Lot 48 - Ridgecrest
174 Four Andrews Drive

Pin#: 4778693608

State of NC LSS Permit Option COVID-19

317315

LHD Reference: _____

PART 3: **Authorization to Operate (ATO)**

Except for date received, the Section below is to be completed by the Owner.

LHD USE ONLY: Initial submittal of request for ATO received: 12/12/2022 by BB
NA *Date* *Initials*
Date of Post-construction Conference: _____

The following items are included in this submittal for an Authorization to Operate under an LSS COVID-19 permit:

1. Signed and sealed copy of the LSS's report that includes:
   a. Signed and sealed evaluation of soil conditions and site features ☒ Yes ☐ No
   b. Drawings, specifications, plans ☒ Yes ☐ No
   c. Reports on special inspections and final inspection ☒ Yes ☐ No
   d. Management Program manual ☒ Yes ☐ No
   e. On-site Wastewater Contractor's signed statement ☒ Yes ☐ No
2. Fee (as applicable) ☒ Yes ☐ No
3. Notarized letter documenting Owner's acceptance of the system from the LSS ☒ Yes ☐ No
4. On-site Wastewater Contractor name: Dewey Grant License number: 2607
   Mailing address: 214 S. Main Street City: Maiden State: NC Zip: 28650
   Telephone number: 828-291-0569 E-mail Address: dewey@maidengrading.com
5. Proof of Errors and Omissions or other appropriate liability insurance for the On-site Wastewater Contractor is attached and includes the name of the insurer, name of the insured, and the effective dates of coverage.
   ☒ Yes ☐ No

Attestation by the Owner for Authorization to Operate

I, Century Complete hereby attest that all items indicated above have been provided to the
Print name of Owner
Iredell County LHD and the system shall meet applicable federal, State, and local laws, regulations, rules and ordinances.

Glenn Bird (Dec 4, 2022 12:41 EST) Dec 4, 2022
Signature of Owner *Date*

This section for LHD Use Only.

LHD Review of required information for the ATO

☐ INCOMPLETE
Based upon review of information submitted by the Owner in the Section above, the following items are missing from the information required for an Authorization to Operate for an LSS COVID-19 permit: _____

Copies of this signed form were sent to the LSS and the Owner on _____ *Date* via _____ *Email, FAX, USPS, Hand-delivered*.

Print name of authorized Agent of the LHD *Signature of authorized Agent of the LHD* *Date*

☒ COMPLETE
Based upon review of information submitted by the Owner in the Section above, this Authorization to Operate is hereby issued in accordance with G.S. 130A-336.2(m).

A copy of this complete NOI/ATO with tracking information was sent to the State on 12/16/22 *Date* via email *Email, FAX, USPS, Hand-delivered*.

Benjamin A. Botkins — *Print name of authorized Agent of the LHD*
Benjamin A Botkins — *Signature of authorized Agent of the LHD*
12/16/22 — *Date*

ISSUANCE OF CERTIFICATE OF OCCUPANCY: Once the LHD determines completeness based upon the ATO submission, the owner may apply to the local permitting agency for permanent electrical service to a residence, place of business or place of public assembly pursuant to G.S. 130A-339.

Century Complete
9325 Center Lake Dr., Suite 160
Charlotte, NC 28216

Subject: Septic System Installation
Rock Gate – Lot 48
Harmony, NC 28634

The septic systems installed on the above-referenced property was specified by Larry Thompson, LSS, and installed by Dewey Grant – Maiden Grading and Septic Tank.

Century complete does hereby accept the septic system installed by Dewey Grant on Lot 48 – Rock Gate.

