



North Carolina Onsite Wastewater Contractor Inspector Certification Board  
Authorized Onsite Wastewater Evaluator Permit Option for Non-Engineered Systems  
Notice of Intent (NOI) to Construct

☒ New ☐ Expansion ☐ Repair ☐ Relocation ☐ Relocation of Repair Area

Owner or Legal Representative Information:

Name: Superior Homes of the Sandhills

Mailing address: 5 Dowd Cir Suite c, Pinehurst City: \_\_\_\_\_ State: NC Zip: 28374

Phone: (910) 315-1822 Email: superiorhomesofthesandhills@gmail.com

Authorized Onsite Wastewater Evaluator Information:

Name: John Kase Certification #: 10060E

Mailing address: 3325 Jones Lake Road City: Fuquay Varina State: NC Zip: 27526

Phone: (910) 539-5439 Email: john@northlakessoil.com



Site Location Information:

Site address: Graham's Mill Lane, Cameron

Tax parcel identification number or subdivision lot, block number of property: Lot 7  
9575-00-2559.000 County: Harnett

System Information:

Wastewater System Type: IIB - Accepted (25% Reduction) - At-Grade w/ cover

Daily Design Flow: 480

Saprolite System: ☐ Yes ☒ No Subsurface Operator Required: ☐ Yes ☒ No

Water Supply Type: ☐ Private Well ☒ Public Water Supply ☐ Spring ☐ Other: \_\_\_\_\_

Facility Type:

☒ Residential 4 # Bedrooms 8 Maximum # of Occupants

☐ Business Type of Business and Basis for Flow: \_\_\_\_\_

☐ Public Assembly Type of Public Assembly and Basis for Flow: \_\_\_\_\_

Required Attachments:

- ☒ Plat or Site Plan  
☒ Evaluation of Soil and Site Features by Licensed Soil Scientist

Attest: On this the 15 day of April, 2025 by signature below I hereby attest that the information required to be included with this NOI to Construct is accurate and complete to the best of my knowledge. Furthermore, I hereby attest that I have adhered to the laws and rules governing onsite wastewater systems in the state of North Carolina.

This NOI shall expire on 15 day of April, 2030.

Signature of Authorized Onsite Wastewater Evaluator: 

Signature of Owner or Legal Representative: \_\_\_\_\_

Disclosure: The owner may apply for a building permit for the project upon submitting a complete NOI to Construct and the fee required (if any) to the local health department. An onsite wastewater system authorized by an authorized onsite wastewater evaluator shall be transferable to a new owner with the consent of the authorized onsite wastewater evaluator.

Local Health Department Receipt Acknowledgement:

Signature of Local Health Department Representative: \_\_\_\_\_ Date: \_\_\_\_\_

**Permit Information:**Design Daily Flow: 480 GPD Wastewater Strength: ☒ domestic ☐ high strength ☐ industrial processSession Law 2014-120 Section 53, Engineering Design (Low-flow Fixtures/Low-flow Technologies) ☐ Yes ☒ NoType of Water Supply: ☐ Private Well ☐ Public Well ☐ Shared Well ☒ Municipal Supply ☐ Spring☐ Other: \_\_\_\_\_

Expiration:

☒ Permit valid for: Five years [site plan submitted pursuant to GS 130A-334(13a)]☐ No expiration [plat submitted pursuant to GS 130A-334(7a)]**Initial System Information:**Wastewater System Type: Accepted (25% Reduction) - At-Grade w/ cover (Initial) System Classification: IIB (Initial)Pump Required: ☐ Yes ☒ No ☐ May be required Sapolite System (Initial): ☐ Yes ☒ NoUsable Depth to LC (Initial)x: 25 Max. Trench Depth (Initial)‡: 12**System Installation Requirements/Conditions:**Septic Tank Size: 1000 gallons Pump Tank Size (if applicable): \_\_\_\_\_ gallons

Pump Requirements: \_\_\_\_\_ ft. TDH vs. \_\_\_\_\_ GPM

Grease Trap Size (if applicable): \_\_\_\_\_ gallons

Distribution Method: ☒ Serial ☐ D-Box ☐ Pressure Manifold(s) ☐ LPP ☐ Other: \_\_\_\_\_Total Trench/Bed Length: 406 feet Trench/Bed Spacing: 9 feet on centerTrench/Bed Width: 36 inches LTAR 0.30 gpd/ft<sup>2</sup> Additional Soil Cover: 6 inches**Repair System Information:**Wastewater System Type: Low Profile Chamber - Shallow Placement w/ cover (Repair) System Classification: IIIBG (Repair)Pump Required: ☒ Yes ☐ No ☐ May be required Sapolite System (Repair): ☐ Yes ☒ NoUsable Depth to LC (Repair)x: 25 Max. Trench Depth (Repair)‡: 10**Notes:**Permit is subject to suspension or revocation if the Site Plan changes or the intended use changes, which significantly impact permit.See attached "NLSC Permit Conditions & Installation Guidelines" & "See attached "NLSC NOI Terms & Conditions"x *Limiting Condition*‡ *Measured on the downhill side of the trench*



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## **AOWE EVALUATION AND PERMITTING**

### **TERMS AND CONDITIONS**

This AOWE Evaluation is intended to file a Notice of Intent (NOI) to construct a wastewater system with the Local Health Department and shall expire in five years. This evaluation is not a permit to develop. The owner and subcontractors will need to abide by all state and local rules and regulations pertaining to planning, zoning and land use development.

**Notice of Intent to Construct** - Prior to commencing or assisting in the construction, siting, relocating or repair of a wastewater (septic) system, a complete NOI to construct a wastewater system using an AOWE must be submitted to the LDH. The owner may apply for a building permit for the project upon submitting a complete NOI and paying the required fee(s).

**Plan Alterations** - If there are any changes in the site plan that may impact the wastewater system or designated repair area, such as moving the proposed house or driveway, addition of accessory structures (storage buildings, swimming pools, patios, etc.), site alterations, or if the applicant chooses to change the design daily flow (change in number of bedrooms, number of employees) or change the type of facility or proposed use that may impact the wastewater strength or flow prior to wastewater system construction, a new NOI shall be submitted to the LHD. The applicant shall request in writing that the AOWE revoke the prior issued NOI with an official notice to the LHD.

**Site Alterations** - The applicant shall be responsible for preventing modifications or alterations of the site for the wastewater system and the designated repair area before, during and after construction activities for the facility, unless otherwise approved by the AOWE.

**On-Site Wastewater System Contractor** - The AOWE shall assist the owner in the selection of a certified on-site wastewater system contractor who shall be under contractual obligation to the owner and have sufficient errors and omissions, liability or other insurance for the system being constructed. The contractor shall hold a current certification from the North Carolina Onsite Wastewater Contractor Inspector Certification Board (NCOWCICB) and have the proper certification level to install the type of system specified in the permit package.

**NLSC approved and certified NC Septic Installers: (If contractor is not listed below, contact NLSC for approval)**

Adcock Excavating, LLC: 919-552-6724

Quality Septic Service, Inc: 919-201-7285

True Work, Inc: 919-868-1497

McFarland Septic: 919-383-1015

Garner Septic Tanks: 919-718-5181

Blackley Brothers: Phillip Blackley: 919-896-0232

**Inspections, Construction Observations and Reports** - The AOWE shall make periodic visits to the site to observe the progress and quality of the construction of the wastewater system.

