Preliminary Field Check For Drip Systems

DATE:

INSPECTOR:

OBSERVATION:

COMAL COUNTY
ENGINEER'S OFFICE

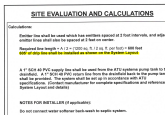
Address: 1262 DEER VALLEY PASS

Legal Description: REBECCA CREEK PARK THIRD FILING 1, LOT 94

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:

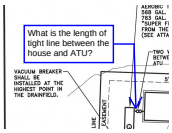
118930.pdf Markup Summary 9-16-2025

Unchecked (3)



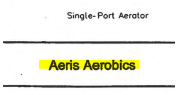
Subject: Line
Page Label: 10
Checkmark: Unchecked
Author: Brandon Mark Olvera
Date: 9/16/2025 1:56:59 PM
Response:

The site plan shows 600 linear ft.



Subject: Deficiency
Page Label: 14
Checkmark: Unchecked
Author: Brandon Mark Olvera
Date: 9/16/2025 1:54:07 PM
Response:

What is the length of tight line between the house and ATU?



Subject: Line
Page Label: 15
Checkmark: Unchecked
Author: Brandon Mark Olvera
Date: 9/16/2025 2:17:55 PM
Response:

285.34(b):
Provide the pump tank details show the float settings and the 1/3 day flow reserve capacity.

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

COMAL COUNTY
ENGINEER'S OFFICE

OSSF DEVELOPMENT APPLICATION CHECKLIST

- *Staff will complete shaded items*

		118930
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.

Signed by:
Bleed Maroon, LLC
6F7F93CBC5A24B4...
Signature of Applicant

7/29/2025
Date

___ COMPLETE APPLICATION
Check No._____ Receipt No._____

INCOMPLETE APPLICATION
___ (Missing Items Circled, Application Refeused)

Revised: September 2019

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 _____ Permit Number 118930

1. APPLICANT / AGENT INFORMATION

Owner Name	Bleed Maroon LLC	Agent Name	
Mailing Address	PO Box 17381	Agent Address	
City, State, Zip	San Antonio, TX 78217	City, State, Zip	
Phone #	210-668-2555	Phone #	
Email	patrick@rivercityrei.com	Email	

2. LOCATION

Subdivision Name Rebecca Creek Park Third Filing Unit _____ Lot 16 Block 43

Survey Name / Abstract Number _____ Acreage _____

Address 1262 Deer Valley Pass City Spring Branch State TX Zip 78070

3. TYPE OF DEVELOPMENT

☒ Single Family Residential

Type of Construction (House, Mobile, RV, Etc.) mobile home; single wide

Number of Bedrooms 3

Indicate Sq Ft of Living Area 1088

☐ 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: $ 20,000 (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.

Bleed Maroon, LLC
6F7F93CBC5A24B4...
Signature of Owner

7/29/2025
Date

Revised January 2021

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 Corey Mangold

System Description Aerobic Drip

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

Tank Size(s) (Gallons) 500 gal. Absorption/Application Area (Sq Ft) 1200

Gallons Per Day (As Per TCEQ Table III) 240

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

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

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

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

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

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

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

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

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

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

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

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

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

If yes, indicate the city: _____

By signing this application, I certify that:

- The information provided above is true and correct to the best of my knowledge.
- I affirmatively consent to the online posting/public release of my e-mail address associated with this permit application, as applicable.

Corey Mangold
Signature of Designer

8/1/25
Date

Revised July 2018

AFFIDAVIT TO THE PUBLIC

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.

The Texas Health and Safety Code, Chapter 366 authorizes the Texas Commission on Environmental Quality (commission) 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 OSSF's 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.

An OSSF requiring maintenance contract, according to 30 Texas Administrative Code §285.91 (12) will be installed on the property described as (insert legal description):

Lot 16, Block 43, Rebecca Creek Park Third Filing, according to a Map or Plat recorded in Volume 3, Pages 8-15, Map and Plat records of Comal County, Texas.

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

Bleed Maroon LLC

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 29 DAY OF July, 20 25

, managing member
Patrick Mahaffey
Owner(s) signature(s)

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 29 DAY OF July, 20 25

Samantha M Hurtado
Notary Public, State of Texas

Samantha M Hurtado
My Commission Expires
1/8/2029
Notary ID 135222088

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
08/14/2025 08:05:01 AM
IRENE 1 Pages(s)
202506025792

Bobbie Koepp

Permit/License Number : _____
Regulatory Authority : ***Comal Co***

JT Environmental Services
13735 Greenwood rd
Atascosa Tx 78002
Cell (210) 347-8465

Customer: ***Patrick Mahaffey***
Site address: ***1262 Deer Valley***
City: ***SpringBranch*** Zip: ***78070***
Phone: ***210-688-2555***
Email: patrick@rivercityrei.com

Septic System Service Agreement

I. **General**: This work for Hire Agreement (hereinafter referred to as "agreement") is entered into and between ***Patrick Mahaffey*** (hereinafter referred to as "Customer") and JT Environmental Service. By this agreement , JT Environmental Service and it's employees (hereinafter inclusively referred to as "Contractor") agree to render services at the site address stated below, and described herein, and the Customer agrees to fulfill his/her/their responsibilities, as described herein. The designed flow rate for this system is a maximum of 240gallons per day.

II. **Effective dates**: This Agreement commences on ***When LTO is issued*** and ends on ***2 Years Past LTO***. If this is an initial agreement (New Installation), the Customer will notify the Contractor within two(2) business days of the systems first use to establish the date of commencement. If no notification is received by the Contractor within ninety (90) days after completion of the 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. **Renewal:** This agreement shall automatically renew each at the same terms, conditions ,and costs unless either party gives notice of termination a minimum of thirty (30) days prior to the end of the first agreement period. See section IV.

IV. **Termination of agreement:** This agreement may be terminated by either party with thirty (30) days written notice for any reason, including for example, substantial failure to perform in accordance with it's terms, without fault or liability of the terminating party. If this agreement is so 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 any remaining monies from Prepayment for services will be refunded to Customer within thirty(30) days. Either party terminating this agreement for any reason, including non-renewal, shall notify in writing the equipment manufacturer and the appropriate regulatory authority a minimum of thirty (30) days prior to the date of such termination. Non payment of any kind shall be considered breach of contract and a termination.

V. **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 systems manufacturer, and required by state and/or local regulation ,for a total of three(3) visits per year. (**Residential**)
b. Provide written record of each visit to the site by means of an inspection tag attached or contained in the control panel.
c. Repair of Replace, if Contractor has necessary materials on site, any component of the OSSF to be failing or inoperative during the course of a routine monitoring visit. If such services are not covered by warranty, and services cost are $100.00 or less. Customer hereby authorizes Contractor to perform the service and invoice Customer for said service. When service cost are greater than $100.00, or if the contractor does not have the necessary supplies on site, the customer will be notified of required services and associated costs. Customer must notify Contractor of arrangements to affect repair of

system within two(2) days of said notification.
d. Provide sample collection and laboratory testing of TSS and BOD on a yearly basis (commercial systems only, as aplicable)
e. Forward copies of this agreement and all reports to the regulatory agency and the Customer.
f. Visit the site in response to Customers 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 the customer.

VI. **Disinfection**: The Disinfection system will be maintained by the Customer. A cost estimate can be provided if the customer can not perform this function. Customer initial _____.

VII. **Electronic Monitoring is not included in this agreement.**

VIII. **Performance of agreement:** Commencement of performance under this agreement is contingent on the following conditions:

a. If this is a 1. Contractor receipt of fully executed original copy or facsimile of this agreement and all documentation requested by Contractor.
2. Contractors receipt of payment of the Wastewater-monitoring fee in accordance with the terms as described in section XIV of this agreement.
b. If the above conditions are not met, Contractor is not obligated to perform any portion of this agreement.

IX. **Customers Responsibilities:** The Customer is responsible for each and all of the following:

a. Provide all necessary yard and lawn maintenance and removal of 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 damaged caused by insects.
c. Maintain a current license to operate and abide by the conditions and limitations of that license and all requirements for an OSSF from the State and/or local regulatory agency, whichever are more stringent, as well as proprietary systems 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 evaluation by Contractor as to the performance of the OSSF.
f. Allow samples at both the inlet and outlet of the OSSF to be obtained by Contractor for the purpose of evaluation of the OSSF. If these samples are taken to a laboratory for testing, with the exception of the service provided under section V, subsection d, above. Customer agrees to pay contractor for sample collection and transportation, portal to portal, at a rate of $35.00 per hour, plus associated fees for laboratory testing.
g. Prevent the backwash or flushing of water treatment of conditioning equipment from entering the OSSF.
h. Prevent condensation from air conditioning, or refrigeration units, or ice maker drains, from hydraulically overloading the aerobic treatment units. Drain lines may discharge into the surface application pump tank if approved by the system designer.
i. Provide pumping and cleaning of tanks and treatment units, when as recommended by Contractor, at Customers expense.
j. Maintain site drainage to prevent adverse effects to the OSSF.
k. Pay promptly and fully, all Contractors fees, Bills, or invoices as described herein.

X. **Access by Contractor**: Contractor is hereby granted and easement to the OSSF for the purpose of performing services described herein. Contractor may enter during Contractors normal work hours and /or any reasonable hour without prior notice to Customer to perform 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 or proprietary system manufacturer. If not an initial agreement (new installation) and the access is not in place or provided by Customer, the cost for the labor of excavation, and possible other labor and material costs will be required. These costs shall be billed to the Customer as an additional service at a rate of $75.00 per hour, plus materials at list price. Excavated soil shall be replaced as best as can at the time of service, and under no circumstances is the Contractor responsible for damages to sod, grass, roots, landscaping, or any un-marked underground items (telephone, television, electrical, cable, water, gas, etc) or for the uneven settling of soil.

XI. **Limit of Liability**: Contractor shall not be held liable for any incidental, consequential, special damages, economic loss due to expense, loss of profits or income, loss of use to Customer, whether in contract tort of 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.

XII . **Severability:** If any provision of the "Proposal and Contract" shall be held to be invalid or un-enforceable 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 un-enforceable, but that by limiting such provisions is would become valid and enforceable, then such provisions shall be deemed to be written, constructed and enforces as so limited.

XIII. Fee for services: The cost for this agreement is **$465.00** (Four Sixty Five). This fee only involves the regularly scheduled required inspection service described herein section **V. Services.** The Fee does not include any equipment, material, labor necessary for non-warranty repairs, unscheduled inspections, or Customer requested visits to site.

Price Schedule for common (not covered) services:

Customer requested site visits (Call Outs)	***$100.00***
Site evaluation for existing OSSF (N/A if a service contract is initiated)	
Samples necessary for Regulatory authority compliance, not required by the STATE	
For all other services/repairs, the contractor will provide a cost estimate to the customer.	

