

Subsurface Wastewater Disposal System Design Packet



Cedar Pointe LOT 29 275 Deodora Lane Cameron NC, 28326 PIN: 9574-11-1192 4/1/25

Table of Contents

Project Deta	ails
---------------------	------

Contact Information	1
Table of contents page	2
Introduction Letter	
Common Form	5-13
Site Specifications	
Soils Evaluation	14-15
Site Plans	16-19
Design Specifications	
Initial and Repair System	
System Components	
Septic Tank	
Filter Specs	
Nitrification Trench Detail	23
Miscellaneous	
Information for the Contractor	
Insurance Information	25-31

PAC-ONE, **PLLC**

Subsurface Wastewater Disposal System Design Packet

Date: 4/1/25

Proposed for a: 4 -bedroom residential dwelling

Located at: 275 DEODORA LANE, CAMERON NC 28326

DESIGNED BY: Steve Bristow 920 Garner Rd, Selma NC 27576 Email: stevebristow57@gmail.com

Phone: (919)906-4737

Session Law 2022-11 (S372) Introduction Letter

This information contained within this packet concerns a soils and subsurface wastewater evaluation conducted by:

Stephen W. Bristow (LSS#1167) of Permit Acquisition Company – One, PLLC

for the property hereafter described as:

275 DEODORA LANE, CAMERON NC 28326

at the behest of:

Owner Print:	wner Print:SDH RALEIGH LLC						
Owner Signat	ure:	Will Sn	nith				
Owner's Repre	esentative	(if any):	Will Smith				
Date:	4/1/2	5					

The LSS/LG evaluation(s) attached to this application is to be used to issue an Improvement Permit in accordance with G.S 130A-335(a2) and (a3).

The plans or evaluations attached to this application are to be used to issue a Construction Authorization Permit in accordance with G.S. 130A-335 (a2), (a5), and (a6).

The LSS Evaluation is being submitted pursuant to, and meets the requirements, of G.S. 130A-335(a2).



Stephen WBurtow



ROY COOPER • Governor KODY H. KINSLEY • Secretary MARK BENTON • Chief Deputy Secretary for Health SUSAN KANSAGRA • Assistant Secretary for Public Health Division of Public Health

Application for Services

This application, in conjunction with the common form established in G.S. 130A-335(a3) and (a5), is optional for local health departments to be used for applications submitted in accordance with G.S. 130A-335(a2), (a3), and (a5). [hereinafter, G.S. 130A-335(a3) and (a5) permits referred to as (a2) Improvement Permit and (a2) Construction Authorization]

Applying for: (a2) Improvement Permit (a2) Construction Author 	rization (a2) Repair/Construction Authorization	
If applying for a Construction Authorization, please indicate desire	ed system type(s):	
 New Construction Expansion System Reloc 5-Year Expiration Requested (site plan provided) Non-Exp Requesting DHHS review? (systems >3000 GPD or IPWW) 	piring Permit Requested (plat provided, defined in G.S.130A-334(7a)	
Applicant: SDH RALEIGH LLC	Owner: SDH RALEIGH LLC	
Mailing Address: 3412 Apex Peakway	Mailing Address: <u>3412 Apex Peakway</u>	
Mulling / doi: cool		
City: APEX	City: APEX	
	State: NC Zip: 27502	
State: NC Zip: 27502 Phone #:	Phone #:	
Email:	Email:	
	Linai.	
If the answer to any of the following questions is "yes", applicat	nt must attach supporting documentation	
Yes V No Does the site contain any jurisdictional		
Yes V No Is any wastewater going to be generated on the site other than domestic sewage?		
Yes V No Is the site subject to approval by any ot	-	
Yes V No Are there any easements or right of wa		
are to be used to issue an Improvement Permit and/or Construct I understand that authorized county and state officials are grant conduct necessary inspections to determine compliance with ap the application for an Improvements Permit and/or Construction then the Improvement Permit and Construction Authorization	shall become invalid.	
Applicant Signature:	Date: <u>4/1/25</u>	
Owner's Signature:	Date:	

Perm	it/F	ile	#:
------	------	-----	----

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES	ROY COOPER • Governor KODY H. KINSLEY • Secretary MARK BENTON • Chief Deputy Secretary for Health SUSAN KANSAGRA • Assistant Secretary for Public Health Division of Public Health
Submittal Includes: 🔳 (a2) Improvement Permit	(a2) Construction Authorization Fee \$
IMPROVEME	NT PERMIT FOR G.S. 130A-335(a2)
County: HARNETT	_
PIN/Lot Identifier: 9574-11-1192	
Issued To: SDH RALEIGH LLC	
Property Location: 275 DEODORA LANE, CAN	
Subdivision (if applicable) Cedar Pointe	Lot #: LOT 29 Block: Section:
LSS Report Provided: Yes 🔳 No 🗌	
If yes, name and license number of LSS: Stephen W Brist	ow # 1167
New Expansion	System Relocation Change of Use
Facility Type: SFD	
Number of bedrooms: Number of Occupants: _8	Other:
	High Strength Industrial Process Wastewater
	roposed LTAR (Initial): <u>.6</u> Proposed LTAR (Repair): <u>.6</u>
Proposed Wastewater System Type*: IIb	(Initial) Pump Required: 🔲 Yes 🔳 No 🗌 May be required
Proposed Wastewater System Type*: <u>IIb</u>	(Repair) Pump Required: 🗌 Yes 🔳 No 🗌 May be required
*Please include system classification for proposed wastewat	er system types in accordance with Rule .1301 Table XXXII
Effluent Standard: 🔳 DSE 🗌 HSE 🗌 NSF/ANSI 40	TS-I TS-II RCW
Saprolite System (Initial): Yes INO Saprolite System	/stem (Repair): 🗌 Yes 🔳 No
Fill System (Initial): Yes INO If yes, specify: New	Existing (when adding more than 6 inches of fill to system area provide a fill plan)
	Existing (when adding more than 6 inches of fill to system area provide a fill plan)
	sable Depth to LC (Repair) ^x : <u>48</u> <i>× Limiting Condition</i>
	h Depth (Repair) [‡] : <u>35</u> <i>[‡] Measured on the downhill side of the trench</i>
	pecify details:
	Shared well 🔳 Municipal Supply 🗌 Spring 🗌 Other:
	No 🗌 Drainfield location meets requirements of Rule .0601: Yes 🔳 No 🗌
Permit valid for: 🔳 Five years [site plan submitted pursuant	to GS 130A-334(13a)] 🗌 No expiration [plat submitted pursuant to GS 130A-334(7a)]
Use EZ Flow product only- do not use chambers on this sandy sit	to discuss installation- the berm can make the layout difficult to follow. 919-906-4737 e or this permit is void. his installation or the 1060 infiltrator tank as specified by this permit.
Licensed Soil Scientist Print Name: Steve Bristow #1167	as suit, and
	_{Date:} <u>4/1/25</u>
	I pursuant to and meets the requirements of G.S. 130A-335(a2).
-	e attached site sketch*
NCDHHS/DPH/EHS/OSWP	Revised January 2024

Permit/File #: _



This Section for Local Health Department Use Only

Initial submittal received: ______ by _____ Date Initials

G.S. 130A-335(a3) states the following:

When an applicant for an Improvement Permit submits to a local health department an Improvement Permit application, the permit fee charged by the local health department, the common form developed by the Department, and a soil evaluation pursuant to subsection (a2) of this section, the local health department shall, within five business days of receiving the application, conduct a completeness review of the submittal. A determination of completeness means that the Improvement Permit includes all of the required components. If the local health department determines that the Improvement Permit is incomplete, the local health department shall notify the applicant of the components needed to complete the Improvement Permit. The applicant may submit additional information to the local health department to cure the deficiencies in the Improvement Permit. The local health department shall make a final determination as to whether the Improvement Permit is complete within five business days after the local health department receives the additional information from the applicant. If the local health department fails to act within any period set out in this subsection, the applicant may treat the failure to act as a determination of completeness. The Department shall develop a common form for use as the Improvement Permit.