**Authorization to Operate (ATO)** - Upon determining that the wastewater system has been properly installed and capable of being operated in accordance with the conditions of the permit, the AOWE shall provide the owner with a report that includes inspection reports, a written operation and management program, any special reports/evaluations, and a final ATO. The owner shall sign confirming acceptance and receipt of the report and then provide a copy to the LHD, which will allow the issuance of the certificate of occupancy (CO) for the facility.

**Operation and Maintenance** - The owner shall be responsible for continued adherence to the operations and maintenance program established by the AOWE. This permit shall in no way be taken as a guarantee or implied warranty that the septic system will function satisfactorily for any given period of time.

**Change in System Ownership** - A wastewater system ATO shall be transferable to a new owner with the consent of the AOWE. The new owner and the AOWE shall enter into a contract for the wastewater system, prior to any change in ownership.

**Revocation** - The AOWE permit is subject to revocation if the site plan, plat or intended use changes. This permit is subject to compliance with the provisions of the laws and rules of wastewater treatment and disposal systems and conditions of this permit.

**Repair of Malfunctioning Systems** - The owner may apply for an Improvement Permit and Construction Authorization with the LHD or obtain a NOI from an AOWE to repair a malfunctioning wastewater system.



# Profile Descriptions

NORTH LAKES SOIL CONSULTING, PLLC			SOIL/SITE EVALUATION SHEET				Project #:		25-022	
							Sheet #:		1	
OWNER/APP. NAME:		Superior Homes			SUBDIV./LOT#		Lot 7			
LOCATION OF SITE:		Graham's Mill Lane (Off of Cameron Hill Road)								
COUNTY:		Harnett		PROPERTY ID #:		099565006507		DATE EVALUATED:		4/4/2025
PROPOSED FACILITY:		SFR		PROPOSED DESIGN FLOW (.0400):		480 GPD		PROPERTY SIZE:		10.79
WATER SUPPLY:		Public			WATER SUPPLY SETBACK:		10'			
TYPE OF WASTEWATER:			Domestic			EVALUATION METHOD:			Auger	
P R O F I L E  #	.0502 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY		OTHER PROFILE FACTORS				.0509 PROFILE CLASS & LTAR	
			.0503 STRUCTURE/ TEXTURE	.0503 CONSISTENCE/ MINERALOGY	.0504 SOIL WETNESS/ COLOR	.0505 SOIL DEPTH	.0506 SAPRO CLASS	.0507 RESTR HORIZ		
E1	LS	0-16	SL/Gr	fr/ns/np	Not observed	N.O.	N.O.	N.O.	S-0.3	
	3%	16-25	SCL/Wsbk	fr/ss/sp	10yr 7/2 @25"					
	.0502(d) SLOPE CORRECTION									
	1.0"									
E3	LS	0-18	SL/Gr	fr/ns/np	Not observed	N.O.	N.O.	N.O.	S-0.3	
	3%	18-27	SCL/Wsbk	fr/ss/sp	10yr 7/2 @27"					
	.0502(d) SLOPE CORRECTION									
	1.0"									
E6	LS	0-16	SL/Gr	ns/np/np	Not observed	N.O.	N.O.	N.O.	S-0.3	
	3%	16-28	SCL/Wsbk	fr/ss/sp	10yr 7/2 @28"					
	.0502(d) SLOPE CORRECTION									
	1.0"									
E7	LS	0-18	SL/Gr	ns/np/np	Not observed	N.O.	N.O.	N.O.	S-0.3	
	3%	18-26	SCL/Wsbk	fr/ss/sp	10yr 7/2 @26"					
	.0502(d) SLOPE CORRECTION									
	1.0"									
DESCRIPTION:		INITIAL SYSTEM		REPAIR SYSTEM		SITE CLASSIFICATION (.0509):		Suitable		
Available Space (.0508):		Suitable		Suitable		EVALUATED BY:		John Kase		
System Type(s):		Accepted		LP Chamber		OTHER(S) PRESENT:				
Site LTAR:		0.300		0.250						
Maximum Trench Depth:		12"		10"						
Saprolite System:		No		No						
Comments:		Trench bottoms depth measure on downslope side of trench.								



NORTH LAKES SOIL CONSULTING, PLLC			SOIL/SITE EVALUATION SHEET				Project #:		25-022	
							Sheet #:		2	
OWNER/APP. NAME:		Superior Homes			SUBDIV./LOT#		Lot 7			
LOCATION OF SITE :		Graham's Mill Lane (Off of Cameron Hill Road)								
COUNTY:		Hamett	PROPERTY ID #:		099565006507		DATE EVALUATED:		4/4/2025	
PROPOSED FACILITY:		SFR	PROPOSED DESIGN FLOW (.400):		480 GPD		PROPERTY SIZE:		10.79	
WATER SUPPLY:		Public			WATER SUPPLY SETBACK:					
TYPE OF WASTEWATER:			Domestic		EVALUATION METHOD:			Auger		
P R O F I L E  #	.502 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.503)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR	
			.503 STRUCTURE/ TEXTURE	.503 CONSISTENCE/ MINERALOGY	.504 SOIL WETNESS/ COLOR	.505 SOIL DEPTH	.506 SAPRO CLASS	.0507 RESTR HORIZ		
E8		0-16	SL/Gr	ns/np/np	Not observed	N.O.	N.O.	N.O.	S-0.3	
	LS	16-26	SCL/Wsbk	fr/ss/sp	10yr 7/2 @26"					
	3%									
	.0502(d) SLOPE CORRECTION									
	1.0"									
E10		0-18	SL/Gr	fr/ns/np	Not observed	N.O.	N.O.	N.O.	S-0.25	
	LS	18-25	SCL/Wsbk	fr/ss/sp	10yr 7/2 @25"					
	8%									
	.0502(d) SLOPE CORRECTION									
	2.8"									
E11		0-16	SL/Gr	fr/ns/np	Not observed	N.O.	N.O.	N.O.	S-0.25	
	LS	16-25	SCL/Wsbk	fr/ss/sp	10yr 7/2 @25"					
	8%									
	.0502(d) SLOPE CORRECTION									
	2.8"									
E13		0-19	SL/Gr	fr/ns/np	Not observed	N.O.	N.O.	N.O.	S-0.25	
	LS	19-26	SCL/Wsbk	fr/ss/sp	10yr 7/2 @26"					
	8%									
	.0502(d) SLOPE CORRECTION									
	2.8"									
Comments:										

