COMAL COUNTY

ENGINEER'S OFFICE

License to Operate On-Site Sewage Treatment and Disposal Facility

Issued This Date: **12/06/2023** Permit Number: **116171**

Location Description: 118 RED OAK LN
CANYON LAKE, TX 78133

Subdivision:	Canyon Springs Resort
Unit:	1
Lot:	NW 50' of Lots 8 and 9, Vol. 160, Pg. 42
Block:	14
Acreage:	0.1800

Type of System: Aerobic
Drip Irrigation

Issued to: James Poston and Lynn S. Poston

This license is authorization for the owner to operate and maintain a private facility at the location described in accordance to the rules and regulations for on-site sewerage facilities of Comal County, Texas, and the Texas Commission on Environmental Quality.

The license grants permission to operate the facility. It does not guarantee successful operation. It is the responsibility of the owner to maintain and operate the facility in a satisfactory manner.

Alterations to this permit including, but not limited to:

- Increase in the square feet of living area
- Increase in the number of bedrooms
- A change of use (i.e. residential to commercial)
- Relocation of system components (including the relocation of spray heads)
- Installation of landscaping
- Adding new structures to the system

may require a new permit. **It is the responsibility of the owner to apply for a new permit, if applicable.**

Inspection and licensing of a facility indicates only that the facility meets certain minimum requirements. It does not impede any governmental entity in taking the proper steps to prevent or control pollution, to abate nuisance, or to protect the public health.

This license to operate is valid for an indefinite period. The holder may transfer it to a succeeding owner, provided the facility has not been remodeled and is functioning properly.

Licensing Authority
Comal County Environmental Health

Corey Allen **OS0036769**
ENVIRONMENTAL HEALTH INSPECTOR

B Molina Assistant OS0034792
ENVIRONMENTAL HEALTH COORDINATOR

Comal County Environmental Health
OSSF Inspection Sheet

Installer Name: Winters **OSSF Installer #:** OS0005924

1st Inspection Date: 11/21/23 **2nd Inspection Date:** 11/29/23 **3rd Inspection Date:** 12/6/23

Inspector Name: Corey Allen **Inspector Name:** Corey Allen **Inspector Name:** Corey Allen

Permit#: 116171 **Address:** 118 Red Oak Lane

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
1	SITE AND SOIL CONDITIONS & SETBACK DISTANCES Site and Soil Conditions Consistent with Submitted Planning Materials	X	285.31(a) 285.30(b)(1)(A)(iv) 285.30(b)(1)(A)(v) 285.30(b)(1)(A)(iii) 285.30(b)(1)(A)(ii) 285.30(b)(1)(A)(i)		X		
2	SITE AND SOIL CONDITIONS & SETBACK DISTANCES Setback Distances Meet Minimum Standards	X	285.91(10) 285.30(b)(4) 285.31(d)		X		
3	SEWER PIPE Proper Type Pipe from Structure to Disposal System (Cast Iron, Ductile Iron, Sch. 40, SDR 26)	X	285.32(a)(1)		X		
4	SEWER PIPE Slope from the Sewer to the Tank at least 1/8 Inch Per Foot	X	285.32(a)(3)		X		
5	SEWER PIPE Two Way Sanitary - Type Cleanout Properly Installed (Add. C/O Every 100' &/or 90 degree bends)	X	285.32(a)(5)		X		
6	PRETREATMENT Installed (if required) TCEQ Approved List PRETREATMENT Septic Tank(s) Meet Minimum Requirements		285.32(b)(1)(G) 285.32(b)(1)(E)(iii) 285.32(b)(1)(E)(iv) 285.32(b)(1)(F) 285.32(b)(1)(B) 285.32(b)(1)(C)(i) 285.32(b)(1)(C)(ii) 285.32(b)(1)(D) 285.32(b)(1)(E) 285.32(b)(1)(A) 285.32(b)(1)(E)(ii)(II) 285.32(b)(1)(E)(i) 285.32(b)(1)(E)(ii)(I)				
7	PRETREATMENT Grease Interceptors if required for commercial		285.34(d)				

Inspector Notes: **11/21/23 CA: Tank level no leaks no tightline or tee cover tank**
11/29/23 CA: Operational field to design no tightline not connected to structure
12/6/23 CA:Connected tee installed covered.

Comal County Environmental Health
OSSF Inspection Sheet

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
8	SEPTIC TANK Tank(s) Clearly Marked SEPTIC TANK If SingleTank, 2Compartments Provided withBaffle SEPTIC TANK Inlet Flowline Greater than3" and " T " Provided on Inlet and OutletSEPTIC TANK Septic Tank(s) MeetMinimum Requirements		285.32(b)(1) (E)285.91(2)285.32(b)(1) (F)285.32(b)(1)(E) (iii)285.32(b)(1)(E)(ii) (II)285.32(b)(1)(E)(ii) (I)285.32(b)(1)(E) (i)285.32(b)(1) (D)285.32(b)(1)(C) (ii)285.32(b)(1)(C) (i)285.32(b)(1) (B)285.32(b)(1) (A)285.32(b)(1)(E)(iv)				
9	ALL TANKS Installed on 4" Sand Cushion/ Proper Backfill Used	x	285.32(b)(1)(F) 285.32(b)(1)(G) 285.34(b)		x		
10	SEPTIC TANK Inspection / Clean Out Port & Risers Provided on Tanks Buried Greater than 12" Sealed and Capped		285.38(d)				
11	SEPTIC TANK Secondary restraint system providedSEPTIC TANK Riser permanently fastened to lid or cast into tank SEPTIC TANK Riser cap protected against unauthorized intrusions		285.38(d) 285.38(e)				
12	SEPTIC TANK Tank Volume Installed						
13	PUMP TANK Volume Installed						
14	AEROBIC TREATMENT UNIT Size Installed	x		600	x		
15	AEROBIC TREATMENT UNIT Manufacturer AEROBIC TREATMENT UNIT Model Number	x x		Aqua Klear	x x		
16	DISPOSAL SYSTEM Absorptive		285.33(a)(4) 285.33(a)(1) 285.33(a)(2) 285.33(a)(3)				
17	DISPOSAL SYSTEM Leaching Chamber		285.33(a)(1) 285.33(a)(3) 285.33(a)(4) 285.33(a)(2)				
18	DISPOSAL SYSTEM Drip Irrigation	x	285.33(c)(3)(A)-(F)		x		

Comal County Environmental Health
OSSF Inspection Sheet

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
32	EFFLUENT DISPOSAL SYSTEM Utilized Only by Single Family Dwelling EFFLUENT DISPOSAL SYSTEM Topographic Slopes < 2.0% EFFLUENT DISPOSAL SYSTEM Adequate Length of Drain Field (1000 Linear ft. for 2 bedrooms or Less & an additional 400 ft. for each additional bedroom) EFFLUENT DISPOSAL SYSTEM Lateral Depth of 18 inches to 3 ft. & Vertical Separation of 1ft on bottom and 2 ft. to restrictive horizon and ground water respectfully EFFLUENT DISPOSAL SYSTEM Lateral Drain Pipe (1.25 - 1.5" dia.) & Pipe Holes (3/16 - 1/4" dia. Hole Size) 5 ft. Apart		285.33(b)(3)(A) 285.33(b)(3)(A) 285.33(b)(3) (B)285.91(13) 285.33(b)(3)(D) 285.33(b)(3)(F)				
33	AEROBIC TREATMENT UNIT Is Aerobic Unit Installed According to Approved Guidelines.	X	285.32(c)(1)		X		
34	AEROBIC TREATMENT UNIT Inspection/Clean Out Port & Risers Provided AEROBIC TREATMENT UNIT Secondary restraint system provided AEROBIC TREATMENT UNIT Riser permanently fastened to lid or cast into tank AEROBIC TREATMENT UNIT Riser cap protected against unauthorized intrusions	X X X			X X X		
35	AEROBIC TREATMENT UNIT Chlorinator Properly Installed with Chlorine Tablets in Place.	X			X		
36	PUMP TANK Is the Pump Tank an approved concrete tank or other acceptable materials & construction PUMP TANK Sampling Port Provided in the Treated Effluent Line PUMP TANK Check Valve and/or Anti- Siphon Device Present When Required PUMP TANK Audible and Visual High Water Alarm Installed on Separate Circuit From Pump						
37	PUMP TANK Inspection/Clean Out Port & Risers Provided PUMP TANK Secondary restraint system provided PUMP TANK Riser permanently fastened to lid or cast into tank PUMP TANK Riser cap protected against unauthorized intrusions						
38	PUMP TANK Secondary restraint system provided						
39	PUMP TANK Electrical Connections in Approved Junction Boxes / Wiring Buried	X					

Comal County Environmental Health
OSSF Inspection Sheet

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
40	APPLICATION AREA Distribution Pipe, Fitting, Sprinkler Heads & Valve Covers Color Coded Purple?	X	285.33(d)(2)(G)(iii)(II) 285.33(d)(2)(G)(iii)(III) 285.33(d)(2)(G)(v) 285.33(d)(2)(G)(iii) 285.33(d)(2)(G)(iv) 285.33(d)(2)(G)(i) 285.33(d)(2)(G)(ii) 285.33(d)(2)(G)(iii)(I)				
41	APPLICATION AREA Low Angle Nozzles Used / Pressure is as required APPLICATION AREA Acceptable Area, nothing within 10 ft of sprinkler heads? APPLICATION AREA The Landscape Plan is as Designed	X X	285.33(d)(2)(G) (i)285.33(d)(2) (A)285.33(d)(2)(F)				
42	APPLICATION AREA Area Installed	X					
43	PUMP TANK Meets Minimum Reserve Capacity Requirements						
44	PUMP TANK Material Type & Manufacturer						
45	PUMP TANK Type/Size of Pump Installed						

COMAL COUNTY

ENGINEER'S OFFICE

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

Permit Number:	116171
Issued This Date:	05/15/2023
This permit is hereby given to:	James Poston and Lynn S. Poston

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

118 RED OAK LN
CANYON LAKE, TX 78133

Subdivision:	Canyon Springs Resort
Unit:	1
Lot:	NW 50' of Lots 8 and 9, Vol. 160, Pg. 42
Block:	14
Acreage:	0.1800

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.

RECEIVED
By Kathy Griffin at 2:42 pm, May 02, 2023

COMAL COUNTY
ENGINEER'S OFFICE

ON-SITE SEWAGE FACILITY APPLICATION

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

Date 04/21/2023 Permit Number 116171

1. APPLICANT / AGENT INFORMATION

Owner Name James Poston and Lynn S. Poston
Mailing Address 114 Red Oak Lane
City, State, Zip Canyon Lake, Texas 78133
Phone # 480-390-7444
Email jameslynnposton@cox.net

Agent Name John J. Haag, P.E.
Agent Address 15831 Secret Trails
City, State, Zip San Antonio, Tx. 78247
Phone # 210-705-4268
Email jhaag@satx.rr.com

2. LOCATION

Subdivision Name Canyon Springs Resort Unit 1 Lot 8 and 9 Block 14
Survey Name / Abstract Number NW 50' of Lots 8 and 9, Vol. 160, Pg. 427 Acreage 0.18
Address 118 ~~114~~ Red Oak Lane 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 2
Indicate Sq Ft of Living Area 936

☐ 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: $ 175000 (Structure Only)

Is any portion of the proposed OSSF located in the United States Army Corps of Engineers (USACE) flowage easement?

