LW

BLDG-2023-32390

ICHD - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625

PERMIT # OSWP-2023-42745

SEPTIC: IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM

PIN # 4761 44 2779.000 ✓

APPLICANT / OWNER: TRUE HOMES — APPLICANT ADDRESS: 2649 BREKONRIDGE CENTRE DRIVE, MONROE, N.C. 28110

SITE ADDRESS: 236 WHEATFIELD DR, STATESVILLE, NC 28[illegible] ✓ — PHONE: 704-968-3576 — ALT. PHONE: 336-653-6359

SITE DIRECTIONS: South on 21, Left on Ostwalt Amity, Right on Bear Branch, Lot on Right — SAP CONTROLLED: YES ☐ NO ☑

SUBDIVISION: Wheatfield ✓ — SECTION: 2 ✓ — LOT #: 106 ✓ — LOT AREA: 0.474 — DESIGN FLOW: 360 — L.T.A.R.: 0.3

Septic Tank: 1000 (gal)	STB: 766	Date: 10/14/23	☐ New System ☐ Repair ☐ Expansion	System Type: III	☑ Residence	No. Bedrooms: 3	Water Supply: Municipal Water
Pump Tank: 1000 (gal)	PT: 363	Date: 11/18/23	System Description: Pressure Manifold 50% Reduction (Horizontal PPBPS)		☐ Business	No. Persons: 6	
Pump Make:	Model:	Serial #:	Repair System Description: Pressure Manifold 50% Reduction (Horizontal PPBPS)		☐ Other	No. Employees:	
Nitrification Fields: 1	# Lines: 3	Linear Ft.: 200	Maintenance Agreement Required: ☐ YES ☑ NO		☑ Slab	☐ Crawl Space	
Trench Width: 36	Trench Bottom Depth (Low side): 18		Gravel Depth:	☐ GRAVITY ☑ PRESSURE	☐ Basement w/ Plumbing	☐ Basement w/o Plumbing	

Comments / Conditions: Install per attached site plan. Property recorded in Deed book 82 Page 3.

INITIAL SITE SKETCH

THIS PERMIT IS ISSUED PURSUANT TO G.S. 130A-335(A2),(A3)+(A4) USING THE SIGNED AND SEALED LSS/LG EVALUATION HERE, FROM: AGRI-WASTE TECHNOLOGY, INC/ JEFF VAUGHAN- LSS #1227

AS BUILT SKETCH

Tanks CW
Lines
PH 1/4/24
PM

1/24/24 DW floats, alarm, electrical

Remove irrigation still

irrigation completely disconnected @ time of inspection - non functioning

Permit can be suspended or revoked if any false information is supplied toward securing the permit / any unauthorized changes are made to the site / any unauthorized changes are made in the installation of the system. CONTACT A LOCATOR SERVICE PRIOR TO ANY EXCAVATION

☐ IMPROVEMENT PERMIT with plat valid without expiration. ☑ IMPROVEMENT PERMIT with site plan valid for 60 mos. ☑ AUTHORIZATION TO CONSTRUCT valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.

Owner / Applicant Signature: — Date: —

IMPROVEMENT PERMIT by: Bryant C. White — Date: 12-28-2023

AUTHORIZATION TO CONSTRUCT by: Bryant C. White — Date: 12-28-2023

Installed By: Lago Vista

OPERATION PERMIT by: D. Sweberg — Date: 1/24/24

Existing System Inspected By: — Date:

BLDG-2023-32390 AC = OSWP-2023-18848

ICHD - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625

PERMIT # OSWP-2023-24415 = IP

SEPTIC: IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM

PIN # 4761-33-1361

PPLICANT / OWNER: True Homes LLC T/A Tribute Homes APPLICANT ADDRESS: 2649 BRECKONRIDGE CENTRE DR STE 104, MONROE, NC 28110

TE ADDRESS: 236 WHEATFIELD DR, STATESVILLE, NC 28677 PHONE: 3364516682 ALT. PHONE:

TE DIRECTIONS:

SAP CONTROLLED: YES ☐ NO ☑

UBDIVISION: Wheatfield SECTION: LOT #: 106 LOT AREA: DESIGN FLOW: 360 L.T.A.R.: 0.3

ptic Tank: 1000 (gal)	STB:	Date:	☑ New System ☐ Repair ☐ Expansion	System Type: III	☑ Residence	No. Bedrooms: 3	Water Supply: Municipal Water
ump Tank: (gal)	PT:	Date:	System Description: 25% reduction		☐ Business	No. Persons: 6	
ump Make:	Model:	Serial #:	Repair System Description: 50% reduction		☐ Other	No. Employees:	
Nitrification Fields: 1	# Lines: 4	Linear Ft.: 300	Maintenance Agreement Required: ☐ YES ☐ NO		☐ Slab	☑ Crawl Space	
ench Width: 36	Trench Bottom Depth (Low side): 18		Gravel Depth:	☐ GRAVITY ☐ PRESSURE	☐ Basement w/ Plumbing	☐ Basement w/o Plumbing	

omments / Conditions: This permit is issued pursuant to G.S. 130A-335 (a2), (a3), and (a4) using the signed and sealed LSS/LG Evalution attached here.

INITIAL SITE SKETCH

*Pre-applicant site not to be subdivided. any changes in site plan will require a new permit to be issued

FYI

Address is currently 1088 Ostwalt Amity

It is subject to change again!

SKETCH

rmit can be suspended or revoked if any false information is supplied toward securing the permit / any unauthorized changes are made to the site / any unauthorized changes are made in the installation of the system. CONTACT A LOCATOR SERVICE PRIOR TO ANY EXCAVATION

] IMPROVEMENT PERMIT with plat valid without expiration ☑ IMPROVEMENT PERMIT with site plan valid for 60 mos ☑ AUTHORIZATION TO CONSTRUCT valid for period equal to IMPROVEMENT PERMIT—not to exceed 60 mo

wner / Applicant Signature: Date: Installed By:

IPROVEMENT PERMIT by: Date: 5/18/2023 OPERATION PERMIT by: Date:

UTHORIZATION TO CONSTRUCT by: Date: 7/20/2023 Existing System Inspected By: Date:

FOR SEPTIC FINAL INSPECTION CALL: 704-664-3703 BETWEEN 8am-9am the day the inspection is needed.

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

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 Permit ☑ (a2) Construction Authorization ☐ (a2) Repair/Construction Authorization

Please check one of the following:
☑ New Construction ☐ Expansion ☐ System Relocation ☐ Change of Use ☐ Repair
☑ 5 Year Expiration Requested (site plan provided)
☐ Non-Expiring Permit Requested (plat provided, as defined in G.S. 130A-334(7a)

Property Owner Name: True Homes
Property Owner Mailing Address: 2649 Brekonridge Centre Drive, Monroe, NC. 28110
Property Owner Phone Number: 704-288-7256
Property Owner Email Address: amcdonald@truehomesusa.com

Applicant Name: Jeff Vaughan
Applicant Mailing Address: 501 N Salem St, Suite 203, Apex, NC, 27502
Applicant Phone Number: 919-859-0669
Applicant Email Address: jvaughan@agriwaste.com

Does the property include, or is subject to, any of the following:
☐ Yes ☑ No Previously identified jurisdictional wetlands
☐ Yes ☑ No Existing or proposed easements, rights-of-way, encroachments, or other areas subject to legal restrictions
☐ Yes ☑ No Approval by other public agencies

A site plan or plat is required, **OR** the site sketch submitted from the LSS/AOWE, must include the following:
(A) existing and proposed facilities, structures, appurtenances, and wastewater systems
(B) proposed wastewater system showing setbacks to property line(s) or other fixed reference point(s)
(C) existing and proposed vehicular traffic areas
(D) existing and proposed water supplies, wells, springs, and water lines; and
(E) surface water, drainage features, and all existing and proposed artificial drainage, as applicable.

Requesting DHHS review: ☑ Yes ☐ No

I understand that the documentation and fees, as required in G.S. 130A-335(a2), (a3), (a5), and (a6), attached to this application are to be used to issue an Improvement Permit and/or Construction Authorization pursuant to G.S. 130A-335(a2),(a3), and (a5). I understand that authorized county and state officials are granted right of entry to the property indicated on this application to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that if the information in the application for an Improvements Permit and/or Construction Authorization is falsified, changed, or the site is altered, then the Improvement Permit and Construction Authorization shall become invalid.

Applicant Signature: Jeff Vaughan Date: 12/7/2023

Owner's Signature: DocuSigned by: True Homes 68A1E081A954420... Date: 12/8/2023

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

Permit #: _____

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
MARK BENTON • 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: Iredell

PIN/Lot Identifier: 4761331361

Issued To: True Homes

Property Location: Lot 106 Wheatfield Drive, Statesville, NC.

Subdivision (if applicable) Wheatfield Subdivision Lot #: 106 Block: N/A Section: 2

LSS Report Provided: Yes ☑ No ☐

If yes, name and license number of LSS: Jeff Vaughan, License number: 1227 Certification number:10003E

New ☑ Expansion ☐ System Relocation ☐ Change of Use ☐

Proposed Structure: Single Family Residence

Number of bedrooms: 3 Number of Occupants: 6 Other: _____

Design Wastewater Strength: ☑ domestic ☐ high strength ☐ industrial process

Proposed Design Daily Flow: 360 GPD Proposed LTAR (Initial): 0.3 Proposed LTAR (Repair): 0.3

Proposed Wastewater System Type*: Pressure Manifold 50% Reduction (Horizontal PPBPS) (Initial) Pump Required: ☐ Yes ☐ No ☑ May be required

Proposed Wastewater System Type*: Pressure Manifold 50% Reduction (Horizontal PPBPS) (Repair) Pump Required: ☑ Yes ☐ No ☐ May be required

**Please include system classification for proposed wastewater system types in accordance with 15A NCAC 18A .1961 Table V(a)*

Saprolite System (initial): ☐ Yes ☑ No Saprolite 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 Soil Depth (Initial): 30" Usable Soil Depth (Repair): 30"

Max. Trench Depth (Initial)‡: 18" Max. Trench Depth (Repair)‡: 18" ***‡ 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 .1945: Yes ☑ No ☐ Drainfield location meets requirements of Rule .1950: 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:
A 2" soil Cap will be required over the drain field area. If site grading allows for the primary to be gravity fed, the installer/county inspector can make that adjustment on site. The panels should be serial fed if gravity can be achieved.

Licensed Soil Scientist Print Name: Jeff Vaughan

Licensed Soil Scientist Signature: _____ Date: 12/7/2023

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

See attached site sketch

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

Permit #: OSWP-2023-42745

This Section for Local Health Department Use Only

Initial submittal received: 12-27-2023 *Date* by BCW *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: Burpust C. White Date: 12-28-2023

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 by the Health Department in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This 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 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 evaluations, submittals, or actions from a licensed soil scientist or licensed geologist pursuant to GS 130A-335(a2).

Improvement Permit Expiration Date: 12-28-2028

See attached site sketch

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

Permit #: _____

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

County: Iredell

PIN/Lot Identifier: 4761331361

Issued To: True Homes

Property Location: Lot 106 Wheatfield Drive, Statesville, NC

AOWE/PE Plans/Evaluations Provided: Yes ☑ No ☐ If yes, name and license number of AOWE/PE: Jeff Vaughan, 1227

Facility Type: Single Family Residence

☑ New ☐ Expansion ☐ Repair ☐ System Relocation ☐ Change of Use

Basement? ☐ Yes ☑ No Basement Fixtures? ☐ Yes ☐ No

Type of Wastewater System* Pressure Manifold 50% Reduction (Horizontal PPBPS) (Initial) Pressure Manifold 50% Reduction (Horizontal PPBPS) (Repair)

**Please include system classification for proposed wastewater system types in accordance with 15A NCAC 18A .1961 Table V(a)*

Design Daily Flow: 360 GPD Wastewater Strength: ☑ domestic ☐ high strength ☐ industrial process

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

Installation Requirements/Conditions

Septic Tank Size: 1000 gallons Total Trench/Bed Length: 200 feet Trench/Bed Spacing: 9 feet on center

Trench/Bed Width: 3 inches LTAR: 0.3 gpd/ft²

Soil Cover: 4 inches Slope Corrected Maximum Trench/Bed Depth‡: 18 inches ‡ ***Measured on the downhill side of the trench***

Aggregate Depth: - inches above pipe - inches below pipe 14 inches total

Pump Tank Size (if applicable): 1000 gallons Requires more than 1 pump? ☐ Yes ☑ No

Pump Requirements: 9.79 ft. TDH vs. 21 GPM Grease Trap Size (if applicable): N/A 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 [.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 ☐

Conditions: A 2" soil Cap will be required over the drain field area. If site grading allows for the primary to be gravity fed, the installer/county inspector can make that adjustment on site. The panels should be serial fed if gravity can be achieved.

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: Jeff Vaughan Expiration Date: 12/7/2028

AOWE/PE Signature: Jeff V/L Date: 12/7/2023

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

See attached site sketch

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

Permit #: OSWP-2023-42745

This Section for Local Health Department Use Only

Initial submittal received: 12-27-2023 (Date) by BCW (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: Bryant C. White Date of Issuance: 12-28-2023

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: 12-28-2028

See attached site sketch

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Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 203
Apex, North Carolina 27502
919-859-0669
www.agriwaste.com





Soil Suitability for Domestic Sewage Treatment and Disposal Systems
Lot 106 Wheatfield Drive, Statesville, NC.
Iredell County PID: 4761331361 (Larger Parcel)

PREPARED FOR: True Homes, Client

PREPARED BY: Jeff Vaughan, Licensed Soil Scientist
Trevor Hackney, Environmental Scientist

DATE: December 7, 2023

Soil suitability for domestic sewage treatment and disposal systems was evaluated from February 1, 2023 and was revisited November 29,2023 for the property located on Wheatfield Drive, Statesville NC. Jeff Vaughan and Trevor Hackney of Agri-Waste Technology, Inc. (AWT) conducted the soil evaluation. This evaluation was done to facilitate permitting for a 3-bedroom home. This report and attached documents were prepared *to this application is to be used to issue an Improvement Permit in accordance with G.S. 130A-335(a2) and (a3). The LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2).*

A drawing of the site plan, septic layout, and boring locations is included in Attachment 1. Profile descriptions for each boring are included in Attachment 2. Additional Documentation is in Attachment 3.

The total property area is approximately 0.5 acres. The property is cleared and a home entirely constructed. The home has a slab foundation and site grading and the plumbing stub out has impacted the initial septic permit approval. This proposal is for pressure manifold system with a 50% reduction trench product for the primary and repair system. This property is proposed based on a preliminary PLAT. In order to obtain the IP and CA for this site, the final PLAT may be required to obtain permits with Iredell County.

Soil Suitability for Domestic Sewage Treatment and Disposal Systems
The drawing in Attachment 1 details the proposed property boundaries (as proposed by Mc2 Engineering), soil boring locations, and layout of drain field trenches (Completed by AWT). Five soil borings were assessed on the property. Soil borings were examined to determine soil suitability for on-site sewage disposal systems in accordance with 15A

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

18A .1900 Rules for Sewage Treatment and Disposal Systems. These borings were advanced with a hand auger. All soil borings are being utilized for the drain field area. A septic layout was performed to demonstrate available space (.1945). The layout in Attachment 1 indicates there is available space for a three-bedroom primary and repair septic system utilizing a 50% reduction trench product. If the primary system is found to meet acceptable grade, the system can be changed from a pressure manifold to a serial fed gravity system.

The proposed LTAR (Long Term Acceptance Rate) by AWT is 0.3 GPD/ft^2. The soils on this property are group IV soils within the distribution and treatment zone as used to define the LTAR. Since usable slope corrected soil depths meet or exceed 30" AWT is recommending the use of 50% reduction horizontal panel block style trench for the primary system. With a LTAR of 0.3 GPD/ft^2, 200 linear feet of 50% reduction trench product is necessary to support a three-bedroom home initial system. The maximum trench bottom should not exceed 18". With this trench bottom a two-inch soil cap will be required over the drainfield area. The attached drawing proves that 204 linear feet of trench can be installed for the primary system. The attached drawing proves that 204 linear feet of horizontal panels can be installed for the repair drain field.

Any disturbances or grading done in the usable area will change the potential of using the area designated for a drain field. Prior to moving forward with building on the property, Iredell County Environmental Health Department should be contacted to complete the necessary review of this documentation to issue an IP (Improvement Permit) for the property and the CA (Construction Authorization).

Conclusions

An IP (Improvement Permit) and CA (Construction Authorization) for this property can be issued with the site plan that is in Attachment 1. A CA permit will be required in order to secure a building permit for the property. The county issues an Operation Permit after the system has been installed to meet the specifications of the Authorization to Construct. Additional septic layouts have been or will be performed as needed. It will be critical to not disturb any of the proposed septic area or there is a risk that the IP and CA will be revoked. *This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2) and (a5).*

We appreciate the opportunity to assist you in this matter. Please contact us with any questions, concerns, or comments.

Sincerely,

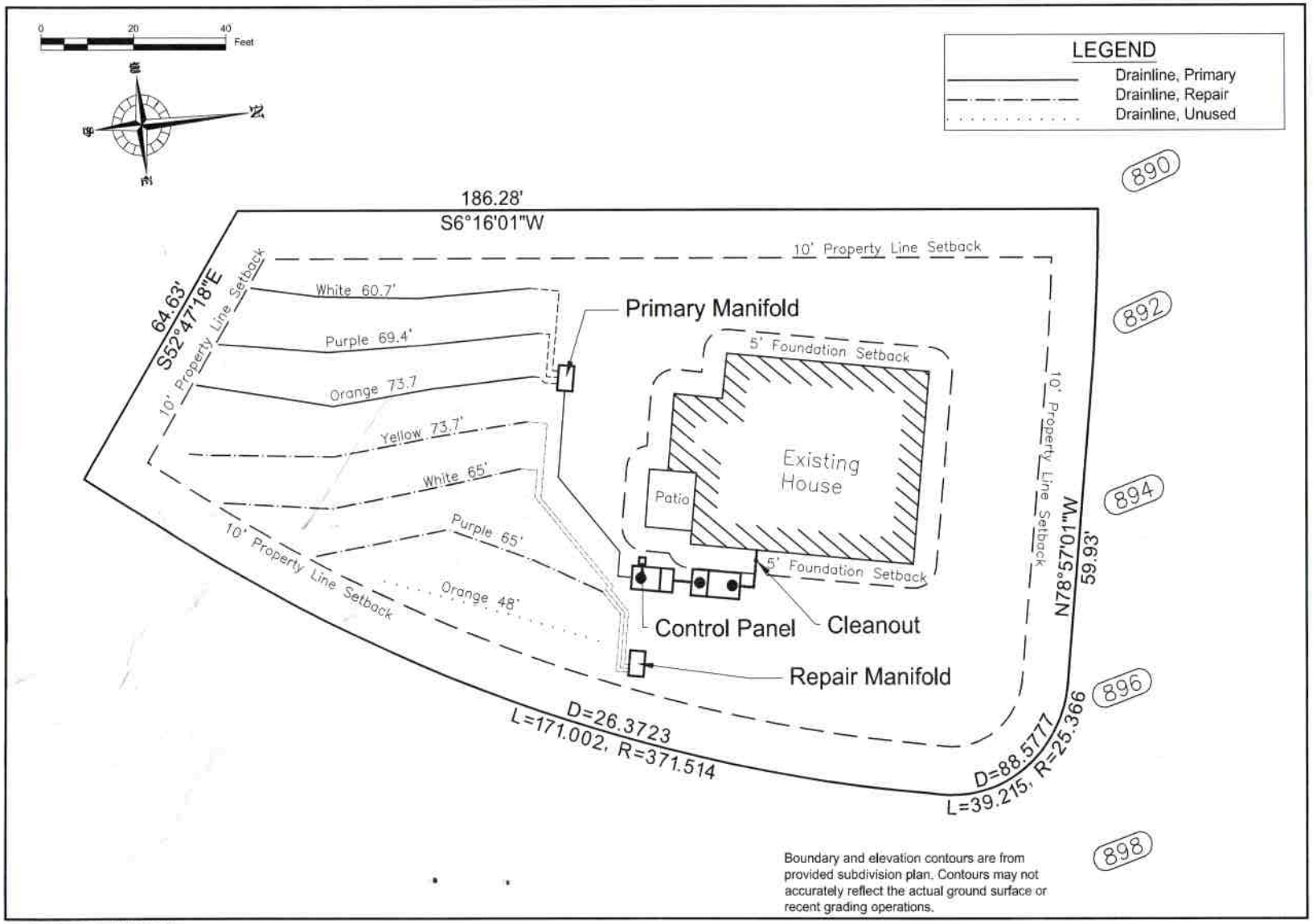
Jeff Vaughan

Trevor Hackney

Trevor Hackney

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

NOTES - If conditions permit gravity fed may be used instead of pump system



PROPERTY LAYOUT
SOURCE: AWT, INC.

