

Harnett County Department of Public Health Improvement Permit

A building permit cannot be issued with only an Improvement Permit

ISSUED TO: Davidson Homes, LLC PROPERTY LOCATION: 85 Blue Monarch Ln. (Christian Light Rd. -
 SUBDIVISION Prince Place LOT # 26
 NEW REPAIR EXPANSION Site Improvements required prior to Construction Authorization Issuance:
 Type of Structure: 44x56 sfd, 4 beds 4.5 baths
 Proposed Wastewater System Type: 25% Reduction Sys.
 Projected Daily Flow: 480 GPD
 Number of bedrooms: 4 Number of Occupants: 8 max
 Basement Yes No
 Pump Required: Yes No May be required based on final location and elevations of facilities
 Type of Water Supply: Community Public Well Distance from well NA feet Permit valid for: Five years
 Permit conditions: _____ No expiration

Authorized State Agent: [Signature] Date: 02/14/2022 SEE ATTACHED SITE SKETCH
 The issuance of this permit by the Health Department in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This site is subject to revocation if the site plan, plat, or the intended use changes. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to conditions of this permit.

Construction Authorization

(Required for Building Permit)

The construction and installation requirements of Rules .1950, .1952, .1954, .1955, .1956, .1957, 1958, and 1959 are incorporated by references into this permit and shall be met. Systems shall be installed in accordance with the attached system layout.

ISSUED TO: Davidson Homes, LLC PROPERTY LOCATION: 85 Blue Monarch Ln. (Christian Light Rd
 SUBDIVISION Prince Place LOT # 26
 Facility Type: 44x56 sfd, 4 beds 4.5 bat New Expansion Repair
 Basement? Yes No Basement Fixtures? Yes No
 Type of Wastewater System** 25% Reduction System (Initial) Wastewater Flow: 480 GPD
 (See note below, if applicable
25% Reduction System (Repair)

Installation Requirements/Conditions
 Septic Tank Size 1000 gallons Number of trenches 3
 Pump Tank Size _____ gallons Exact length of each trench 135 feet Trench Spacing: 9 Feet on Center
 Trenches shall be installed on contour at a Soil Cover: 6 inches
 Maximum Trench Depth of: 16-18 inches (Maximum soil cover shall not exceed
 (Trench bottoms shall be level to +/-1/4" 36" above the trench bottom)
 in all directions)
 Pump Requirements: _____ ft. TDH vs. _____ GPM Aggregate Depth: NA inches below pipe
 Conditions: Proposal by Mitchell Enviromental / Gravity to D-Box Equal Distribu NA inches above pipe
NA inches total

**WATER LINES (INCLUDING IRRIGATION) MUST BE 10FT. FROM ANY PART OF SEPTIC SYSTEM OR REPAIR AREA.
 NO UTILITIES ALLOWED IN INITIAL OR REPAIR DRAIN FIELD AREA.**

**If applicable: I understand the system type specified is different from the type specified on the application. I accept the specifications of this permit.
 Owner/Legal Representative Signature: _____ Date: _____

This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes. The Construction Authorization shall not be transferred when there is a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to the conditions of this permit. SEE ATTACHED SITE SKETCH

Authorized State Agent: [Signature] Date: 02/14/2022
ANDREW CORWIN Construction Authorization Expiration Date: 02/14/2023

Application # SFD2201-0056

Harnett County Department of Public Health Site Sketch

Property Location: 85 Blue Monarch Ln. (Christian Light Rd. - SR 1412)

Issued To: Davidson Homes, LLC

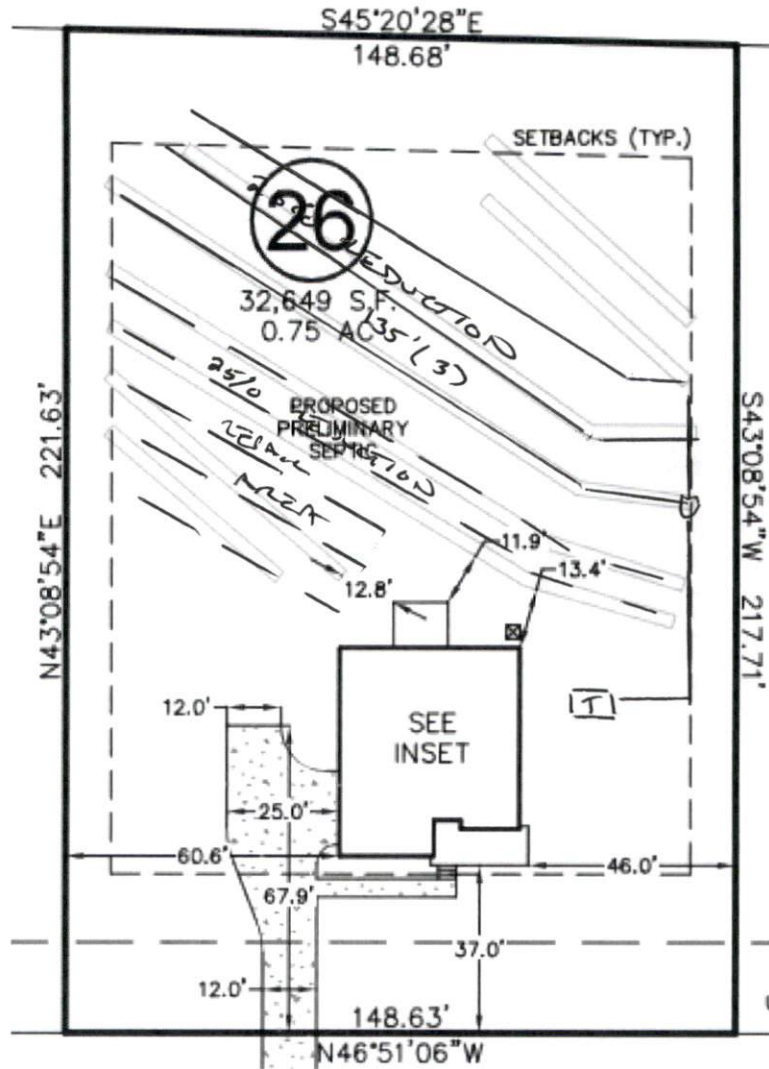
Subdivision Prince Place

Lot # 26

Authorized State Agent: _____

Andrew Corbin
ANDREW CORBIN

Date: 02/14/2023



* GRAVITY TO D-BOX EQUAL DISTRIBUTION REQUIRED

* PROPOSAL BY MITCHELL ENVIRONMENTAL, P.A.

This drawing is for illustrative purposes only. System installation must meet all pertinent laws, rules, and regulations.

Mitchell Environmental, P.A.