☐ Yes ☒ No (If yes, owner must provide approval from USACE for proposed OSSF improvements within the USACE flowage easement)

Source of Water ☒ Public ☐ Private Well

4. SIGNATURE OF OWNER

By signing this application, I certify that:
- The completed application and all additional information submitted does not contain any false information and does not conceal any material facts. I certify that I am the property owner or I possess the appropriate land rights necessary to make the permitted improvements on said property.
- Authorization is hereby given to the permitting authority and designated agents to enter upon the above described property for the purpose of site/soil evaluation and inspection of private sewage facilities..
- I understand that a permit of authorization to construct will not be issued until the Floodplain Administrator has performed the reviews required by the Comal County Flood Damage Prevention Order.
- I affirmatively consent to the online posting/public release of my e-mail address associated with this permit application, as applicable.

Signature of Owner

Date Apr 26, 2023

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 John J. Haag, P.E.

System Description Proprietary aerobic drip disposal

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

Tank Size(s) (Gallons) 600 gpd Absorption/Application Area (Sq Ft) 900 min

Gallons Per Day (As Per TCEQ Table III) 180

(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.

J. Haag, P.E. 02PRK
Signature of Designer

05/23/23
Date

Revised July 2018

2 CS

THE COUNTY OF COMAL

202306013154 05/01/2023 09:46:07 AM 1/2

STATE OF TEXAS

CERTIFICATION OF OSSF REQUIRING MAINTENANCE

According to Texas Commission on Environmental Quality (TCEQ) Rules for On- Site Sewage Facilities, this document is filed in the Deed Records of Comal County, Texas.

I

The Texas Health and Safety Code, Chapter 366 authorizes the TCEQ to regulate on-site sewage facilities (OSSFs). Additionally, the Texas Water Code (TWC), § 5.012 and § 5.013, gives the TCEQ 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 TCEQ, under the authority of the TWC and the Texas Health and Safety Code, requires owners to provide notice to the public that certain types of OSSFs are located on specific pieces of property. To achieve this notice, the TCEQ 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 TCEQ of the suitability of this OSSF, nor does it constitute any guarantee by the TCEQ 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:

Legal Description: NW 50' of Lots 8 and 9, Vol. 160, Pg. 427

This property is owned by: James Poston and Lynn S. Poston

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 system for a single family residence shall either obtain a maintenance contract within 30 days or maintain the system personally.

The owner will, upon any sale or transfer of the above-described property, request a transfer of the permit for the OSSF to the buyer or new owner. A copy of the planning materials for the OSSF can be obtained from Comal County.

WITNESS BY HAND(S) ON THIS 26 DAY OF April, 2023.

James Poston (Owner)

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 26 DAY OF April, 2023.

NOTARY PUBLIC STATE OF TEXAS
LORRAINE PELTON
Notary ID #132166653
My Commission Expires
September 10, 2023

Notary Public, State of Texas

DAVID WINTERS SEPTICS, LLC
PO BOX 195
SPRING BRANCH, TX 78070
830-935-2477 OFFICE
830-935-2477 FAX
wintersseptics@gvtc.com

Routine Maintenance and Inspection Agreement

This Work-for-Hire Agreement (hereafter referred to as this "Agreement") is entered into, by, and between James Poston (referred to as "Client") and David Winters Septic's, LLC, Inc. (hereafter referred to as "Contractor") located at 114 Red Oak Ln., Canyon Lake, Tx. 78133 Date beginning on LTO and contract ending _____
By this agreement the Contractor agrees to render professional service, as described herein, and the Client agrees to fulfill the terms of this Agreement as described herein.

This agreement will provide for all required inspections, testing, and service for your Aerobic Treatment System. The policy will include the following:

1. Three (3) inspections per year/service calls (at least one every four months), for a total of six (6) over the two-year period, including inspection, adjustment, and servicing of the mechanical, electrical and other applicable component parts to ensure proper function. This includes inspecting control panel, air pumps, air filters, diffuser operation, and replacing or repairing any component not found to be functioning correctly. Any alarm situations affecting the proper function of the Aerobic process will be addressed within a 48-hour time frame. This contract does not include labor on warranty and non-warranty parts.

2. An effluent quality inspection consisting of a visual check of color, turbidity, scum overflow and examination for odors. A test for chlorine residual and pH will be taken and reported as necessary.

3 If any improper operation is observed, which cannot be corrected at the time of the service visit, you will be notified on your inspection report.

4. The Client is responsible for the chlorine tablets and/or liquid chlorine; they must be filled before or during the service visit.

5. Any additional visits, inspections or sample collection required by specific Municipalities, Water/River Authorities, and County Agencies the TCEQ or any other authorized regulatory agency in your jurisdiction will not be covered by this policy.

At the conclusion of the initial service policy, our company will make available, for purchase on an annual basis, a continuing service policy cover NORMAL inspection, maintenance and repair.

The Homeowners Manual must be strictly followed or warranties are subject invalidation. Pumping of sludge build up is not covered by this policy and will result in additional charges.

This agreement does not cover any labor or parts for items which must be replaced due to acts of God, i.e., lightning strikes, high winds, flooding, freezing.

This agreement DOES NOT COVER materials or parts which must be replaced due to misuse or abuse of the system. These include but are not limited to: Sewage flows exceeding the recommended daily hydraulic design capabilities, Disposal of Non-Biodegradable materials, such as chemicals, grease or oil, sanitary napkins, tampons, baby wipes, disposable diapers, Clogs in the line between the house and the tank.

This agreement DOES NOT COVER LABOR OR PARTS for out- of- warranty items.

ACCESS BY CONTRACTOR
The contractor or anyone authorized by the contractor may enter the property at reasonable times without prior notice for the purpose of service described above.

PAYMENT AGREEMENT
The client will pay compensation to the contractor for the services in the amount of _____. This compensation shall be payable in one lump sum payment upon acceptance of this agreement. Payments not received within 30 days of the above described due date will be subject to a $25.00 late penalty.

TERMINATION OF THIS AGREEMENT
Either party may terminate this agreement within 10 days of written notice in the event of substantial failure to perform in accordance with its terms by other party without fault of the terminating party. If this agreement is terminated, the contractor will immediately notify the appropriate health authority.

LIMIT OF LIABILTY
The Contractor will not be liable for indirect, consequential, incidental or punitive damages, whether in contract or any other theory. In no event shall the Contractor's liability for direct damages exceed the price for the services described in this agreement.

Permit # _____

The effective date of this initial maintenance agreement shall be the date the license to operate is issued.

Client	**Contractor**
James Poston	David Winters Septic's, LLC, Inc. MP0001686
Name	
114 Red Oak Ln.	P.O. Box 195
Address	
Canyon Lake, Texas 78133	Spring Branch, Texas 780170
City/State/Zip Code	
480-390-7444	Office 830-935-2477 Fax 830-935-2477
Phone Number	
	By: David Winters
Signature of Client	Signature of Contractor

ON-SITE SEWAGE FACILITY (OSSF)
SITE EVALUATION FORM

1. OWNER INFORMATION
Property Owner's Full Legal Name: James Poston

2. PROPERTY INFORMATION				
City: Canyon Lake			Zip Code: 78133	
Legal Description: NW 50' of lots 8 & 9				
Lot: NW 8 & 9	Block: 14	Canyon Springs Resort	Unit: 1	Sect:
If not located in subdivision: Survey:				
	Abstract:		Recorded (Vol/Pg): 160/427	

3. SITE EVALUATION INFORMATION:	
Name of Site Evaluator: John J. Haag	PE #: 90158
Date Performed: 04/18/23	Proposed Excavation Depth: Surface

4. REQUIREMENTS:

- At least two soil evaluations must be performed on the site at opposite ends of the proposed disposal area. Locations of soil evaluations must be shown on the application site drawing or designer's site drawing.
- For subsurface disposal, soil evaluations must be performed to a depth of at least 2 feet below the proposed excavation depth. For surface disposal, the surface horizon must be evaluated.

Soil Profile Hole Number: 1					
Depth (ft.)	Textural Class	Gravel Analysis	Drainage (Mottles/Water Table)	Restrictive Horizon	Observations
0	III	<30%	No	Yes	Type III to 8" then limestone
1					
2					
3					
4					
5					

ON-SITE SEWAGE FACILITY (OSSF)
SITE EVALUATION FORM

Soil Profile Hole Number: 2					
Depth (ft.)	Textural Class	Gravel Analysis	Drainage (Mottles/Water Table)	Restrictive Horizon	Observations
0	III	<30%	No	Yes	Type III to 10" then limestone
1					
2					
3					
4					
5					

5. FEATURES OF SITE AREA:

Presence of 100 year flood zone:	☐ Yes	☒ No
Presence of adjacent ponds, streams or water impoundments	☐ Yes	☒ No
Existing or proposed water well in nearby area	☐ Yes	☒ No
Organized sewage available to lot or tract	☐ Yes	☒ No
Recharge features within 150 feet	☐ Yes	☒ No

6. I certify that the above statements are true and correct and are based on my own field observations.

04/18/2023

Haag Engineering Consultants, LLC.
Firm: F-5789

AEROBIC TREATMENT
DRIP TUBING SYSTEM
FOR:
NW 50' OF LOTS 8 & 9, BLOCK 14
CANYON SPRINGS RESORT, UNIT 1

SITE DESCRIPTION:

Located in Canyon Springs Resort, Unit 1, NW 50' of lots 8 & 9, block 14, the proposed system will serve at 2-bedroom, 936 s.f. residence situated with soils per the Site 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 Aquaklear AKA600CA (600 gpd) aerobic treatment plant containing a 600 gallon pretreatment tank and a 800 gallon pump chamber. The pump chamber contains a 0.5 HP Franklin C1-Series-20XC1-05P4-2W115 submersible well pump. The well pump is activated by a Intermatic Model FM1D20-120 time controller (pin timer shall not be used) allowing the distribution ten times per day with the float setting at min. 180 gallons. A high level audible and visual alarm will activate should the pump fail. Distribution is through a self-flushing 100 micron Arkal Disk filter then through a 1" SCH-40 manifold to a minimum 900 sf drip tubing field with Netifim Bioline drip lines approximately two feet apart with 0.61 gph emitters set every two feet as per the attached schematic. A pressure regulator Model PMR35MF 35psi installed in the pump tank on the manifold to the field will maintain pressure at 35 psi. A 1" SCH-40 return line is installed to continuously flush the system by cycling a 1" ball valve. Solids caught in the disk filter are flushed each cycle back to the trash tank. Agricultural Products, Inc. (Model #VBK-1) 1" PVC vacuum breakers installed on the highest point on each manifold will prevent siphoning of effluent from higher to lower parts in the field. The field area shall be scarified and then built up so that a minimum of 12" of Type II or III soil is above any bedrock or type IV soils then the drip tubing shall be laid and capped with a minimum of 6" of Type II or Type III soil (NOT SAND). The field area shall be covered with a Bermuda seeded erosion control mat prior to system startup. The tank must have at grade risers on each opening with watertight caps that must be 65# or have a padlock or can only be removed with tools – all risers shall meet the minimum requirements of 30 TAC 285 effective 12/29/16. A secondary plug, cap or suitable restraint must be provided below riser cap to prevent tank entry should the cap be damaged or removed.