AWT
Engineers and Soil Scientists
Ayr-Waste Technology, Inc.
501 N. Salem Street, Suite 225
Apex, North Carolina 27502
919-859-0681
www.ayrwaste.com

True Homes-Wheatfield Dr - Lot 106

Project Location
Wheatfield Dr
Statesville, NC 28677
Iredell County
PIN: 4761237381.000

Project Owner
True Homes
c/o Denise Rush
2649 Breckenridge Centre Dr.
Monroe, NC 28110
(704) 868-3575
drushsls@truehomesusa.com

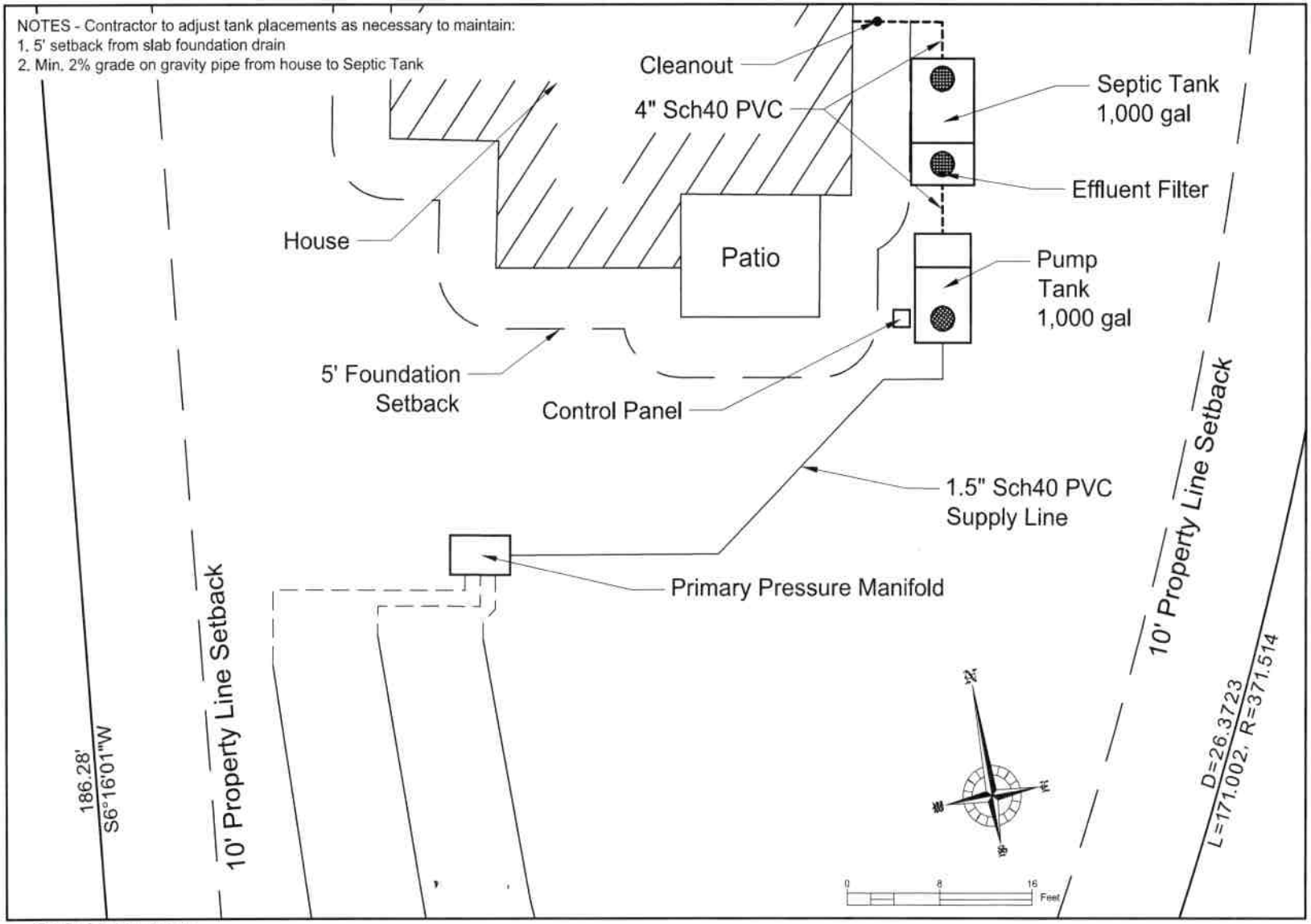
REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Property Layout

DRAWN BY:	CREATED ON:
B. Isherwood	12/5/2023
REVISED BY:	REVISED ON:
####	####
RELEASED BY:	RELEASED ON:
####	####

DRAWING NUMBER
WW-2

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6



COMPONENT LAYOUT

SOURCE: AWT Inc.

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 201
Apex, North Carolina 27502
919-859-0889
www.agriwaste.com

True Homes-Wheatfield Dr - Lot 106

Project Location:
Wheatfield Dr.
Statesville, NC 28677
Iredell County
PIN: 4761313610000

Project Owner:
True Homes
c/o Denise Rush
2849 Brookridge Centre Dr.
Monroe, NC 28110
(704) 368-3576
drichds@truehomesusa.com

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE:
Component Layout

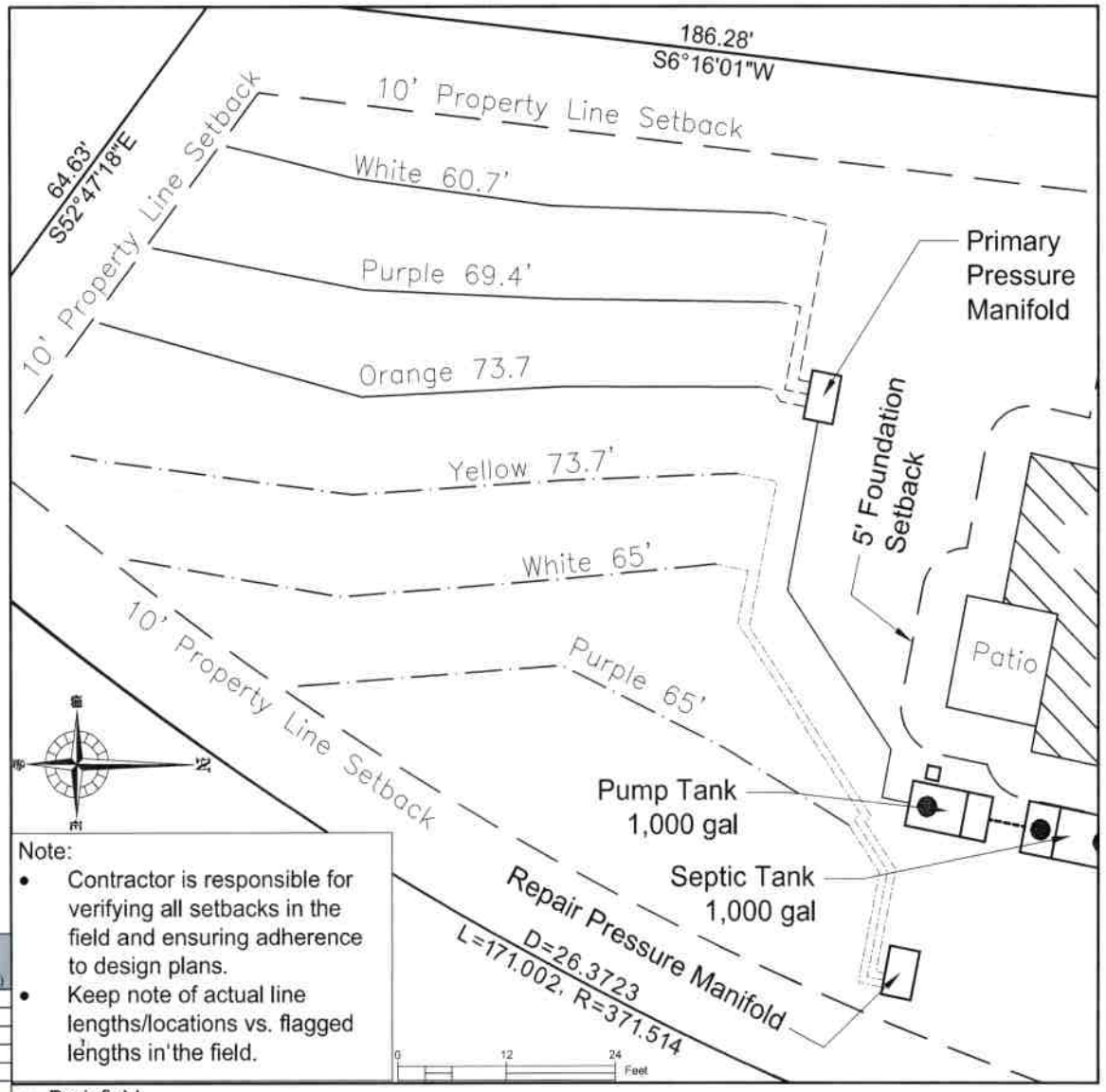
DRAWN BY:	CREATED ON:
B. Isherwood	12/5/2023
REVISED BY:	REVISED ON:
####	####
RELEASED BY:	RELEASED ON:
####	####

DRAWING NUMBER
WW-3

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

General Drainfield Notes:

1. Clear all trees less than 8" in diameter (measured at a height 3' from soil surface) from the drainfield.
2. Vegetation that will re-grow from a cut stump shall be stumped or pulled from the ground. Stumps shall not be pushed over.
3. Drainfield area shall be cleared of all leaves, pine straw, debris, etc. The accumulated material shall be removed from the drainfield.
4. In clayey soils, sides of trenches shall be raked and limed per manufacturer's instructions.
5. Supply lines shall be installed with a minimum of 18" cover.
6. The trenches shall be backfilled appropriately so that no low areas are present.
7. Apply lime over the drainfield area as needed. Seed fine fescue over the drainfield at the rate recommended by the seed manufacturer. Hand rake the seed into the soil surface. Straw the seeded area at the rate of 1.5-2 bales per 1000 sq. ft.



Note:
- Contractor is responsible for verifying all setbacks in the field and ensuring adherence to design plans.
- Keep note of actual line lengths/locations vs. flagged lengths in the field.

Line	Use	Flag Color	Elevation (ft)	Line Length (ft)	Used as Primary (ft)	Used as Repair (ft)
1	Layout Line	White	891.7	61	60.7	
2	Layout Line	Purple	892.3	70	69.3	
3	Layout Line	Orange	892.7	74	73.7	
4	Layout Line	Yellow	893.1	80.59		73.7
5	Layout Line	White	893.5	68.71		65.0
6	Layout Line	Purple	894.0	65		65.0
			Total	419	204	204
			Count	6	3	3

1 WW-4 Drainfield

SOURCE: Agri-Waste Technology, Inc.

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 203
Apex, North Carolina 27502
919-639-0690
www.agriwaste.com

True Homes-Wheatfield Dr - Lot 106

Project Location:
Wheatfield Dr.
Statesville, NC 28677
Iredell County
PIN: 4767337361.000

Project Owner:
True Homes
c/o Daniel Rush
2649 Brewbridge Centre Dr.
Monroe, NC 28110
(704) 366-3679
drrushs@rushhomesusa.com

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE: Drainfield

DRAWN BY: B. Isherwood	CREATED ON: 12/5/2023
REVISED BY: ####	REVISED ON: ####
RELEASED BY: ####	RELEASED ON: ####

DRAWING NUMBER: WW-4

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

501 N Salem St, Suite 201
Apex, NC 27502

Engineers and Soil Scientists
Agri-Waste Technology, Inc.

919-859-0669
www.agriwaste.com

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: True Homes
ADDRESS: Wheatfield Dr. Statesville, NC 28677
PROPERTY ID: 4761331361.000 COUNTY: Iredell
PROPOSED FACILITY: Single Family Residence PROPOSED DESIGN FLOW (.1949): 360 GPD
LOCATION OF SITE: Proposed Lot 106 of Wheatfield Subdivision

APPLICATION DATE
DATE EVALUATED: 02/01 & 11/29/23
PROPERTY RECORDED:
PROPERTY SIZE: ~0.5 ac

WATER SUPPLY: ☐ Private ☑ Public ☐ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☑ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
1	5%	0-10	SCL; GR	SS; SP; FR	-	35"	-	SAP	0.3 GPD/Ft²
		10-35	C; SBK	SS; SP; FI					
		35+	CL; MA	SS; SP; FR					
2	5%	0-8	SCL; GR	SS; SP; FR	-	36"	-	-	0.3 GPD/Ft²
		8-36+	C; SBK	SS; SP; FI					
3	6%	0-10	SCL; GR	SS; SP; FR	-	33"	-	SAP	0.3 GPD/Ft²
		10-33	C; SBK	SS; SP; FI					
		33+	CL; MA	SS; SP; FR					
4	5%	0-8	SCL; GR	SS; SP; FR	-	32"	-	SAP	0.3 GPD/Ft²
		8-32	C; SBK	SS; SP; FI					
		32+	CL; MA	SS; SP; FR					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	Provisionally Suitable	Provisionally Suitable
System Type(s)	50% Reduction	50% Reduction
Site LTAR	0.3 GPD/Ft²	0.3 GPD/Ft²

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):

EVALUATED BY: Trevor Hackney
OTHER(S) PRESENT: Nathan Estevez

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Apex, NC 27502

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SOIL/SITE EVALUATION

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
5	5%	0-8	SCL; GR	SS; SP; FR	-	32"	-	SAP	0.3 GPD/Ft^2
		8-32	C; SBK	SS; SP; FI					
		32+	CL; MA	SS; SP; FR					

LOT 106

RECORDED IN DEED BOOK 82 PAGE 3

PERMIT SNAPSHOT REPORT OSWP-2023-42745 FOR IREDELL COUNTY

Permit Type	OSWP - AOWE|Session Law|EOP|Expedited Review	**Project:**		**App Date:**	12/08/2023
Work Class:	OSWP - AOWE|Session Law|EOP|Expedited Review	**District:**	Iredell County	**Exp Date:**	NOT AVAILABLE
Status:	PRIORITY PERMIT	**Square Feet:**	0.00	**Completed:**	NOT COMPLETED
Valuation:	$0.00	**Assigned To:**	White, Bryant	**Approval Expire Date:**	

Description: PROPERTY has been subdivided. See BLDR-2023-32390. Also, see internal notes - existing IP/AC. 10' setback on SP is the septic setback not the building setbacks. 236 Wheatfield is for lot 106. A2 Permit Option IP-CA. The new address is not established for this property. An updated Parcel ID number is also not established.

Parcel:	4761331361.000 Main	**Address:**	236 Wheatfield Dr Statesville, NC 28677 Main	**Zone:**	RA(Residential Agricultural District)

Property Owner	Developer	Applicant	Soil Scientist
True Homes Denise Rush 2649 Brekonridge Centre Dr Monroe, NC 28110 Mobile: (704) 968-3576	Caleb Cole Home: (336) 653-6359 Business: (336) 653-6359 Mobile: (336) 653-6359	Trevor Hackney 501 N Salem St. Apex, NC 27502	Jeff Vaughan Home: (919) 367-6313 Mobile: (919) 367-6313

Permit Custom Fields

EHExpeditedApplication/PermitType	A2	How is your site plan being submitted	Custom Site Plan	Does the site contain any jurisdictional wetlands	No
Non-domestic Sewage Generated	No	Other Public Agency	No	All proposed structure dimensions	40' x 58.5
What are the proposed structures	New Single-Family Residence - Stick Built	New Single-Family Residence	Stick Built	If other Addition/Structure, please explain	
Maximum Number of Bedrooms	3	Number of Occupants	6	Foundation Type	Concrete Slab Foundation
Water Supply	Municipal Water	Desired Septic System Type	Conventional (most common)	If other septic system type, please explain	
Has this project been approved by TRC	No	Front Setback	35	Back Setback	35
Left Setback	25	Right Setback	15	Is the structure or development in the floodplain	No
Is the property in a local historic district?	No	Is the property located downtown?	No	Zoning Notes/Addendums	no building permit can be issued until plat is recorded
Additional Unique Setbacks Apply	Yes	Watershed	NOT IN A WATERSHED		

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Trevor_Hackney_12/8/2023.jpg	12/08/2023 11:07	Hackney, Trevor		Uploaded via CSS
1088 Ostwalt Amity AA Form_v1.pdf	12/12/2023 15:45	Nebel, Barbara	Available Online	Authorize to Act as Agent
WFE P1 RECORDED.pdf	12/22/2023 9:24	Hart, Ronda	Available Online	Recorded Subdivision plat
WFE P2 RECORDED.pdf	12/22/2023 9:24	Hart, Ronda	Available Online	Subdivision plat

Note	Created By	Date and Time Created

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

Septic System Design - Summary Page

Engineers and Soil Scientists
Agri-Waste Technology, Inc.

Project Manager:
Jeff Vaughan, PhD, LSS
jvaughan@agriwaste.com
919-859-0669
Engineer:

Project: True Homes-Wheatfield Dr - Lot 106
Property: Wheatfield Dr.
Statesville, NC 28677
Subdiv.: Wheatfield Ph 2 - Sec 1
Lot #: 106

Owner: True Homes
Address: 2649 Brekonridge Centre Dr
Monroe, NC 28110
Phone: 704-968-3576
Email: dnichols@truehomesusa.com

EHS:

Date: 12/5/2023
County: Iredell
Permit #:
Type of System: III b
PIN: 4761331361.000

Soil Parameters

Soil Evaluation By:

LTAR: 0.30 gpd/ft^2

Special Conditions/Notes:

2" Fill Cap Required

Design Parameters

Type of Establishment: Residence, 5 or fewer bedrooms
Unit: Bedroom
# of Units: 3

Septic Tank Specifications

Min. Tank Capacity: 900 gal
Actual Tank Volume: 1,000 gal
Tank Manufacturer: Shoaf
Tank Model: TS 1000 STB

	Exterior	Interior	
Length:	108.0	102.0	in.
Width:	58.0	52.0	in.
Depth:	67.5	60.5	in.

Primary Drainfield Specifications

Type of Distribution: Parallel Pressure Manifold
Trench Media: PPBPS, Horizontal
Trench Width: 3 ft
Trench Depth: 18 in.
(or as specified on permit)

Trench Bottom Area: 1200 ft^2
Minimum Drain Line: 200 ft
Actual Drain Line: 204 ft
Number of Lines: 3
Minimum Line Spacing: 8 ft O.C.

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

Wastewater Treatment System Design Calculations

Project: True Homes-Wheatfield Dr - Lot 106
Location: Wheatfield Dr.
Statesville, NC 28677
County: Iredell

Septic Tank Sizing

Daily Flow Estimate:

Unit	# of Units	Flow/Unit	Flow/Day
Bedroom	3	120	360

Q= 360 gpd

Septic Tank Minimum Capacity: Per NCAC T15A:18A .1952(b)(1):

For individual residences with 3 or fewer bedrooms,

Minimum Liquid Capacity (V)= 900 gal

Septic Tank Specs:

Manufacturer: Shoaf
Model: TS 1000 STB
Volume: 1,000 gal
Weight: 10,500 lbs

	Exterior	Interior	
Length:	108.0	102.0	in.
Width:	58.0	52.0	in.
Depth:	67.5	60.5	in.

Shape of Risers: Circular
Diameter: 2.00 ft

DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

Pump Tank Storage & Float Settings

Project: True Homes-Wheatfield Dr - Lot 106
Location: Wheatfield Dr.
Statesville, NC 28677
County: Iredell

Tank Manufacturer	Shoaf
Tank Model	TS 1000 PT

Interior Height (in.)	**50.0** in.	
Avg. Storage	**20.16** gal/in.	

Primary System

Elevations, measured from bottom towards top (0 = Interior Bottom of Tank):

Top of pump (including 4" block)	14.1 in.	(Pump height = 10 1/16")
Pump Off	16.0 in.	
Pump On	25.5 in.	(set for dose volume)
Alarm On	31.5 in.	(6 in. above On Float)
Emergency Storage Available		
Pump Tank	373 gal	
Days of Storage	1.04 days	

(determined from "interior top of tank" - "High Water Alarm")

Repair System

Elevations, measured from bottom towards top (0 = Interior Bottom of Tank):

Top of pump (including 4" block)	14.1 in.	(Pump height = 10 1/16")
Pump Off	16.0 in.	
Pump On	25.5 in.	(set for dose volume)
Alarm On	31.5 in.	(6 in. above On Float)
Emergency Storage Available		
Pump Tank	373 gal	
Days of Storage	1.04 days	

(determined from "interior top of tank" - "High Water Alarm")

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ELEVATIONS

Project: True Homes-Wheatfield Dr - Lot 106
Location: Wheatfield Dr.
Statesville, NC 28677
County: Iredell

Benchmark NE Corner of Lot
BM Elev 894.38 ft

Septic Tank	1,000 gal	
Ground Surface		894.00 ft
Depth of Soil Cover	12 in.	1.00 ft
Overall Ht of Tank	67.5 in.	5.63 ft
Elev, Base of Tank		887.38 ft
Ht to 4" Inlet Invert	57 in.	4.75 ft
Elev, 4" Inlet Invert		892.13 ft
Ht to 4" Outlet Invert	55 in.	4.58 ft
Elev, 4" Outlet Invert		891.96 ft
Gravel Base	6 in.	0.50 ft
Elev, Bot of Excavation		886.88 ft
Pump Tank	1008 gal	
Ground Surface		894.00 ft
Depth of Soil Cover	15 in.	1.21 ft
Overall Ht of Tank	57 in.	4.75 ft
Elev, Base of Tank		888.04 ft
Ht to 4" Inlet Invert	46 in.	3.83 ft
Elev, 4" Inlet Invert		891.88 ft
Ht to 2" Outlet Invert	58 in.	4.83 ft
Elev, 2" Outlet Invert		892.88 ft
Gravel Base	6 in.	0.50 ft
Elev, Bot of Excavation		887.54 ft
ST Inlet Pipe		
Grade @ Stub-out		894.65 ft
Depth of Stub-out, top		1.5 ft
Elev, Stub-out Invert		892.80 ft
Elev @ ST Inlet Invert		892.13 ft
Length		7.75 ft
Slope		8.7 %
Pipe, ST to PT		
ID	4 in.	0.33 ft
OD	4.5 in.	0.38 ft
Elev, ST Outlet Invert	in.	891.96 ft
Elev, PT Inlet Invert	in.	891.88 ft
Length	in.	4 ft
Slope	in.	2.1 %
Cover over inlet pipe	in.	1.52 ft
Pump Reqmt.		
Floor Thickness	4 in.	0.33 ft
Elev, Pump Tank Floor		888.38 ft
Pump Block Ht.	4 in.	0.33 ft
Elev, Pump Intake		888.71 ft
Grade @ Primary Manifold		892.74 ft
Grade @ Repair Manifold		894.30 ft
Min. Cover	18 in.	1.50 ft
Max Elev, Primary		891.24 ft
Max Elev, Repair		892.80 ft
Elev Diff, Primary		2.53 ft
Elev Diff, Repair		4.09 ft

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Drainfield Design

Project	True Homes-Wheatfield Dr - Lot 106
Location	Wheatfield Dr. Statesville, NC 28677
County	Iredell

Drainfield Sizing

Primary

LTAR	0.3 gpd/ft^2		
Daily Design Flow	360 gpd	**Type of Drainfield Media**	PPBPS, Horizontal
Req. Drainfield Area	1,200 ft^2	**Required Drainline**	
Trench Width, Eff.	3 ft	**After 50% Reduction**	200 ft
Required Drainline	400 ft	**Minimum Line Spacing**	8 ft (O.C.)

Repair

LTAR	0.3 gpd/ft^2		
Daily Design Flow	360 gpd	**Type of Drainfield Media**	PPBPS, Horizontal
Req. Drainfield Area	1,200 ft^2	**Required Drainline**	
Trench Width, Eff.	3 ft	**After 50% Reduction**	200 ft
Required Drainline	400 ft	**Minimum Line Spacing**	8 ft (O.C.)

