS

Agreement Dates: _____

Service Address 2186 SIERRA MADRE

City, State & Zip: CANYON LAKE, TX 78133

Permitting Authority: COMAL

Permit Number: _____

Contact Number: _____

Email Address: _____

The Texas Commission on Environmental Quality (TCEQ) requires all ATU's to be checked and maintained every four months for the life of the unit (some permitting authorities may stipulate this requirement, after the first two years after installation; call your county to inquire). Upon expiration of this agreement, MJ Septic will offer a continuation of your maintenance agreement to cover labor and routine maintenance/reports. Lab testing, if required, for coliform, TSS, BOD etc. are NOT included in this policy and applicable fees are the owner's responsibility. MJ Septic will inspect and service your ATU once every 4 months for the duration of your agreement. For new installations, the effective date of this maintenance agreement shall be the date the LTO (license to operate) is issued, required by state guidelines dated June 13, 2001.

MJ Septic will address all major concerns/complaints (excluding weekends & holidays) within 72 hours from the initial point of contact with the property owner(s). Office hours are Monday - Friday 8am to 5pm

Inspections: An inspection every four months (three times annually) which includes inspecting/servicing the mechanical, electrical, and other applicable components to ensure proper function. The annual fee does not include any parts, cleaning/pumping, chlorine/bleach (tablets or liquid), additional service calls or additional testing that may be required by any regulating authority. If for any reason, we are unable to obtain access to your property or system to perform a service check, you may be charged a $75 service call for re-scheduling. It is very important that we always have full access to your system, including all gate codes, combination locks etc. to inspect your system.

Service Calls: If a service call is required by the property owner/renter between regular inspections, a service call fee of $75 (not including parts and/or cleaning/pumping) will be assessed. We may waive this fee or credit it towards the cost of a repair approved onsite at our discretion. These calls include but are not limited to the following: red light alarms, high water alarms, chlorinator checks, disconnected airlines, timer adjustments, spray head adjustments and system power failure.

Repairs I: If repairs or replacement of parts are needed during routine inspection, we will attempt to contact the property owner for approval to make onsite repairs. If we are unable to repair/replace parts onsite, the customer will be notified via email that repairs/replacement of parts is needed. All major part replacements come with a 2-year warranty (see notes below). There will be a $75 warranty credit fee assessed on all parts. Warranted items will only be honored when a valid maintenance agreement is in effect with MJ Septic. If the agreement has a lapse in time, All warranted items are voided.

Repairs II: For ATU's under initial installation warranty (2 years from initial installation date) if warranted items are required to be replaced within 30 days of installation, part will be replaced with no fees, after 30 days there will be a $75 warranty credit fee assessed on all parts. Warranted items will only be honored when a valid maintenance agreement is in place with MJ Septic.

Violations of Warranty: include but are not limited to the following, turning off your system at any time; disconnecting the alarm; restricting airflow to the air compressor; overloading the system above its daily rated capacity; introducing excessive amounts of harmful matter (including harsh chemicals, cleaners, antibiotics, etc.) into the system, or any other harmful usage of your OSSF/ATU; refusing to clean/pump out septic when recommended and/or replacing necessary parts as needed; necessary treatment of ants. property owners must keep grass, weeds, and plants trimmed and clear of tank access points, control panel, air compressor, etc. Moving sprinkler lines without proper documentation, etc. Building over septic tanks, lids, etc. Adding pools, decks, sport courts, outdoor kitchens, sheds, etc. without proper septic design and county permitting is not acceptable. You must have a septic designer redesign your septic system and have permitting authority's approval prior to any additions being made. MJ Septic is not liable for any fines you may incur from illegal modifications.

Septic Tank Pumping: The cost for cleaning/pumping of your ATU is not included in your maintenance agreement. Manufacturer recommends pumping between 10-12" of sludge in the pump tank. We determine this by gathering 2-3 different readings out of your pump tank with a sludge judge. A few other factors that may determine pumping is necessary, even if sludge in the pump tank is less than 10-12". *A typical/average household will need to have their system pumped every 1-3 years; this all depends on usage and will vary per household*

Chlorine Supply: The property owner is responsible for maintaining their own chlorine supply. TCEQ regulation requires proper chlorination. For liquid chlorinators, property owners are to add 2-3 gallons of 6-10% Sodium Hypochlorite (Household Bleach) per month. Chlorine consumption will vary depending on water usage. For tablet chlorinators, property owners can purchase Calcium Hypochlorite tablets at a local Home Depot or Lowe's. DO NOT USE POOL TABLETS (this can cause a dangerous volatile chemical reaction).

Transfer of Maintenance Agreement/Property Ownership: The fee of this maintenance agreement is non-refundable, however is fully transferable to the new property owner(s). If this policy is sold within the agreement period, the signing party is responsible for all repairs unless the new property owner(s) information is provided before repairs are made and the transfer agreement is signed (by the new property owner) and returned to us. The new property owner(s) will be emailed a copy of the electronic orientation, if it was an MJ Septic installation, once the signed agreement is received on file with our office.

Rental Homes: The property owner is responsible for all fees associated with this agreement. The property owner is responsible for ensuring all tenants are informed on proper usage of the system.

Alterations and Modifications to the OSSF: Do not allow alteration to any part of the system or sprinkler head locations. Alterations will put the system out of county/code compliance and may cause the property owner additional expense to bring the system back into compliance. Any use of another company to make repairs to the system will void any warranties and be considered as a breach of this maintenance agreement. If a customer chooses to purchase and use their own parts, MJ Septic will not install nor work on these parts. Adding pools, decks, sport courts, outdoor kitchens, sheds, landscaping features, etc. without proper septic design and county permitting is not acceptable. You must have a septic designer redesign your septic system and have permitting authority's approval prior to any additions being made. MJ Septic is not liable for any fines you may incur from unapproved alterations and modifications.

Payment Terms: This agreement must be paid in full before any services are rendered. A credit card will be required at time of booking any service for parts, repairs, cleaning/pumping, service calls, red lights, etc. unless otherwise specifically noted. MJ will not perform any repairs or pumping unless we have a credit card on file. MJ Septic no longer accepts payment onsite, whether it be a check or credit card, and we do not offer billing/invoicing for future payments; this is a strict office policy, no exceptions.

Property owner(s) are not required to be present at inspections. Please note, customers will receive a notice 1-15 business days prior to your scheduled inspection. An additional notice may be sent the day of scheduled inspection when the technician is headed to your property. A door hanger will be left if no one is onsite. Inspection reports are immediately emailed upon inspection completion to the email address(es) you provided to MJ Septic, please check your spam folder. If you have not received your report 3-5 business days after your scheduled inspection, please call our office.

Please note, customers will receive an emailed notice 1-15 business days prior to your scheduled inspection, this is your only notification we will send. MJ Septic will assess a $75 re inspection/missed inspection fee if we are not granted access to complete your inspection on the date assigned, aggressive dogs, overgrown vegetation, system inaccessible, etc. It is your responsibility to contact the office to update any information during the duration of your agreement.

Acceptance of Maintenance Agreement: Agreement price, terms and conditions are satisfactory and are hereby accepted. MJ Septic is authorized to enter property to perform routine maintenance inspections as agreed. I have read and agreed to the maintenance agreement guidelines stated above and have also read and agreed to comply with the Maintenance Tips/Septic Guide. MJ Septic reserves the right to make amendments to this document at any time and the property owner will be responsible for signing an updated version for office and county records.

Customer Name: DAVID & JEANNINE MCMASTERS

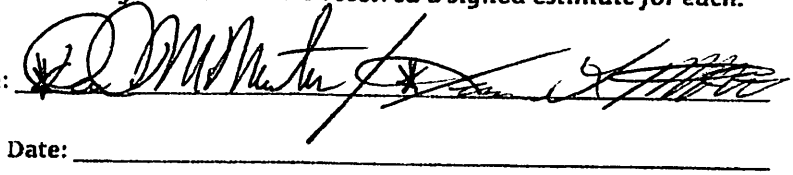
Service Address 2186 SIERRA MADRE

Service City, State & Zip: CANYON LAKE, TX 78133

Agreement Dates: _____

I have fully read the terms of this agreement. I understand that upon issuance of OSSF LTO, I will contact MJ Septic to fully enroll, update all property information and/or transfer this agreement. Upon completion, I am aware that an electronic system orientation will be emailed to me.

MJ Septic will not sign until we have received a signed estimate for each.

Customer Signature: 

Customer Signature Date: _____

MJ Septic Signature: Brianna Perez

MJ Septic Signature Date: 04/10/2025

Greg W. Johnson, P.E.
170 Hollow Oak
New Braunfels, Texas 78132
830/905-2778

March 21, 2025

Comal County Office of Environmental Health
195 David Jonas Drive
New Braunfels, Texas 78132-3760

RE- SEPTIC DESIGN
2186 SIERRA MADRE
ENSENADA SHORES AT CANYON LAKE, UNIT 4, LOT 89
CANYON LAKE, TX 78133
MCMASTER RESIDENCE

Brandon/Brenda,

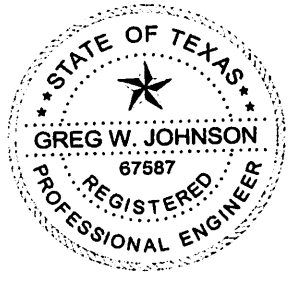
The referenced property is located within the Edwards Aquifer Contributing Zone. This OSSF design will comply with requirements in the CZP.

Temporary erosion and sedimentation controls should be utilized as necessary prior to construction. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, activities must be suspended immediately and the applicant or his agent must immediately notify the TCEQ Regional Office. After that operations can only proceed after the Executive Director approves required additional engineered impact plans.

Designed in accordance with Chapter 285, Subchapter D, §285.40,285.41, & 285.42, Texas Commission on Environmental Quality (Effective December 29, 2016).

03/21/25

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



ON-SITE SEWERAGE FACILITY
SOIL EVALUATION REPORT INFORMATION

Date Soil Survey Performed: **March 20, 2025**

Site Location: **ENSENADA SHORES AT CANYON LAKE, UNIT 4, LOT 88**

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 **1**

Depth (Feet)	Texture Class	Soil Texture	Gravel Analysis	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0 – 4"	**III**	**CLAY LOAM**	**N/A**	**NONE OBSERVED**	**LIMESTONE @ 4"**	**BROWN**
1						
2						
3						
4						
5						

SOIL BORING NUMBER **2**

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

03/20/25
Date

STATE OF TEXAS
GREG W. JOHNSON
67587
REGISTERED
PROFESSIONAL ENGINEER

FIRM #2585

OSSF SOIL EVALUATION REPORT INFORMATION

Date: March 21, 2025

Applicant Information:

Name: DAVID & JEANNINE McMASTERS
Address: c/o 6442 F.M. 306 #1201
City: NEW BRAUNFELS State: TEXAS
Zip Code: 78130 Phone: (830) 643-0501

Site Evaluator Information:

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

Property Location:

Lot 89 Unit 4 Blk ___ Subd. ENSENADA SHORES at CANYON LAKE
Street Address: 2186 SIERRA MADRE
City: CANYON LAKE Zip Code: 78133
Additional Info.: _____

Installer Information:

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

Topography: Slope within proposed disposal area: 15+ %

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

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

03/21/25
DATE

STATE OF TEXAS
GREG W. JOHNSON
67587
REGISTERED
PROFESSIONAL ENGINEER

FIRM #2585

DRIP TUBING SYSTEM
DESIGNED FOR:
DAVID & JEANNINE MCMASTERS
c/o 6442 FM 306, #1201
NEW BRAUNFELS, TX 78132

SITE DESCRIPTION:
Located in Ensenada Shores, Unit 4, Lot 89, at 2186 Sierra Madre, the proposed system will serve a five bedroom residence (3688sf.) 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 or 4 inch SCH-40 pipe discharges from the residence into a Pro-Flo Model 5060-600 gpd aerobic treatment plant, containing a 397 gal. pretreatment chamber and a 768 gal. pump chamber. The effluent after processing gravity feeds into the pump chamber. The pump chamber contains a 0.5 HP FPS submersible well pump. The well pump is activated by mercury floats and a timer set to cycle eight times per day for six minutes with a tank operating level from 50-70 gallons. A high level audible and visual alarm will activate should the pump fail. Distribution is through a self flushing 100 micron Arkal 1" Super Filter, disk filter " filter then through a 1" SCH-40 manifold to a 3000 sf. 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 Model PMR30MF 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 throttlling a 1" ball valve. Solids caught in the disk filter are flushed each cycle back to the trash tank. Agricultural Products, Inc. (Model #VBK-1) 1" PVC vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower parts of the field. Prior to installing tubing the entire field must be scarified and built up with eight inches of Type II or III soil. Drip tubing will be laid and the entire field area will be capped with 6" of loamy soil (Type 2 or 3 - ***NOT SAND)***. The field area will be sodded with grass with hearty grass such as Bermuda, St. Augustine, etc. prior to system startup.
Tanks must have at grade risers on each opening with watertight caps that must be at least 65# or have a padlock or can only be removed with tools. A secondary plug, cap, or suitable restraint must be provided below riser cap to prevent tank entry should the cap be damaged or removed, in compliance with Chapter §285.38.

DESIGN SPECIFICATIONS:
Q = 360 GPD - 5 bdrm residence (3688 sf)(Table III)
Pretreatment tank size: 397 Gal
Plant Size: ProFlo Model 5060 - 600 GPD (TCEQ Approved)
Pump tank size: 768 Gal

Reserve capacity after High Level: 120 gal. (1/3 day usage)
Application Rate: Ra = 0.2 gal/sf
Total absorption area: Q/Ra = 360 GPD/0.20 = 1800 sf. (Actual 3000 sf)
Total linear feet drip tubing: 1500' ***Netifim Bioline*** drip tubing .61 GPH
Pump requirement: 750 emitters @ 0.61 gph @ 30 psi = 7.625 gpm
Pump:0.5 HP FPS E SERIES 20FE05P4-2W115 submersible pump or equivalent.
Dosing volume: 50-70 gal.
Pump Tank Calculations: 768 Gal (13.3 gal/in.)
Volume below working level = 12"= 160 gal
Working level = 360 gal = 27"
Reserve Requirement = 1/3 day = 120 gal. = 9"

