



# COMAL COUNTY

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## ENGINEER'S OFFICE

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

Permit Number: 117383  
Issued This Date: 04/25/2024  
This permit is hereby given to: BEN C. & TIFFANY O. WALDROP

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

2162 BELLA VISTA  
CANYON LAKE, TX 78133

Subdivision: ENSENADA SHORES AT CANYON LAKE  
Unit: 4  
Lot: 141  
Block: 0  
Acreage: 1.0900

#### 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**



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 19, 2024

Permit Number 117383

## 1. APPLICANT / AGENT INFORMATION

Owner Name BEN CECIL WALDROP & TIFFANY OBERG WALDROP  
Mailing Address 2510 PARROT SHELL LANE  
City, State, Zip RICHMOND, TEXAS 77406  
Phone # 281-221-1351  
Email ben.waldrop@honeywell.com

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

## 2. LOCATION

Subdivision Name ENSENADA SHORES AT CANYON LAKE Unit 4 Lot 141 Block   
Survey Name / Abstract Number  Acreage   
Address 2162 BELLA VISTA 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 4074

☐ 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: \$ 800,000 (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.

B. Waldrop / Tiffany Waldrop  
Signature of Owner

27. mar. 2024  
Date

## \* \* \* COMAL COUNTY OFFICE OF ENVIRONMENTAL HEALTH \* \* \*

APPLICATION FOR PERMIT FOR AUTHORIZATION TO CONSTRUCT AN  
ON-SITE SEWAGE FACILITY AND LICENSE TO OPERATEPlanning 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 &amp; Soil Evaluation

Tank Size(s) (Gallons) NUWATER B-550-PC Absorption/Application Area (Sq Ft) 3000Gallons Per Day (As Per TCEQ Table III) 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.)

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

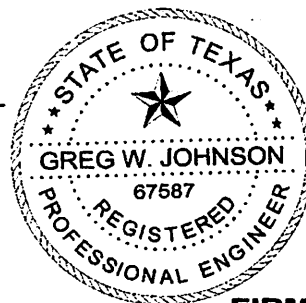
(if yes, the P.E. or R.S. shall certify that the OSSF design complies with all provisions of the existing CZP)

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

Date

March 22, 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 141 LOT ENSENADA SHORES AT CANYON LAKE SUBDIVISION

IF NOT IN SUBDIVISION:            ACREAGE            SURVEY

The property is owned by (insert owner's full name): BEN CECIL WALDROP & TIFFANY OBERG WALDROP

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.

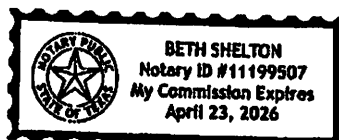
WITNESS BY HAND(S) ON THIS 27 DAY OF March, 20 24

Ben Cecil Waldrop  
Tiffany Oberg Waldrop  
Owner(s) signature(s)

Ben Cecil Waldrop  
Tiffany Oberg Waldrop  
Owner(s) Printed name(s)

BEN C. & TIFFANY O. WALDROP **SWORN TO AND SUBSCRIBED BEFORE ME ON THIS** 27 **DAY OF** March, 20 24

Beth Shelton  
Notary Public Signature



Filed and Recorded  
Official Public Records  
Bobbie Koepp, County Clerk  
Comal County, Texas  
04/05/2024 08:15:59 AM  
TERRI 1 Pages(s)  
202406010177



Bobbie Koepp

## WASTEWATER TREATMENT FACILITY MONITORING AGREEMENT

Regulatory Authority COMAL

Block Creek Aerobic Services, LLC

444 A Old Hwy #9

Comfort, TX 78013

Off. (830) 995-3189

Fax. (830) 995-4051

ENSENADA SHORES, UNIT 4, LOT 141

Permit/License Number \_\_\_\_\_

Customer BEN C. & TIFFANY OBERG WALDROP

Site Address 2162 BELLA VISTA

City CANYON LAKE Zip 78133

Mailing Address 2510 Parrot Shell Ln. Richmond. 77406

County COMAL Map # CCEO 29 C5

Phone 281-221-1351

Email ben.waldrop@honeywell.com

**I. General:** This Work for Hire Agreement (hereinafter referred to as "Agreement") is entered into by and between BEN C. & TIFFANY OBERG WALDROP (hereinafter referred to as "Customer") and Block Creek Aerobic Services, LLC. By this agreement, Block Creek Aerobic Services, LLC and its employees (hereinafter inclusively referred to as "Contractor") agree to render services at the site address stated above, as described herein, and the Customer agrees to fulfill his/her/their responsibilities, as described herein.

### **II. Effective Date:**

This Agreement commences on LTO and ends on \_\_\_\_\_ for a total of two (2) years (initial agreement) or one (1) year (thereafter). If this is an initial agreement (new installation), the Customer shall notify the Contractor within two (2) business days of the system's first use to establish the date of commencement. If no notification is received by Contractor within ninety (90) days after completion of installation or where county authority mandates, the date of commencement will be the date the "License to operate" (Notice of Approval) was issued by the permitting authority. This agreement may or may not commence at the same time as any warranty period of installed equipment, but in no case shall it extend the specified warranty.

### **III. Termination of Agreement:**

This Agreement may be terminated by either party for any reason, including for example, substantial failure of either party to perform in accordance with the terms of this Agreement, without fault or liability of the terminating party. The terminating party must provide written notice to the non-terminating party thirty (30) days prior to the termination of this Agreement. If this Agreement is terminated, Contractor will be paid at the rate of \$75.00 per hour for any work performed and for which compensation has not been received. After the deduction of all outstanding charges, any remaining monies from prepayment for services will be refunded to customer within thirty (30) days of termination of this Agreement. Either party terminating this Agreement for any reason, including non-renewal, shall notify in writing the equipment manufacturer and the appropriate regulatory agency a minimum of thirty (30) days prior to the date of such termination. Nonpayment of any kind shall be considered breach of contract and a termination of contract.