Drainfield Layout

Line	Use	Flag Color	Elevation (ft)	Line Length (ft)	Used as Primary (ft)	Used as Repair (ft)
1	Layout Line	White	891.7	61	60.7	
2	Layout Line	Purple	892.3	70	69.3	
3	Layout Line	Orange	892.7	74	73.7	
4	Layout Line	Yellow	893.1	80.59		73.7
5	Layout Line	White	893.5	68.71		65.0
6	Layout Line	Purple	894.0	65		65.0
			Total	419	204	204
			Count	6	3	3

Note: Line length totals are shown to the nearest foot.

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PRESSURE MANIFOLD DESIGN (Primary)

Site Information

Project: True Homes-Wheatfield Dr - Lot 106
Location: Wheatfield Dr.
Statesville, NC 28677
County: Iredell

Design Information

Estimated Daily Flow	360	gal/day
L.T.A.R. (from Iredell Co.)	0.3	gal/day/ft^2
L.T.A.R. + 5%	0.315	gal/day/ft^2
Trench Width	3	ft.
Line Length Required	400	ft.
Length after 50% Reduction	200	ft
L.T.A.R. Reduced	0.600	gal/day/ft^2
L.T.A.R. Reduced + 5%	0.630	gal/day/ft^2

DRAINFIELD INFO. - **Primary**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using PPBPS, Horizontal***

Line No.	Flag Color	Line Length (ft)	Tap	Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
1	White	60.7	1/2in SCH 80	5.48	0.090	0.550
2	Purple	69.3	1/2in SCH 40	7.11	0.103	0.625
3	Orange	73.7	1/2in SCH 40	7.11	0.096	0.588
	Total	**204**	**Total**	**19.70**	**Avg.**	**0.59**

Note: Line lengths are calculated in 4'4" increments to reflect use of PPBPS product.

Total Run Time	18.27	min.
Volume per Panel	4.08	gal
Number of Panels	47	
Dose Volume	191.5	gal/dose
Run Time/Dose	**9.7**	**minutes**
Volume/depth	20.16	gal/in.
Estimated Drawdown	9.50	in.

Manifold Box

Number of Taps	3	with		0	Split(s)
Manifold Length	3.0	ft.	(approximate)		

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PRESSURE MANIFOLD SYSTEM DESIGN (Repair)

Site Information

Project: True Homes-Wheatfield Dr - Lot 106
Location: Wheatfield Dr.
Statesville, NC 28677
County: Iredell

Design Information

Estimated Daily Flow	360	gal/day
L.T.A.R. (from Iredell Co.)	0.3	gal/day/ft^2
L.T.A.R. + 5%	0.315	gal/day/ft^2
Trench Width	3	ft.
Line Length Required	400	ft.
Length after 50% Reduction	200	ft
L.T.A.R. Reduced	0.600	gal/day/ft^2
L.T.A.R. Reduced + 5%	0.630	gal/day/ft^2

DRAINFIELD INFO. - **Repair**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using PPBPS, Horizontal***

Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
4	Yellow	73.7	1/2in SCH 80	5.48	0.074	0.543
5	White	65	1/2in SCH 80	5.48	0.084	0.615
6	Purple	65	1/2in SCH 80	5.48	0.084	0.615
	Total	**204**	**Total**	**16.44**	**Avg.**	**0.59**

Note: Line lengths are calculated in 4'4" increments to reflect use of PPBPS product.

Total Run Time	21.90	min.
Volume per Panel	4.08	gal
Number of Panels	47	
Dose Volume	191.5	gal/dose
Run Time/Dose	**11.6**	**minutes**
Volume/depth	20.16	gal/in.
Estimated Drawdown	9.50	in.

Manifold Box

Number of Taps	3	with		0	Split(s)
Manifold Length	3.0	ft.	(approximate)		

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PUMP DESIGN

System (initial/repair): **Primary**

Project: True Homes-Wheatfield Dr - Lot 106
Location: Wheatfield Dr.
Statesville, NC 28677
County: Iredell

Friction Losses

Suction Head	0 ft		*(submersible 0)*
Elev. Difference (highest point from pump)	2.53 ft		
Design Pressure At Outlet	2 ft		

Supply Line - 1.5" Schedule 40 PVC

Pipe Diameter, Nominal	1.5 in.		
Pipe Diameter (ID)	1.59 in.	Flow	19.70 gpm
Pipe Length	54 ft	Velocity	3.18 ft/sec
Pipe Length for Fittings	5.4 ft		Meets requirement that 2 ft/s < v < 5 ft/s.
Equivalent Length	59.4 ft		
Estimated Friction Loss in Supply Line	1.52 ft		
Pressure Filter Friction Loss	0.23 ft		*(from manufacturer)*
Friction Loss - Taps/Special Fittings	3.5 ft		
TOTAL	**9.79 ft.**		

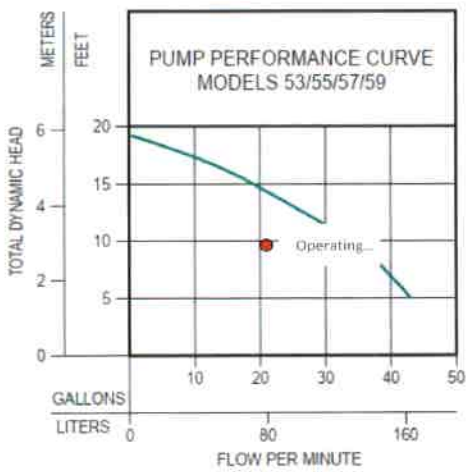
Flow for Anti-Siphon Hole

Hole Diameter	3/16	in.
Hole Flowrate	1.30	gpm

Pump Efficiency	0.7	*(assumed, typical)*
Motor Efficiency	0.9	*(assumed for electric pumps)*
Flow	**21.00 gpm**	
Required Horsepower	0.08 hp	
TDH	**9.79 ft**	

Pump Selection

Manufacturer:	Zoeller
Model:	N53
Horsepower:	**0.3**



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PUMP DESIGN

System (initial/repair): **Repair**

Project: True Homes-Wheatfield Dr - Lot 106
Location: Wheatfield Dr.
Statesville, NC 28677
County: Iredell

Friction Losses

Suction Head	0 ft		*(submersible 0)*
Elev. Difference (highest point from pump)	4.09 ft		
Design Pressure At Outlet	2 ft		

Supply Line - 1.5" Schedule 40 PVC

Pipe Diameter, Nominal	1.5 in.		
Pipe Diameter (ID)	1.59 in.	Flow	16.44 gpm
Pipe Length	117 ft	Velocity	2.66 ft/s
Pipe Length for Fittings	11.7 ft		Meets requirement that 2 ft/s < v < 5 ft/s.
Equivalent Length	128.7 ft		
Estimated Friction Loss in Supply Line		2.36 ft	

Pressure Filter Friction Loss	0.00 ft	*(from manufacturer)*
Friction Loss - Taps/Special Fittings	3.5 ft	
TOTAL	**11.95 ft.**	

Flow for Anti-Siphon Hole

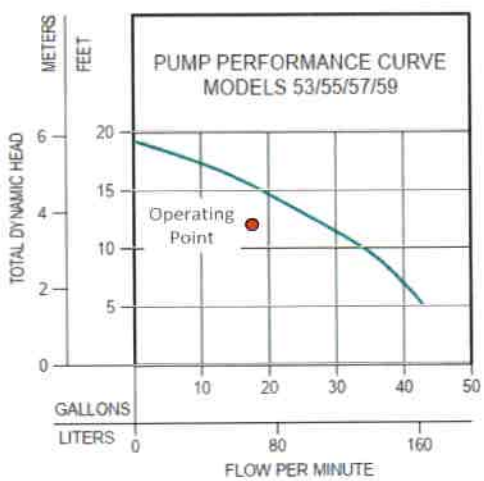
Hole Diameter	3/16 in.
Hole Flowrate	1.43 gpm

Pump Efficiency	0.7	*(assumed, typical)*
Motor Efficiency	0.9	*(assumed for electric pumps)*
Flow	**17.87 gpm**	

Required Horsepower	0.09 hp
TDH	**11.95 ft.**

Pump Selection

Manufacturer:	Zoeller
Model:	N53
Horsepower:	**0.3**



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Attachment 2: Soil Boring Description Sheets

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LEGEND

use the following standard abbreviations

LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope)	I	S (Sand)	1.2 - 0.8	0.6 - 0.4	SEXP (Slightly Expansive)	G (Single Grain)
CV (Convex Slope)		LS (Loamy Sand)			EXP (Expansive)	M (Massive)
D (Drainage Way)						CR (Crumb)
DS (Debris Slump)	II	SL (Sandy Loam)	0.8 - 0.6	0.4 - 0.3		GR (Granular)
FP (Flood Plain)		L (Loam)				SBK (Subangular Blocky)
FS (Foot Slope)						ABK (Angular Blocky)
H (Head Slope)	III	Si (Silt)	0.6 - 0.3	0.3 - 0.15		PL (Platy)
L (Linear Slope)		SiCL (Silty Clay Loam)				PR (Prismatic)
N (Nose Slope)		CL (Clay Loam)				
R (Ridge)		SCL (Sandy Clay Loam)			**MOIST**	**WET**
S (Shoulder Slope)		SiL (Silt Loam)				
T (Terrace)					VFR (Very Friable)	NS (Non-sticky)
	IV	SC (Sandy Clay)	0.4 - 0.1	0.2 - 0.05	FR (Friable)	SS (Slightly Sticky)
		SiC (Silty Clay)			FI (Firm)	S (Sticky)
		C (Clay)			VFI (Very Firm v. Very Sticky)	VS (Very Sticky)
		O (Organic)	None	None	EFI (Extremely Firm)	NP (Non-plastic)
						SP (Slightly Plastic)
						P (Plastic)
						VP (Very Plastic)

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

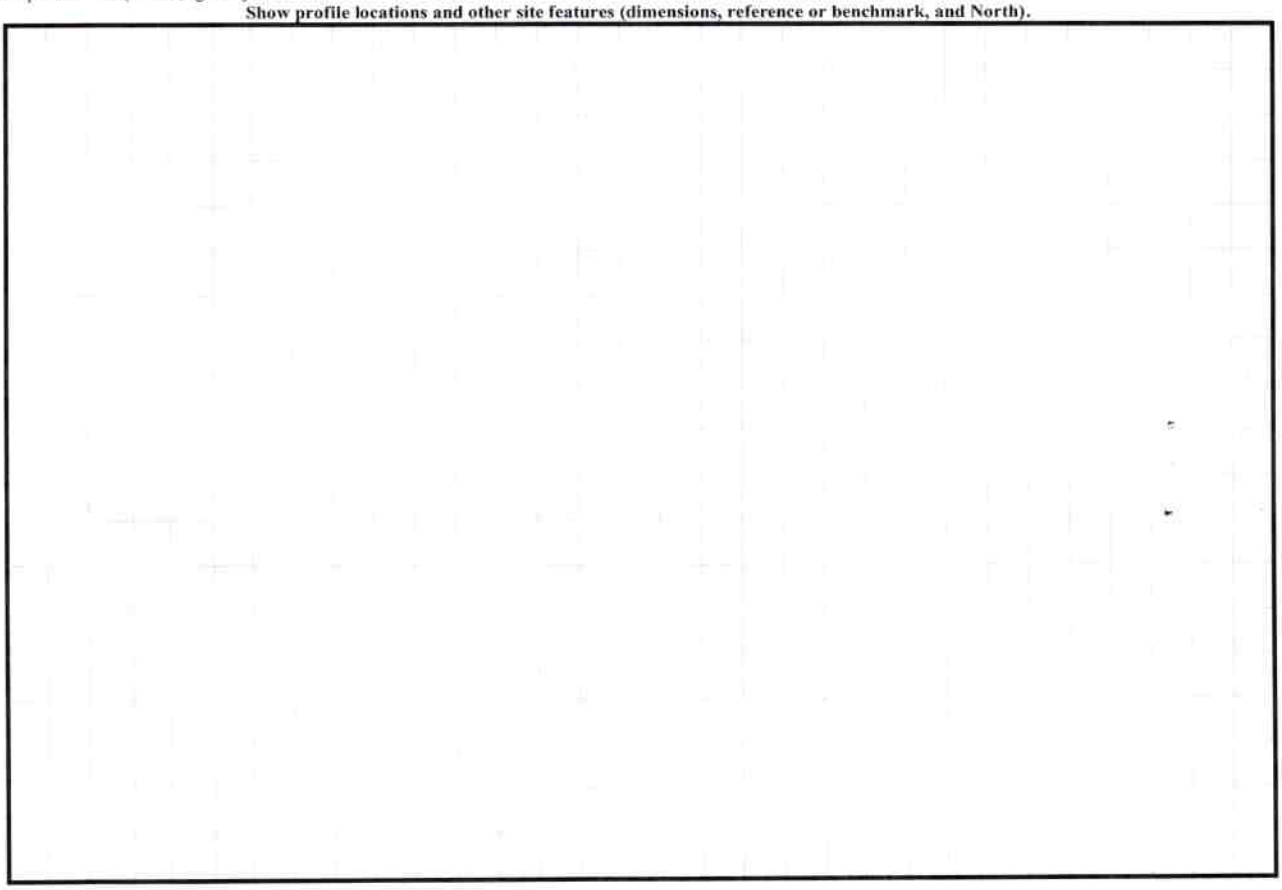
NOTES

HORIZON DEPTH	In inches below natural soil surface
DEPTH OF FILL	In inches from land surface
RESTRICTIVE HORIZON	Thickness and depth from land surface
SAPROLITE	S(suitable) or U(unsuitable)
SOIL WETNESS	Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation
CLASSIFICATION	S (Suitable), PS (Provisionally Suitable), or U (Unsuitable)

Evaluation of saprolite shall be by pits.

Long-term Acceptance Rate (LTAR): gal/day/ft^2

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



DocuSign Envelope ID: 675204F0-740D-45D1-A757-C8E33D8995B6

Attachment 3: Additional Documentation

County: Iredell

This Section for Local Health Department Use Only

Initial submittal received: 5-17-2023 (Date) by BB. (Initials)

Permit Number: OSWP-2023-18848

G.S. 130A-335(a6) states the following: *'If a local health department fails to act on an application for a construction authorization submitted pursuant to subsection (a5) of the section within 10 business days of receipt of a complete application, the local health department shall issue the construction authorization.'*

In accordance with G.S. 130A-335(a5) the construction authorization application is:

☐ 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 Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☐ Denied (See attached report.)

Copies of this were sent to the AOWE/PE and the Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☑ Complete

State Authorized Agent: Brianna A Batts Date of Issuance: 7/24/2023

This Construction Authorization is issued pursuant to G.S. 130A-335(a2), (a5), and (a6) 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, or if information submitted in the application was falsified, inaccurate or misleading. 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 location and identification of all property lines, easements, water lines, and other appropriate utilities shall be the responsibility of the owner. Final landscaping shall be constructed to divert water and establish vegetative cover.

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: 5/18/2028

See attached site sketch

County: Iredell

This Section for Local Health Department Use Only

Initial submittal received: 5-17-2023 (Date) by BB. (Initials)

Permit Number: OSWP-2023-24415

G.S. 130A-335(a4) states the following: *'If a local health department fails to act on an application for an improvement permit submitted pursuant to subsection (a3) of the section within 10 business days of receipt of a complete application, the local health department shall issue the improvement permit.'*

In accordance with G.S. 130A-335(a3) the improvement permit application is:

☐ 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 Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☐ Denied (See attached report.)

Copies of this were sent to the LSS and the Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☑ Complete

State Authorized Agent: Benjamin A. Bolt Date of Issuance: 5-18-2023

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2), (a3), and (a4) using the signed and sealed LSS/LG evaluation(s) attached here. The issuance of this permit by the Health Department in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This site is subject to revocation if the site plan, plat, or the intended use changes, or if information submitted in the application was falsified, inaccurate or misleading. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to conditions of this permit. The location and identification of all property lines, easements, water lines, and other appropriate utilities shall be the responsibility of the owner.

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: 5-18-2028

See attached site sketch

County: Iredell

CONSTRUCTION AUTHORIZATION FOR G.S. 130A-335(a2)/SL2022-11

PIN/Lot Identifier: 4761331361

Issued To: True Homes

Property Location: Lot 106 Wheatfield Drive, Statesville, NC

AOWE/PE Plans/Evaluations Provided: Yes ☑ No ☐ If yes, name and license number of AOWE/PE: Jeff Vaughan, 10003E

Facility Type: Single Family Residence

☑ New ☐ Expansion ☐ Repair System Relocation ☐

Basement? ☑ Yes ☐ No Basement Fixtures? ☑ Yes ☐ No

Type of Wastewater System** 25% Reduction (Initial) 50% Reduction (Repair)

Design Daily Flow: 360 GPD Wastewater Strength: ☑ domestic ☐ high strength ☐ industrial process

Session Law 2014-120 Section 53, Engineering Design Utilizing Low-flow Fixtures and Low-flow Technologies? ☐ Yes ☑ No

Installation Requirements/Conditions

Septic Tank Size: 1000 gallons Total Trench/Bed Length: 300 feet Trench/Bed Spacing: 9 feet on center

Drainfield square footage: 900 Trench/Bed Width: 36 inches LTAR: 0.3 gpd/ft²

Soil Cover: 6+ inches Slope Adjusted Maximum Trench/Bed Depth: 18 inches

Aggregate Depth: _____inches above pipe _____inches below pipe 12 inches total

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 [.1937(h)]: Yes ☐ No ☑

Easement, Right-of-Way, or Encroachment Agreement Required [.1938(j)]: ☐ Yes ☑ No

Declaration of Restrictive Covenants: ☐ Yes ☑ No

****If applicable:**

I understand the system type specified is different from the type specified on the application. I accept the specifications of this permit.

Owner/Legal Representative Print Name: _____

Owner/Legal Representative Signature: _____ Date: _____

Pre-Construction Conference Required: Yes ☐ No ☑

Conditions: No Foundation drain should be permitted for this home. The property will need to be Properly recorded prior to a CA being issued. The repair system will require 2 inches of fill soil.

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: Jeff Vaughan

AOWE/PE Signature: _____ Date: 3/10/2023

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

See attached site sketch

County: Iredell

IMPROVEMENT PERMIT FOR G.S. 130A-335(a2)/SL2022-11

PIN/Lot Identifier: 4761331361

Issued To: True Homes

Property Location: Lot 106 Wheatfield Drive, Statesville, NC

Subdivision: Wheatfield Subdivision Lot #: 106 Block: N/A Section: 2

LSS Report Provided: Yes ☑ No ☐

If yes, name and license number of LSS: Jeff Vaughan, 1227

New ☑ Repair ☐ Expansion ☐ System Relocation ☐

Proposed Structure: Single Family Residence

Proposed Wastewater System Type: Gravity 25 % reduction (Initial) 50% Percent Reduction (Repair)

Fill System: ☐ Yes ☑ No If yes, specify: ☐ New ☐ Existing (when adding more than 6 inches of fill to system area please provide a fill plan)

Proposed Design Daily Flow: 360 GPD Proposed LTAR (Initial): 0.3 Proposed LTAR (Repair): 0.3

Design Wastewater Strength: ☑ domestic ☐ high strength ☐ industrial process

Number of bedrooms: 3 Number of Occupants: 6 Other:

Pump Required: ☐ Yes ☑ No ☐ May be required based upon final location and elevations of facilities

Artificial Drainage Required: ☐ Yes ☑ No If yes, please specify details:

Type of Water Supply: ☐ Private well ☐ Public well ☑ Municipal Supply ☐ Spring ☐ Other:

Drainfield location meets requirements of Rule .1945: Yes ☑ No ☐

Drainfield location meets requirements of Rule .1950: 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:

No foundation drain should be permitted for this home.

This plan is based on a proposed PLAT of the subdivision and county GIS has not yet been updated.

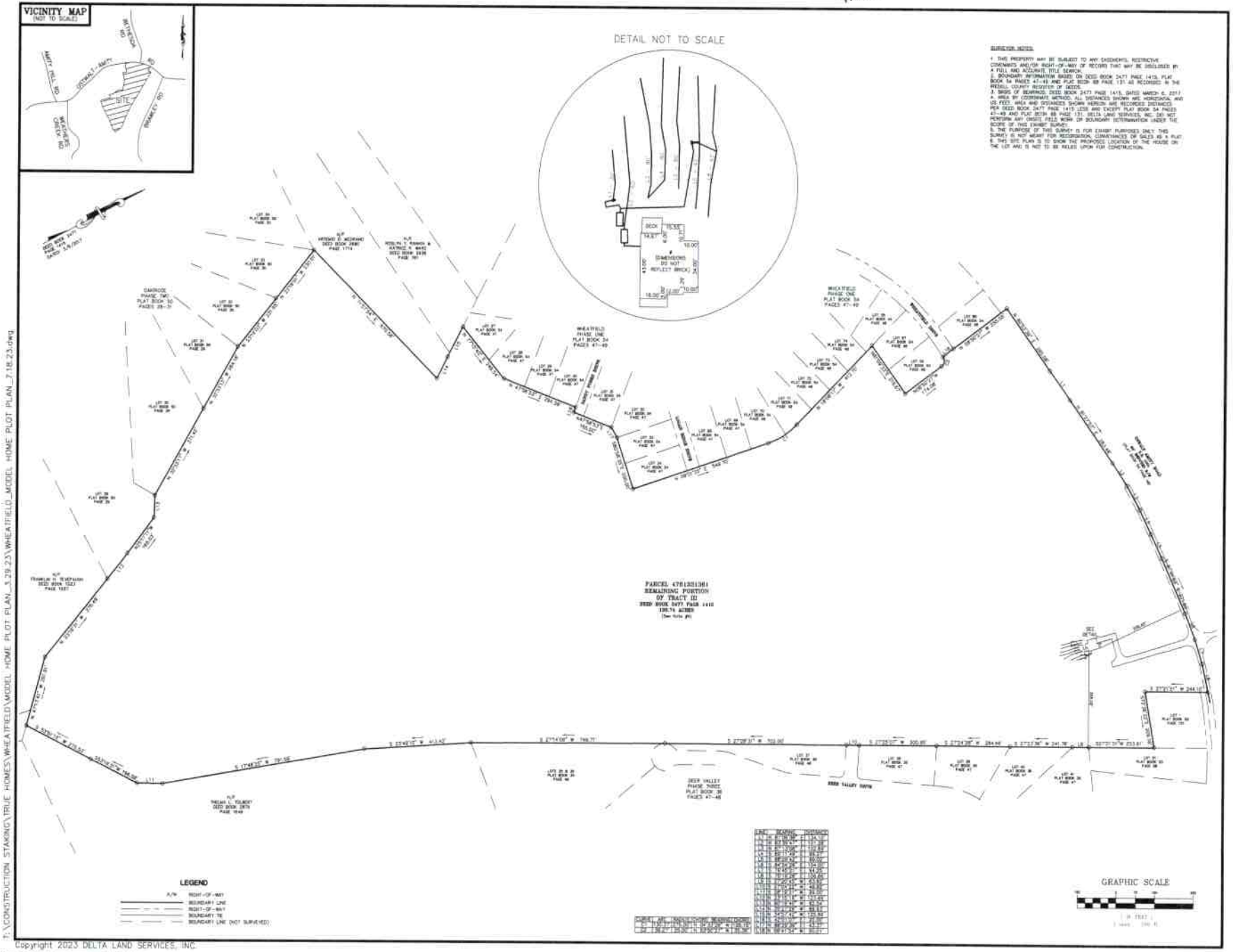
Licensed Soil Scientist Print Name: Jeff Vaughan

Licensed Soil Scientist Signature: Jeff Vaughan Date: 3/10/2023

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

See attached site sketch

ICHP 7/24/2023
Approved



DELTA LAND SERVICES, INC
NC FIRM LICENSE #C-1735
6128 MATTHEWS-MINT HILL ROAD
SUITE G
MATTHEWS, NC 28105
T 704.841.4700
www.deltalandservices.net

SEAL

OWNERSHIP:
TAX PARCEL 4761331361
DEED BOOK 2477 PAGE 1415
M.J. SUMNER CORPORATION
P.O. BOX 428
KING, NC 27021

PREPARED FOR:
TRUE HOMES
2649 BRECKENRIDGE CENTRE DRIVE
MONROE, NC 28110

MODEL HOME PLOT PLAN

PARCEL 4761331361
125 OSWALT AMITY ROAD
STATESVILLE, IREDELL COUNTY, NORTH CAROLINA

PROJECT NUMBER:
WHEATFIELD

DRAWING REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY: BMJ DATE: 07/18/2023
CHECKED BY: THD SCALE: 1" = 150'

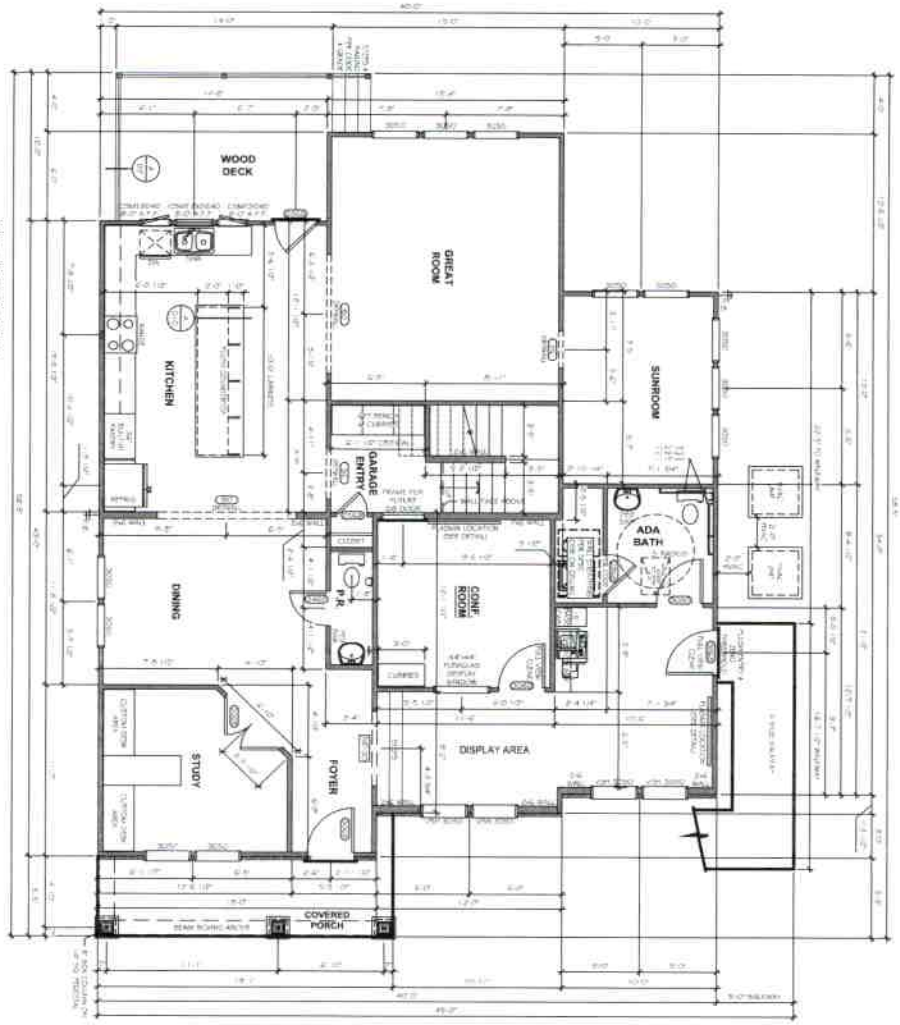
DRAWING TITLE:
Wheatfield
Model Home Plot Plan

SHEET NUMBER:
1

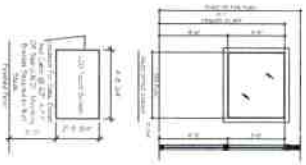
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Copyright 2023 DELTA LAND SERVICES, INC.

2313 - FIRST FLOOR PLAN







SHEET	A2.1
PREPARED BY	SETH
DATE	9-22-22
SCALE	1/8"=1'-0"
REVIEWED BY	NICK

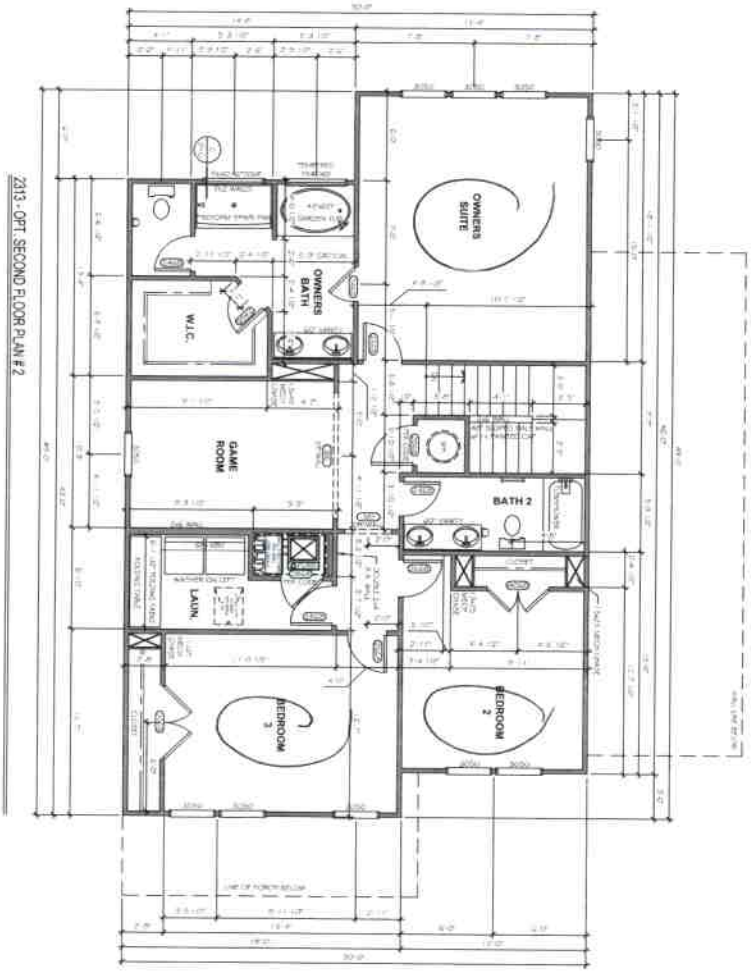
JASPER
2313

IREDELL

WHEATFIELD

LOT# 106

TrueHomes
IT'S ALL ABOUT U
2649 Brekonridge Centre Dr.
Suite 104
Monroe, N.C. 28110
704-271-1191



SHEET
A2.2

PREPARED BY:
SETH
DATE:
SCALE:
REVIEWED BY:
NICK

JASPER
2313

IREDELL

WHEATFIELD

LOT# 106

TrueHomes
IT'S ALL ABOUT U
2649 Brekonridge Centre Dr.
Suite 104
Monroe, N.C. 28110
704-271-1191

Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 203
Apex, North Carolina 27502
919-859-0669
www.agriwaste.com





Soil Suitability for Domestic Sewage Treatment and Disposal Systems
Lot 106 Wheatfield Drive, Statesville, NC.
Iredell County PID: 4761331361 (Larger Parcel)

PREPARED FOR: True Homes, Client

PREPARED BY: Jeff Vaughan, Licensed Soil Scientist
Trevor Hackney, Environmental Scientist

DATE: March 10, 2023

Soil suitability for domestic sewage treatment and disposal systems was evaluated from February 1, 2023, for the property located on Wheatfield Drive, Statesville NC. Jeff Vaughan and Trevor Hackney of Agri-Waste Technology, Inc. (AWT) conducted the soil evaluation. This evaluation was done to facilitate permitting for a 3-bedroom home. This report and attached documents were prepared *to this application is to be used to issue an Improvement Permit in accordance with G.S. 130A-335(a2) and (a3). The LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2).*

A drawing of the site plan, septic layout, and boring locations is included in Attachment 1. Profile descriptions for each boring are included in Attachment 2. Additional Documentation is in Attachment 3.

The total property area is approximately 0.5 acres. The property is completely wooded. The home is proposed near the proposed extension of Wheatfield Drive with the septic system proposed behind the home. This proposal is for a serial distribution gravity system with a 25% reduction trench product with a split pressure manifold panel block repair system. This property is proposed based on a preliminary PLAT. In order to obtain the IP and CA for this site, the final PLAT may be required to obtain permits with Iredell County.

Soil Suitability for Domestic Sewage Treatment and Disposal Systems
The drawing in Attachment 1 details the proposed property boundaries (as proposed by Mc2 Engineering), soil boring locations, and layout of drain field trenches (Completed by AWT). Five soil borings were assessed on the property. Soil borings were examined to determine soil suitability for on-site sewage disposal systems in accordance with 15A

18A .1900 Rules for Sewage Treatment and Disposal Systems. These borings were advanced with a hand auger. All soil borings are being utilized for the drain field area. A septic layout was performed to demonstrate available space (.1945). The layout in Attachment 1 indicates there is available space for a three-bedroom primary septic system utilizing a 25% reduction trench product. The repair system will be a horizontal configuration panel block system utilizing a 50% reduction in drain field size.

The proposed LTAR (Long Term Acceptance Rate) by AWT is 0.3 GPD/ft^2. The soils on this property are group IV soils within the distribution and treatment zone as used to define the LTAR. Since usable slope corrected soil depths meet or exceed 30" AWT is recommending the use of 25% reduction trench product for the primary system. With a LTAR of 0.3 GPD/ft^2, 300 linear feet of 25% reduction trench product is necessary to support a three-bedroom home initial system. The maximum trench bottom should not exceed 18". The attached drawing proves that 300 linear feet of trench can be installed for the primary system. The repair field will be a split pressure manifold horizontal panel block style system to utilize the 50% reduction of the trench product. The repair field will require two inches of fill soil when it is installed to maintain the proper soil cap. A total of 200 linear feet of horizontal panel block style trench are required for a 3-bedroom repair system. The attached drawing proves that 204 linear feet of horizontal panels can be installed.

Any disturbances or grading done in the usable area will change the potential of using the area designated for a drain field. Prior to moving forward with building on the property, Iredell County Environmental Health Department should be contacted to complete the necessary review of this documentation to issue an IP (Improvement Permit) for the property and the CA (Construction Authorization).

Conclusions

An IP (Improvement Permit) and CA (Construction Authorization) for this property can be issued with the site plan that is in Attachment 1. A CA permit will be required in order to secure a building permit for the property. The county issues an Operation Permit after the system has been installed to meet the specifications of the Authorization to Construct. Additional septic layouts have been or will be performed as needed. It will be critical to not disturb any of the proposed septic area or there is a risk that the IP and CA will be revoked. *This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2) and (a5).*

We appreciate the opportunity to assist you in this matter. Please contact us with any questions, concerns, or comments.

Sincerely,

Jeff Vaughan

Trevor Hackney

Trevor Hackney

General Drainfield Notes:

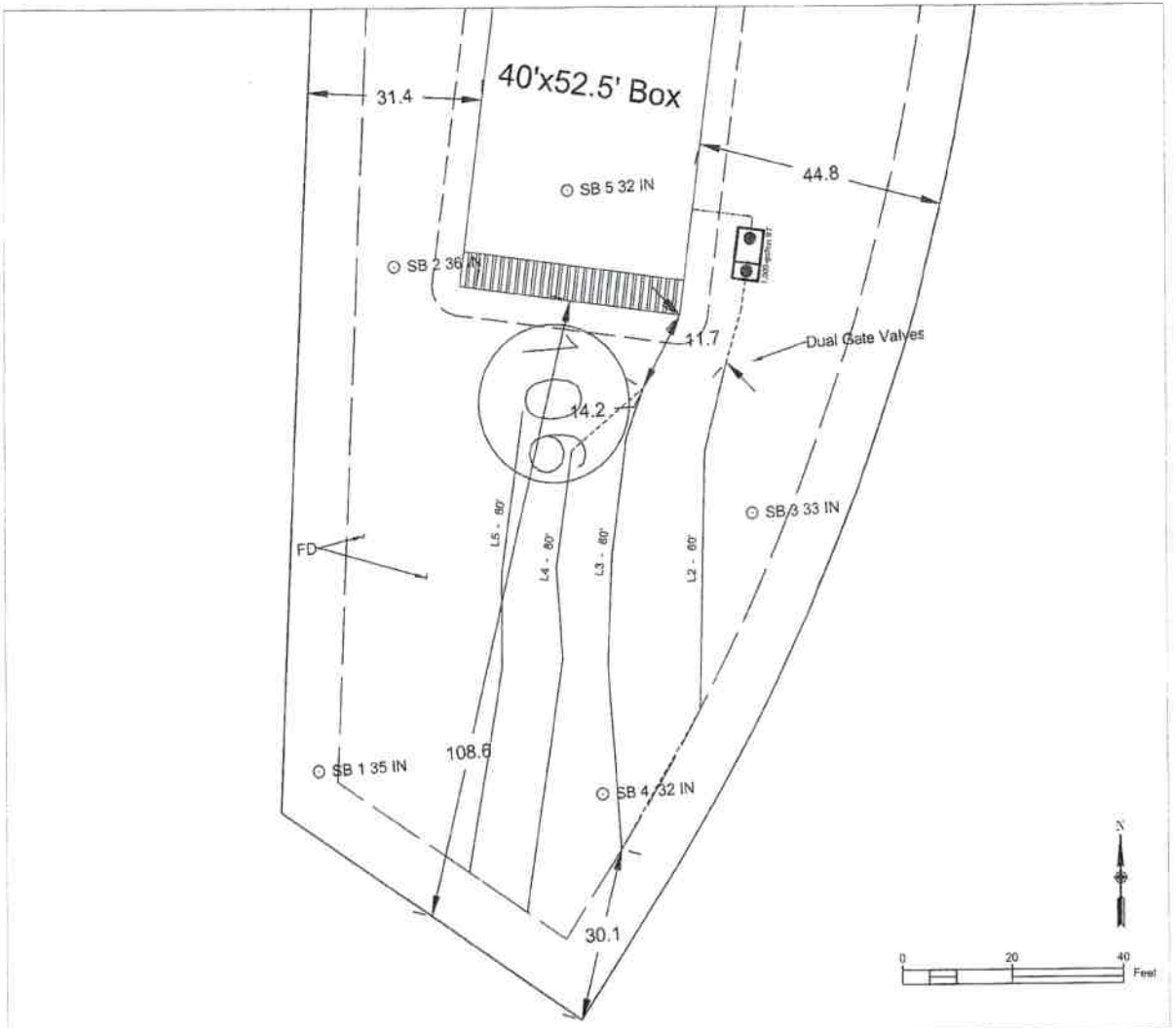
1. Clear all trees less than 8" in diameter (measured at a height 3' from soil surface) from the drainfield.
2. Vegetation that will re-grow from a cut stump shall be stumped or pulled from the ground. Stumps shall not be pushed over.
3. Drainfield area shall be cleared of all leaves, pine straw, debris, etc. The accumulated material shall be removed from the drainfield.
4. In clayey soils, sides of trenches shall be raked and limed per manufacturer's instructions.
5. Supply lines shall be installed with a minimum of 18" cover.
6. The trenches shall be backfilled appropriately so that no low areas are present.
7. Apply lime over the drainfield area as needed. Seed fine fescue over the drainfield at the rate
8. recommended by the seed manufacturer. Hand rake the seed into the soil surface. Straw the seeded area at the rate of 1.5-2 bales per 1000 sq. ft.

Installation Notes:

Contractor to adjust tank placements as necessary to maintain:

1. 5' downslope NO foundation drain
2. Min. 12" cover over Septic Tank (Not to exceed 36")
3. Min. 18" cover over pipes
4. Min. 2% grade on gravity pipe from house to Septic Tank

Note:
Primary distribution is Serial. Primary is Quick4 Plus Standard.



System Layout

SOURCE: Agri-Waste Technology, Inc.

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 201
Apex, North Carolina 27502
919-851-9978
www.agri-waste.com

True Homes
Lot 106

Project Location:
Wheatfield Dr
Statesville, NC 28677
Iredell County
PIN# 4761031361.000

Project Owner:
True Homes
2849 Brekonridge Centre Dr
Monroe, NC 28110
704-968-3576
dschols@truehomesnc.com

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Primary Layout

DRAWN BY: T. Bostic	CREATED ON: 02/20/2023
REVISED BY: ####	REVISED ON: ####
RELEASED BY: ####	RELEASED ON: ####

DRAWING NUMBER
WW-3

General Drainfield Notes:

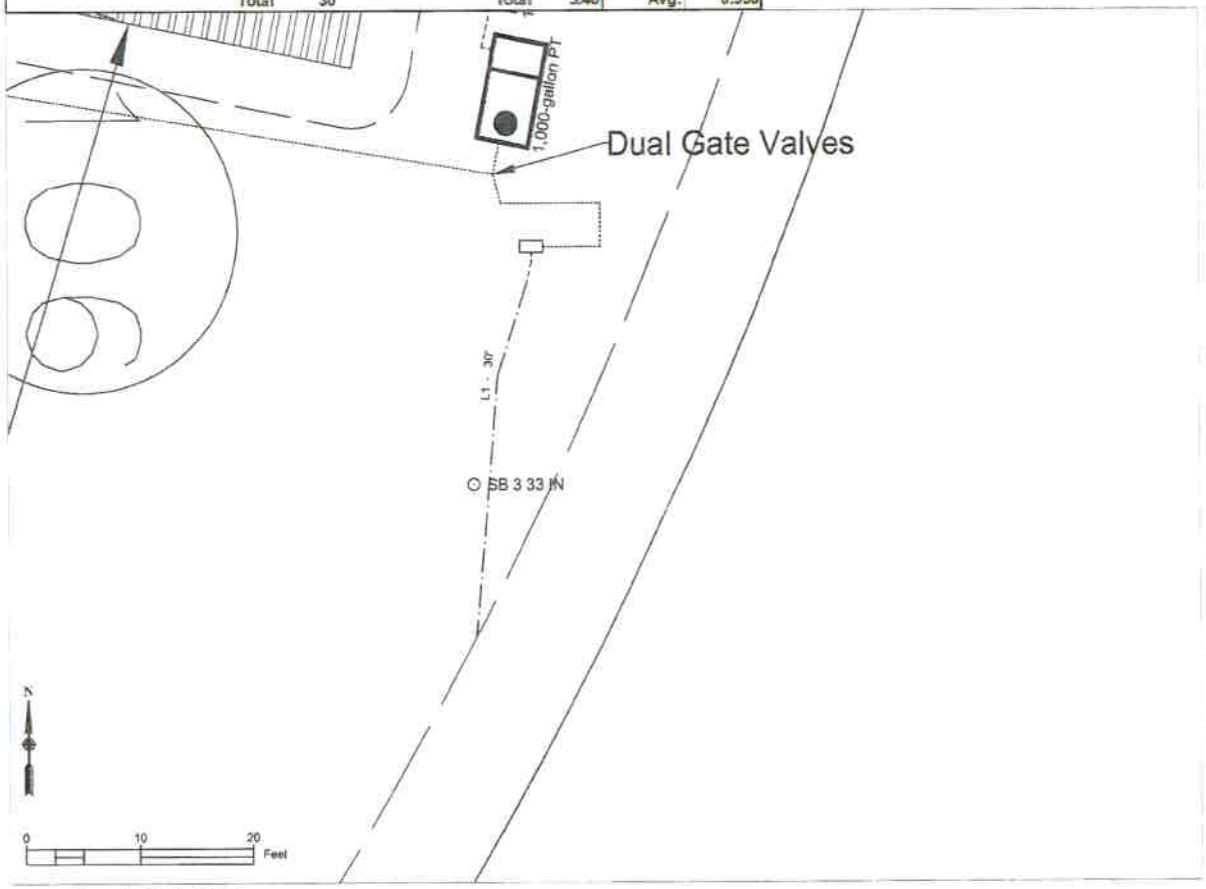
1. Clear all trees less than 8" in diameter (measured at a height 3' from soil surface) from the drainfield.
2. Vegetation that will re-grow from a cut stump shall be stumped or pulled from the ground. Stumps shall not be pushed over.
3. Drainfield area shall be cleared of all leaves, pine straw, debris, etc. The accumulated material shall be removed from the drainfield.
4. In clayey soils, sides of trenches shall be raked and limed per manufacturer's instructions.
5. Supply lines shall be installed with a minimum of 18" cover.
6. The trenches shall be backfilled appropriately so that no low areas are present.
7. Apply lime over the drainfield area as needed. Seed fine fescue over the drainfield at the rate recommended by the seed manufacturer. Hand rake the seed into the soil surface. Straw the seeded area at the rate of 1.5-2 bales per 1000 sq. ft.

Note:
Repair distribution is split pressure manifold utilizing T&J Panel.

DRAINFIELD INFO. - **Repair**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold*** SPLIT
using PPBPS, Horizontal

Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R
1	orange	30.3	1/2in SCH 80	5.48	0.181	0.550
	Total	30	Total	5.48	Avg.	0.550



Repair Drainfield
SOURCE: Agri-Waste Technology, Inc.

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 201
Apex, North Carolina 27502
919-661-0201
www.agriwaste.com

True Homes
Lot 106

Project Location:
Wheatfield Dr
Statesville, NC 28677
Iredell County
PIN: 4703131361.000

Project Owner:
True Homes
3649 Blakeridge Center Dr
Monroe, NC 28110
704-882-2578
dschultz@truehomesusa.com

NO.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Repair Drainfield

DRAWN BY:	CREATED ON:
T. Bostic	02/20/2023
REVISED BY:	REVISED ON:
####	####
RELEASED BY:	RELEASED ON:
####	####

DRAWING NUMBER
WW-4
(A)

General Drainfield Notes:

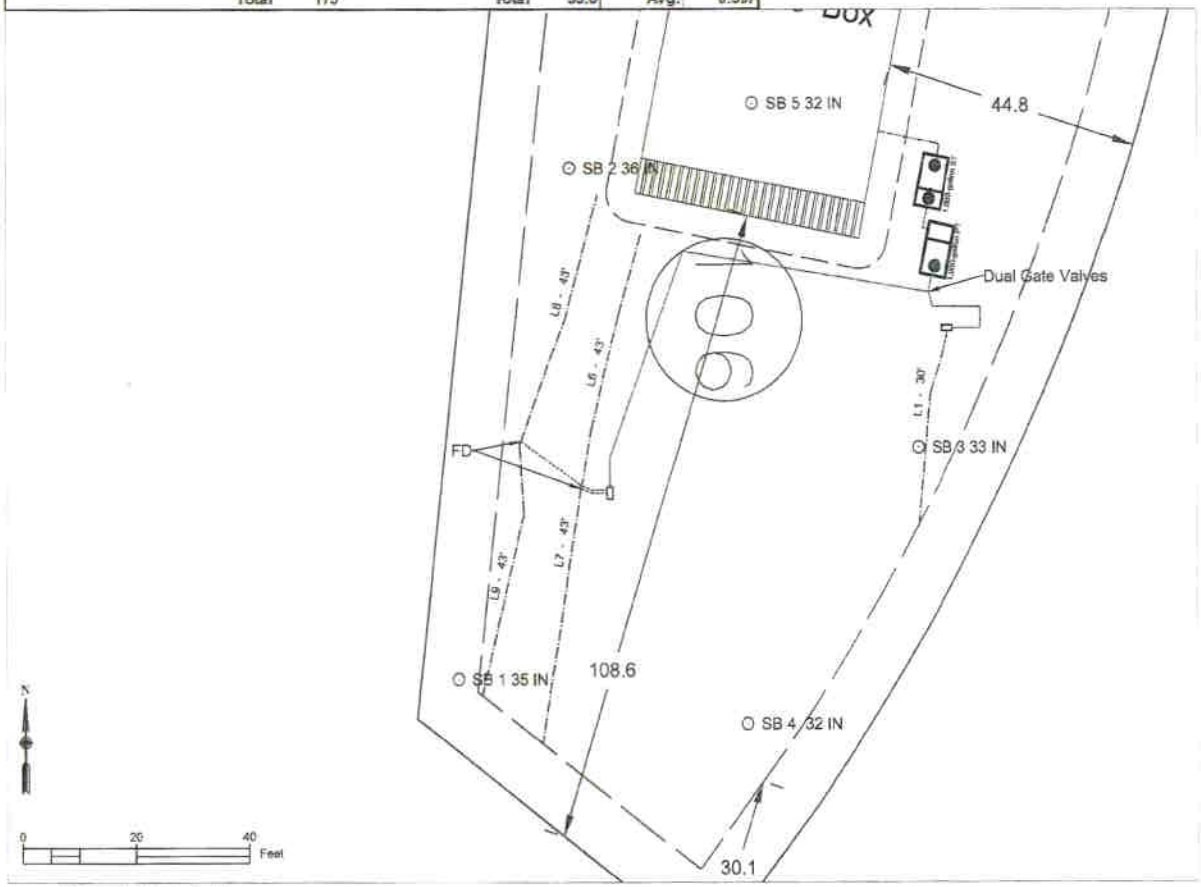
1. Clear all trees less than 8" in diameter (measured at a height 3' from soil surface) from the drainfield.
2. Vegetation that will re-grow from a cut stump shall be stumped or pulled from the ground. Stumps shall not be pushed over.
3. Drainfield area shall be cleared of all leaves, pine straw, debris, etc. The accumulated material shall be removed from the drainfield.
4. In clayey soils, sides of trenches shall be raked and limed per manufacturer's instructions.
5. Supply lines shall be installed with a minimum of 18" cover.
6. The trenches shall be backfilled appropriately so that no low areas are present.
7. Apply lime over the drainfield area as needed. Seed fine fescue over the drainfield at the rate recommended by the seed manufacturer. Hand rake the seed into the soil surface. Straw the seeded area at the rate of 1.5-2 bales per 1000 sq. ft.

DRAINFIELD INFO. - **Repair**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using PPBPS, Horizontal*** SPLIT

Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
6	purple	43.3	1in SCH 80, Split	8.40	0.194	0.597
7	purple	43.3	1in SCH 80, Split	8.40	0.194	0.597
8	red	43.3	1in SCH 80, Split	8.40	0.194	0.597
9	red	43.3	1in SCH 80, Split	8.40	0.194	0.597
	Total	173	Total	33.6	Avg.	0.597

Note:
Repair distribution is split pressure manifold utilizing T&J Panel.



Repair Drainfield

SOURCE: Agri-Waste Technology Inc.

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
701 N. Salem Street, Suite 201
Apex, North Carolina 27502
919-851-0649
www.agriwaste.com

True Homes
Lot 106

Project Location:
Wheatfield Dr
Statesville, NC 28677
Iredell County
PIN: 4761331361.000

Project Owner:
True Homes
2648 Wahsatoga Centre Dr
Monroe, NC 28110
704-865-3578
dsmith@truehomesnc.com

REV. ISSUED DATE DESCRIPTION

SHEET TITLE
Repair Drainfield

DRAWN BY:	CREATED ON:
T. Bostic	02/20/2023
REVISED BY:	REVISED ON:
#####	#####
RELEASED BY:	RELEASED ON:
#####	#####

DRAWING NUMBER
WW-4
(B)

General Drainfield Notes:

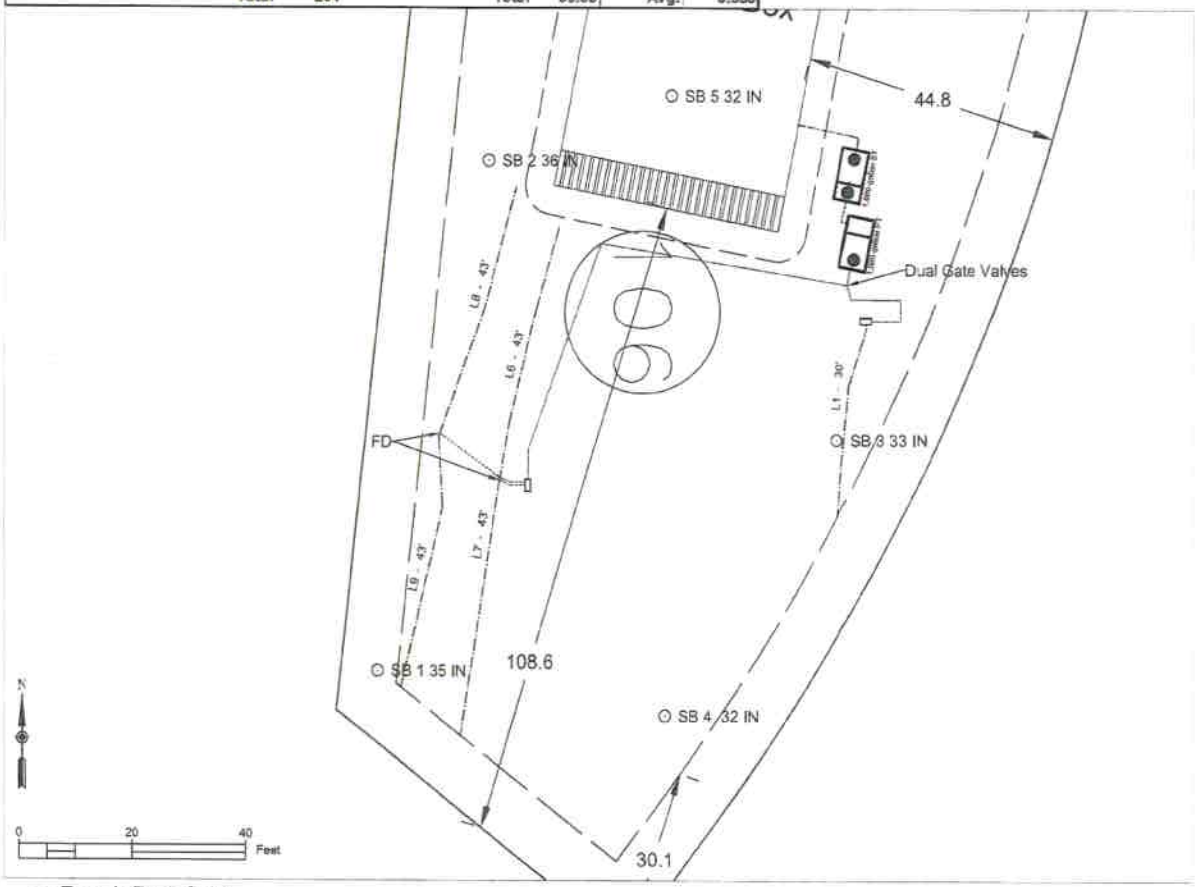
1. Clear all trees less than 8" in diameter (measured at a height 3' from soil surface) from the drainfield.
2. Vegetation that will re-grow from a cut stump shall be stumped or pulled from the ground. Stumps shall not be pushed over.
3. Drainfield area shall be cleared of all leaves, pine straw, debris, etc. The accumulated material shall be removed from the drainfield.
4. In clayey soils, sides of trenches shall be raked and limed per manufacturer's instructions.
5. Supply lines shall be installed with a minimum of 18" cover.
6. The trenches shall be backfilled appropriately so that no low areas are present.
7. Apply lime over the drainfield area as needed. Seed fine fescue over the drainfield at the rate recommended by the seed manufacturer. Hand rake the seed into the soil surface. Straw the seeded area at the rate of 1.5-2 bales per 1000 sq. ft.

DRAINFIELD INFO. - **Repair**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using PPBPS, Horizontal***

Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
1	orange	30.3	1/2in SCH 80	5.48	0.181	0.555
5	purple	43.3	1in SCH 80, Split	8.40	0.194	0.596
7	purple	43.3	1in SCH 80, Split	8.40	0.194	0.596
8	red	43.3	1in SCH 80, Split	8.40	0.194	0.596
9	red	43.3	1in SCH 80, Split	8.40	0.194	0.596
	Total	**204**	**Total**	**39.08**	**Avg.**	**0.588**

Note:
Repair distribution is split pressure manifold utilizing T&J Panel.



Repair Drainfield

SOURCE: Agri-Waste Technology, Inc.

Engineers and Soil Scientists

Agri-Waste Technology, Inc.
501 N. Edison Street, Suite 210
Kinston, North Carolina 28501
919-493-3999
www.agri-waste.com

True Homes
Lot 106

Project Location:
Wheatfield Dr
Statesville, NC 28677
Iredell County
PIN: 4791331941.000

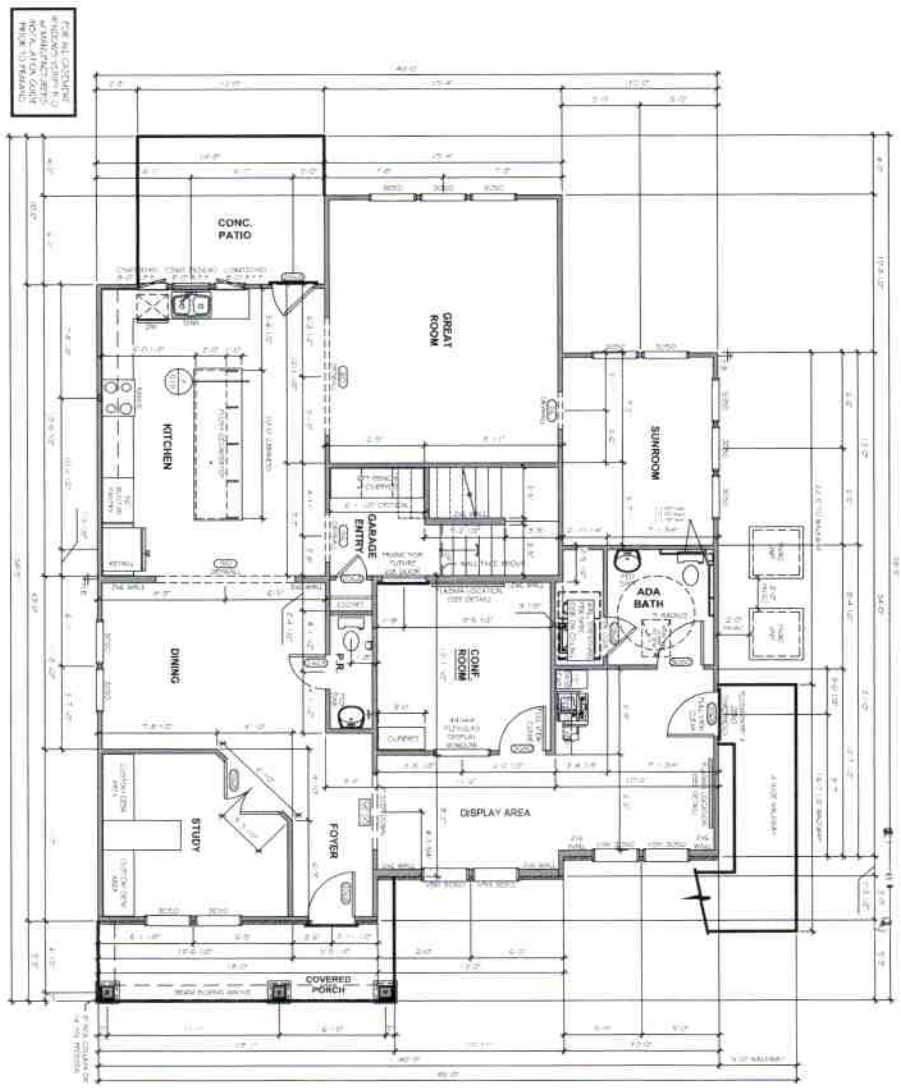
Project Owner:
True Homes
2648 Brewington Centre Dr
Monroe, NC 28110
704-668-3076
mitchell@truehomesusa.com

REV.	ISSUED DATE	DESCRIPTION

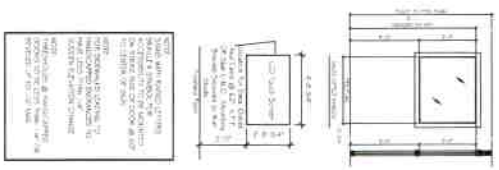
SHEET TITLE
Repair Drainfield

DRAWN BY: T. Bostic	CREATED ON: 02/20/2023
REVISED BY: ####	REVISED ON: ####
RELEASED BY: ####	RELEASED ON: ####

DRAWING NUMBER
WW-4



2313 - FIRST FLOOR PLAN



SHEET	A2.1
PREPARED BY:	SETH
DATE	9-27-22
SCALE	1/8" = 1'-0"
REVIEWED BY:	NICK

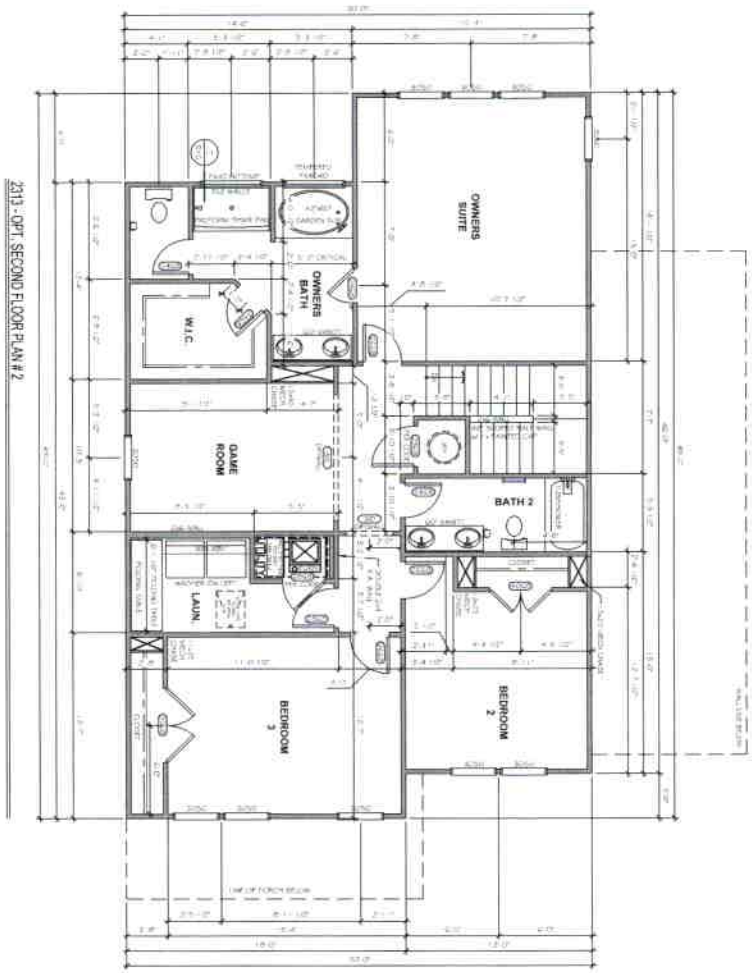
JASPER
2313

IREDELL

WHEATFIELD

LOT# 106

TrueHomes
IT'S ALL ABOUT U
2649 Brekonridge Centre Dr.
Suite 104
Monroe, N.C. 28110
704-271-1191



SHEET A2.2	PREPARED BY: SETH DATE: 9-22-22 SCALE: 1/8" = 1'-0" REVIEWED BY: NICK	JASPER 2313 IREDELL	WHEATFIELD LOT# 106

TrueHomes
IT'S ALL ABOUT U
2649 Brekonridge Centre Dr.
Suite 104
Monroe, N.C. 28110
704-271-1191

PERMIT SNAPSHOT REPORT (OSWP-2023-42745)

1. True Homes did not originally want to record the subdivision plat so the original septic permit for 236 Wheatfield was issued for the entire lot which is 1088 Ostwalt Amity. NOW they need to either record the subdivision plat OR resubmit in the manner of the original permit which is one septic system on the entire parcel. SEE BLDR-2023-32390 and OSWP-2023-21455.	Ronda Hart	12/15/2023 14:58

Invoice No.	Fee		Fee Amount	Amount Paid
INV-00024778	New Pump System AOWE IP/AC - 090123		$480.00	$480.00
		Total for Invoice INV-00024778	$480.00	$480.00
		Grand Total for Permit	**$480.00**	**$480.00**

Workflow Step / Action Name	Action Type	Start Date	End Date
Application Completeness Check v.1		12/12/2023 15:45	12/12/2023 15:46
Confirm application complete v.1	Generic Action		12/12/2023 15:46
~~**Zoning Review v.1**~~			12/18/2023 15:00
~~Floodplain Admin Overview v.1~~	Task		12/18/2023 15:00
~~Fees Paid v.1~~	Generic Action		12/18/2023 15:00
Fees v.1		12/22/2023 9:26	12/22/2023 10:31
Fees Paid v.1	Generic Action		12/22/2023 10:31
Issue Invoice v.1	Generic Action		12/22/2023 9:26
Lot Readiness Verification v.1			
~~OSWP Septic Preliminary Site Visit v.1~~	Inspection		12/22/2023 10:31
	Inspection		
	Generic Action		
	Generic Action		
	Generic Action		
	Create Sub Permit		
	Generic Action		

ICHD - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625

PERMIT # OSWP-2023-24415

SEPTIC: IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM

PIN # 4761-33-1361

PPLICANT / OWNER: True Homes LLC T/A Tribute Homes | APPLICANT ADDRESS: 2649 BRECKONRIDGE CENTRE DR STE 104, MONROE, NC 28110

ITE ADDRESS: 236 WHEATFIELD DR, STATESVILLE, NC 28677 | PHONE: 3364516682 | ALT. PHONE:

ITE DIRECTIONS: | SAP CONTROLLED: YES ☐ NO ☑

UBDIVISION: Wheatfield | SECTION: | LOT #: 106 | LOT AREA: | DESIGN FLOW: 360 | L.T.A.R.: 0.3

eptic Tank: 1000 (gal)	STB:	Date:	☑ New System ☐ Repair ☐ Expansion	System Type: III	☑ Residence	No. Bedrooms: 3	Water Supply: Municipal Water
ump Tank: (gal)	PT:	Date:	System Description: 25% reduction		☐ Business	No. Persons: 6	
ump Make:	Model:	Serial #:	Repair System Description: 50% reduction		☐ Other	No. Employees:	
Nitrification Fields: 1	# Lines: 4	Linear Ft.: 300	Maintenance Agreement Required: ☐ YES ☐ NO		☐ Slab	☑ Crawl Space	
rench Width: 36	Trench Bottom Depth (Low side): 18		Gravel Depth:	☐ GRAVITY ☐ PRESSURE	☐ Basement w/ Plumbing	☐ Basement w/o Plumbing	

omments / Conditions: This permit is issued pursuant to G.S. 130A-335 (a2), (a3), and (a4) using the signed and sealed LSS/LG Evalution attached here.

INITIAL SITE SKETCH

*Pre applicant site not to be subdivided. any changes in site plan will Require a new permit to be issued

AS-BUILT SKETCH

rmit can be suspended or revoked if any false information is supplied toward securing the permit / any unauthorized changes are made to the site / any unauthorized changes are made in the installation of the system. CONTACT A LOCATOR SERVICE PRIOR TO ANY EXCAVATION

] IMPROVEMENT PERMIT with plat valid without expiration. ☑ IMPROVEMENT PERMIT with site plan valid for 60 mos. ☑ AUTHORIZATION TO CONSTRUCT valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.

wner / Applicant Signature: Date: Installed By:

IPROVEMENT PERMIT by: Date: 5/18/2023 OPERATION PERMIT by: Date:

UTHORIZATION TO CONSTRUCT by: Date: 7/24/2023 Existing System Inspected By: Date:

FOR SEPTIC FINAL INSPECTION CALL: 704-664-3703 BETWEEN 8am-9am the day the inspection is needed.

County: Iredell

This Section for Local Health Department Use Only

Initial submittal received: 5-17-2023 (Date) by BB. (Initials)

Permit Number: OSWP-2023-24415

G.S. 130A-335(a4) states the following: *'If a local health department fails to act on an application for an improvement permit submitted pursuant to subsection (a3) of the section within 10 business days of receipt of a complete application, the local health department shall issue the improvement permit.'*

In accordance with G.S. 130A-335(a3) the improvement permit application is:

☐ 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 Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☐ Denied (See attached report.)

Copies of this were sent to the LSS and the Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☑ Complete

State Authorized Agent: Benjamin A Bolin Date of Issuance: 5-18-2023

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2), (a3), and (a4) using the signed and sealed LSS/LG evaluation(s) attached here. The issuance of this permit by the Health Department in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This site is subject to revocation if the site plan, plat, or the intended use changes, or if information submitted in the application was falsified, inaccurate or misleading. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to conditions of this permit. The location and identification of all property lines, easements, water lines, and other appropriate utilities shall be the responsibility of the owner.

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: 5-18-2028

See attached site sketch

County: Iredell

IMPROVEMENT PERMIT FOR G.S. 130A-335(a2)/SL2022-11

PIN/Lot Identifier: 4761331361

Issued To: True Homes

Property Location: Lot 106 Wheatfield Drive, Statesville, NC

Subdivision: Wheatfield Subdivision Lot #: 106 Block: N/A Section: 2

LSS Report Provided: Yes ☑ No ☐

If yes, name and license number of LSS: Jeff Vaughan, 1227

New ☑ Repair ☐ Expansion ☐ System Relocation ☐

Proposed Structure: Single Family Residence

Proposed Wastewater System Type: Gravity 25 % reduction (Initial) 50% Percent Reduction (Repair)

Fill System: ☐ Yes ☑ No If yes, specify: ☐ New ☐ Existing (when adding more than 6 inches of fill to system area please provide a fill plan)

Proposed Design Daily Flow: 360 GPD Proposed LTAR (Initial): 0.3 Proposed LTAR (Repair): 0.3

Design Wastewater Strength: ☑ domestic ☐ high strength ☐ industrial process

Number of bedrooms: 3 Number of Occupants: 6 Other:

Pump Required: ☐ Yes ☑ No ☐ May be required based upon final location and elevations of facilities

Artificial Drainage Required: ☐ Yes ☑ No If yes, please specify details:

Type of Water Supply: ☐ Private well ☐ Public well ☑ Municipal Supply ☐ Spring ☐ Other:

Drainfield location meets requirements of Rule .1945: Yes ☑ No ☐

Drainfield location meets requirements of Rule .1950: 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:

No foundation drain should be permitted for this home.

This plan is based on a proposed PLAT of the subdivision and county GIS has not yet been updated.

Licensed Soil Scientist Print Name: Jeff Vaughan

Licensed Soil Scientist Signature: Jeff V/L Date: 3/10/2023

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

See attached site sketch

County: Iredell

CONSTRUCTION AUTHORIZATION FOR G.S. 130A-335(a2)/SL2022-11

PIN/Lot Identifier: 4761331361

Issued To: True Homes

Property Location: Lot 106 Wheatfield Drive, Statesville, NC

AOWE/PE Plans/Evaluations Provided: Yes ☑ No ☐ If yes, name and license number of AOWE/PE: Jeff Vaughan, 10003E

Facility Type: Single Family Residence

☑ New ☐ Expansion ☐ Repair System Relocation ☐

Basement? ☑ Yes ☐ No Basement Fixtures? ☑ Yes ☐ No

Type of Wastewater System** 25% Reduction (Initial) 50% Reduction (Repair)

Design Daily Flow: 360 GPD Wastewater Strength: ☑ domestic ☐ high strength ☐ industrial process

Session Law 2014-120 Section 53, Engineering Design Utilizing Low-flow Fixtures and Low-flow Technologies? ☐ Yes ☑ No

Installation Requirements/Conditions

Septic Tank Size: 1000 gallons Total Trench/Bed Length: 300 feet Trench/Bed Spacing: 9 feet on center

Drainfield square footage: 900 Trench/Bed Width: 36 inches LTAR: 0.3 gpd/ft²

Soil Cover: 6+ inches Slope Adjusted Maximum Trench/Bed Depth: 18 inches

Aggregate Depth: _____ inches above pipe _____ inches below pipe 12 inches total

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 [.1937(h)]: Yes ☐ No ☑

Easement, Right-of-Way, or Encroachment Agreement Required [.1938(j)]: ☐ Yes ☑ No

Declaration of Restrictive Covenants: ☐ Yes ☑ No

****If applicable:**
I understand the system type specified is different from the type specified on the application. I accept the specifications of this permit.

Owner/Legal Representative Print Name: _____

Owner/Legal Representative Signature: _____ Date: _____

Pre-Construction Conference Required: Yes ☐ No ☑

Conditions: No Foundation drain should be permitted for this home. The property will need to be Properly recorded prior to a CA being issued. The repair system will require 2 inches of fill soil.

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: Jeff Vaughan

AOWE/PE Signature: Jeff Vaughan Date: 3/10/2023

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

See attached site sketch

AGRITEC-01 CGARKALNS

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 1/20/2022

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

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

PRODUCER	CONTACT NAME: Connie Garkalns	
Hartsfield & Nash Agency, Inc. 10405 Ligon Mill Rd., Ste H Wake Forest, NC 27587	PHONE (A/C, No, Ext): (919) 556-3698	FAX (A/C, No): (919) 556-8758
	E-MAIL ADDRESS: Connie@hartsfield-nash.com	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : SELECTIVE INSURANCE COMPANY	39926
INSURED	INSURER B : Accident Fund National Insurance Company	12305
Agri-Waste Technology Inc 501 N. Salem St Ste 203 Apex, NC 27502	INSURER C : Evanston Insurance Company	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	X COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$	2,000,000
	CLAIMS-MADE X OCCUR			S 2253659	1/18/2022	1/18/2023	DAMAGE TO RENTED PREMISES (Ea occurrence)	$	3,000,000
							MED EXP (Any one person)	$	10,000
							PERSONAL & ADV INJURY	$	2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$	4,000,000
	POLICY X PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$	4,000,000
	OTHER:							$	
A	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$	1,000,000
	X ANY AUTO			S 2253659	1/18/2022	1/18/2023	BODILY INJURY (Per person)	$	
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$	
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$	
								$	
A	X UMBRELLA LIAB X OCCUR			S 2253659	1/18/2022	1/18/2023	EACH OCCURRENCE	$	2,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$	2,000,000
	DED RETENTION $							$	
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			100003072	1/18/2022	1/18/2023	X PER STATUTE OTH-ER		
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: N	N/A					E.L. EACH ACCIDENT	$	1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$	1,000,000
							E.L. DISEASE - POLICY LIMIT	$	1,000,000
C	Prof / Pollution			MKLV3ENV102697	8/22/2021	8/22/2022	Per Claim		5,000,000
A	Leased / Rented			S 2253659	1/18/2022	1/18/2023	Equipment		25,000

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

CERTIFICATE HOLDER

***This is ONLY For Informational Purposes
Contact Agency for Specific
Holder info to be added
****

CANCELLATION

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

AUTHORIZED REPRESENTATIVE

Connie Garkalns

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Engineers and Soil Scientists

Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 203
Apex, North Carolina 27502
919-859-0669
www.agriwaste.com





Soil Suitability for Domestic Sewage Treatment and Disposal Systems
Lot 106 Wheatfield Drive, Statesville, NC.
Iredell County PID: 4761331361 (Larger Parcel)

PREPARED FOR: True Homes, Client

PREPARED BY: Jeff Vaughan, Licensed Soil Scientist
Trevor Hackney, Environmental Scientist

DATE: March 10, 2023

Soil suitability for domestic sewage treatment and disposal systems was evaluated from February 1, 2023, for the property located on Wheatfield Drive, Statesville NC. Jeff Vaughan and Trevor Hackney of Agri-Waste Technology, Inc. (AWT) conducted the soil evaluation. This evaluation was done to facilitate permitting for a 3-bedroom home. This report and attached documents were prepared *to this application is to be used to issue an Improvement Permit in accordance with G.S. 130A-335(a2) and (a3). The LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2).*

A drawing of the site plan, septic layout, and boring locations is included in Attachment 1. Profile descriptions for each boring are included in Attachment 2. Additional Documentation is in Attachment 3.

The total property area is approximately 0.5 acres. The property is completely wooded. The home is proposed near the proposed extension of Wheatfield Drive with the septic system proposed behind the home. This proposal is for a serial distribution gravity system with a 25% reduction trench product with a split pressure manifold panel block repair system. This property is proposed based on a preliminary PLAT. In order to obtain the IP and CA for this site, the final PLAT may be required to obtain permits with Iredell County.

Soil Suitability for Domestic Sewage Treatment and Disposal Systems
The drawing in Attachment 1 details the proposed property boundaries (as proposed by Mc2 Engineering), soil boring locations, and layout of drain field trenches (Completed by AWT). Five soil borings were assessed on the property. Soil borings were examined to determine soil suitability for on-site sewage disposal systems in accordance with 15A

18A .1900 Rules for Sewage Treatment and Disposal Systems. These borings were advanced with a hand auger. All soil borings are being utilized for the drain field area. A septic layout was performed to demonstrate available space (.1945). The layout in Attachment 1 indicates there is available space for a three-bedroom primary septic system utilizing a 25% reduction trench product. The repair system will be a horizontal configuration panel block system utilizing a 50% reduction in drain field size.

The proposed LTAR (Long Term Acceptance Rate) by AWT is 0.3 GPD/ft^2. The soils on this property are group IV soils within the distribution and treatment zone as used to define the LTAR. Since usable slope corrected soil depths meet or exceed 30" AWT is recommending the use of 25% reduction trench product for the primary system. With a LTAR of 0.3 GPD/ft^2, 300 linear feet of 25% reduction trench product is necessary to support a three-bedroom home initial system. The maximum trench bottom should not exceed 18". The attached drawing proves that 300 linear feet of trench can be installed for the primary system. The repair field will be a split pressure manifold horizontal panel block style system to utilize the 50% reduction of the trench product. The repair field will require two inches of fill soil when it is installed to maintain the proper soil cap. A total of 200 linear feet of horizontal panel block style trench are required for a 3-bedroom repair system. The attached drawing proves that 204 linear feet of horizontal panels can be installed.

Any disturbances or grading done in the usable area will change the potential of using the area designated for a drain field. Prior to moving forward with building on the property, Iredell County Environmental Health Department should be contacted to complete the necessary review of this documentation to issue an IP (Improvement Permit) for the property and the CA (Construction Authorization).

Conclusions

An IP (Improvement Permit) and CA (Construction Authorization) for this property can be issued with the site plan that is in Attachment 1. A CA permit will be required in order to secure a building permit for the property. The county issues an Operation Permit after the system has been installed to meet the specifications of the Authorization to Construct. Additional septic layouts have been or will be performed as needed. It will be critical to not disturb any of the proposed septic area or there is a risk that the IP and CA will be revoked. *This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2) and (a5).*

We appreciate the opportunity to assist you in this matter. Please contact us with any questions, concerns, or comments.

Sincerely,

Jeff Vaughan

Trevor Hackney

Trevor Hackney

Attachment 1: Site Plan/Drawing

LOT 106

Project Location

Wheatfield Dr
Statesville, NC 28677
Iredell County
PIN: 4761331361.000

Project Owner

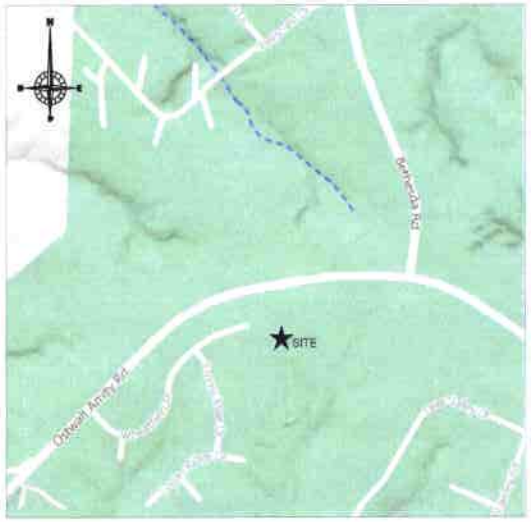
True Homes
2649 Brekonridge Centre Dr
Monroe, NC 28110
704-968-3576
dnichols@truehomesusa.com

Project Consultant

Jeff Vaughan, L.S.S
(919) 367-6313
Trent Bostic
(919) 367-6322
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 203
Apex, NC 27502
(919) 859-0669
(919) 233-1970 Fax

System Overview

Single Family Residence
Three (3) Bedroom, 360 gpd
Gravity Fed with Serial Distribution
Split PM for Repair



VICINITY MAP

Sheet Index

Sheet 1	Cover Sheet
Sheet 2	Property Layout
Sheet 3	Primary Layout
Sheet 4	Repair Layout
Sheet 4 (a)	Split Manifold 1
Sheet 4 (b)	Split Manifold 2
Sheet 5	Detail Sheet 1
Sheet 6	Detail Sheet 2
Sheet 7	Excavation Safety

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 203
Apex, North Carolina 27502
919-859-0669
www.agriwaste.com

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Lot 106

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Wheatfield Dr
Statesville, NC 28677
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PIN: 4761331361.000

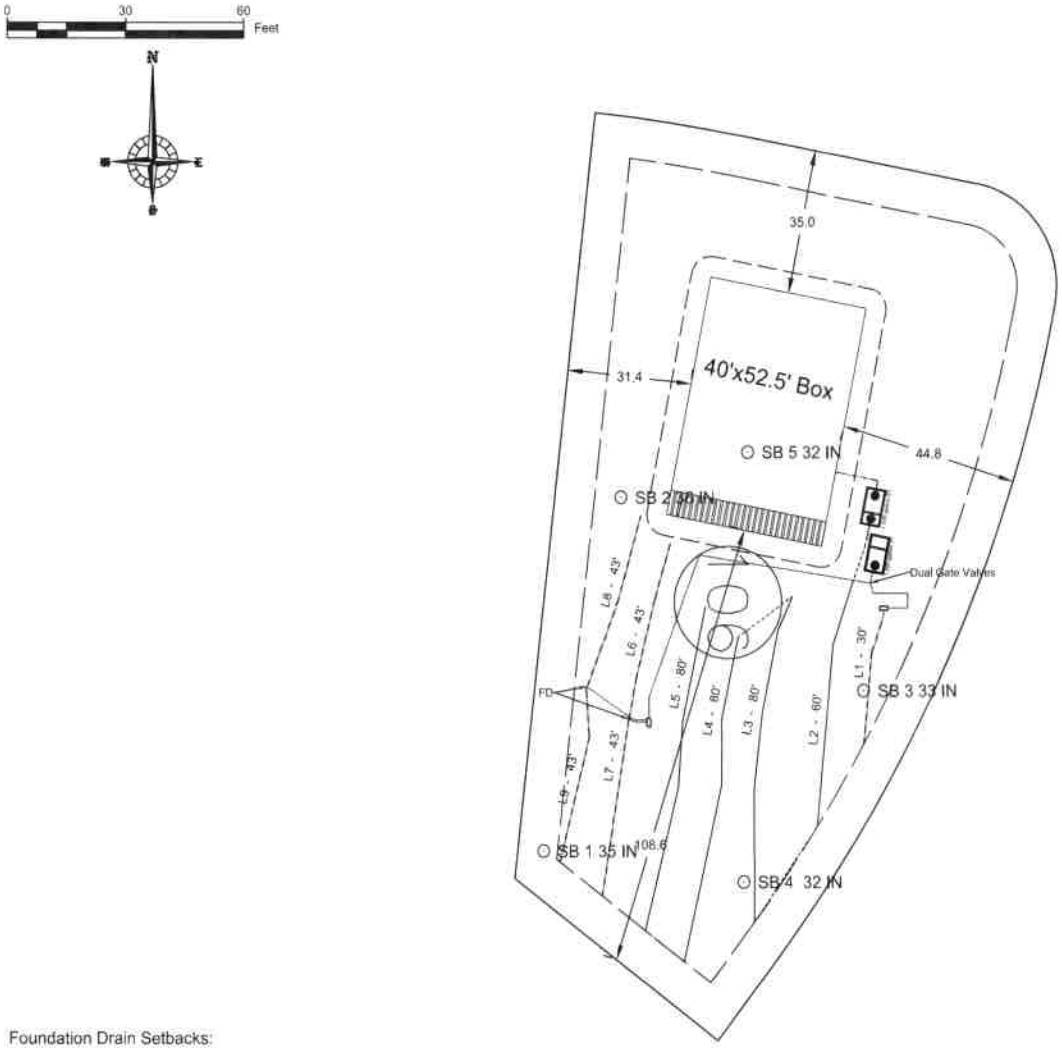
Project Owner
True Homes
2649 Brekonridge Centre Dr
Monroe, NC 28110
704-968-3576
dnichols@truehomesusa.com

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Cover Sheet

DRAWN BY:	CREATED ON:
T. Bostic	02/20/2023
REVISED BY:	REVISED ON:
####	####
RELEASED BY:	RELEASED ON:
####	####

DRAWING NUMBER
WW-1



Foundation Drain Setbacks:
10' Upslope
15' Sideslope
25' Downslope

PROPERTY LAYOUT
SOURCE: AWT, Inc.

AWT
Engineers and Soil Scientists

AgroWaste Technology, Inc.
511 N. Salem Street, Suite 203
Apex, North Carolina 27502
919-858-0909
www.agrowaste.com

True Homes
Lot 106

Project Location:
Wheatfield Dr
Statesville, NC 28677
Iredell County
PIN 4765331361.000

Project Owner:
True Homes
2548 Brekonridge Centre Dr
Monroe, NC 28110
704-668-3578
crachols@truehomesusa.com

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Property Layout

DRAWN BY:	CREATED ON:
T. Bostic	02/20/2023
REVISED BY:	REVISED ON:
####	####
RELEASED BY:	RELEASED ON:
####	####

DRAWING NUMBER
WW-2

General Drainfield Notes:

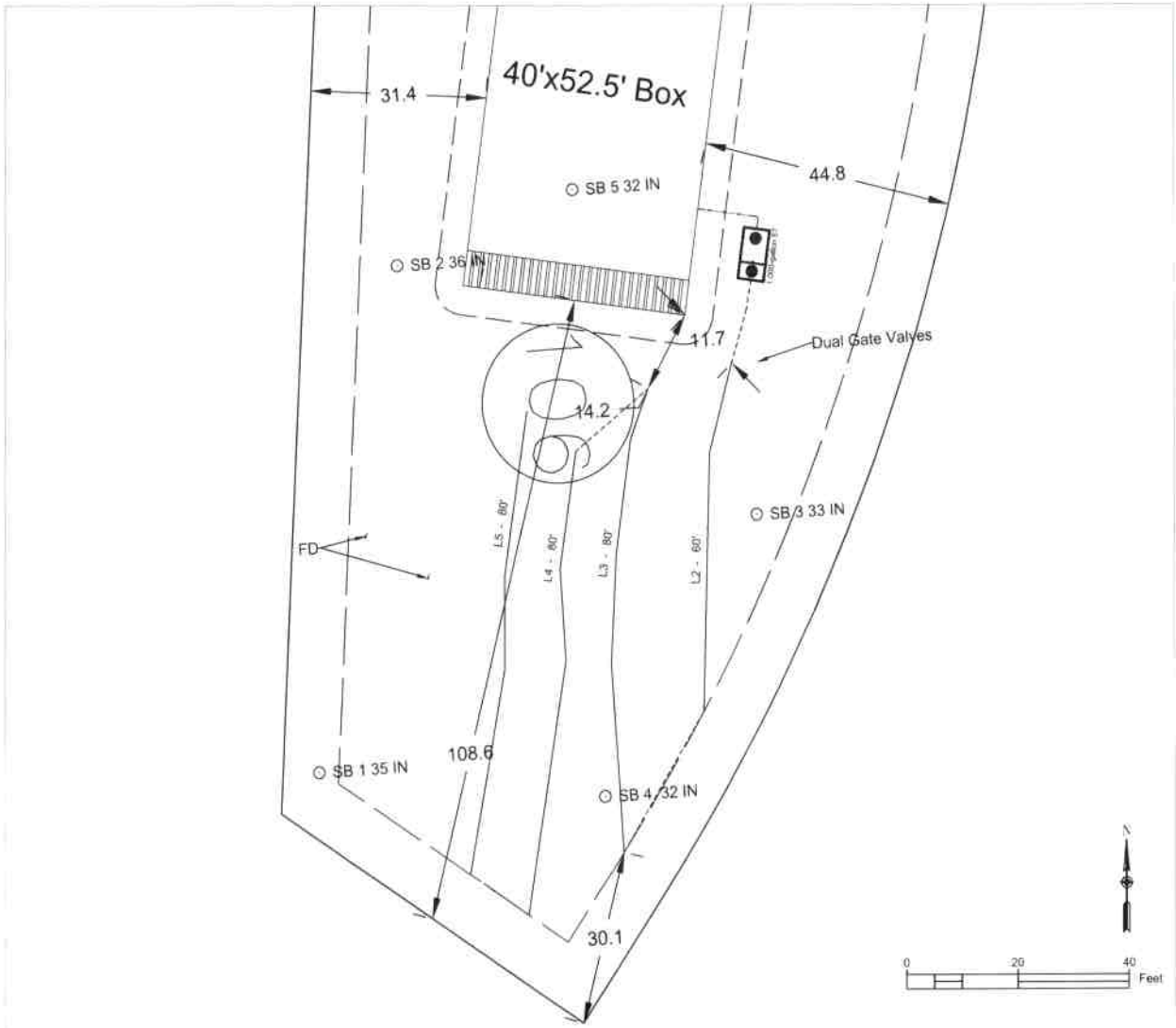
1. Clear all trees less than 8" in diameter (measured at a height 3' from soil surface) from the drainfield.
2. Vegetation that will re-grow from a cut stump shall be stumped or pulled from the ground. Stumps shall not be pushed over.
3. Drainfield area shall be cleared of all leaves, pine straw, debris, etc. The accumulated material shall be removed from the drainfield.
4. In clayey soils, sides of trenches shall be raked and limed per manufacturer's instructions.
5. Supply lines shall be installed with a minimum of 18" cover.
6. The trenches shall be backfilled appropriately so that no low areas are present.
7. Apply lime over the drainfield area as needed. Seed fine fescue over the drainfield at the rate
8. recommended by the seed manufacturer. Hand rake the seed into the soil surface. Straw the seeded area at the rate of 1.5-2 bales per 1000 sq. ft.

Installation Notes:

Contractor to adjust tank placements as necessary to maintain:

1. 5' downslope NO foundation drain
2. Min. 12" cover over Septic Tank (Not to exceed 36")
3. Min. 18" cover over pipes
4. Min. 2% grade on gravity pipe from house to Septic Tank

Note:
Primary distribution is Serial. Primary is Quick4 Plus Standard.



System Layout

SOURCE: Agri-Waste Technology Inc.

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 201
Apex, North Carolina 27502
919-455-0600
www.agriwaste.com

True Homes
Lot 106

Project Location:
Wheatfield Dr
Statesville, NC 28677
Iredell County
PIN 4761331361.000

Project Owner:
True Homes
2645 Breckenridge Centre Dr
Monroe, NC 28110
704-868-3576
drechols@truehomesusa.com

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Primary Layout

DRAWN BY:	CREATED ON:
T. Bostic	02/20/2023
REVISED BY:	REVISED ON:
####	####
RELEASED BY:	RELEASED ON:
####	####

DRAWING NUMBER
WW-3

General Drainfield Notes:

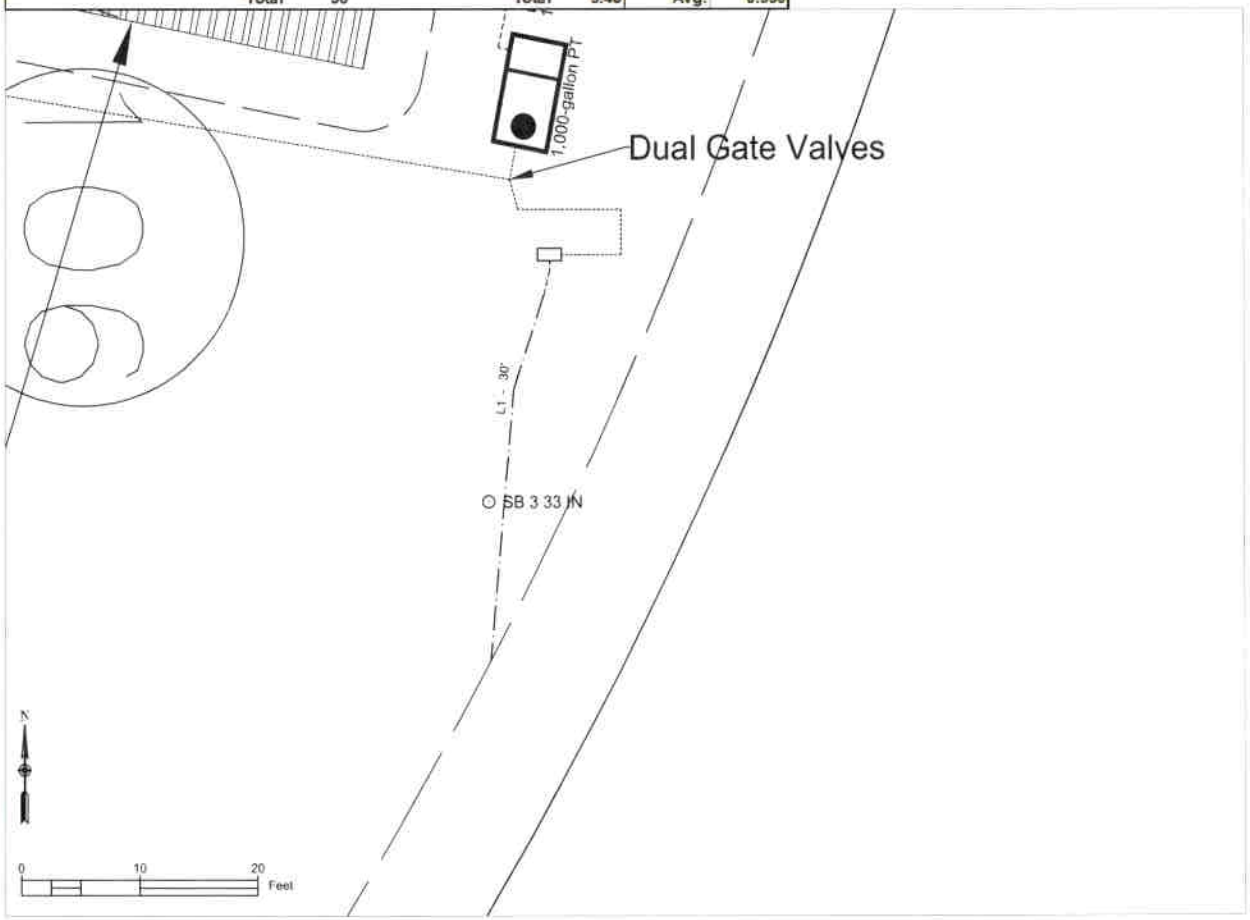
1. Clear all trees less than 8" in diameter (measured at a height 3' from soil surface) from the drainfield.
2. Vegetation that will re-grow from a cut stump shall be stumped or pulled from the ground. Stumps shall not be pushed over.
3. Drainfield area shall be cleared of all leaves, pine straw, debris, etc. The accumulated material shall be removed from the drainfield.
4. In clayey soils, sides of trenches shall be raked and limed per manufacturer's instructions.
5. Supply lines shall be installed with a minimum of 18" cover.
6. The trenches shall be backfilled appropriately so that no low areas are present.
7. Apply lime over the drainfield area as needed. Seed fine fescue over the drainfield at the rate recommended by the seed manufacturer. Hand rake the seed into the soil surface. Straw the seeded area at the rate of 1.5-2 bales per 1000 sq. ft.

Note:
Repair distribution is split pressure manifold utilizing T&J Panel.

DRAINFIELD INFO - **Repair**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using PPBPS, Horizontal*** SPLIT

Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
1	orange	30.3	1/2in SCH 80	5.48	0.181	0.550
	Total	**30**	**Total**	**5.48**	**Avg.**	**0.550**



Repair Drainfield

SOURCE: Agri-Waste Technology Inc.

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 203
Apex, North Carolina 27502
919-859-0909
www.agriwaste.com

True Homes
Lot 106

Project Location:
Wheatfield Dr
Statesville, NC 28677
Iredell County
PIN 4763331361.000

Project Owner:
True Homes
2649 Breakwater Centre Dr
Monroe, NC 28110
704-969-3571
drbostic@truehomesusa.com

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Repair Drainfield

DRAWN BY:	CREATED ON:
T. Bostic	02/20/2023
REVISED BY:	REVISED ON:
####	####
RELEASED BY:	RELEASED ON:
####	####

DRAWING NUMBER
WW-4
(A)

General Drainfield Notes:

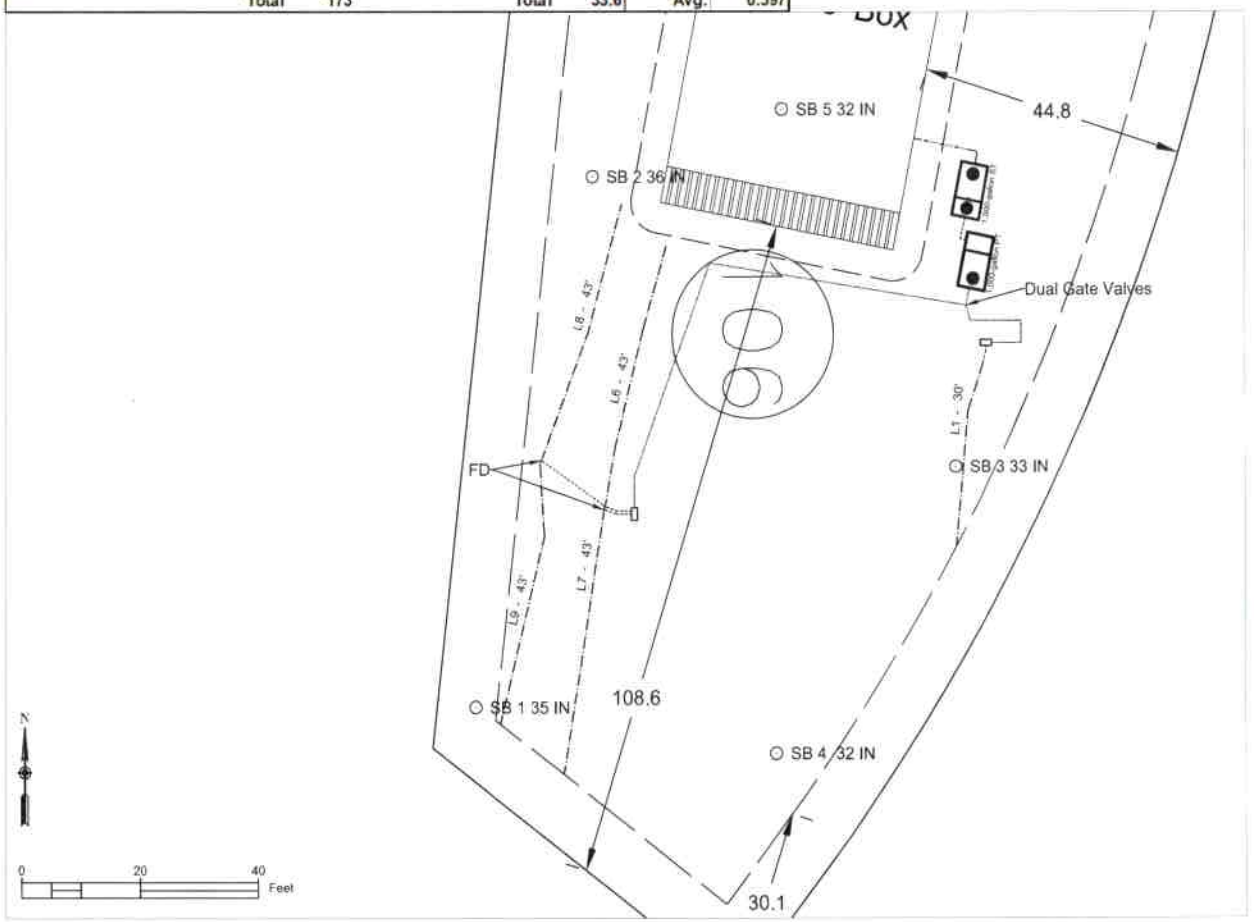
1. Clear all trees less than 8" in diameter (measured at a height 3' from soil surface) from the drainfield.
2. Vegetation that will re-grow from a cut stump shall be stumped or pulled from the ground. Stumps shall not be pushed over.
3. Drainfield area shall be cleared of all leaves, pine straw, debris, etc. The accumulated material shall be removed from the drainfield.
4. In clayey soils, sides of trenches shall be raked and limed per manufacturer's instructions.
5. Supply lines shall be installed with a minimum of 18" cover.
6. The trenches shall be backfilled appropriately so that no low areas are present.
7. Apply lime over the drainfield area as needed. Seed fine fescue over the drainfield at the rate recommended by the seed manufacturer. Hand rake the seed into the soil surface. Straw the seeded area at the rate of 1.5-2 bales per 1000 sq. ft.

DRAINFIELD INFO. - **Repair**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using PPBPS, Horizontal*** SPLIT

Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
6	purple	43.3	1in SCH 80, Split	8.40	0.194	0.597
7	purple	43.3	1in SCH 80, Split	8.40	0.194	0.597
8	red	43.3	1in SCH 80, Split	8.40	0.194	0.597
9	red	43.3	1in SCH 80, Split	8.40	0.194	0.597
	Total	**173**	**Total**	**33.6**	**Avg.**	**0.597**

Note:
Repair distribution is split pressure manifold utilizing T&J Panel.



Repair Drainfield

SOURCE: Agri-Waste Technology, Inc.

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 201
Apex, North Carolina 27502
919-850-0808
www.agriwaste.com

True Homes
Lot 106

Project Location:
Wheatfield Dr
Statesville, NC 28677
Iredell County
PIN: 4761321361.000

Project Owner:
True Homes
2645 Breckenridge Center Dr
Monroe, NC 28110
704-969-3575
dsimcik@truehomesusa.com

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Repair Drainfield

DRAWN BY:	CREATED ON:
T. Bostic	02/20/2023
REVISED BY:	REVISED ON:
####	####
RELEASED BY:	RELEASED ON:
####	####

DRAWING NUMBER
WW-4
(B)

General Drainfield Notes:

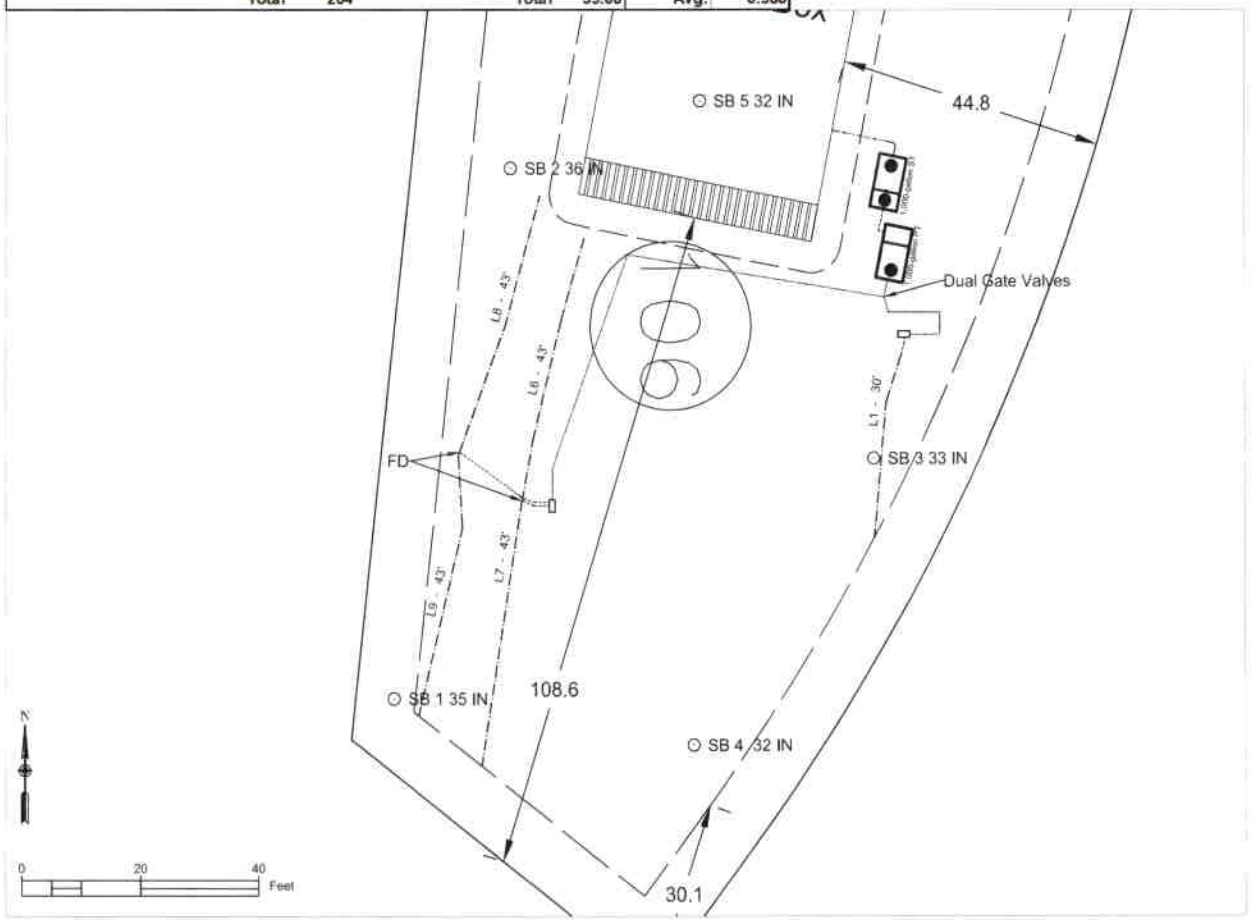
1. Clear all trees less than 8" in diameter (measured at a height 3' from soil surface) from the drainfield.
2. Vegetation that will re-grow from a cut stump shall be stumped or pulled from the ground. Stumps shall not be pushed over.
3. Drainfield area shall be cleared of all leaves, pine straw, debris, etc. The accumulated material shall be removed from the drainfield.
4. In clayey soils, sides of trenches shall be raked and limed per manufacturer's instructions.
5. Supply lines shall be installed with a minimum of 18" cover.
6. The trenches shall be backfilled appropriately so that no low areas are present.
7. Apply lime over the drainfield area as needed. Seed fine fescue over the drainfield at the rate recommended by the seed manufacturer. Hand rake the seed into the soil surface. Straw the seeded area at the rate of 1.5-2 bales per 1000 sq. ft.

DRAINFIELD INFO. - **Repair**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using PPBPS, Horizontal***

Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
1	orange	30.3	1/2in SCH 80	5.48	0.181	0.555
6	purple	43.3	1in SCH 80, Split	8.40	0.194	0.596
7	purple	43.3	1in SCH 80, Split	8.40	0.194	0.596
8	red	43.3	1in SCH 80, Split	8.40	0.194	0.596
9	red	43.3	1in SCH 80, Split	8.40	0.194	0.596
	Total	**204**	**Total**	**39.08**	**Avg.**	**0.588**

Note:
Repair distribution is split pressure manifold utilizing T&J Panel.



Repair Drainfield

SOURCE: Agri-Waste Technology, Inc.

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 203
Apex, North Carolina 27502
919-859-0909
www.agriwaste.com

True Homes
Lot 106

Project Location:
Wheatfield Dr
Statesville, NC 28677
Iredell County
PIN: 4761331361.000

Project Owner:
True Homes
2649 Breckenridge Centre Dr
Monroe, NC 28110
704-865-3578
dracrods@truehomesusa.com

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Repair Drainfield

DRAWN BY:	CREATED ON:
T. Bostic	02/20/2023
REVISED BY:	REVISED ON:
####	####
RELEASED BY:	RELEASED ON:
####	####

DRAWING NUMBER
WW-4

Septic System Design - Summary Page

Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 North Salem Street
Suite 203, Apex, NC 27502

Project: True Homes - Wheatfield
Property: Wheatfield Dr
Statesville, NC 28677
Subdiv.:
Lot #: 106

Date: 3/9/2023
County: Iredell
Permit #:

Project Manager:
Jeff Vaughan, PhD, LSS
jvaughan@agriwaste.com
919-859-0669
Engineer:
Trent Bostic
tbostic@agriwaste.com

Owner: True Homes
Address: 2649 Brekonridge Centre Dr
Monroe, NC 28110
Phone: 704-968-3576
Email: dnichols@truehomesusa.com

EHS:

Type of System: III g
PIN: 4761331361

Soil Parameters

Soil Evaluation By:

Special Conditions/Notes:

LTAR: 0.300 gpd/ft^2

Design Parameters

Type of Establishment: Residence, 5 or fewer bedrooms
Unit: Bedroom
# of Units: 3

Septic Tank Specifications

Min. Tank Capacity: 900 gal
Actual Tank Volume: 1,000 gal
Tank Manufacturer: Shoaf
Tank Model: TS 1000 STB

	Exterior	Interior	
Length:	108.0	102.0	in.
Width:	58.0	52.0	in.
Depth:	67.5	60.5	in.

Primary Drainfield Specifications

Type of Distribution: Serial Continuous
Trench Media: Chambers
Trench Width: 3 ft
Trench Depth: 18 in.
(or as specified on permit)

Trench Bottom Area: 1200 ft^2
Minimum Drain Line: 300 ft
Actual Drain Line: 300 ft
Number of Lines: 4
Minimum Line Spacing: 9 ft O.C.

Wastewater Treatment System Design Calculations

Project: True Homes - Wheatfield
Location: Wheatfield Dr
Statesville, NC 28677
County: Iredell

Septic Tank Sizing

Daily Flow Estimate:

Unit	# of Units	Flow/Unit	Flow/Day
Bedroom	3	120	360
			0
			0
		Q=	360 gpd

Septic Tank Minimum Capacity: Per NCAC T15A:18A .1952(b)(1):

For individual residences with 3 or fewer bedrooms,

Minimum Liquid Capacity (V)= 900 gal

Septic Tank Specs:

Manufacturer:	Shoaf		
Model:	TS 1000 STB		
Volume:	1,000	gal	
Weight:	9,500	lbs	
	Exterior	Interior	
Length:	108.0	102.0	in.
Width:	58.0	52.0	in.
Depth:	67.5	60.5	in.
Shape of Risers:	Circular		
Diameter:	2.00	ft	

Pump Tank Storage & Float Settings

Project: True Homes - Wheatfield
Location: Wheatfield Dr
Statesville, NC 28677
County: Iredell

Tank Manufacturer	Shoaf
Tank Model	TS 1000 PT

Interior Height (in.)	**50.0**	in.
Avg. Storage	**20.16**	gal/in.

Repair System

Elevations, measured from bottom towards top (0 = Interior Bottom of Tank):

Top of pump (including 4" block)	16.8 in.	(Pump height = 12 3/4")
Pump Off	18.0 in.	
Pump On	28.0 in.	(set for dose volume)
Alarm On	32.0 in.	(4 in. above On Float)
Emergency Storage Available		
Pump Tank	363 gal	
Days of Storage	1.01 days	

(determined from "interior top of tank" - "High Water Alarm")

ELEVATIONS

Project: True Homes - Wheatfield
Location: Wheatfield Dr
Statesville, NC 28677
County: Iredell

Benchmark NW Property Corner
BM Elev 0 ft

Septic Tank	1,000 gal		
Ground Surface		6.00	ft
Depth of Soil Cover	16 in.	1.33	ft
Overall Ht of Tank	67.5 in.	5.63	ft
Elev, Base of Tank		-0.96	ft
Ht to 4" Inlet Invert	57 in.	4.75	ft
Elev, 4" Inlet Invert		3.79	ft
Ht to 4" Outlet Invert	55 in.	4.58	ft
Elev, 4" Outlet Invert		3.63	ft
Gravel Base	6 in.	0.50	ft
Elev, Bot of Excavation		-1.46	ft
Pump Tank	1000 gal		
Ground Surface		6.00	ft
Depth of Soil Cover	16 in.	1.33	ft
Overall Ht of Tank	57 in.	4.75	ft
Elev, Base of Tank		-0.08	ft
Ht to 4" Inlet Invert	46 in.	3.83	ft
Elev, 4" Inlet Invert		3.75	ft
Ht to 2" Outlet Invert	58 in.	4.83	ft
Elev, 2" Outlet Invert		4.75	ft
Gravel Base	6 in.	0.50	ft
Elev, Bot of Excavation		-0.58	ft
ST Inlet Pipe			
Grade @ Stub-out		6	ft
Depth of Stub-out, top		1.5	ft
Elev, Stub-out Invert		4.15	ft
Elev @ ST Inlet Invert		3.79	ft
Length		10	ft
Slope		3.5	%
Pipe, ST to PT			
ID	4 in.	0.33	ft
OD	4.5 in.	0.38	ft
Elev, ST Outlet Invert		3.63	ft
Elev, PT Inlet Invert		3.75	ft
Length		4	ft
Slope		-3.1	%
Cover over inlet pipe		1.85	ft
Pump Reqmt.			
Floor Thickness	4 in.	0.33	ft
Elev, Pump Tank Floor		0.25	ft
Pump Block Ht.	4 in.	0.33	ft
Elev, Pump Intake		0.58	ft
Grade @ Repair Manifold		3.50	ft
Min. Cover	18 in.	1.50	ft
Max Elev, Repair		2.00	ft
Elev Diff, Repair		1.42	ft

Drainfield Design

Project	True Homes - Wheatfield
Location	Wheatfield Dr Statesville, NC 28677
County	Iredell

Drainfield Sizing

Primary

LTAR	0.3 gpd/ft^2		
Daily Design Flow	360 gpd	**Type of Drainfield Media**	Chambers
Req. Drainfield Area	1,200 ft^2	**Required Drainline**	
Trench Width, Eff.	3 ft	**After 25% Reduction**	300 ft
Required Drainline	400 ft	**Minimum Line Spacing**	9 ft (O.C.)

Repair

LTAR	0.3 gpd/ft^2		
Daily Design Flow	360 gpd	**Type of Drainfield Media**	PPBPS, Horizontal
Req. Drainfield Area	1,200 ft^2	**Required Drainline**	
Trench Width, Eff.	3 ft	**After 50% Reduction**	200 ft
Required Drainline	400 ft	**Minimum Line Spacing**	9 ft (O.C.)

Drainfield Layout

Line	Use	Flag Color	Elevation (ft)	Line Length (ft)	Used as Primary (ft)	Used as Repair (ft)
1	Layout Line	orange	6.0	40		30.3
2	Layout Line	purple	5.5	80	60.0	.
3	Layout Line	red	5.0	80	80.0	
4	Layout Line	pink	4.5	80	80.0	
5	Layout Line	orange	4.0	80	80.0	
6	Layout Line	purple	3.5	100		43.3
7	Layout Line	purple	3.5	100		43.3
8	Layout Line	red	3.0	100		43.3
9	Layout Line	red	3.0	100		43.3
			Total	760	300	204
			Count	9	4	5

Note: Line length totals are shown to the nearest foot.

For Chambers or Low-profile Chambers:

Effective trench lengths are shown. Add 1' for total installation length.

PRESSURE MANIFOLD SYSTEM DESIGN (Repair)

Site Information

Project: True Homes - Wheatfield
Location: Wheatfield Dr
Statesville, NC 28677
County: Iredell

Design Information

Estimated Daily Flow	360	gal/day
L.T.A.R. (from Iredell Co.)	0.3	gal/day/ft^2
L.T.A.R. + 5%	0.315	gal/day/ft^2
Trench Width	3	ft.
Line Length Required	400	ft.
Length after 50% Reduction	200	ft
L.T.A.R. Reduced	0.600	gal/day/ft^2
L.T.A.R. Reduced + 5%	0.630	gal/day/ft^2

DRAINFIELD INFO. - **Repair**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using PPBPS, Horizontal***

Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
1	orange	30.3	1/2in SCH 80	5.48	0.181	0.555
6	purple	43.3	1in SCH 80, Split	8.40	0.194	0.596
7	purple	43.3	1in SCH 80, Split	8.40	0.194	0.596
8	red	43.3	1in SCH 80, Split	8.40	0.194	0.596
9	red	43.3	1in SCH 80, Split	8.40	0.194	0.596
	Total	**204**	**Total**	**39.08**	**Avg.**	**0.588**

Note: Line lengths are calculated in 4'4" increments to reflect use of PPBPS product.

Total Run Time	9.21	min.	
Drainfield Capacity	338.4	gal	
% of Drainfield Cap	59.6%		(Max. 100.7% to not exceed 7.2 gal/panel)
Dose Volume	201.7	gal/dose	
Run Time/Dose	**5.2**	**minutes**	Time to deliver max. 7.2 gal/panel
Volume/depth	20.16	gal/in.	(Per tank manufacturer's specifications)
Estimated Drawdown	10.00	in.	

Manifold Box

Number of Taps: 5 with 2 Split(s)
Manifold Length: 4.0 ft. (approximate)

PRESSURE MANIFOLD SYSTEM DESIGN (Repair)

Site Information

Project: True Homes - Wheatfield
Location: Wheatfield Dr
Statesville, NC 28677
County: Iredell

Design Information

Estimated Daily Flow	50	gal/day
L.T.A.R. (from Iredell Co.)	0.3	gal/day/ft^2
L.T.A.R. + 5%	0.315	gal/day/ft^2
Trench Width	3	ft.
Line Length Required	56	ft.
Length after 50% Reduction	28	ft
L.T.A.R. Reduced	0.595	gal/day/ft^2
L.T.A.R. Reduced + 5%	0.625	gal/day/ft^2

DRAINFIELD INFO. - **Repair**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using PPBPS, Horizontal*** SPLIT

Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
1	orange	30.3	1/2in SCH 80	5.48	0.181	0.550
	Total	**30**	**Total**	**5.48**	**Avg.**	**0.550**

Note: Line lengths are calculated in 4'4" increments to reflect use of PPBPS product.

Total Run Time	9.12	min.	
Drainfield Capacity	50.4	gal	
% of Drainfield Cap	56.0%		(Max. 108.2% to not exceed 7.2 gal/panel)
Dose Volume	28.2	gal/dose	
Run Time/Dose	**5.2**	**minutes**	Time to deliver max. 7.2 gal/panel
Volume/depth	20.16	gal/in.	(Per tank manufacturer's specifications)
Estimated Drawdown	1.40	in.	

Manifold Box

Number of Taps: 1 with 0 Split(s)
Manifold Length: 2.0 ft. (approximate)

PRESSURE MANIFOLD SYSTEM DESIGN (Repair)

Site Information

Project: True Homes - Wheatfield
Location: Wheatfield Dr
Statesville, NC 28677
County: Iredell

Design Information

Estimated Daily Flow	310	gal/day
L.T.A.R. (from Iredell Co.)	0.3	gal/day/ft^2
L.T.A.R. + 5%	0.315	gal/day/ft^2
Trench Width	3	ft.
Line Length Required	344	ft.
Length after 50% Reduction	172	ft
L.T.A.R. Reduced	0.601	gal/day/ft^2
L.T.A.R. Reduced + 5%	0.631	gal/day/ft^2

DRAINFIELD INFO. - **Repair**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using PPBPS, Horizontal*** SPLIT

Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
6	purple	43.3	1in SCH 80, Split	8.40	0.194	0.597
7	purple	43.3	1in SCH 80, Split	8.40	0.194	0.597
8	red	43.3	1in SCH 80, Split	8.40	0.194	0.597
9	red	43.3	1in SCH 80, Split	8.40	0.194	0.597
	Total	**173**	**Total**	**33.6**	**Avg.**	**0.597**

Note: Line lengths are calculated in 4'4" increments to reflect use of PPBPS product.

Total Run Time	9.23	min.	
Drainfield Capacity	288.0	gal	
% of Drainfield Cap	60.2%		(Max. 100.7% to not exceed 7.2 gal/panel)
Dose Volume	173.4	gal/dose	
Run Time/Dose	**5.2**	**minutes**	Time to deliver max. 7.2 gal/panel
Volume/depth	20.16	gal/in.	(Per tank manufacturer's specifications)
Estimated Drawdown	8.60	in.	

Manifold Box

Number of Taps: 2 with 2 Split(s)
Manifold Length: 2.5 ft. (approximate)

PUMP DESIGN

System (initial/repair): **Repair**

Project: True Homes - Wheatfield
Location: Wheatfield Dr
Statesville, NC 28677
County: Iredell

Friction Losses

Suction Head	0 ft		*(submersible 0)*
Elev. Difference (highest point from pump)	1.42 ft		
Design Pressure At Outlet	2 ft		

Supply Line - 2" Schedule 40 PVC

Pipe Diameter, Nominal	2 in.		
Pipe Diameter (ID)	2.047 in.	Flow	39.08 gpm
Pipe Length	90 ft	Velocity	3.81 ft/s
Pipe Length for Fittings	9 ft		Meets requirement that 2 ft/s < v < 5 ft/s.
Equivalent Length	99 ft		
Estimated Friction Loss in Supply Line	2.64 ft		
Friction Loss - Taps/Special Fittings	3.5 ft		
TOTAL	**9.55 ft.**		

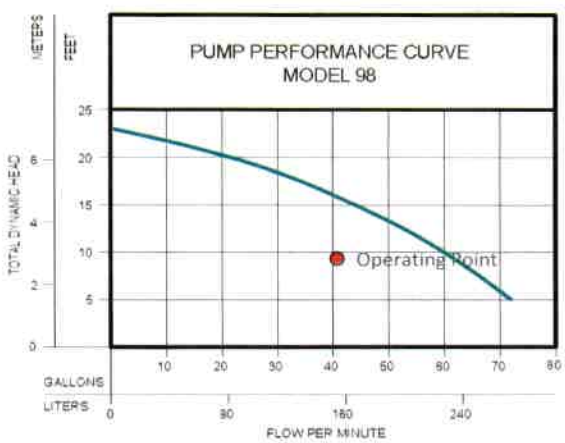
Flow for Anti-Siphon Hole

Hole Diameter	3/16 in.
Hole Flowrate	1.28 gpm

Pump Efficiency	0.7	*(assumed, typical)*
Motor Efficiency	0.9	*(assumed for electric pumps)*
Flow	**40.36 gpm**	
Required Horsepower	0.15 hp	
TDH	**9.55 ft.**	

Pump Selection

Manufacturer:	Zoeller
Model:	N137
Horsepower:	**0.5**



Septic Tank Buoyancy Calculation

Project: True Homes - Wheatfield
Location: Wheatfield Dr
Statesville, NC 28677
County: Iredell

Tank Size (nominal) 1000 gal

Properties/Assumptions:

Min. liquid level to be maintained in tank at all times after initial installation.

Min. depth to water table	24.0	in.	from ground surface
Effluent Density	62.4	lb/ft^3	(Specific Weight of Water)
Concrete Density	142.6	lb/ft^3	
Soil App. Sp. Grav.	1.3		*(typical value)*
Soil Cover Over Tank	12	in.	(minimum)
Additional Cover	4	in.	for pipe grade
Unsubmerged wt of soil	81.1	lb/ft^3	
Submerged wt of soil	49.9	lb/ft^3	50% Porosity Assumed

Tank Dimensions (from supplier):

		Exterior		*Interior*		
		Top	Bottom	Top	Bottom	
Tank	Length	108.0	104.0	102.0	98.0	in.
	Width	58.0	54.0	52.0	48.0	in.
	Height	64.5	(w/o lid)	60.5		in.
Lid	Length	108.0	in.			
	Width	58.0	in.			
	Height	3.0	in.			

Area of Riser Openings 6.28 ft^2

Permanent Liquid Depth in Tank 0.0 in. 0.00 ft

Tank Weight 9,500 lb (per manufacturer)

Buoyancy Force Calculation:

Buoyancy Force Specific Weight of Water x Displaced Volume

Displaced Volume	203.6	ft^3 *
Buoyancy Force	**12,703**	**lb.**

Weight Calculation:

Tank Weight	9500	lb		
Water Weight in Tank	0	lb	Volume	0.0 ft^3 *
Soil Weight Over Tank	4025	lb		
Soil Friction Force	4227	lb		
Total Weight	**17,752**	**lb**		

Factor of Safety = 1.40

Note: Total weight must be greater than buoyancy force so that tank will not float during high water table conditions.

** Volume calculated by the prismoidal formula.*

Pump Tank Buoyancy Calculation

Project: True Homes - Wheatfield
Location: Wheatfield Dr
Statesville, NC 28677
County: Iredell

Tank Size (nominal) 1000 gal

Properties/Assumptions:

Min. liquid level to be maintained in tank at all times after initial installation.

Min. depth to water table	24	in.	from ground surface
Effluent Density	62.4	lb/ft^3	(Specific Weight of Water)
Concrete Density	142.6	lb/ft^3	
Soil App. Sp. Grav.	1.3		*(typical value)*
Soil Cover Over Tank	12	in.	(minimum)
Additional Cover	4	in.	for pipe grade
Unsubmerged wt of soil	81.1	lb/ft^3	
Submerged wt of soil	49.9	lb/ft^3	50% porosity assumed

Tank Dimensions (from supplier):

		Exterior		*Interior*		
		Top	Bottom	Top	Bottom	
Tank	Length	96.0	92.0	90.0	86.0	in.
	Width	62.0	56.0	56.0	50.0	in.
	Height	54.0	(w/o lid)	50.0		in.
Lid	Length	96.0	in.			
	Width	62.0	in.			
	Height	3.0	in.			

Area of Riser Openings 3.14 ft^2

Permanent Liquid Depth in Tank 0.0 in. 0.00 ft

Tank Weight 8000 lb (per manufacturer)

Buoyancy Force Calculation:

Buoyancy Force Specific Weight of Water x Displaced Volume

Displaced Volume	156.3	ft^3 *
Buoyancy Force	**9,751**	**lb**

Weight Calculation:

Tank Weight	8000 lb		
Water Weight in Tank	0 lb	Volume	0.0 ft^3 *
Soil Weight Over Tank	4131 lb		
Soil Friction Force	2869 lb		
Total Weight	**15,000 lb**		

Factor of Safety = 1.54

Note: Total weight must be greater than buoyancy force so that tank will not float during high water table conditions.
** Volume calculated by the prismoidal formula.*

Attachment 2: Soil Boring Description Sheets

501 N Salem St, Suite 201
Apex, NC 27502

Engineers and Soil Scientists
Agri-Waste Technology, Inc.

919-859-0669
www.agriwaste.com

SOIL/SITE EVALUATION
***for* ON-SITE WASTEWATER SYSTEM**

OWNER: True Homes
ADDRESS: Wheatfield Dr. Statesville, NC 28677
PROPERTY ID: 4761331361.000 COUNTY: Iredell
PROPOSED FACILITY: Single Family Residence PROPOSED DESIGN FLOW (.1949): 360 GPD
LOCATION OF SITE: Proposed Lot 106 of Wheatfield Subdivision

APPLICATION DATE
DATE EVALUATED: 02/01/2023
PROPERTY RECORDED:
PROPERTY SIZE: ~0.5 ac

WATER SUPPLY: ☐ Private ☑ Public ☐ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☑ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
1	5%	0-10	SCL; GR	SS; SP; FR	-	35"	-	SAP	0.3 GPD/Ft²
		10-35	C; SBK	SS; SP; FI					
		35+	CL; MA	SS; SP; FR					
2	5%	0-8	SCL; GR	SS; SP; FR	-	36"	-	-	0.3 GPD/Ft²
		8-36+	C; SBK	SS; SP; FI					
3	6%	0-10	SCL; GR	SS; SP; FR	-	33"	-	SAP	0.3 GPD/Ft²
		10-33	C; SBK	SS; SP; FI					
		33+	CL; MA	SS; SP; FR					
4	5%	0-8	SCL; GR	SS; SP; FR	-	32"	-	SAP	0.3 GPD/Ft²
		8-32	C; SBK	SS; SP; FI					
		32+	CL; MA	SS; SP; FR					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	Provisionally Suitable	Provisionally Suitable
System Type(s)	25% Reduction	50% Reduction
Site LTAR	0.3 GPD/Ft²	0.3 GPD/Ft²

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):

EVALUATED BY: Trevor Hackney
OTHER(S) PRESENT: Nathan Estevez

501 N Salem St, Suite 201
Apex, NC 27502

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.

919-859-0669
www.agriwaste.com

SOIL/SITE EVALUATION

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
5	5%	0-8	SCL; GR	SS; SP; FR	-	32"	-	SAP	0.3 GPD/Ft^2
		8-32	C; SBK	SS; SP; FI					
		32+	CL; MA	SS; SP; FR					

COMMENTS: _____

Attachment 3: Additional Documentation

WHEATFIELD SUBDIVISION
PHASE 1 - SECTION 2

OSTWALT-AMITY ROAD

IREDELL COUNTY, NC - CHAMBERSBURG TOWNSHIP



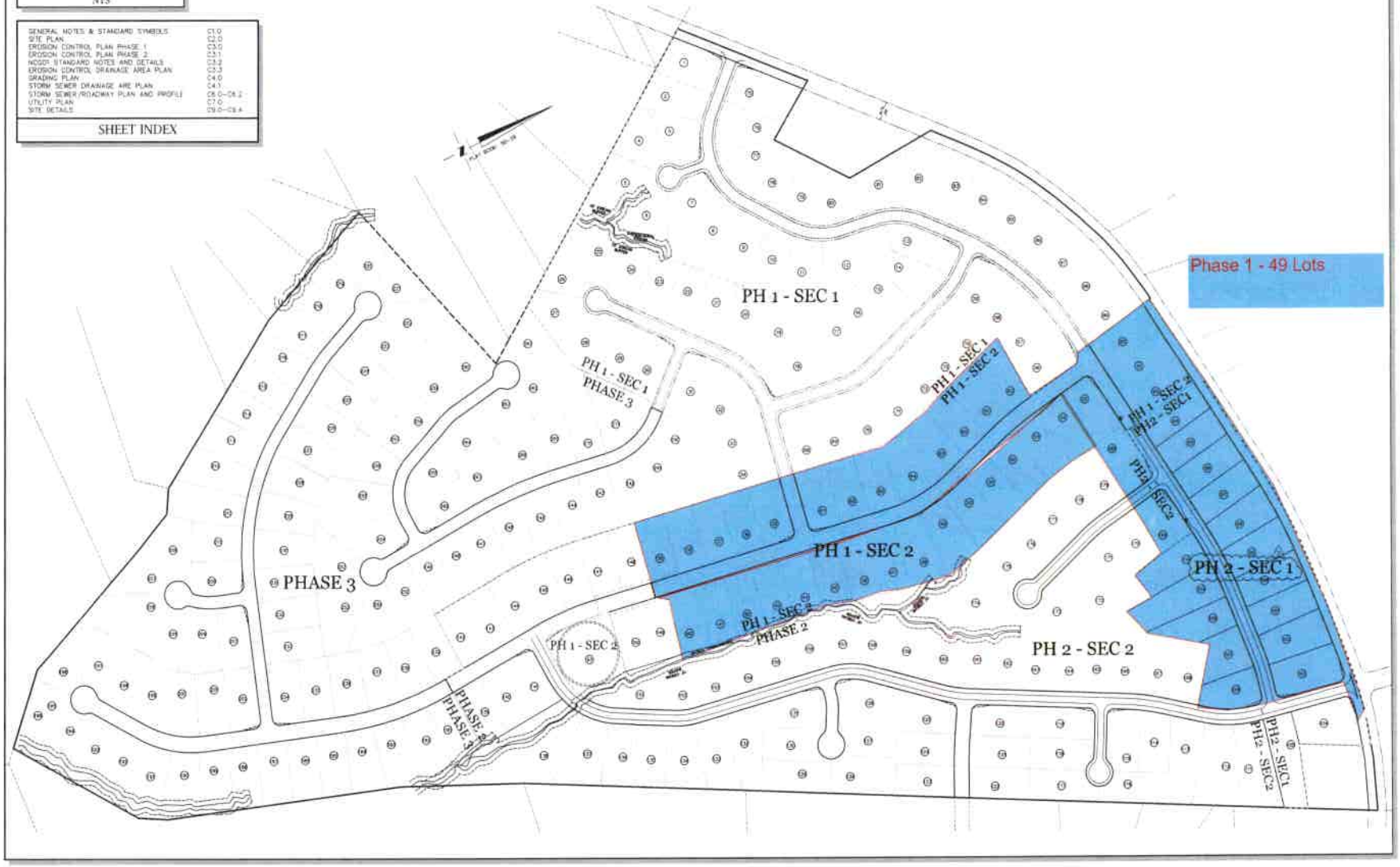
LOCATION MAP
NTS

GENERAL NOTES & STANDARD SYMBOLS	C1.0
SITE PLAN	C2.0
EROSION CONTROL PLAN PHASE 1	C3.0
EROSION CONTROL PLAN PHASE 2	C3.1
NCDOT STANDARD NOTES AND DETAILS	C3.2
EROSION CONTROL DRAINAGE AREA PLAN	C3.3
GRADING PLAN	C4.0
STORM SEWER DRAINAGE ARE PLAN	C4.1
STORM SEWER /ROADWAY PLAN AND PROFILE	C5.0—C5.2
UTILITY PLAN	C7.0
SITE DETAILS	C9.0—C9.4

SHEET INDEX

GRAPHIC SCALE

811 Know what's below. Call before you dig.



MC² ENGINEERING
211 North Kingshighway, Suite 400
Charlotte, NC 28262
Phone 704.910.9792

4/19/22

WHEATFIELD SUB PH1 - SEC2
OSTWALT-AMITY ROAD
IREDELL COUNTY, NC - CHAMBERSBURG TWP

MJ SILMSER CORP
PO BOX 428
KING, NC 27021

REVISIONS

2	4/29/22	REVISED PHASING

CAD FILE:	21-030 BASE.DWG
PROJECT NO.	21-030
DESIGNED BY:	JDM
REVIEWED BY:	JDM
DATE:	DECEMBER 13, 2021

COVER