SEPTIC SYSTEM DESIGN

for

PRINCE PLACE SUBDIVISION- LOT 26

Fuquay-Varina, Harnett County, North Carolina

Submitted to:

Harnett County Health Department
307 Cornelius Harnett Blvd.
Lillington, NC 27546

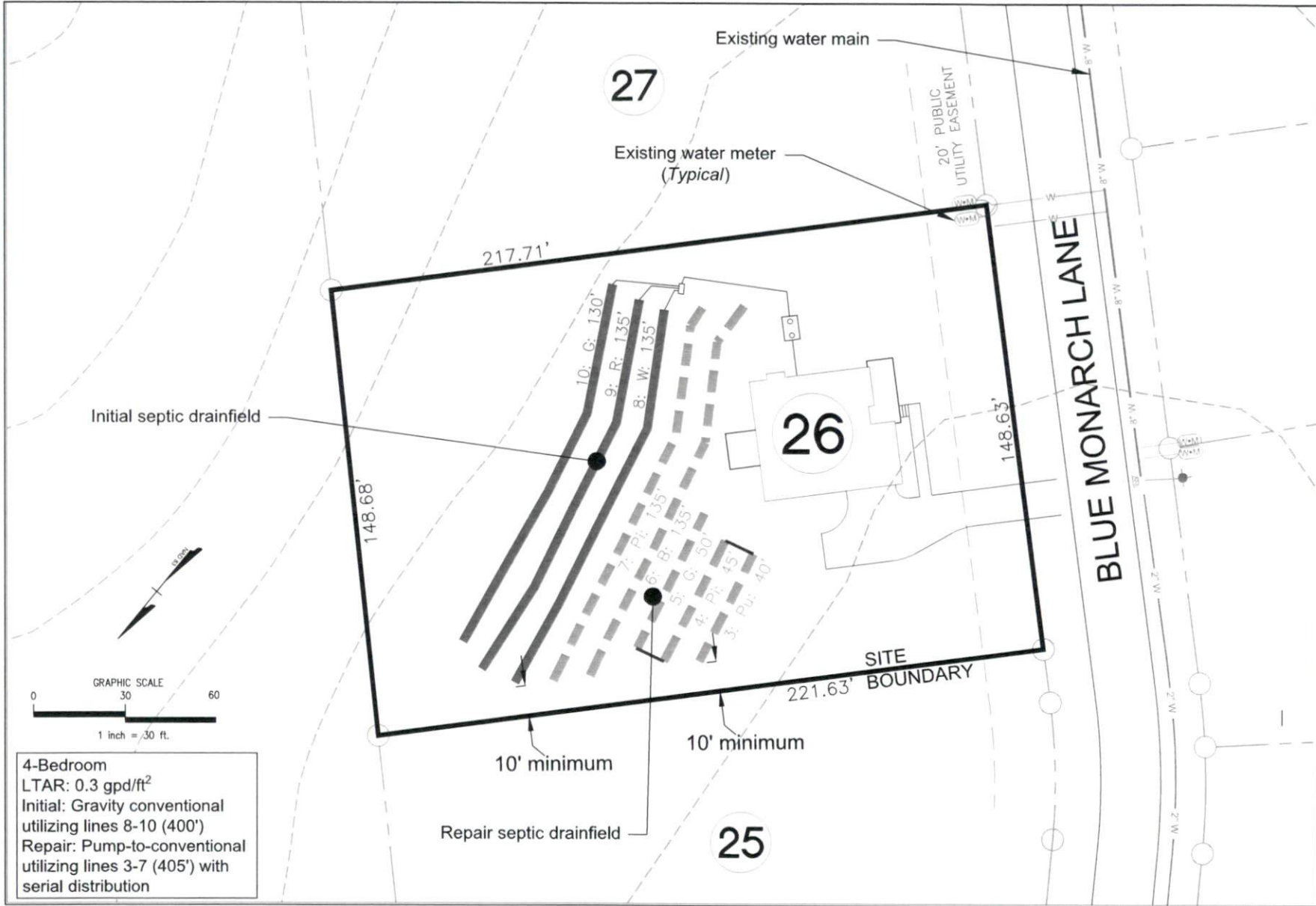
Prepared for:

Davidson Homes, LLC
336 James Record Road
Huntsville, Alabama 35824

Prepared by:

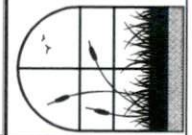
Scott Mitchell, PE, LSS
Adam Aycock, EI

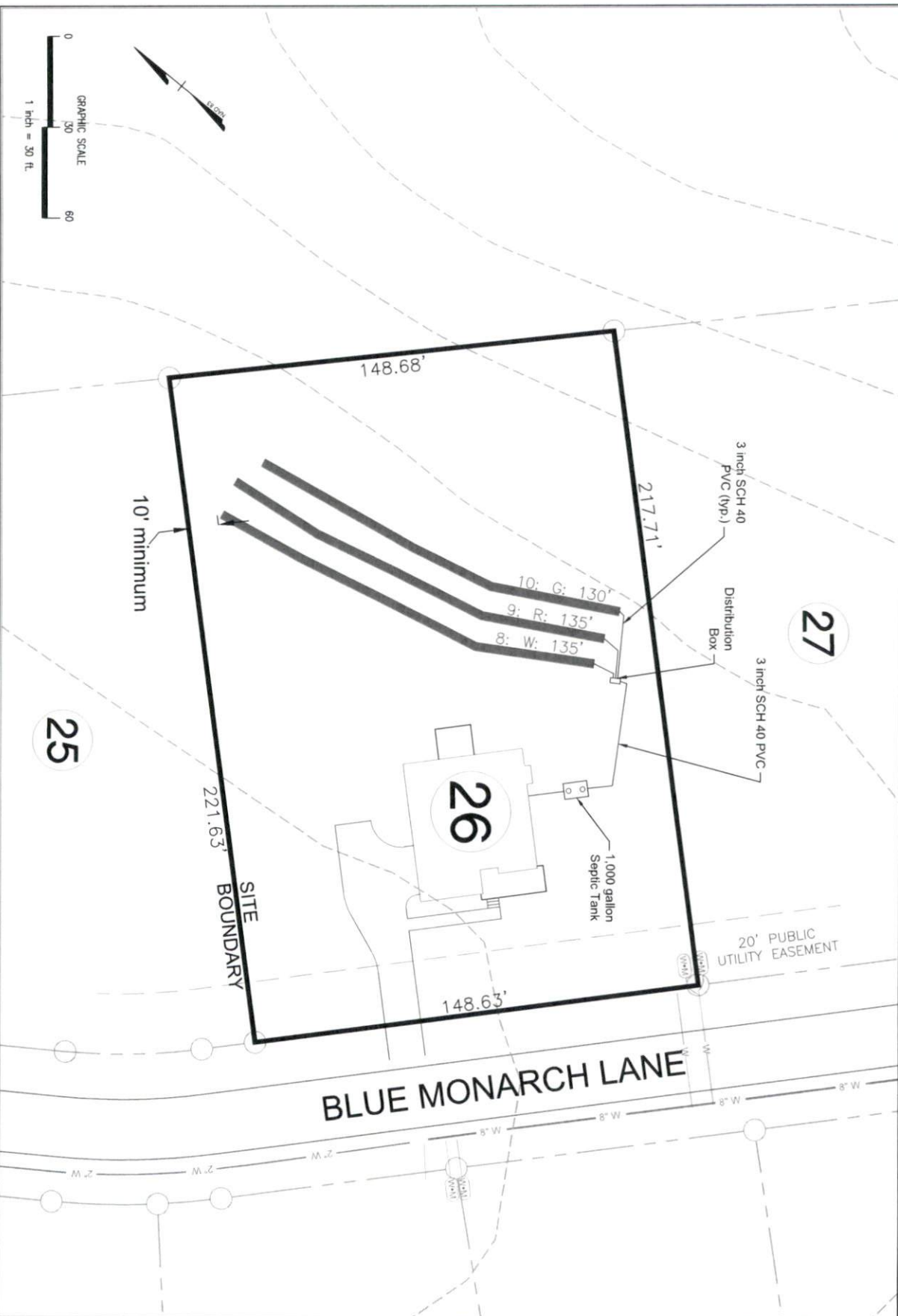
DATE: January 12, 2022
PROJECT NO.: 4321