DESIGN SPECIFICATIONS:

Daily flow = Q=180 gpd
Pretreatment tank size: 500 gal
Plant size: Aquaklear AKA600CA (600 gpd) (TCEQ approved)
Pump tank size: 800 gal
Min. Reserve capacity after alarm on position: 60 gal (1/3 - day req'd)
Application rate: Ra=0.2 gal/sf
Total absorption area: Q/Ra = min. 900 sf (1,000 sf actual)
Total linear feet of drip tubing: 500' Netifim Bioline drip tubing 0.61 gph
Pump requirement: 0.5 HP Franklin C1-Series-20XC1-05P4-2W115

Calculation Outputs

Total System Information

Application Area Provided (square feet)	1,000
Total Amount of Bioline® Required (feet)	500
Total Number of Emitters in the Dripfield	250

Zone Information

Number of Zones	1
Amount of Bioline® Per Zone (feet)	500
Number of Emitters Per Zone	250
Minimum Number of Laterals Per Zone	1
Maximum Number of Laterals Per Zone	11
Number of Laterals That Will be Used	2
Maximum Length of Bioline® Laterals Based on Inlet Pressure	391
Flow Rate Per Zone (GPM)	2.5
Holding Capacity of Dripperline Per Zone (Gallons)	6.7
Additional Flow Requirement to Accommodate Flushing Velocity	3.2

Holding Capacity of Piping

Holding Capacity (Gallons) of Supply Line & Supply & Flush Manifolds	3.6
Holding Capacity (Gallons per Zone) of Bioline	6.7
Holding Capacity (Gallons) of Supply Line, Manifolds and Dripperline	10.2

Head Loss Data - Dosing & Flushing Cycle

Friction Loss per 100' (psi) in Supply Line & Manifolds	0.9
Velocity (fps)	2.1
Friction Loss in Supply Line & Supply Manifolds (psi)	0.7
Friction Loss in Supply Line & Supply Manifolds (Feet of Head)	1.6
Additional Pressure Required for Return Manifold and Piping to Tank (psi)	0.9
Additional Pressure Required for Return Manifold and Piping to Tank (Feet of Head)	2.1
TDH (Total Dynamic Head) in Feet of Head	91.5

Control Settings Information

Total System Runtime Per Day (Minutes)	71
Total Runtime Per Zone Per Day (Minutes)	71
Total System Dosing Events Per Day	10
Runtime For Each Dose (Minutes)	7
Off Time Between Doses in the Same Zone (Hours to nearest 0.1)	2.3

Miscellaneous Information

Dosing Volume Per Emitter Per Dose (gallons)	0.08
Inches Per Week of Dosing	2.02
Volume of a Single Dose (gallons)	20.3

Pump Selection

Pump Flow Rating (GPM)	5.7
TDH (Total Dynamic Head in Feet of Head)	91.5
Pump Manufacturer	Franklin
Pump Model	20XC1-05P4-2W115

PIPE AND FITTINGS:

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

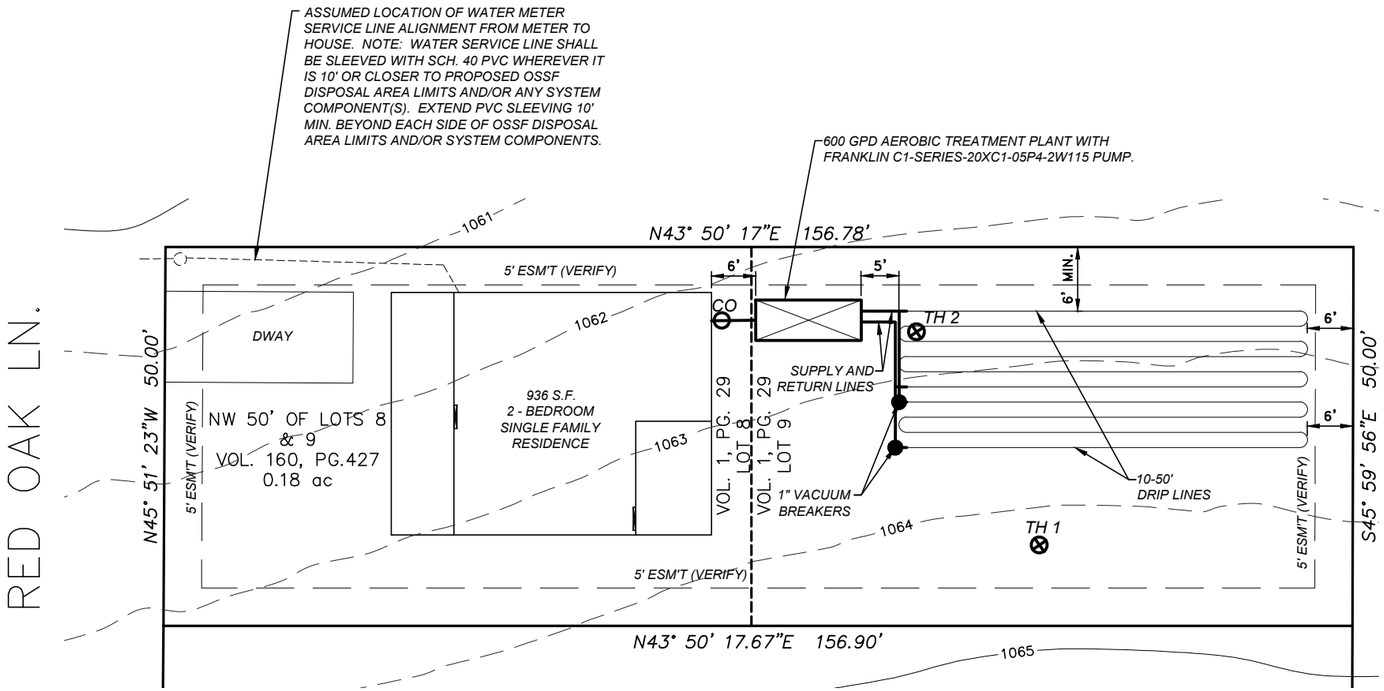
Designed in accordance with Chapter 285, Subchapter D, §285 and §285.40 Texas Commission on Environmental Quality (Revised March 2013).

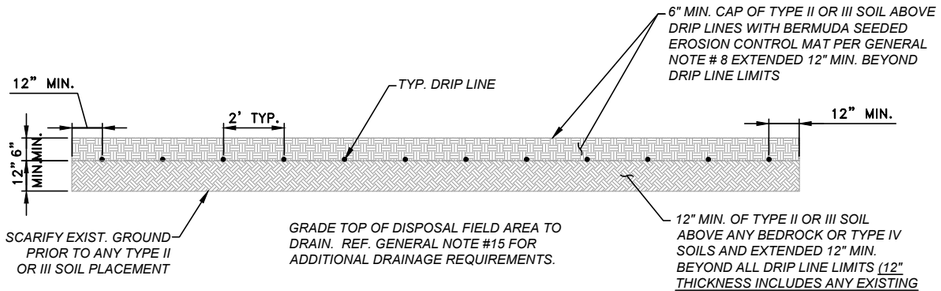
05/02/2023

Haag Engineering Consultants, LLC.
Firm No.: F-5786

GENERAL NOTES:

1. NO VEHICULAR TRAFFIC IS ALLOWED ON ANY PORTION OF THE DISPOSAL SYSTEM, UNLESS THE DESIGN SPECIFIES OTHERWISE.
2. PIPE ALIGNMENT TO THE DISPOSAL BEDS MAY BE ALTERED AS REQUIRED. ANY CHANGE FROM THE PLANS MUST BE APPROVED BY THE ENGINEER AND THE APPROPRIATE GOVERNMENTAL AGENCY(IES).
3. CONTRACTOR SHALL PROTECT TREES WHICH ARE NOT IN THE EXCAVATED CONSTRUCTION AREAS. CONTRACTOR SHALL MINIMIZE ROOT DAMAGE AND REASONABLY ADHERE TO THE DESIGN.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING A MINIMUM OF 1/4" PER FOOT OF FALL FROM THE BUILDING TO THE SEPTIC TANK.
5. NOT AUTOMATIC SPRINKLER SYSTEM SHALL BE INSTALLED OVER THE DISPOSAL AREAS. ANY WATERING IN THESE AREAS SHALL BE DONE BY HAND AND ONLY WHEN REQUIRED TO MAINTAIN GRASS COVER.
6. ALL CONSTRUCTION SHALL CONFORM TO THE RULES AND REGULATIONS OF THE APPROPRIATE AUTHORITY - TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) AND ANY APPLICABLE LOCAL BUILDING AND SAFETY CODES.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE CONSTRUCTION OF THIS SYSTEM.
8. THE DRIP FIELD SHALL BE VEGETATED WITH A BERMUDA SEEDED EROSION CONTROL MAT.
9. FIELDS MUST BE MOWED AT REGULAR INTERVALS. FAILURE TO PROPERLY MAINTAIN VEGETATIVE COVER MAY RESULT IN SYSTEM FAILURE AND SHALL BE THE RESPONSIBILITY OF THE OWNER.
10. ALL PIPES SHALL BE SCHEDULE 40 PVC OR APPROVED EQUAL, UNLESS NOTED OTHERWISE. ALL JOINTS SHALL BE CLEANED WITH THE APPROPRIATE SOLVENT AND GLUED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.
11. ALL POTABLE WATER LINES SHALL BE A MINIMUM OF 10 FEET FROM ANY DISPOSAL SYSTEM OR SEWERAGE PIPE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF WATER LINES LESS THAN 10 FEET FROM THE DISPOSAL AREA.
12. HIGH WATER ALARM SHALL BE LOCATED IN A NOTICEABLE LOCATION. THE ALARM SHALL BE A VISUAL AND AUDIBLE ALARM AND WIRED ON A SEPARATE CIRCUIT FROM THE PUMPS. ALL EXTERIOR CONTROLS AND CONNECTIONS SHALL BE ENCLOSED IN A WEATHER-PROOF HOUSING. ELECTRICAL CONSTRUCTION SHALL COMPLY WITH ALL LOCAL ELECTRICAL AND BUILDING CODES.
13. NO EXCAVATION IS PERMITTED NEAR THE DISPOSAL FIELDS THAT WILL RESULT IN THE NONCOMPLIANCE OF APPLICABLE SETBACKS STATED IN THE RULES AND REGULATIONS OF THE APPROPRIATE AUTHORITY.
14. ONLY GOOD QUALITY SANDY LOAM SHALL BE APPLIED OVER THE DISPOSAL FIELDS. CLAY LOAM IS UNACCEPTABLE AND WILL CAUSE SYSTEM FAILURE. SANDY LOAM SHALL BE DEFINED AS SHOWN IN TABLE VI (USDA SOIL TEXTURAL CLASSIFICATIONS) OF THE RULES AND REGULATIONS OF THE TCEQ. THE INSTALLER IS RESPONSIBLE FOR VERIFYING THE QUALITY OF EACH LOAD OF LOAM PLACED ON THE SYSTEM.
15. STORM WATER (RAINFALL RUNOFF) SHOULD NOT BE ALLOWED TO FLOW OVER THE DISPOSAL FIELDS OR THE TANKS. DIVERSION BERMS, SWALES AND/OR RAIN GUTTERS SHOULD BE INSTALLED AS NECESSARY TO PREVENT SUCH RUNOFF.
16. THE CONTRACTOR IS RESPONSIBLE FOR STAKING AND VERIFYING THE GRADES PRIOR TO EXCAVATION. ANY DISCREPANCIES OF MORE THAN 6 INCHES SHALL BE REPORTED TO THE ENGINEER PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOT DEVIATE FROM THESE PLANS WITHOUT THE WRITTEN CONSENT OF THE APPROPRIATE AUTHORITY AND THE ENGINEER.
17. CONTRACTOR SHALL REPORT TO THE ENGINEER ANY ELEVATION DIFFERENCES GREATER THAN 4 FEET BETWEEN THE HIGHEST AND LOWEST TRENCH IN THE FIELD. THIS SHOULD BE CHECKED PRIOR TO INSTALLING THE LATERALS AND MANIFOLD.
18. THIS DISPOSAL SYSTEM HAS BEEN DESIGNED TO OPERATE PROPERLY AT SPECIFICATIONS NOTED IN THESE PLANS. ALTERATIONS TO THE SYSTEM BY THE OWNER, INCLUDING BUT NOT LIMITED TO LANDSCAPING, DRAINAGE, BUILDING AND/OR WATER USAGE, MAY CAUSE PREMATURE FAILURE AND SHALL BE THE SOLE RESPONSIBILITY OF THE OWNER.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PLUMBING FIXTURES ARE CONNECTED TO THE DESIGNATED SEPTIC TANK(S). LOW FLOW TOILETS (1.6 GAL), SHOWERHEADS AND FAUCETS SHALL BE USED IN THE STRUCTURES.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR JOBSITE SAFETY AND PROTECTION OF THE PUBLIC FROM INJURY DURING CONSTRUCTION. THE OWNER SHALL BE RESPONSIBLE FOR THE PREVENTION OF PERSONAL INJURY TO ANYONE ON OR NEAR THE DISPOSAL SYSTEM.
21. CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL TANKS HAVE ADEQUATE STRENGTH AND INTEGRITY TO PERFORM SATISFACTORILY AS SHOWN ON THESE PLANS.
22. THE WASTEWATER FLOW TO THE SEPTIC SYSTEM SHALL NOT EXCEED THE DESIGN FLOW SHOWN ON THIS PLAN.