XIV. **Payment:** Full amount due upon signature (required of new customers). Payment of invoices for any other service or repair provided by Contractor are due upon receipt of invoice.

XV. **Application or transfer of payment:** The fees paid for this agreement may transfer to the subsequent property owner; however this agreement is not transferable. Customer will advise subsequent property owner of the state requirement that they sign a replacement agreement authorizing Contractor to perform the herein described services, and accepting the Customers responsibilities. This replacement agreement must be signed and received in the Contractors office within ten (10) days of the date of transfer of property ownership. Contractor will apply all funds received from Customer, first to any past due obligations arising form this agreement including fees or charges for service or repairs. Any remaining monies will be applied to the funding of the replacement agreement. The consumption of funds in this manner may result in 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.

Theodore G. Knappick

Theodore G. Knappick MP#0002213

8/6/2025

Customer Signature Date

Comal OSSF SITE EVALUATION FORM

Applicant/Site Information		Site Evaluator Information	
Name	Bleed Maroon, LLC	Name	Corey Mangold
Address		Address	5596 CR 5710
City, State, Zip		City, State, Zip	Devine, TX, 78016
Site location	1262 Deer Valley Pass, Spring Ranch, TX, 78070	TCEQ or PE License No.	OS0039119

Soil Boring/Backhoe Pit Number 1 Surface Elevation:_____ Proposed Depth Elevation:

Depth (Feet)	Soil Texture	Texture Class (Ia, Ib, II, III, IV)	% Gravel (Required when Texture Class is II or III)	Observation Notes (Restrictive Horizon, Size of Gravel, Groundwater, Mottling, Fractured Rock, Recent Weather. etc.)
0 1 2 3 4 5 6	Stony clay from 0" to 13". Rock horizon below to 60"	IV	<30%	None

Soil Boring/Backhoe Pit Number: 2 Surface Elevation:_____ Proposed Depth Elevation:

Depth (Feet)	Soil Texture	Texture Class (Ia, Ib, II, III, IV)	% Gravel (Required when Texture Class is II or III)	Observation Notes (Restrictive Horizon, Size of Gravel, Groundwater, Mottling, Fractured Rock, Recent Weather, etc.)
0 1 2 3 4 5 6	Same As Above			

By my signature, I hereby certify that the information provided in this report is based on my site observations and are accurate to the best of r ability. I understand that any misrepresentation of the information contained in this report may be grounds to revoke or suspend my licen The site evaluation determined the site is suitable for a Aerobic disposal system with Secondary treatment. According to Table XIII, the site is suitable/not suitable for this proposed system. A copy of Tables IX and XIII have been given the property owner to inform them of other alternatives based upon the results of this site evaluation.

Signature: Corey Mangold TCEQ or PE license #: OS0039119 Date: 8/1/25

SITE EVALUATION AND CALCULATIONS

Site Evaluation:

Soil Texture:	Stony clay
Soil Structure:	Blocky
Soil Depth:	13" minimum
Restrictive Horizon:	At 13" min. from surface
Groundwater:	None encountered
Topography:	More than 2% slope on drainfield area

Determination: Site was determined to have a Class IV soil. Due to the limited available space and rock horizon an aerobic treatment unit followed by drip irrigation shall be installed.

Calculations:

System is designed for a 3 bedroom house with water saving devices with a living area of 1088 sq. ft. The washing machine water is in the septic system.

Q = 240 gpd

A 500 Gallon aerobic treatment system, or equal, shall be installed. It has built in pre-treatment, and pump tanks. The aerobic unit shall be followed by a drip irrigation system. (Reference the System Layout) No Chlorination is required.

Ra = **0.20 gal. / sq. ft. / day,** **(For a Class III soil)(Substituted)**

A = Q / Ra, **A** = (240 gal. / day) / (0.20 gal. / sq. ft. / day) = **1200 sq. ft.**

calculations continued on next page....

Owner Bleed Maroon, LLC

Location Comal County, Texas

Drawn by: Corey E. Mangold

Drawing No. 100-10207

MANGOLD Engineering Company
5596 CR 5710
Devine, TX 78016
Phone: (830) 931-0400

Date: 8/1/25

Scale: None

Sheet 1 **of** 6

Corey Mangold
STATE OF TEXAS
COREY MANGOLD
5307
REGISTERED
PROFESSIONAL SANITARIAN
8/1/25

SITE EVALUATION AND CALCULATIONS

Calculations:

Emitter line shall be used which has emitters spaced at 2 foot intervals, and adjacent emitter lines shall also be spaced at 2 feet on center.

Required line length = A / 2 = (1200 sq. ft. / 2 sq. ft. per foot) = **600 feet**
605' of drip line shall be installed as shown on the System Layout

A 1" SCH 40 PVC supply line shall be used from the ATU systems pump tank to the drainfield. A 1" SCH 40 PVC return line from the drainfield back to the pump tank shall be provided. The system shall be set up in accordance with ATU specifications. (Contact manufacturer for complete specifications and reference the System Layout and details)

NOTES FOR INSTALLER (if applicable):

Do not connect water softener back-wash to septic system.

The TCEQ allows washing machine water to be discharged into a separate gray water system unless the water contains human waste. Running this water out separate from the septic system can prolong the life of the system.

A Netafim 1" "Super filter" 200 mesh/55 micron, shall be installed in a riser in the outlet line of the pump tank compartment.

Connect the 1" "Super filter" and assemble in accordance with manufacturers specifications..

Contact ATU dealer for complete specifications. All required specifications may not be contained in this design.

Owner	Bleed Maroon, LLC	**Drawn by:**	Corey E. Mangold
Location	See sheet #1	**Drawing No.**	100-10207

MANGOLD Engineering Company
5596 CR 5710
Devine, TX 78016
Phone: (830) 931-0400

Date: 8/1/25
Scale: None
Sheet 2 **of** 6

Corey Mangold
STATE OF TEXAS
COREY MANGOLD
5307
REGISTERED
PROFESSIONAL SANITARIAN
8/1/25

SITE EVALUATION AND CALCULATIONS

The design pressure at the emitters is as specified by the manufacturer.

The total length of supply and return pipe is as shown on the System Layout

Diameter of supply and return lines is as shown on the System Layout.

NOTES TO OWNER OF SYSTEM:
MAINTENANCE AND MANAGEMENT PRACTICES (if applicable):

An OSSF should not be treated as if it were a normal city sewer system.

The excessive use of in-sink garbage grinders and grease discarding should be avoided.

Do not use the toilet to dispose of cleaning tissues, cigarette butts, or other trash.

Septic tanks shall be cleaned before sludge accumulates to a point where it approaches the bottom of the outlet device, to prevent solids from exiting the tank with the liquid.

Septic tanks should be cleaned every two-to-three years to prevent excessive sludge buildup.

Do not build driveways, storage buildings, or other structures over the treatment works or its disposal field.

Chemical additives or the so-called enzymes are not necessary for the operation of a septic tank. Some of these additives may be harmful to the tank's operation.

continued next page.....

Owner Bleed Maroon, LLC	**Drawn by:** Corey E. Mangold
Location See sheet #1	**Drawing No.** 100-10207

MANGOLD Engineering Company
5596 CR 5710
Devine, TX 78016
Phone: (830) 931-0400

Date: 8/1/25
Scale: None
Sheet 3 **of** 6

Corey Mangold
STATE OF TEXAS
COREY MANGOLD
5307
REGISTERED
PROFESSIONAL SANITARIAN
8/1/25

SITE EVALUATION AND CALCULATIONS

Soaps, detergents, bleaches, drain cleaners, and other household cleaning materials will very seldom affect the operation of the system. However, moderation should be exercised in the use of such materials.

It is not advisable to allow water softener back flush to enter into any portion of the OSSF.

Except for Aerobic systems, the liquid from the OSSF is still heavily laden with bacteria. Contact with this liquid should be avoided, if it surfaces.

WATER CONSERVATION MEASURES (if applicable):

Showers usually use less water than baths. Install a water saving shower head that uses less than 2 1/2 gallons per minute and saves both water and energy.

If you take a tub bath, reduce the level of water in the tub from the level to which you customarily fill it.

Leaky faucets and faulty toilet fill-up mechanisms should be repaired as quickly as possible.

Check toilets for leaks that may not be apparent. Add a few drops of food coloring to the tank. Do not flush. If the color appears in the bowl within a few minutes, the toilet fill or ball-cock valve needs to be adjusted to prevent water from overflowing the stand pipe, or the flapper at the bottom of the toilet tank needs to be replaced.

Reduce the amount of water used for flushing the toilet by installing one of the following: a new toilet (1.6 gallon); a toilet tank dam; or filling and capping one-quart plastic bottles with water (usually one is all that will fit in smaller toilet tanks) and lowering them into the tank of the existing 3.5 gallon or larger toilet. Do not use bricks since they may crumble and cause damage to the fixture.

continued next page.....

Owner	Bleed Maroon, LLC	**Drawn by:**	Corey E. Mangold
Location	See sheet #1	**Drawing No.**	100-10207

MANGOLD Engineering Company
5596 CR 5710
Devine, TX 78016
Phone: (830) 931-0400

Date: 8/1/25

Scale: None

Sheet 4 **of** 6

Corey Mangold
STATE OF TEXAS
COREY MANGOLD
5307
REGISTERED
PROFESSIONAL SANITARIAN
8/1/25

SITE EVALUATION AND CALCULATIONS

Try to run the dishwasher with a full load, whenever possible.

Avoid running the water continuously for brushing teeth, washing hands, rinsing kitchen utensils, or for cleaning vegetables.

Use faucet aerators that restrict flow to no more than 2.2 gallons per minute to reduce water consumption.

Keep a container of drinking water in the refrigerator instead of running the faucet until the water turns cool.

Insulate all hot water pipes to avoid long delays of wasted water while waiting for the heated water.

Ask your city, county, or local government about their programs to conserve water, and how they can help you save water.

Owner	Bleed Maroon, LLC	**Drawn by:**	Corey E. Mangold
Location	See sheet #1	**Drawing No.**	100-10207

MANGOLD Engineering Company
5596 CR 5710
Devine, TX 78016
Phone: (830) 931-0400

Date: 8/1/25
Scale: None
Sheet 5 **of** 6

Corey Mangold
STATE OF TEXAS
COREY MANGOLD
5307
REGISTERED
PROFESSIONAL SANITARIAN
8/1/25

MANGOLD ENGINEERING COMPANY WILL NOT BE RESPONSIBLE FOR THE CONSEQUENCES OF THE USE OF ANY PART OF THE ENGINEERING OF THIS SEPTIC SYSTEM BEFORE THE ENGINEERING HAS BEEN COMPLETELY AND FINALLY APPROVED BY THE APPROPRIATE COUNTY AUTHORITY IN THE COUNTY FOR WHICH IT IS INTENDED. IF TEST HOLES WERE NOT PRESENT DURING THE SITE-EVALUATION, THE OWNER/INSTALLER SHALL BE RESPONSIBLE FOR DIGGING TEST HOLES AND CONTACTING MANGOLD ENGINEERING COMPANY PRIOR TO ANY USE OF THIS ENGINEERING DESIGN.

