

ROY COOPER • Governor

KODY H. KINSLEY • Secretary

MARK BENTON • 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 Peri	mit 🔲 (a2)	) Construction Authorization	☐ (a2) Repair/Const	truction Authorization
Please check one of the fo  ☐ New Construction  ☐ 5 Year Expiration Requ  ☐ Non-Expiring Permit Re	☐ Expansion uested (site plan pro	☐ System Relocation pvided) System Relocation pvided)	☐ Change of Use	□ Repair
Property Owner Name:				
Property Owner Phone Nu	umber:			
Applicant Name:				
(A) existing and propo (B) proposed wastew (C) existing and propo (D) existing and propo (E) surface water, dra Requesting DHHS review:	Previously identification Existing or propose Approval by other fred, <b>OR</b> the site skeed osed facilities, structures system showing osed vehicular trafficosed water supplies ainage features, and Pres No	ed jurisdictional wetlands and easements, rights-of-way, expected submitted from the LSS/AG ctures, appurtenances, and was and setbacks to property line(s) of ic areas s, wells, springs, and water line d all existing and proposed artif	OWE, must include the follo stewater systems or other fixed reference poi es; and ficial drainage, as applicable	e.
are to be used to issue ar understand that authoriz conduct necessary inspec the application for an Imp	n Improvement Per zed county and stat- ctions to determine provements Permit and Construction A	ees, as required in G.S. 130A-33 mit and/or Construction Author e officials are granted right of o e compliance with applicable la t and/or Construction Authoriza Authorization shall become inv	orization pursuant to G.S. 13 entry to the property indica aws and rules. I understand ation is falsified, changed, c	30A-335(a2),(a3), and (a5). I ated on this application to I that if the information in or the site is altered, then
Applicant Signature:			Date:	
Owner's Signature:			Date:	

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES • DIVISION OF PUBLIC HEALTH

Permit #:	



**ROY COOPER • Governor** 

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Division of Public Health

Submittal Includes:	(a2) Improvement Permit	(a2) Construction Authorization	Fee \$	
	IMPROVEN	MENT PERMIT FOR G.S. 130A-33	35(a2)	
County:				
PIN/Lot Identifier:				
Issued To:				
Subdivision (if applicat	ole)	Lot #:	Block:	Section:
LSS Report Provided: `	Yes No No			
If yes, name and licens	se number of LSS:			
New 🗌	Expansion	System Relocation	Change of U	se 🗌
Proposed Structure:				
Number of bedrooms:	Number of Occupants:	Other:		
Design Wastewater St	rength:  domestic	high strength indust	rial process	
Proposed Design Daily	Flow:GPD	Proposed LTAR (Initial):	Proposed LTAR (Repair	·):
Proposed Wastewater	System Type*:	(Initial) Pump Re	equired: 🗌 Yes 🔲 N	lo May be required
Proposed Wastewater	System Type*:	(Repair) Pump Re	equired: 🗌 Yes 🔲 N	o May be required
*Please include system	n classification for proposed waster	water system types in accordance with 15	A NCAC 18A .1961 Tab	le V(a)
Saprolite System (initia	al): 🗌 Yes 🔲 No Saprolit	e System (repair): 🗌 Yes 🔲 No		
Fill System (Initial):	Yes No If yes, specify: Ne	ew Existing (when adding more than	6 inches of fill to syste	em area provide a fill plan)
Fill System (repair):	Yes No If yes, specify: No	ew 🔲 Existing (when adding more than	6 inches of fill to syste	em area provide a fill plan
Usable Soil Depth (Init	ial): Usable	Soil Depth (Repair):		
Max. Trench Depth (In	itial)‡: Max. Tr	ench Depth (Repair)‡:	‡ Measured on the do	wnhill side of the trench
Artificial Drainage Req	uired: Yes No If yes, plea	se specify details:		
Type of Water Supply:	Private well Dublic well	Shared well Municipal Supply	Spring Ot	her:
Drainfield location me	ets requirements of Rule .1945: Ye	es No Drainfield location meet:	s requirements of Rule	.1950: Yes No No
Permit valid for: 🗌 Fi	ve years [site plan submitted pursu	ant to GS 130A-334(13a)] 🔲 No expirat	ion [plat submitted pu	rsuant to GS 130A-334(7a
Permit conditions:				
	^			
Licensed Soil Scientist				
Licensed Soil Scientist	Signature:		Date:	

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

\*See attached site sketch\*

#### NC DEPARTMENT OF HEALTH AND HUMAN SERVICES • DIVISION OF PUBLIC HEALTH



Permit #:	
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## This Section for Local Health Department Use Only

	Initial submittal received:		by	
		Date	Initials	
G.S. 130A-335(a3) states the follow	wing:			
When an applicant for an Improvement Pedepartment, the common form developed within five business days of receiving the appearmit includes all of the required component department to cure the deficiencies in the list complete within five business days after act within any period set out in this subsect common form for use as the Improvement	by the Department, and a soil evaluati oplication, conduct a completeness revents. If the local health department de ts needed to complete the Improvement improvement Permit. The local health of the local health department receives to tion, the applicant may treat the failur	on pursuant to su view of the submit termines that the nt Permit. The app department shall the additional infol	bsection (a2) of this section, tal. A determination of com Improvement Permit is inco- licant may submit addition make a final determination rmation from the applicant.	the local health department shall, pleteness means that the Improvement amplete, the local health department all information to the local health as to whether the Improvement Permi If the local health department fails to
The review for completeness of th Permit is determined to be:	is Improvement Permit was co	nducted in ac	cordance with G.S. 130	)A-335(a3). This Improvement
☐ Incomplete (If box is checked,	information in this section is r	equired.)		
The following items are missing:	5/6			M
Copies of this were sent to the LSS				2 W
		Date		
State Authorized Agent:			Da	te:
☐ Complete	1 95//			218
State Authorized Agent:		-11-34	Da	te:
This Improvement Permit is issue attached here. The issuance of the permit holder is responsible for conto revocation if the site plan, plat ownership of the site. This perming Disposal and to the conditions of The Department, the Department any liabilities, duties, and response evaluations, submittals, or action	his permit by the Health Depar hecking with appropriate gove , or the intended use changes it is subject to compliance with this permit. It's authorized agents, and the sibilities imposed by statute o	tment in no werning bodies The Improven the provision  local health derin common I	vay guarantees the iss in meeting their requi ement Permit shall no ns of the Laws and Ru epartments shall be d aw from any claim ari	tuance of other permits. The irements. This permit is subject to affected by a change in les for Sewage Treatment and lischarged and released from sing out of or attributed to
Improvement Permit Expiration C	)ate:	·		