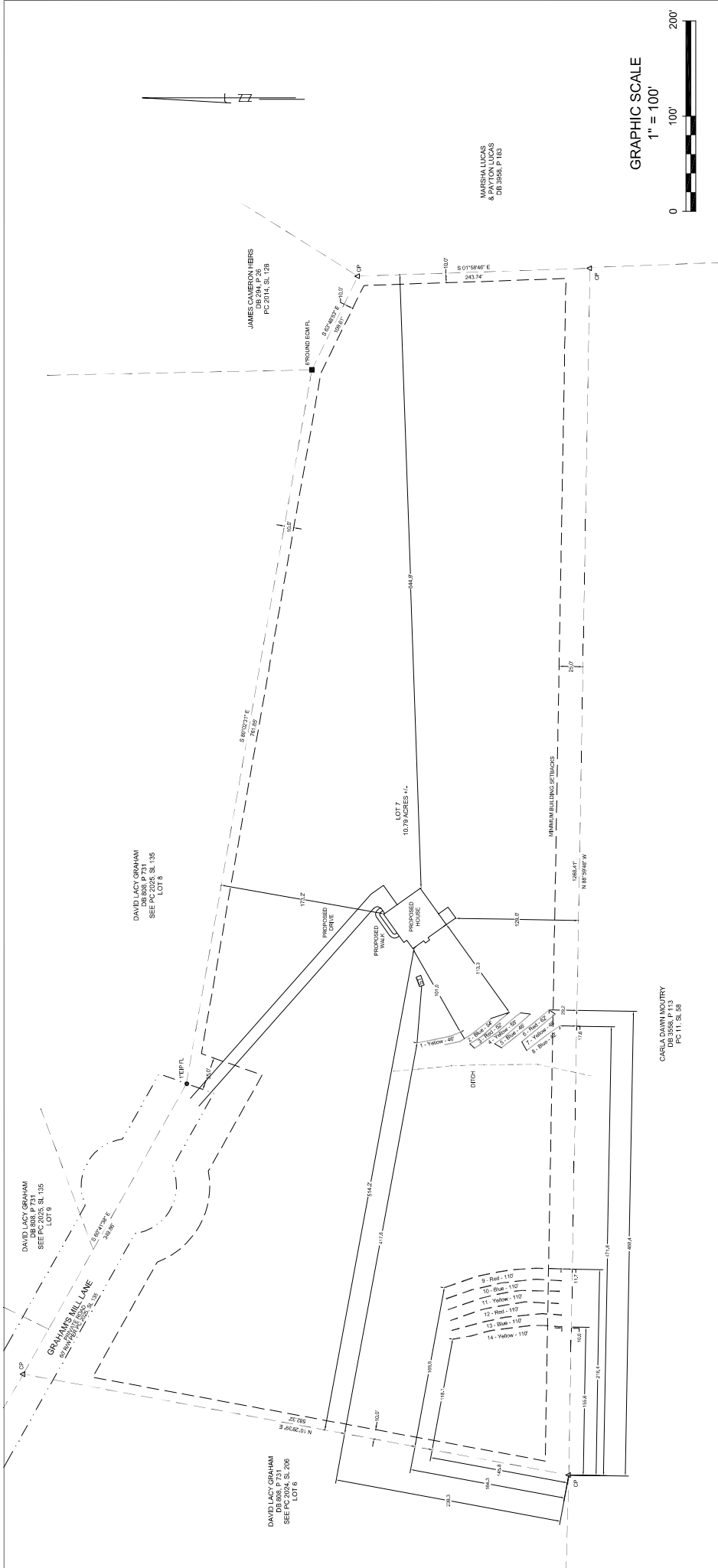
NORTH LAKES SOIL CONSULTING, PLLC			SOIL/SITE EVALUATION SHEET				Project #:		25-022	
							Sheet #:		3	
OWNER/APP. NAME:		Superior Homes			SUBDIV./LOT#		Lot 7			
LOCATION OF SITE :		Graham's Mill Lane (Off of Cameron Hill Road)								
COUNTY:		Hamett	PROPERTY ID #:		099565006507		DATE EVALUATED:		4/4/2025	
PROPOSED FACILITY:		SFR	PROPOSED DESIGN FLOW (.400):		480 GPD		PROPERTY SIZE:		10.79	
WATER SUPPLY:		Public		WATER SUPPLY SETBACK:		10'				
TYPE OF WASTEWATER:			Domestic		EVALUATION METHOD:			Auger		
P R O F I L E  #	.502 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.503)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR	
			.503 STRUCTURE/ TEXTURE	.503 CONSISTENCE/ MINERALOGY	.504 SOIL WETNESS/ COLOR	.505 SOIL DEPTH	.506 SAPRO CLASS	.0507 RESTR HORIZ		
E14		0-19	SL/Gr	fr/ns/np	Not observed	N.O.	N.O.	N.O.	S-0.25	
	LS	19-25	SCL/Wsbk	fr/ss/sp	10yr 7/2 @25"					
	8%									
	.0502(d) SLOPE CORRECTION									
	2.8"									
	.0502(d) SLOPE CORRECTION									
	.0502(d) SLOPE CORRECTION									
	.0502(d) SLOPE CORRECTION									

Comments:

Standard Abbreviations							
LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL LTAR	SAPROLITE	LPP LTAR	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope)	I	S (Sand)	0.8 - 1.2	0.6 - 0.8	0.4 - 0.6	SEXP (Slightly Expansive)	G (Single Grain)
CV (Convex Slope)		LS (Loamy Sand)		0.5 - 0.7		EXP (Expansive)	M (Massive)
D (Drainage Way)							
FP (Flood Plain)	II	SL (Sandy Loam)	0.6 - 0.8	0.4 - 0.6	0.3 - 0.4	<b>MOIST</b>	SBK (Subangular Blocky)
FS (Foot Slope)		L (Loam)		0.2 - 0.4		VFR (Very Friable)	WSBK (Weak Subangular Blocky)
H (Head Slope)						FR (Friable)	ABK (Angular Blocky)
L (Linear Slope)	III	SiL (Silt Loam)	0.3 - 0.6	0.1 - 0.3	0.15 - 0.3	FI (Firm)	PL (Platy)
N (Nose Slope)		SCL (Sandy Clay Loam)		0.05 - 0.15*		EFI (Extremely Firm)	PR (Prismatic)
R (Ridge/Summit)		CL (Clay Loam)		N/A			MA-RCF (Massive Rock Controlled Fabric)
S (Shoulder Slope)		SiCL (Silty Clay Loam)	<b>WET</b>			AR (Auger Refusal)	
T (Terrace)		Si (Silt)	NS (Non-Stick)				
TS (Toe Slope)						SS (Slightly Sticky)	<b>OTHER</b>
	IV	SC (Sandy Clay)	0.1 - 0.4	N/A	0.05 - 0.2	S (Sticky)	NO (Not Observed)
		SiC (Silty Clay)				VS (Very Sticky)	
		C (Clay)				NP (Non-plastic)	
						SP (Slightly Plastic)	
	O (Organic)		N/A	N/A	N/A	P (Plastic)	
						VP (Very Plastic)	
<b>NOTES:</b>							
SAPROLITE*	*Sandy clay loam sapolite can only be used with advanced pretreatment in accordance with 15A NCAC 18E .1200.						
HORIZON DEPTH	In inches below natural soil surface						
DEPTH OF FILL	In inches from land surface						
RESTRICTIVE HORIZON	Thickness and depth from land surface						
SAPROLITE	S (suitable) or U (unsuitable)						
SOIL WETNESS	Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation						
CLASSIFICATION	S (Suitable) or U (Unsuitable)						
Long-term Acceptance Rate (LTAR): gal/day/ft2							



# Septic Site Plan



NOTES:

- All components of the septic system should meet all County and State setback requirements. This includes tanks, manifolds, d-box, and both initial and repair lines.
- This site plan is not a survey and should not be used in finding property boundaries.
- This site plan is not a guarantee of a septic permit.
- No vehicular traffic or grading of any form should be completed in the septic area, both initial and repair. This includes no adding of soil.
- No cuts of 2' or greater should be made within 15' of initial and repair septic areas.