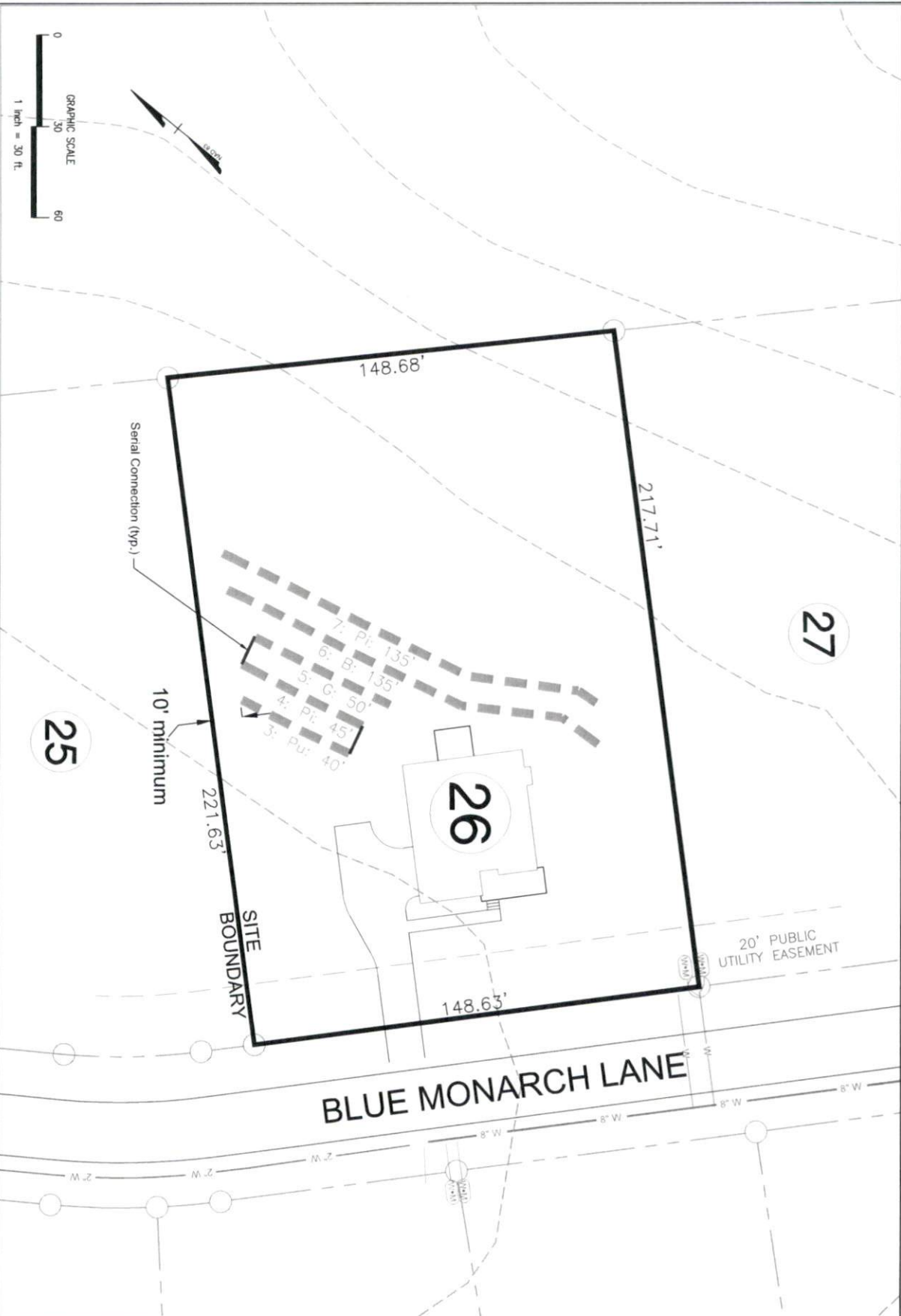
4-Bedroom
 LTAR: 0.3 gpd/ft²
 Initial: Gravity conventional
 utilizing lines 8-10 (400')
 Repair: Pump-to-conventional
 utilizing lines 3-7 (405') with
 serial distribution

MITCHELL ENVIRONMENTAL, PA C-2917 1501 LAKESTONE VILLAGE LANE SUITE 205 FUQUAY VARINA, NC 27526	PREPARED FOR : 36 James M. Road Matthews, PA 19064	REVISION NO. Original Submittal Revision 1 Revision 2 Revision 3 Master Set	DATE January 12, 2022	SHEET NUMBER 1 of 5
	DATE : January 12, 2022 ENGINEER AND SOIL SCIENTIST CONTACT: SCOTT MITCHELL, PE, LSS DRAWN BY: ADAM AYCOCK, E	Division Name: 36 James M. Road Matthews, PA 19064		





 <p>MITCHELL ENVIRONMENTAL, PA C-2911</p> <p>1501 LAKESTONE VILLAGE LANE SUITE 205 FUQUAY VARINA, NC 27526</p>	<p>PREPARED FOR: Davidson Homes 336 James Record Road Huntville, AL 35824</p>	<table border="1"> <thead> <tr> <th>REVISION NO.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>Original Submittal</td> <td>January 12, 2022</td> </tr> <tr> <td>Revision 1</td> <td>-----</td> </tr> <tr> <td>Revision 2</td> <td>-----</td> </tr> <tr> <td>Revision 3</td> <td>-----</td> </tr> <tr> <td>Master Set</td> <td>-----</td> </tr> </tbody> </table>	REVISION NO.	DATE	Original Submittal	January 12, 2022	Revision 1	-----	Revision 2	-----	Revision 3	-----	Master Set	-----	<p>SHEET NUMBER</p> <p>2 of 5</p> <p>Prince Place Lot 26 Initial Nitrification Field</p>
	REVISION NO.	DATE													
	Original Submittal	January 12, 2022													
	Revision 1	-----													
	Revision 2	-----													
Revision 3	-----														
Master Set	-----														
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<p>ENGINEER AND SOIL SCIENTIST CONTACT: SCOTT MITCHELL, PE, LSS</p>															
<p>DRAWN BY: ADAM AYCOCK, EI</p>															