### **IV. Services:**

#### **Contractor will:**

a. Inspect and perform routine upkeep on the On-Site Sewage Facility (hereinafter referred to as OSSF) as recommended by the treatment system manufacturer, and required by state and/or local regulation, for a total of three visits to site per year. The list of items checked at each visit shall be the: control panel, Electrical circuits, timer, Aeration including compressor and diffusers, CFM/PSI measured, lids safety pans, pump, compressor, sludge levels, and anything else required as per the manufacturer.

b. Provide a written record of visits to the site by means of an inspection tag attached to or contained in the control panel.

c. Repair or replace, if Contractor has the necessary materials at site, any component of the OSSF found to be failing or inoperative during the course of a routine monitoring visit. If such services are not covered by warranty, and the service(s) cost less than \$100.00, Customer hereby authorizes Contractor to perform the service(s) and bill Customer for said service(s). When service costs are greater than \$100.00, or if contractor does not have the necessary supplies at the site, Contractor will notify Customer of the required service(s) and the associated cost(s). Customer must notify Contractor of arrangements to affect repair of system within two (2) business days after said notification.

d. Provide sample collection and laboratory testing of TSS and BOD on a yearly basis (commercial systems only).

e. Forward copies of this Agreement and all reports to the regulatory agency and the Customer.

f. Visit site in response to Customer's request for unscheduled services within forty-eight (48) hours of the date of notification (weekends and holidays excluded) of said request. Unless otherwise covered by warranty, costs for such unscheduled responses will be billed to Customer.

### **V. Disinfection:**

BW/JW

RC



Customer's Initials

Contractor's Initials

\_\_\_\_ Not required; X required. The responsibility to maintain the disinfection device(s) and provide any necessary chemicals is that of the Customer.

**VI. Electronic Monitoring:**

Electronic Monitoring is not included in this Agreement.

**VII. Performance of Agreement:**

Commencement of performance by Contractor under this Agreement is contingent on the following conditions:

a. If this is an initial Agreement (new installation):

1. Contractor's receipt of a fully executed original copy or facsimile of this agreement and all documentation requested by Contractor.

If the above conditions are not met, Contractor is not obligated to perform any portion of this Agreement.

**VIII. Customer's Responsibilities:**

The customer is responsible for each and all of the following:

a. Provide all necessary yard or lawn maintenance and removal of all obstacles, including but not limited to dogs and other animals, vehicles, trees, brush, trash, or debris, as needed to allow the OSSF to function properly, and to allow Contractor safe and easy access to all parts of the OSSF.

b. Protect equipment from physical damage including but not limited to that damage caused by insects.

c. Maintain a current license to operate, and abide by the conditions and limitations of that license, and all requirements for and OSSF from the State and/or local regulatory agency, whichever requirements are more stringent, as well as the proprietary system's manufacturer recommendations.

d. Notify Contractor immediately of any and all alarms, and/or any and all problems with, including failure of, the OSSF.

e. Provide, upon request by Contractor, water usage records for the OSSF so that the Contractor can perform a proper evaluation of the performance of the OSSF.

f. Allow for samples at both the inlet and outlet of the OSSF to be obtained by Contractor for the purpose of evaluating the OSSF's performance. If these samples are taken to a laboratory for testing, with the exception of the service provided under Section IV (d) above, Customer agrees to pay Contractor for the sample collection and transportation, portal to portal, at a rate of \$35.00 per hour, plus the associated fees for laboratory testing.

g. Prevent the backwash or flushing of water treatment or conditioning equipment from entering the OSSF.

h. Prevent the condensation from air conditioning or refrigeration units, or the drains of icemakers, from hydraulically overloading the aerobic treatment units. Drain lines may discharge into the surface application pump tank if approved by system designer.

i. Provide for pumping and cleaning of tanks and treatment units, when and as recommended by Contractor, at Customer's expense.

j. Maintain site drainage to prevent adverse effects on the OSSF.

k. Pay promptly and fully, all Contractor's fees, bills, or invoices as described herein.

**IX. Access by Contractor:**

Contractor is hereby granted an easement to the OSSF for the purpose of performing services described herein. Contractor may enter the property during Contractor's normal business hours and/or other reasonable hours without prior notice to Customer to perform the Services and/or repairs described herein. Contractor shall have access to the OSSF electrical and physical components. Tanks and treatment units shall be accessible by means of man ways, or risers and removable covers, for the purpose of evaluation as required by State and/or local rules and the proprietary system manufacturer. It is Customer's responsibility to keep lids exposed and accessible at all times.

**X. Limit of Liability:**

Contractor shall not be held liable for any incidental, consequential, or special damages, or for economic loss due to expense, or for loss of profits or income, or loss of use to Customer, whether in contract tort or any other theory. In no event shall Contractor be liable in an amount exceeding the total Fee for Services amount paid by Customer under this Agreement.

**XI. Indemnification:**

Customer (whether one or more) shall and does hereby agree to indemnify, hold harmless and defend Contractor and each of its successors, assigns, heirs, legal representatives, devisees, employees, agents and/or counsel (collectively "Indemnitees") from and against any and all liabilities, claims, damages, losses, liens, causes of action, suits, fines, judgments and other expenses (including, but not limited to, attorneys' fees and expenses and costs of investigation), of any kind, nature or description, (hereinafter collectively referred to as "Liabilities") arising out of, caused by, or resulting, in whole or in part, from this Agreement.

BU/DW

Customer's Initials



RC

Contractor's Initials



**THIS INDEMNIFICATION APPLIES EVEN IF SUCH LIABILITIES ARE CAUSED BY THE CONCURRENT OR CONTRIBUTORY NEGLIGENCE OR BY THE STRICT LIABILITY OF ANY INDEMNITEE.**

Customer hereby waives its right of recourse as to any Indemnitee when Indemnification applies, and Customer shall require its insurer(s) to waive its/their right of subrogation to the extent such action is required to render such waiver of subrogation effective. Customer shall be subrogated to Indemnitees with respect to all rights Indemnitees may have against third parties with respect to matters as to which Customer provides indemnity and/or defense to Indemnitees. No Indemnification is provided to Indemnitees when the liability or loss results from (1) the sole responsibility of such Indemnitee; or, (2) the willful misconduct of such Indemnitee. Upon irrevocable acceptance of this Indemnification obligation, Customer, in its sole discretion, shall select and pay counsel to defend Indemnitees of and from any action that is subject to this Indemnification provision. Indemnitees hereby covenant not to compromise or settle any claim or cause of action for which Customer has provided Indemnification without the consent of Customer.

**XII. Severability:**

If any provision of the "Proposal and Contract" shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable. If a court finds that any provision of the "Agreement" is invalid or unenforceable, but that by limiting such provision it would become valid and enforceable, then such provision shall be deemed to be written, construed, and enforced as so limited.

**XIII. Fee for Services:**

The Fee for Services does not include any fees for equipment, material, labor necessary for non-warranty repairs, unscheduled inspections, or Customer requested visits to the site.