Initial System	Repair System	LEGEND
System Type: IIB, Gravity - Serial	System Type: IIIB, Pressure Manifold	Initial System
Line Numbers: 1-8 Total Footage: 406'	Line Numbers: 9-14 Total Footage: 660'	Repair System
Accepted Status System (25% Reduction) - At-Grade w/ cover	Low Profile Chamber - Shallow Placement w/ cover	Not Used
Soil LTAR: 0.300	Soil LTAR: 0.250	[ST] 1500 Gallon Min. Septic Tank
12" Maximum Trench Depth	10" Maximum Trench Depth	[PT] 1500 Gallon Min. Pump Tank
Address:		Draw Date 04/15/2025
North Lakes Soil Consulting, PLLC		Revision
3325 Jones Lake Road, Fuquay Varina, NC 27526		Revision
Phone: (910) 539-5439		Drawn By JMM
Email: john@northlakesoil.com		TSC Project #: 25-022
Septic System Layout: Initial & Repair		
Bedroom Count: 4-Bedroom		



# Gravity or PM Design Packet



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910-539-5439

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## **Permit Conditions & Installation Guidelines**

1. Permit is subject to suspension or revocation if the Site Plan changes or the intended use changes, which significantly impact permit.
2. Initial system is designed as an at-grade system and requires cover. Soil cover above the original grade shall be placed over the entire dispersal field and shall extend laterally five feet beyond the trenches. Final soil cover over the dispersal field shall be a minimum of six inches deep after settling, so additional soil cover may be required to account for settling. The cover material shall be free of trash, debris, or large clods that do not break apart.
3. Maintain all required setbacks pursuant to 15A NCAC 18E SECTION .0600 – LOCATION OF WASTEWATER SYSTEMS.
4. It is recommended to construct protective fencing around the soil area to protect from grading, compaction, and construction traffic.
5. No grading should be completed within the areas reserved for the initial and repair septic areas.
6. Storage of materials, cuts and fill over septic areas could result in revocation of the permit.
7. Maintain the septic layout until the system is installed. There will be a fee to re-flag the septic system layout.
8. This system is designed for domestic strength effluent only. No garbage disposals, garbage grinders, floor drains, water softener backwash, fats, oils, greases (FOG).
9. Install system per 15A NCAC 18E .0901 (g) and .0800.
10. Use septic and pump tanks as required per 15A NCAC 18E .0805.
11. Make sure property lines are marked prior to installation. Contact NC 811 prior to any digging.
12. For a 25% chamber system, I recommend placing #5 or #57 clean, washed gravel placed over the chamber louvers to offer structural support, decreased settling, prevent soil intrusion on trench bottom and allow venting of the chambers. Use a High Flow Splash Plate at each End Cap receiving effluent if pumping to a chamber system.
13. Surface water runoff, including stormwater, gutter drains, or downspouts, shall be diverted away from the wastewater system. No depressions shall be allowed over the dispersal field area.
14. Install system during dry conditions (when no smearing of trench walls occurs and at least 3 days after the most recent measurable rain event). Install system in the area noted at the trench depth specified.

15. It is recommended to regularly operate the system at 50-60% of daily design peak flow to maintain the system at optimum performance.
16. It is recommended to remove all maples, sweet gums, and willow oaks in the vicinity of the drainfield due to the propensity for roots growing into the drainfield lines.
17. It is recommended to straw and seed septic areas after installation to establish a stable cover and prevent soil erosion.

**NORTH LAKES SOIL CONSULTING, PLLC**

**Layout Staking Sheet**

**Superior Homes / Graham's Mill Lane (Lot 7)**

**Project #:** 25-022  
**Parcel #:** 099565006507

LINE #	FLAG COLOR	BS (ft)	FS (ft)	FLAGGED LINE LENGTH (ft)	DESIGN LINE LENGTH (ft)
1	Yellow		4.50	47	46
2	Blue		5.58	57	54
3	Red		6.25	53	52
4	Yellow		6.58	61	58
5	Blue		7.30	49	46
6	Red		8.00	64	62
7	Yellow		9.00	46	46
8	Blue		9.75	43	42
9	Red		3.70	116	110
10	Blue		4.40	116	110
11	Yellow		5.20	116	110
12	Red		5.90	116	110
13	Blue		6.60	116	110
14	Yellow		7.30	116	110
<b>Total:</b>				<b>1116</b>	<b>1066</b>

SYSTEM AREA	DESIGN LINE LENGTH (ft)	SOIL LTAR (GPD/FT2)	SYSTEM TYPE	DESIGN LTAR* (GPD/FT2)	DRAINFIELD PRODUCT TYPE	MAXIMUM TRENCH DEPTH (Inches)	DISTRIBUTION METHOD	DESIGN FLOW (GPD)
Initial	406	0.300	IIB	0.296	Accepted (25% Reduction)	12"	Gravity - Serial	480
Repair	660	0.250	IIIBG	0.242	Low Profile Chamber	10"	Pressure Manifold	480

**NOTES:**

- 1) Initial TBM - 3', on ground at Auger Boring E2. Repair TBM - 8.4', on ground at Auger Boring E10
- 2) TBM is assumed to be 100.00
- 3) All measures in feet.
- 4) Nitrification lines are demonstrated on contour via colored pin flags.
- 5) Initial System (Lines 1-8) Repair System (Lines 9-14)
- 6) BS, FS indicate rod readings.
- 7) Maximum trench depth is calculated on the downhill side of the trench and accounts for slope correction.

\* Design LTAR = Design Flow / ((Design Line Length x Trench Width) / (1-%Reduction))

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# CAST-A-SEAL 402/402F

## PIPE TO MANHOLE & TANK CONNECTOR

### What It Is

The Cast-A-Seal 402/402F is a simple cast-in pipe-to-manhole connector that offers a watertight flexible connector that is cast into the structure when the concrete is poured.

The key lock is integrally cast-in during the production process providing a secure seal for storm water and sanitary collection systems.

### How It Works

- The connector is folded into the casting position.
- It is placed on the reusable mandrel and then placed on the form.
- After curing, the mandrel is removed.
- The connector is then simply unfolded at the jobsite.
- Take-up clamps made from series 304 stainless steel with quick adjusting screws secure the connector to the pipe.



### Why It's Better

- Durable and reusable mandrel forms.
- Integrally cast into the structure at time of casting.
- Contractor can backfill immediately after pipe insertion.
- The 4" connector is available in either open or closed end face.
- Contractor can save time and money by backfilling immediately.

### Where To Use

- Manholes
- Wet wells
- Square pump and lift stations
- Stormwater structures
- On-site treatment structures
- Junction chambers
- Grease interceptors



Press-Seal believes all information is accurate as of its publication date. Information, specifications, and prices are all subject to change without notice. Press-Seal is not responsible for any inadvertent errors. Copyright 2022.

Phone: 800-348-7325  
Fax: (260) 436-1908

**PRESS-SEAL CORPORATION**  
*Protecting Our Planet's Clean Water Supply*  
ISO 9001: Registered • Version 02.16.22.11.17

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Web: [www.press-seal.com](http://www.press-seal.com)

# CAST-A-SEAL 402/402F

## SUBMITTAL SPECIFICATIONS

A flexible pipe-to-structure connector shall be employed in the connection of the sanitary sewer pipe to precast structures. The connector shall be Cast-A-Seal® 402/402F as manufactured by Press-Seal Corporation, Fort Wayne, Indiana, or approved equal. The connector shall be the sole element relied on to assure a flexible, watertight seal of the pipe to the precast structure. The connector shall consist of a rubber gasket and an external take-up clamp.

The rubber gasket element shall be constructed solely of synthetic or natural rubber, and shall meet or exceed the physical property requirements of ASTM C 923.

The external take-up clamp shall be constructed of Series 300 non-magnetic stainless steel and shall utilize no welds in its construction. The clamp shall be installed by torquing the adjusting screw using a torque-setting wrench available from the connector manufacturer.