12-5-22

Century Complete (signature) Date

NORTH CAROLINA NOTARY ACKNOWLEDGMENT

THE STATE OF NORTH CAROLINA

COUNTY OF Union

I, Glenn R Bird, Notary Public, do hereby certify that Kaye Dyess (name of individual(s) whose acknowledgment is being taken) personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal this 5 day of December 2022

Notary Public Signature

Print Glenn R Bird

My commission expires: August 23, 2027

(Official Seal)

GLENN R BIRD
NOTARY PUBLIC
Union County
North Carolina
My Commission Expires August 23, 2027

December 3, 2022

RE: Septic System Installation
Rock Gate – Lot 48
Harmony, NC 28634

The purpose of this letter is to confirm that the septic system installation for Rock Gate – Lot 48 was installed in general accordance with the proposal submitted to your office by Larry Thompson, LSS.

Sincerely,

Dewey L Grant (Dec 5, 2022 08:37 EST)
Dewey Grant
Maiden Grading and Septic Tank

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 09/01/2022

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: Lisa Lynch Davis	
Mauney Insurance Agency, Inc 1205 E Main Street Maiden NC 28650	PHONE (A/C, No, Ext): (828)428-8231	FAX (A/C, No): (828)428-8237
	E-MAIL ADDRESS: ldavis@mauneyinsurance.com	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : Erie Insurance Exchange	26271
INSURED Maiden Grading and Septic Tank 214 S Main Ave Maiden NC 28650	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

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

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY PRO-JECT LOC OTHER:			Q30-0621570	06/06/2022	06/06/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1000000 $ 1000000 $ 5000 $ 1000000 $ 2000000 $ 2000000
A	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			Q06-0530679	06/05/2022	06/05/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
	UMBRELLA LIAB OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N: Y If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		Q91-5900316	07/09/2022	07/09/2023	PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $1,000,000 $ $1,000,000 $ $1,000,000

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

CERTIFICATE HOLDER

Thompson Enviromental Consulting, Inc
Post Office Box 541
Midland NC 28107

Fax: Email: larry@thompsonenv.com

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

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THOMPSON ENVIRONMENTAL CONSULTING, INC.
WATER ♦ WASTEWATER ♦ WETLANDS

December 3, 2022

RE: Septic System Installation
Rock Gate – Lot 48
Harmony, NC 28634

The purpose of this letter is to confirm that the septic system installation for Rock Gate – Lot 48, Harmony, NC 28634 was installed in general accordance with the proposal submitted to your office. This system has been inspected for the LSS COVID-19 permit closeout process.

Sincerely,

Larry B. Thompson, Jr.

PO BOX 541 • MIDLAND, NC • 28107
PHONE: 704-301-4881 • EMAIL: LARRY@THOMPSONENV.COM
WEB: WWW.THOMPSONENV.COM

Residential Subsurface Wastewater Treatment and Disposal System COVID-19 Proposal

for

Lot 48 – Rock Gate
174 Four Andrews Drive, Harmony
Iredell County, NC

Tax Parcel # 4778693608
February 25, 2022

Prepared for:

Glenn Bird
Century Complete
9325 Center Lake Dr., Suite 160
Charlotte, NC 28216
1-833-791-0192

Prepared by:

Michael G. Wood, LSS
Thompson Environmental Consulting, Inc.
PO Box 541
Midland, NC 28107-0541
Phone: 704-301-4881
larry@thompsonenv.com



The LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2020-97 Section 3.19.

Details

Century Complete has contracted with Thompson Environmental Consulting, Inc. (TEC) to prepare a septic proposal for the 3-bedroom single family residence on Lot 48 – Rock Gate Estates located at 174 Four Andrews Drive, Iredell County, Harmony, North Carolina.

Based upon a soils investigation performed by TEC, it has been determined that a sufficient amount of "Suitable" Group IV soils is available for the installation of **Pressure Manifold to Gravity Horizontal Prefabricated Permeable Block Panel System (H-PPBPS)** with a 50% reduction for the initial and repair system at a 0.30 GPD/ft. sq. long term acceptance rate (LTAR). The property is served by a municipal water supply.

The enclosed Licensed Soil Scientist Evaluation is being submitted pursuant to and meets the requirements of SL 2020-97 Section 3.19. Century Complete requests that Iredell County Environmental Health (ICEH) issue the appropriate permits for a subsurface wastewater treatment and disposal system based upon the enclosed LSS COVID-19 permit option.