The review for completeness of this Improvement Permit was conducted in accordance with G.S. 130A-335(a3). This Improvement Permit is determined to be:

Incomplete (If box is checked, information in this section is rec	uired.)
The following items are missing:	
Copies of this were sent to the LSS and the Applicant on	te
State Authorized Agent:	Date:
Complete	
State Authorized Agent:	Date:

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2) and (a3) using the signed and sealed LSS/LG evaluation(s) attached here. The issuance of this permit in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. <u>This permit is subject to revocation if the site plan, plat, or the intended use changes</u>. 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 15A NCAC 18E and to the conditions of this permit.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to evaluations, submittals, or actions from a licensed soil scientist or licensed geologist pursuant to GS 130A-335(a2).

Improvement Permit Expiration Date: _____

See attached site sketch



Permit/File #: _____

Re-submittal of Improvement Permit

LHD USE ONLY: This IP resubmittal received:		by	
	Date	Initials	

The following items are being resubmitted pursuant to G.S. 130A-335(a3) for issuance of the Improvement Permit:

I, _______hereby attest that the information required to be included with this re-submittal Licensed Soil Scientist (Print Name) is accurate and complete to the best of my knowledge and that the proposed Improvement Permit meets all applicable federal, State, and local laws, regulations, rules, and ordinances.

Signature of Licensed Soil Scientist

The section below is for Local Health Department use after submittal of items noted as missing above.

Date

LHD Follow-up Completeness Review of Improvement Permit

The review for completeness of this Improvement Permit re-submittal was conducted in accordance with G.S. 130A-335(a3). This Improvement Permit is determined to be:

Date

Incomplete (If box is checked, information in this section is required.)

The following items are missing:

Copies of this were sent to the LSS and the Applicant on _____

State Authorized Agent: _____

Complete

State Authorized Agent: _____

Date: _____

Date: _____



Permit/File #: ____

CONSTRUCTION AUTHORIZATION FOR G.S. 130A-335(a2)

_{County:} Harnett			Pre-Construction Conference Required: Yes 🔳 No 🗌			
PIN/Lot Identifier:	9574-11-1192	2				
Issued To: SDH	RALEIGH LL	С				
			MERON NC 28326			
AOWE/PE Plans/Ev	valuations Provided:	Yes 🔳 No 🗌 If	yes, name and license number of AOWE/PE: Steve Bristow # 10)012E		
Facility Type: SFD)					
Number of bedroo	ms: <u>4</u> Numb	er of Occupants: <u>8</u>	Other:			
New	Expansion	Repair	System Relocation Change of Use			
Basement?	Yes	No	Basement Fixtures? 🗌 Yes 🔳 No			
Crawl Space?	Yes	No	Slab Foundation? Yes No			
Type of Wastewate	er System* <u>IIb</u>		(Initial) IIb	(Repair)		
*Please include sys	stem classification fo	or proposed wastew	vater system types in accordance with Rule .1301 Table XXXII			
Design Daily Flow:	<u>480</u>	GPD Waste	ewater Strength: 🔳 Domestic 🛛 🗌 High Strength 🗌 Indus	trial Process WW		
	120 Section 53, Engi ide engineering doc		izing Low-flow Fixtures and Low-flow Technologies? 🗌 Yes 🔳 N	10		
Effluent Standard:	🔳 DSE 🗌 HSE	NSF/ANSI 40	TS-I TS-II RCW			
Type of Water Sup	ply: 🗌 Private well	Public well	Shared well Municipal Supply Spring Other:_			
Installation Requir	ements/Conditions	1-18				
Septic Tank Size: _	000/1060 gallons	Total Trench/Bed	Length: 220 feet Trench/Bed Spacing: 9 feet on center			
	. 36 inches			Limiting condition		
Soil Cover: <u>6/22</u> i	nches Slope Co	rrected Maximum T	rench/Bed Depth [‡] : <u>35</u> inches <i>[‡] Measured on the downhill</i> .	side of the trench		
Pump Tank Size (if	applicable):	gallons	Requires more than 1 pump? 🗌 Yes 🗌 No			
Pump Requirements:ft. TDH vs GPM Grease Trap Size (if applicable): gallons						
Distribution Method: 🔳 Serial 🗌 D-Box or Parallel 🔲 Pressure Manifold(s) 🗌 LPP 🗌 Other:						
Artificial Drainage	Required: Yes 🗌	No 🖌 If yes, pleas	se specify details:			
Legal Agreements	(If the answer is "Ye	s" to any type of le	gal agreements, please attach a copy of the agreement.)			
Multi-party Agreer	nent Required [.020	4(g)]: 🗌 Yes 🔳	No Declaration of Restrictive Covenants: 🗌 Yes	; 🔳 No		
			quired [.0301(b)]: 🔲 Yes 🔳 No			
Management Entit	y Required: 🗌 Yes	No Minimun	n O&M Requirements:			
			Current - And			
Permit condition Call if you have que		or need a site meetin	g to discuss installation- the berm can make the layout difficult to follow. 919-	906-4737		
			site or this permit is void. thiis installation or the 1060 infiltrator tank as specified by this permit.			
The requirements	of 15A NCAC 18E ar	e incorporated by	reference into this permit and shall be met. Systems shall be instal	led in accordance		
with the attached	site sketch. <u>This Co</u>	onstruction Authoriz	zation is subject to revocation if the site plan, plat, or the intended	<i>use changes.</i> The		
			ange in ownership of the site. This Construction Authorization is su 1900, as applicable, and to the conditions of this permit.	bject to compliance		
AOWE/PE Print Na	me. Steve Bristo	w 10012E		UNIN STE WAS A SHE		
AOWE/PE Signatur	me:Steve Bristo re:Alen Be	terr	 	Certification		
			ant to and meets the requirements of G.S. 130A-335(a2) and (a5).	10012E		
		-	See attached site sketch*	Certification Number 10012E		
NCDHHS/DPH/EHS/C	DSWP		4	Revised January 2024 Form A2CF-24.1		



This Section for Local Health Department Use Only

Initial submittal received: ______ by _____

Date

Initials

G.S. 130A-335(a5) states the following:

When an applicant for a Construction Authorization, or an Improvement Permit and Construction Authorization together, submits a Construction Authorization, or an Improvement Permit and Construction Authorization application together, the permit fee charged by the local health department, the common form developed by the Department, and any necessary signed and sealed plans or evaluations conducted by a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator, the local health department shall, within five business days of receiving the application, conduct a completeness review of the submittal. A determination of completeness means that the Construction Authorization or Improvement Permit and Construction Authorization includes all of the required components. If the local health department determines that the Construction Authorization or Improvement Permit and Construction Authorization is incomplete, the local health department shall notify the applicant of the components needed to complete the Construction Authorization or Improvement Permit and Construction Authorization. The applicant may submit additional information to the local health department to cure the deficiencies in the Construction Authorization or Improvement Permit and Construction Authorization. The local health department shall make a final determination as to whether the Construction Authorization or Improvement Permit and Construction Authorization is complete within five business days after the local health department receives the additional information from the applicant. If the local health department fails to act within any period set out in this subsection, the applicant may treat the failure to act as a determination of completeness. The applicant may apply for the building permit for the project upon the decision of completeness of the Construction Authorization or Improvement Permit and Construction Authorization by the local health department or if the local health department fails to act within five business days. The Authorized On-Site Wastewater Evaluator or licensed engineer submitting the evaluation pursuant to this subsection may request that the local health department revoke or suspend the Construction Authorization or Improvement Permit and Construction Authorization for cause. Upon written request of the Authorized On-Site Wastewater Evaluator or licensed engineer, the local health department shall suspend or revoke the Construction Authorization or Improvement Permit and Construction Authorization pursuant to G.S. 130A-23. The Department shall develop a common form for use as the Construction Authorization.

The review for completeness of this Construction Authorization was conducted in accordance with G.S. 130A-335(a5). This

Construction Authorization is determined to be:

Incomplete	(If box is checked	, information in this s	ection is required.)
------------	--------------------	-------------------------	----------------------

The following items are missing: _

Complete

State Authorized Agent: ____

Date of Issuance:

This Construction Authorization is issued pursuant to G.S. 130A-335(a2) and (a5) using the signed and sealed plans or evaluations attached here. This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes. The Construction Authorization shall not be affected by 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.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to plans, evaluations, preconstruction conference findings, submittals, or actions from a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator in GS 130A-335(a2), (a5), and (a7). The Department, the Department's authorized agents, and the local health departments shall be responsible and bear liability for their actions and evaluations and other obligations under State law or rule, including the issuance of the operations permit pursuant to GS 130A-337.

Construction Authorization Expiration Date: _____

See attached site sketch



Re-submittal of Construction Authorization

	LHD USE ONLY: This CA resubmittal receive	ed:	by	_
		Date	Initials	
The following i	tems are being resubmitted pursuant to G.S. 130.	A-335(a5) for issuance	e of the Construction Author	prization:
		TATE	Dr.	
1	hereby attes	st that the information	required to be included w	vith this re-submittal
	nsite Wastewater Evaluator (Print Name)			
	complete to the best of my knowledge and that and local laws, regulations, rules, and ordinances		iction Authorization meets	all applicable
Signatu	re of Authorized On-Site Wastewater Evaluator		Date	
	The section below is for Local Health Departme	nt use after submittal of	items noted as missing abov	е.
LHD Follow-	up Completeness Review of Constructio	on Authorization		
	completeness of this Construction Authorizatior on Authorization is determined to be:	ו re-submittal was con	ducted in accordance with	G.S. 130A-335(a5).
🗌 Incomplete	(If box is checked, information in this section is r	required.)		
The following it	tems are missing:			
	JO BE QU	IAM VIDER	1. Alexandre de la companya de la co	
Copies of this w	vere sent to the AOWE/PE and the Applicant on	Date		
State Authorize	ed Agent:		Date:	
Complete				
	ed Agent:		Date:	



Permit/File #: _____

ADDENDUM TO G.S. 130A-335(a2) SUBMITTAL

County:
PIN/Lot Identifier:
Issued To:
Additional Improvement Permit Conditions:
IN STATE
MAX 20. 17 5 0.1
Additional Construction Authorization Conditions:
IPRIL 12 VITO
TSSO TERM
- QUAM VID-



Permit #:

Re-submittal of Construction Authorization

	LHD USE ONLY: This CA resubmittal received:	Date	by	-
		Date	Initiais	
The following	items are being resubmitted pursuant to G.S. 130A-335	5(a5) for issuance	of the Construction Author	ization:
	22200-			
l,	hereby attest that <u>Insite Wastewater Evaluator (Print Name)</u>	the information	required to be included wit	h this re-submittal
is accurate and	complete to the best of my knowledge and that the p	proposed Constru	ction Authorization meets a	all applicable
federal, State,	and local laws, regulations, rules, and ordinances.			
Signatu	re of Authorized On-Site Wastewater Evaluator		Date	
	The section below is for Local Health Department use	after submittal of	items noted as missing above	•
LHD Follow-	up Completeness Review of Construction Au	Ithorization		
	completeness of this Construction Authorization re-su on Authorization is determined to be:	ıbmittal was conc	lucted in accordance with G	5.S. 130A-335(a5).
Incomplete	(If box is checked, information in this section is requir	ed.)		
The following i	tems are missing:			
	SE OLIAN	A VIDER		
Copies of this v	vere sent to the AOWE/PE and the Applicant on	Date	_	
State Authorize	ed Agent:		Date:	
Complete				
State Authorize	ed Agent:		Date:	

DEPARTMENT OF HEALTH AND HUMAN SERVICES DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION ON-SITE WATER PROTECTION BRANCH

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM (Complete all fields in full)

OWNER:										
PROPO	ESS: 3412 Apex Peakv DSED FACILITY	SFD	PR	OPOSED DESIGN I	FLOW (.0400):	360 gpd	PROPI	ERTY SIZ	E: .625ac	
	TION OF SITE:		, CAMERON NC 28326						ORDED: yes	
			gle Family Well r Boring □ Pit	□ Shared Well □	Spring □ Oth PE OF WASTE				SETBACK: <u>n</u> Strength I	
EVAL		OD: Mauge	r Boring 🗆 Pit		PE OF WASTE	EWATER:	Domesu	c 🗆 High	Strength 🗆 I	PWW
P R O F I			SOIL MO	RPHOLOGY	OTHEI	R PROFII	LE FACTO	DRS		
L E #	.0502 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	.0503 STRUCTURE/ TEXTURE	.0503 CONSISTENCE/ MINERALOGY	.0504 SOIL WETNESS/ COLOR	.0505 SOIL DEPTH	.0506 SAPRO CLASS	.0507 RESTR HORIZ	.0509 PROFILE CLASS & LTAR*	.0502(d) SLOPE CORRE CTION
	Linear	4	GR/SL	VFR/NS/NP/SEXP	10YR 2/2	48+			Suitable	.72in
	Slope 2%	48	GR/SL	VFR/NS/NP/SBK	5YR 4/6				.60	
1										
	Linear	8	GR/SL	VFR/NS/NP/SEXP	10YR2/2	48+			Suitable	.72in
	Slope 2%	48	SG/SL	LO/FR/NS/NP/SEXP	10YR4/6				.70	
2										
	Linear	6	GR/SL	VFR/NS/NP/SEXP	7.5YR 4/4	48+			Suitable	.72in
	Slope 2%	48	GR/SL	VFR/NS/NP/SEXP	5YR 4/6				.60	
3										
	Linear	5	GR/SL	VFR/NS/NP/SEXP	10YR 2/2	48+			Suitable	.72in
	Slope 2%	28	SG/SL	LO/FR/NS/NP/SEXP	7.5YR 4/6				.65	
4		48	GR/SL	VFR/NS/NP/SEXP	2.5YR 4/6					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM		2022-20	
Available Space (.0508)	YES	YES	SITE CLASSIFICATION (.0509):	SUL SO	
System Type(s)	llb	llb	EVALUATED BY: Stephen W Bristow LSS 1167	Stan W. BR. CA	
Site LTAR	.60	.60	OTHER(S) PRESENT:	- [[][][]]]	
Maximum Trench Depth	35	35			
Comments:					
				- 1131 cs	