Selection of the proper size connector for the structure and pipe requirement, and installation thereof, shall be in strict conformance with the recommendations of the connector manufacturer. Any dead end pipe stubs installed in connectors shall be restrained from movement per ASTM C 923.

The finished connection shall provide sealing to 13 psi (minimum) and shall accommodate deflection of the pipe to 7 degrees (minimum) without loss of seal.

Vacuum testing shall be conducted in strict conformance with ASTM C 1244 prior to backfill. Other testing shall be conducted in strict conformance with the requirements of the connector manufacturer.

## Product Performance

Cast-A-Seal 402/402F meets and/or exceeds all requirements of ASTM C 923, including physical properties of materials and performance testing, including:

- 13 PSI minimum in straight alignment
- 10 PSI at minimum 7° angle
- 10 PSI minimum under shear load of 150 lbs/in. pipe diameter

Cast-A-Seal 402/402F meets and/or exceeds the requirements of the following Standards, Specifications, Codes, and Test Methods:

- IAPMO/ANSI Z1000 Standard for Prefabricated Septic Tanks
- IAPMO/ANSI Z1001 Standard for Prefabricated Gravity Grease Interceptors
- NPCA Best Practices Manual for Precast Concrete On-Site Wastewater Tanks
- NOWRA Model Code Framework
- ASTM C 1227 Standard Specification for Precast Concrete Septic Tanks
- ASTM C 1644 Standard Specification for Resilient Connectors Between Reinforced Concrete On-Site Wastewater Tanks and Pipes (CAS 402)
- ASTM C 1613 Standard Specification for Precast Concrete Grease Interceptor Tanks
- ASTM C 923 - Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals
- ASTM C 1244 Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test
- ASTM C 1478 - Standard Specification for Storm Drain Resilient Connectors Between Reinforced Concrete Storm Sewer Structures, Pipes, and Laterals

Press-Seal believes all information is accurate as of its publication date. Information, specifications, and prices are all subject to change without notice. Press-Seal is not responsible for any inadvertent errors. Copyright 2022.

**Phone:** 800-348-7325  
**Fax:** (260) 436-1908

**PRESS-SEAL CORPORATION**  
*Protecting Our Planet's Clean Water Supply*  
ISO 9001: Registered • Version 02.16.22.11.17

Email: [sales@press-seal.com](mailto:sales@press-seal.com)  
Web: [www.press-seal.com](http://www.press-seal.com)



# CAST-A-SEAL 402/402F

## SELECTION GUIDE

PIPE SIZE	CAST-A-SEAL 402	PIPE O.D. RANGE	WALL THICKNESS*	APPLICATION
1.25" - 2" 31 - 51 mm	452.0250	1.5" - 2.75" 38 - 70 mm	2.5" - 6" 64 - 150 mm	STANDARD
4" 100 mm	452.0450	4.2" - 4.7" 107 - 119 mm	2.5" - 6" 64 - 150 mm	STANDARD
4" 100 mm	452.0402F1	4.2" - 4.7" 107 - 119 mm	2.5" - 4.0" 64 - 102 mm	Closed Face
6" 150 mm	452.0650	6.2" - 6.7" 157 - 170 mm	2.5" - 6" 64 - 150 mm	STANDARD
3" 75 mm	CAS ADAPTER	3.2" - 3.6" 81 - 91 mm	---	Use with 4" CAST-A-SEAL



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Email: sales @press-seal.com  
Web: www.press-seal.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.

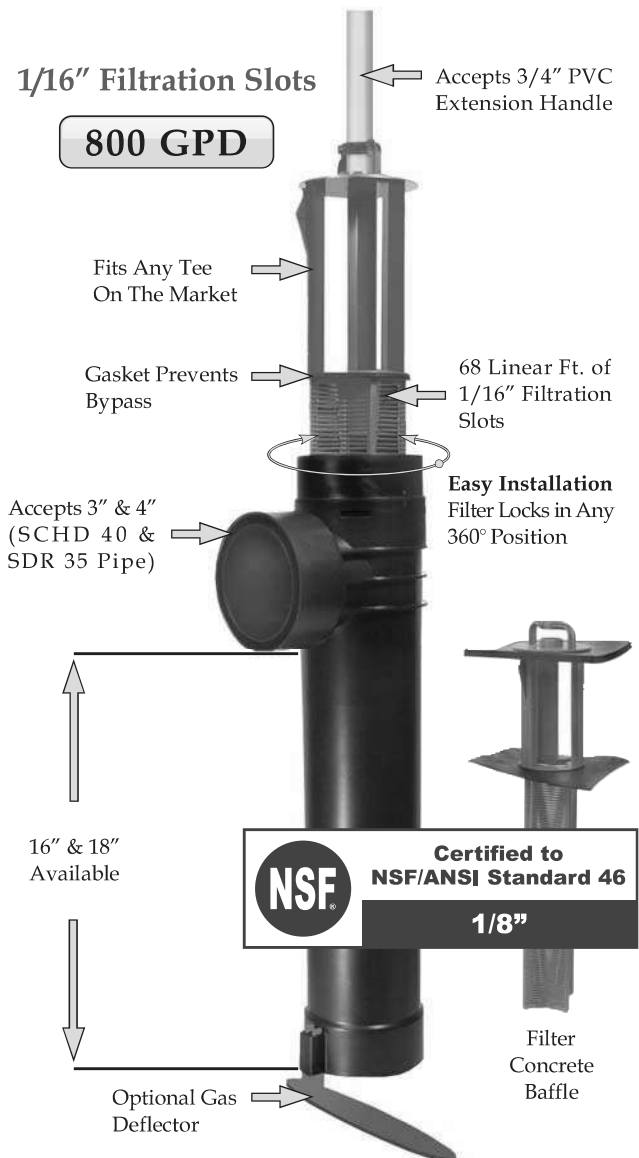
### PL-68 Maintenance:

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



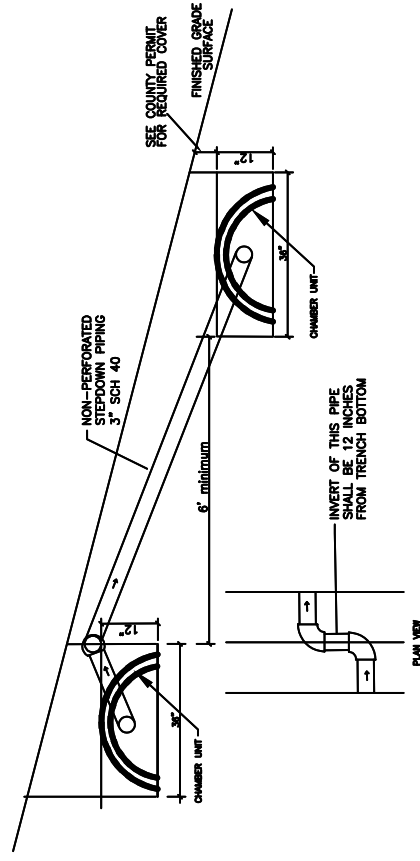
**Spacer Bushing**  
4" SCHD 40  
to 110mm Pipe



**2" Extender**

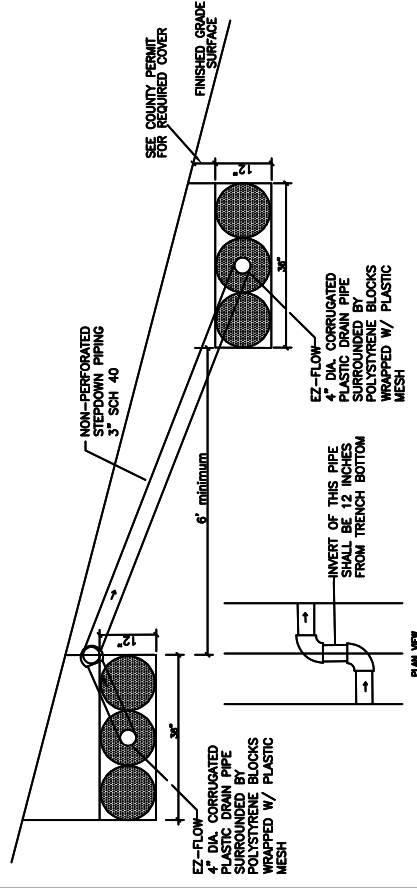
# *TRENCH CONNECTION DETAIL FOR SERIAL DISTRIBUTION*

N.T.S.