Location

From Statesville, take I-40 East to Exit 154. Left on Old Mocksville Road for 8.1 miles, then left onto Mt. Bethel Road for 0.8 mile. Left onto Four Andrews Drive. Lot 48 is on right in approximately 0.4 mile.

References

Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, Department of Environment and Natural Resources, Division of Environmental Health, On-site Wastewater Section, December 6, 2018.

Design, Installation and Maintenance of the T & J Panel Wastewater Treatment System; 2021, published by T & J Panel.

Primary Investigator's Credentials

NC Licensed Soil Scientist No. 1219
SC Professional Soil Classifier No. 114
VA Professional Soil Scientist No. 0415

Plans and Specifications

A. Septic Tank

1. The septic tank shall be State approved (Section .1953 of 15A NCAC 18A), watertight, structurally sound, and 1,000 gallons in capacity.
2. The septic tank will be fitted with an approved effluent filter and riser for easy access and periodic maintenance.
3. It is the responsibility of the septic contractor to thoroughly inspect the septic tank prior to accepting delivery to assure that the tank has had time to properly cure and is free of cracks or other structural deficiencies.

B. Pump Tank

1. The pump tank shall be State approved, of one-piece construction, watertight, structurally sound and 1,000 gallons capacity. Again, it is the responsibility of the septic tank contractor to thoroughly inspect each pump tank prior to accepting delivery.
2. All pipe penetrations into the tank shall be booted (i.e., C-293 boot with a stainless-steel strap).
3. The pump tank shall have access risers that extend, at a minimum, 6 inches above finished grade and must have less than 36 inches of fill over its top once finished grade has been established (a reinforced concrete tank will be required if finished soil cover is 36 inches or greater in depth).
4. Floats, pump and control circuits, and the control panel shall meet the requirements of Rule .1952(c). Panel and control equipment shall include lightning protection, be protected from unauthorized access, and always remain accessible to the system operator.
5. The pump and alarm controls shall be provided with manual circuit disconnects within a watertight, corrosion resistant, NEMA 4x rated control panel. The control panel must be securely mounted outside, adjacent to the pump tank riser and at a minimum of 12 inches above finished grade. Pump and float control wiring should be long enough to reach from the tank to the control panel without splicing, routed through wire conduit, and sealed at the openings within the pump tank as well as the control panel enclosure. It is paramount that the conduit is properly sealed to prevent the escape of flammable gases from the pump tank. Furthermore, there must be two electrical circuits for the pump tank controls: one for the pump and one for the alarm controls.
6. Float switch tie downs must be made of a corrosion resistant material (per OWPS, all metal in the tanks shall be stainless steel). Floats should be mounted on a separate "float tree" rather than the pump supply line (see pump tank detail).
7. The pump removal system will be via a pump tether made of nylon rope or its equivalent. The tether material should be resistant to mildew and rot.

C. Pipes and Fittings

1. All discharge piping, connectors and supply lines should be made of SCH 40 PVC.

2. All joints must be properly "welded" utilizing the appropriate PVC cement for each application.
3. The supply line from the pump tank to the pressure manifold shall be 2-inch Schedule 40 PVC (supply line is approximately 125 feet long).
4. There shall be a threaded PVC union above each pump to facilitate easy removal of the pumps for maintenance or replacement.

D. Distribution Method – Pressure Manifold

1. The system will be fed by a pressure manifold.
2. The pressure manifold shall be contained within an adequately sized box/vault that will allow future repair lines to be installed and is designed to allow for drainage of effluent that may accumulate in it during flushing and head pressure adjustments. The box should be placed upon a gravel base.
3. A gate valve shall be provided at the pressure manifold box to allow for final pressure adjustment (2 foot of head pressure as per design).
4. The pressure manifold shall be constructed of SCH 80 PVC.
5. There shall be 5 taps; all 1/2in SCH 80 PVC
6. The connecting pipe between the pressure manifold taps and the drainfield shall be constructed of PVC.