Alen Buter

Revised January 2024 Form SSE-24.2

NCDHHS/DPH/EHS/OSWP

LEGEND

LANDSCAPE POSITION	SOIL GROUP	SOIL TEXTURE	CONVENTIONAL LTAR (gpd/ft ²)	SAPROLITE LTAR (gpd/ft ²)	LPP LTAR (gpd/ft ²)	MINERALOGY/ CONSISTENCE		STRUCTURE
CC (Concave slope)		S (Sand)		0.6 - 0.8		MOIST	WET	SG (Single grain)
CV (Convex Slope)	I	LS (Loamy sand)	0.8 - 1.2	0.5 -0.7	0.4 -0.6	Lo (Loose)	NS (Non-sticky)	M (Massive)
D (Drainage way)		SL (Sandy loam)		0.4 -0.6		VFR (Very friable)	SS (Slightly sticky)	GR (Granular)
FP (Flood plain)	Ш	L (Loam)	0.6 - 0.8	0.2 - 0.4	0.3 - 0.4	FR (Friable)	S (Sticky)	SBK (Subangular blocky)
FS (Foot slope)		SiL (Silt loam)		0.1 - 0.3		Fl (Firm)	VS (Very sticky)	ABK (Angular blocky)
H (Head slope)		SCL (Sandy clay loam)		0.05 - 0.15**		VFI (Very firm)	NP (Non-plastic)	PR (Prismatic)
L (Linear Slope)		CL (Clay loam)				EFI (Extremely firm)	SP (Slightly plastic)	PL (Platy)
N (Nose slope)		SiCL (Silty clay loam)					P (Plastic)	
R (Ridge/summit)	ш	Si (Silt)	0.3 - 0.6		0.15 - 0.3		VP (Very plastic)	
S (Shoulder slope)		SC (Sandy clay)				SEXP (Slight	ly expansive)	
T (Terrace)		SiC (Silty clay)				EXP (Ex	pansive)	
TS (Toe Slope)	IV	C (Clay)	0.1 - <mark>0</mark> .4	None	0.05 - 0.2			•
		O (Organic)	None					

* Adjust LTAR due to depth, consistence, structure, soil wetness, landscape, position, wastewater flow and quality.

**Sandy clay loam saprolite 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

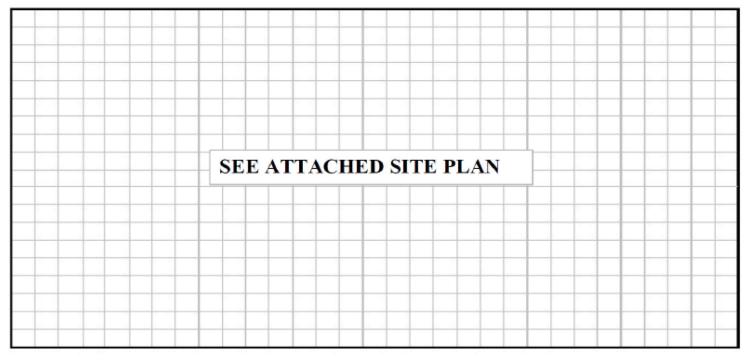
 SAPROLITE
 S(suitable) or U(unsuitable); Evaluation of saprolite shall be by pits.

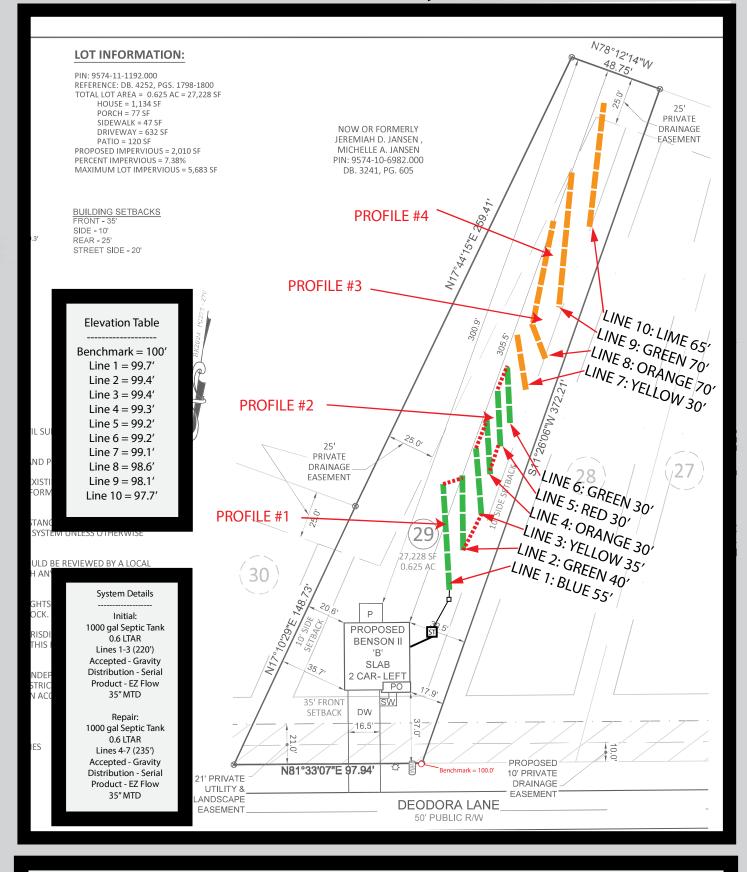
 SOIL WETNESS
 Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation

S (Suitable) or U (Unsuitable)

CLASSIFICATION S (Suitable) or U (I

Show profile locations and other site features (dimensions, reference or benchmark, and North).



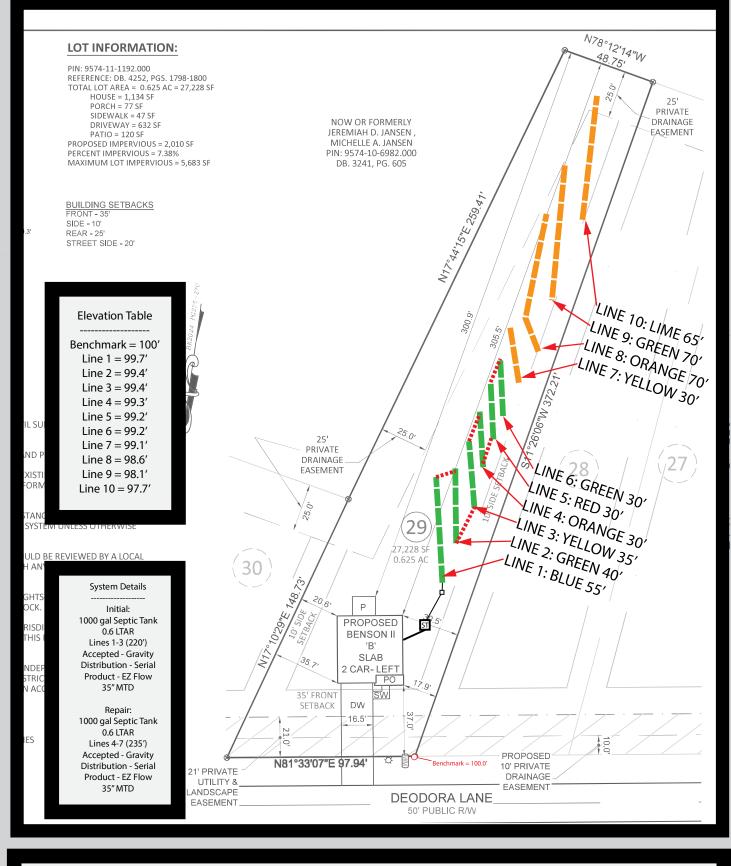


0' 50' 1 inch = 50'



Legend Initial **Serial Serial**



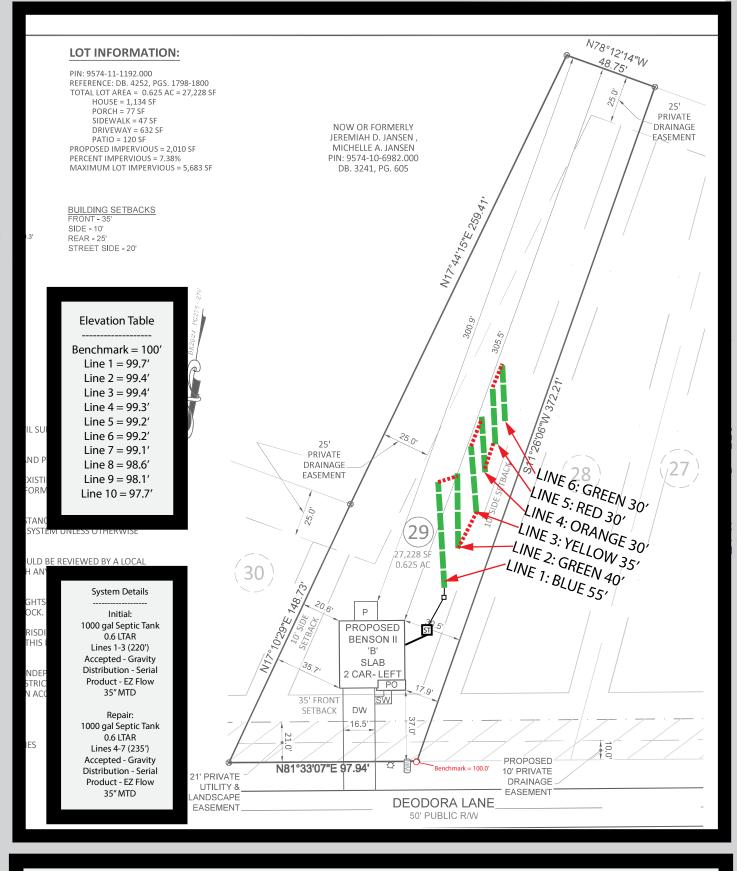


0' 50' 1 inch = 50'



Legend Initial **Second Second**





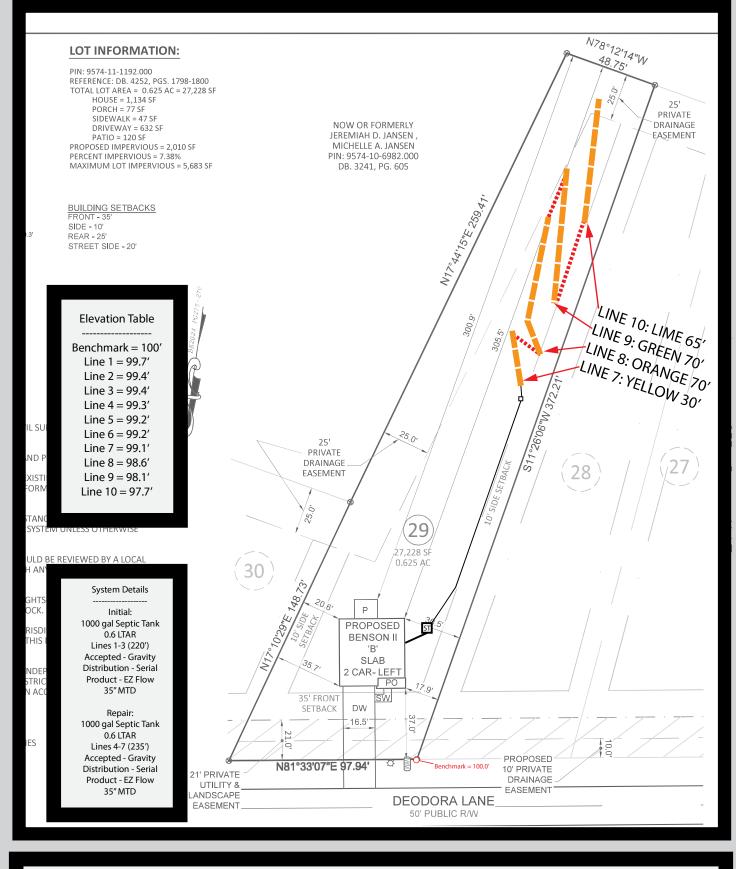
0' 50' 1 inch = 50'



Initial Repair Serial

Legend





0' 50' 1 inch = 50'



Initial Repair Serial

Legend



SYSTEM DETAIL OVERVIEW

CEDAR POINTE LOT 29

Initial System

Design Criteria

Number of bedrooms	4
Design Flow	480 gal/day
Soil L.T.A.R.	0.6 gal/day/sqft
System Detail	
Trench Depth	35"
Total Trench Length	220'
Distribution	Serial
System Components	
Trench Product	EZ Flow
Septic Tank	1000g or 1060g
Effluent Filter	Polylok PL-68 (or approved equivalent)

Repair System

Design Criteria

Number of bedrooms	4
Design Flow	480 gal/day
Soil L.T.A.R.	0.6 gal/day/sqft
System Detail	
Trench Depth	35"
Total Trench Length	235'
Distribution	Serial
System Components	
Trench Product	EZ Flow
Septic Tank	1000g or 1060g
Effluent Filter	Polylok PL-68 (or approved equivalent)



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.





IM-1060



The Infiltrator IM-1060 is a lightweight strong and durable septic tank. This watertight tank design is offered with Infiltrator's line of custom-fit risers and heavy-duty lids. Infiltrator injection molded tanks provide a revolutionary improvement in plastic septic tank design, offering long-term exceptional strength and watertightness.

Infiltrator

TW Riser

System

Inlet Side

TANK CUTAWAY

Partition baffle wall



HEAVY DUTY LID CUTAWAY Reinforced 24" structural access port

Structural bulkheads

MID-SEAM CUTAWAY Reinforced water tight mid-seam gasketed connection



Protecting the Environment with Innovative Wastewater Treatment Solutions

Features & Benefits

- Strong injection molded polypropylene construction
- Lightweight plastic construction and inboard lifting lugs allow for easy delivery and handling
- Integral heavy-duty green lids that interconnect with TW[™] risers and pipe riser solutions
- Structurally reinforced access ports eliminate distortion during installation and pump-outs
- Reinforced structural ribbing and fiberglass bulkheads offer additional strength
- Can be installed with 6" to 48"
 of cover
- Can be pumped dry during pump-outs
- Suitable for use as a septic tank, pump tank, or rainwater (non-potable) tank
- No special water filling requirements are necessary
- The tank may be backfilled with suitable native soil. See installation instructions for guidance.

IM-1060 General Specifications and Illustrations

The IM-1060 is an injection molded two piece mid-seam plastic tank. The IM-1060 injection molded plastic design allows for a mid-seam joint that has precise dimensions for accepting an engineered EPDM gasket. Infiltrator's gasket design utilizes technology from the water industry to deliver proven means of maintaining a watertight seal. The two-piece design is permanently fastened using a series of non-corrosive plastic alignment dowels and locking seam clips. The IM-1060 is assembled and sold through a network of certified Infiltrator distributors.

Must be backfilled and installed in accordance with Infiltrator Water Technologies, Infiltrator IM-Series Septic Tank General Installation Instructions and for shallow ground water conditions reference the Infiltrator IM-Series Tank Buoyancy Control Guidance.

Please visit www.infiltratorwater.com/images/pdf/ ManualsGuides/TANK01.pdf for the latest information.

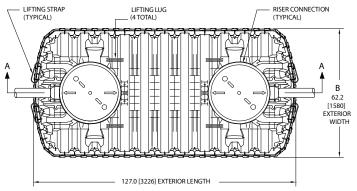
IM-1060	
Working Capacity	1094 gal (4141 L)
Total Capacity	1287 gal (4872 L)
Airspace	16.5%
Length	127" (3226 mm)
Width	62.2" (1580 mm)
Length-to-Width Ratio	2.3 to 1
Height	54.7" (1389 mm)
Liquid Level	44" (1118 mm)
Invert Drop	3" (76 mm)
Fiberglass Supports	2
Compartments	1 or 2
Maximum Burial Depth	48" (1219 mm)
Minimum Burial Depth	6" (152 mm)
Maximum Pipe Diameter	6" (152 mm)
Weight	320 lbs (145 kg)



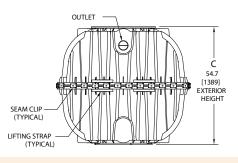
INFILTRATOR

water technologies

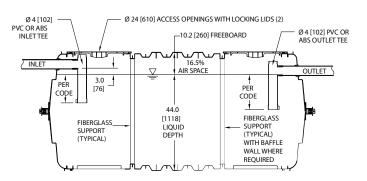
4 Business Park Road P.O. Box 768 Old Saybrook, CT 06475 860-577-7000 • Fax 860-577-7001 **1-800-221-4436** www.infiltratorswater.com



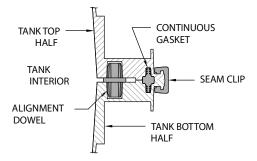
TOP VIEW



END VIEW



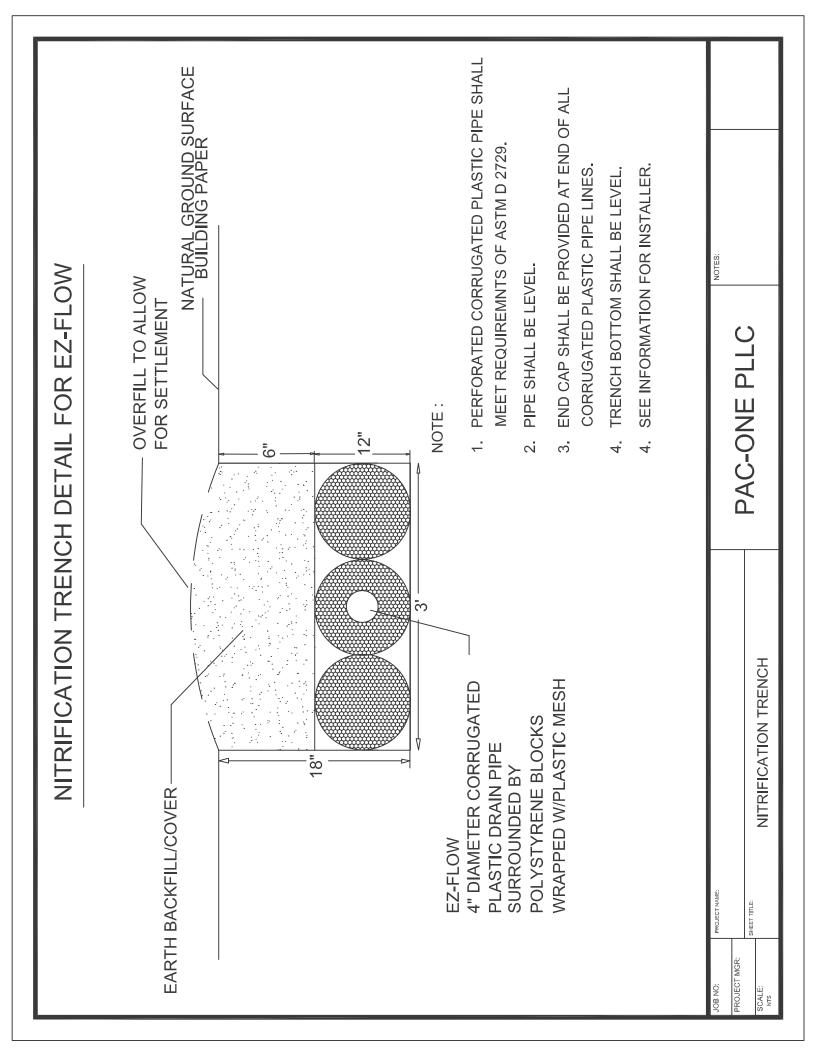
SIDE VIEW



MID-HEIGHT SEAM SECTION

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. © 2016 Infiltrator Water Technologies, LLC. All rights reserved. Printed in U.S.A.

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



INFORMATION FOR THE CONTRACTOR

The permit should be read very carefully prior to bidding. The following are details that must be considered by the contractor prior to and during installation:

- Tanks shall be approved by NCDHHS and certification supplied by the manufacturer.

- The installer shall be responsible to the owner for placement of the tanks and to ensure that final grades are returned to the original grade, with exception of added structural features.

- The supply trench shall be compacted to eliminate cavities left during initial fill placement without damage or displacement of pipe or fittings.

- Installation of the system shall be during dry conditions in order to protect the soil structure.

- All fittings shall be pressure rated fittings.

- All joints shall be cleaned with PVC pipe cleaner and a heavy-bodied PVC pipe glue applied to weld all joints.

- Where required by the regulating County Health Department, post installation inspections by the Engineer or his representative must be scheduled <u>5 week days</u> in advance.

- Trenches shall be carefully excavated so the bottom is level **for the entire length and width of the trench**. If the trench bottom level needs adjusting after excavation it **must** be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over-excavated during initial trenching. All fine grading within the trench will be done by hand with a shovel. No loose material will be left in the trench.

- All pipe openings in the tanks shall be properly filled with press boot seal. This also applies to the joints around the riser.

- All tanks shall be properly back filled and compacted to prevent settlement.

- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.

- No heavy equipment shall be used on the field during or after installation. —

- Elevations at pin flag locations should be checked by the contractor prior to beginning trench excavation.

- Pump tank riser shall be 6" above grade, control panel shall be 18" above grade.

-Septic tank shall have specified effluent filter or approved equivalent.

System Specifics:

- System uses EZ-Flow drain line.
- Repair uses EZ-Flow drain line.

Miscellaneous errors and omissions

Markel has over 35 years of experience providing miscellaneous errors and omissions insurance. Our leadership has a wealth of knowledge and expertise in protecting small business owners from litigation stemming from actual or perceived negligence. Our underwriting team has crafted policies that fit your specific needs, while our seasoned, in-house claims professionals will help you successfully navigate a loss or claim should you need their assistance.

Reporting new professional liability claims

New Claims can be reported in writing by website, email, fax, or regular mail. Please refer to your specific policy for all relevant reporting requirements.

To report a new claim, visit **markelinsurance.com/file-a-claim** and select "BOP/Miscellaneous errors and omissions/Workers compensation" from the drop down. You can also email **newclaims@markelcorp.com** and include the following:

- Policy number
- Insured and claimant names with contact details
- Date of loss
- Location and description of loss
- All pertinent documentation available (incident report, police report, witness information, photos, etc.)

General claims questions

For information about an already reported Professional Liability claim, email: **markelclaims@markelcorp.com**, or contact your assigned claim examiner directly.

Additional contact information:

- (800) 362-7535 or (800) 3 MARKEL
- (855) 662-7535 or (855) 6 MARKEL
- Markel Claims Department, P.O. Box 2009, Glen Allen, VA 23058-2009

While your policy is primarily designed to protect against a variety of professional errors and omissions claims, it may also provide protection for other specific exposures such as pollution claims, disciplinary proceedings, third party discrimination claims, subpoena and public relations expenses, among others. Contact your agent for more information, or if you have reported a Claim, your assigned examiner.

Risk management and loss prevention

Policyholders have access to loss control and risk management resources that can assist in a better understanding of potential hazards within their operation and ways to reduce claims.

Here's a sample of the many services available:

- Exposure assessments
- Loss analysis tools
- Safety videos
- Safety training materials
- Regulatory program guidance

Designed Protection[®] for professional service providers and associations – professional service providers hotline

Our panel of Risk Management experts is available to discuss general risk management related concerns and questions. Please visit **markelcorp.com/riskmanagement** and under "Designed Protection[®]" click "Click here," enter your policy number, then select "Professional Service Providers Hotline" to access our panel of experts.

Visit our website at: markelinsurance.com/risk-management-home.

For more information about any of Markel's loss control services, contact us at (888) 500-3344 or email **losscontrol@markelcorp.com**.



Products and services are offered through Markel Specialty, a business division of Markel Service Incorporated. Policies are written by one or more Markel insurance companies. Terms and conditions for rate and coverage may vary. 201806



ACORD	

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

_	11/26/2024									
C B	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.									
	IPORTANT: If the certificate holder is a te terms and conditions of the policy, c									
С	ertificate holder in lieu of such endorse	men	t(s).	, ,					0	
PRO	DUCER				CONTAC NAME:	T Angela S	Sensenig			
Wac	le Associates, LLC				PHONE (A/C, No	, EX(): • •	631-5269	(A/C, NO).	(252)649	-2443
250	Pollock St.				E-MAIL ADDRE	S: asensen:	ig@wadeict	com		
						INS	URER(S) AFFOR	DING COVERAGE		NAIC #
New Bern NC 28560			INSURE	RA:Starsto	one Specia	lty Insurance Compa	iny	44776		
INSU	RED				INSURE	RB:Builder	s Mutual	Insurance Company		10844
Per	mit Acquistion Company One, I	PLLC			INSURE	RC:				
920) Garner Rd				INSURE	RD:				
					INSURE	RE:				
Sel	ma NC 275	76			INSURE	RF:				
CO	VERAGES CER	TIFIC	ATE	NUMBER:24-25				REVISION NUMBER:		
IN C	HIS IS TO CERTIFY THAT THE POLICIES OF IDICATED. NOTWITHSTANDING ANY REQU ERTIFICATE MAY BE ISSUED OR MAY PERT XCLUSIONS AND CONDITIONS OF SUCH PO	irem 'Ain, ⁻	ENT, ⁻ THE IN	TERM OR CONDITION OF AN	NY CONT	RACT OR OTH	IER DOCUMEI BED HEREIN I	NT WITH RESPECT TO WHIC	CH THIS	
INSR LTR	TYPE OF INSURANCE	ADDL INSD		POLICY NUMBER		POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	3	
	X COMMERCIAL GENERAL LIABILITY			. elle : nomben				EACH OCCURRENCE	\$	1,000,000
А	CLAIMS-MADE X OCCUR							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$	100,000
				SSEP0476240AEM		11/22/2024	11/22/2025	MED EXP (Any one person)	\$	10,000
								PERSONAL & ADV INJURY	\$	1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:							GENERAL AGGREGATE	\$	2,000,000
	X POLICY PRO- JECT LOC							PRODUCTS - COMP/OP AGG	\$	2,000,000
	OTHER:								\$	
	AUTOMOBILE LIABILITY							COMBINED SINGLE LIMIT (Ea accident)	\$	
	ANY AUTO							BODILY INJURY (Per person)	\$	
	ALL OWNED SCHEDULED AUTOS							BODILY INJURY (Per accident)	\$	
	HIRED AUTOS NON-OWNED AUTOS							PROPERTY DAMAGE (Per accident)	\$	
									\$	
	UMBRELLA LIAB OCCUR							EACH OCCURRENCE	\$	
	EXCESS LIAB CLAIMS-MADE							AGGREGATE	\$	
	DED RETENTION \$								\$	
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N							X PER OTH- STATUTE ER		
	ANY PROPRIETOR/PARTNER/EXECUTIVE	N/A						E.L. EACH ACCIDENT	\$	500,000
в	(Mandatory in NH)			69KOUB-5N24039-7-24		11/14/2024	11/14/2025	E.L. DISEASE - EA EMPLOYEE	\$	500,000
	DESCRIPTION OF OPERATIONS below							E.L. DISEASE - POLICY LIMIT	\$	500,000
A	Errors & Omissions			SSEP0476240AEM		11/22/2024	11/22/2025	Each Occurrence		\$1,000,000
								General Aggregate		\$2,000,000
DEC				4 Additional Demoder Ochodal		ahad if				
DES	CRIPTION OF OPERATIONS / LOCATIONS / VEHICLES	(ACC	10 טאנ	1, Additional Remarks Schedule, m	nay be atta	cned if more space	ce is required)			
	CERTIFICATE HOLDER CANCELLATION									
	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE									
	Smith Douglas Homes							, NOTICE WILL BE DELIVER	ed in	
	3412 Apex Peakway				ACC	ORDANCE WIT		PROVISIONS.		
	Apex, NC 27502				AUTHO		ITATIVE			
								7		
					N Whi	tsett/RAC	HEL	N. Reed h))	-
	© 1988-2014 ACORD CORPORATION. All rights reserved.									