DRIP FIELD CROSS SECTION
SCALE: 1"=5'

1" = 20'

STATE OF TEXAS
JOHN J. HAAG
90158
LICENSED
PROFESSIONAL ENGINEER

05/02/23

OSSF LAYOUT
NW 50' OF LOTS 8 AND 9, BLK. 14
CANYON SPRINGS RESORT NO. 1
CANYON LAKE, TEXAS

ADD'L. NOTES:

1. DESIGN DAILY WASTEWATER FLOW = 240 GPD (WATER SAVING DEVICES WERE ASSUMED FOR SEPTIC SYSTEM DESIGN).
2. TOPOGRAPHIC DATA SOURCE: FEMA 2011 DATA
3. INSTALLER SHALL VERIFY ALL EASEMENTS, SETBACKS AND PROPERTY LINE BEARINGS AND DISTANCES PRIOR TO CONSTRUCTION.

NOTE: OSSF IS NOT WITHIN THE EDWARDS AQUIFER RECHARGE ZONE OR FEMA 100 YEAR FLOODPLAIN.
SITE EVALUATION BY JOHN J. HAAG, P.E. ON 04/18/23

DRAWN BY: JJH
CHECKED BY: JJH
DATE: 05/02/23
JOB NO. SUNNY23006

SHEET 1 OF 1

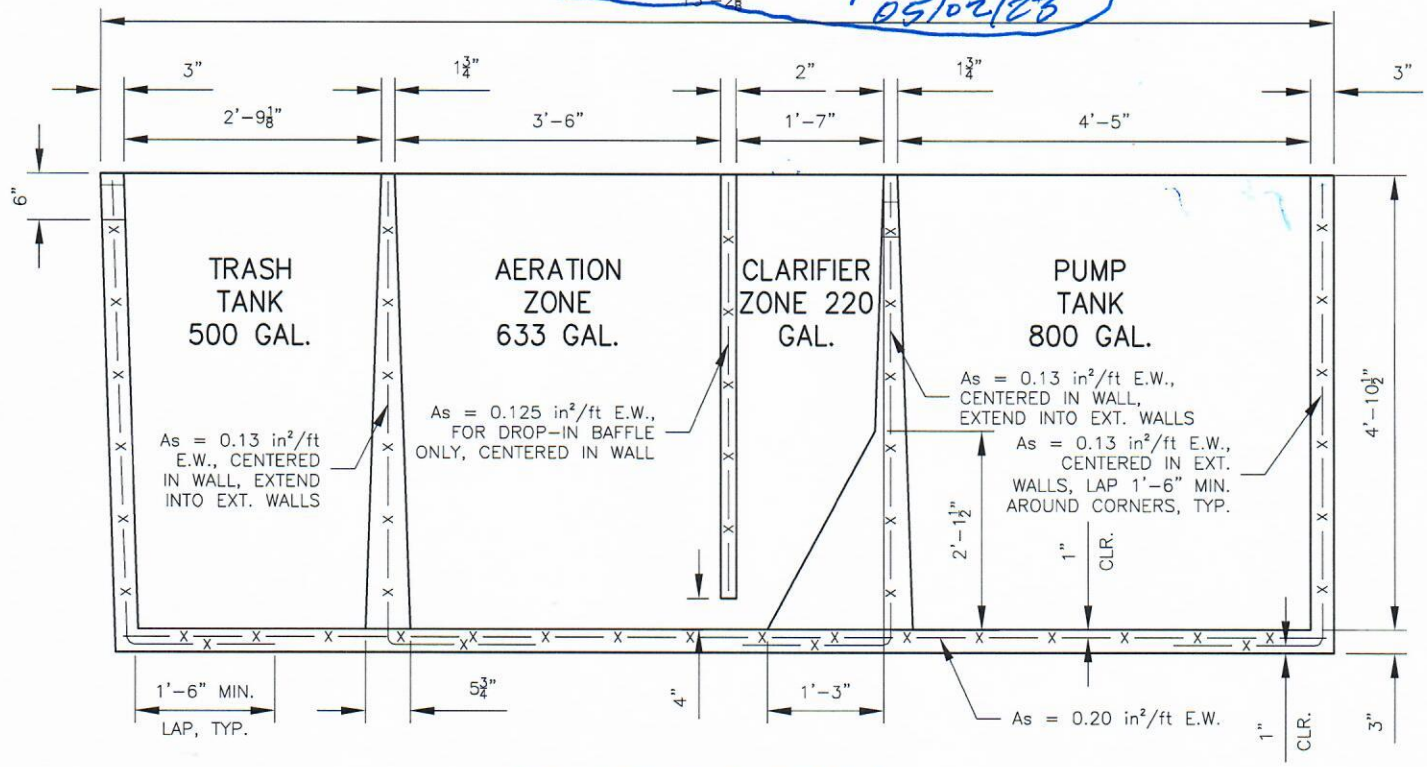
HAAG ENGINEERING CONSULTANTS
15831 SECRET TRAILS
SAN ANTONIO, TEXAS 78247
FIRM: F-5789
TEL: (210) 705-4268

Checked by: JRW

Pump float settings for 180 gpd design flow and min. 60 gal reserve:
Pump off position: 12 inches above tank bottom (184.56gal)
Pump on position: 24 inches above tank bottom (369.12 gal)
Alarm on position: 30 inches above tank bottom (461.40 gal)
338.60 gal reserve capacity at approx. 52 inches above tank bottom

STATE OF TEXAS
JOHN J. HAAG
90158
LICENSED
PROFESSIONAL ENGINEER

J J Haag, PE,
05/02/23



REINFORCING SECTION

REV.NO.	DATE	REVISION

PREPARED FOR:

DAVID WINTERS SEPTIC
P.O. BOX 195
SPRINF BRANCH, TX 78070

PREPARED BY:

DELTA
SPECIALTY PRECAST CONCRETE ENGINEERS
860 HOOPER ROAD, ENDWELL, NY 13760-1564
PHONE(607)231-6600 FAX(607)231-6650

DATE: 09/20/2021	SHEET TITLE: REINFORCING SECTION	DRWN BY: CCFH	
SCALE: N.T.S.		CKD BY:	
PROJECT: AQUAKLEAR WASTEWATER TREATMENT SYSTEM MODEL AKA600CA			
CONTRACTOR:		DWG. I.D. RS-02	
DELTA PROJ. NO.: 2021.750.001		SHT. NO. 2 OF 2	

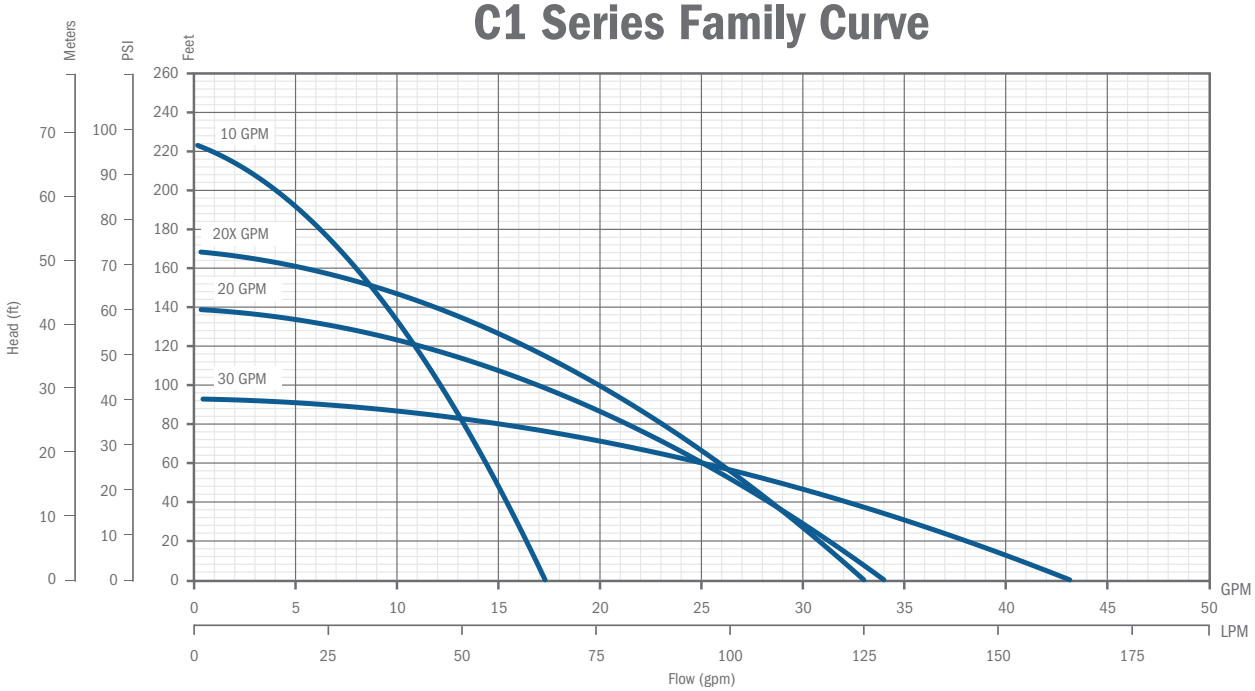
C1 SERIES
CISTERN PUMPS

Designed for use in gray water / filtered effluent service applications, the C1 Series cistern pump provides high performance and long life in less than ideal water conditions. The C1 Series pump is able to pass solids up to 1/8" without having a negative effect on the internal hydraulic components.

The pump's unique bottom suction design allows for maximum fluid drawdown without compromising durability or overall life, and it does not require the use of a flow induction sleeve. Intended specifically for use in a cistern or tank, C1 Series pumps are suitable for use in agricultural, residential, and commercial installations.

Franklin Electric

C1 Series Family Curve



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, ½ hp motor
- Fluid flows of 10, 20, and 30 gpm, with a max shut-off pressure of over 100 psi
- Heavy duty 600 V 10 foot SJOOW jacketed lead

APPLICATIONS

- Gray water pumping
- Filtered effluent service water pumping
- Water reclamation projects such as pumping from rain catchment basins
- Aeration and other foundation or pond applications
- Agriculture and livestock water pumping

ORDERING INFORMATION

C1 Series Pumps							
GPM	HP	Volts	Stage	Model No.	Order No.	Length (in)	Weight (lbs)
10	1/2	115	7	10C1-05P4-2W115	90301005	26	17
		230	7	10C1-05P4-2W230	90301010	26	17
20		115	5	20C1-05P4-2W115	90302005	25	16
		230	5	20C1-05P4-2W230	90302010	25	16
20X		115	6	20XC1-05P4-2W115	90302015	26	17
		230	6	20XC1-05P4-2W230	90302020	26	17
30		115	4	30C1-05P4-2W115	90303005	25	16
		230	4	30C1-05P4-2W230	90303010	25	16

Note: All units have 10 foot long SJOOW leads.

Project:

Location:

Product Type:

Contact/Phone:

Model #:

FM1D20 Series

One Channel Panel Mount

The FM1D20 Series One Channel Electronic Time Switches are compact electronic 24-Hour/7-Day modules with heavy-duty relay contacts for switching low or line voltage loads. The timers are applicable for time-of-day control of pumps, fans, heaters, HVAC control circuits, lighting, machinery and many other types of commercial, industrial, and agricultural equipment.

FM1D20-120

Features

- 24-Hour or 7-Day applications
- 20 setpoint programs
- 3 preset adjustable block programs
- Easy-to-follow menu driven programming
- Manual override with status indication
- Battery backup
- Large LCD

Ratings

Size:	2.37" x 2.37" (60.1 mm x 60.1 mm)
Power Consumption:	4VA
Supply Voltage:	24, 120, 240 VAC
Switch Rating:	SPDT relay
N.O. Contact:	½ HP, 120 VAC 1 HP, 240 VAC 12A, Ballast 120 VAC 8A, Ballast 240 VAC 720 VA, 240 VAC Pilot Duty 360 VA, 120 VAC Pilot Duty 600W, Tungsten 120 VAC 1000W, Tungsten 240 VAC
N.C. Contact:	16A, 277 VAC Resistive 8A, 24 VDC Pilot Duty 360 VA, 120 VAC Pilot Duty
Wiring Connections:	¼" quick connect terminals
Operating Temperature:	-13ºF to 131ºF (-25ºC to 55ºC) (limited display function at -13˚F)
Shipping Weight:	.10 lbs
Warranty:	Limited 1 year

CALIFORNIA TITLE 24 COMPLIANT

c UL us

#E10694

FM1D20 Series

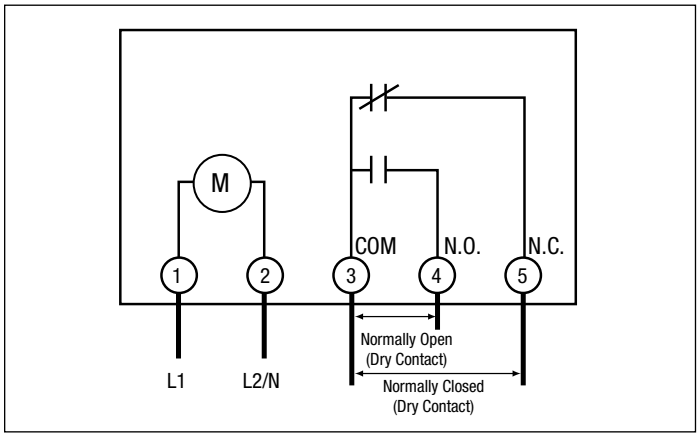
Model Number	Voltage	Programs	Mounting
FM1D20-24*	24 VDC, 50/60Hz	20	Panel
FM1D20-120	120 VAC, 50/60Hz	20	Panel
FM1D20-240	240 VAC, 50/60Hz	20	Panel

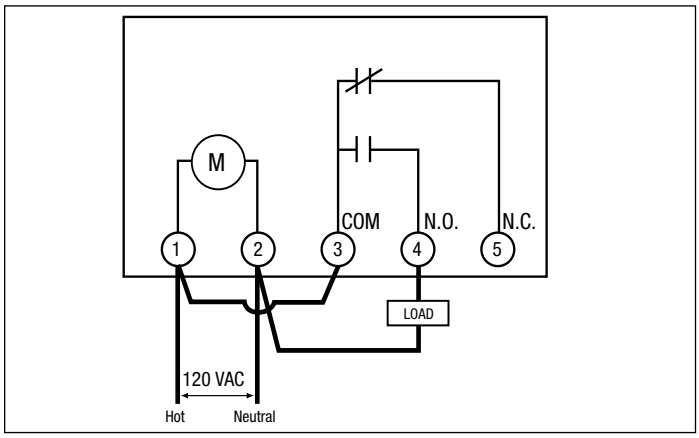
*24V model will operate on AC or DC

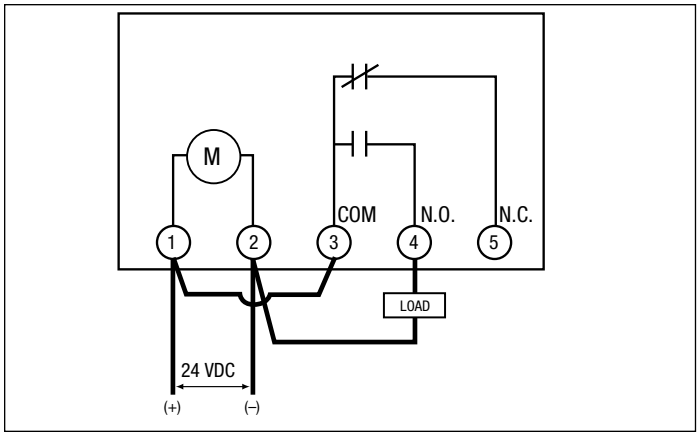
Specification

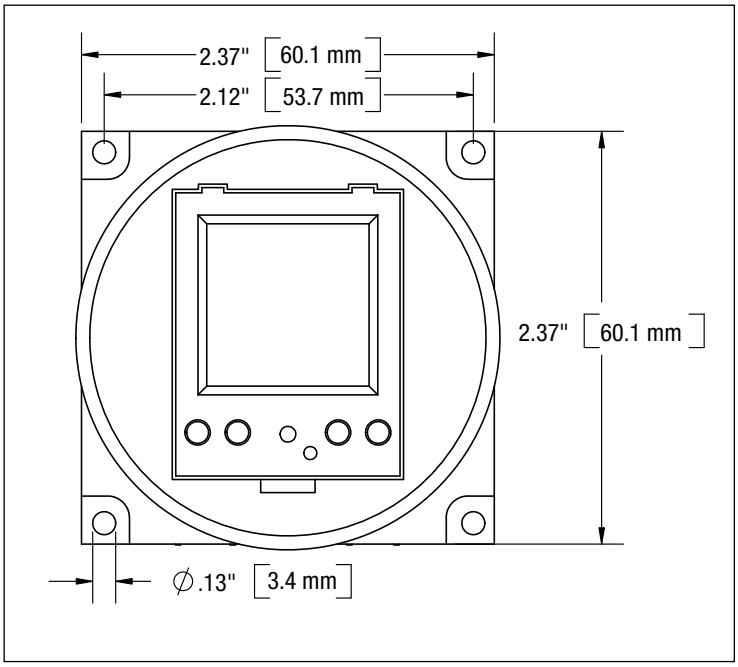
Furnish and install a Grässlin FM1D20____24-Hour/7-Day electronic time switch. This 1-circuit control shall have 24-Hour/7-Day programming, 10 ON and 10 OFF setpoint programs, and 3 preset block programs to allow a selection of any combination of days for different weekday schedules. The LCD shall display time of day in AM/PM or 24-Hour (military time) format. A Daylight Saving Time adjustment button shall also be provided. The time switch will be programmable to-the-minute and also offer a manual override for temporary ON or OFF to the next scheduled event. The LCD shall provide load status indication. The SPDT relay output will be rated for 16A Resistive @277 VAC. Reserve carryover of 7 years (non-replaceable, non-rechargeable battery).

Diagrams









NETAFIM™

1" SUPER/LONG MANUAL DISC FILTER

INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

FEATURES

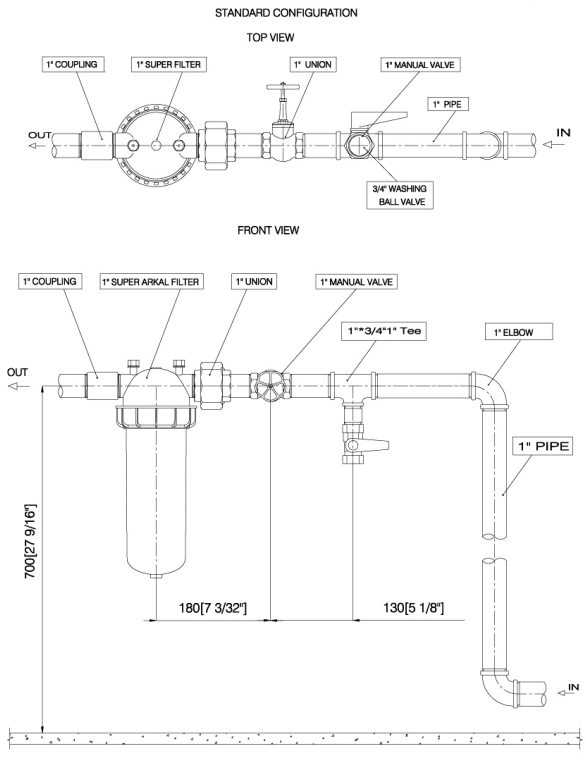
- A "T' shaped reinforced plastic filter with two 1" male connections.
- Filter element consists of grooved discs, mounted on a spine, forming a cylindrical filter element. The discs are compressed together by a spring located at the bottom of the filter cover.
- Screw-on filter cover.
- Resistant to chemicals and liquid fertilizers.
- Available filtration grades: 040, 080, 120, 140 and 200.

TECHNICAL DATA	
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
MAXIMUM TEMPERATURE	158° F
pH	5 - 11

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

INSTALLATION

1. Filter can be installed either vertically or horizontally.
2. Use Teflon tape on filter threads - Do Not Use Pipe Dope.
3. Ensure correct inlet/outlet direction.
4. When connecting filter to pipe, do not overtighten.
5. Never use spanners for tighening the filter cover.



MAINTENANCE AND CLEANING

DISMANTLING

1. Ensure system is turned off and no pressure remains in the pipeline.
2. Unscrew cover from the filter body.
3. Pull out entire filter element.

CLEANING

1. Move tightening ring to end of spine and flush discs with pressurized water.
2. If discs are not clean after flushing with water:
   a. If the discs have an accumulation of algae in the grooves, soak the discs and spine in a small bucket of Clorox bleach for one hour and then reflush with fresh water.
   b. If the discs have an accumulation of iron in the grooves, soak the discs and spine in a small bucket of 10% Muriatic Acid for one hour and then reflush with fresh water. Muriatic Acid can be purchased at any pool supply store.

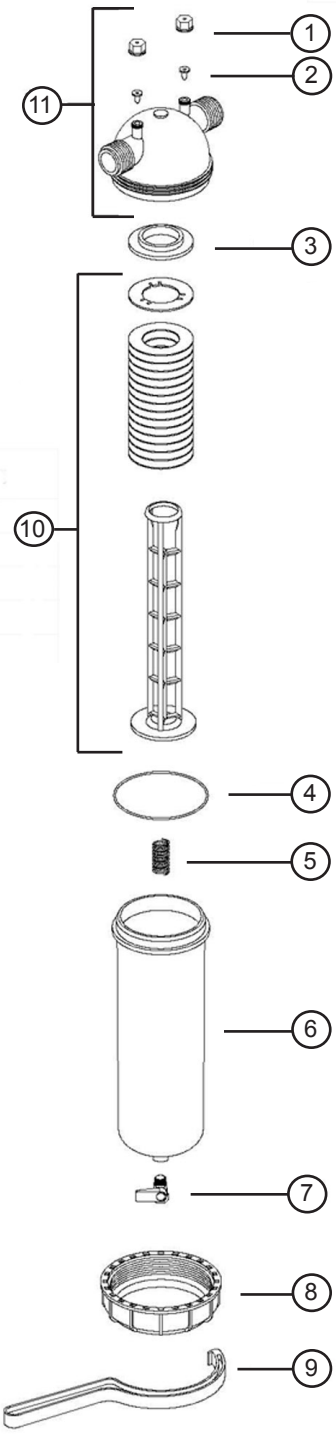
MAINTENANCE AND CLEANING

ASSEMBLY

1. Verify that spring is in place inside the filter cover.
2. Insert filter element and make sure it is seated correctly.
3. Replace cover.
4. Tighten filter cover securely by turning the fixing nut clockwise and do not overtighten.

WINTERIZATION

Drain all the water from the filter to avoid cracking due to freezing.



PARTS BREAKDOWN - 1" SUPER/LONG FILTER

KEY	MODEL NUMBER	DESCRIPTION	MATERIALS
1	SEE # 11	GAUGE PORT NUT	R.PP
2	SEE # 11	GAUGE PORT SEAL	EPDM
3	-	FILTER ADAPTER RING	R.PA
4	25AP531140	COVER O RING	NR
5	25AP50440011	COMPRESSION SPRING	SS
6	25AP23113	FILTER COVER	R.PA
7	-	1/4" TAP (OPTIONAL)	BRASS
8	25AP231131	FIXING NUT	R.PA
9	25AP131199	FILTER WRENCH	R.PA
10	25AP21121-***	RING SET WITH SPINE	PP
11	25AP25000101	FILTER BODY COMPLETE	-

Substitute *** for proper mesh size.

MATERIALS KEY

CODE	MATERIAL
SS	STAINLESS STEEL
PP	POLYPROPYLENE
NR	NITRILE RUBBER
R.PP	REINFORCED POLYPROPYLENE
R.PA	REINFORCED POLYAMIDE
EPDM	ETH. PROPY. RUBBER

NETAFIM™
GROW MORE WITH LESS

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

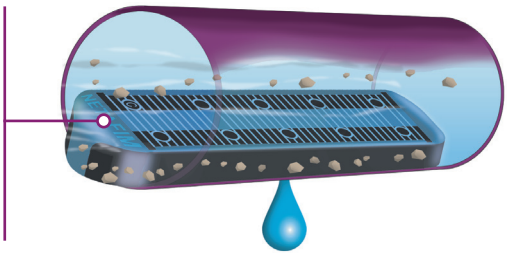
WASTEWATER DIVISION

BIOLINE® DRIPLINE

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

CROSS SECTION OF BIOLINE DRIPLINE

Bioline dripper inlets are positioned in the center of flow where water is the cleanest



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. Water exits dripper in one location while exiting the tubing in another.
- 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.
- Anti-bacterial-impregnated drippers - prevents buildup of microbial slime.
- Can be used subsurface - Bioline can be installed on-surface, under cover or subsurface.
- No special storage requirements - does not degrade if stored outdoors.
- Techfilter compatible - an optional level of protection, provides a limited lifetime warranty against root intrusion.

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 (stainless steel clamps recommended above 50 psi)
- Maximum recommended system pressure: 50 psi
- Tubing diameter: 0.66" OD, 0.57" 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 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 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 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 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 0.5 fps FLUSH VELOCITY

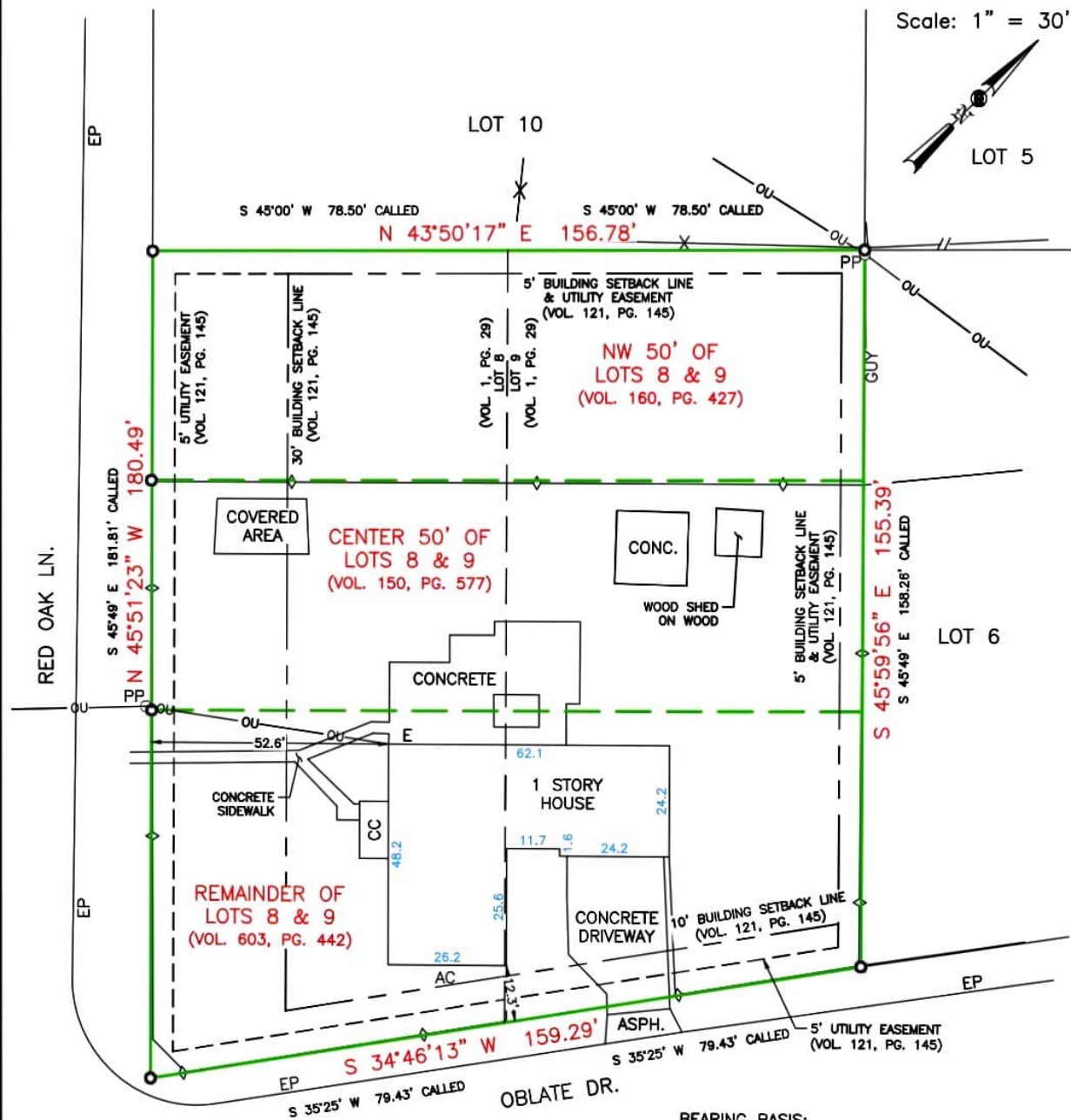
ADDITIONAL FLOW OF 0.4 GPM REQUIRED PER LATERAL TO ACHIEVE 0.5 fps

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.



LEGEND:

CC	COVERED CONCRETE
E	ELECTRIC METER
EP	EDGE OF PAVEMENT
PP	POWER POLE
AC	AIR CONDITIONER
OU	OVERHEAD UTILIY
	WOOD FENCE
	WIRE FENCE
	CHAINLINK FENCE
o	1/2" IRON ROD FOUND (UNLESS NOTED)

SURVEY PLAT SHOWING LOTS 8 AND 9, BLOCK 14, CONYON SPRINGS RESORT UNIT 1, COMAL COUNTY, TEXAS, AS RECORDED IN VOLUME 2, PAGE 15, MAP AND PLAT RECORDS, COMAL COUNTY, TEXAS. FURTHER BEING CONVEYED IN DOCUMENT NO. 202106044064, OFFICIAL PUBLIC RECORD, COMAL COUNTY, TEXAS.

BEARING BASIS:
TEXAS STATE PLANE COORDINATE SYSTEM GRID, SOUTH CENTRAL ZONE (FIPS 4204) (NAD'83), AS DETERMINED BY THE GLOBAL POSITIONING SYSTEM (GPS)

ADDRESS: 114 RED OAK LANE

REFERENCES:
VOL. 1, PG. 29
VOL. 121, PG. 145
VOL. 150, PG. 577
VOL. 160, PG. 427
VOL. 603, PG. 442
DOC. #202106044064

STATE OF TEXAS
REGISTERED
RICHARD A. GOODWIN
4069
PROFESSIONAL LAND SURVEYOR

NOTE: THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT. THERE MAY BE OTHER MATTERS OF RECORD AFFECTING THIS PROPERTY THAT WOULD BE SHOWN ON SAID REPORT. THE SURVEYOR HAS NOT ABSTRACTED THE SUBJECT PROPERTY.