# *TRENCH CONNECTION DETAIL FOR SERIAL DISTRIBUTION*

N.T.S.



**NORTH LAKES**  
SOIL CONSULTING

**North Lakes Soil Consulting, PLLC**

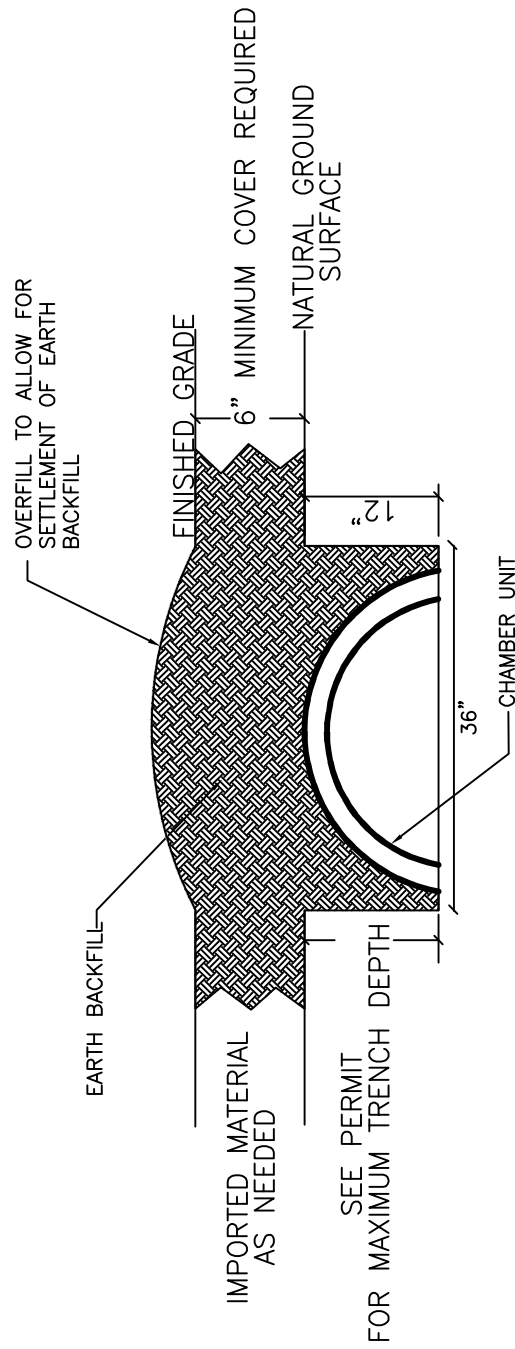
3325 Jones Lake Road, Fuquay Varina, NC 27526

Phone: (910) 539-5439

Email: john@northlakessoil.com

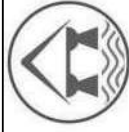
# NITRIFICATION TRENCH DETAIL FOR AT-GRADE CHAMBERS

N.T.S.



## NOTES:

1. TRENCH BOTTOM SHALL BE LEVEL.
2. SHALL BE INSTALLED IN 36" WIDE TRENCHES
3. CHAMBER SYSTEM SHALL BE SELECTED FROM THOSE CURRENTLY APPROVED FOR 25% AREA / TRENCH LENGTH REDUCTION AND SPECIFIED FOR INSTALLATION IN 36 INCH WIDE NITRIFICATION TRENCHES.
4. ALLOW FOR MINIMUM OF 6 INCHES OF SOIL COVER OVER CHAMBERS.
5. SPLASH PLATE REQUIRED.



**North Lakes Soil Consulting, PLLC**  
3325 Jones Lake Road, Fuquay Varina, NC 27526

Phone: (910) 539-5439  
Email: john@northlakessoil.com

**NORTH LAKES**  
SOIL CONSULTING



**INFILTRATOR®**  
water technologies

**Quick4<sup>PLUS</sup>**  
CHAMBER SYSTEMS™

## The Quick4® Plus Standard Chamber

### Quick4 Plus™ Series

The Quick4 Plus Standard Chamber offers maximum strength through its two center structural columns. This chamber can be installed in a 36-inch-wide trench. Like the original line of Quick4 chambers, it offers advanced contouring capability with its Contour Swivel Connection™ which permits turns up to 15-degrees, right or left. It is also available in four-foot lengths to provide optimal installation flexibility. The Quick4 Plus All-in-One 12 Endcap, and the Quick4 Periscope are available with this chamber, providing increased flexibility in system configurations.



**Maximum Strength**

### Quick4 Plus Standard Chamber Specifications

**Size**

34"W x 53"L x 12"H  
(864 mm x 1346 mm x 305 mm)

**Effective Length**

48" (1219 mm)

**Louver Height**

8" (203 mm)

**Storage Capacity**

47 gal (178 L)

**Invert Height**

0.6" (15 mm), 5.3" (135 mm),  
8.0" (203 mm), 12.7" (323 mm)



### Quick4 Plus Standard Chamber Benefits:

- Two center structural columns offer increased stability and superior strength
- Advanced contouring connections
- Latching mechanism allows for quick installation
- Four-foot chamber lengths are easy to handle and install
- Supports wheel loads of 16,000 lbs/axle with 12" of cover



### Quick4 Plus All-in-One 12 Endcap Benefits:

- May be used at the end of chamber row for an inlet/outlet or can be installed mid-trench
- Mid-trench connection feature allows construction of chamber rows with center feed, as an alternative to inletting at the ends of chamber rows
- Center-feed connection allows for easy installation of serial distribution systems
- Pipe connection options include sides, ends or top



