



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 \$ \_\_\_\_\_

**IMPROVEMENT PERMIT FOR G.S. 130A-335(a2)**

County: Harnett  
 PIN/Lot Identifier: 0643-37-2222  
 Issued To: Halcyon Homes, LLC  
 Property Location: 249 DEER TAIL LN FUQUAY-VARINA, NC 27526  
 Subdivision (if applicable) Cotton Farms Lot #: 45 Block: \_\_\_\_\_ Section: \_\_\_\_\_  
 LSS Report Provided: Yes ☒ No ☐  
 If yes, name and license number of LSS: Jason Hall, NC LSS #1248

New ☒ Expansion ☐ System Relocation ☐ Change of Use ☐  
 Facility Type: Single-Family Dwelling, 4-Bedroom

Number of bedrooms: 4 Number of Occupants: ≤8 Other: \_\_\_\_\_

Design Wastewater Strength: ☒ Domestic ☐ High Strength ☐ Industrial Process Wastewater  
 Proposed Design Daily Flow: 360 GPD Proposed LTAR (Initial): 0.275 Proposed LTAR (Repair): 0.275  
 Proposed Wastewater System Type\*: IIIg, LPC (Initial) Pump Required: ☐ Yes ☒ No ☐ May be required  
 Proposed Wastewater System Type\*: IIIbe, PPBPS (Repair) Pump Required: ☒ Yes ☐ No ☐ May be required

\*Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII

Effluent Standard: ☒ DSE ☐ HSE ☐ NSF/ANSI 40 ☐ TS-I ☐ TS-II ☐ RCW  
 Saprolipe System (Initial): ☐ Yes ☒ No Saprolipe System (Repair): ☐ Yes ☒ No  
 Fill System (Initial): ☐ Yes ☒ No If yes, specify: ☐ New ☐ Existing (when adding more than 6 inches of fill to system area provide a fill plan)  
 Fill System (Repair): ☐ Yes ☒ No If yes, specify: ☐ New ☐ Existing (when adding more than 6 inches of fill to system area provide a fill plan)  
 Usable Depth to LC (Initial)\*: 32" Usable Depth to LC (Repair)\*: 32" \*Limiting Condition  
 Max. Trench Depth (Initial)\*: 12" Max. Trench Depth (Repair)\*: 16" \*Measured on the downhill side of the trench  
 Artificial Drainage Required: ☐ Yes ☒ No If yes, please specify details: \_\_\_\_\_  
 Type of Water Supply: ☐ Private well ☐ Public well ☐ Shared well ☒ Municipal Supply ☐ Spring ☐ Other: \_\_\_\_\_  
 Drainfield location meets requirements of Rule .0508: Yes ☒ 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)]

Permit conditions:

4" of additional cover material needed over the entire initial septic area  
 6" of additional cover material needed over the entire repair septic area

Licensed Soil Scientist Print Name: Jason Hall

Licensed Soil Scientist Signature: [Signature] Date: 08/16/2024

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

\*See attached site sketch\*

NCDHHS/DPH/EHS/OSWP

Revised January 2024  
Form A2CF-24.1





**This Section for Local Health Department Use Only**

Initial submittal received: 3-19-25 by RL  
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 required.)

The following items are missing:

\_\_\_\_\_

Copies of this were sent to the LSS and the Applicant on \_\_\_\_\_  
Date

State Authorized Agent: \_\_\_\_\_ Date: \_\_\_\_\_

☒ Complete

State Authorized Agent: RL REHS Date: 3-25-25

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. *This permit is subject to revocation if the site plan, plat, or the intended use changes.* The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of 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: 3-25-30

\*See attached site sketch\*



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

County: Harnett Pre-Construction Conference Required: Yes ☐ No ☒  
PIN/Lot Identifier: 0643-37-2222  
Issued To: Halcyon Homes, LLC  
Property Location: 249 DEER TAIL LN FUQUAY-VARINA, NC 27526 (Cotton Farms, Lot 45)  
AOWE/PE Plans/Evaluations Provided: Yes ☒ No ☐ If yes, name and license number of AOWE/PE: Jason Hall, AOWE #10004E  
Facility Type: Single-Family Dwelling, 4-Bedroom  
Number of bedrooms: 4 Number of Occupants: ≤8 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 Wastewater System\* Illig, LPC (Initial) Illibe, PPBPS (Repair)

\*Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII

Design Daily Flow: 360 GPD Wastewater Strength: ☒ Domestic ☐ High Strength ☐ Industrial Process WW

Session Law 2014-120 Section 53, Engineering Design Utilizing Low-flow Fixtures and Low-flow Technologies? ☒ Yes ☐ No  
(if yes, please provide engineering documentation)

Effluent Standard: ☒ DSE ☐ HSE ☐ NSF/ANSI 40 ☐ TS-I ☐ TS-II ☐ RCW

Type of Water Supply: ☐ Private well ☐ Public well ☐ Shared well ☒ Municipal Supply ☐ Spring ☐ Other: \_\_\_\_\_

**Installation Requirements/Conditions**

Septic Tank Size: 1000 gallons Total Trench/Bed Length: 450 feet Trench/Bed Spacing: 9 feet on center  
Trench/Bed Width: 36 inches LTAR: 0.275 gpd/ft<sup>2</sup> Usable Depth to LC (Initial)\*: 32" \*Limiting condition  
Additional Soil Cover: 4 inches Slope Corrected Maximum Trench/Bed Depth\*: 12 inches \*Measured on the downhill 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, please specify details: \_\_\_\_\_

**Legal Agreements** (If the answer is "Yes" to any type of legal agreements, please attach a copy of the agreement.)

Multi-party Agreement Required [.0204(g)]: ☐ Yes ☒ No Declaration of Restrictive Covenants: ☐ Yes ☒ No

Easement, Right-of-Way, or Encroachment Agreement Required [.0301(b)]: ☐ Yes ☒ No

Management Entity Required: ☐ Yes ☒ No Minimum O&M Requirements: \_\_\_\_\_

**Permit conditions:**

4" of additional cover material needed over the entire initial septic area  
fence off the entire septic area from construction traffic

The requirements of 15A NCAC 18E are incorporated by reference into this permit and shall be met. Systems shall be installed in accordance with the attached site sketch. 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 15A NCAC 18E, or 15A NCAC 18A .1900, as applicable, and to the conditions of this permit.

AOWE/PE Print Name: Jason Hall

AOWE/PE Signature: [Signature] Date: 08/16/2024

This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2) and (a5)

\*See attached site sketch\*







**This Section for Local Health Department Use Only**

Initial submittal received 3-19-25 by RL  
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 section is required.)

The following items are missing: \_\_\_\_\_  
\_\_\_\_\_

Copies of this were sent to the AOWE/PE and the Applicant on \_\_\_\_\_  
Date

State Authorized Agent: \_\_\_\_\_ Date: \_\_\_\_\_

☒ Complete

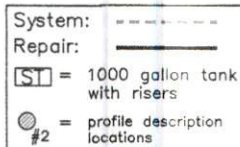
State Authorized Agent: RLH Date of Issuance: 3-25-25

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: 3-25-30

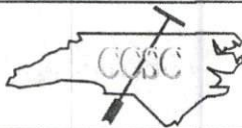
\*See attached site sketch\*



- \*Keep tanks and drain lines 10' from property lines.
- \*Not a survey.
- \*Not a guarantee of a septic permit.
- \*Keep supply lines >5' from property lines.
- \*Some lines are flagged longer in the field than lengths indicate.
- \*No grading septic area.
- \*No adding soil within septic area
- \*No rutting-up septic area
- \*No cuts of >2' within 15' of septic areas

Initial System: Gravity to D-Box  
 Lines: 9-13, (450')  
 Quick4 Plus Low Profile Chambers System  
 Quick4 Plus All-in-One 8 Endcaps (10)  
 0.275 Soil LTAR  
 12" Trench Bottom on the downhill side  
 4" minimum of additional cover material

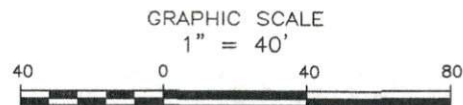
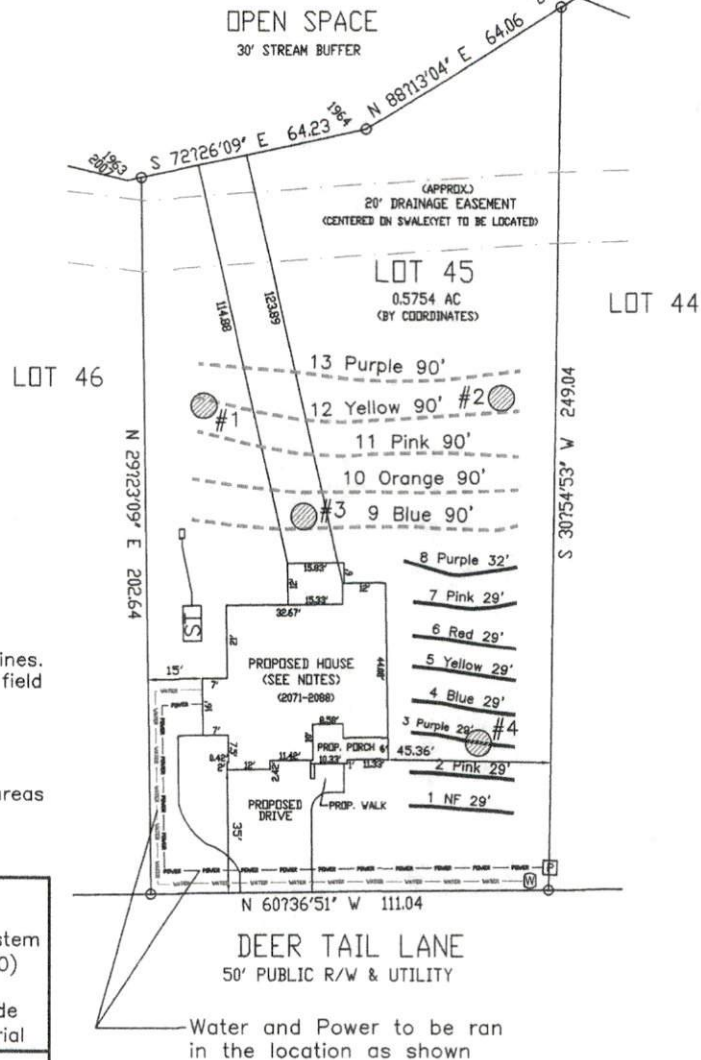
Repair System: Pressure Manifold  
 Lines: 1-8, (235')  
 T&J Panel Block System  
 Horizontal Panel Block Orientation  
 0.275 Soil LTAR  
 16" Trench Bottom on the downhill side  
 6" minimum of additional cover material



Central Carolina Soil Consulting, PLLC  
 1900 South Main Street, Suite 110  
 Wake Forest, North Carolina 27587  
 Phone (919)569-6704 Fax (919)569-6703

4-Bedroom Septic Layout  
 360 gal/day per on engineered flow-reduction  
 Lot 45, Cotton Farms Subdivision  
 Harnett County, North Carolina

Job#: 4722  
 Drawn By: JR  
 Date: 08/15/2024  
 Revision:



## Cotton Farms, Lot 45

### Initial System TAP CHART

Bench Mark: is = 100.00 Location of BM: Elevation Head: -93.60  
 Pump tank elev. 100.00 Pump elev. 94.60 Manifold elevation: 1.00  
 line color rod read Elevation length hole size flow/tap gal/day trench area LINE LTAR

total feet = 0 gal/min = 0 LTAR = 0.3000  
 LTAR + %5 0.3150  
 % of Dose Volume 75 Des. Flow 360 (ltar W/ INOV) 0.4000  
 Dose Volume 0.00 Pump Run= #DIV/0! (ltar W/ INOV + 5%) 0.4200  
 Dose Pump Time #DIV/0! Tank Gal/IN 20  
 Drawdown in Inches 0.00

## Cotton Farms, Lot 45

### T&J Panel Block Repair System, TAP CHART

Bench Mark: is = 100.00 Location of BM: Elevation Head: 5.30  
 Pump tank elev. 100.00 Pump elev. 94.60 Manifold elevation: 99.90  
 line color rod read Elevation length hole size flow/tap gal/day trench area LINE LTAR # of Panels Spacing of Panels (in) Feet of 1.5in PVC  
 1 NF 1.10 98.90 29 1/2in SCH 80 5.48 45.00 87 0.5172 7 3.3 24  
 2 Pink 2.30 97.70 29 1/2in SCH 80 5.48 45.00 87 0.5172 7 3.3 24  
 3 Purple 3.40 96.60 29 1/2in SCH 80 5.48 45.00 87 0.5172 7 3.3 24  
 4 Blue 4.40 95.60 29 1/2in SCH 80 5.48 45.00 87 0.5172 7 3.3 24  
 5 Yellow 5.10 94.90 29 1/2in SCH 80 5.48 45.00 87 0.5172 7 3.3 24  
 6 Red 5.70 94.30 29 1/2in SCH 80 5.48 45.00 87 0.5172 7 3.3 24  
 7 Pink 6.30 93.70 29 1/2in SCH 80 5.48 45.00 87 0.5172 7 3.3 24  
 8 Purple 7.00 93.00 32 1/2in SCH 80 5.48 45.00 96 0.4688 7 7.8 24

total feet = 235 gal/min = 43.84 Total Number of Panels: 56  
 T&J Panel Block Orientation: Horizontal  
 LTAR = 0.2750  
 LTAR + %5 0.2888  
 % of Dose Vol. 0 Des. Flow 360 (ltar W/ INOV) 0.5500  
 Dose Volume 201.60 Pump Run= 8.21 (ltar W/ INOV + 5%) 0.5775  
 Dose Pump Time 4.60 Tank Gal/IN 20  
 Drawdown in Inches 10.08  
 Backfill Sand Needed: 40 tons  
 backfill sand needed +5%: 42 tons  
 Total Footage of 1.5in PVC: 192