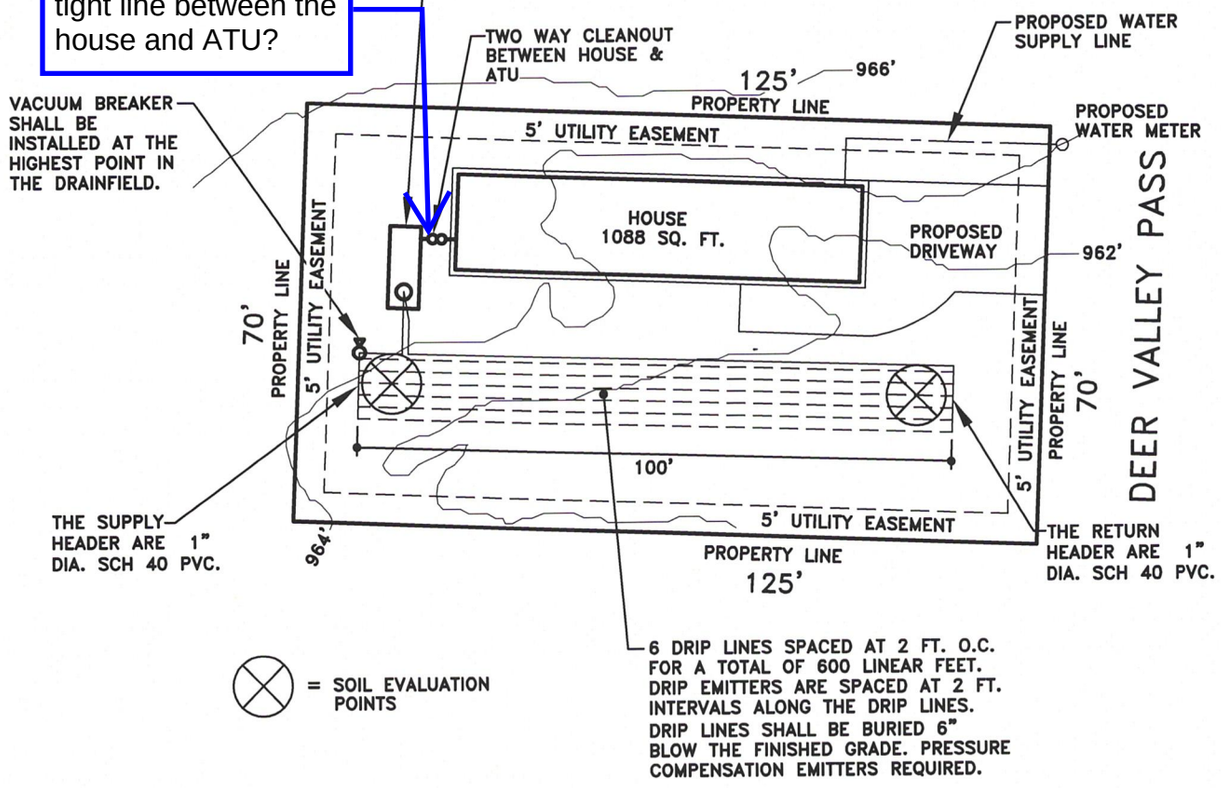
SITE SHALL BE PREPPED: REMOVING 12" OF SOIL 3 FEET BEYOND DRAINFIELD AND REPLACED WITH CLASS Ib OR II SOIL AND TOPPED WITH 6" OF Ib OR II SOIL.

THE ENTIRE PROPERTY IS LOCATED OUTSIDE OF THE FEMA DESIGNATED 100 YEAR FLOOD PLAIN.

AERIS MODEL D-500M AEROBIC TREATMENT SYSTEM W/ 568 GAL. PRE-TREATMENT TANK & 763 GAL. PUMP TANK. INSTALL A 1" "SUPER FILTER" IN THE OUTLET LINE FROM THE PUMP TANK COMPARTMENT. (SEE ATTACHED SPECIFICATIONS)

WHERE A WATER LINE IS CLOSER THAN 10' TO A WASTEWATER MAIN, THE WATER LINE SHALL BE CASED INSIDE OF A SCH 40 PVC PIPE SUCH THAT THE ENDS OF THE CASING ARE AT LEAST 10' AWAY FROM THE WASTEWATER MAIN. IN ADDITION, IF THE LINES CROSS, THE WATER LINE SHALL BE AT LEAST 6" ABOVE THE WASTEWATER MAIN.

What is the length of tight line between the house and ATU?



N

SYSTEM LAYOUT *

Scale: 1" = 30'

WHERE DRAIN LINES PASS UNDER ROADWAYS. THEY SHALL BE SCH 80 PVC OR THEY SHALL BE SLEEVED INSIDE OF A SCH 40 PVC PIPE WHICH IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE DRAIN LINE.

* Septic tank must be a minimum of 50' from any water well. Closest distance from any part of spray area to water well must be 100' minimum, unless well is pressure cemented.
Minimum setback of spray area from property lines is 10'.
Minimum separation distance between septic tank or spray area and water supply lines is 10'.
Setback of spray area from lakes, streams, ponds, and rivers is 50' minimum.

NOTES:

SLOPE OF INFLOW LINE TO TANK IS 1/8 INCH PER FOOT RUN. PIPE IS 4" DIA. SCH 40 PVC.

PRE-TREATMENT TANK IS BUILT ONTO THE AEROBIC TREATMENT UNIT. NO ADDITIONAL TRASH TANK IS REQUIRED IN THIS SYSTEM.

SYSTEM WILL BE INSPECTED BY COUNTY INSPECTOR IN ACCORDANCE WITH CURRENT COUNTY INSPECTION PROCEDURES.

Owner Bleed Maroon, LLC

Location 1262 Deer Valley Pass

Drawn by: Corey E. Mangold

Drawing No. 100-10207

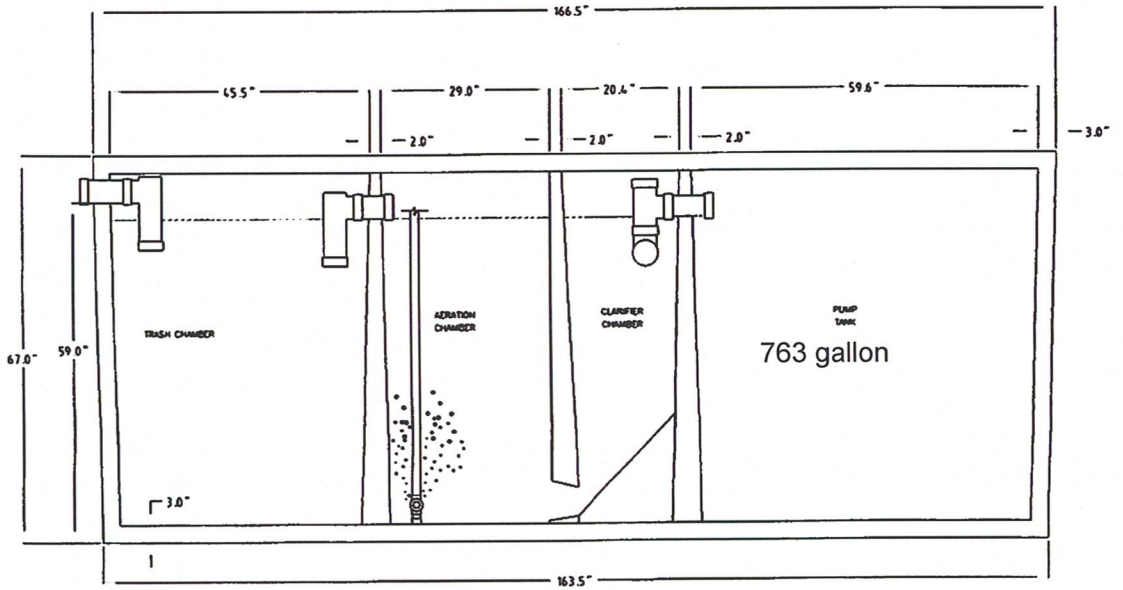
MANGOLD Engineering Company
5596 CR 5710
Devine, TX 78016
Phone: (830) 931-0400
FIRM NO. 5549

Date: 8/1/25

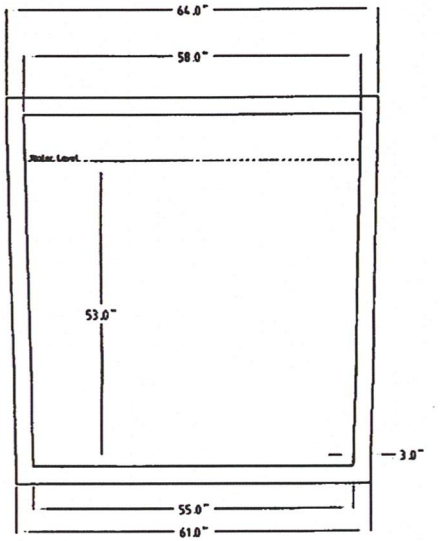
Scale: Noted

Sheet 6 of 6

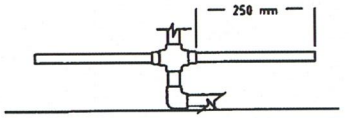
Corey Mangold
STATE OF TEXAS
COREY MANGOLD
5307
REGISTERED
PROFESSIONAL SANITARIAN
8/1/25



SIDE SECTION VIEW

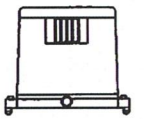


END SECTION VIEW



DIFFUSER DETAIL

2 diffusers per downpipe



Single-Port Aerator

Title:	Company Name:	Date:
Model D-500-m 500 gallon per day Aerobic Treatment Unit	Aeris Aerobics	2-22-2015

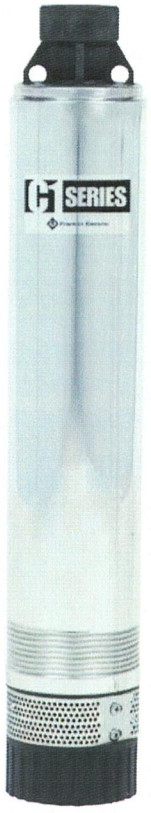
EFFLUENT PUMPS

Little GIANT®

C1 SERIES - 1/2 HP

APPLICATIONS

Gray water pumping, filtered effluent service water pumping,
water reclamation projects such as pumping from rain catchment basins,
aeration and other fountain or pond applications, agriculture and livestock water pumping



FEATURES

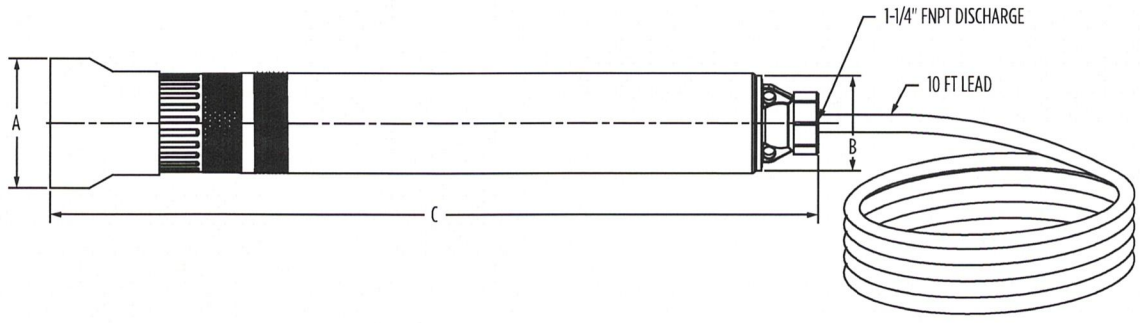
- Supplied with a removable 5" base for secure and reliable mounting
- Bottom suction design
- Robust thermoplastic discharge head design resists breakage during installation and operation
- Single shell housing design provides a compact unit while ensuring cool and quiet operation
- Hydraulic components molded from high quality engineered thermoplastics
- Optimized hydraulic design allows for increased performance and decreased power usage
- All metal components are made of high grade stainless steel for corrosion resistance
- Available with a high quality 115 V or 230 V, 1/2 hp motor
- Fluid flows of 10, 20, and 30 gpm, with a maximum shut-off pressure of 100 psi
- Heavy-duty 600 V 10 foot SJOOW jacketed lead

SERIES SPECIFICATIONS

Item No	Model	HP	Volts	Hz	Stages	Amps	Watts	Wire	Min. Shut-Off Head		Min. Head @ Rated Flow		Max GPM	Min. Head @ Max. GPM		Max. Amps
									PSI	FT	PSI	FT		PSI	FT	
90301005	10C1-05P4-2W115	1/2	115	60	7	9.0	920	2	93	215	50	115	14	22	50	10
90301010	10C1-05P4-2W230	1/2	230	60	7	4.5	920	2	93	215	50	115	14	22	50	5
90302005	20C1-05P4-2W115	1/2	115	60	5	9.0	920	2	56	130	34	78	28	9	20	10
90302010	20C1-05P4-2W230	1/2	230	60	5	4.5	920	2	56	130	34	78	28	9	20	5
90302015	20XC1-05P4-2W115	1/2	115	60	6	9.0	920	2	68	156	37	85	28	9	21	10
90302020	20XC1-05P4-2W230	1/2	230	60	6	4.5	920	2	68	156	37	85	28	9	21	5
90303005	30C1-05P4-2W115	1/2	115	60	4	9.0	920	2	39	89	19	45	35	13	29	10
90303010	30C1-05P4-2W230	1/2	230	60	4	4.5	920	2	39	89	19	45	35	13	29	50

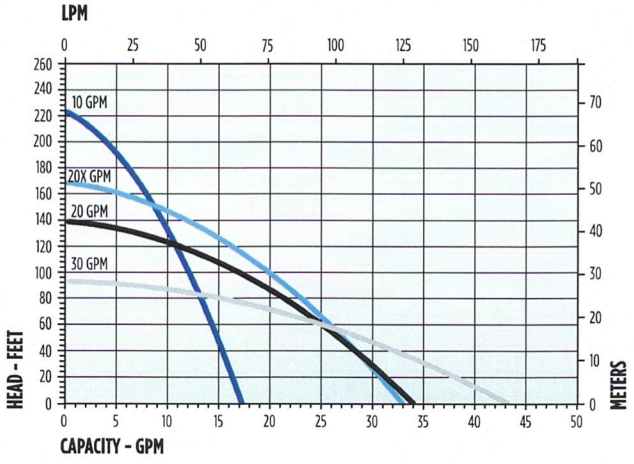
C1 SERIES - 1/2 HP

ENGINEERING DATA



Item No	Model	A	B	C
90301005	10C1-05P4-2W115	5" 12.70 cm	3.9" 9.91 cm	26" 66.04 cm
90301010	10C1-05P4-2W230	5" 12.70 cm	3.9" 9.91 cm	26" 66.04 cm
90302005	20C1-05P4-2W115	5" 12.70 cm	3.9" 9.91 cm	26" 66.04 cm
90302010	20C1-05P4-2W230	5" 12.70 cm	3.9" 9.91 cm	26" 66.04 cm
90302015	20XC1-05P4-2W115	5" 12.70 cm	3.9" 9.91 cm	26" 66.04 cm
90302020	20XC1-05P4-2W230	5" 12.70 cm	3.9" 9.91 cm	26" 66.04 cm
90303005	30C1-05P4-2W115	5" 12.70 cm	3.9" 9.91 cm	26" 66.04 cm
90303010	30C1-05P4-2W230	5" 12.70 cm	3.9" 9.91 cm	26" 66.04 cm

PERFORMANCE DATA

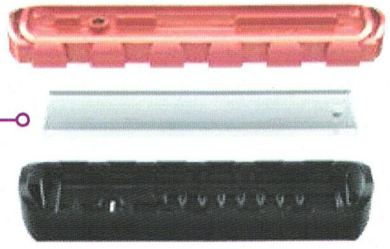


WASTEWATER DIVISION

BIOLINE® DRIPLINE

THE WORLD'S MOST ADVANCED CONTINUOUS SELF-CLEANING, PRESSURE COMPENSATING DRIPLINE SPECIFICALLY DESIGNED FOR WASTEWATER

Copper oxide is impregnated into the emitter serving as a natural antimicrobial agent to help prevent microbial activity.



PRODUCT ADVANTAGES

- Pressure compensation - all drippers deliver equal flow, even on sloped or rolling terrain.
- Unique flow path - Turbonet technology provides more control of water and a high resistance to clogging.
- Continuous self-flushing dripper design - flushes debris, as it is detected - throughout operation, not just at the beginning or end of a cycle. Ensures uninterrupted dripper operation.
- Single hole dripper outlet from tubing:
  - Better protection against root intrusion
  - Allows the dripline to be used in subsurface applications without need for chemical protection
- Drippers capture water flow from the center of the tubing - ensures that only the cleanest flow enters the dripper.
- Built-in physical root barrier - drippers are protected from root intrusion without the need for chemical protection.
- Three dripper flow rates - provides the broadest range of flow rates available. Allows the designer to match the dripline to any soil or slope condition.
- Bioline tubing is completely wrapped in purple - easily identifying it for non-potable use, regardless of how the tubing is installed.
- Cupron copper oxide is impregnated at specific concentrations, our patent-pending process, ensuring it remains effective throughout the life of the product.
- Bioline can be installed on-surface, under cover or subsurface.
- No special storage requirements - does not degrade if stored outdoors.

APPLICATIONS

- Typically installed following a treatment process
- Can be used with domestic septic tank effluent with proper design, filtration and operation
- Reuse applications including municipally treated effluent designated for irrigation and other disinfected and non-disinfected water sources.

SPECIFICATIONS

- Dripper flow rates: 0.4, 0.6 or 0.9 GPH
- Dripper spacings: 12", 18" or 24" dripper spacings and blank tubing
- Pressure compensation range: 7 to 58 psi
- Maximum recommended system pressure: 58 psi
- Tubing diameter: 0.66" OD, 0.56" ID
- Tubing color: Purple color indicates non-potable
- Coil lengths: 500' or 1,000' (Blank tubing in 250')
- Recommended filtration: 120 mesh
- Bending radius: 7"
- UV resistant
- Tubing material: Linear low-density polyethylene

Additional spacing and pipe sizes available by special order. Please contact Netafim USA Customer Service for details.

BIOLINE DRIPLINE

MAXIMUM LENGTH OF A SINGLE LATERAL WITH 3.0 fps FLUSH VELOCITY

ADDITIONAL FLOW OF 2.3 GPM REQUIRED PER LATERAL TO ACHIEVE 3 fps

	DRIPPER SPACING	12"			18"			24"		
	DRIPPER FLOW RATE (GPH)	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	102	94	84	136	127	113	161	151	137
	25	151	136	118	203	184	161	245	223	197
	35	193	171	146	260	232	200	315	283	245
	40	211	186	158	286	254	218	347	311	267
	45	228	200	169	310	274	233	377	335	287
Flow per 100' (GPM / GPH)		0.67/40	1.02/61	1.53/92	0.44/26.67	0.68/41	1.02/61	0.34/20	0.51/31	0.77/46

Lateral lengths are based on flows allowing for a 3 fps flushing/scouring velocity

MAXIMUM LENGTH OF A SINGLE LATERAL WITH 1.5 fps FLUSH VELOCITY

ADDITIONAL FLOW OF 1.2 GPM REQUIRED PER LATERAL TO ACHIEVE 1.5 fps

	DRIPPER SPACING	12"			18"			24"		
	DRIPPER FLOW RATE (GPH)	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	201	171	140	275	235	194	337	289	241
	25	266	222	179	366	308	251	453	383	313
	35	316	262	210	437	365	295	543	455	369
	40	337	280	223	469	391	313	583	487	393
	45	358	296	235	497	413	331	619	517	415
Flow per 100' (GPM / GPH)		0.67/40	1.02/61	1.53/92	0.44/26.67	0.68/41	1.02/61	0.34/20	0.51/31	0.77/46

Lateral lengths are based on flows allowing for a 1.5 fps flushing/scouring velocity

MAXIMUM LENGTH OF A SINGLE LATERAL WITH 2.5 fps FLUSH VELOCITY

ADDITIONAL FLOW OF 2.0 GPM REQUIRED PER LATERAL TO ACHIEVE 2.5 fps

	DRIPPER SPACING	12"			18"			24"		
	DRIPPER FLOW RATE (GPH)	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	128	115	100	172	155	136	205	187	165
	25	183	161	137	248	220	188	301	268	231
	35	228	198	166	310	272	229	379	333	283
	40	248	214	178	338	295	247	413	362	305
	45	266	229	190	364	316	263	447	389	327
Flow per 100' (GPM / GPH)		0.67/40	1.02/61	1.53/92	0.44/26.67	0.68/41	1.02/61	0.34/20	0.51/31	0.77/46

Lateral lengths are based on flows allowing for a 2.5 fps flushing/scouring velocity

MAXIMUM LENGTH OF A SINGLE LATERAL WITH 1.0 fps FLUSH VELOCITY

ADDITIONAL FLOW OF 0.8 GPM REQUIRED PER LATERAL TO ACHIEVE 1.0 fps

	DRIPPER SPACING	12"			18"			24"		
	DRIPPER FLOW RATE (GPH)	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	248	205	163	344	285	228	427	355	285
	25	315	258	203	440	361	286	549	453	359
	35	367	299	234	513	419	331	643	527	417
	40	389	316	248	545	445	350	683	559	441
	45	409	332	260	574	468	367	721	589	463
Flow per 100' (GPM / GPH)		0.67/40	1.02/61	1.53/92	0.44/26.67	0.68/41	1.02/61	0.34/20	0.51/31	0.77/46

Lateral lengths are based on flows allowing for a 1 fps flushing/scouring velocity

MAXIMUM LENGTH OF A SINGLE LATERAL WITH 2.0 fps FLUSH VELOCITY

ADDITIONAL FLOW OF 1.6 GPM REQUIRED PER LATERAL TO ACHIEVE 2.0 fps

	DRIPPER SPACING	12"			18"			24"		
	DRIPPER FLOW RATE (GPH)	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	161	141	119	217	191	164	263	233	201
	25	221	190	157	302	261	218	369	321	270
	35	269	229	187	370	316	260	455	391	324
	40	290	246	200	399	340	278	493	421	347
	45	310	261	212	427	362	296	527	449	369
Flow per 100' (GPM / GPH)		0.67/40	1.02/61	1.53/92	0.44/26.67	0.68/41	1.02/61	0.34/20	0.51/31	0.77/46

Lateral lengths are based on flows allowing for a 2 fps flushing/scouring velocity

MAXIMUM LENGTH OF A SINGLE LATERAL WITH 0.5 fps FLUSH VELOCITY

ADDITIONAL FLOW OF 0.4 GPM REQUIRED PER LATERAL TO ACHIEVE 0.5 fps

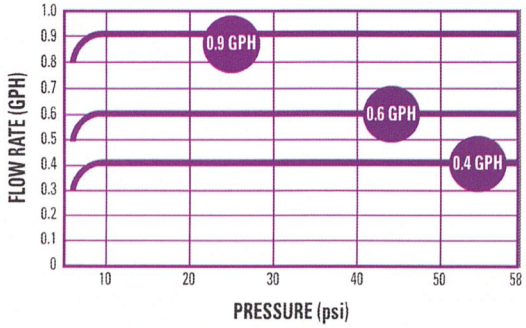
	DRIPPER SPACING	12"			18"			24"		
	DRIPPER FLOW RATE (GPH)	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	301	242	188	422	341	265	531	429	335
	25	369	296	228	520	418	323	655	527	409
	35	421	337	260	595	476	368	749	603	467
	40	443	354	273	626	501	387	790	635	491
	45	464	371	285	656	524	404	829	665	513
Flow per 100' (GPM / GPH)		0.67/40	1.02/61	1.53/92	0.44/26.67	0.68/41	1.02/61	0.34/20	0.51/31	0.77/46

Lateral lengths are based on flows allowing for a 0.5 fps flushing/scouring velocity

Netafim recommends flushing velocities capable of breaking free any accumulated bioslimes and debris in the piping network.

Notes:
1. Refer to local regulations for information on flushing velocities that may be written into codes.
2. Netafim does not endorse a specific flushing velocity.
3. Flushing velocities should be determined based on regulations, quality of effluent, and type of flushing control.
4. Using a flushing velocity less than 1 fps does not provide turbulent flow as defined by Reynolds Number.
5. Higher flushing velocities provide more aggressive flushing.

DRIPPER FLOW RATE VS. PRESSURE



Between 0 and 7 psi, the dripper functions as a turbulent flow emitter, ensuring that the nominal design flow is not exceeded at system start-up.

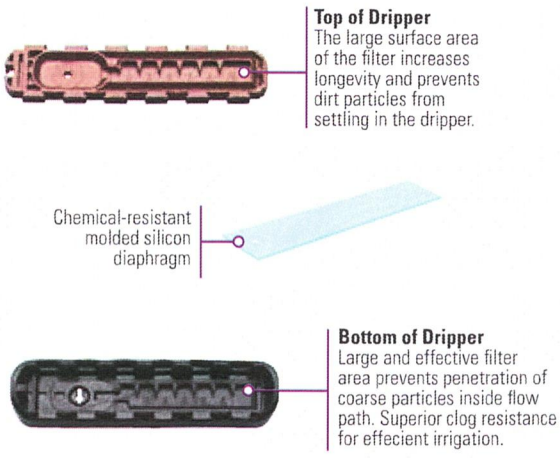
FLOW PER 100 FEET

DRIPPER SPACING	0.4 GPH DRIPPER		0.6 GPH DRIPPER		0.9 GPH DRIPPER	
	GPH	GPM	GPH	GPM	GPH	GPM
12"	40.0	0.67	61.0	1.02	92.0	1.53
18"	26.7	0.44	41.0	0.68	61.0	1.02
24"	20.0	0.34	31.0	0.51	46.0	0.77

Netafim sets the bar for innovation in drip irrigation with copper. Cupron® copper oxide-based technology allows for maximum performance. The integration of copper oxide in the internal emitter, and the unique patented emitter design with physical root barrier provides two levels of protection, giving your system the protection it needs to fight against root intrusion.

- Cupron copper oxide provides one of two layers of defense against root intrusion, a physical root barrier inside the dripper provides the other.
- Cupron copper oxide technology will not wash out, wear off or leach out; remaining effective throughout the life of the product.
- Cupron copper oxide is approved for use by the EPA ensuring peace of mind.

EXPLODED VIEW OF BIOLINE DRIPPER



BIOLINE DRIPPER OPERATION

Bioline drippers are pressure compensating - delivering the water uniformly into the soil for further treatment or for reuse by the landscape. These unique drippers allow the tubing to be installed on flat topography or steep slopes.

Bioline drippers are protected against microbial activity. Copper oxide impregnated XR drippers – Copper, a natural antimicrobial material, is used to help prevent microbial activity.

Netafim drippers are 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.

SPECIFYING INFORMATION

SAMPLE MODEL NUMBER

A Bioline Dripline = 08WRAM

08WRAM.6-24 V
(A) (1) (2) (3)

1 DRIPPER FLOW RATE	2 DRIPPER SPACING	3 COIL LENGTH
0.4 GPH = .4	12" = 12	500' = V500
0.6 GPH = .6	18" = 18	1,000' = V
0.9 GPH = 1	24" = 24	

BLANK Tubing Model Number: 250' = 08WRAM-250

ORDERING INFORMATION

FLOW RATE	DRIPPER SPACING	COIL LENGTH	MODEL NUMBER
0.4 GPH	12"	1,000'	08WRAM.4-12V
		500'	08WRAM.4-12V500
0.4 GPH	18"	1,000'	08WRAM.4-18V
		500'	08WRAM.4-18V500
0.4 GPH	24"	1,000'	08WRAM.4-24V
		500'	08WRAM.4-24V500
0.6 GPH	12"	1,000'	08WRAM.6-12V
		500'	08WRAM.6-12V500
0.6 GPH	18"	1,000'	08WRAM.6-18V
		500'	08WRAM.6-18V500
0.6 GPH	24"	1,000'	08WRAM.6-24V
		500'	08WRAM.6-24V500
0.9 GPH	12"	1,000'	08WRAM1-12V
		500'	08WRAM1-12V500
0.9 GPH	18"	1,000'	08WRAM1-18V
		500'	08WRAM1-18V500
0.9 GPH	24"	1,000'	08WRAM1-24V
		500'	08WRAM1-24V500
Blank Tubing 17mm		250'	08WRAM-250

BIOLINE FITTINGS

FITTING APPLICATIONS

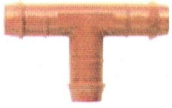
- Fits Bioline Dripline

FITTING SPECIFICATIONS

- Barbed fittings for a secure fit
- Easy installation without glue or tools
- Allows for easy on-site inspection of proper fitting installation

TLCOUP
Insert Coupling

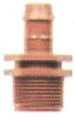
TLELL
Insert Elbow



TLTEE
Insert Tee

TLCROS
Insert Cross

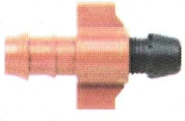
TL050MA
½" Male Adapter



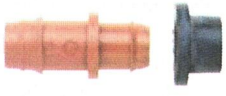
TL075MA
¾" Male Adapter

TL075FTEE
Combination Tee
Ins x Ins x ¾" FPT

TL2W075MA
2-Way Insert
¾" MPT x Insert



TLIAPE-B
Insert Adapter for 1" or Larger PE (Requires 11mm or 7/16" drill or punch)



TLIAPVC-B
Insert Adapter with Grommet
1½" or larger PVC Pipe

TDBIT16.5
Drill Bit for TLIAPVC Fitting (16.5mm or 21/32")

TLFIG8
Figure 8 Line End

TLS6
6" Soil Staple

FITTING DEFINITIONS

FPT = Female Pipe Thread
MPT = Male Pipe Thread
Ins x Ins = Insert by Insert

TLSOV
Shut-Off Valve
Ins x Ins

TLCV
Inline Check Valve

- Flow Range: 0.9 to 4.4 GPM
- Opening Pressure: 10.2 psi
- Closing Pressure: 5.8 psi
  (13.4 Feet Column of Water)

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www.netafimusa.com

W064 11/21

NETAFIM™
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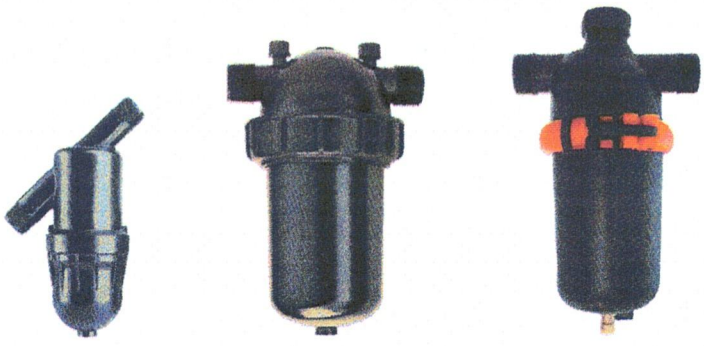
MANUAL DISC FILTERS

RELIABLE, EFFICIENT PLASTIC DISCS CREATE SUPERIOR FILTRATION



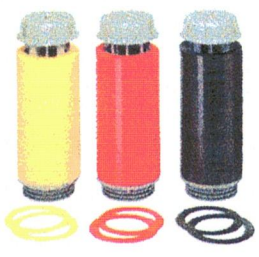
3/4" 1" 2" DUAL LITE

PRODUCT ADVANTAGES

- Highly effective multiple disc ring design captures and holds more debris.
- Greater holding capacity of the rings vs. screen filters mean less frequent cleaning.
- Rings are easily removed for fast cleaning without the need for scrubbing.
- Color-coded disc rings make identification of mesh rating fast and easy.

APPLICATIONS

- Primary irrigation filter for relatively clean or average water quality
- Protection of irrigation systems from clogging and/or abrasion



MESH/MICRON

MESH	MICRON	DISC COLOR
040	400	Blue
080	200	Yellow
120	130	Red
140	115	Black
200	55	Green

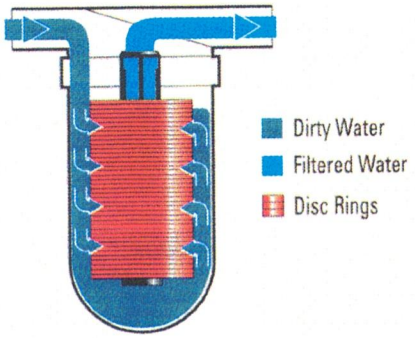
Substitute *** in Model Number for proper mesh.

THE FILTERING PROCESS

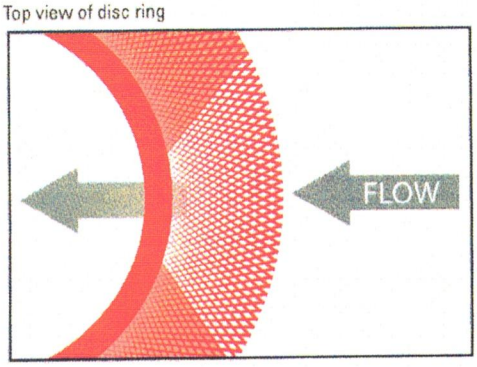
Grooved, compressed plastic disc rings produce a deep filtration process. As dirty water is pumped into the filter and pressure increases on the outside of the filter, the water pressure compresses the rings together tightly.

Grooves in the disc rings crisscross, forming a three dimensional network that traps particles. The number of crisscrossed intersection points on each groove varies, depending on filtration grade. The turbulence in the varying paths and the large number of intersections create an environment where particles are eventually trapped.

This design filters the dirty water thoroughly, not only on the outer surface of the cylindrical disc filter, but through the entire depth of every ring's grooves. The result is a larger, more efficient filtering area (when compared to screen filters) with more debris being captured and cleaner water exiting from the filter.

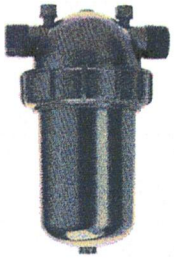


Top view of disc ring



MANUAL DISC FILTERS

3/4" FILTER	
FLOW RANGE	1 - 12 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	25 sq. in.
FILTERING VOLUME	5.8 cu. in.
LENGTH	5 22/32"
WIDTH	7 15/32"
WEIGHT	.66 lbs.
DISTANCE BETWEEN ENDS	6"
INLET/OUTLET DIAMETER	3/4" Male
MODEL NUMBER	25A45-***



1" FILTER	
FLOW RANGE	5 - 26 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	49 sq. in.
FILTERING VOLUME	27 cu. in.
LENGTH	9 11/32"
WIDTH	6 7/32"
WEIGHT	2.2 lbs.
DISTANCE BETWEEN ENDS	6 7/32"
INLET/OUTLET DIAMETER	1" Male
MODEL NUMBER	25A47-***

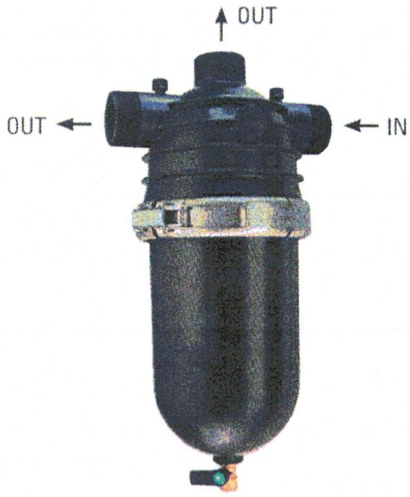
1" SUPER FILTER	
FLOW RANGE	10 - 35 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	78 sq. in.
FILTERING VOLUME	36 cu. in.
LENGTH	13 13/32"
WIDTH	6 7/32"
WEIGHT	3.11 lbs.
DISTANCE BETWEEN ENDS	6 7/32"
INLET/OUTLET DIAMETER	1" Male
MODEL NUMBER	25A48-***

2" DUAL LITE FILTER	
FLOW RANGE	40 - 110 GPM
MAXIMUM PRESSURE	115 psi
FILTERING SURFACE AREA	147 sq. in.
FILTERING VOLUME	75.7 cu. in.
LENGTH	16 5/16"
WIDTH	10 1/4"
WEIGHT	6.6 lbs.
DISTANCE BETWEEN ENDS	10 1/4"
INLET/OUTLET DIAMETER	2" Male
MODEL NUMBER	25A2DL-***

3" TWIN LITE FILTER	
FLOW RANGE	80 - 220 GPM
MAXIMUM PRESSURE	115 psi
FILTERING SURFACE AREA	294.5 sq. in.
FILTERING VOLUME	174 cu. in.
LENGTH	28 3/4"
WIDTH	9 14/32"
WEIGHT	17 lbs.
DISTANCE BETWEEN ENDS	12 19/32"
INLET/OUTLET DIAMETER	3" Flanged
MODEL NUMBER	25A3TL-***F

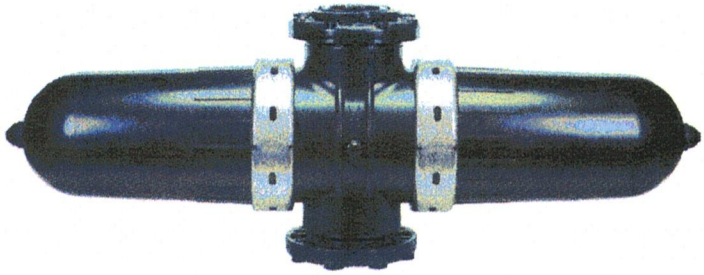
1 ½" FILTER	
FLOW RANGE	10 - 35 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	49 sq. in.
FILTERING VOLUME	27 cu. in.
LENGTH	10 5/8"
WIDTH	7 7/8"
WEIGHT	2.4 lbs.
DISTANCE BETWEEN ENDS	7 7/8"
INLET/OUTLET DIAMETER	1 1/2" Male
MODEL NUMBER	25A15-***

1 ½" SUPER FILTER	
FLOW RANGE	10 - 52 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	78 sq. in.
FILTERING VOLUME	36 cu. in.
LENGTH	14 1/2"
WIDTH	7 7/8"
WEIGHT	3.3 lbs.
DISTANCE BETWEEN ENDS	7 7/8"
INLET/OUTLET DIAMETER	1 1/2" Male
MODEL NUMBER	25A17-***



2" DUAL HP FILTER	
FLOW RANGE	40 - 120 GPM
MAXIMUM PRESSURE	174 psi
FILTERING SURFACE AREA	147 sq. in.
FILTERING VOLUME	75 cu. in.
LENGTH	14 3/4"
WIDTH	10 1/4"
WEIGHT	11 lbs.
DISTANCE BETWEEN ENDS	10 1/4"
INLET/OUTLET DIAMETER	2" Male
MODEL NUMBER	25A30-***

FLANGED GROOVED



3" ANGLE FILTER	
FLOW RANGE	80 - 220 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	287 sq. in.
FILTERING VOLUME	108 cu. in.
LENGTH	24 7/8"
WIDTH	12 3/32"
WEIGHT	31 lbs.
INLET/OUTLET DIAMETER	3"
MODEL NUMBER - FLANGED	25A53-***FNEW
MODEL NUMBER - GROOVED	25A53-***GNEW

4" TWIN FILTER	
FLOW RANGE	160 - 450 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	574 sq. in.
FILTERING VOLUME	216 cu. in.
LENGTH	47"
WIDTH	13"
WEIGHT	52.8 lbs.
DISTANCE BETWEEN ENDS	17 17/32"
INLET/OUTLET DIAMETER	4" Flanged
MODEL NUMBER	25A78-***F

6" TWIN FILTER	
FLOW RANGE	200 - 600 GPM
MAXIMUM PRESSURE	140 psi
FILTERING SURFACE AREA	574 sq. in.
FILTERING VOLUME	216 cu. in.
LENGTH	47"
WIDTH	13"
WEIGHT	57.2 lbs.
DISTANCE BETWEEN ENDS	17 17/32"
INLET/OUTLET DIAMETER	6" Flanged
MODEL NUMBER	25A80-***F

MANUAL DISC FILTERS

FILTER APPLICATION RECOMMENDATIONS

FLOW RATE (GPM)	HEADLOSS (psi)										
	3/4"	1"	1" SUPER	1 1/2"	1 1/2" SUPER	2" DUAL HP	2" DUAL LITE	3" TWIN LITE	3" ANGLE	4" TWIN	6" TWIN
5	0.60	0.25									
10	2.50	0.60									
13	3.40	1.34									
17	5.87	2.10									
22		3.24	1.10	1.10							
26			1.50	1.30	1.50						
31			2.10	1.70	2.10						
35			2.50	2.30	2.50						
44					4.20	0.30	0.30				
66						0.63	0.63				
88						1.03	1.03	0.64	0.44		
110						1.47	1.47	0.98	0.58		
132								1.37	0.73		
154								1.80	0.88		
176								2.28	1.03		
198									1.32		
220									1.61		
242											
264											
286											
308										1.40	1.00
330										1.50	1.20
350										1.60	1.30
400										2.00	1.50
500											2.00
600											3.00

The losses shown are for filters with 140 Mesh

CHART LEGEND

0.00 River, ditch, pond, lake or reservoir water

0.00 Well water containing sand only

0.00 Municipal supply

ORDERING INFORMATION

FILTER SIZE	MODEL NUMBER
3/4"	25A45-***
1"	25A47-***
1" SUPER	25A48-***
1 1/2"	25A15-***
1 1/2" SUPER	25A17-***
2" DUAL HP	25A30-***
2" DUAL LITE	25A2DL-***
3" TWIN LITE	25A3TL-***F
3" ANGLE FLANGED	25A53-***FNEW
3" ANGLE GROOVED	25A53-***GNEW
4" TWIN FLANGED	25A78-***F
6" TWIN FLANGED	25A80-***F

Substitute *** for proper mesh size.

MATERIALS

- Disc Rings: Polypropylene
- O-Rings: EPDM Rubber
- Clamp: Stainless Steel (except 2" Dual Lite and 3" Twin Lite which is Plastic)

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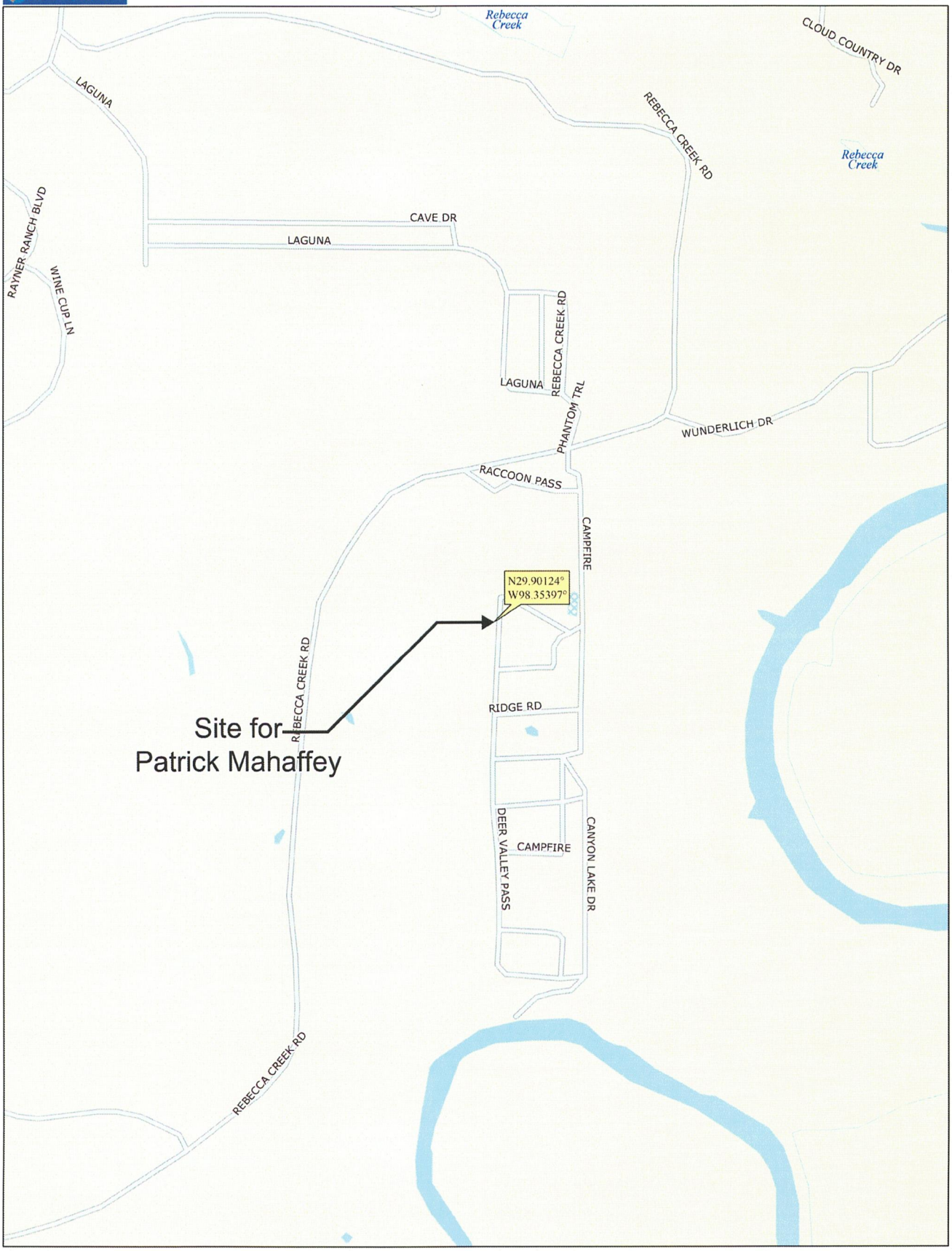
DeLorme

DeLorme Street Atlas USA® 2013



MN (3.1° E)

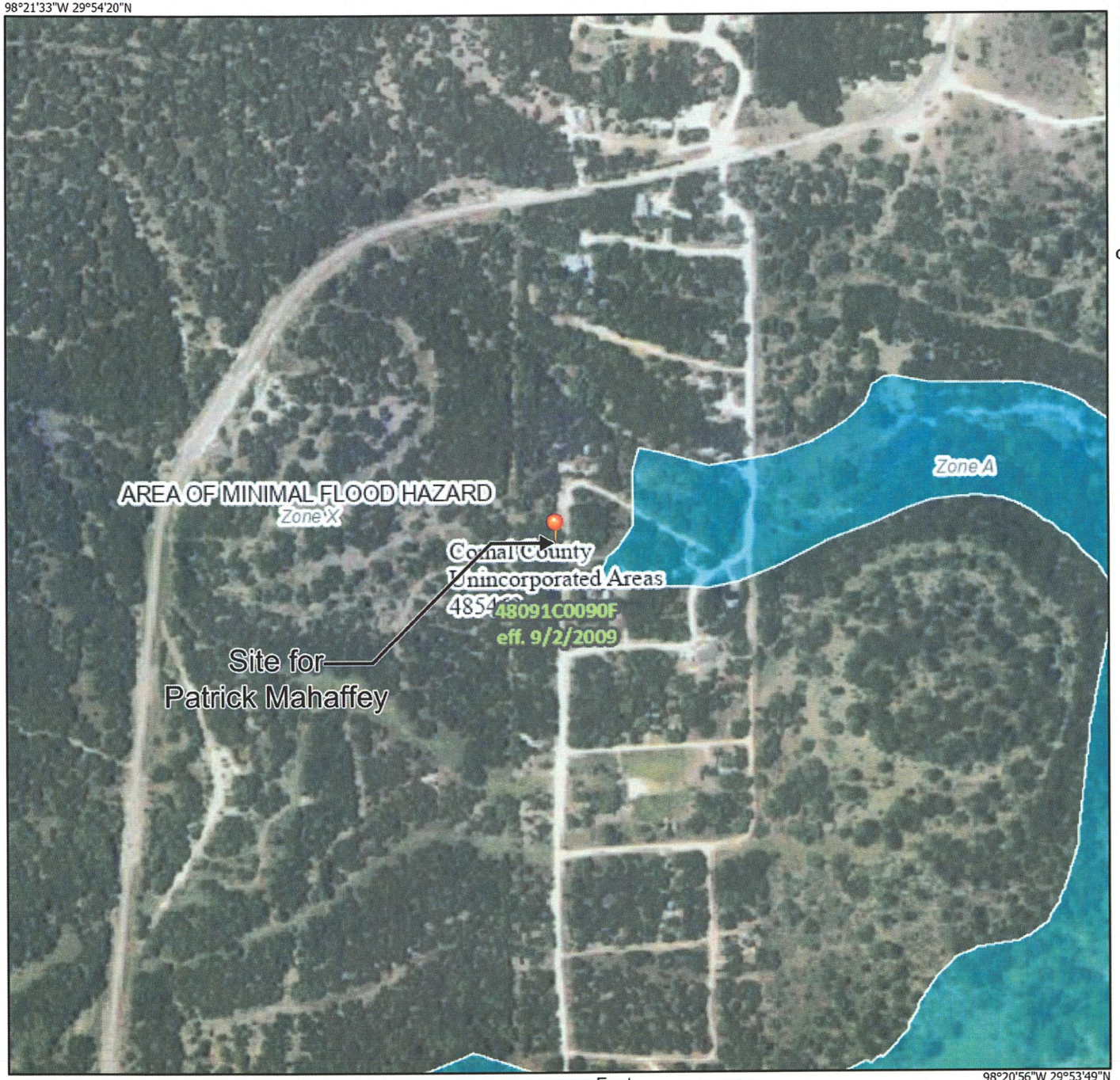
0 200 400 600 800 1000 1200 1400 1600 ft

Data Zoom 14-3

National Flood Hazard Layer FIRMette

FEMA

98°21'33"W 29°54'20"N



98°20'56"W 29°53'49"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

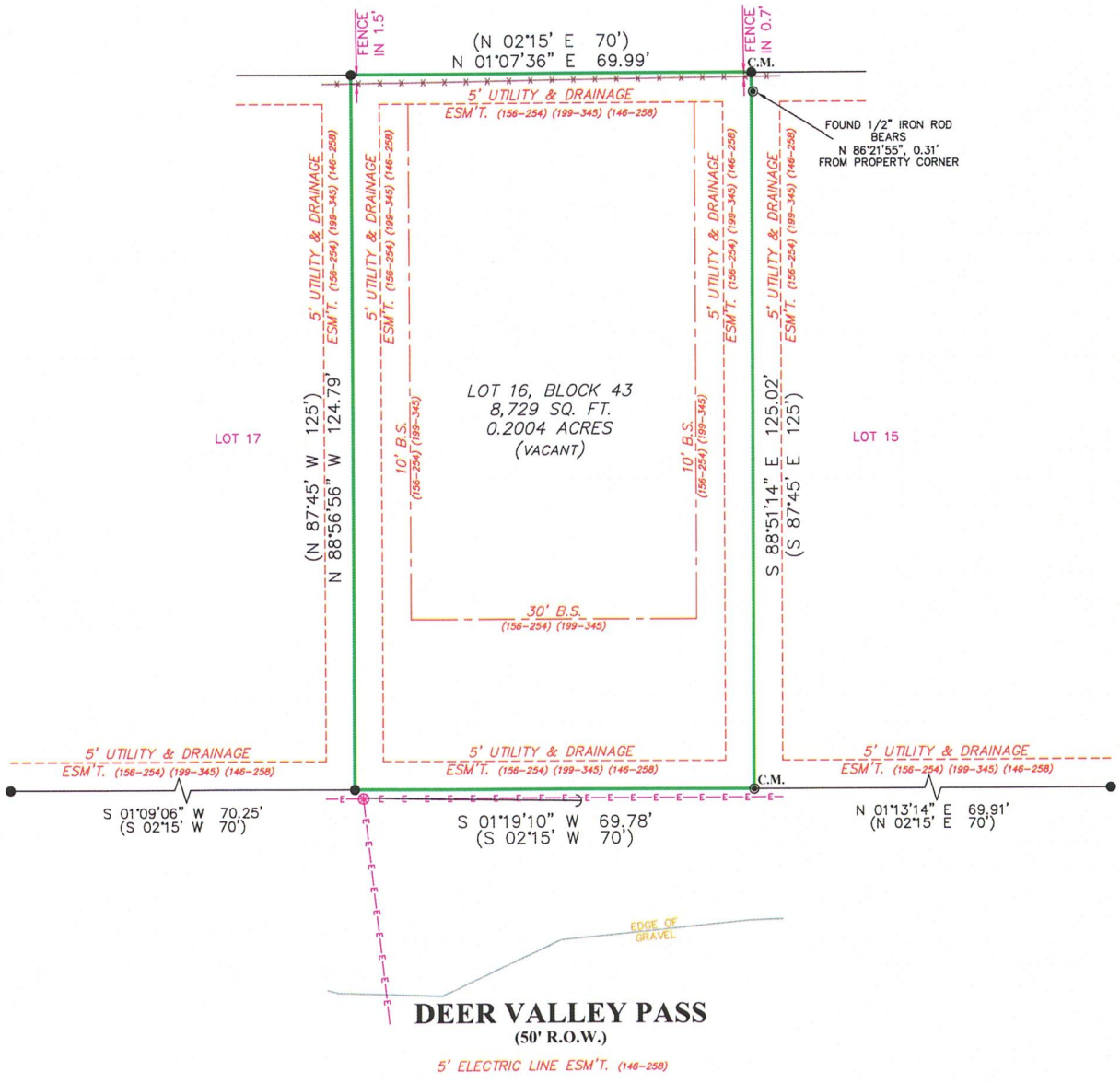
OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

SCALE: 1"=20'



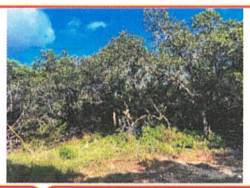
NOTE:
Bearings shown hereon are based on actual GPS Observations, Texas State Plane Coordinates, Central Zone, Grid.

NOTE:
THIS PROPERTY IS SUBJECT TO RESTRICTIVE COVENANTS, EASEMENTS, AGREEMENTS, AND/OR SETBACK LINES (IF ANY) AS FOLLOWS: VOLUME 3, PAGES 8-15, PLAT RECORDS OF COMAL COUNTY, TEXAS AND RESTRICTIONS IN VOLUME 156, PAGE 254, VOLUME 160, PAGE 159, VOLUME 172, PAGE 509, VOLUME 199, PAGE 345, VOLUME 343, PAGE 141, AND CLERK'S FILE NO(S). 201806044141, 201806044142, 202006058237 AND 202206015383, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS.

THIS SURVEY IS ACKNOWLEDGED AND IS ACCEPTED:

_____

_____



FLOOD ZONE INTERPRETATION: IT IS THE RESPONSIBILITY OF ANY INTERESTED PERSONS TO VERIFY THE ACCURACY OF FEMA FLOOD ZONE DESIGNATION OF THIS PROPERTY WITH FEMA AND STATE AND LOCAL OFFICIALS, AND TO DETERMINE THE EFFECT THAT SUCH DESIGNATION MAY HAVE REGARDING THE INTENDED USE OF THE PROPERTY. The property made the subject of this survey appears to be included in a FEMA Flood Insurance Rate Map (FIRM), identified as Community No. 48091C, Panel No. 0090 F, which is Dated 9/2/2009. By scaling from that FIRM, it appears that all or a portion of the property may be in Flood Zone(s) X. Because this is a boundary survey, the surveyor did not take any actions to determine the Flood Zone status of the surveyed property other that to interpret the information set out on FEMA's FIRM, as described above. THIS SURVEYOR DOES NOT CERTIFY THE ACCURACY OF THIS INTERPRETATION OF THE FLOOD ZONES, which may not agree with the interpretations of FEMA or State or local officials, and which may not agree with the tract's actual conditions More information concerning FEMA's Special Flood Hazard Areas and Zones may be found at https://msc.fema.gov/portal.

Property Address:
1262 DEER VALLEY PASS
Property Description:
LOT 16, BLOCK 43 OF REBECCA CREEK PARK THIRD FILING, A SUBDIVISION IN COMAL COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 3, PAGES 8-15 OF THE MPA AND PLAT RECORDS OF COMAL COUNTY, TEXAS.

Owner:
BLEED MAROON LLC.

FIRM REGISTRATION NO. 10111700

Westar Alamo
LAND SURVEYORS, LLC.
P.O. BOX 1645 BOERNE, TEXAS 78006
PHONE (210) 372-9500 FAX (210) 372-9999

LEGEND
- ● = FOUND 1" IRON PIPE
- ● = FOUND 1/2" IRON ROD
- ( ) = RECORD INFORMATION
- B.S. = BUILDING SETBACK
- C.M. = CONTROLLING MONUMENT
- ⊛ = POWER POLE
- —E— = OVERHEAD ELECTRIC
- —G— = GUY WIRE
- —x— = WIRE FENCE

STATE OF TEXAS REGISTERED DERRICK L. MAYFIELD 6456 PROFESSIONAL LAND SURVEYOR

I, DERRICK L. MAYFIELD, Registered Professional Land Surveyor, State of Texas, certify that the above plat represents an actual survey made on the ground under my supervision, and that my professional opinion is that there are no discrepancies, conflicts, shortages in area or boundary lines, or any encroachment or overlapping of improvements, except as may appear herein, to the best of my knowledge and belief.

Derrick L. Mayfield

DERRICK L. MAYFIELD
Registered Professional Land Surveyor
Texas Registration No. 6456

G.F. NO.	PS-4416-SD	JOB NO.	132048	DWG: CJ	RVD: DLM	TITLE COMPANY: MCKNIGHT TITLE	DATE: 7/11/2025

Comal AD Property Search

Property Details

Account		
Property ID:	47340	**Geographic ID:** 450400376500
Type:	R	**Zoning:**
Property Use:		
Location		
Situs Address:	1262 DEER VALLEY PASS SPRING BRANCH, TX 78070	
Map ID:		**Mapsco:**
Legal Description:	REBECCA CREEK PARK THIRD FILING, BLOCK 43, LOT 16	
Abstract/Subdivision:	450400-3	
Neighborhood:	(319C602) REBECCA CRK PARK 2	
Owner		
Owner ID:	1024083	
Name:	CASTO CHRISTOPHER A & ADA	
Agent:		
Mailing Address:	4611 HERZOG ST AUSTIN, TX 78723	
% Ownership:	100.0%	
Exemptions:	For privacy reasons not all exemptions are shown online.	

Property Values

Improvement Homesite Value:	$0 (+)
Improvement Non-Homesite Value:	$0 (+)
Land Homesite Value:	$0 (+)
Land Non-Homesite Value:	$10,000 (+)
Agricultural Market Valuation:	$0 (+)
Market Value:	$10,000 (=)
Agricultural Value Loss:	$0 (-)

HS Cap Loss:	$0 (-)
Circuit Breaker:	$0 (-)
Appraised Value:	$10,000
Ag Use Value:	$0

Information provided for research purposes only. Legal descriptions and acreage amounts are for Appraisal District use only and should be verified prior to using for legal purpose and or documents. Please contact the Appraisal District to verify all information for accuracy.

Property Taxing Jurisdiction

Owner: CASTO CHRISTOPHER A & ADA **%Ownership:** 100.0%

Entity	Description	Market Value	Taxable Value	Estimated Tax
046	COMAL COUNTY	$10,000	$10,000	$22.67
046LR	COMAL COUNTY LATERAL ROAD	$10,000	$10,000	$3.75
ES1	(ESD1) COMAL COUNTY EMERGENCY SERVICES DISTRICT NO. 1 (EMS)	$10,000	$10,000	$6.98
ES4	(ESD4) COMAL COUNTY EMERGENCY SERVICES DISTRICT NO. 4 (FIRE)	$10,000	$10,000	$6.68
SCIS	COMAL ISD	$10,000	$10,000	$108.69

GF# PS-4416-SD

GENERAL WARRANTY DEED

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REVOKE 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.

THE STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF COMAL §

THAT THE UNDERSIGNED, **CHRISTOPHER A. CASTO AND ADA CASTO, HUSBAND AND WIFE**, hereinafter referred to as "Grantor", whether one or more, for and in consideration of the sum of TEN DOLLARS ($10.00) cash, and other good and valuable consideration in hand paid by the Grantee, herein named, whose address is **P. O. BOX 17381, SAN ANTONIO, TEXAS 78217-0381**, the receipt and sufficiency of which is hereby fully acknowledged and confessed, has GRANTED, SOLD and CONVEYED, and by these presents does hereby GRANT, SELL and CONVEY unto **BLEED MAROON, LLC, A TEXAS LIMITED LIABILITY COMPANY**, herein referred to as "Grantee", whether one or more, all Grantor's right, title and interest in and to the real property described as follows, to-wit:

LOT 16, BLOCK 43 OF REBECCA CREEK PARK THIRD FILING, A SUBDIVISION IN COMAL COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 3, PAGES 8-15 OF THE MAP AND PLAT RECORDS OF COMAL COUNTY, TEXAS.

Commonly known as: **1262 DEER VALLEY PASS, SPRING BRANCH, TEXAS 78070**

This conveyance, however, is made and accepted subject to any and all validly existing encumbrances, conditions and restrictions, relating to the hereinabove described property as now reflected by the records of the County Clerk of COMAL County, Texas.

TO HAVE AND TO HOLD the above described premises, together with all and singular the rights and appurtenances thereto in anywise belonging unto the said Grantee, Grantee's heirs, executors, administrators, successors and/or assigns forever; and Grantor does hereby bind Grantor's heirs, executors, administrators, successors and/or assigns, to WARRANT AND FOREVER DEFEND all and singular the said premises unto the said Grantee, Grantee's heirs, executors, administrators, successors and/or assigns, against every person whomsoever claiming or to claim the same or any part thereof.

Current ad valorem taxes on said property having been prorated, the payment thereof is assumed by Grantee.

TO BE EFFECTIVE this 15TH day of JULY, 2025.

GRANTOR:

x _____
CHRISTOPHER A. CASTO

x _____
ADA CASTO

ACKNOWLEDGMENT

THE STATE OF Tx §
§
COUNTY OF Travis §

The foregoing instrument was acknowledged before me on the 15 day of JULY, 2025, by **CHRISTOPHER A. CASTO AND ADA CASTO.**

_____
NOTARY PUBLIC, STATE OF Tx
MY COMMISSION EXPIRES: _____

KATHARINE P ANDERSON
Notary Public
STATE OF TEXAS
ID# 126205649
My Comm. Exp. August 12, 2027

AFTER RECORDING, RETURN TO:

BLEED MAROON, LLC
P. O. BOX 17381
SAN ANTONIO, TEXAS 78217-0381

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
07/15/2025 04:27:48 PM
TERRI 2 Pages(s)
202506022070

Bobbie Koepp