

Preliminary Field Check For Drip Systems



COMAL COUNTY

ENGINEER'S OFFICE

Address: _____

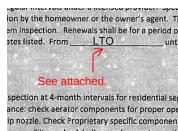
Legal Description: _____

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:

119081.pdf Markup Summary

Efrain Gallegos (2)



Subject: Callout
Page Label: 4
Author: Efrain Gallegos
Date: 10/30/2025 11:21:16 AM
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See attached.



Subject: Text Box
Page Label: 7
Author: Efrain Gallegos
Date: 10/30/2025 11:49:59 AM
Status:
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An inspector will be on property 10/31/25 to conduct a preliminary inspection. Additional comments may follow.

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

Date 9/9/25

Permit Number 119081

1. APPLICANT / AGENT INFORMATION

Owner Name	ROBERT HOWELL & MARIA HOWELL
Mailing Address	c/o 23011 FM 306
City, State, Zip	Canyon Lake, TX 78133
Phone #	830-935-4936
Email	katelyn@psseptics.com

Agent Name	GREG W. JOHNSON, P.E.
Agent Address	170 Hollow Oak
City, State, Zip	New Braunfels, TX 78132
Phone #	830-905-2778
Email	gregjohnsonpe@yahoo.com

2. LOCATION

Subdivision Name EAGLES PEAK RANCH Unit 2 Lot 197 Block _____
Survey Name / Abstract Number _____ Acreage _____
Address 1645 SOARING EAGLE DRIVE City FISCHER State TX Zip 78623

3. TYPE OF DEVELOPMENT

☒ Single Family Residential

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

Number of Bedrooms 4

Indicate Sq Ft of Living Area 2,858 sq'

☐ 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: \$ 600,000 (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

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

September 9, 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) FUJI CE7A & AK1000 PUMP Absorption/Application Area (Sq Ft) 2500

Gallons Per Day (As Per TCEQ Table III) 300

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

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

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

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

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

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

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

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

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

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

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

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

(if yes, the 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 appropriate regional office.)

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

October 4, 2025
Date

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):

2 UNIT/PHASE/SECTION BLOCK 197 LOT EAGLES PEAK RANCH SUBDIVISION

IF NOT IN SUBDIVISION: ACREAGE SURVEY

The property is owned by (insert owner's full name): ROBERT HOWELL & MARIA HOWELL

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 24th DAY OF September, 2025

[Signature]
Owner(s) Signature(s)

ROBERT HOWELL

MARIA HOWELL

Owner (s) Printed name (s)

September, 2025 SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 24th DAY OF

Margaret Jane Andrews
Notary Public Signature



(Notary Seal Here)

THIS AREA FOR COMAL COUNTY CLERK RECORDING PURPOSES ONLY

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
09/30/2025 08:09:58 AM
MARY 1 Pages(s)
202506031348



Bobbie Koepp

SEPTIC PUMPING & MAINTENANCE

By Cody Young LLC

To: Robert & Maria Howell

EAGLE PEAK RANCH UNIT 2, LOT 197

Site: 1645 Soaring Eagle Drive, Fischer, TX 78623 - Lot 197

County: Comal

Installer: Paul Swoyer Septics

Agency: COMAL CCEO

Mfg./Brand: FUJI CE7A

Level 1 Contract

This service contract for the On-Site Sewage-facility, (OSSF), located at the site stated above. OSSF is to be inspected and serviced at regular intervals under a licensed provider. Special emergency service is to be provided within 48 hours of notification by the homeowner or the owner's agent. The initial contract is for (2) years from the date of final septic system inspection. Renewals shall be for a period of 2 years at the current rate and remain in effect for the specified dates listed. From LTO until 2 YEARS FROM LTO

Contract price \$700

Service Program Includes:

See attached.

1. Regular site inspection at 4-month intervals for residential septic system.
2. OSSF maintenance: check aerator components for proper operation, control panel, effluent pump, spray head/drip nozzle. Check Proprietary specific components. Check pumps, check spray heads, check, and clean any Filters, check bull run valves and any other valves. Flush drain field if needed.
3. Visual inspection of control panel, (when accessible).
4. Labor expenses required at the home to maintain, repair, or remove any part of the control center or mechanical aerator to be returned for factory repair.
5. Labor expenses required at the home to service, repair, or install any part of the control panel or aerator returned from factory.
6. All maintenance reports will be emailed to the permitting authority & customer within 14 days of inspection.

Client Responsibilities:

1. Special service calls after the (at the 4-month intervals) stated in item #1.
2. BODs or TSS grab samples, (if needed).
3. Freight costs to and from factory, for component repair.
4. Costs for replacing damaged or missing parts and repairing any equipment not under any specified warranty.
5. Pumping out any or all the OSSF by a licensed waste hauler.
6. The Homeowner is responsible for maintaining the chlorinator and providing proper chlorine supply if required.
7. Securing pets so that maintenance functions can be performed safely for the technician, and the pet. If pets are present in the yard, and the owner is not on site to secure the animals, it is necessary to cancel the maintenance.
8. Securing pets so that maintenance functions can be performed safely for the technician, and the pet. If pets are present in the yard, and the owner is not on site to secure the animals, and it is necessary to cancel the maintenance, there will be a \$75 trip charge.
9. Insuring access to the property, always to the maintenance provider. (Gates, chains with locks, codes, etc.)

Miscellaneous Provisions

1. This contract can be terminated by either party in writing, within 30 days' notice. Contracts that are terminated will include notification in writing to the Authority having Jurisdiction, the Manufacturer of the system, and the other party.

Homeowner: _____

Date: 9-09-2025

Phone: 713 384-2307

Email: babbowall421@gmail.com

Maintenance Provider: Milo Young, License #MP0002338

Septic Pumping & Maintenance by Cody Young

911 RR3404

Kingsland, TX 78639

(325)248-8740

ON-SITE SEWERAGE FACILITY SOIL EVALUATION REPORT INFORMATION

Date Soil Survey Performed: June 01, 2023

Site Location: EAGLES PEAK RANCH, UNIT 2, LOT 197

Proposed Excavation Depth: N/A

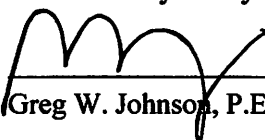
Requirements:

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						
Depth (Feet)	Texture Class	Soil Texture	Gravel Analysis	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0	III	CLAY LOAM	N/A	NONE OBSERVED	LIMESTONE @ 8"	BROWN
1						
2						
3						
4						
5						

SOIL BORING NUMBER <u> </u> SURFACE EVALUATION						
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

06/01/2023
Date

Date: June 02, 2023

Name: **ROBERT & MARIA HOWELL**
Address: **c/o 23011 F.M. 306**
City: **CANYON LAKE** State: **TEXAS**
Zip Code: **78133** Phone: **(830) 935-4935**

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 197 **Unit** 2 **Blk** _____ **Subd.** EAGLES PEAK RANCH
Street Address: 1645 SOARING EAGLE DRIVE
City: FISCHER **Zip Code:** 78623
Additional Info.:

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

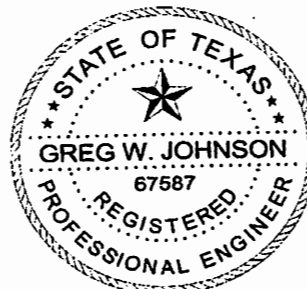
Topography: Slope within proposed disposal area:	<u>20 to 25</u>	%
Presence of 100 yr. Flood Zone:	YES	NO <u>X</u>
Existing or proposed water well in nearby area.	YES	NO <u>X</u>
Presence of adjacent ponds, streams, water impoundments	YES	NO <u>X</u>
Presence of upper water shed	YES	NO <u>X</u>
Organized sewage service available to lot	YES	NO <u>X</u>

An inspector will be on property 10/31/25 to conduct a preliminary inspection. Additional comments may follow.

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

06/02/23
DATE

**FIRM #2585**

**AEROBIC TREATMENT
DRIP TUBING SYSTEM
DESIGNED FOR:
ROBERT HOWELL & MARIA HOWELL
c/o 23011 FM 306
CANYON LAKE, TEXAS 78133**

SITE DESCRIPTION:

Located in Eagles Peak Ranch Unit 2, Lot 197, at 1645 Soaring Eagle the proposed system will serve a four bedroom residence (2858sf.) situated in an area with shallow Type III soil as described in the Soil Evaluation Report. Native grasses and oak trees were found throughout this property. 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 Fuji Clean CE7A 720gpd aerobic plant containing a 277-gallon pretreatment tank, an aerobic treatment plant, and a 1000-gallon pump tank containing a submersible (Franklin C1 20XC1-05P4-W115) 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 300 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 2500 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 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 periodically flush the system by cycling a 1" ball valve. Solids caught in the disc filter are continuously flushed each cycle back to the pump tank. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower parts of the field. Prior to installing field the field area will be graded to less than 30% slope. Due to slope check valves will be installed at each zone (supply and return) to prevent migration of effluent in field. Field area will be scarified and built up with 4" 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**). The field area will be covered in Curlex erosion control blankets and heavily seeded or sodded with grass prior to system startup. **Tank 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:

Daily waste flow: 300 GPD Table III

Pretreatment tank size: 277 Gal

Plant Size: Fuji Clean CE7A 720gpd (TCEQ Approved)

Pump tank size: 1000 Gal

Reserve capacity after High Level: 100 Gal (1/3 day Req'd)

Application Rate: $R_a = 0.2$ gal/sf

Total absorption area: $Q/R_a = 300 \text{ GPD}/0.20 = 1500 \text{ sf}$. (Actual 2500 sf.)

Total linear feet drip tubing: 1250' *Netifim Bioline* drip tubing .61 GPH

Pump requirement: 625 emitters @ .61 gph @ 30 psi = 6.354gpm

Pump Requirement (cont.): Franklin C1 20XC1-05P4-W115 submersible well pump

MINIMUM SCOUR VELOCITY (MSV) > 2 FPS

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

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

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

$$\text{MSV} = 1.5 \text{ gpm PER LINE} * 5 \text{ LINES} = 7.5 \text{ GPM MIN FLOW RATE}$$

IN RETURN MANIFOLD W/ NOM. DIA 1.049" ID

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

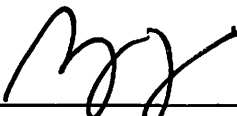
$$\text{MSV} = 2(3.14159((1.049/12)\uparrow 2)/4) * 7.48 * 60$$

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

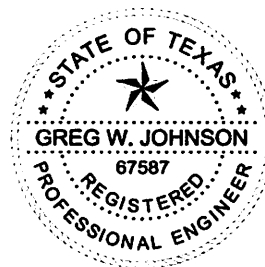
PIPE AND FITTINGS:

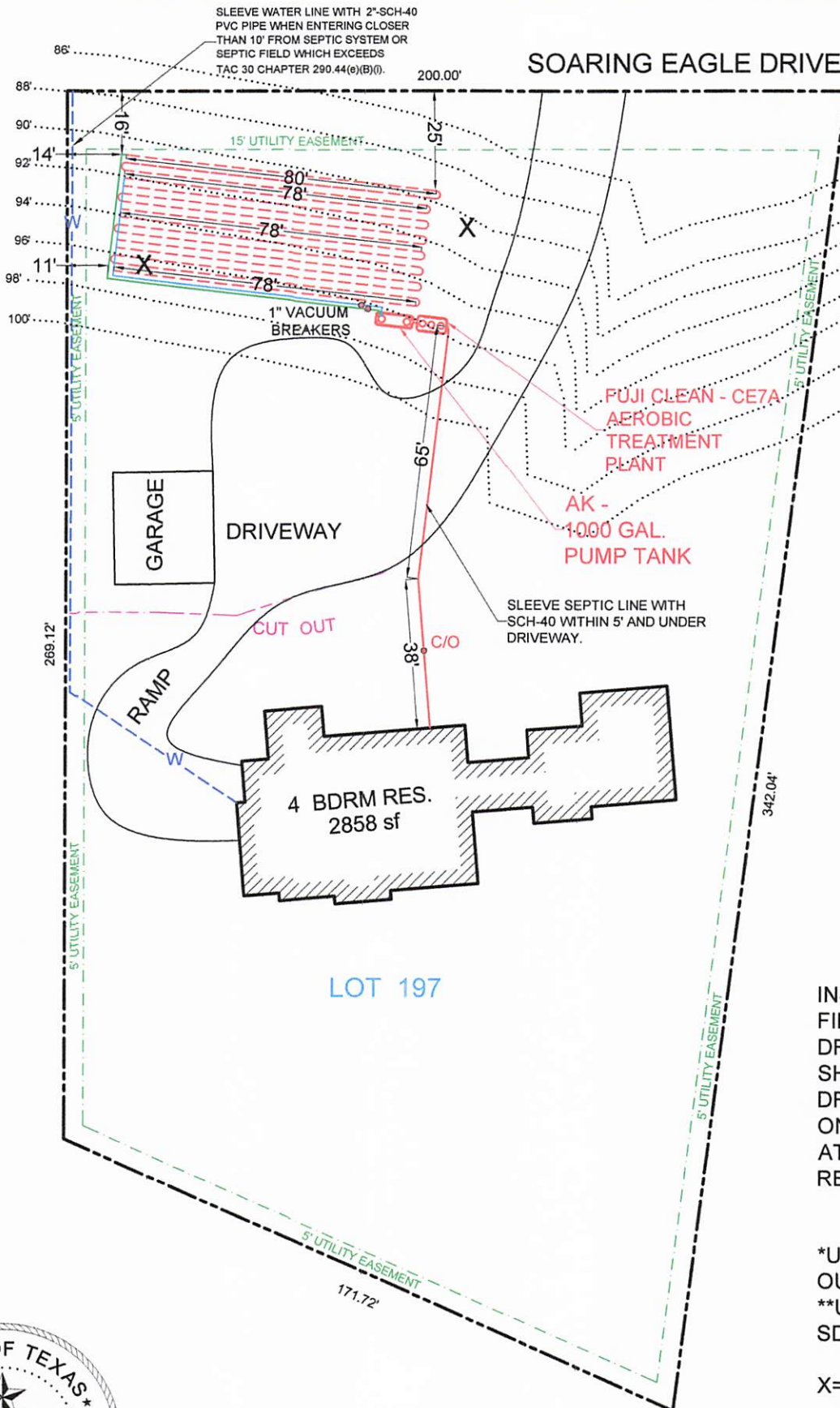
All pipes and fittings in this drip tubing system shall be 1" schedule 40 PVC. All joints shall be sealed with approved solvent-type PVC cement. Clipper type cutters are recommended to prevent PVC burrs during cutting of pipes causing possible plugging.

Designed in accordance with Chapter 285, Subchapter D, §285.30 and §285.40 Texas Commission On Environmental Quality. (Effective September 1, 2023)

 10/04/25

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





INSTALL 2500sf OF FIELD USING 1250' 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



OWNER: ROBERT & MARIA HOWELL					DRAWN BY: EJS III/GWJ		
STREET ADDRESS: 1645 SOARING EAGLE DRIVE							
LEGAL DESC: EAGLES PEAK RANCH				UNIT/SECTION/PHASE: 2		BLOCK:	LOT: 197
PREPARED BY: GREG W. JOHNSON, P.E. F#002585		SCALE: 1"=40'		DATE: 6/2/2023		REVISED: 10/04/2025	

INSTALL 2500sf OF FIELD USING 1250' OF DRIP TUBING. THERE SHALL BE NO PARKING, DRIVING OR STORAGE ON THE SEPTIC FIELD AT ANY TIME FOR ANY REASON.

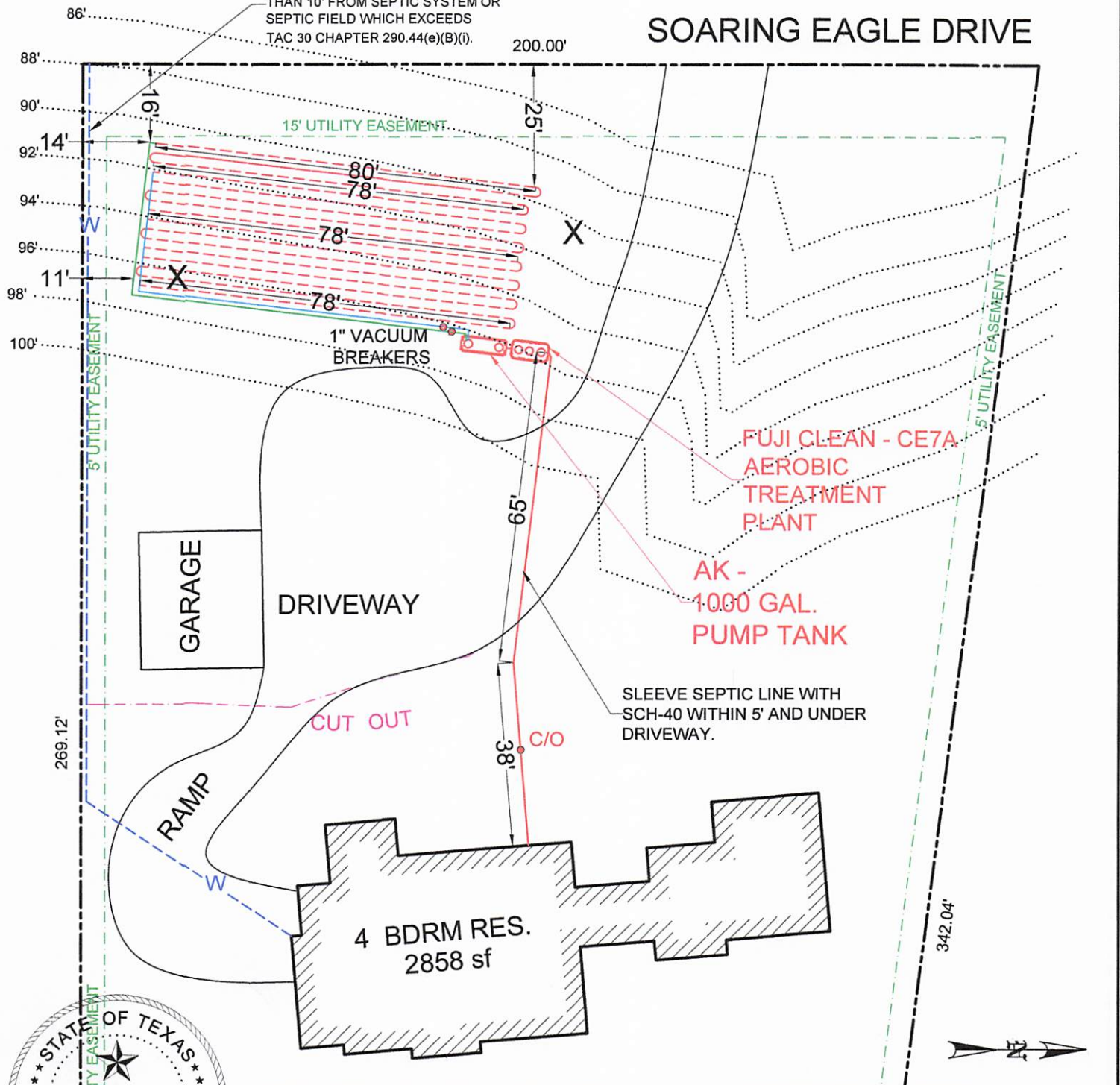
*USE TWO WAY CLEAN OUT

**USE SCH-40 OR SDR-26 TO TANK

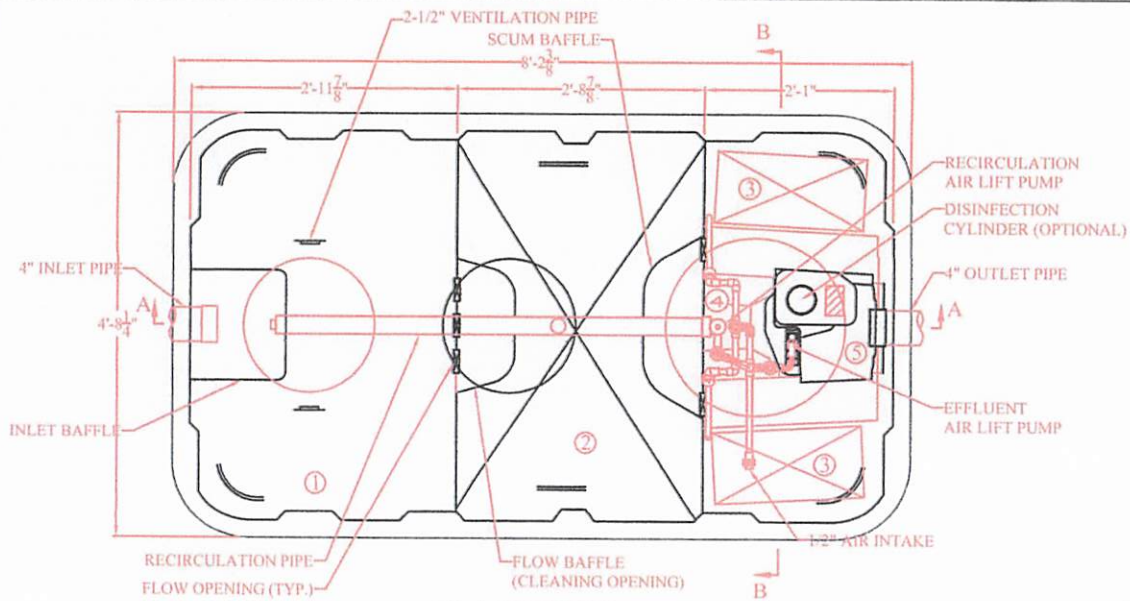
X= TEST HOLE

SLEEVE WATER LINE WITH 2"-SCH-40 PVC PIPE WHEN ENTERING CLOSER THAN 10' FROM SEPTIC SYSTEM OR SEPTIC FIELD WHICH EXCEEDS TAC 30 CHAPTER 290.44(e)(B)(i).