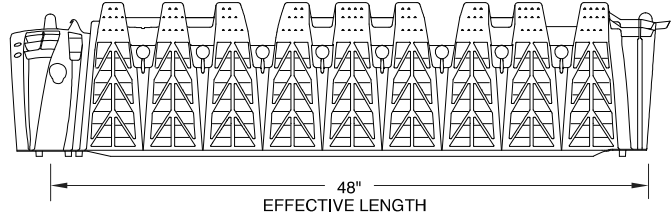
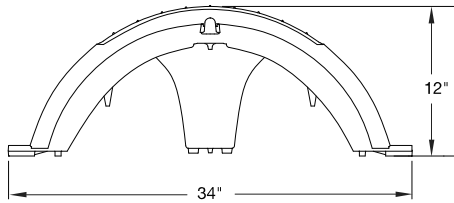
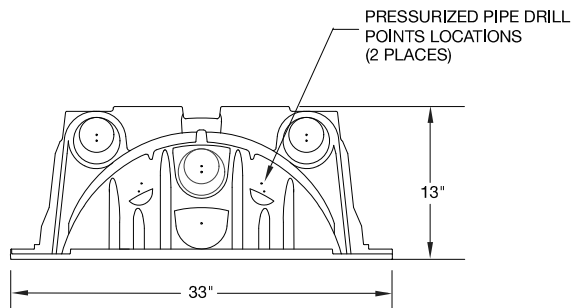
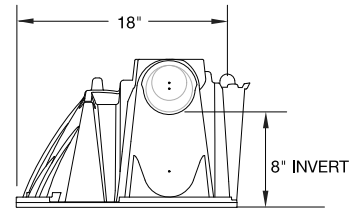
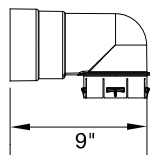
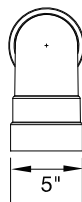
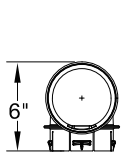
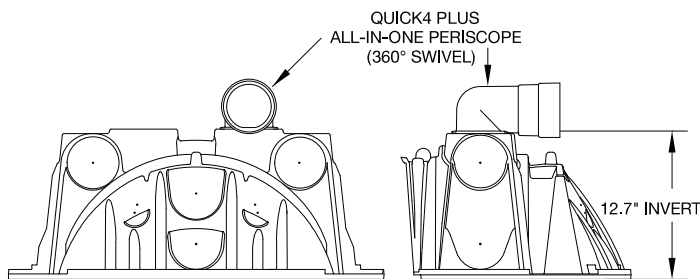
### Quick4 Plus All-in-One Periscope Benefits:

- Allows for raised invert installations
- 180° directional inletting
- 12" raised invert is ideal for serial applications

APPROVED in \_\_\_\_\_

Certified by the International  
Association of Plumbing  
and Mechanical  
Officials (IAPMO)




**Quick4 Plus All-in-One 12 Endcap**

**FRONT VIEW**

**SIDE VIEW**
**Quick4 Plus All-in-One Periscope**

**INFILTRATOR WATER TECHNOLOGIES, LLC ("INFILTRATOR")**
**Infiltrator Water Technologies, LLC STANDARD LIMITED Drainfield WARRANTY**

(a) The structural integrity of each chamber, endcap, EZflow expanded polystyrene and/or other accessory manufactured 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 Infiltrator to be covered by this Limited Warranty. 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 chamber system is manufactured by anyone other than 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](http://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**

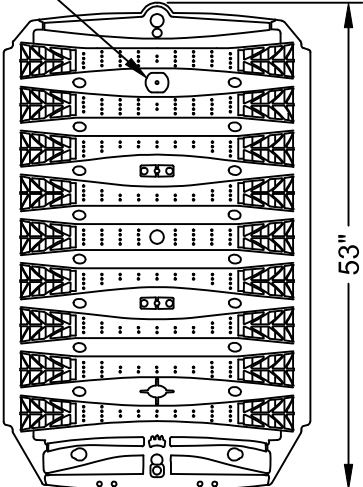
# INFILTRATOR WATER TECHNOLOGIES

## QUICK4 PLUS STANDARD CHAMBER

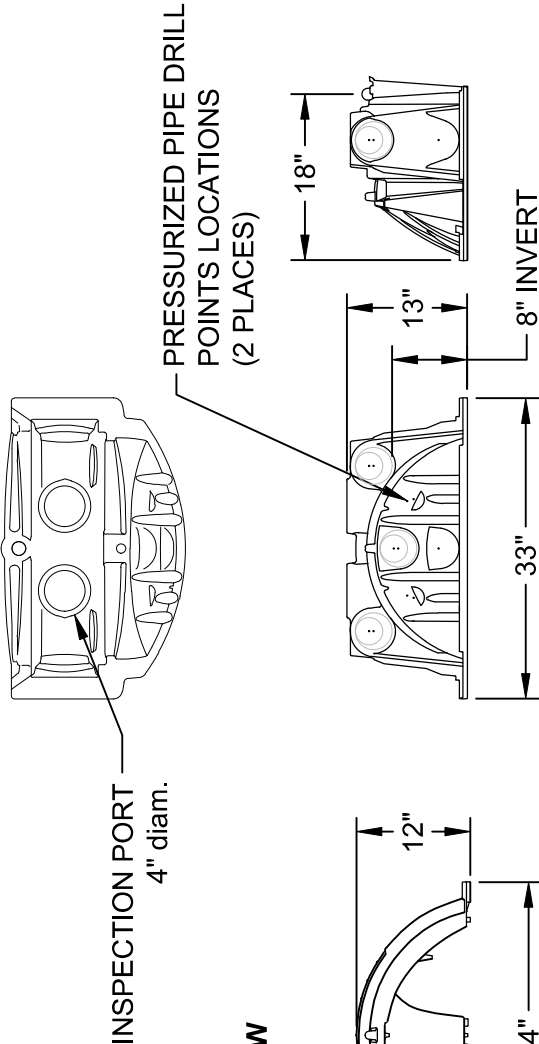
### PRODUCT SPECIFICATIONS

(NOT TO SCALE)