MINIMUM SCOUR VELOCITY (**MSV**) > 2 FPS
IN DRIP TUBING W/ NOM. DIA. 0.55" ID
MSV = 2 FPS (Πd↑2)/4*7.48 gal/cf*60 sec/min
MSV = 2(3.14159((.55/12)↑2)/4)*7.48*60
MSV = 1.5 gpm MIN FLOW RATE x 4 lines = 6 gpm

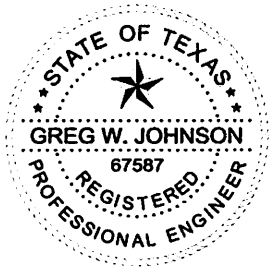
IN RETURN MANIFOLD W/ NOM. DIA 1.049" ID
MSV = 2 FPS (Πd↑2)/4*7.48 gal/cf*60 sec/min
MSV = 2(3.14159((1.049/12)↑2)/4)*7.48*60
MSV = 5.4 GPM

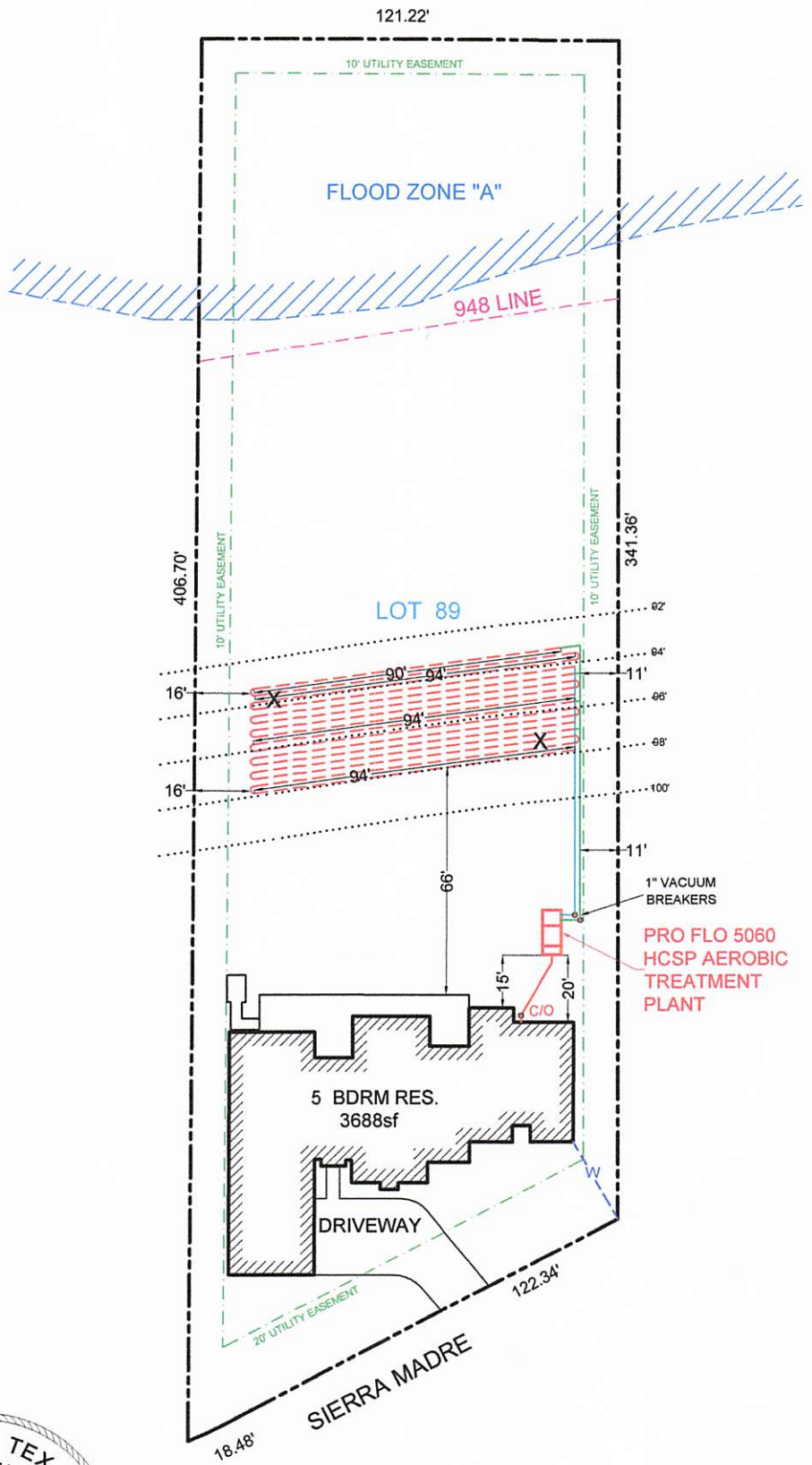
PIPE AND FITTINGS:
All pipes and fittings in this drip tubing system shall be 1" schedule 40 PVC. All joints shall be sealed with approved solvent-type PVC cement. Clipper type cutters are recommended to prevent PVC burrs during cutting of pipes causing possible plugging. Drip tubing 0.61 gph drip tubing to be used in field. The manifold trench should be kept shallow to prevent interconnection of the trenches.

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

03/24/25

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





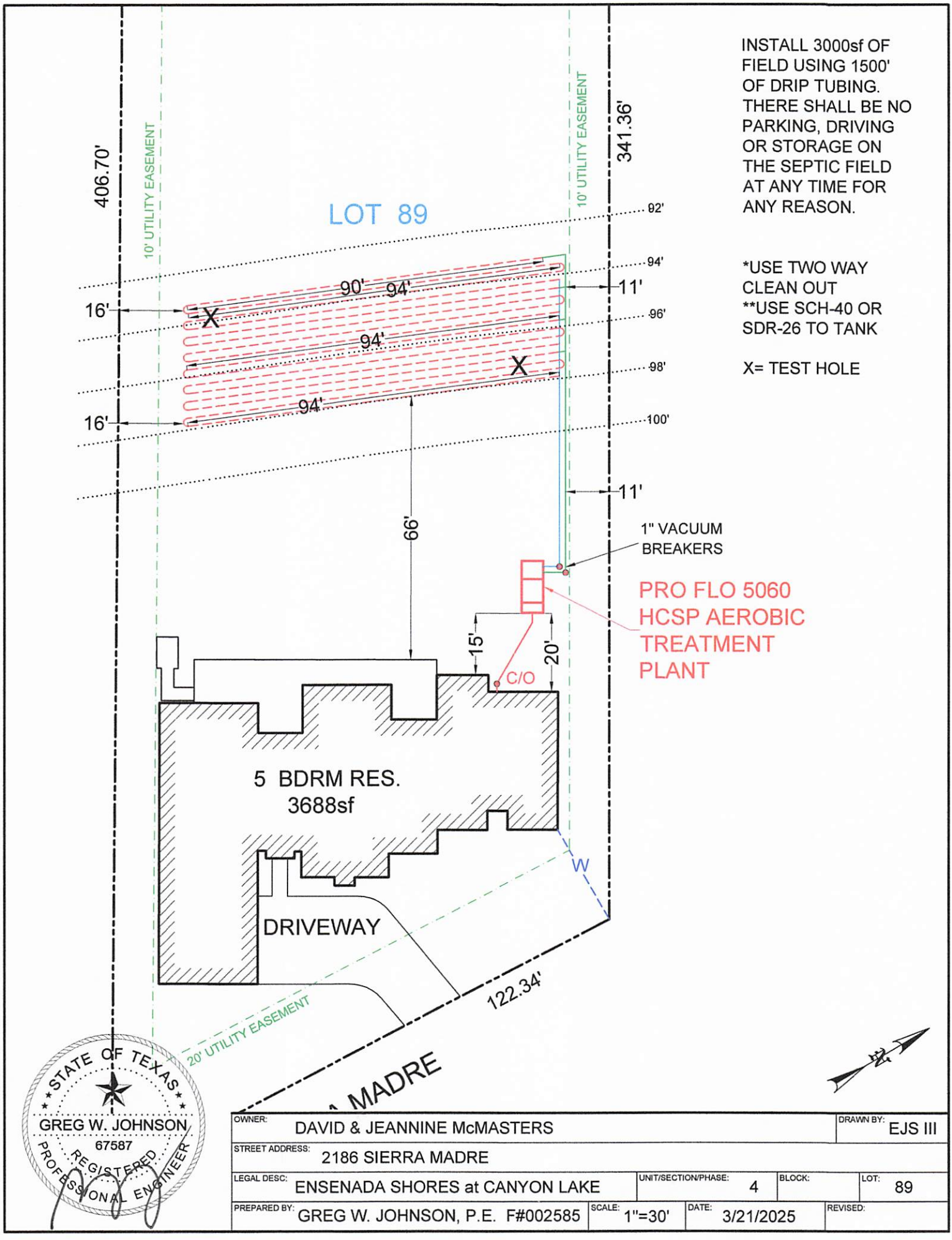
INSTALL 3000sf OF FIELD USING 1500' OF DRIP TUBING. THERE SHALL BE NO PARKING, DRIVING OR STORAGE ON THE SEPTIC FIELD AT ANY TIME FOR ANY REASON.