SOARING EAGLE DRIVE



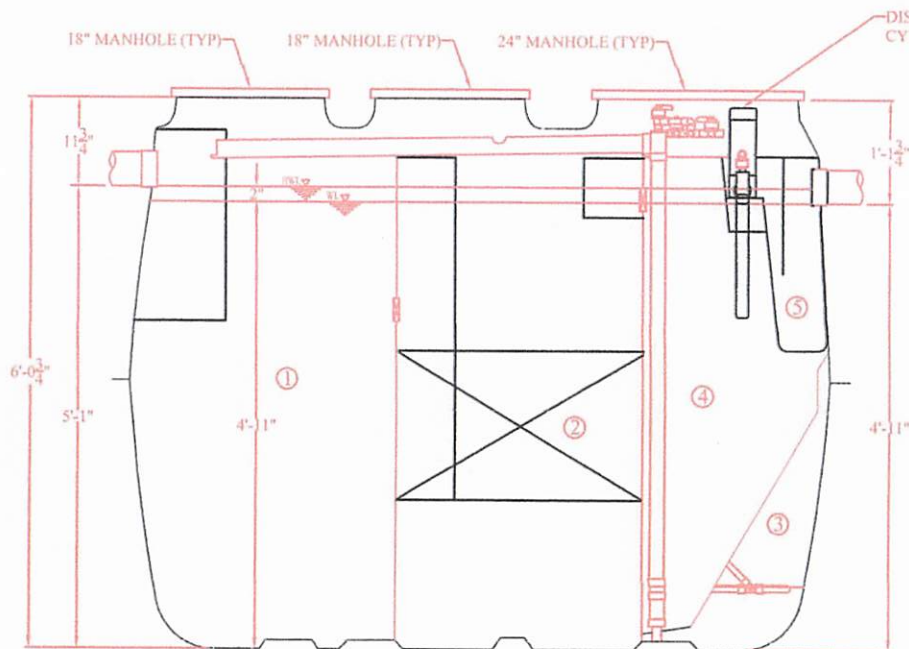
OWNER: ROBERT & MARIA HOWELL			DRAWN BY: EJS III/GWJ	
STREET ADDRESS: 1645 SOARING EAGLE DRIVE				
LEGAL DESC: EAGLES PEAK RANCH		UNIT/SECTION/PHASE: 2	BLOCK:	LOT: 197
PREPARED BY: GREG W. JOHNSON, P.E. F#002585		SCALE: 1"=30'	DATE: 6/2/2023	REVISED: 10/04/2025



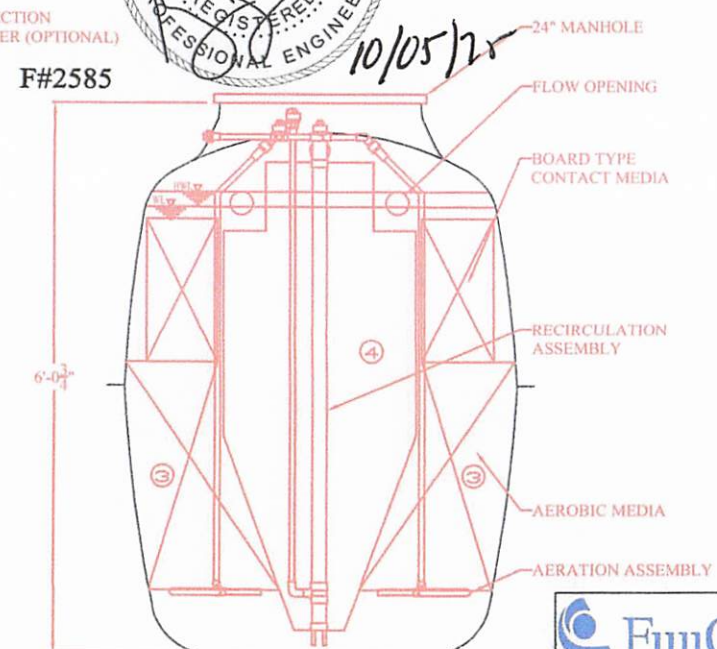
PLAN VIEW

CHAMBER		Volume (gal)
①	Sedimentation Chamber	397
②	Anaerobic Filtration Chamber	396
③	Aerobic Contact Filtration Chamber	181
④	Storage Chamber	90
⑤	Disinfection Chamber	6
Total Volume		1069

SPECIFICATIONS			
Anaerobic Media	PP / PE	Filling Rate	32%
Board Type Aerobic Media	PVC / PP / PE	Filling Rate	17%
Aerobic Media	PP / PE	Filling Rate	55%
Blower	2.8 cfm		
Tank	FRP		
Piping	PVC / PP / PE		
Access Covers	Plastic / Cast Iron		
Disinfectant (Optional)	Chlorine Tablets		



SECTION A-A VIEW



SECTION B-B VIEW



F#2585

10/05/25



**FUJI CE7A 720 GPD
Structural Drawing**

DATE: 07/01/2014 SCALE: 1/2" = 1"