The ACORD name and logo are registered marks of ACORD

A STOCK COMPANY



MARKEL INSURANCE COMPANY

10275 West Higgins Road, Suite 750 Rosemont, IL 60018 (800) 431-1270

INSURANCE POLICY

Coverage afforded by this policy is provided by the Company (Insurer) and named in the Declarations.

In **Witness Whereof**, the company (insurer) has caused this policy to be executed and attested and countersigned by a duly authorized representative of the company (insurer) identified in the Declarations.

Kapileen anne Sturgeon

Bun W. Jakes

Secretary

President



MARKEL INSURANCE COMPANY

NOTICE TO POLICYHOLDERS CLAIM REPORTING

Please immediately report a new claim under this policy to:

newclaims@markel.com

For general claims inquiries after a claim has been reported, please email:

markelclaims@markel.com

In order for us to expedite the handling of your claim and quickly refer it to the appropriate party, please have the following information available:

- Claim number (or report as new)
- Your name, contact information and position with the Named Insured
- Date of loss
- Policy number and insured name
- Details of loss

Our address and additional contact information are as follows:

Markel Claims P.O. Box 2009 Glen Allen, VA 23058-2009 Phone: 800-362-7535 (800) 3MARKEL Fax: 855-662-7535 (855) 6MARKEL

Markel understands the importance of having knowledgeable claims professionals prepared to answer your questions with personal attention and expertise. With claims professionals located across four times zones, you are sure to find the claims assistance you need -- when you need it.

PLEASE REFER TO THE POLICY FOR ANY NOTICE AND REPORTING PROVISIONS AND DUTIES IN THE EVENT OF LOSS OR DAMAGE TO COVERED PROPERTY.



MARKEL INSURANCE COMPANY

U.S. TREASURY DEPARTMENT'S OFFICE OF FOREIGN ASSETS CONTROL ("OFAC") ADVISORY NOTICE TO POLICYHOLDERS

No coverage is provided by this Policyholder Notice nor can it be construed to replace any provisions of your policy. You should read your policy and review your Declarations page for complete information on the coverages you are provided.

This Notice provides information concerning possible impact on your insurance coverage due to directives issued by OFAC. **Please read this Notice carefully.**

The Office of Foreign Assets Control (OFAC) administers and enforces sanctions policy, based on Presidential declarations of "national emergency". OFAC has identified and listed numerous:

- Foreign agents;
- Front organizations;
- Terrorists;
- Terrorist organizations; and
- Narcotics traffickers;

as "Specially Designated Nationals and Blocked Persons". This list can be located on the United States Treasury's web site – https://www.treasury.gov/ofac.

In accordance with OFAC regulations, if it is determined that you or any other insured, or any person or entity claiming the benefits of this insurance has violated U.S. sanctions law or is a Specially Designated National and Blocked Person, as identified by OFAC, this insurance will be considered a blocked or frozen contract and all provisions of this insurance are immediately subject to OFAC. When an insurance policy is considered to be such a blocked or frozen contract, no payments nor premium refunds may be made without authorization from OFAC. Other limitations on the premiums and payments also apply.



PROFESSIONAL LIABILITY INSURANCE DECLARATIONS

Claims Made and Reported Coverage: The coverage afforded by this policy is limited to liability for only those **Claims** that are first made against the **Insured** during the **Policy Period** or the Extended Reporting Period, if exercised, and reported to Markel Insurance Company during the **Policy Period** or the Extended Reporting Period, if exercised, or within 60 days after the expiration of the **Policy Period** or the Extended Reporting Period, if exercised, or within 60 days after the expiration of the **Policy Period** or the Extended Reporting Period.

Notice: This policy contains provisions that reduce the Limits of Liability stated in the policy by the costs of legal defense and permit legal defense costs to be applied against the deductible, unless the policy is amended by endorsement. Please read the policy carefully.

POLICY NUMBER: MEO1642-05

RENEWAL OF POLICY: MEO1642-04

NAMED INSURED: Permit Acquisition Company-One LLC

BUSINESS ADDRESS: 920 Garner Road

Selma, NC 27576

POLICY PERIOD: From 11/22/2023 to 11/22/2024

12:01 A.M. Standard Time at address of Insured stated above.

IN RETURN FOR THE PAYMENT OF THE PREMIUM, AND SUBJECT TO ALL THE TERMS OF THIS POLICY, THE COMPANY AGREES WITH THE NAMED INSURED TO PROVIDE THE INSURANCE AS STATED IN THIS POLICY.

1. PROFESSIONAL SERVICES: soil science

2. LIMITS OF LIABILITY

Professional Liability Coverage

	, ,	
Α.	Each Claim:	\$2,000,000
В.	Policy Aggregate:	\$2,000,000
Ad	ditional Payments	
Α.	Contingent Bodily Injury And Property Damage	\$100,000
В.	Pollution	\$10,000
C.	Pre-Claim Assistance Expenses	\$20,000
D.	Sexual Abuse	\$10,000
E.	Third Party Discrimination	\$25,000
Su	pplementary Payments	
Α.	Disciplinary Proceeding	\$25,000 per Policy Period
В.	Loss Of Earnings And Expense Reimbursement	\$10,000
C.	Public Relations Expenses	\$5,000
D.	Subpoena And Record Request Assistance	\$5,000
Prod	ucer Number, Name and Mailing Address	
9849	6	
Wad	e Associates, LLC New Bern	
PO E	ox 1209	

Davidson, NC, 28036

3.	DEDUCTIBLE	
	A. Each Claim:	\$1,000
	B. Aggregate:	\$3,000
4.	RETROACTIVE DATE: 11/22/2019	
5.	PREMIUM RATE: Flat	PREMIUM BASE: Flat
6.	PREMIUM FOR POLICY PERIOD	
	Minimum:	\$560
	Deposit:	\$560
	Adjusted Annual Premium:	\$560

7. PREMIUM PERCENTAGE FOR EXTENDED REPORTING PERIOD: ADDITIONAL PERIOD:

8. FORMS AND ENDORSEMENTS ATTACHED AT POLICY INCEPTION:

See MDIL 1001 attached.

These declarations, together with the Coverage Form and any Endorsement(s), complete the above numbered policy.

Countersigned: 08/30/2023	
(Date)	
	By: John K Clark
	Authorized Representative Signature