**XIV. Payment:**

Full payment is due upon execution of this Agreement (Required of new Customer). For any other service(s) or repair(s) provided by Contractor the Customer shall pay the invoice(s) for said service(s) or repair(s) within thirty (30) days of the invoice date. The Contractor shall mail all invoices on the date of invoice. All payments not received within thirty (30) days from the invoice date will be subject to a \$29.00 late penalty and a 1.5% per month carrying charge, as well as any reasonable attorney's fees, and all collection and court costs incurred by Contractor in collection of unpaid debt(s). Contractor may terminate contract at any time for nonpayment for services. Any check returned to Contractor for any reason will be assessed a \$30.00 return check fee.

**XV. Application or Transfer of payment:**

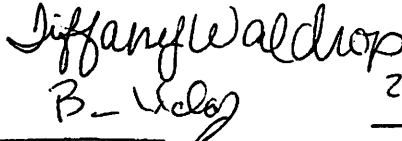
The fees paid for this agreement may be transferred to subsequent property owner(s); however, this Agreement is not transferable. Customer shall advise the subsequent property owner(s) of the State requirement that they sign a replacement agreement authorizing Contractor to perform the herein described Services, and accepting Customer's Responsibilities. This replacement Agreement must be signed and received in Contractor's offices within ten (10) business days of date of transfer of property ownership. Contractor will apply all funds received from Customer first to any past due obligation arising from this Agreement including late fees or penalties, return check fees, and/or charges for services or repairs not paid within thirty (30) days of invoice date. Any remaining monies shall be applied to the funding of the replacement Agreement. The consumption of funds in this manner may cause a reduction in the termination date of effective coverage per this Agreement. See Section IV.

**XVI. Entire Agreement:**

This agreement contains the entire Agreement of the parties, and there are no other conditions in any other agreement, oral or written.

  
Rudy Carson

Block Creek Aerobic Services, LLC,  
Contractor  
MP# 0002036

  
B. Waldrop  
27. mar. 2024  
\_\_\_\_\_  
Date

Customer Signature



Customer's Initials



RC

Contractor's Initials



**Greg W. Johnson, P.E.**

170 Hollow Oak

New Braunfels, Texas 78132

830/905-2778

March 22, 2024

Comal County Office of Environmental Health

195 David Jonas Drive

New Braunfels, Texas 78132-3760

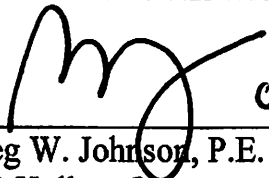
RE- SEPTIC DESIGN  
2162 BELLA VISTA  
ENSENADA SHORES AT CANYON LAKE, UNIT 4, LOT 141  
CANYON LAKE, TX 78133  
WALDROP

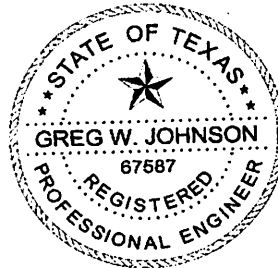
**Brandon/Brenda,**

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).

 03/22/24  
\_\_\_\_\_  
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 21, 2024

Site Location: ENSENADA SHORES at CANYON LAKE, UNIT 4, LOT 141

Proposed Excavation Depth: N/A

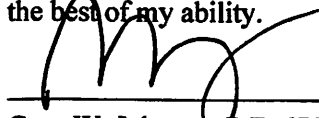
**Requirements:**

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 @ 4"	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

03/11/24  
\_\_\_\_\_  
Date

**Date:** March 22, 2024

**BEN CECIL & TIFFANY OBERG**  
**Name: WALDROP**  
**Address: 2510 PARROT SHELL LANE**  
**City: RICHMOND State: TEXAS**  
**Zip Code: 77406 Phone: (281) 221-1351**

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:** **ENSENADA SHORES at**  
**Lot 141 Unit 4 Blk Subd. CANYON LAKE**  
**Street Address: 2162 BELLA VISTA**  
**City: CANYON LAKE Zip Code: 78133**  
**Additional Info.:**

Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_  
 Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

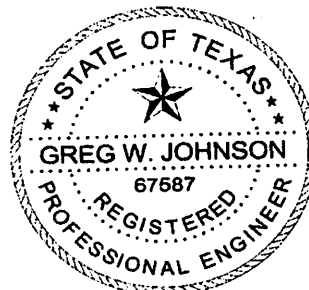
**Topography:** Slope within proposed disposal area: 15 to 25 %

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

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

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

03/22/24  
DATE

**FIRM #2585**

**DRIP TUBING SYSTEM**  
**DESIGNED FOR:**  
**BEN CECIL & TIFFANY OBERG WALDROP**  
**2510 PARROT SHELL LAN**  
**RICHMOND, TEXAS 77406**

**SITE DESCRIPTION:**

Located in Ensenada Shores at Canyon Lake, Unit 4, Lot 141, at 2162 Bella Vista, the proposed system will serve a five bedroom residence (4074sf.), situated in an area with 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 NuWater B550 600 gpd aerobic treatment plant containing a 353 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 Franklin C1-Series-20XC105P4-2W115 submersible pump or equivalent. The well pump is activated by mercury floats and a timer set to cycle eight times per day 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" disk filter then through a pressure regulator Model PMR30MF, will maintain pressure at 30 psi, then to 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 1" SCH-40 return line is installed to periodically flush the system by cycling a 1" ball valve. Solids caught in the Arkal 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. *A minimum of 12" soil required between drip tubing and rock.* **Risers are required on tank inspection ports as per 30 TAC 285.38 (9/1/2023). This includes access limitation (<65lbs lid or hardware secured lid), inspection and cleanout ports shall have risers over the port openings which extend to a minimum of two inches above grade. A secondary plug, cap, or other suitable restraint system shall be provided below the riser cap to prevent tank entry if the cap is unknowingly damaged or removed.**

**DESIGN SPECIFICATIONS:**

Q = 360 gallons per day - 5 bedroom residence  
Plant Size: NuWater B550-600 GPD (TCEQ Approved)

Pump tank size: 768 Gal

Reserve capacity after High Level: 120 gal. (>1/3 day usage)

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

Total absorption area:  $Q/R_a = 360 \text{ GPD}/0.20 = 1800 \text{ sf}$ . (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 Franklin C1-Series-20XC105P4-2W115 submersible pump or equivalent.

Dosing volume: 50-70 gal.

Pump Tank Calculations: 768 Gal (14.5 gal/in.)

Volume below working level = 15" = 218 gal

Working level = 360 gal = 25"

Reserve Requirement = 1/3 day = 120 gal. = 8.5"

MINIMUM SCOUR VELOCITY (MSV) > 2 FPS

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

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

$MSV = 2(3.14159((.55/12)^2)/4) * 7.48 * 60$

$MSV = 1.5 \text{ gpm MIN FLOW RATE} \times 5 \text{ lines} = 7.5 \text{ gpm}$

IN RETURN MANIFOLD W/ NOM. DIA 1.049" ID

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

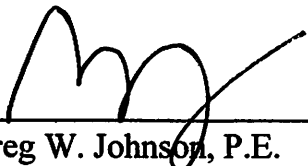
$MSV = 2(3.14159((1.049/12)^2)/4) * 7.48 * 60$

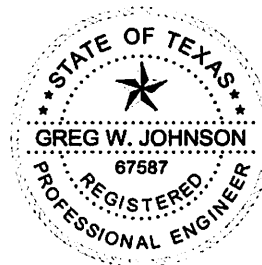
$MSV = 5.4 \text{ GPM}$

### PIPE AND FITTINGS:

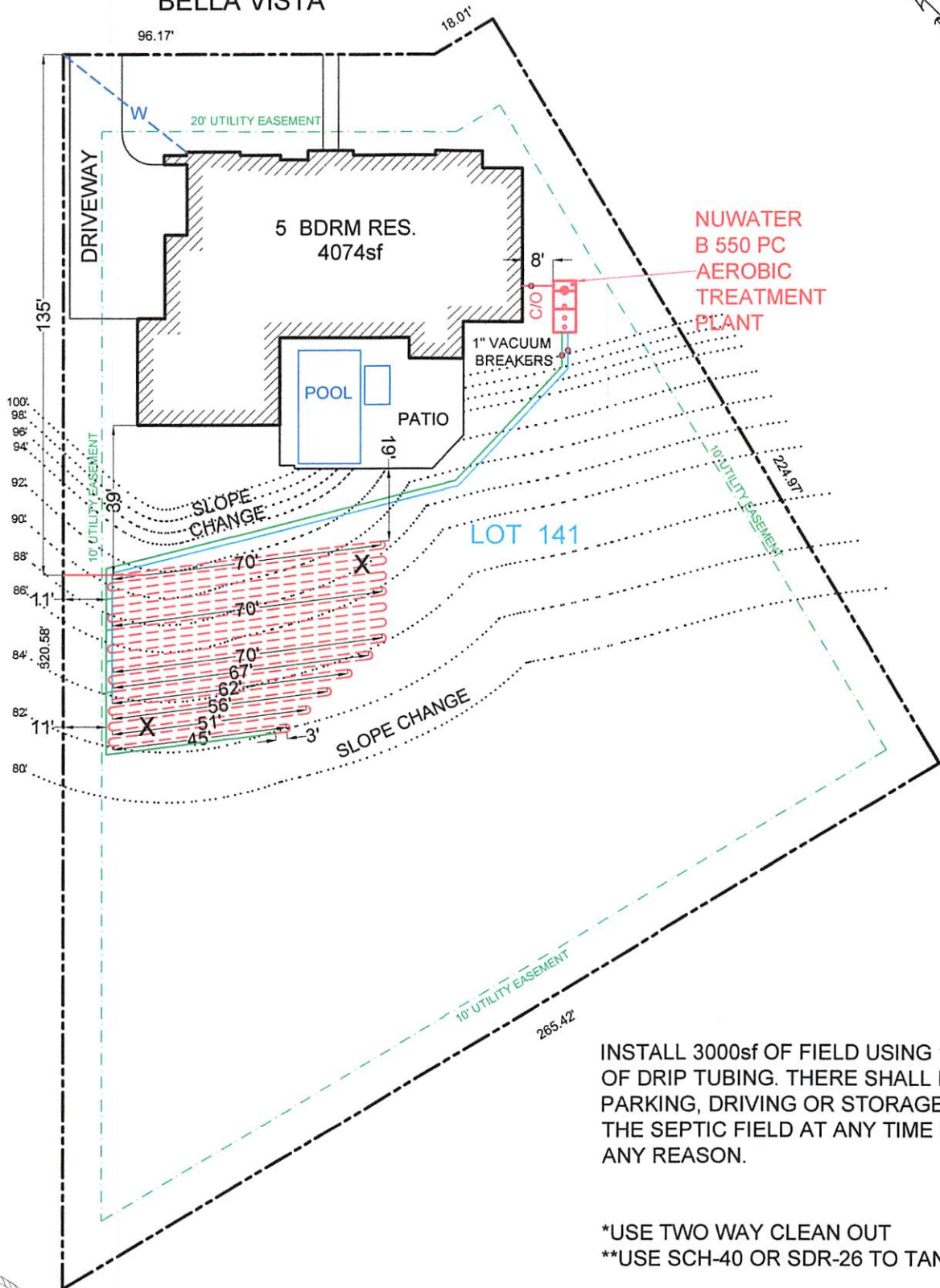
All pipes and fittings in this drip tubing system shall be 1" schedule 40 PVC. All joints shall be sealed with approved solvent-type PVC cement. Clipper type cutters are recommended to prevent PVC burrs during cutting of pipes causing possible plugging. Drip tubing 0.61 gph drip tubing to be used in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

  
Greg W. Johnson, P.E. No. 67587, F#2385  
170 Hollow Oak  
New Braunfels, Texas 78132  
830/905-2778



# BELLA VISTA



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



OWNER: BEN CECIL & TIFFANY OBERG WALDROP					DRAWN BY: EJS III	
STREET ADDRESS: 2162 BELLA VISTA						
LEGAL DESC: ENSENADA SHORES at CANYON LAKE			UNIT/SECTION/PHASE: 4		BLOCK:	LOT: 141
PREPARED BY: GREG W. JOHNSON, P.E. F#002585		SCALE: 1"=40'	DATE: 3/22/2024		REVISED:	

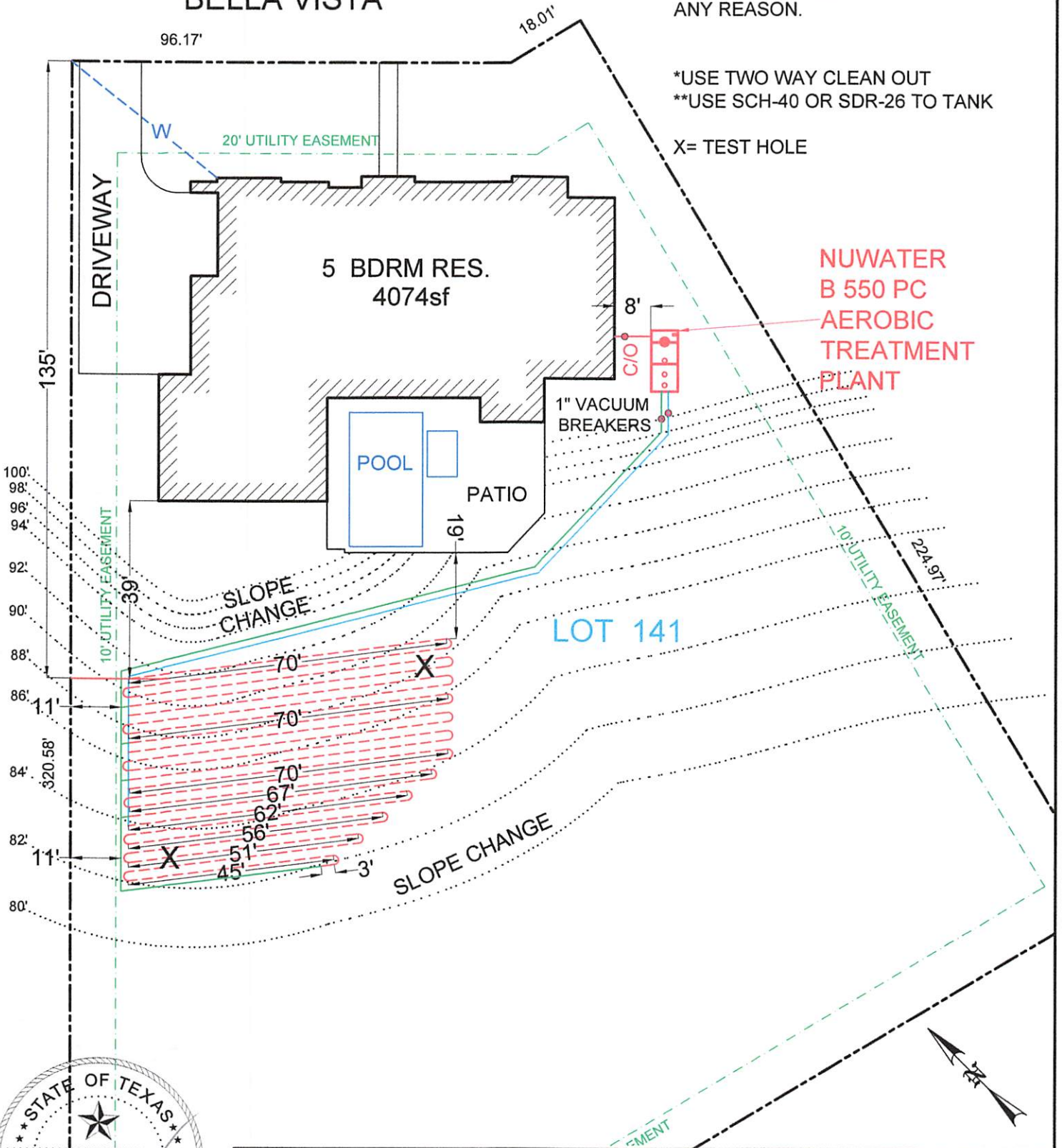


# BELLA VISTA

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



OWNER:		BEN CECIL & TIFFANY OBERG WALDROP				DRAWN BY:		EJS III						
STREET ADDRESS:		2162 BELLA VISTA												
LEGAL DESC:		ENSENADA SHORES at CANYON LAKE			UNIT/SECTION/PHASE:		4		BLOCK:	LOT:		141		
PREPARED BY:		GREG W. JOHNSON, P.E. F#002585			SCALE:		1"=30'		DATE:		3/22/2024		REVISED:	



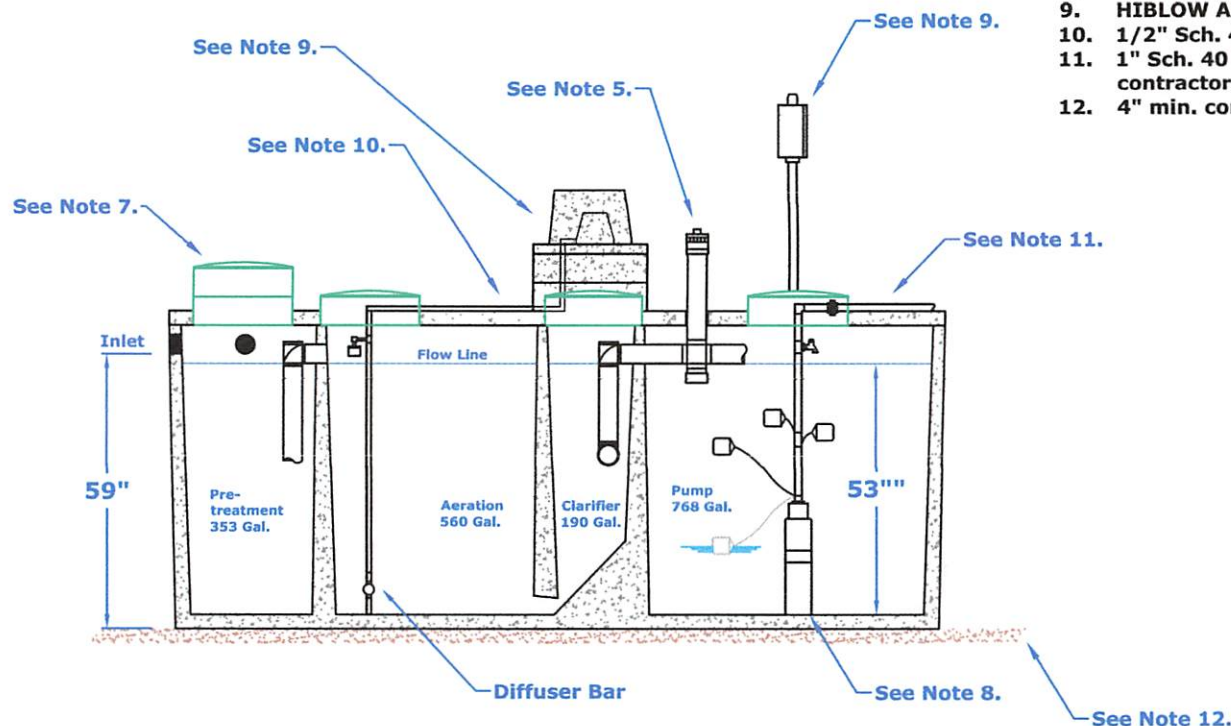
# Assembly Details

OSSF



## GENERAL NOTES:

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



## DIMENSIONS:

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

## MINIMUM EXCAVATION DIMENSIONS:

Width: 76"  
Length: 176"

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

Model: B-550-PC-400PT

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

## Scale:

\* All Dimensions subject to allowable specification tolerances.