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND, AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAT CORRECTLY REPRESENTS THE FACTS FOUND AT THE TIME OF THIS SURVEY AND THAT THERE ARE NO VISIBLE EASEMENTS OR ENCROACHMENTS OF BUILDINGS ON ADJOINING PROPERTY AND THAT ALL BUILDINGS ARE WHOLLY LOCATED ON THIS PROPERTY EXCEPT AS SHOWN ABOVE.

R A Goodwin

RICHARD A. GOODWIN
REGISTERED PROFESSIONAL LAND SURVEYOR

4069
TEXAS REGISTRATION NO.

JOB # 202-200-223
DATE: 9/16/22

Trihydro CORPORATION
New Braunfels Branch Office
Texas Survey Firm 10194320
1672 Independence Dr., Ste 315
New Braunfels, Texas 78132
(P) 830/625.0337 (F) 830/626.3601

SHERWOOD SURVEYING & S.U.E.
UTILITIES | RESIDENTIAL | COMMERCIAL | INDUSTRIAL
6477 FM 311, P.O. BOX 992 TBPLS FIRM#10044200
SPRING BRANCH, TEXAS 78070
PHONE (830) 228-5788 FAX (830) 885-2170

NO. 89204 - WARRANTY DEED. CANYON SPRINGS RESORT, INC. TO RALPH A. BEESON ET UX.

WARRANTY DEED

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

That CANYON SPRINGS RESORT, INC., a Corporation, acting herein by and through its officers thereunto duly authorized, of the county of Bexar, State of Texas, for and in consideration of the sum of TEN AND NO/100 * * * * * * * * * * * * * * * ($10.00) DOLLARS, and other good and valuable considerations, to it in hand paid by the grantee herein named, the receipt of which is hereby acknowledged, have GRANTED, SOLD AND CONVEYED, and by these presents do GRANT, SELL AND CONVEY unto RALPH A. BEESON and wife, JOYCE E.
6921 Security Wing, Box 178, APO S.F. 96210
of the County of Bexar State of Texas

all of the following described real property situated, in Comal County, Texas, to-wit:

The NW 50. feet of Lot 8 and Lot 9, Block 14, Unit I, Canyon Springs Resort according to plat recorded in Volume 2, Pages 15 and 16, of the Map and Plat Records of Comal County, Texas, and more particularly described as follows:

BEGINNING at an iron pin the southwest corner of Lot 10, the northwest corner of Lot 8, Block 14;

THENCE N44°-11'E, 157.0 feet to an iron pin the northeast corner of Lot 9, Block 14, the southwest corner of Lot 5, Block 15;

THENCE S45°-49'E, 50.0 feet to an iron pin;

THENCE S44°-11'W, 157.0 feet to an iron pin in the NE line of Red Oak Lane;

THENCE N45°-49'W, 50.0 feet to the PLACE OF BEGINNING.

This conveyance is made subject to Restrictions of Record in Comal County Deed Records affecting said property, Volume 121, Pages 145-149;

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, their heirs and assigns forever; and the said Grantor does hereby bind itself, its successors and assigns to WARRANT AND FOREVER DEFEND all and singular the said premises unto the said grantee, their heirs and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof.

EXECUTED this 27th day of December, A.D. 1967.

CANYON SPRINGS RESORT, INC.,

By Ruth L. Slocum
Vice President

ATTEST: Ruth L. Slocum
Acting Secretary

VOL 160 PAGE 428

THE STATE OF TEXAS
COUNTY OF BEXAR }

Before me, the undersigned authority, on this day personally appeared Ruth I. Slocum, Vice President, of CANYON SPRINGS RESORT, INC. known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that the same was the act of the said CANYON SPRINGS RESORT, INC., a corporation, and that he executed the same as the act of such corporation for the purposes and consideration therein expressed, and in the capacity therein stated.

Given under my hand and seal of office, this the 28th day of December, A. D. 19 67

Marie Mesrata
Notary Public in and for Bexar County, Texas.
MARIE MESRSTA
Notary Public, Bexar County, Texas

REVISED 10-60

Filed for Record January 5, A. D. 1968, at 4:20 o'clock P. M.
Recorded January 8, A. D. 1968, at 4:40 o'clock A. M.
By Nellie Mae Weickert, Deputy.
Irene S. Nuhn
County Clerk, Comal County, Texas

S+C 1337099 MW 202106044064 08/20/2021 09:13:35 AM 1/4

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

Warranty Deed with Vendor's Lien

Date: August 19, 2021

Grantor: JEFFREY DAVID BACHUS and CASEY NICOLE BACHUS

Grantor's Mailing Address:

908 Bio Verde
New Braunfels, TX 78130
Comal County

Grantee: JAMES POSTON and LYNN S. POSTON, a married couple

Grantee's Mailing Address:

114 Red Oak Ln
Canyon Lake, TX 78133
Comal County

Consideration:

Cash and a note of even date executed by Grantee and payable to the order of TEXAS PARTNERS BANK, A TEXAS STATE BANK DBA THE BANK OF SAN ANTONIO in the principal amount of TWO HUNDRED THIRTY-TWO THOUSAND SEVEN HUNDRED FIFTY AND NO/100 DOLLARS ($232,750.00). The note is secured by a first and superior vendor's lien and superior title retained in this deed in favor of TEXAS PARTNERS BANK, A TEXAS STATE BANK DBA THE BANK OF SAN ANTONIO and by a first-lien deed of trust of even date from Grantee to BRENT R. GIVEN, trustee.

Property (including any improvements):

BEING a 0.43 acre tract of land, out of the GEORGE BURKHARDT SURVEY NUMBER 932, ABSTRACT NUMBER 806, Comal County, Texas, being the remainder of all of Lots 8 and 9, Block 14, CANYON SPRINGS RESORT NO. 1 SUBDIVISION, according to plat thereof, recorded in Volume 2, Page 15, Map and Plat Records of Comal County, Texas, said tract being more particularly described in Exhibit "A" attached hereto.

Reservations from and 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 2021, which Grantee assumes and agrees to pay, and subsequent assessments for that and prior years due to change in land usage, ownership, or both, the payment of which Grantee assumes.

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

GRANTEE IS TAKING THE PROPERTY IN AN ARM'S-LENGTH AGREEMENT BETWEEN THE PARTIES. THE CONSIDERATION WAS BARGAINED ON THE BASIS OF AN "AS IS" TRANSACTION AND REFLECTS THE AGREEMENT OF THE PARTIES THAT THERE ARE NO REPRESENTATIONS OR EXPRESS OR IMPLIED WARRANTIES.

The vendor's lien against and superior title to the Property are retained until each note described is fully paid according to its terms, at which time this deed will become absolute.

TEXAS PARTNERS BANK, A TEXAS STATE BANK DBA THE BANK OF SAN ANTONIO, at Grantee's request, has paid in cash to Grantor that portion of the purchase price of the Property that is evidenced by the note. The first and superior vendor's lien against and superior title to the Property are retained for the benefit of TEXAS PARTNERS BANK, A TEXAS STATE BANK DBA THE BANK OF SAN ANTONIO and are transferred to TEXAS PARTNERS BANK, A TEXAS STATE BANK DBA THE BANK OF SAN ANTONIO without recourse against Grantor.

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

GRANTOR:

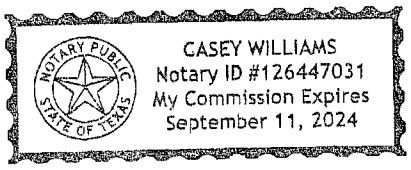
JEFFREY DAVID BACHUS

CASEY NICOLE BACHUS

STATE OF TEXAS)

COUNTY OF Comal)

This instrument was acknowledged before me on August 19, 2021, by JEFFREY DAVID BACHUS.

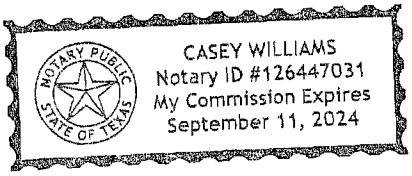


Casey L Williams
Notary Public, State of Texas

STATE OF TEXAS)

COUNTY OF Comal)

This instrument was acknowledged before me on August 19, 2021, by CASEY NICOLE BACHUS.



Casey L Williams
Notary Public, State of Texas

AFTER RECORDING RETURN TO:
JAMES POSTON and LYNN S. POSTON
114 Red Oak Ln
Canyon Lake, TX 78133
GF: 1337099

Order No. 150-2167878-09

Exhibit "A"

BEING a 0.43 acre tract of land, out of the GEORGE BURKHARDT SURVEY NUMBER 932, ABSTRACT NUMBER 806, Comal County, Texas, being the remainder of all of Lots 8 and 9, Block 14, CANYON SPRINGS RESORT NO. 1 SUBDIVISION, according to plat thereof, recorded in Volume 2, Page 15, Map and Plat Records of Comal County, Texas, consisting of all of a called Tract 1, described as the Northwest 50 feet of said Lots 8 and 9, in a deed recorded in Volume 160, Page 427, Deed Records of Comal County, Texas, all of a called Tract 2, described as the center 50 feet of said Lots 8 and 9, in a deed recorded in Volume 150, Page 577, Deed Records of Comal County, Texas and all of the remaining portion of said Lots 8 and 9, as described in Volume 603, Page 442, Deed Records of Comal County, Texas, less the right of way of Oblate Drive, as monumented and not as shown on said plat and being a portion of the same tract as described in a Special Warranty Deed to James E. Manker, Sr., recorded in Document 201206027229, Official Public Records of Comal County, Texas, said tract being more particularly described as follows:

BEGINNING at a found 1/2" iron rod, on the East R.O.W. of Red Oak Lane (50" R.O.W.), for the South corner of Lot 10, of said CANYON RESORT UNIT 1 SUBDIVISION, also being the West corner of said Lot 8, same being the West corner of herein described tract;

THENCE, departing said East R.O.W. of Red Oak Lane, along the common boundary line of said Lot 10 and said Lot 8, passing the common corner of said Lots 8 and 9, same being the Northwest line of the herein described tract, North 43° 57' 08" East, 157.08 feet (North 44° 11' East, 157.0 feet, per deed), to a 1/2" iron rod found for the North corner of the herein described tract, the common corner of Lot 5, Lot 6, Lot 9 and Lot 10, of said CANYON SPRINGS RESORT UNIT 1 SUBDIVISION;

THENCE, along the common line of said Lot 6 and Lot 9, same being the Northeast line of the herein described tract, South 45° 55' 28" East, 105.46 feet (157.56 feet, per plat), to a 1/2" iron rod found for the East corner of the herein described tract, the East corner of Lot 9, the South corner of Lot 6, a point in the Northwesterly R.O.W. line of Oblate Drive (a 65' R.O.W.), as built and monumented and not as described by above said plat;

THENCE, along and with said monumented R.O.W. line, crossing said Lots 8 and 9, same being the Southeast line of the herein described tract, South 34° 51' 48" West, passing the common corner of said Lot 8 and Lot 9, and continuing for a total distance of 158.77 feet (South 35° 25' West, 158.86 feet, per plat), to a capped 1/2" iron rod set for the South corner of the herein described tract, the South corner of said remainder of Lot 8, the intersection of the Northwesterly R.O.W. line of said Oblate Drive, as monumented and the Northeasterly R.O.W. line of said Red Oak Lane;

THENCE, along the Northeasterly R.O.W. line of said Red Oak Lane, same being the Southwest line of the herein described tract, North 46° 04' 56" West, 130.54 feet (181.77 feet, per plat) to the POINT OF BEGINNING, containing 0.43 acres, more or less.

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
08/20/2021 09:13:35 AM
TERRI 4 Pages(s)
202106044064

Bobbie Koepp

Order No. 150-2167878-09

Exhibit "A"

BEING a 0.43 acre tract of land, out of the GEORGE BURKHARDT SURVEY NUMBER 932, ABSTRACT NUMBER 806, Comal County, Texas, being the remainder of all of Lots 8 and 9, Block 14, CANYON SPRINGS RESORT NO. 1 SUBDIVISION, according to plat thereof, recorded in Volume 2, Page 15, Map and Plat Records of Comal County, Texas, consisting of all of a called Tract 1, described as the Northwest 50 feet of said Lots 8 and 9, in a deed recorded in Volume 160, Page 427, Deed Records of Comal County, Texas, all of a called Tract 2, described as the center 50 feet of said Lots 8 and 9, in a deed recorded in Volume 150, Page 577, Deed Records of Comal County, Texas and all of the remaining portion of said Lots 8 and 9, as described in Volume 603, Page 442, Deed Records of Comal County, Texas, less the right of way of Oblate Drive, as monumented and not as shown on said plat and being a portion of the same tract as described in a Special Warranty Deed to James E. Manker, Sr., recorded in Document 201206027229, Official Public Records of Comal County, Texas, said tract being more particularly described as follows:

BEGINNING at a found 1/2" iron rod, on the East R.O.W. of Red Oak Lane (50" R.O.W.), for the South corner of Lot 10, of said CANYON RESORT UNIT 1 SUBDIVISION, also being the West corner of said Lot 8, same being the West corner of herein described tract;

THENCE, departing said East R.O.W. of Red Oak Lane, along the common boundary line of said Lot 10 and said Lot 8, passing the common corner of said Lots 8 and 9, same being the Northwest line of the herein described tract, North 43° 57' 08" East, 157.08 feet (North 44° 11' East, 157.0 feet, per deed), to a 1/2" iron rod found for the North corner of the herein described tract, the common corner of Lot 5, Lot 6, Lot 9 and Lot 10, of said CANYON SPRINGS RESORT UNIT 1 SUBDIVISION;

THENCE, along the common line of said Lot 6 and Lot 9, same being the Northeast line of the herein described tract, South 45° 55' 28" East, 105.46 feet (157.56 feet, per plat), to a 1/2" iron rod found for the East corner of the herein described tract, the East corner of Lot 9, the South corner of Lot 6, a point in the Northwesterly R.O.W. line of Oblate Drive (a 65' R.O.W.), as built and monumented and not as described by above said plat;

THENCE, along and with said monumented R.O.W. line, crossing said Lots 8 and 9, same being the Southeast line of the herein described tract, South 34° 51' 48" West, passing the common corner of said Lot 8 and Lot 9, and continuing for a total distance of 158.77 feet (South 35° 25' West, 158.86 feet, per plat), to a capped 1/2" iron rod set for the South corner of the herein described tract, the South corner of said remainder of Lot 8, the intersection of the Northwesterly R.O.W. line of said Oblate Drive, as monumented and the Northeasterly R.O.W. line of said Red Oak Lane;

THENCE, along the Northeasterly R.O.W. line of said Red Oak Lane, same being the Southwest line of the herein described tract, North 46° 04' 56" West, 130.54 feet (181.77 feet, per plat) to the POINT OF BEGINNING, containing 0.43 acres, more or less.

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
05/01/2023 09:46:07 AM
TERRI 2 Page(s)
202306013154

Bobbie Koepp

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
08/20/2021 09:13:35 AM
TERRI 4 Pages(s)
202106044064

Bobbie Koepp

CCEO COPY

From: Boyd, Robert
To: Ritzen, Brenda
Cc: Olvera,Brandon
Subject: RE: 114 Red oak lane
Date: Tuesday, April 25, 2023 12:36:22 PM
Attachments: image002.png

Brenda,

In reviewing this further, the 0.18 acre tract did exist in 1967 (Volume 160 Page 427) and then was put back together. The 0.43 acre tract in the current deed references that old piece of property. So they can apply for the 0.18 acre tract and highlighting that property in the legal description in their current deed.

They are going to get a new address for the 0.18 acre tract and then they will apply for the OSSF permit.

Thanks.

Robert Boyd, P.E.
Comal County Assistant Engineer
Work: 830-608-2090
Cell: 830-358-0516

From: Boyd, Robert
Sent: Monday, April 24, 2023 12:08 PM
To: Ritzen, Brenda <rabbjr@co.comal.tx.us>
Cc: Olvera,Brandon <Olverb@co.comal.tx.us>
Subject: RE: 114 Red oak lane

Brenda,

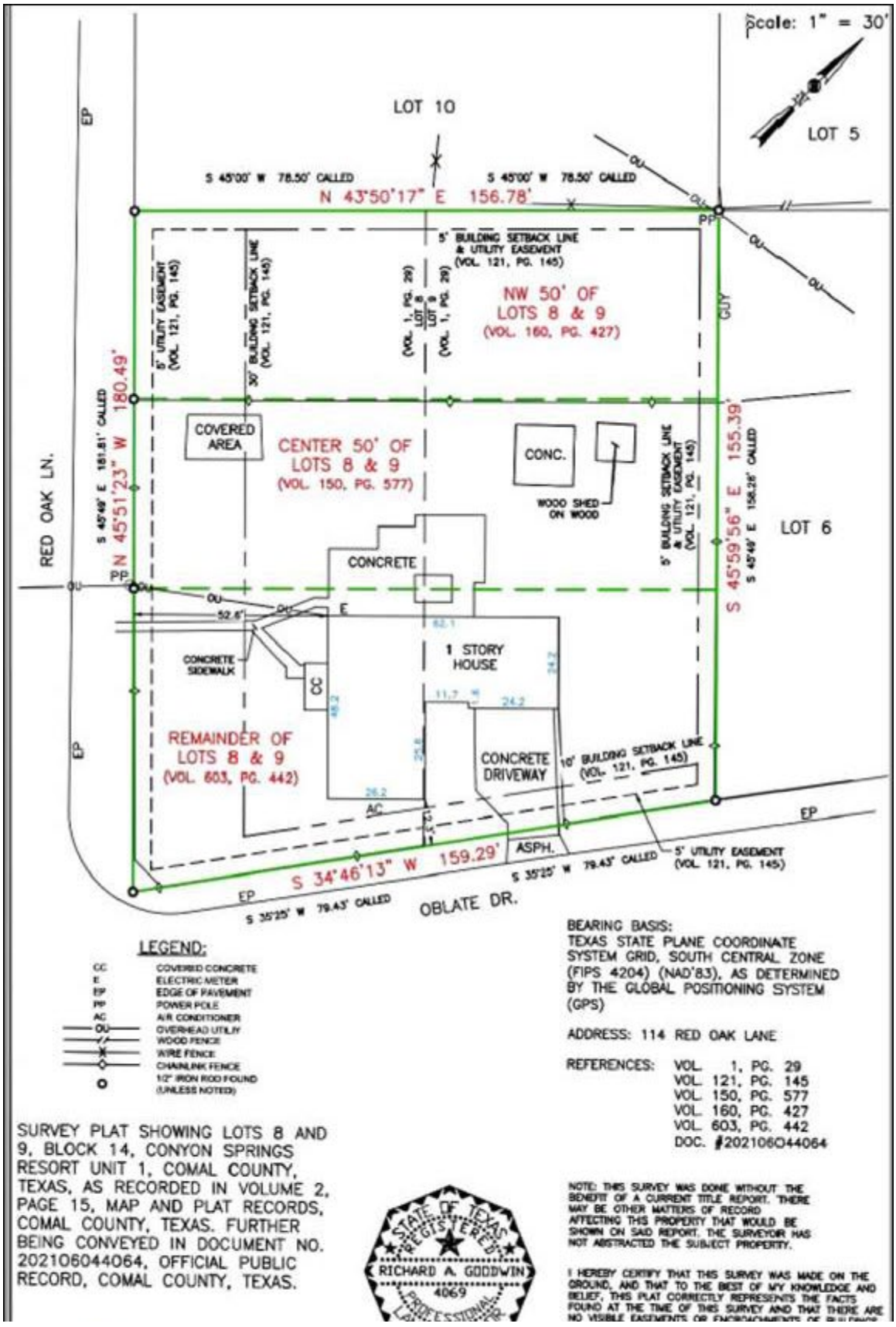
It appears that lots 8 & 9 were subdivided into 3 tracts as shown below.

- The Northwest 50' of Lots 8 & 9 was sold off in December 1967 to Ralph & Joyce Beeson (Volume 160 Page 427)
- The Center 50' of Lots 8 & 9 was sold off in July 1966 to Steve & Neva Austin (Volume 150 Page 577)
- The remainder of Lots 8 & 9 was sold to Gerald Brauchle in October 1987 (Volume 603 Page 442)

In 2019, James Manker did a correction affidavit that combined the 3 tracts back into lots 8 & 9 as they originally were in Volume 2 Page 15 (201906013770). At the same time he sold the land to Jeffrey & Casey Bachus (201906013546) and called the tract a 0.43 acre tract made up of the 3 tracts referenced above. This is the same tract that was sold to James & Lynn Poston.

CCEO COPY

It appears that the permit should be issued to the 0.43 acre tract. It does not appear that a crossing property lines affidavit would be necessary if the permit is issued to the 0.43 acre tract.



RECEIVED
By Kathy Griffin at 2:42 pm, May 02, 2023

COMAL COUNTY
ENGINEER'S OFFICE

OSSF DEVELOPMENT APPLICATION CHECKLIST

Staff will complete shaded items

		116171
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

- [x] Completed Application for Permit for Authorization to Construct an On-Site Sewage Facility and License to Operate
- [x] Site/Soil Evaluation Completed by a Certified Site Evaluator or a Professional Engineer
- [x] 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.
- [x] Required Permit Fee - See Attached Fee Schedule
- [x] Copy of Recorded Deed
- [x] Surface Application/Aerobic Treatment System
  - [x] Recorded Certification of OSSF Requiring Maintenance/Affidavit to the Public
  - [x] 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

Date

___ COMPLETE APPLICATION

Check No. _____ Receipt No._____

___ INCOMPLETE APPLICATION
(Missing Items Circled, Application Refused)

Revised: September 2019