MITCHELL ENVIRONMENTAL, PA
 C-2911
 1501 LAKESTONE VILLAGE LANE
 SUITE 205
 FUQUAY VARINA, NC 27526

PREPARED FOR: Davidson Homes
 336 James Record Road
 Huntsville, AL 35824
 DATE: January 12, 2022
 ENGINEER AND SOIL SCIENTIST CONTACT:
 SCOTT MITCHELL, PE, LSS
 DRAWN BY:
 ADAM AYCOCK, D

REVISION NO.	DATE
Original Submittal	January 12, 2022
Revision 1	-----
Revision 2	-----
Revision 3	-----
Master Set	-----

SHEET NUMBER
 3 of 5
 Prince Place
 Lot 26
 Repair Nitrification Field

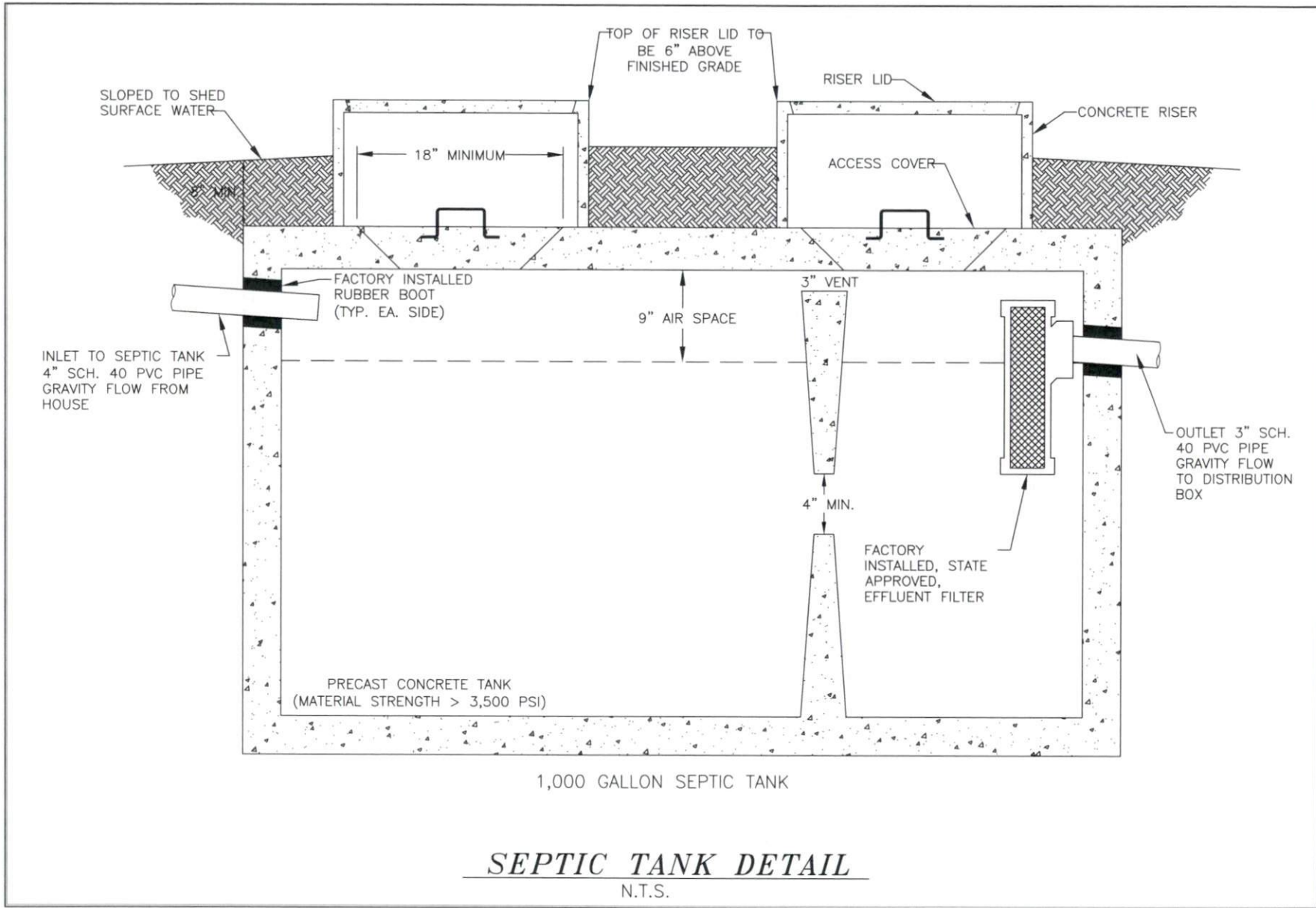
Repair System

PRESSURE MANIFOLD DESIGN

Name: Davidson Homes P.I.N. #: 0633-87-2499 D #: N/A
 Address: Prince Place Drive Subdiv: Prince Place Lot#: 26
 # of BDR: 4 Daily Flow: 480 gal/day L.T.A.R.: 0.300 gal/day/sq.ft
 Septic Tank: 1000 gals (min.) Pump Tank: 1200 gals (min.) Sq. Foot: 1215 Stone Depth: N/A
 (EZ Flow)
 Number of Taps: 3 Length of Trenches: 135 ft(See Tap Chart for Details)
 Depth of Trenches: see Harnett County Permit Manifold Length: 36 in
 Manifold Diameter: 4 in sch 80pvc (minimum) Tap Configuration: 6 in spacing 1 side(s) of manifold
 Supply Line: length: 280 ft Diameter: 2 in sch 40pvc
 Friction Loss + Fitting Loss: 3.89 ft(supply line length + 70' for fittings in pump tank)
 Design Head: 2.0 ft Elevation Head: 7.62 ft
 Vent Hole Size: 3/16 in Orifice Coefficient of Discharge: 0.60
 Orifice Coefficient of Contraction: 0.62 Orifice Coefficient of Velocity: 0.97
 Maximum Head Supplied by Selected Pump(s) at Total Design Flowrate: 22 ft
 Orifice / Vent Hole Flowrate: 1.94 gpm Head Loss at Orifice / Vent Hole: 1.40 ft
 Total Head: 14.90 ft Pump to Deliver: 23.27 gals/min at 14.90 ft head
 Dosing Volume: 173.75 gals.
 Drawdown: 173.75 gals divided by 19 gals/in = 9.14 inches
 SJE Rhombus Installer Friendly Series simplex control panel, or equivalent, required
 A septic tank filter, or equal is required.
 Possible pumps: Hydromatic: Goulds: Myers:
 Zoeller: 137 Other:

TAP CHART

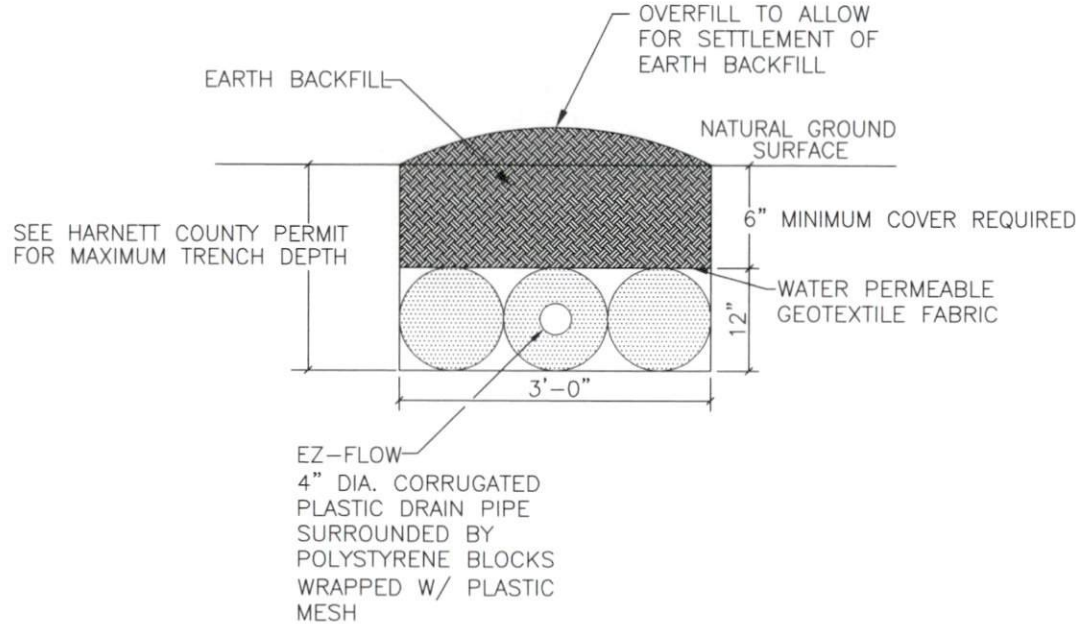
Bench Mark	7.49	is = 100.00	set at	EG at 25/26 rear corner	Design Head:	2.0			
Pump tank elev.	6.5	100.99	Pump elev.	95.99	Manifold elev.	103.61			
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
3 & 4 & 5	Pu & Pi & G	4.88	102.61	135	1/2in SCH 40	7.11	160.00	405	0.3951
6	Blue	6.06	101.43	135	1/2in SCH 40	7.11	160.00	405	0.3951
7	Pink	6.62	100.87	135	1/2in SCH 40	7.11	160.00	405	0.3951
		total	feet =	405	gal/min =	21.3	LTAR =		0.3000
% of Pipe Vol.	<u>66</u>		Des. Flow	480.00		(Itar + 5%)		0.3150	
Dose Volume	173.75		Pump Run=	22.50		(Itar W/ INOV)		0.4000	
Dose Pump Time	8.15		Tank Gal/IN	19		(Itar + 5%)		0.4200	
Drawdown in Inches	9.14		Elev. Head	7.62					
Supply Line Length	280								
Comments:									



SHEET NUMBER 4 of 5		Prince Place Lot 26 Septic Tank Detail	
REVISION NO.	DATE	REVISION NO.	DATE
Original Submittal	January 12, 2022	Revision 1	
		Revision 2	
		Revision 3	
		Master Set	
Prepared For:	Division Home & Roof Hurricane, AL 35824	DATE:	January 12, 2022
Engineer and Soil Scientist Contact:	SCOTT MITCHELL, PE, LSS	Drawn By:	ADAM AYCOCK, E
MITCHELL ENVIRONMENTAL, PA C-2911 1501 LAKESTONE VILLAGE LANE SUITE 205 FUQUAY VARINA, NC 27526			

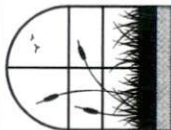
NITRIFICATION TRENCH DETAIL FOR EZ-FLOW

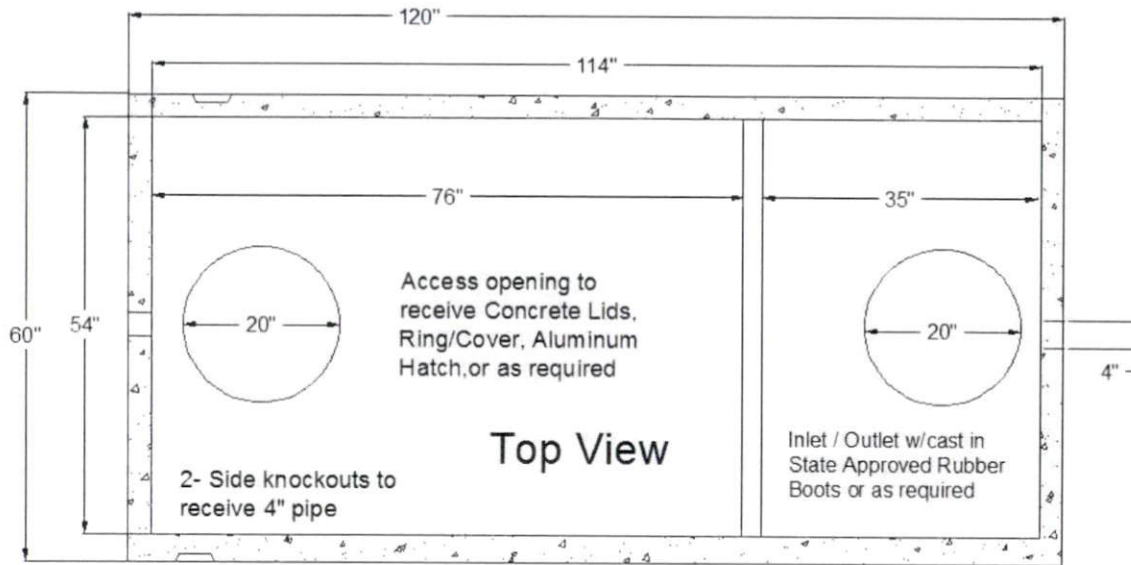
N.T.S.



NOTES:

1. PERFORATED CORRUGATED PLASTIC PIPE SHALL MEET REQUIREMENTS OF ASTM D 2729.
2. PIPE SHALL BE LEVEL.
3. ENDCAP SHALL BE PROVIDED AT END OF ALL CORRUGATED PLASTIC PIPE LINES.
4. TRENCH BOTTOM SHALL BE LEVEL.
5. HAND RAKE TRENCH WALLS PRIOR TO PLACEMENT OF TRENCH MEDIA IF SOIL SMEARING IS PRESENT.

	<p>MITCHELL ENVIRONMENTAL, PA C-2917</p> <p>1501 LAKESTONE VILLAGE LANE SUITE 205 FUQUAY VARINA, NC 27526</p>	<p>REVISION NO. Original Submittal</p> <p>Revision 1</p> <p>Revision 2</p> <p>Revision 3</p> <p>Master Set</p>	<p>DATE January 12, 2022</p>	<p>SHEET NUMBER 5 of 5</p> <p>Prince Place Lot 26 Trench Detail</p>
<p>PREPARED FOR : Division Home and Community Development, Harnett Co., NC 28540</p> <p>DATE : January 12, 2022</p> <p>ENGINEER AND SOIL SCIENTIST CONTACT: SCOTT MITCHELL, PE, LSS</p> <p>DRAWN BY: ADAM AYCOCK, D</p>				



STB - 345 - Top Seam

Approval Date: 12 - 09 - 99

Liquid Capacity 1007 Gallons

Non Traffic Rated

Reinforcing Schedule: # 3 Grade 60 Rebar

4500 PSI Concrete w/ State Approved Structural Fiber

Est. Weight: 8,200 lbs.

Manufactured By:

GARNERS
Septic Tanks, Inc.

Eddie Garner, President

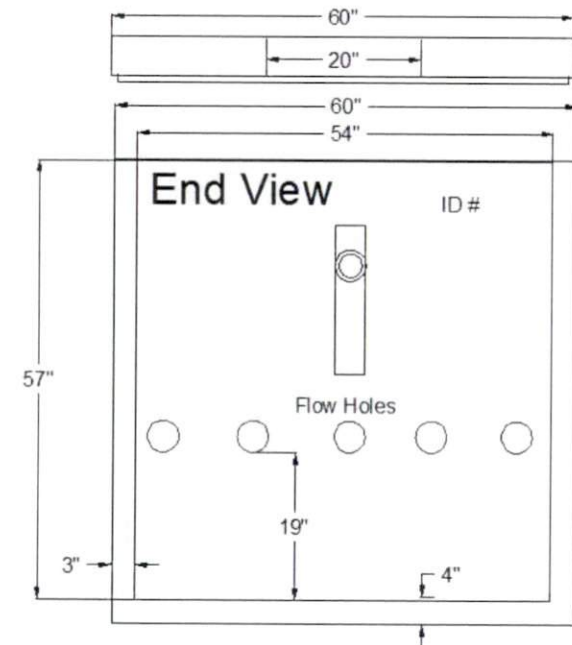
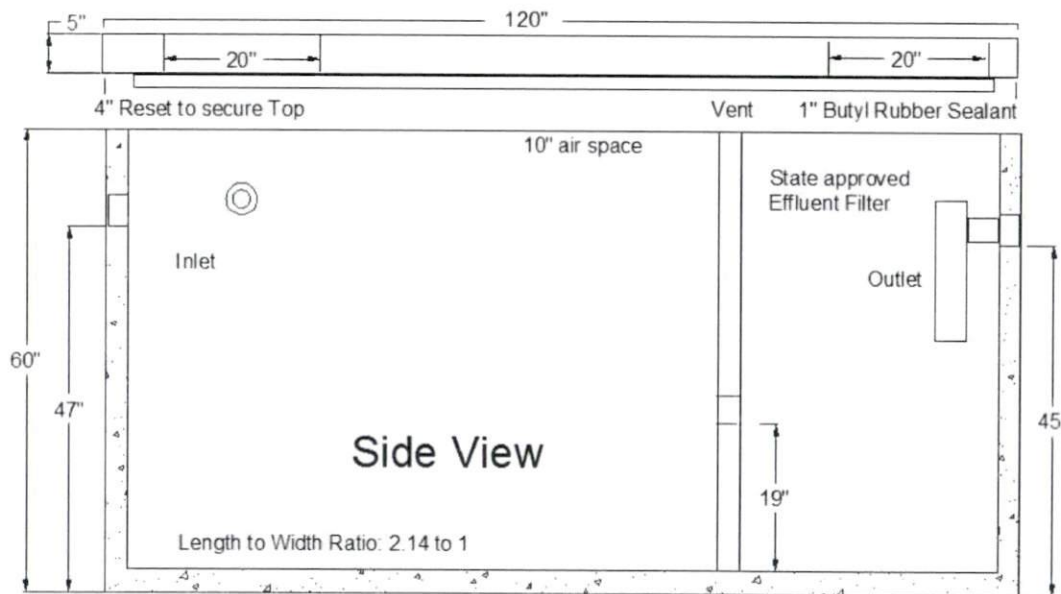
919-718-5181

121 Stanton Hill Road

Carthage, NC 28327

Fax 919-775-2229

Eddie@garnersseptictanks.com





PL-68 Filter and Tee

PL-68 is much more than just an effluent filter. The housing can also be used as an inlet baffle (tee) or an outlet baffle. The housing is designed to accept Polylok's snap in gas deflector to deflect gas bubbles away from the tee and to keep the solids in the tank.

Features:

- Offers 68 linear feet of 1/16" filter slots, which significantly extends time between cleaning.
- Accepts 3/4" PVC handle.
- Locks in any 360° position when used with PL-68 Tee.
- PL-68 Housing can be used as an inlet or outlet tee.
- Gasket prevents bypass.

PL-68 Installation:

Ideal for residential waste flows up to 800 gallons per day (GPD). Easily installs in any new or existing 4" outlet tee.

1. Locate the outlet of the septic tank.
2. Remove the tank cover and pump tank if necessary.
3. Glue the filter housing to the outlet pipe, or use a Polylok Extend & Lok if not enough pipe exists.
4. Insert the PL-68 filter into tee.
5. Replace and secure the septic tank cover.

PL-68 Maintenance:

The PL-68 Effluent Filter will operate efficiently for several years under normal conditions before requiring cleaning. It is recommended that the filter be cleaned every time the tank is pumped, or at least every three years.

1. Do not use plumbing when filter is removed.
2. Pull PL-68 out of the tee.
3. Hose off filter over the septic tank. Make sure all solids fall back into septic tank.
4. Insert filter back into tee/housing.

Related Products:

PL-68 Filter Concrete Baffle
 Extend & Lok™



Extend & Lok™
 Easily installs
 into existing tanks.



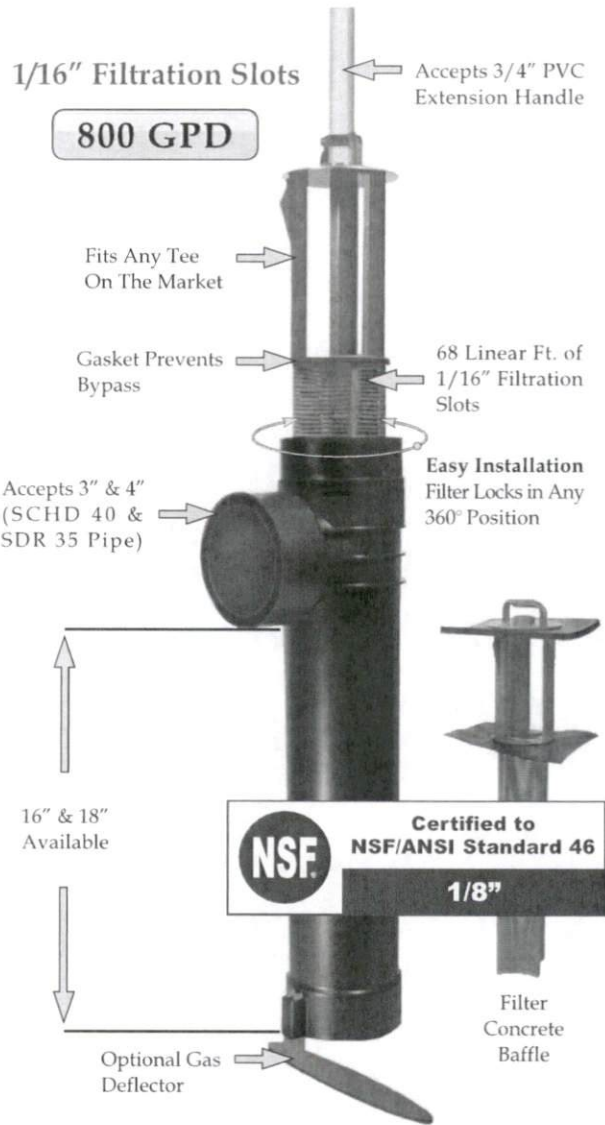
Spacer Bushing
 4" SCHD 40
 to SDR 35



Spacer Bushing
 4" SCHD 40
 to 110mm Pipe

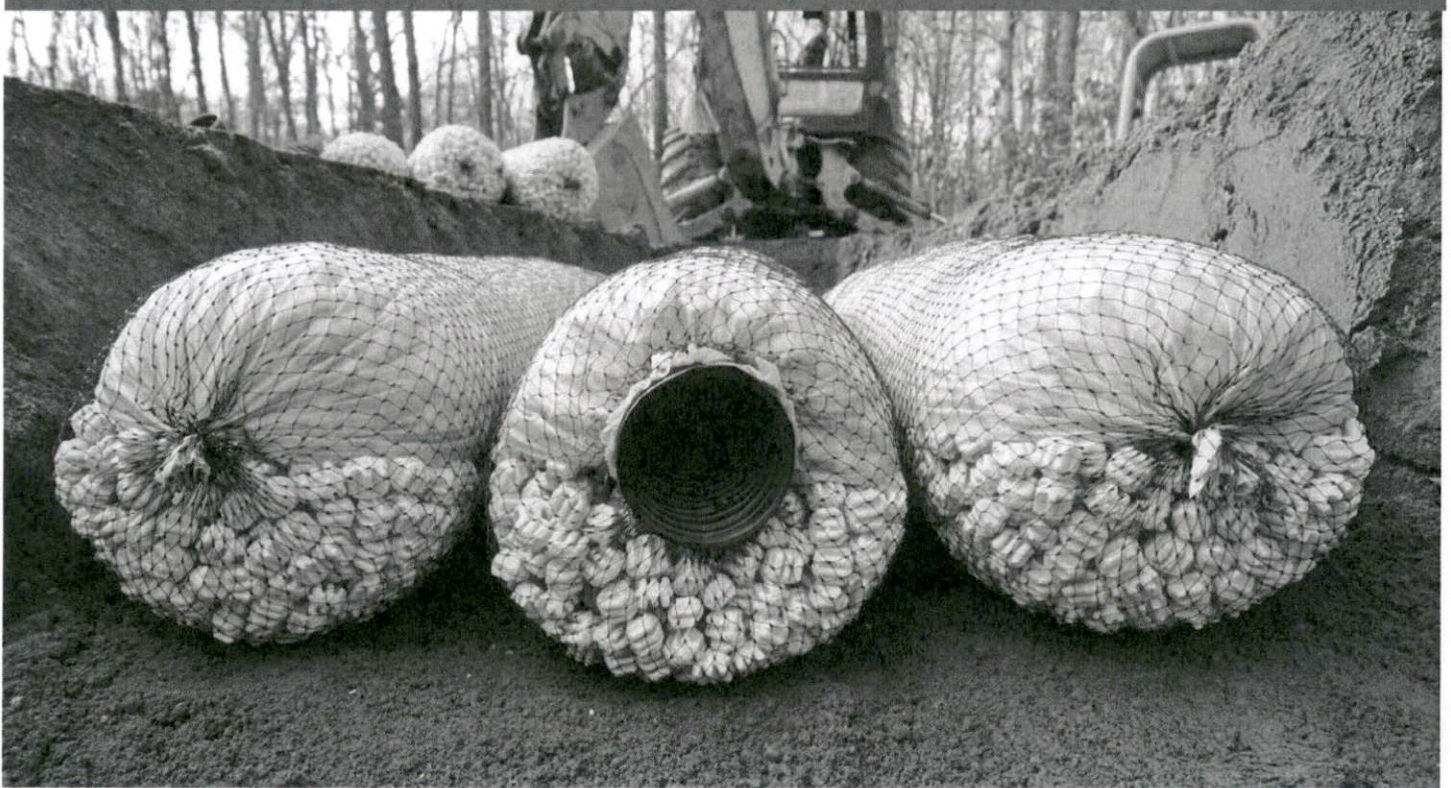


2" Extender





GEOSYNTHETIC AGGREGATE TECHNOLOGY



EZflow by Infiltrator is an environmentally friendly replacement to traditional stone and pipe drainfields using an engineered geosynthetic aggregate modular design. The EZflow system is designed to improve infiltration performance by eliminating the fines associated with crushed stone, and reducing compaction and embedment associated with stone. Preassembled units include a 3" or 4" perforated pipe surrounded by aggregate and held in place with a durable high-strength netting. This product comes in easy-to-contour 5' and 10' lengths and in diameters of 7, 8, 9, 10, 12, 13, or 14 inches.

Lightweight expanded polystyrene

construction offers structural integrity and resists compaction. Engineered flow-channels increase void space creating improved water flow and greater storage.

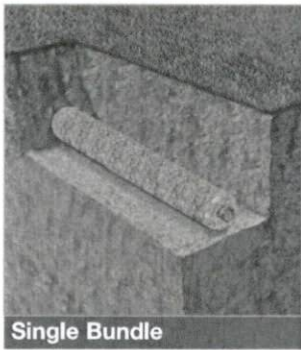


INFILTRATOR
water technologies

Compared with stone and pipe, benefits include:

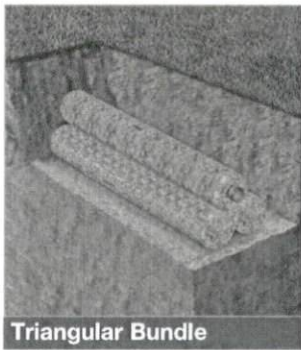
- Always clean and free of fines
- Bundles are quick to install, saving costs on heavy machinery and labor
- Modular construction allows configurations to match trench dimensions for most system shapes and sizes
- Engineered for optimal storage and absorption efficiencies
- Ability to contour along sloped sites and around trees or landscaping
- Lightweight system is perfect for repairs and tight job sites
- Easily hand-carried into position reducing time and labor
- 5' or 10' lengths with simple snap, internal couplers
- Easier cleanup at the job site with the elimination of stone
- Manufactured from recycled materials rather than a mined natural resource
- A wide variety of diameters and configurations to meet any installation professional's needs
- Approved in many jurisdictions with an increased efficiency rating, reducing drainfield size
- Backed by the leader in the onsite wastewater industry

Bundle System Configurations: Available in 7", 8", 9", 10", 12", 13" and 14" diameter bundles.



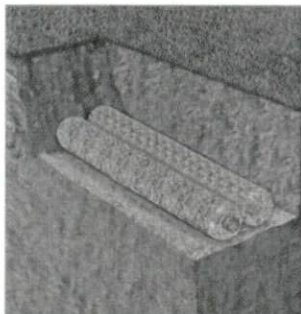
Single Bundle

0701P-GEO 1201P-GEO
0801P-GEO 1401P-GEO
1201P-GEO 1801P-GEO
1001P-GEO



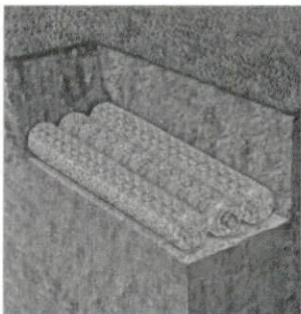
Triangular Bundle

1003T-GEO 1303T-GEO
1203T-GEO 1403T-GEO

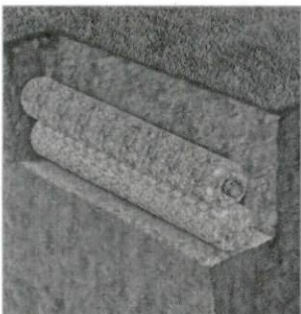


Horizontal Bundles

0705H-GEO 1303H-GEO
0904H-GEO 1202H-GEO
1002H-GEO 1203H-GEO

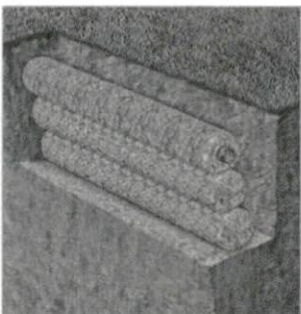


1206H-GEO 1402H-GEO
1303H-GEO 1802H-GEO



Vertical Bundles

1002V-GEO 1006V-GEO 1203V-GEO 1206V-GEO
1003V-GEO 1202V-GEO 1204V-GEO 1402V-GEO
1004V-GEO



Notes:

1. Other systems include 10" and 12" bed systems. Bed size will dictate the number of bundles.
2. System dimensions are dependent upon bundle diameter and configuration.
3. LLP is for "Low Pressure Pipe" in which a pressurized distribution pipe is field installed within the corrugated pipe.
4. Internal pipe and couplings meet the requirements of ASTM F405.
5. Bundles are also available without geotextile between the netting and synthetic aggregate.

INFILTRATOR WATER TECHNOLOGIES STANDARD LIMITED WARRANTY

(a) The structural integrity of each EZflow by Infiltrator expanded polystyrene drainfield system and other accessories manufactured by EZflow by Infiltrator ("Units"), when installed and operated in a leachfield of an onsite septic system in accordance with Infiltrator's instructions, is warranted to the original purchaser ("Holder") against defective materials and workmanship for one year from the date that the septic permit is issued for the septic system containing the Units; provided, however, that if a septic permit is not required by applicable law, the warranty period will begin upon the date that installation of the septic system commences. To exercise its warranty rights, Holder must notify Infiltrator in writing at its Corporate Headquarters in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect. Infiltrator will supply replacement Units for Units determined by EZflow by Infiltrator to be covered by this Limited Warranty. EZflow by Infiltrator's liability specifically excludes the cost of removal and/or installation of the Units.

(b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE UNITS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE

(c) This Limited Warranty shall be void if any part of the EZflow system is manufactured by anyone other than EZflow by Infiltrator. The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the Holder or any third party. Specifically excluded from Limited Warranty coverage are damage to the Units due to ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Units; the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground covers set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper siting or improper sizing, excessive water usage, improper grease disposal, or improper operation; or any other event not caused by Infiltrator. This Limited Warranty shall be void if the Holder fails to comply with all of the terms set forth in this Limited Warranty. Further, in no event shall Infiltrator be responsible for any loss or damage to the Holder, the Units, or any third party resulting from installation or shipment, or from any product liability claims of Holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Infiltrator's installation instructions.

(d) No representative of Infiltrator has the authority to change or extend this Limited Warranty. No warranty applies to any party other than the original Holder.

The above represents the Standard Limited Warranty offered by Infiltrator. A limited number of states and counties have different warranty requirements. Any purchaser of Units should contact Infiltrator's Corporate Headquarters in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of Units.



4 Business Park Road
P.O. Box 768
Old Saybrook, CT 06475
860-577-7000 • Fax 860-577-7001
1-800-221-4436
www.infiltratorwater.com

U.S. Patents: 4,759,661; 5,017,041; 5,156,488; 5,336,017; 5,401,116; 5,401,459; 5,511,903; 5,716,163; 5,588,778; 5,839,844 Canadian Patents: 1,329,959; 2,004,564 Other patents pending. Infiltrator, Equalizer, Quick4, and SideWinder are registered trademarks of Infiltrator Water Technologies. Infiltrator is a registered trademark in France. Infiltrator Water Technologies is a registered trademark in Mexico. Contour, MicroLeaching, PolyTuff, ChamberSpacer, MultiPort, PosiLock, QuickCut, QuickPlay, SnapLock and StraightLock are trademarks of Infiltrator Water Technologies. PolyLok is a trademark of PolyLok, Inc. TUF-TITE is a registered trademark of TUF-TITE, INC. Ultra-Rib is a trademark of IPEX Inc.

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Contact Infiltrator Water Technologies' Technical Services Department for assistance at 1-800-221-4436