Dwg. #: ADV-B550-3



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

## TANK NOTES:

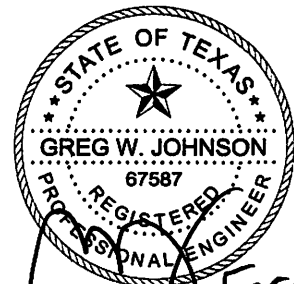
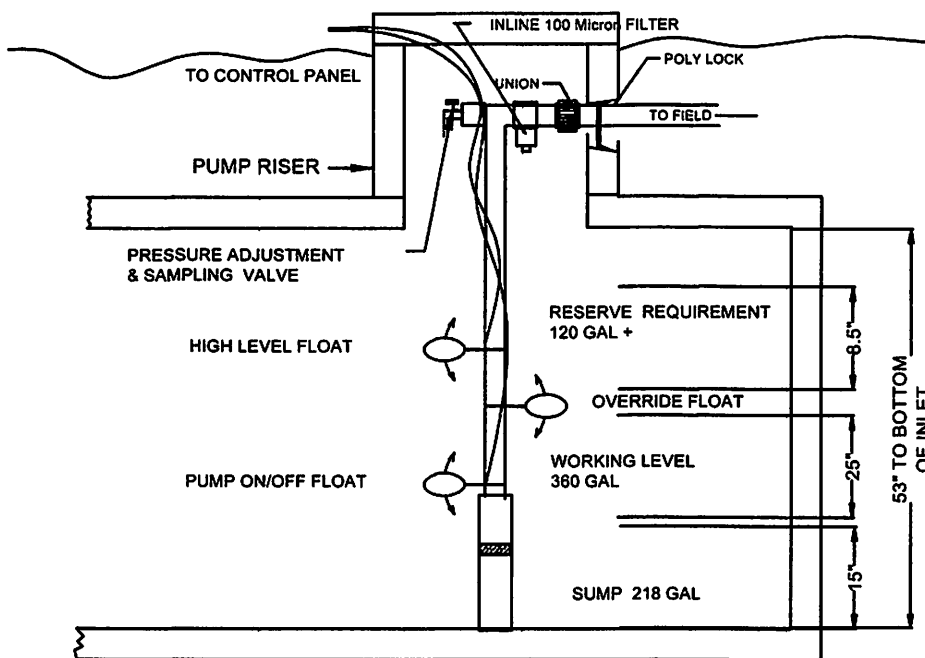
Tanks must be set to allow a minimum of 1/8" per foot fall from the residence.

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



03/22/24/ F2585

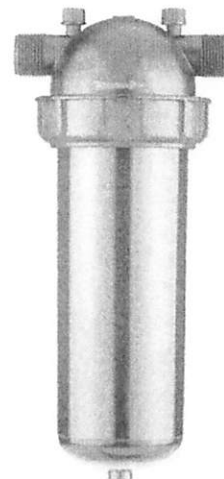
**TYPICAL PUMP TANK CONFIGURATION  
NU-WATER 550PC -400PT 768 GAL PUMP TANK**

# Arkal 1" Super Filter

Catalog No. 1102 0 \_ \_ \_

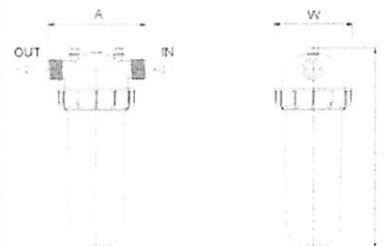
## Features

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



## Technical Data

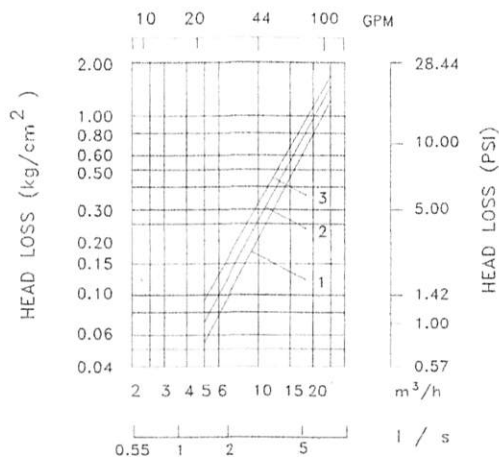
Inlet/outlet diameter	1" BSPT (male)	1" NPT (male)
	25.0 mm – nominal diameter	
	33.6 mm – pipe diameter (O. D.)	
Maximum pressure	10 atm	145 psi
Maximum flow rate	8 m <sup>3</sup> /h (1.7 l/sec)	35 gpm
General filtration area	500 cm <sup>2</sup>	77.5 in <sup>2</sup>
Filtration volume	600 cm <sup>3</sup>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



## Filtration Grades

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

## Head Loss Chart





# PMR-MF

## PRESSURE-MASTER REGULATOR - MEDIUM FLOW

### Specifications

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

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

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

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

#### Inlet

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

#### Outlet

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

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

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

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

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

### Physical

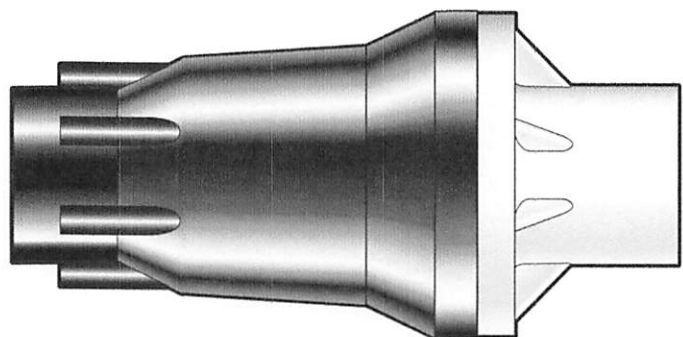
#### ¾" FNPT x ¾" FNPT model (shown on right)

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

#### 1" FNPT x 1" FNPT model

#### 1" FBSPT x 1" FBSPT model

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



\* Please consult factory for applications outside of recommended guidelines.