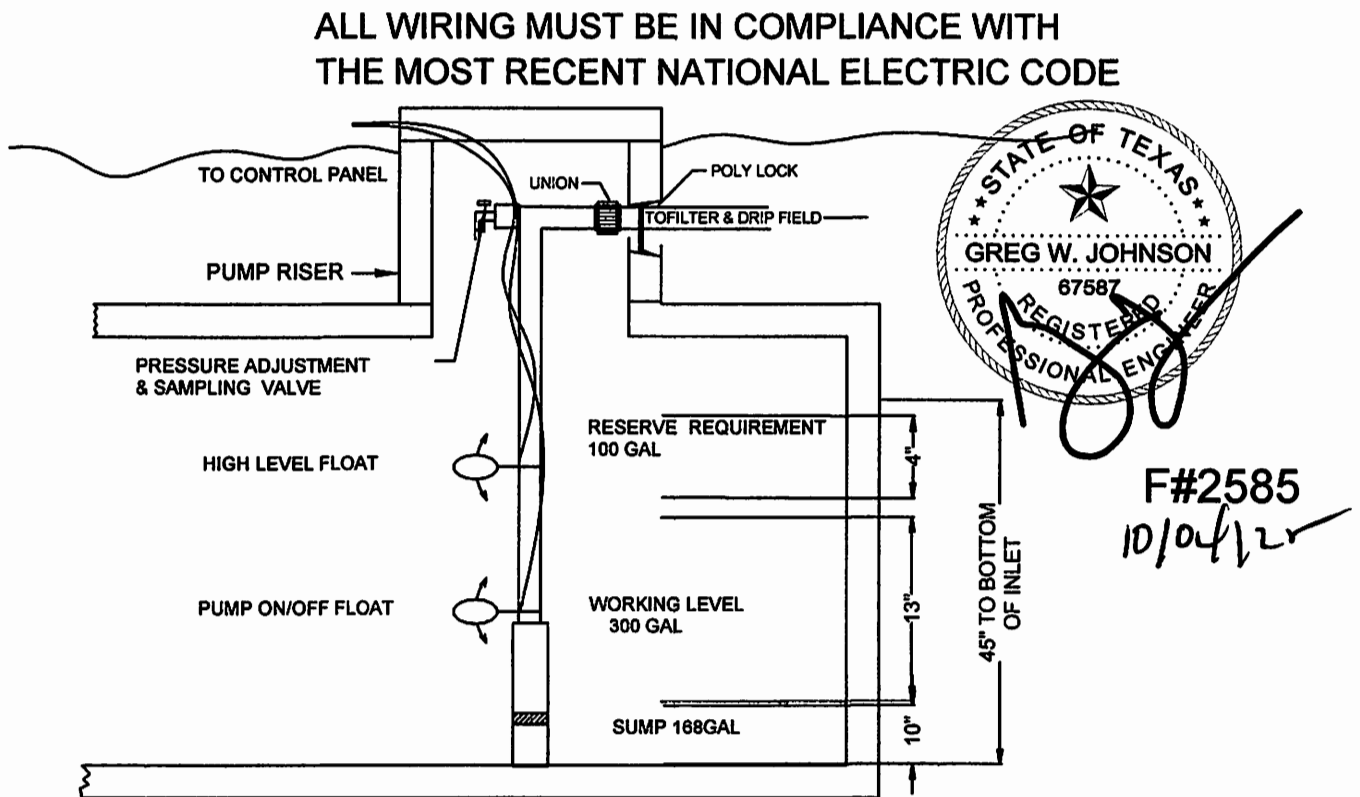
TANK NOTES:

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



TYPICAL PUMP TANK CONFIGURATION
AK1000 GAL PUMP TANK

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

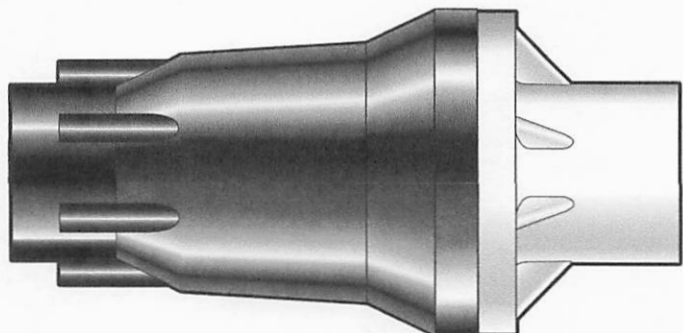
¾" FNPT x ¾" FNPT model (shown on right)

- 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)

Arkal 1" Super Filter

Catalog No. 1102 0 _ _ _

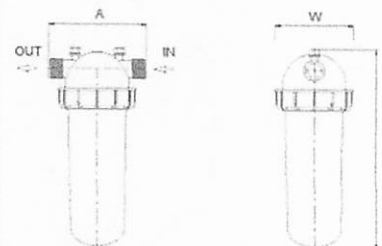
Features

- ♦ 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

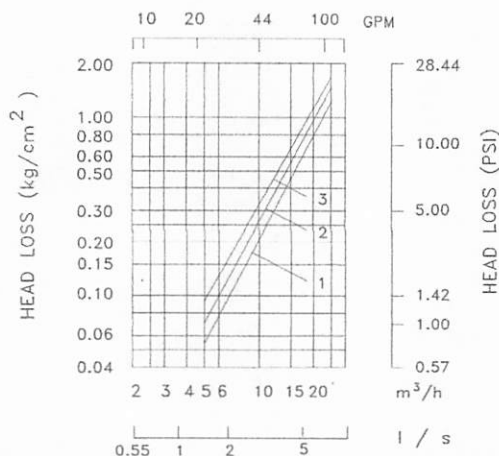
Inlet/outlet diameter	1" BSPT (male)	1" NPT (male)
	25.0 mm – nominal diameter	
	33.6 mm – pipe diameter (O. D.)	
Maximum pressure	10 atm	145 psi
Maximum flow rate	8 m ³ /h (1.7 l/sec)	35 gpm
General filtration area	500 cm ²	77.5 in ²
Filtration volume	600 cm ³	37 in ³
Filter length L	340 mm	13 13/32"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

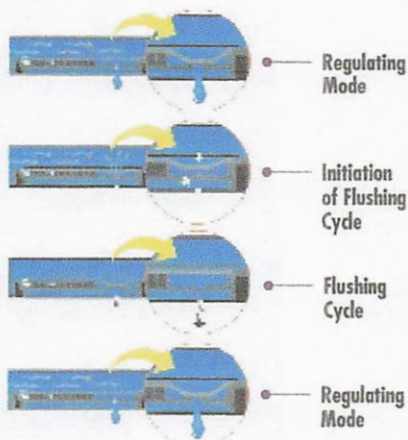
Head Loss Chart



NETAFIM™

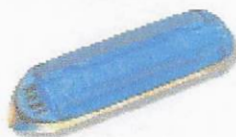
Bioline® Dripperline

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

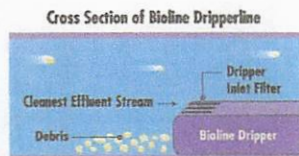
- Tens of millions of feet used in wastewater today.
- Bioline is permitted in every state allowing drip disposal.
- Backed by the largest, most quality-driven manufacturer of drip products in the U.S.
- Preferred choice of major wastewater designers and regulators.
- Proven track record of success for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

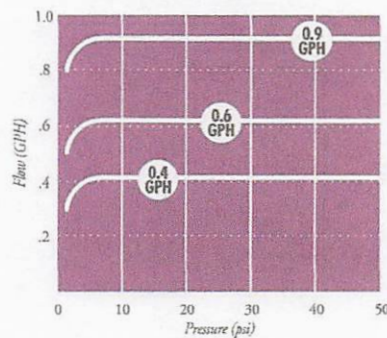
Recommended filtration: 120 mesh

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

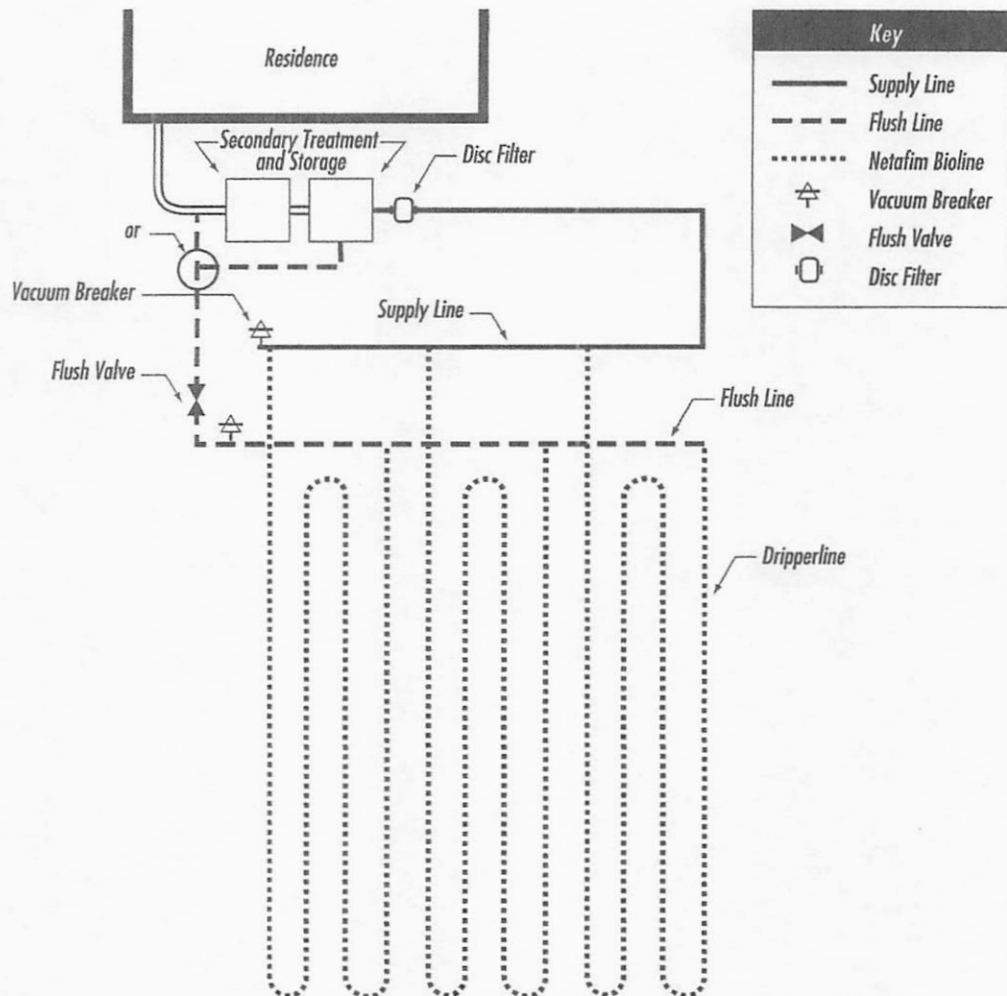
NETAFIM WASTEWATER DISPERSAL SYSTEM DESIGN GUIDE

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



20-550967-BV

General Warranty Deed

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.

Date: January 8, 2021

Grantor: Theresa Shemwell, a single person

Grantor's Mailing Address: 715 PottHast DR. New Braunfels TX 78130

Grantee: Robert Howell and Maria Howell, a married couple

Grantee's Mailing Address: 1823 Nocturne Ln, Houston TX 77043

Consideration: the sum of TEN DOLLARS (\$10.00) cash, and other good and valuable consideration

Property (including any improvements):

Lot 197, Eagles Peak Ranch, Unit 2, an Addition in Comal County, Texas, according to the Map or Plat thereof recorded in Volume 8, Pages 298-303, Map and Plat Records of Comal County, Texas.

Reservations from Conveyance: None

Exceptions to Conveyance and Warranty:

This conveyance is made and accepted subject to all restrictions, encumbrances, easements, covenants, and conditions relating to the Property filed for record in Comal County, Texas.

Grantor, for the Consideration, and subject to the Reservations from 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 to Grantee and Grantee's successors and assigns forever. Grantor binds Grantor and Grantor's successors and assigns to warranty and forever defend all and singular the Property to Grantee and Grantee's 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.

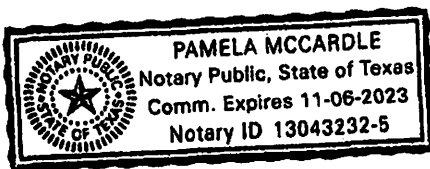
When the context requires, singular nouns and pronouns include the plural.

EXECUTED this 8th day of January, 2021.

Theresa Shemwell
Theresa Shemwell

THE STATE OF Texas §
COUNTY OF Comal §

Before me, a Notary Public, the foregoing instrument was acknowledged on 8th day of January, 2021 by Theresa Shemwell who personally appeared before me, and who is known to me through Photo ID to be the person(s) who executed it for the purposes and consideration expressed therein, and in the capacity stated.



Pamela McCardle
NOTARY PUBLIC, STATE OF
Texas

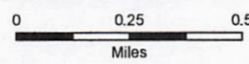
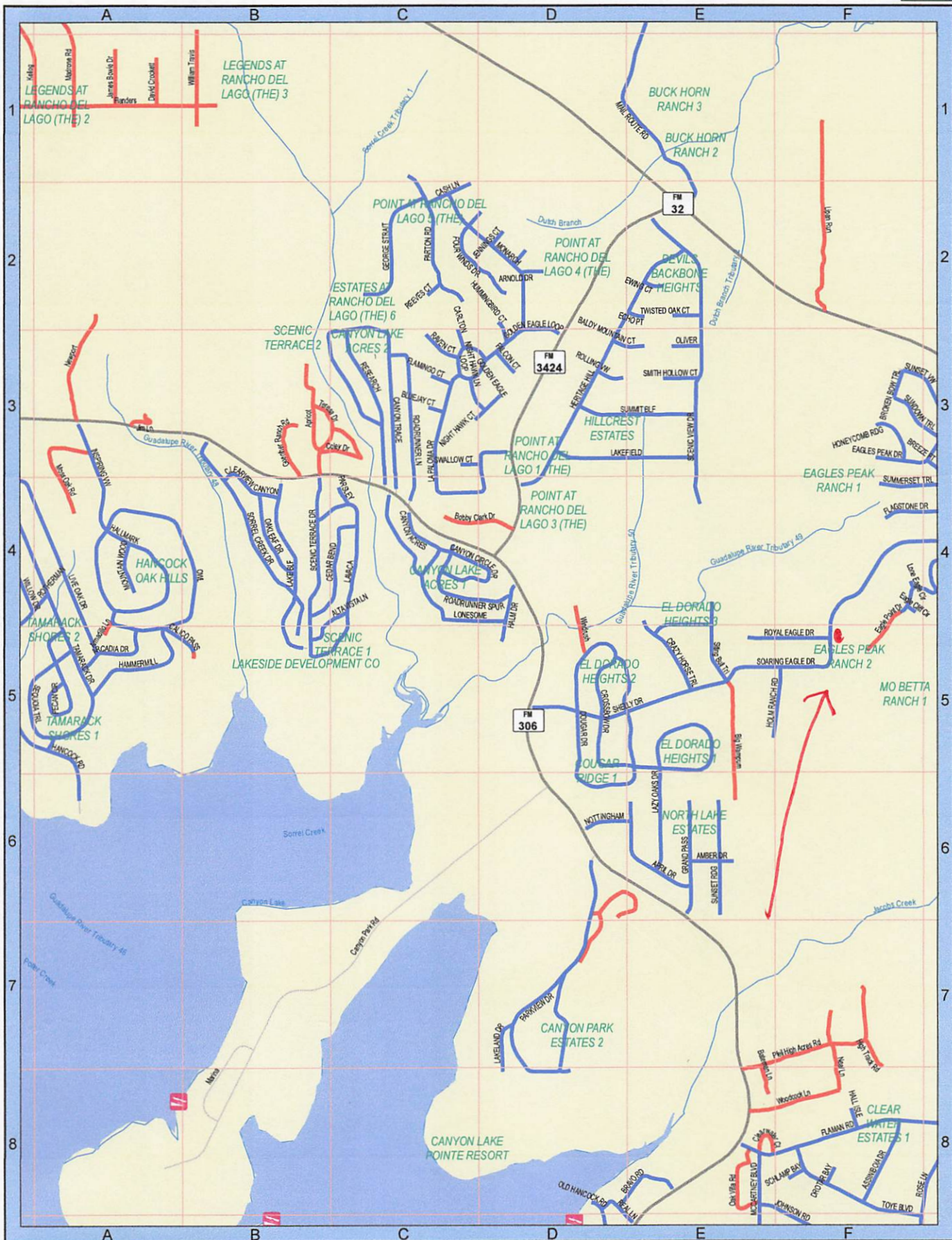
AFTER RECORDING, RETURN TO:
1823 Nolturn Ln
Houston TX 77043

PREPARED IN THE LAW OFFICE OF
Shaddock & Associates, P. C.
2400 N. Dallas Parkway, Ste. 560
Plano, Texas 75093

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
01/14/2021 03:05:30 PM
TERRI 2 Pages(s)
202106002546



Bobbie Koepp





COMAL COUNTY
ENGINEER'S OFFICE

**OSSF DEVELOPMENT APPLICATION
CHECKLIST**

Staff will complete shaded items

		119081
<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

10/06/2025

Date

___ COMPLETE APPLICATION	
Check No. _____	Receipt No. _____

INCOMPLETE APPLICATION
___ (Missing Items Circled, Application Refused)