\*See attached site sketch\*



Permit #:	
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## **Re-submittal of Improvement Permit**

_				
	LHD USE ONLY: This IP resubmittal received:		by	
		Date	Initials	
The following ite	ems are being resubmitted pursuant to G.S. 130A-33	55(a3) for issuance of	of the Improvement Permit:	
	- STA	ATT	<u>A</u>	
1	horaby attact tha	at the information r	equired to be included with	thic re-cuhmittal
is accurate and c	cientist (Print Name)  complete to the best of my knowledge and that the laws, regulations, rules, and ordinances.			
Signature	of Licensed Soil Scientist		Date	
	The section below is for Local Health Department use	e after submittal of it	ems noted as missing above.	
LHD Follow-u	p Completeness Review of Improvement F	Permit		
	ompleteness of this Improvement Permit re-submitermit is determined to be:	tal was conducted i	n accordance with G.S. 130A	-335(a3). This
☐ Incomplete	(If box is checked, information in this section is requ	uired.)		
The following ite	ems are missing:			
Copies of this we	ere sent to the LSS and the Applicant on			
State Authorized	Agent:		Date:	
☐ Complete				
State Authorized	Agent:		Date:	



Permit #:
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## **CONSTRUCTION AUTHORIZATION FOR G.S. 130A-335(a2)**

County:
PIN/Lot Identifier:
Issued To:
Property Location:
AOWE/PE Plans/Evaluations Provided: Yes No If yes, name and license number of AOWE/PE:
Facility Type:
□ New   □ Expansion   □ Repair   □ System Relocation   □ Change of Use
Basement?
Type of Wastewater System*(Initial)(Repai
*Please include system classification for proposed wastewater system types in accordance with 15A NCAC 18A .1961 Table V(a)
Design Daily Flow: GPD Wastewater Strength: _ domestic _ high strength _ industrial process
Session Law 2014-120 Section 53, Engineering Design Utilizing Low-flow Fixtures and Low-flow Technologies?
Installation Requirements/Conditions
Septic Tank Size: gallons Total Trench/Bed Length: feet Trench/Bed Spacing: feet on center
Trench/Bed Width: inches LTAR: gpd/ft²
Soil Cover: inches Slope Corrected Maximum Trench/Bed Depth <sup>‡</sup> : inches * Measured on the downhill side of the trench
Aggregate Depth:inches above pipeinches below pipeinches total
Pump Tank Size (if applicable): gallons Requires more than 1 pump?
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, please specify details:
<u>Legal Agreements</u> (If the answer is "Yes" to any type of legal agreements, please attach a copy of the agreement.)
Multi-party Agreement Required [.1937(h)]: Yes No
Easement, Right-of-Way, or Encroachment Agreement Required [.1938(j)]: Yes No
Declaration of Restrictive Covenants: Yes No
Pre-Construction Conference Required: Yes No No
Conditions:
The construction and installation requirements of Rules .1950, .1952, .1954, .1955, .1956, .1957, .1958, and .1959 are incorporated by reference
into this permit and shall be met. Systems shall be installed in accordance with the attached system layout.
AOWE/PE Print Name: Expiration Date:
AOWE/PE Signature: Date:
This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2) and (a5)

\*See attached site sketch\*



Permit #:
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## 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 Improvement Permit and Construction Authorization application together bepartment, and any necessary signed and sealed plans or evaluations congineer or a person certified pursuant to Article 5 of Chapter 90A of the elepartment shall, within five business days of receiving the application, contect the Construction Authorization or Improvement Permit and Construction Authorization or Improvement Permit and Construction Authorization of the components needed to complete the Construction Authoridational information to the local health department to cure the deficient authorization. The local health department shall make a final determination to the local health department fails to act within any period set out in this subsection, the apply for the building permit for the project upon the decision of complete authorization by the local health department or if the local health department decision or Improvement Permit and Construction Authorization for Improvement Permit and Construction Authorization for Improvement Permit and Construction Authorization for Improvement Shall develop a common form for use as the Construction The Department shall develop a common form for use as the Construction Authorization for Improvement Shall develop a common form for use as the Construction Authorization for Improvement Shall develop a common form for use as the Construction Authorization for Improvement Shall develop a common form for use as the Construction Authorization for Improvement Shall develop a common form for use as the Construction Authorization Improvement Shall develop a common form for use as the Construction Authorization Improvement Shall develop a common form for use as the Construction Authorization Improvement Permit Improvement Shall develop a common form for use as the Construction Authorization Improvement Permit Improvement Permit Improvement Permit Improvement Improvement Improvement Improvement Improvement Improvement Improvement Imp	r, the permit fee charged by the conducted by a person licensed pageneral Statutes as an Authorication accompleteness review Authorization includes all of the construction Authorization rization or Improvement Perminicies in the Construction Authorication as to whether the Construction as to whether the failure to be permined as the construction Authorization for the Construction Authorization for the Construction Authorization accounts and the failure to be constructed as a construction Authorization account for the local feature of the count for the coun	e local health department, the common form developed by the pursuant to Chapter 89C of the General Statutes as a licensed ized On-Site Wastewater Evaluator, the local health of the submittal. A determination of completeness means that it is incomplete, the local health department is incomplete, the local health department shall notify the it and Construction Authorization. The applicant may submit rization or Improvement Permit and Construction attion Authorization or Improvement Permit and Construction information from the applicant. If the local health is act as a determination of completeness. The applicant may orization or Improvement Permit and Construction is siness days. The Authorized On-Site Wastewater Evaluator or the department revoke or suspend the Construction of the Authorized On-Site Wastewater or licensed
he review for completeness of this Construction Authoriz	ation was conducted in a	accordance with G.S. 130A-335(a5). This
Construction Authorization is determined to be:		
$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	ion is required.)	
he following items are missing:		
Copies of this were sent to the AOWE/PE and the Applican	nt on	MV /6 //
tate Authorized Agent:		Date:
☐ Complete		
itate Authorized Agent:	RIL 12 1776	Date of Issuance:
This Construction Authorization is issued pursuant to G.S. attached here. This Construction Authorization is subject Construction Authorization shall not be affected by a chao compliance with the provisions of the Laws and Rules for the Construction and Rules for the Laws an	to revocation if the site nge in ownership of the	plan, plat, or the intended use changes. The site. This Construction Authorization is subject
The Department, the Department's authorized agents, and publications in plants in posed by starting liabilities, duties, and responsibilities imposed by starting in posed by starting in posed in preconstruction conference findings, so the General Statutes as a licensed engineer or a person continuous for the General Statutes as a licensed engineer or a person continuous for the General Statutes as a licensed engineer or a person set of the General State Wastewater Evaluator in GS 130A-335 agents, and the local health departments shall be responsibilities under State law or rule, including the issuance of the General State law or rule, including the issuance of the General State law or rule, including the second state is the continuous for the General State law or rule, including the issuance of the General State law or rule, including the issuance of the General State law or rule, including the issuance of the General State law or rule, including the issuance of the General State law or rule, including the issuance of the General State law or rule, including the issuance of the General State law or rule, including the issuance of the General State law or rule, including the issuance of the General State law or rule, including the issuance of the General State law or rule.	tute or in common law f submittals, or actions fro ertified pursuant to Artio 5(a2), (a5), and (a7). The sible and bear liability fo	from any claim arising out of or attributed to om a person licensed pursuant to Chapter 89C of cle 5 of Chapter 90A of the General Statutes as an e Department, the Department's authorized or their actions and evaluations and other
Construction Authorization Expiration Date:		
*See a	ttached site sketch*	

G.S. 130A-335(a2) Common Form



Permit #:
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## **Re-submittal of Construction Authorization**

	LHD LISE ONLY. This CA resubmitted received		h.,	
	LHD USE ONLY: This CA resubmittal received:	Date	by	
The following it	tems are being resubmitted pursuant to G.S. 130A-33	5(a5) for issuance of	of the Construction Authoriza	ation:
	ST	ATT	<i>Sh</i>	
l,		nt the information r	equired to be included with	this re-submittal
	nsite Wastewater Evaluator (Print Name) complete to the best of my knowledge and that the	proposed Construc	tion Authorization mosts all	annlicable
	and local laws, regulations, rules, and ordinances.	proposed construc	tion Authorization meets air	аррисавіе
Signatur	re of Authorized On-Site Wastewater Evaluator	1	Date	
	The section below is for Local Health Department use	e after submittal of it	ems noted as missing above.	<del></del>
LHD Follow-ւ	up Completeness Review of Construction A	uthorization		
	completeness of this Construction Authorization re-s on Authorization is determined to be:	ubmittal was condu	ucted in accordance with G.S	. 130A-335(a5).
☐ Incomplete (	(If box is checked, information in this section is requi	red.)		
The following it	ems are missing:			
	OLIAN 35° OLIAN	M AIDE	19	
Copies of this w	vere sent to the AOWE/PE and the Applicant on	Date	_	
State Authorize	d Agent:		Date:	
☐ Complete				
State Authorize	d Agent:		Date:	

## Southeastern Soil & Environmental Associates, Inc.

P.O. Box 9321 Fayetteville, NC 28311 Phone/Fax (910) 822-4540 Email mike@southeasternsoil.com

January 22, 2025

Mr. Mateo Burbano Clayton Properties Group 2521 Schieffelin Rd., Suite 116, Apex, NC 27502

Re: Soil/site evaluation for subsurface waste disposal (GS 130A-335(A2)/SL 2022-11), 46 Atherton Circle, Angier, NC 27501, Lot 38, Cambridge Reserve Subdivision, Harnett County, North Carolina

Dear Mr. Burbano,

A soil/site evaluation has been conducted on the aforementioned property at your request. The purpose of the investigation was to determine if soils were suitable or provisionally suitable for a subsurface waste disposal system (conventional, accepted and innovative) to serve a proposed single-family residence (4-bedroom home). All ratings and determinations were made in accordance with "Laws and Rules for Wastewater Treatment and Dispersal Systems, 15A NCAC 18E". This LSS evaluation is being submitted to meet the requirements of GS 130A-335(a2)/SL 2022-11.

The soil evaluation was completed on <u>January 15, 2025</u>. Hand auger borings were advanced under moist soil conditions. The site essentially lies on a footslope landscape (3-7% slope). Soil borings conducted in most of this area consisted of 20 or more inches of loamy sand/sandy loam underlain by clay loam and/or sandy clay loam to 48 or more inches below the soil surface. Soil wetness and/or parent material (greater than 50%) was not observed shallower than 38 inches below the soil surface (initial and repair system). All other soil characteristics were suitable to at least 48 inches.

Based on soil borings and site conditions, the site would be designated Suitable for a pump to accepted subsurface waste disposal drainfield (0.35 gal/day/ft2 LTAR; initial system). There is enough suitable soil area to allow for a pump to accepted subsurface septic system repair (0.4 gal/day/ft2). A map showing the approximate location of the site and proposed septic layout accompanies this report. [Note: No grading, rutting or other soil disturbance can occur in or near the proposed septic area. Any grading can alter the findings of this report and render the site unusable. As such, we recommend the builder protect the proposed septic areas with rope, flagging, fencing, etc.]

#### **Design Summary**

- Pump to Accepted product with pressure manifold (351', see septic layout)
- 480 gal/day flow rate (4BR)
- 18" maximum trench depth (initial system)
- Initial System 0.35 gpd/ft2 LTAR
- Repair System 0.4 gpd/ft^2 LTAR
- Pump to produce 23.55 gpm at 18.97 TDH
- Pump dose 151 gallons (6.6" drawdown-pending final pump tank gallons/inch)
- 1000-gallon septic and pump tank (each certified watertight)
- No grading, rutting or filling in septic areas
- No vertical cuts (greater than 2') within 15' of septic lines/areas
- Keep tanks and drainlines 10' from property lines
- Keep supply line 5 or more feet from property lines
- Install in dry soil conditions
- Maintain natural contours when clearing the lots
- Direct gutter water away from septic system

During site construction, it is important not to impact and suitable or provisionally suitable soil areas with activities such as excavation or filling. Only the vegetation should be removed in the areas of the proposed septic drainfields to prevent any disturbance of naturally occurring soil. We recommend all lot clearing activity be delayed until the local health department issues a permit.

To the extent possible, we have identified the soil types that will impact the flow of wastewater on this site and have provided a professional opinion as to the best septic system layout. This report does not guarantee that the proposed septic system will properly function for any specific length of time.

Sincerely

John Kase

NC Licensed Soil Scientist #1323

NC Authorized Wastewater Evaluator #10060E

NC REHS #1785





## SOUTHEASTERN SOIL & ENVIRONMENTAL ASSOC., INC.

### PROPOSED SUBSURFACE WASTE DISPOSAL SYSTEM DETAIL SHEET

SUBDIVISION	ON:		LOT				
INITIAL SYS	STEM:		REPAIR:				
<u>DISTRIBUT</u>	ION:		DISTRIBUTION				
<u>BENCHMA</u>	RK: 100.0		LOCATION				
NO. BEDRO	OOMS:		LTAR				
SEPTIC TAI	NK SIZE		PUMP TANK SIZE				
<u>LINE</u>	FLAG COLOR	ELEVATION	<u>LENGTH</u>				
			_				
ВҮ			DATE				
TYPICAL PI	ROFILE		THERE SHALL BE NO GRADING,				
			CUTTING, LOGGING OR OTHER SOIL				
		38" Soil — wetness	DISTURBANCE IN SEPTIC AREA				
		wethess	HEALTH DEPARTMENT USE ONLY.				

Auger Refusal at 40"

DESIGNS DO NOT GURANTEE FUNCTIONALITY

PRELIMINARY PLOT PLAN FOR MUNGO HOMES

LOT 38, CAMBRIDGE SUBDIVISION

ATHERTON CIRCLE

REF: B.M., PG. NOT RECORDED

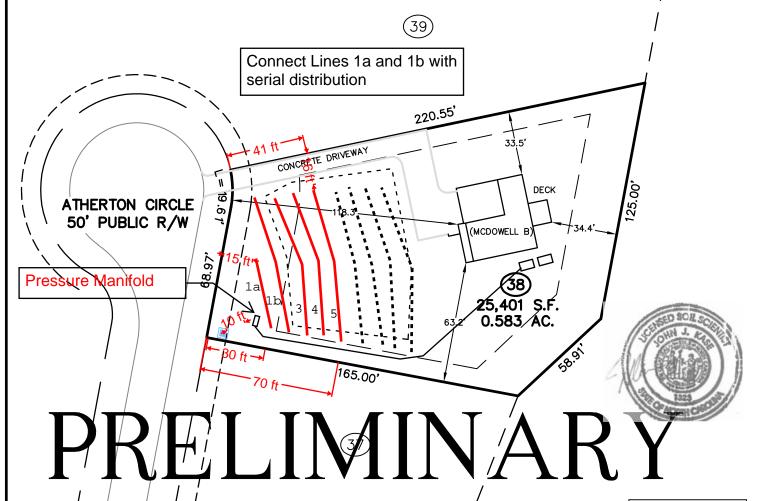
**GROVE TOWNSHIP** 

HARNETT COUNTY, NORTH CAROLINA

**JANUARY 6, 2025** 

ZONED RA-30

FOR REVIEW PURPOSES ONLY



FOR REVIEW PURPOSES ONL'

3	TOTAL CO	ONCRETE				
Υ	DECK	120 S.F.				
1	DRIVEWAY	1,967 S.F.				
	TOTAL	2,087 S.F.				

12.0

39.0

18.7

18.8

INSET NOT TO SCALE

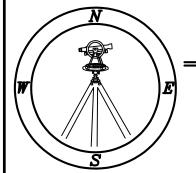
20.3

20.4

IMPERVIOUS SURFACE	TABLE
HOUSE DECK DRIVEWAY/SIDEWALK MISC/UTILITIES	1,426 S.F. 120 S.F. 1,967 S.F. 9 S.F.
TOTAL IMPERVIOUS AREA TOTAL LOT AREA PERCENTAGE OF IMPERVIOUS ARE	3,522 S.F. 25,401 S.F. A 13.86 %

Initial System	
Repair System	

THIS SURVEYOR DOES NOT WARRANTY THE ACCURACY OF ARCHITECTURAL DIMENSIONS. THEY ARE TO BE VERIFIED BY THE CONTRACTOR.



Professional Land Surveyors C-1525

333 S. White Street Post Office Box 1253 Wake Forest, N.C. 27588 (919)556 - 3148

### **NOTES:**

THIS PLAN DOES NOT REFLECT AN ACTUAL SURVEY. IT IS A PRELIMINARY PLAN AND SHOULD BE USED FOR ITS INTENDED PURPOSE ONLY. -NOT FOR RECORDATION, CONVEYANCES, OR SALES.

## SOUTHEASTERN SOIL & ENVIRONMENTAL ASSOCIATES, INC. RESIDENTIAL PRESSURE MANIFOLD DESIGN

Permit # Cambridge Reserve Lot 38

# of BDR: 4 Daily Flow: 480 gal/day L.T.A.R.: 0.3500 gal/day/sq.ft

Septic Tank: 1200 gals Pump Tank: 1200 gals Sq. Foot: 1053 System Type: Accepted

Number of Taps: 4 Length of Trenches: 351 ft(See Tap Chart for Details)

Depth of Trenches: <u>18</u> in Manifold Length: <u>42</u> in

Manifold Diameter: 4in sch 80pvc Tap Configuration: 6 in spacing 1 side(s) of manifold

Supply Line: length: 100 ft Diameter: 2 in sch 40pvc

Friction Loss + Fitting Loss:  $\underline{2.27}$  ft(supply line length + 70' for fittings in pump tank)

Design Head:  $\underline{2}$  ft Elevation Head:  $\underline{14.70}$  ft

Total Head: 18.97 ft Pump to Deliver: 23.55 gals/min at 18.97 ft head

Dosing Volume: <u>151</u> gals,

is = 100.00

Benchmark

Drawdown: 151 gals divided by 20 gals/in = 7.5 inches

water meter

Simplex Control Panel required; elapsed time meter and cycle counter required; Floats to be determined by type of pump tank used. A septic tank filter is required.

**TAP CHART** 

1.0	10 100.00	Water meter				Boolgii Hoda.	_		
	13	88.80	Pump elev.	83.80		Manifold elev.	98.50		
color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR	# of Panels (PPBPS)
Blue	4.30	97.50			0	0.00	0	#DIV/0!	
Orange	5.00	96.80	115	1/2in SCH 40	7.11	144.92	345	0.4200	
White	5.50	96.30	76	1/2in SCH 80	5.48	111.69	228	0.4899	
Orange	5.90	95.90	80	1/2in SCH 80	5.48	111.69	240	0.4654	
White	5.90	95.90	80	1/2in SCH 80	5.48	111.69	240	0.4654	
		101.80			0	0.00	0	#DIV/0!	
		101.80			0	0.00	0	#DIV/0!	
		101.80			0	0.00	0	#DIV/0!	
		101.80			0	0.00	0	#DIV/0!	
		101.80			0	0.00	0	#DIV/0!	
		Total Feet =	351	gal/min =	23.55		LTAR =	0.3500	
		Feet Required =	343	Velocity =	2.25		(Itar + 5%)	0.3675	
PBPS)			Des. Flow	480			(Itar w/25% red)	0.4667	
	66		Pump Run=	20.38			(Itar + 5%)	0.4900	
	151		Tank Gal/IN	20					
	6.39		Elev. Head	14.70					
s	7.5								
1a Blue li	ne is 45'1b	Orange line is	70'. Connec	t 1a and 1b with	serial dist	rbution.			
	color Blue Orange White Orange White	13   13     13     13     14   14   15   15   16   16	13	13   88.80   Pump elev.	13   88.80   Pump elev.   83.80	13   88.80   Pump elev.   83.80	13   88.80   Pump elev.   83.80   Manifold elev.	13   88.80   Pump elev.   83.80   Manifold elev.   98.50	13   88.80   Pump elev.   83.80   Manifold elev.   98.50

Design Head:

## SOUTHEASTERN SOIL & ENVIRONMENTAL ASSOCIATES, INC. PRESSURE MANIFOLD DESIGN - REPAIR SYSTEM

# of BDR:  $\underline{4}$  Daily Flow:  $\underline{480}$  gal/day L.T.A.R.:  $\underline{0.4000}$  gal/day/sq.ft

Septic Tank: 1200 gals Pump Tank: 1200 gals Sq. Foot: 1035 System Type: Accepted

Number of Taps:  $\underline{4}$  Length of Trenches:  $\underline{345}$  ft(See Tap Chart for Details)

Depth of Trenches: 18 in Manifold Length: 42 in

Manifold Diameter: 4in sch 80pvc Tap Configuration: 6 in spacing 1 side(s) of manifold

Supply Line: length: 100 ft Diameter: 2 in sch 40pvc

Friction Loss + Fitting Loss: 3.22 ft(supply line length + 70' for fittings in pump tank)

Design Head: <u>2</u> ft Elevation Head: <u>11.10</u> ft

Total Head: 16.32 ft Pump to Deliver: 28.44 gals/min at 16.32 ft head

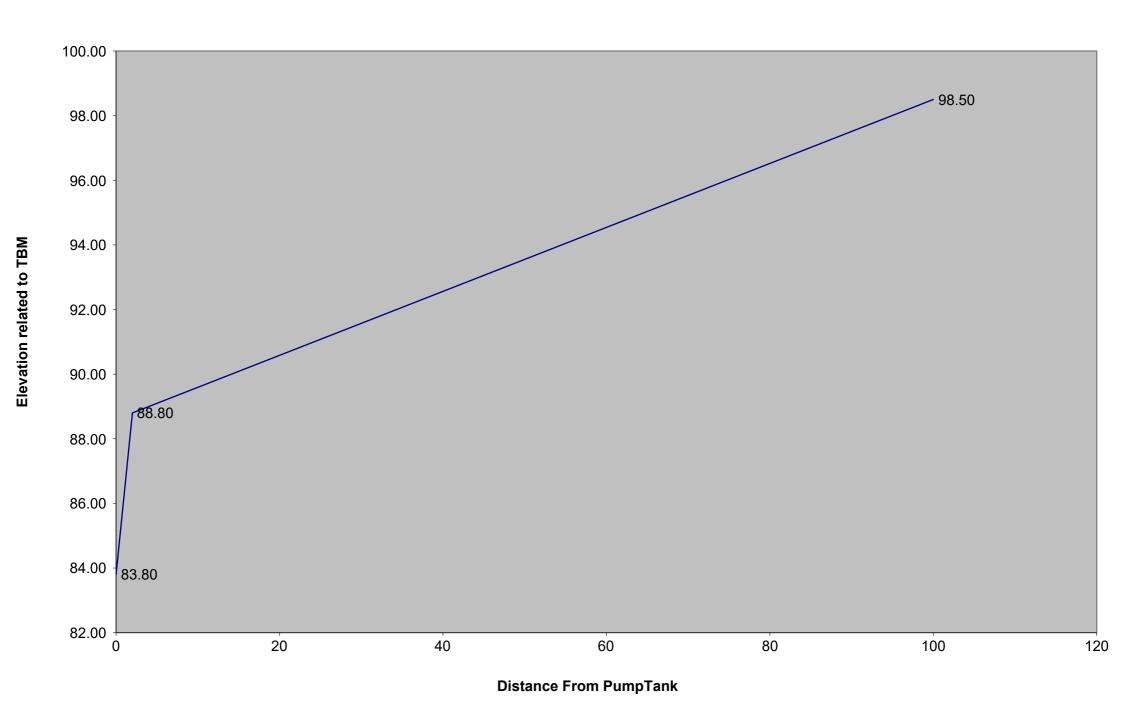
Dosing Volume: <u>148</u> gals,

Drawdown: 148 gals divided by  $\underline{20}$  gals/in =  $\underline{7.4}$  inches

Simplex Control Panel required; elapsed time meter and cycle counter required; Floats to be determined by type of pump tank used. A septic tank filter is required.

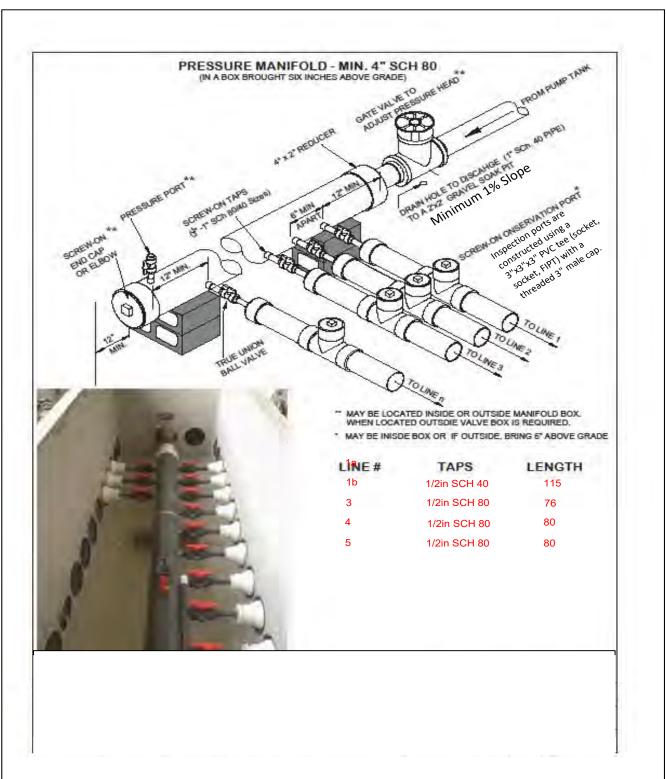
#### **TAP CHART**

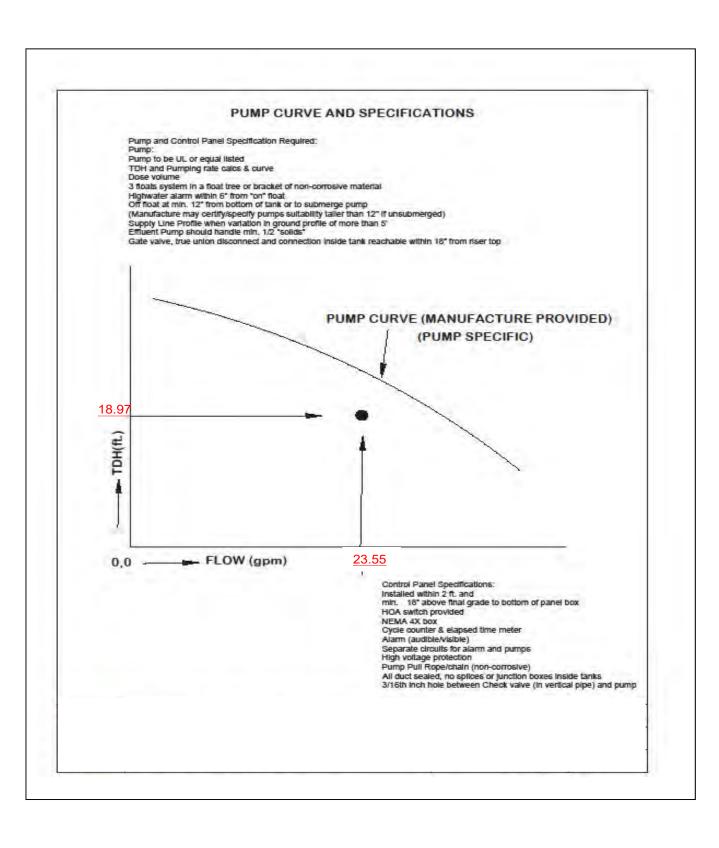
Benchmark	<u>1.8</u>	is = 100.00	water meter				Design Head:	2		
Pump tank elev.		<u>13</u>	88.80	Pump elev.	83.80		Manifold elev.	94.90		# of Panels
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR	(PPBPS)
5	Orange	7.90	93.90	80	1/2in SCH 40	7.11	120.00	240	0.5000	
6	White	8.40	93.40	85	1/2in SCH 40	7.11	120.00	255	0.4706	
7	Orange	8.80	93.00	90	1/2in SCH 40	7.11	120.00	270	0.4444	
8	White	9.00	92.80	90	1/2in SCH 40	7.11	120.00	270	0.4444	
			101.80			0	0.00	0	#DIV/0!	
			101.80			0	0.00	0	#DIV/0!	
			101.80			0	0.00	0	#DIV/0!	
			101.80			0	0.00	0	#DIV/0!	
			101.80			0	0.00	0	#DIV/0!	
			101.80			0	0.00	0	#DIV/0!	
			Total Feet =	345	gal/min =	28.44		LTAR =	0.4000	
			Feet Required =	300	Velocity =	2.72		(ltar + 5%)	0.4200	
Total # of Panels	(PPBPS)			Des. Flow	<u>480</u>			(Itar w/25% red)	0.5333	
% of Dose Vol.		66		Pump Run=	16.88			(Itar + 5%)	0.5600	
Dose Volume		148		Tank Gal/IN	<u>20</u>					
Dose Pump Time	,	5.20		Elev. Head	11.10					
Drawdown in Incl Comments:	hes	7.4								



#### PM Draw

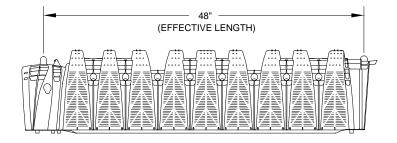
	Line 1	Line 2	Line 3	Line 4	Line 5	Line 6	Line 7	Line 8	Line 9	Line 10
Taps		1/2in SCH 40	1/2in SCH 80	1/2in SCH 80	1/2in SCH 80					
Flow	0	7.11	5.48	5.48	5.48	0	0	0	0	0

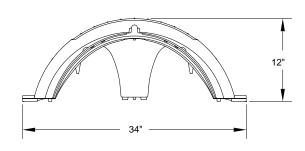




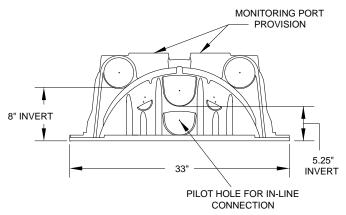
### **Quick4 Plus Standard Chamber**

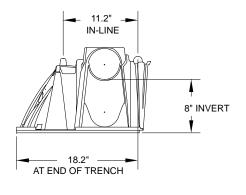
SIDE AND END VIEWS (not to scale)





## Quick4 Plus All-in-One12 Endcap SIDE AND END VIEWS (not to scale)



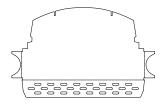


#### NOTES:

For use with the Quick4 Plus Standard Chambers.

## **Quick4 Plus Standard High Flow Splash Plate**

FLAT VIEW (not to scale)



PRELIMINARY PLOT PLAN FOR

## MUNGO HOMES

LOT 38, CAMBRIDGE SUBDIVISION

ATHERTON CIRCLE

REF: B.M., PG. NOT RECORDED

GROVE TOWNSHIP

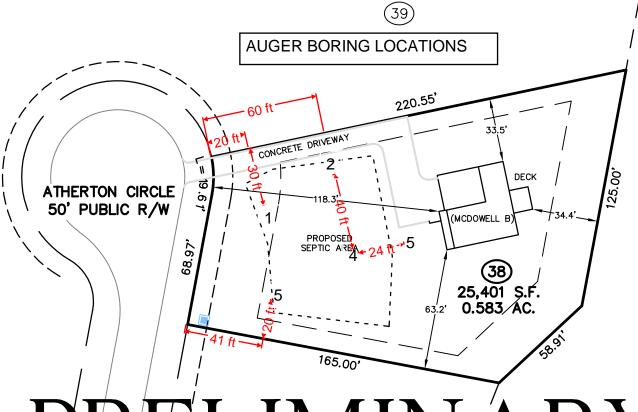
HARNETT COUNTY, NORTH CAROLINA

**JANUARY 6, 2025** 

ZONED RA-30

## PRE 25 1 100 100 RY

FOR REVIEW PURPOSES ONLY



# PRELIMINARY

FOR REVIEW PURPOSES ONLY

J	TOTAL CO	ONCRETE
/	DECK	120 S.F.
L	DRIVEWAY	1,967 S.F.
	TOTAL	2.087 S.F.

12.0

39.0

18.7

18.8

INSET NOT TO SCALE

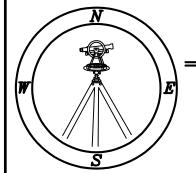
20.3

20.4

IMPERVIOUS SURFACE TABLE

HOUSE 1,426 S.F.
DECK 120 S.F.
DRIVEWAY/SIDEWALK 1,967 S.F.
MISC/UTILITIES 9 S.F.
TOTAL IMPERVIOUS AREA 3,522 S.F.
TOTAL LOT AREA 25,401 S.F.
PERCENTAGE OF IMPERVIOUS AREA 13.86 %

THIS SURVEYOR DOES NOT WARRANTY THE ACCURACY OF ARCHITECTURAL DIMENSIONS. THEY ARE TO BE VERIFIED BY THE CONTRACTOR.



## CME

Professional Land Surveyors C-1525

333 S. White Street
Post Office Box 1253
Wake Forest, N.C. 27588
(919)556-3148

### **NOTES:**

-THIS PLAN DOES NOT REFLECT AN ACTUAL SURVEY. IT IS A PRELIMINARY PLAN AND SHOULD BE USED FOR ITS INTENDED PURPOSE ONLY.
-NOT FOR RECORDATION, CONVEYANCES, OR SALES.

SOUTH	EASTERN SOIL	L & ENVIRONMENTAL TES, INC.	SOI	L/SITE EVALUATI	ON SHEET		Sheet #:	1		
OWNER	/APP. NAME:	Clayton Properties Grou	ip	SUBDIV./LOT# Cambridge Reserve Lot 38						
LOCATION OF SITE: 46 Atherton Circle, Angi		•				<u> </u>				
		Harnett	PROPERTY ID #:	0681-45-6391		DATF F	VALUATE	D: T	1/15/2025	
	SED FACILITY:		PROPOSED DESIGN		480			0.58 acres		
	SUPPLY:	Public				10'		0.00 0.00		
	F WASTEWATE		Domestic	WATERCOOLE	EVALUATION METH		Auger			
P	1777,61277,712							i ragor		
R O F	.0502	HORIZON	SOIL MORPI	HOLOGY		OTHER PROFILE FACTORS				
       	LANDSCAPE POSITION/ SLOPE %	DEPTH (IN.)	.0503 STRUCTURE/ TEXTURE	.0503 CONSISTENCE/ MINERALOGY	.0504 SOIL WETNESS/ COLOR	.0505 SOIL DEPTH	.0506 SAPRO CLASS	.0507 RESTR HORIZ	PROFILE CLASS & LTAR	
<b></b>		0-24	SL / Gr	VFR/NS/NP						
	F	24-29	CL / Sbk w	FR/SS/P				Not Observe d		
1	7%	29-38	C / Sbk m	FR/S/P		48	Not Observe d		S-0.35	
	.0502(d) SLOPE CORRECTION	38-48	CL / Sbk w	FR/S/P	Not Observed					
	2.5"									
	_	0-22	SL / Gr	VFR/NS/NP						
	F 70/	22-28	CL / Sbk w	FR/S/P						
2	.0502(d) SLOPE	28-34	C / Sbk m	FR/S/P		48	N.O.	N.O.	S-0.3	
	CORRECTION	34-48	CL / Sbk w	FR/S/P	10yr 7/2@44"					
	2.5									
	F	0-10	LS / Gr	VFR/NS/NP			N.O.	N.O.		
		10-28	SL / Gr	VFR/NS/NP						
3	.0502(d) SLOPE	28-36	SCL / Sbk w	FR/SS/SP					S -0.4	
	CORRECTION	36-38	CL / Sbk w	FR/SS/P						
	2.5"	38	CL / Sbk w	FR/SS/P	10yr 6/1@38"					
	_	0-10	LS / Gr	VFR/NS/NP						
	F 70/	10-24	SL / Gr	VFR/NS/NP						
4	.0502(d) SLOPE	24-31	SCL / Sbk w	FR/SS/SP			N.O.	N.O.	S - 0.4	
	CORRECTION	31-38	CL / Sbk w	FR/SS/P						
	2.5"	38	CL / Sbk w	FR/S/P	10yr 6/1@38"	-				
DESCRI		INITIAL SYSTEM	REPAIR SYSTEM	SITE CLASSIFICA		Suitable				
+		Suitable	Suitable	EVALUATED BY:		John Ka	se			
System <sup>-</sup>	Type(s):	25% Reduction	25% Reduction	OTHER(S) PRES	ENT:					
Site LTA	R:	0.350	0.400							
		18"	18"							
Saprolite	System:	No								
Commer		Trench bottoms depth n	neasure on downslope	side of trench						

	SOUTHEASTE		SOIL/SITE EVALUATION SHEET  Sheet #:						0
		SSOCIATES, INC.				2			
		Clayton Properties	·		SUBDIV./LOT#	Cambric	lge Resei	ve Lot 3	8
		46 Atherton Circle,		,					
COUN		Harnett	PROPERTY ID #:	0681-45-6391			VALUATI		1/15/2025
	OSED FACILITY		PROPOSED DESIGN		PROPE	RTY SIZE			
	R SUPPLY:	Public		WATER SUPPLY		10'			
	OF WASTEWAT	TER:	Domestic		EVALUATION MET			Auger	
P R			SOIL MORP (.503			OTHER LE FACT	ors		
O F I L E	.502 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	.503 STRUCTURE/ TEXTURE	.503 CONSISTENCE / MINERALOGY	.504 SOIL WETNESS/ COLOR		.506 SAPRO CLASS	.0507 RESTR HORIZ	PROFILE CLASS & LTAR
		0-10	LS / Gr	VFR/NS/NP					
	Т	10-34	SCL / Sbk w	FR/SS/SP					S-0.4
5	.0502(d) SLOPE	34-40	SL / Gr	VFR/NS/NP		40	N.O.	N.O.	
	SLOPE CORRECTION	40	Auger Refusal		Not Observed				
	2.5"								
	.0502(d) SLOPE CORRECTION								
	.0502(d) SLOPE CORRECTION								
Committee	.0502(d) SLOPE CORRECTION								
Comme	ents:	<u> </u>							

			Standar	d Abbrevi	ations		
LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL LTAR	SAPROLITE	LPP LTAR	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope)		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)	0.0 - 1.2	0.5 - 0.7	0.4 - 0.0	EXP (Expansive)	M (Massive)
D (Drainage Way)							GR (Granular)
FP (Flood Plain)	_	SL (Sandy Loam)	0.6 - 0.8	0.4 - 0.6	0.3 - 0.4	MOIST	SBK (Subangular Blocky)
FS (Foot Slope)	"	L (Loam)	0.0 - 0.8	0.2 - 0.4	0.3 - 0.4	VFR (Very Friable)	WSBK (Weak Subangular Blocky)
H (Head Slope)						FR (Friable)	ABK (Angular Blocky)
L (Linear Slope)		SiL (Silt Loam)		0.1 - 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)	III	CL (Clay Loam)	0.3 - 0.6		0.15 - 0.3		MA-RCF (Massive Rock Controlled Fabric
S (Shoulder Slope)		SiCL (Silty Clay Loam)		N/A		WET	AR (Auger Refusal)
T (Terrace)		Si (Silt)				NS (Non-Stick)	
TS (Toe Slope)						SS (Slightly Sticky)	OTHER
		SC (Sandy Clay)				S (Sticky)	NO (Not Observed)
	IV	SiC (Silty Clay)	0.1 - 0.4	N/A	0.05 - 0.2	VS (Very Sticky)	
		C (Clay)				NP (Non-plastic)	
		,				SP (Slightly Plastic)	
	O (Organ	ic)	N/A	N/A	N/A	P (Plastic)	
						VP (Very Plastic)	
NOTES:							
SAPROLITE*	*Sandy c	lay loam saprolite can onl	y be used with adv	anced pretreatr	ment in accor	dance with 15A NCAC 18E .	1200.
HORIZON DEPTH	In inches	below natural soil surface	9				
DEPTH OF FILL	In inches	from land surface					
RESTRICTIVE HORIZON	Thicknes	s and depth from land sur	face				
SAPROLITE	S (suitab	e) or U (unsuitable)				-	
SOIL WETNESS	Inches fro	om land surface to free wa	ater or inches from	land surface to	soil colors w	ith chroma 2 or less - record l	Munsell color chip designation
CLASSIFICATION	S (Suitab	le) or U (Unsuitable)					
Long-term Acceptance Rate (LT	AR): gal/da	y/ft2					