# PMR-MF

## PRESSURE-MASTER REGULATOR - MEDIUM FLOW

### Model Numbers

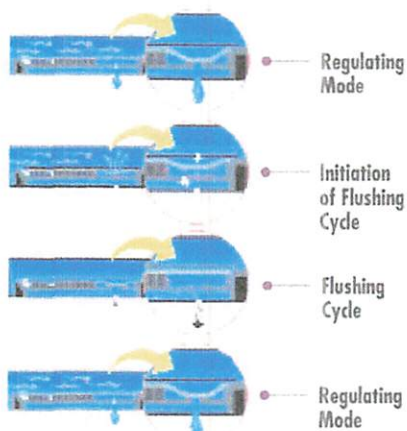
Model #	Flow Range	Preset Operating Pressure	Maximum Inlet Pressure
PMR-6 MF	4 - 16 GPM (909 - 3634 L/hr)	6 PSI (0.41 bar)	80 psi (5.51 bar)
PMR-10 MF	4 - 16 GPM (909 - 3634 L/hr)	10 PSI (0.69 bar)	90 psi (6.20 bar)
PMR-12 MF	2 - 20 GPM (454 - 4542 L/hr)	12 PSI (0.83 bar)	90 psi (6.20 bar)
PMR-15 MF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



# NETAFIM™

## Bioline® Dripperline

### Pressure Compensating Dripperline for Wastewater



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

As shown at left, Bioline is continuously self-cleaning during operation, not just at the beginning and end of a cycle. The result is dependable, clog free operation, year after year.



### Product Advantages

#### The Proven Performer

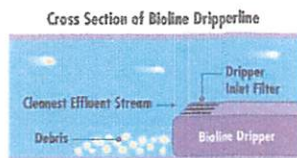
- Tens of millions of feet used in wastewater today.
- Bioline is permitted in every state allowing drip disposal.
- Backed by the largest, most quality-driven manufacturer of drip products in the U.S.
- Preferred choice of major wastewater designers and regulators.
- Proven track record of success for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

#### Quality Manufacturing with Specifications Designed to Meet Your Needs

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

#### Long-Term Reliability

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



#### Root Safe

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



### Applications

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

### Specifications

Wall thickness (mil): 45\*

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

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

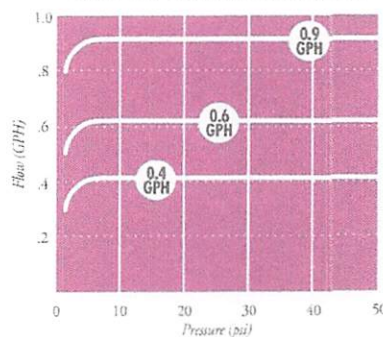
Recommended filtration: 120 mesh

Inside diameter: .570\*

Color: Purple tubing indicates non-potable source

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

BIOLINE Flow Rate vs. Pressure



**NETAFIM USA**  
 5470 E. Home Ave. • Fresno, CA 93727  
 888.638.2346 • 559.453.6800  
 FAX 800.695.4753  
[www.netafimusa.com](http://www.netafimusa.com)