E. Drainfield Installation

1. The drainfield and the proposed septic tank location have been marked on-site utilizing metal stemmed flags. Once this area has been approved by the county, the property owner/builder should mark this area and isolate it as much as possible from construction traffic. Prior to the system installation, the septic contractor shall contact the county for a preconstruction conference at which time the drainfield area will be re-verified.
2. Under no circumstances shall any construction take place within the drainfield area while the soil is in a wet condition. If the installer has doubts as to whether or not the drain field area is dry enough to begin construction, the environmental health specialist for this area should be contacted for permission to proceed with the installation.
3. The specified system is a Type III-B/E/G pump to pressure manifold then gravity flow to prefabricated permeable block panel system – specifically the 16 inch high panel system manufactured by T&J Panel Wastewater Treatment System, Patent No. 4013559; telephone: 1-800-222-2577. The installer must follow the manufacturer's guidelines for installing the T&J Panel System and should request an installation manual from the manufacturer prior to beginning construction.
4. The initial drain field consists of five (5) lateral trenches 3 feet wide by 40 feet in length.
5. It is essential that the lateral trenches be constructed on contour with the land, with each trench being excavated level from beginning to end. The use of a tripod mounted engineer's level is essential to assure that each trench is constructed as level as possible.

6. The maximum trench depth for this system shall be **22-inches on the low-side of trench**. Each trench shall be placed on a minimum of 9 foot on centers.
7. Once trenches are dug, the side walls shall be raked and a light dusting of lime applied.
8. Backfill the trench with 6 inches of sand and level to grade. Once leveled, place 1 x 4- or 6-inch boards on top of the sand the entire length of each trench. Once the grade boards have been set, the panels may be set into the trench. The panels should be placed 6 inches apart.
9. Once the panels have been set, line the top chamber of each panel with 10 – 12 pounds of clean particle sand (medium sand blasting sand). Coverage depth should be approximately 1 inch thick. *Please note that this sand is not the same material specified for backfill.*
10. Tar seal rope, or approved foam, should be placed in the "U" outs of each end of the panel to form seals. Once the tar rope is in place, the 2-inch Schedule 40 PVC laterals can be added and the seal completed by the addition of more tar rope on the top and sides of the pipe. Now that the connection and seals are complete, a block cap is placed on each end of the panel so that all openings are covered.
11. Once the lateral has been installed and the panels closed, the trench is ready to be backfilled to the top with the sand used in the trench bottom.

E. Final Landscaping

1. Final cover over the drainfield shall be at least 6-inches deep. Additional soil cover may be required to achieve the 6-inch requirement.
2. The drainfield shall be shaped to shed rainwater and be free from low spots.
3. The entire area of the drainfield should be planted with grass as soon as possible to prevent erosion. The soil should be properly tilled, limed (if necessary) and fertilized prior to planting. After applying grass seed, the area should be heavily mulched with straw or other suitable material.

F. Utility/Drive Conflicts

1. The builder and property owner must take special care in planning for utilities (water, power, gas, telephone, cable lines, etc.). All utilities shall be kept clear of the septic system and its proposed repair area. Improper planning for underground utilities can negatively impact the installation and, in some cases, cause irreparable damage and permit revocation. If there are any questions regarding preferred routes, contact the County as soon as possible.
2. Water lines must be kept at least ten (10) feet from any portion of the septic system.
3. Irrigation systems should not be placed in the drain field area.

Maintenance

G. In General

The designed system does not require ongoing maintenance via a person certified (Certified Subsurface System Operator) by the North Carolina Department of Environment and Natural

Resources to operate subsurface wastewater systems (Section .1961 Maintenance of Sewage Systems). However, the following maintenance should be considered by the owner.

1. The homeowner must maintain the drainfield area through periodic mowing. The drainfield must not be allowed to become overgrown.
2. The septic tank should be pumped every 4 years or when the solids within the septic tank reach an elevation that is equivalent to 25% of the volume of the tank. In some situations, the tanks may need to be pumped more frequently. If you are using a garbage disposal, it is recommended that the septic and pump tanks be cleaned out annually.
3. When it becomes necessary to clean the effluent filters, the filters should be removed, and the accumulated debris washed back into the septic or pump tank – not onto the lawn.
4. Any damp areas, leakages or malfunctions in the drainfield should be addressed immediately.
5. Divert gutter downspouts and surface water runoff away from the drainfield and septic and pump tanks.

Initial System Design Specifics

Daily Design Flow:	360 GPD – 3 bedroom house
Effluent Loading Rate:	0.300 GPD per sq. ft.
Drainfield Type:	H-PPBPS with 50% Reduction
Maximum Trench Depth:	22-Inches on low-side
Supply Size:	2 Inch
Supply Line Length:	Approximately 125 feet
Number of Drainlines:	5
**Drain Lines:	3' Wide x 40' Long
**Drainline Spacing:	9 Foot on Centers
Total Trench Length:	200 Linear Feet
Total Number of Panels:	37
Distribution Method:	Pressure Manifold
Number of Taps:	(5) ½" SCH 80
Dosing Volume:	185 Gallons
Pump Run Time:	6.74 Minutes
Pressure Head:	2 Feet
Total Elevation/Friction Head	22.94 Feet
*Pump Requirements:	27.40 GPM at 22.94 TDH
Recommended Pump:	Goulds Pump WE05H or equiv.

* Total Dynamic Head (TDH) for system is estimated based upon existing elevations, approximate pump off elevation, design pressure head and supply line length. Total Dynamic Head should be reconfirmed by septic contractor at the time of system installation based upon actual tank depth and pressure manifold height.
** See drainfield layout for site locations and more details.

Repair System Option

Effluent Loading Rate:	0.30 GPD per sq. ft.
Drainfield Type:	H-PPBPS
Number of Drainlines:	5
Drain Lines:	3' Wide x 40' Long
Drainline Spacing:	9 Foot on Centers
Total Trench Length:	200 Linear Feet



VICINITY MAP
(N.T.S.)

CERTIFICATE OF SURVEY AND ACCURACY

I, CHRISTOPHER L COLE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN (REFERENCES AS SHOWN); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN (REFERENCES AS SHOWN); THAT THE RATIO OF PRECISION AS CALCULATED EXCEEDS 1:15,000; AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56.1600);

NORTH CAROLINA PROFESSIONAL SEAL L-5008 LAND SURVEYOR CHRISTOPHER L. COLE

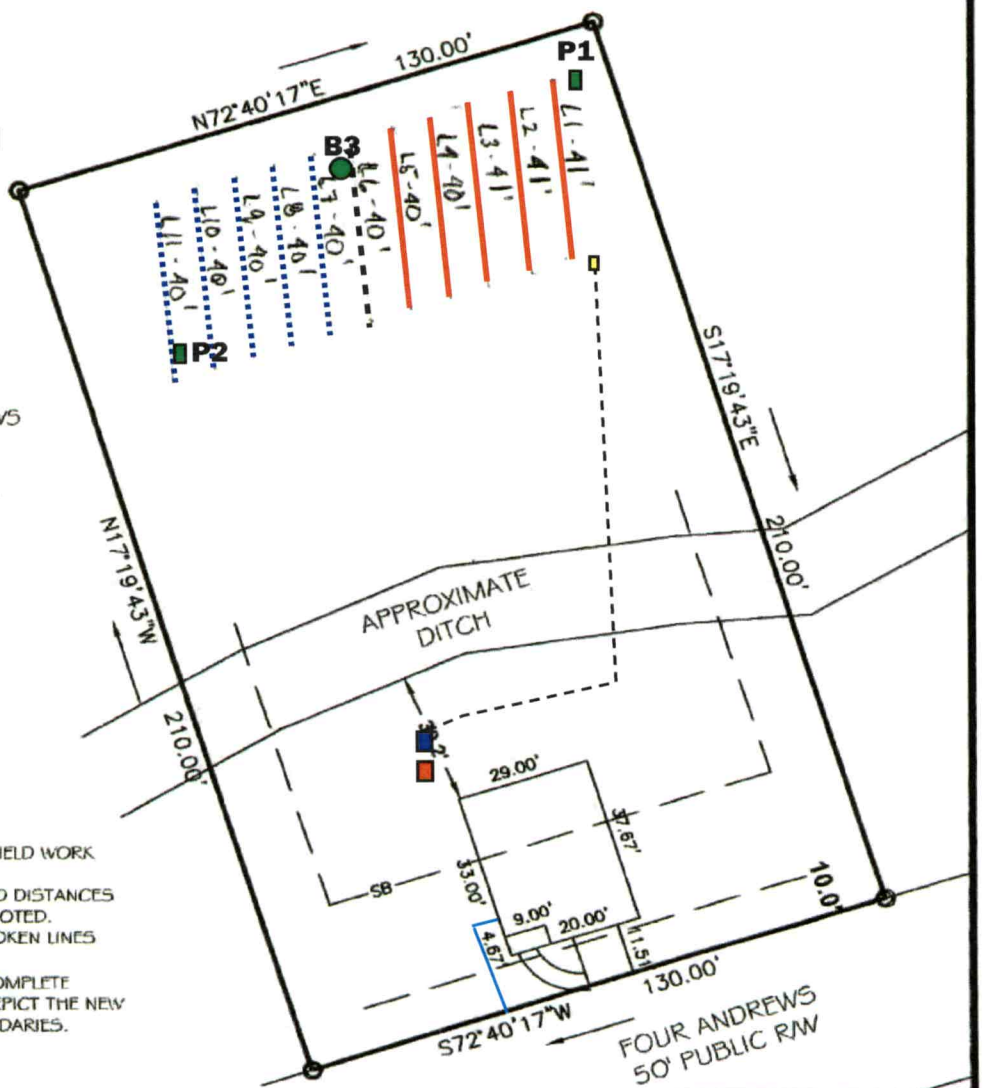
PRELIMINARY

NOT FOR SALES, RECORDATION OR CONVEYANCES

CHRISTOPHER L. COLE
REGISTRATION/LICENSE NO. NCPLS L-5008
NC FIRM LICENSE NO. C-4288

40 0 20 40
(IN FEET)
1 inch = 40 ft.

- Initial Drainlines
- Repair Drainlines
- ~125 Supply Line
- Septic Tank
- Pump Tank
- Pressure Manifold
- Soil Boring
- Soil Pit
- Extra Drainline





174 FOUR ANDREWS
1602 B RH

+/- 27,300 S.F.

NOTES:

1) BASIS OF BEARINGS: PB 34 PG 119
2) BOUNDARY LINES DERIVED BY PLAT, NO FIELD WORK COMPLETED FOR THIS MAP.
3) ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.
4)LINES NOT SURVEYED ARE SHOWN AS BROKEN LINES FROM
5) THIS SURVEY DOES NOT REPRESENT A COMPLETE BOUNDARY SURVEY AND IS INTENDED TO DEPICT THE NEW BUILDING LOCATION RELATIVE TO THE BOUNDARIES.

Ascension Land Surveying P.C.
Professional Land Surveying & Consulting
116 Williams Road, Mocksville, NC 27028
Phone: (704) 579-7197
Email: surveyor.chris007@gmail.com
NC FIRM LICENSE NO: C-4288
NC PLS NO: L-5008

4/14/2021

PIN:
4778693608
DRAWN BY: CC
CHECKED BY: JH
SCALE: 1"=40'
JOB: 21-02-24

PLOT PLAN
LOT-48
174 FOUR ANDREWS
ROCK GATE ESTATES
TURNERSBURG TWNSHP, IREDELL CO., NC