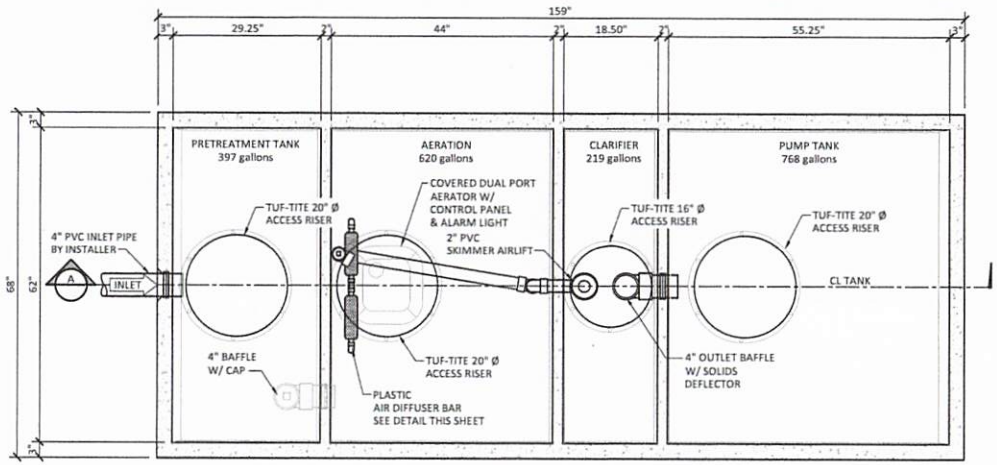
*USE TWO WAY CLEAN OUT
**USE SCH-40 OR SDR-26 TO TANK

X= TEST HOLE

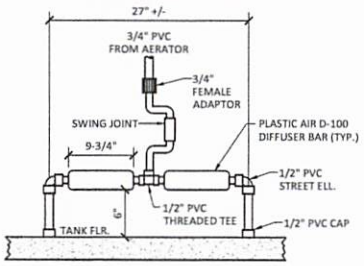
STATE OF TEXAS
GREG W. JOHNSON
67587
REGISTERED
PROFESSIONAL ENGINEER

OWNER: DAVID & JEANNINE McMASTERS				DRAWN BY: EJS III	
STREET ADDRESS: 2186 SIERRA MADRE					
LEGAL DESC: ENSENADA SHORES at CANYON LAKE		UNIT/SECTION/PHASE: 4	BLOCK:	LOT: 89	
PREPARED BY: GREG W. JOHNSON, P.E. F#002585	SCALE: 1"=50'	DATE: 3/21/2025	REVISED:		


INSTALL 3000sf OF FIELD USING 1500' 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
406.70'
341.36'
10' UTILITY EASEMENT
10' UTILITY EASEMENT
LOT 89
92'
94'
96'
98'
100'
90'
94'
94'
94'
11'
11'
16'
16'
66'
1" VACUUM BREAKERS
PRO FLO 5060 HCSP AEROBIC TREATMENT PLANT
15'
20'
C/O
5 BDRM RES.
3688sf
DRIVEWAY
W
122.34'
20' UTILITY EASEMENT
SIERRA MADRE
STATE OF TEXAS
GREG W. JOHNSON
67587
REGISTERED
PROFESSIONAL ENGINEER
OWNER: DAVID & JEANNINE McMASTERS
DRAWN BY: EJS III
STREET ADDRESS: 2186 SIERRA MADRE
LEGAL DESC: ENSENADA SHORES at CANYON LAKE
UNIT/SECTION/PHASE: 4
BLOCK:
LOT: 89
PREPARED BY: GREG W. JOHNSON, P.E. F#002585
SCALE: 1"=30'
DATE: 3/21/2025
REVISED:



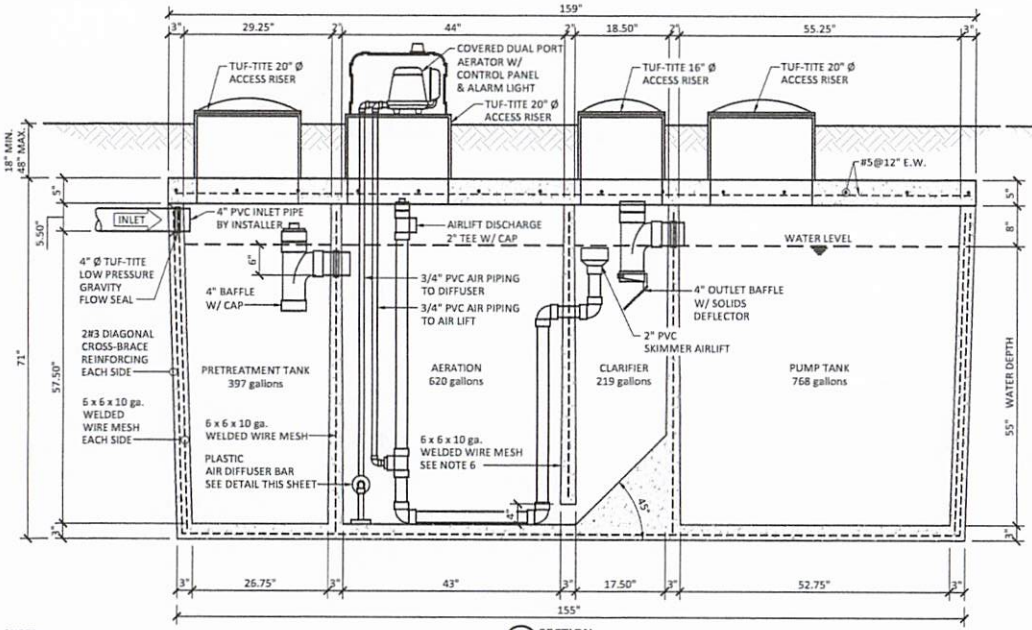
PLAN



AIR DIFFUSER DETAIL

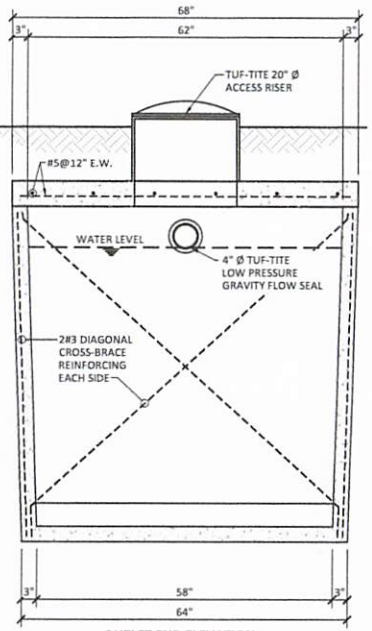
GENERAL NOTES:

1. ALL CONCRETE TO BE 4000 PSI, WITH A AGGREGATE SIZE OF 3/4".
2. ALL INSPECTION HOLES AND TOPS ARE TO BE SEALED WITH A NEOPRENE SEALER.
3. THE SUB GRADE IS TO BE WITHIN 1/2" AND FREE OF FOREIGN OBJECTS.
4. PRETREATMENT TANK & CLARIFIER RISERS MAY BE BELOW GRADE.
5. TANK LID TO BE SEALED WITH ASPHALTIC SEALANT.
6. A 2-1/2" THICK WALL MAY BE USED IN LIEU OF THE CAST IN PLACE INTERNAL WALL BETWEEN THE AERATION & CLARIFIER.
7. THE MANUFACTURER IS REQUIRED TO DEMONSTRATE THAT FAILURE WILL NOT OCCUR BY PHYSICALLY APPLYING LOADS TO THE TANK. THE LOAD APPLIED SHALL BE 1.5 TIMES THE DESIGN DEAD LOAD. SUCH TESTING SHALL BE WITNESSED & CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER.



A SECTION

*NOTE:
2" AIRLIFT RISER TO BE STRAPPED TO WALL. SECTION DRAWING SHOWS IT IN FRONT OF OF DIFFUSER FOR CLARITY



OUTLET END ELEVATION

TANK DIMENSIONS		
TANK LENGTH (TOP)	159.00	in.
TANK LENGTH (BOTTOM	155.00	in.
TANK WIDTH (TOP)	68.00	in.
TANK WIDTH (BOTTOM)	64.00	in.
TANK HEIGHT	71.00	in.
WALL THICKNESS	3.00	in.
FLOOR THICKNESS	3.00	in.
LID THICKNESS	5.00	in.
BOTTOM TO INLET	60.50	in.

TANK VOLUMES				
PRETREATMENT CAPACITY	397	gal.		
AERATION CAPACITY	620	gal.		
CLARIFIER CAPACITY	219	gal.		
PUMP TANK CAPACITY	768	gal.		
WATER DEPTH	55	in.		
TANK CONCRETE VOLUME	86.11	FT^3	3.19	YD^3
TANK LID CONCRETE VOLUME	27.97	FT^3	1.04	YD^3
TANK WEIGHT (EMPTY)	12917	lbs.		
LID WEIGHT	4196	lbs.		
TOTAL TANK WEIGHT (EMPTY)	17112	lbs.		

TANK BUOYANCY CALCULATIONS				
TANK DIMENSIONS:				
Length =	159.0	Inches =	13.3	Ft
Width =	68	Inches =	5.7	Ft
Height =	71	Inches =	5.9	Ft
Tank Displacement Volume =			444.2	Cu Ft
Uplift Force [@ 62.4 #/cu ft) =			27720.8	Lbs
RESISTING FORCES				
Concrete Tank Deadweight (Empty) =			17112	Lbs
Weight of Inserted Equipment & Hatches =			150	Lbs
Total Tank Weight =			17262	**Lbs**
WEIGHT OF SOIL OVER TANK				
Length =			13.3	Ft
Width =			5.7	Ft
X-Section Area =			75.1	Sq Ft
LESS ACCESS HATCH AREAS				
1	16	Inches =	-1.05	Sq Ft
3	20	Inches =	-3.93	Sq Ft
Net Area for Soil Cover =			70.1091	Sq Ft
Height of Soil Cover =			**18.0**	Inches
Soil Cover Volume =			105.2	
Compacted Weight of Soil Cover =			100.00	Lbs/Cu Ft
Weight of Soil Cover =			10516.37	Lbs
Total Downward Force =			27778.37	Lbs
Net Uplift Force =			**-57.61**	
Since uplift force is negative, tank will not float when empty with indicated cover.				
Soil skin friction has been neglected. Actual resistance will be greater.				

STATE OF TEXAS
D. RAY YOUNG
37068
LICENSED
PROFESSIONAL ENGINEER
D. Ray Young
12-19-2013

SCALE: 1" = 1'-0" (24"x36")
2" = 1'-0" (11"x17")

REVISIONS / ISSUANCE

REF.	DATE	DESC.

WATER ENGINEERS, INC.
Water & Wastewater Treatment Consultants
TEXAS BOARD OF PROFESSIONAL ENGINEERS FIRM No. 2066
17230 HUFFMEISTER ROAD
CYPRESS, TEXAS 77429
TEL: 281-373-0500
FAX: 281-373-1113

PRO FLO AEROBIC SYSTEMS, LP
WASTEWATER TREATMENT SYSTEMS
20222 FM 362
WALLER, TEXAS 77484

AEROBIC WASTEWATER TREATMENT UNIT FOR USE IN HARRIS COUNTY, TEXAS

MODEL No.
5060 HCSP

DRAWN BY:	JLW
DATE:	12/3/2013
JOB No.:	4604.12
SHEET No.:	04 of 04

TANK NOTES:

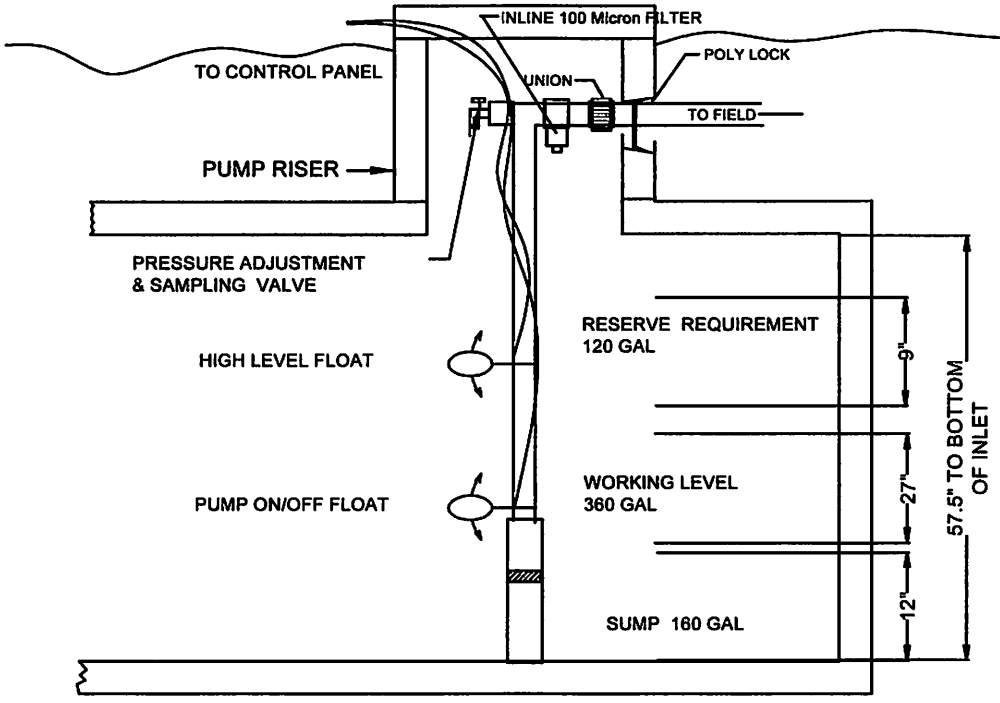
Tanks must be set to allow a minimum of 1/8" per foot fall from the residence.

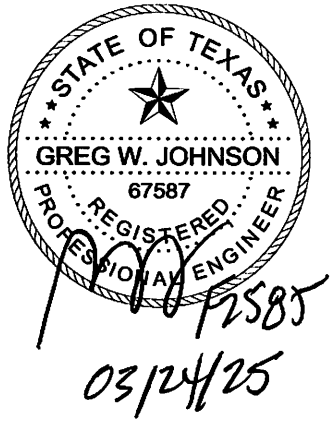
Tightlines to the tank shall be SCH-40 PVC.

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

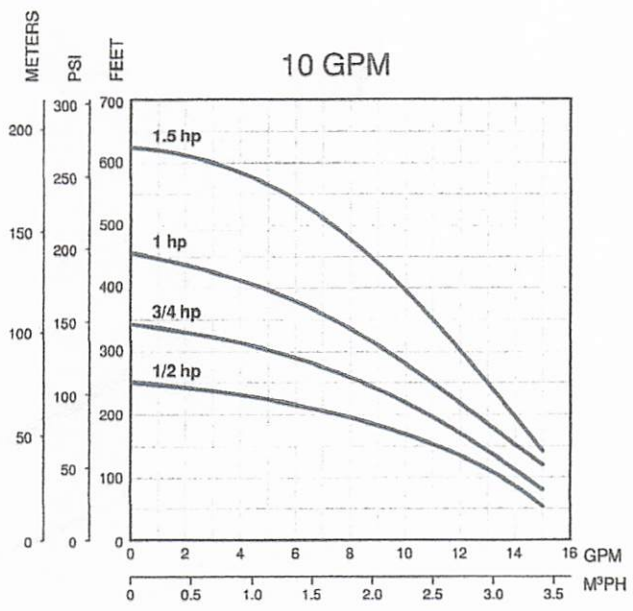
ALL WIRING MUST BE IN COMPLIANCE WITH
THE MOST RECENT NATIONAL ELECTRIC CODE

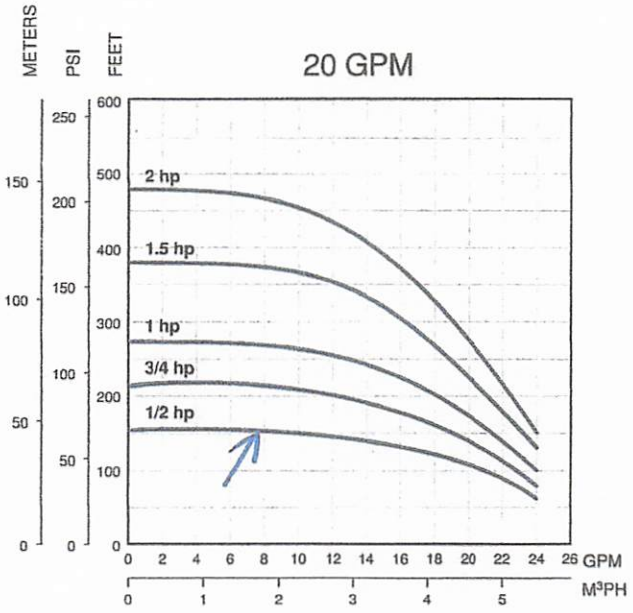




TYPICAL PUMP TANK CONFIGURATION
PRO-FLO 5060 w/ 768 GAL PUMP TANK

Thermoplastic Performance





Thermoplastic Units Ordering Information

1/2 - 1.5 HP Single-Phase Units						
Order No.	Model	GPM	HP	Volt	Wire	Wt.
94741005	10FE05P4-2W115	10	1/2	115	2	24
94741010	10FE05P4-2W230	10	1/2	230	2	24
94741015	10FE07P4-2W230	10	3/4	230	2	28
94741020	10FE1P4-2W230	10	1	230	2	31
94741025	10FE15P4-2W230	10	1.5	230	2	46
94742005	20FE05P4-2W115	20	1/2	115	2	25
94742010	20FE05P4-2W230	20	1/2	230	2	25
94742015	20FE07P4-2W230	20	3/4	230	2	28
94742020	20FE1P4-2W230	20	1	230	2	31
94742025	20FE15P4-2W230	20	1.5	230	2	40

Thermoplastic 1/2 - 2 HP Pump Ends						
Order No.	Model	GPM	HP	Volt	Wire	Wt.
94751005	10FE05P4-PE	10	1/2	N/A	N/A	6
94751010	10FE07P4-PE	10	3/4	N/A	N/A	7
94751015	10FE1P4-PE	10	1	N/A	N/A	8
94751020	10FE15P4-PE	10	1.5	N/A	N/A	12
94752005	20FE05P4-PE	20	1/2	N/A	N/A	6
94752010	20FE07P4-PE	20	3/4	N/A	N/A	7
94752015	20FE1P4-PE	20	1	N/A	N/A	8
94752020	20FE15P4-PE	20	1.5	N/A	N/A	10
94752025	20FE2P4-PE	20	2	N/A	N/A	11

Arkal 1" Super Filter

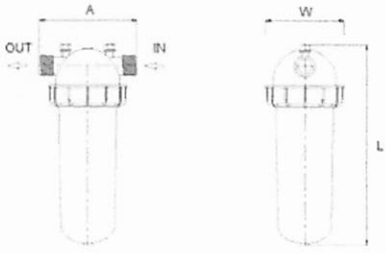
Catalog No. 1102 0_ _ _

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

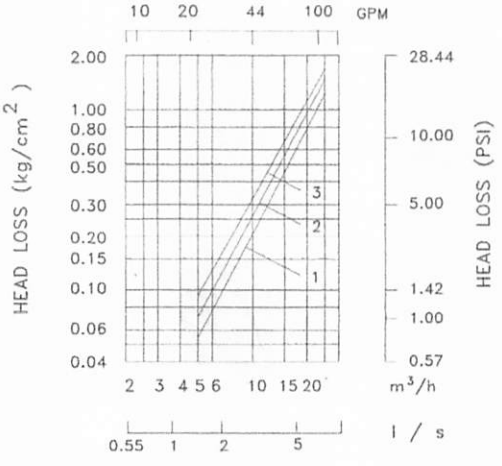
Inlet/outlet diameter	1" BSPT (male) 25.0 mm – nominal diameter 33.6 mm – pipe diameter (O. D.)	1" NPT (male)
Maximum pressure	10 atm	145 psi
Maximum flow rate	8 m^3/h (1.7 l/sec)	35 gpm
General filtration area	500 cm^2	77.5 in^2
Filtration volume	600 cm^3	37 in^3
Filter length L	340 mm	13 13/32"
Filter 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	Outlet
¾-inch Female National Pipe Thread (FNPT)	¾-inch Female National Pipe Thread (FNPT)
1-inch Female National Pipe Thread (FNPT)	1-inch Female National Pipe Thread (FNPT)
1-inch Female British Standard Pipe Thread (FBSPT)	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

3/4" FNPT x 3/4" FNPT model *(shown on right)*

Overall Length 5.2 inches (13.1 cm)

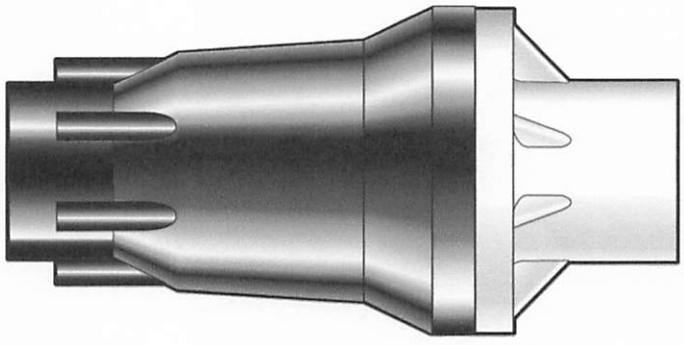
Overall Width 2.5 inches (6.4 cm)

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

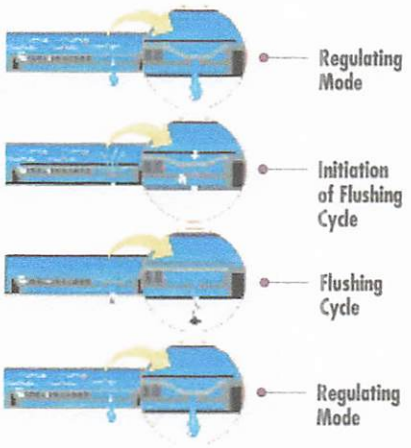
PRESSURE-MASTER REGULATOR - MEDIUM FLOW

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.

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.

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.

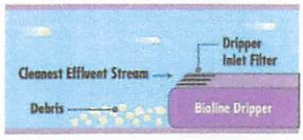
Quality Manufacturing with Specifications Designed to Meet Your Needs

- 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.

Cross Section of Bioline Dripperline

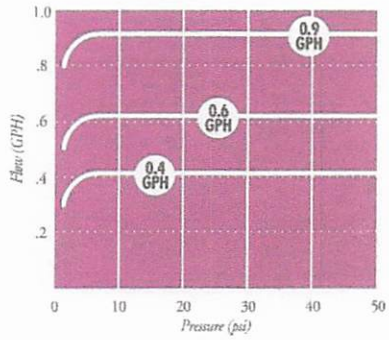


Root Safe

- 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.

TECHFILTER LIFETIME EXTENDED WARRANTY

BIOLINE Flow Rate vs. Pressure



NETAFIM™

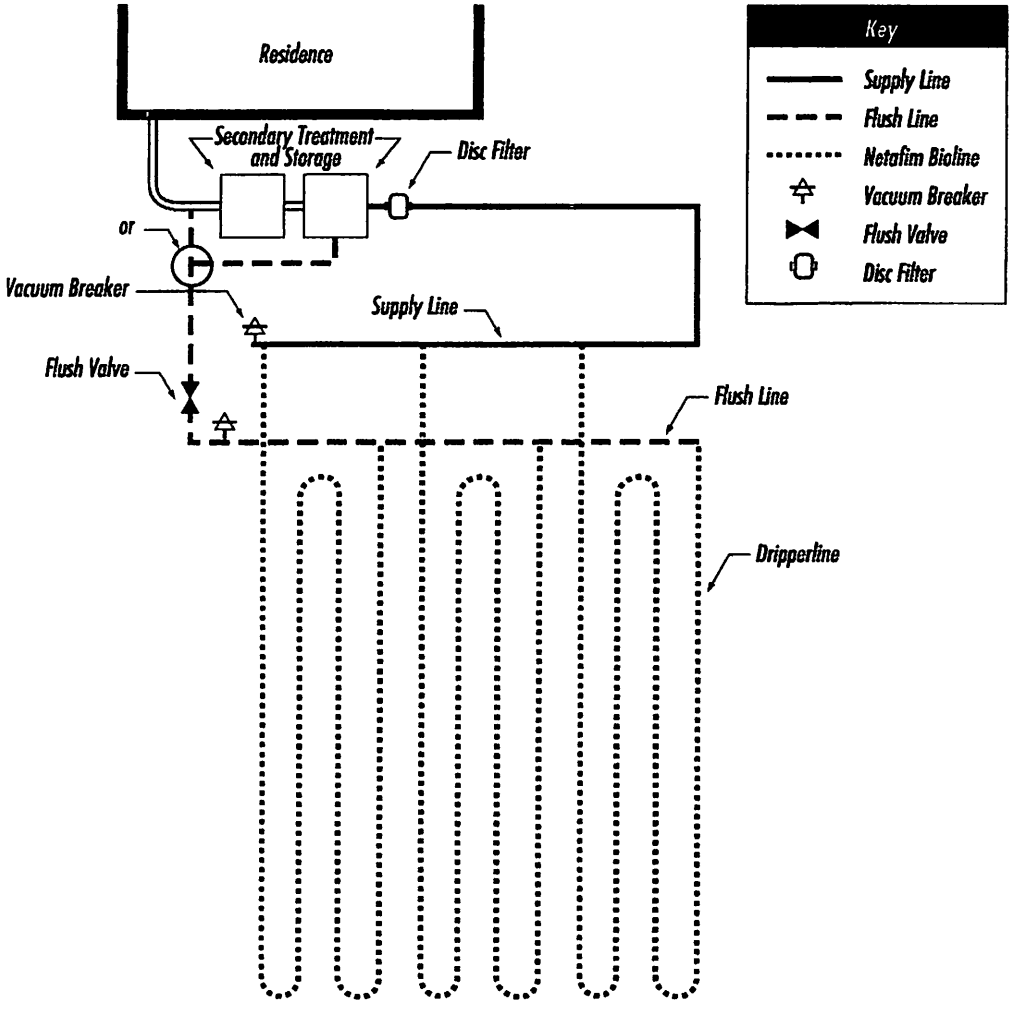
NETAFIM USA
5470 E. Home Ave. • Fresno, CA 93727
888.638.2346 • 559.453.6800
FAX 800.695.4753
www.netafimusa.com

SAMPLE DESIGNS

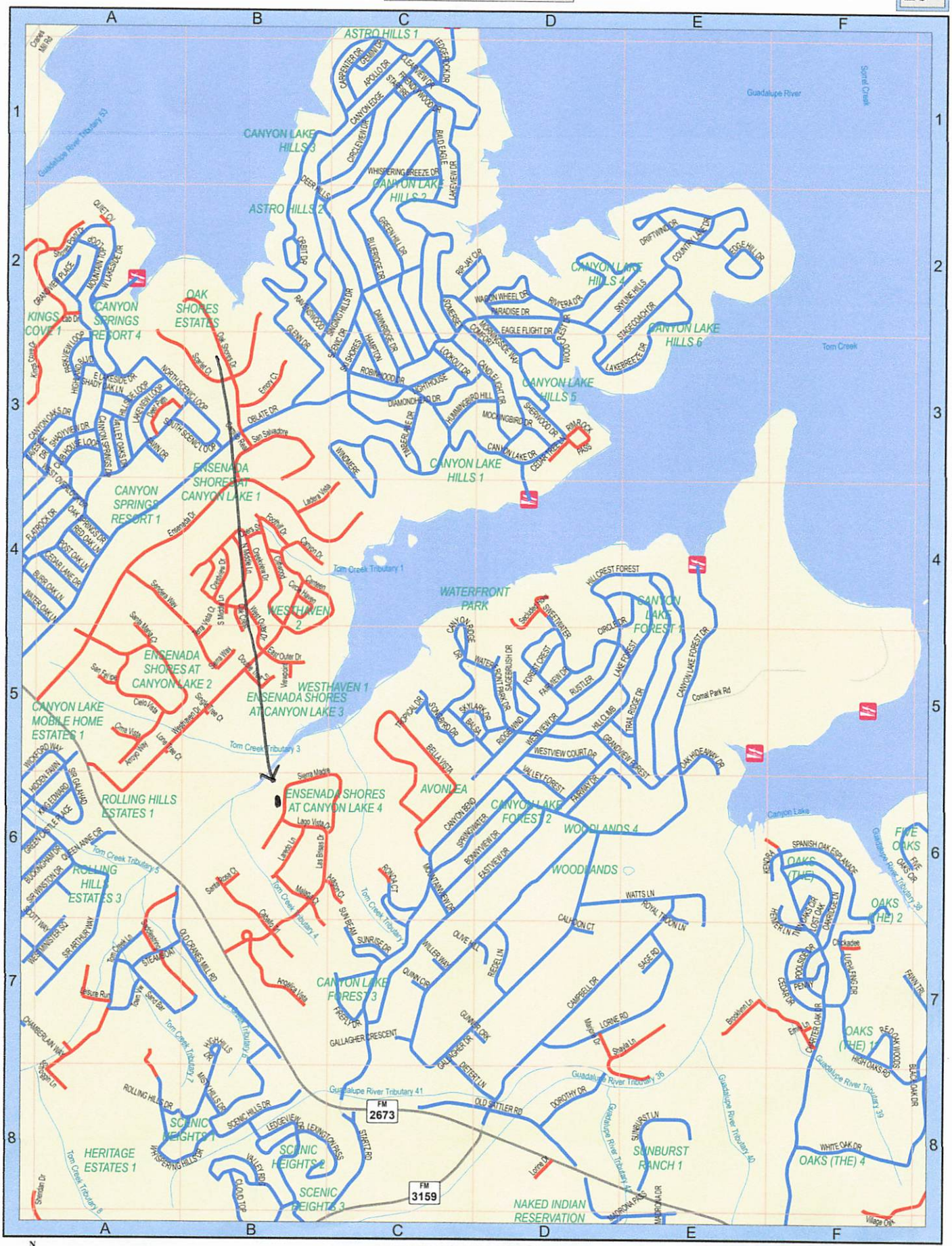
SINGLE TRENCH LAYOUT

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



↑ SEE PAGE 28 ↑



N
W E
S

0 1,250 2,500
Feet

0 0.25 0.5
Miles

Produced by the Comal County Engineer's Office - 7/17/2023

New Braunfels Title GF# 088551NBT AL

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: April 27, 2021

Grantor: JOHN MORT and spouse, CHRIS MORT

Grantor's Mailing Address: 7914 White Birch Lane, Houston, TX 77095

Grantee: DAVID MCMASTERS and wife, JEANNINE MCMASTERS

Grantee's Return Mailing Address: 25602 Jordan Terrace Lane, Katy, TX 77494

Consideration: TEN and NO/100 DOLLARS ($10.00) and other good and valuable consideration in hand paid to Grantor, the receipt and sufficiency of which is hereby acknowledged and confessed, and the further consideration of the execution by Grantee of one certain promissory note of even date payable to the order of THE FIRST NATIONAL BANK OF BASTROP in the principal amount of $238,000.00. The note is secured by a first and superior vendor's lien and superior title retained in this deed in favor of THE FIRST NATIONAL BANK OF BASTROP and by a first-lien deed of trust of even date from Grantee to Michael H. Patterson, trustee.

Property (including any improvements):

Lot 89, Ensenada Shores At Canyon Lake, Unit Four, a subdivision in Comal County, Texas, according to the Map and or Plat thereof recorded in Document No. 200706015755, Official Public Records, Comal County, Texas.

Reservations from Conveyance: None

Exceptions to Conveyance and Warranty: Liens described as part of the Consideration and any other liens described in this deed as being either assumed or subject to which title is taken; 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 2021, which Grantee assumes and agrees to pay, and subsequent assessments for that and prior years due to change in land usage, ownership, or both, the payment of which Grantee 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.

To the extent that the purchase agreement between Grantor and Grantee, if any, provides for limitations or other agreed matters that will survive the closing and this conveyance, then such limitations or other agreed matters are hereby deemed incorporated by reference.

The vendor's lien against and superior title to the Property are retained until each note described is fully paid according to its terms, at which time this deed will become absolute. THE FIRST NATIONAL BANK OF BASTROP, at Grantee's request, has paid in cash to Grantor that portion of the purchase price of the Property that is evidenced by the note. The first and superior vendor's lien against and superior title to the Property are retained for the benefit of THE FIRST NATIONAL BANK OF BASTROP and are transferred to THE FIRST NATIONAL BANK OF BASTROP without recourse against Grantor.

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

JOHN MORT

CHRIS MORT

STATE OF TEXAS)

COUNTY OF HARRIS)

This instrument was acknowledged before me on April 27, 2021 by JOHN MORT and CHRIS MORT. This Deed to be effective 4.28.2021

Notary Public, State of Texas

RHENA ANDERSON
Notary ID #132151455
My Commission Expires
August 28, 2023

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
04/29/2021 12:30:56 PM
CSCHUL 2 Pages(s)
202106022991

Bobbie Koepp

RECEIVED
By Kathy Griffin at 3:17 pm, Apr 14, 2025

COMAL COUNTY
ENGINEER'S OFFICE

OSSF DEVELOPMENT APPLICATION CHECKLIST

Staff will complete shaded items

		118549
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.

Signature of Applicant

04/11/2025
Date

___ COMPLETE APPLICATION

Check No._____ Receipt No._____

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

Revised: September 2019