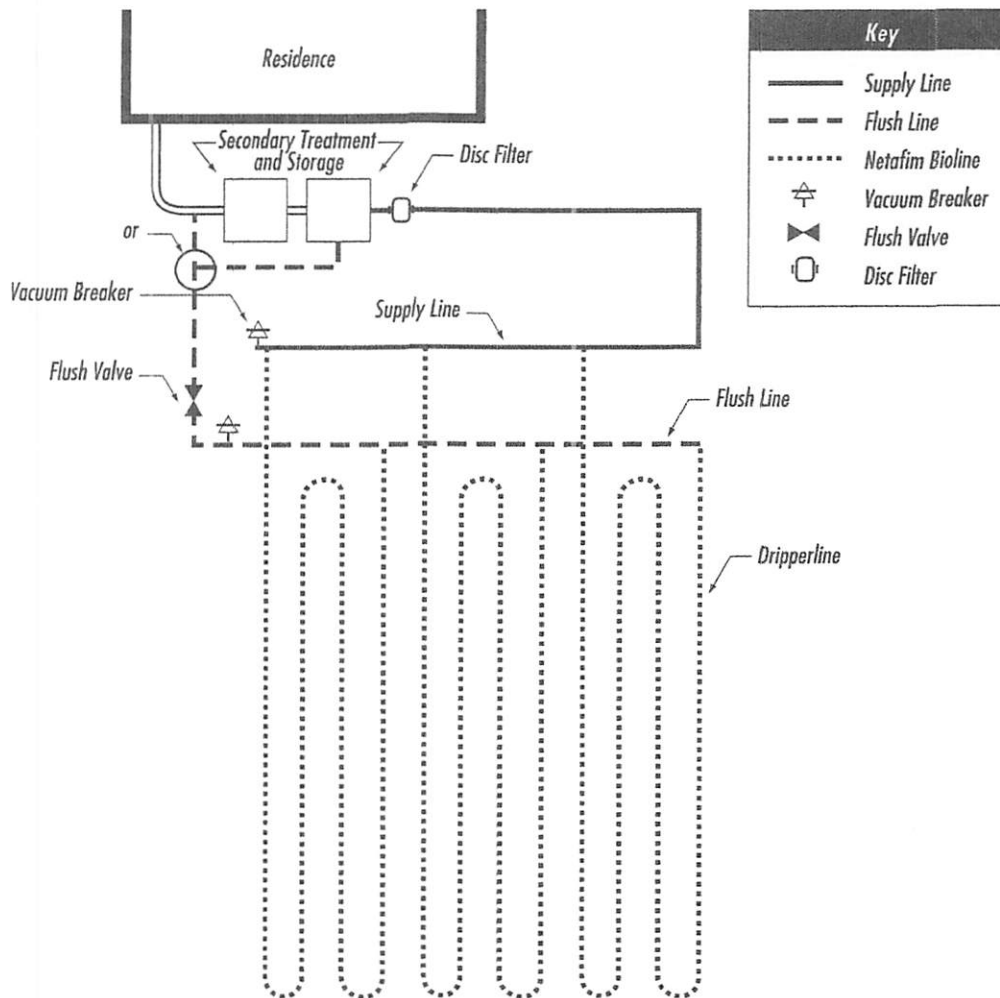
# NETAFIM WASTEWATER DISPERSAL SYSTEM DESIGN GUIDE

## SAMPLE DESIGNS

### SINGLE TRENCH LAYOUT

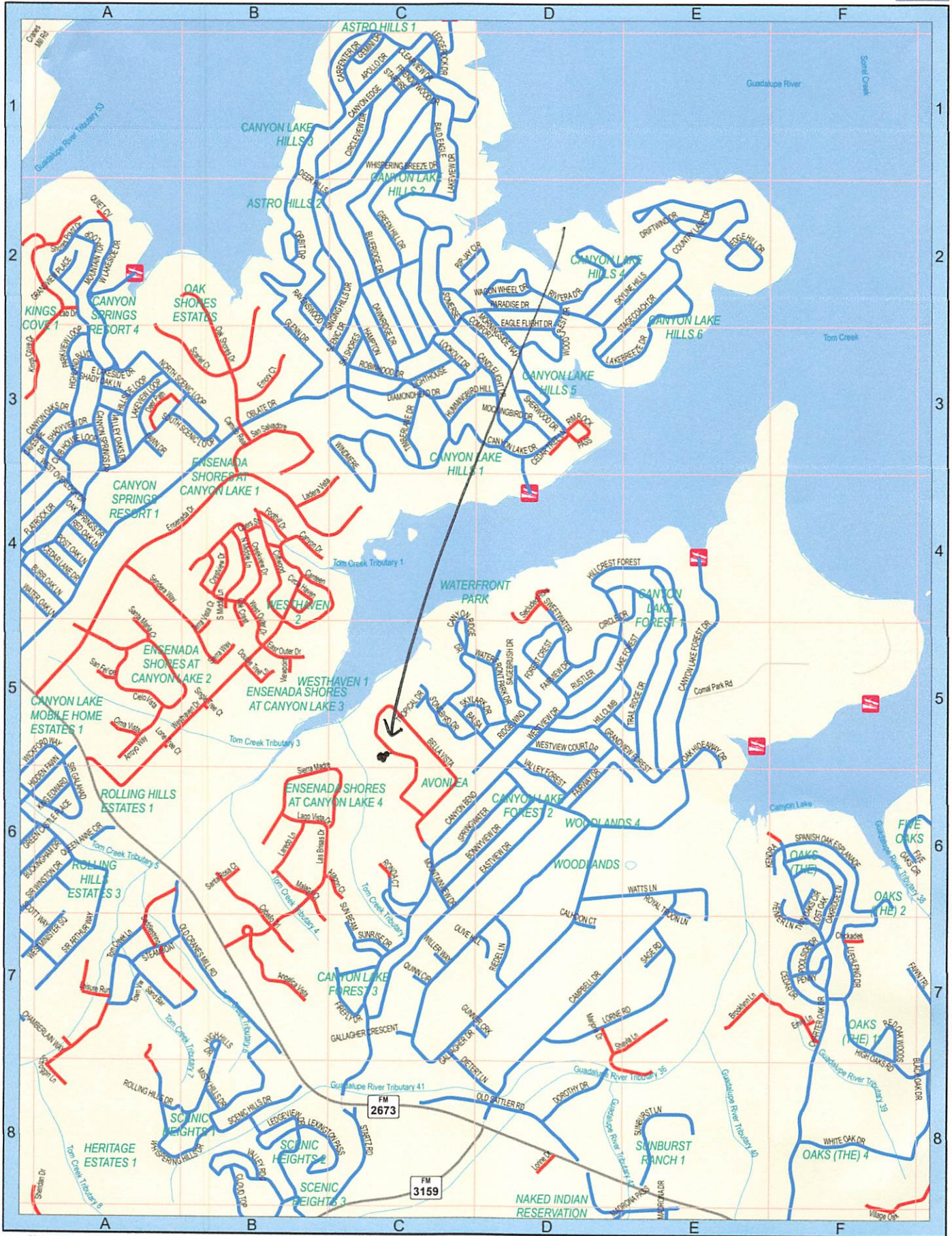
Rectangular field with supply and flush manifold on same side and in same trench;

- 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



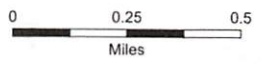


SEE PAGE 8



SEE PAGE 30

SEE PAGE 42



**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.**

**GENERAL WARRANTY DEED**

**Date:** June 14<sup>th</sup>, 2023

**Grantor:** MATTHEW FRANKE, a married person owning, occupying and claiming other property as homestead

**Grantor's Mailing Address:** 6402 Coppage, Houston, TX 77007

**Grantee:** BEN CECIL WALDROP and TIFFANY OBERG WALDROP, husband and wife

**Grantee's Mailing Address, and after Recording, Return to:** 2510 Parrot Shell Ln, Richmond, TX 77406

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

**Property (including any improvements):**

Lot 141, ENSENANDA SHORES AT CANYON LAKE, UNIT FOUR, according to the map or plat thereof, recorded in County Clerk's File No. 200706015755, Map and Plat Records of Comal County, Texas

**Reservations from Conveyance:** None

**Exceptions to Conveyance and Warranty:** Validly existing easements, rights-of-way, and prescriptive rights, whether of record or not; all presently recorded and validly existing instruments, other than conveyances of the surface fee estate, that affect the Property; and taxes for 2023, which Grantee assumes and agrees to pay, but not subsequent assessments for that and prior years due to change in land usage, ownership, or both, the payment of which Grantor assumes.

Grantor, for the Consideration and subject to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty, grants, sells, and conveys to Grantee the Property, together with all and singular the rights and appurtenances thereto in any way belonging, to have and to hold it to Grantee and Grantee's heirs, successors, and assigns forever. Grantor binds Grantor and Grantor's heirs and successors to warrant and forever defend all and singular the Property to Grantee and Grantee's heirs, successors, and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof, except as to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty.



The Contract between Grantor as the Seller and Grantee as the Buyer, if any, may contain limitations as to warranty or other agreed matters; to the extent that such Contract 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 warranty of title contained in this Deed is hereby expressly excluded from the limitations or other agreed matters referenced in this paragraph.


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

  
MATTHEW FRANKE

STATE OF TEXAS )

COUNTY OF HARRIS )

This instrument was acknowledged before me on June 14<sup>th</sup>, 2023 by MATTHEW FRANKE.

  
Notary Public, State of Texas



Filed and Recorded  
Official Public Records  
Bobbie Koepp, County Clerk  
Comal County, Texas  
06/15/2023 11:01:58 AM  
TERRI 2 Pages(s)  
202306018902



*Bobbie Koepp*



**COMAL COUNTY**  
ENGINEER'S OFFICE

**OSSF DEVELOPMENT APPLICATION  
CHECKLIST**

*Staff will complete shaded items*

		117383
<i>Date Received</i>	<i>Initials</i>	<i>Permit Number</i>

**Instructions:**

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

**OSSF Permit**

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

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

\_\_\_\_\_  
Signature of Applicant

04/15/2024

\_\_\_\_\_  
Date

___ COMPLETE APPLICATION	
Check No. _____	Receipt No. _____

INCOMPLETE APPLICATION	
___ (Missing Items Circled, Application Refused)	