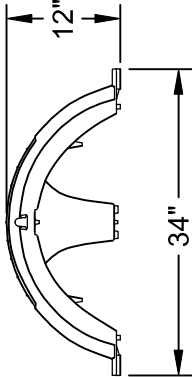
TOP VIEW



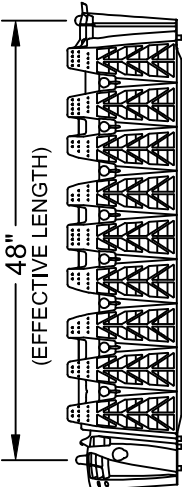
QUICK4 PLUS ALL-IN-ONE 12 END CAP




END VIEW

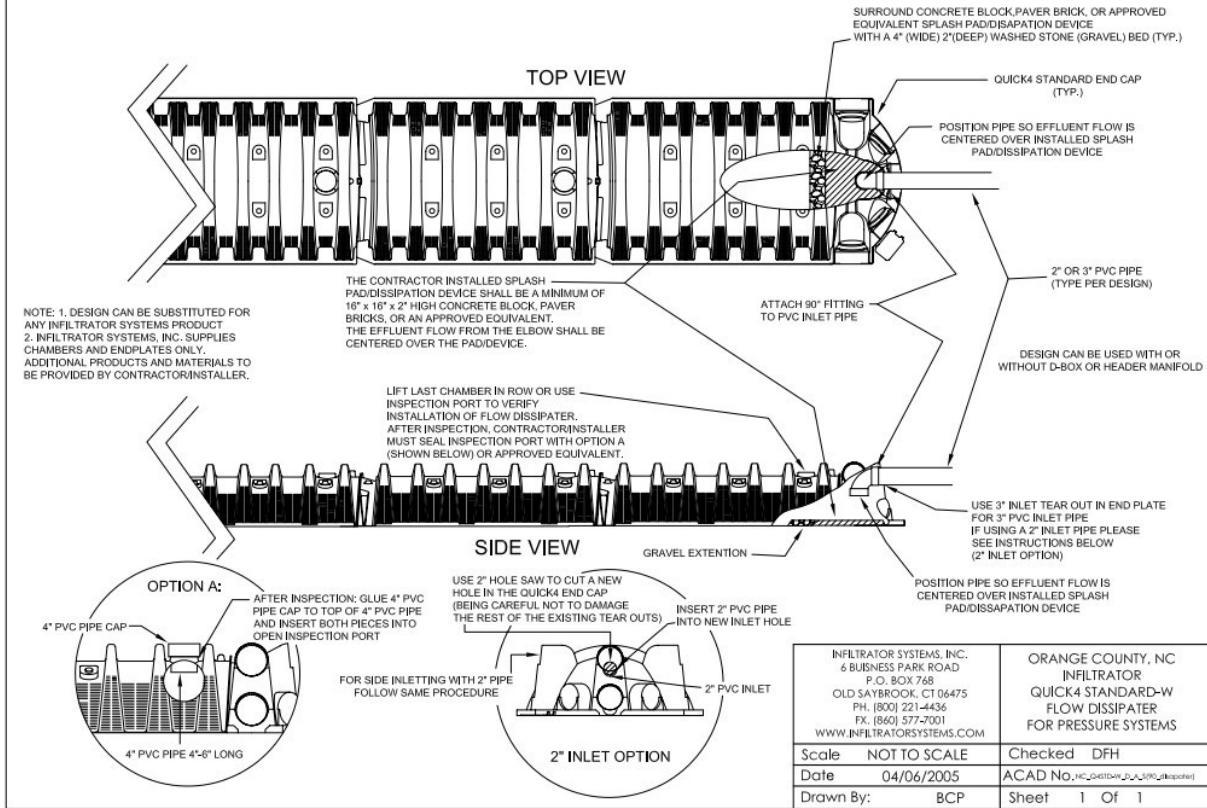


SIDE VIEW



 <b>INFILTRATOR</b> <small>water technologies</small>			
<b>INFILTRATOR WATER TECHNOLOGIES</b> 4 Business Park Rd. Old Saybrook, CT 06475 (800) 221-4436			
<b>QUICK4 PLUS STANDARD CHAMBER</b> <b>PRODUCT SPECIFICATIONS</b>			
Drawn by: EMB	Checked by: DFH	Date: 05/20/2015	Sheet: 1 of 1
Scale: NOT TO SCALE			

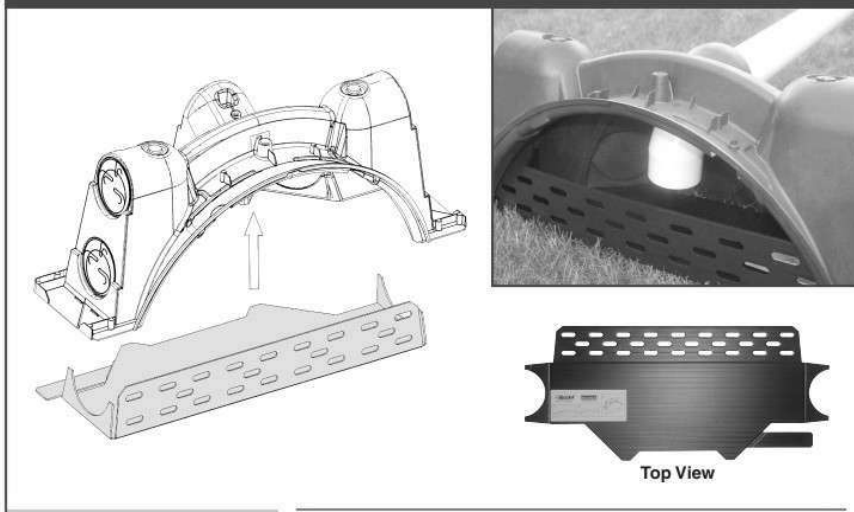
# NORTH CAROLINA INFILTRATOR QUICK4 STANDARD-W FLOW DISSIPATER FOR PRESSURE SYSTEMS



INFILTRATOR SYSTEMS, INC. 6 BUSINESS PARK ROAD P.O. BOX 768 OLD SAYBROOK, CT 06475 PH. (800) 221-4436 FX. (860) 577-7001 WWW.INFILTRATORSYSTEMS.COM	
ORANGE COUNTY, NC INFILTRATOR QUICK4 STANDARD-W FLOW DISSIPATER FOR PRESSURE SYSTEMS	
Scale	NOT TO SCALE
Date	04/06/2005
Drawn By:	BCP
Checked	DFH
ACAD No.	04-06-0005-0001 (DWG)
Sheet	1 Of 1

The Quick4®  
**High Flow**  
Splash Plate

**INFILTRATOR®**  
**SYSTEMS INC.**  
Environmental Onsite Wastewater Solutions™

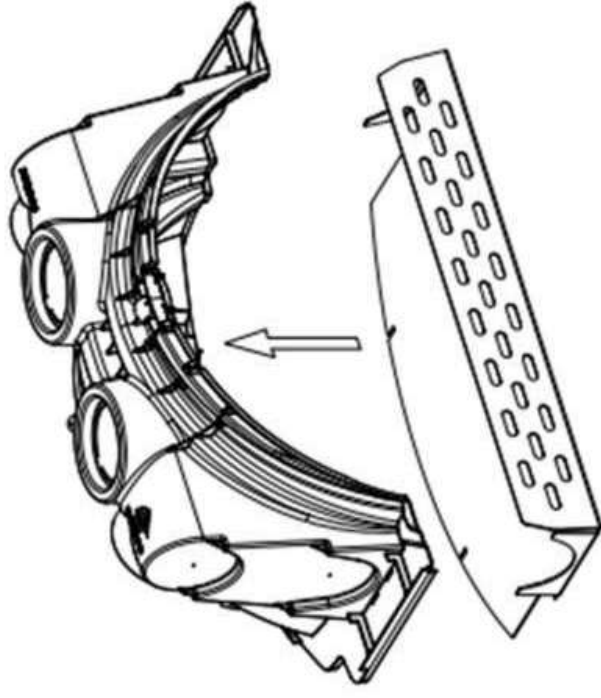


**Gravel over Chamber Trench Louvers Detail:**



**High Flow Splash Plate and End Cap:**

**2**





# Certificate of Insurance



## CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

4/2/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Hub International Carolinas 250 Pollock St New Bern, NC 28560	CONTACT NAME: Reed Whitsett	
	PHONE (A/C, No, Ext): (252) 631-5269 FAX (A/C, No): (252) 631-0373	
	E-MAIL ADDRESS: reed.whitsett@hubinternational.com	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : Auto-Owners Insurance Company	18988
INSURED  North Lakes Soil Consulting PLLC 3325 Jones Lake Road Fuquay Varina, NC 27526	INSURER B : Travelers Casualty & Surety Company of America	31194
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

## COVERAGES

## CERTIFICATE NUMBER:

## REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:			35593059	2/9/2025	2/9/2026	EACH OCCURRENCE \$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000
							MED EXP (Any one person) \$ 10,000
							PERSONAL & ADV INJURY \$
							GENERAL AGGREGATE \$ 2,000,000
							PRODUCTS - COMP/OP AGG \$ 2,000,000
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$
							BODILY INJURY (Per person) \$
							BODILY INJURY (Per accident) \$
							PROPERTY DAMAGE (Per accident) \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$
							AGGREGATE \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y / N If yes, describe under DESCRIPTION OF OPERATIONS below						PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/>
							E.L. EACH ACCIDENT \$
							E.L. DISEASE - EA EMPLOYEE \$
							E.L. DISEASE - POLICY LIMIT \$
B	Errors & Omissions			108223541	3/1/2025	3/1/2026	Each Claim Limit 1,000,000
B	Errors & Omissions			108223541	3/1/2025	3/1/2026	All Claims Limit 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

## CERTIFICATE HOLDER

## CANCELLATION

\*FOR INFORMATIONAL PURPOSES ONLY\*

XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXXXXXXXXXX

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE