CW BLDR-2023-34142 ✓

ICHD - ENVIRONMENTAL HEALTH DIVISION

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

PERMIT # OSWP-2023-31377 ✓

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

PIN # 4730-51-3337 ✓

APPLICANT / OWNER: IQ Custom Homes ✓ APPLICANT ADDRESS: 301 Watkis Ford Woodleaf NC

SITE ADDRESS: 116 EMMALINE CT, TROUTMAN, NC 28166 ✓ PHONE: – ALT. PHONE: –

SITE DIRECTIONS: State Park Road to Honeycutt to Emmaline SAP CONTROLLED: YES ☑ NO ☐

SUBDIVISION: LOUISE HONEYCUTT TROUTMAN ✓ SECTION: LOT #: 4 ✓ LOT AREA: 1.513 DESIGN FLOW: 600 L.T.A.R.: 0.3

Septic Tank: 1500 (gal)	STB: 964	Date: 11/29/23	☑ New System ☐ Repair ☐ Expansion	System Type: III	☑ Residence	No. Bedrooms: 5	Water Supply: New Well
Pump Tank: 1500 (gal)	PT: 353	Date: 9/15/23	System Description: VPPBPS Pressure Manifold		☐ Business	No. Persons: 10	
Pump Make:	Model:	Serial #:	Repair System Description: VPPBPS LPP		☐ Other	No. Employees:	
Nitrification Fields: 1	# Lines: 4	Linear Ft.: 334	Maintenance Agreement Required: ☐ YES ☑ NO		☐ Slab	☐ Crawl Space	
Trench Width: 24	Trench Bottom Depth (Low side): 33		Gravel Depth:	☐ GRAVITY ☑ PRESSURE	☑ Basement w/ Plumbing	☐ Basement w/o Plumbing	

Comments / Conditions: 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. This Construction Authorization is issued pursuant to G.S. 130A-335(a2) and (a5) using the signed and sealed plans or evaluations attached here.

INITIAL SITE SKETCH

AS BUILT SKETCH

Tanks 2/21 - DW
(20' from pool)
Drainlines (SH 2/22/24)
SUPPLY BCW
2-22-2024

Alarm
Electrical } SH 8/15/24

☆ Irrigation
Capped. - 8/15/24

PH } 8/16/24
PM

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: Wendell Overby Date:

IMPROVEMENT PERMIT by: Benjamin A Bass ✓ Date: 8/15/2023

AUTHORIZATION TO CONSTRUCT by: Benjamin A Bass ✓ Date: 8/15/2023

Installed By: Rowan Septic

OPERATION PERMIT by: Sydney Hollaran ✓ Date: 8/16/24

Existing System Inspected By: Date:

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

CW

ICHD - ENVIRONMENTAL HEALTH DIVISION

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

PERMIT # OSWP-2023-31377

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

PIN # 4730-51-3337

PPLICANT / OWNER: IA Custom Homes APPLICANT ADDRESS: 301 Watkins Ford Woodleaf NC

TE ADDRESS: 116 EMMALINE CT, TROUTMAN, NC 28166 PHONE: — ALT. PHONE: —

TE DIRECTIONS: State Park Road to Honeycutt to Emmaline SAP CONTROLLED: YES ☑ NO ☐

UBDIVISION: LOUISE HONEYCUTT TROUTMAN SECTION: LOT #: 4 LOT AREA: 1.513 DESIGN FLOW: 600 L.T.A.R.: 0.3

eptic Tank: 1500 (gal)	STB:	Date:	☑ New System ☐ Repair ☐ Expansion	System Type: III	☑ Residence	No. Bedrooms: 5	Water Supply: New Well
ump Tank: 1500 (gal)	PT:	Date:	System Description: VPPBPS Pressure Manifold		☐ Business	No. Persons: 10	
ump Make:	Model:	Serial #:	Repair System Description: VPPBPS LPP		☐ Other	No. Employees:	
Nitrification Fields: 1	# Lines: 4	Linear Ft.: 334	Maintenance Agreement Required: ☐ YES ☑ NO		☐ Slab	☐ Crawl Space	
rench Width: 24	Trench Bottom Depth (Low side): 33		Gravel Depth:	☐ GRAVITY ☑ PRESSURE	☑ Basement w/ Plumbing	☐ Basement w/o Plumbing	

omments / Conditions: This Improvement Permit is issued pursuant to G.S. 130A-335 (a2) and (a3) using the signed and sealed LSS/LG evaluation(s) ttached here. This Construction Authorization is issued pursuant to G.S. 130A-335(a2) and (a5) using the signed and sealed plans or evaluations attached here.

INITIAL SITE SKETCH

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: Wendell Overby Date:

IPROVEMENT PERMIT by: Benjamin A Box Date: 8/18/2023

UTHORIZATION TO CONSTRUCT by: Benjamin A Box Date: 8/18/2023

Installed By:

OPERATION PERMIT by: Date:

Existing System Inspected By: Date:

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

Permit #: OSWP-2023-31377

This Section for Local Health Department Use Only

Initial submittal received: 8/15/2023 (Date) by BB (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: Benjamin A Bell Date: 8/18/2023

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: 8/18/2023

See attached site sketch

NCDHHS

Permit #: OSWP-2023-31377

This Section for Local Health Department Use Only

Initial submittal received: 8/15/2023 (Date) by BB (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: Benjamin A Bell Date of Issuance: 8/18/2023.

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: 8/18/2023.

See attached site sketch

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: Jason B Kay Date: 8/18/23

Owner's Signature: Jason B Kay Date: 8/18/23

NCDHHS

Permit #: OSWP-2023-31377

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

County: Iredell

PIN/Lot Identifier: 4730513337.000

Issued To: Jason Slagle // IQ Custom Construction

Property Location: 116 EMMALINE CT

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

Facility Type: 5 bedroom house

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

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

Type of Wastewater System* VPPBPS PMANIFOLD (Initial) VPPBPS LPP (Repair)

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

Design Daily Flow: 600 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: 1500 gallons Total Trench/Bed Length: 333 feet Trench/Bed Spacing: 8 feet on center

Trench/Bed Width: 24 inches LTAR: 0.3 gpd/ft²

Soil Cover: 0 inches Slope Corrected Maximum Trench/Bed Depth‡: 33 inches ‡ ***Measured on the downhill side of the trench***

Aggregate Depth: _____inches above pipe _____inches below pipe 16 inches total

Pump Tank Size (if applicable): 1500 gallons Requires more than 1 pump? ☐ Yes ☑ No

Pump Requirements: 23.4 ft. TDH vs. 28.4 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

Pre-Construction Conference Required: Yes ☐ No ☑

Conditions: See design

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: Wendell Overby Expiration Date: 12/31/2023

AOWE/PE Signature: Wendell Overby Date: 7/19/2023

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

See attached site sketch

Permit #: OSWP-2023-31377

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: 4730513337.000
Issued To: Jason Slagle // IQ Custom Construction
Property Location: 116 EMMALINE CT
Subdivision (if applicable) LOUISE HONEYCUTT Lot #: 4 Block: _____ Section: _____
LSS Report Provided: Yes ☑ No ☐
If yes, name and license number of LSS: Wendell Overby #1218
New ☑ Expansion ☐ System Relocation ☐ Change of Use ☐
Proposed Structure: 5 bedroom house
Number of bedrooms: 5 Number of Occupants: 10 Other: _____
Design Wastewater Strength: ☑ domestic ☐ high strength ☐ industrial process
Proposed Design Daily Flow: 600 GPD Proposed LTAR (Initial): 0.3 Proposed LTAR (Repair): 0.3
Proposed Wastewater System Type*: VPPBPS PMANIFOLD (Initial) Pump Required: ☑ Yes ☐ No ☐ May be required
Proposed Wastewater System Type*: VPPBPS LPP (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): 60 Usable Soil Depth (Repair): 60
Max. Trench Depth (Initial)‡: 33 Max. Trench Depth (Repair)‡: 33 ***‡ 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:
See Design

Licensed Soil Scientist Print Name: Wendell Overby
Licensed Soil Scientist Signature: _____ Date: 7/19/2023

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

See attached site sketch

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES • DIVISION OF PUBLIC HEALTH
LOCATION: 5605 Six Forks Road, Building 3, Raleigh, NC 27609
MAILING ADDRESS: 1632 Mail Service Center, Raleigh, NC 27699-1632
www.ncdhhs.gov • TEL: 919-707-5854 • FAX: 919-845-3972
AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

7/13/2023

Iredell County Environmental Health
Attn: Heath Snow
349 N Center Street
Statesville, NC 28677

Re: Improvement Permit & CA Submittal for 116 Emmaline Ct (Lot #4)

Mr. Snow,

Attached please find sealed soil notes as well as site plans and design related data for a 5 bedroom VPPBPS system using PMANIFOLD distribution.

"The LSS evaluation attached to this application is to be used to issue an Improvement Permit in accordance with G.S. 130A-335(a2) and (a3)." "The plans or evaluations attached to this application are to be used to issue a Construction Authorization in accordance with G.S. 130A-335(a2), (a5) and (a6)."

Owner/Applicant: Jason Slagle // Dragon Properties 16 LLC

Signature: _____

Date: 7/13/23

"The LSS Evaluation is being submitted pursuant to and meets requirements of GS 130A-335(a2)." This Improvement Permit is issued pursuant to G.S. 130A-335(a2),(a3), and (a4) using the signed and sealed LSS evaluation attached here". "This AOWE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2) and (a5)". "This Construction Authorization is issued pursuant to G.S. 130A-335 (a2), and (a5) and (a6) using the signed and sealed plans or evaluations attached here."

Wendell Overby, LSS

Signature: _____

Date: 7/13/2023 Seal:





IREDELL COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

DOCUMENTATION TO AUTHORIZE AN OWNER'S LEGAL REPRESENTATIVE

(Check and sign only ONE of the options below)

☐ 1. *** APPLICANT AND OWNER ARE THE SAME. * (Sign here)** Jason Slagle

Applications for permits require the "signature of the owner or owner's legal representative" (15A NCAC 18A .1937). If the owner does not sign the application himself or herself, they can submit any one of the following documents to designate their legal representative: *Power of Attorney; Real Estate Contract; Estate executor; Bankruptcy trustee; Court ordered guardianship*
In the absence of the above documentation, the property owner may provide the local health department with documentation that designates a legal representative. A property owner may:
Complete this form to document his or her legal representative, or provide his or her own form that contains the information in this form. If there are multiple property owners, then all property owners must sign the form that designates a legal representative.
By signing a form that designates a legal representative for purposes of 15A NCAC 18A .1937, the property owner authorizes that representative to act on their behalf in matters pertaining to the application and permitting process, including signing or receiving any application, document or permit. The owner retains full responsibility to meet all permit conditions specified by the local health department.

2. I, Jason Slagle, am the legal owner(s) of the property located

☒ at 116 Emmaline Ct, identified as

PIN (Parcel Identification Number) 4730513337.000, located in Iredell County, North Carolina.

I do hereby authorize (print legal representative/company name) Wendell Overby

Soil & Forestry Services of the Carolinas, PA, to act as an agent on my behalf in applying for/signing/obtaining any of the documents described below.

- Application for Improvement Permit (IP) / Authorization to Construct (AC)
- Improvement Permit (IP) / Authorization to Construct (AC)
- Application for soil-site evaluation (new/repair)
- Application/permit for private drinking water well/well abandonment
- Application for Compliance Inspection

I agree to abide by all decisions and/or conditions between the legal representative acting on my behalf and the Iredell County Department of Public Health, Environmental Health Division.

Jason Slagle — Signature of Owner(s)

7/13/23 — Date

Mooresville - Environmental Health

Fax: 704-662-3239
610 E. Center Avenue, Mooresville, NC 28115

Statesville - Environmental Health

ronda.hart@co.iredell.nc.us
Fax: 704-871-3483
349 N. Center Street, Statesville, NC 28677

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

usablesoil@gmail.com
980-439-5007
813 Davidson Dr NW
Concord NC 28025
SoilAndForestryServices.com

Project# 23-1076

Septic System Design for a 5 Bedroom House
VPPBPS using PMANIFOLD distribution
Site location: 116 Emmaline Ct, Lot # 4

Contents	**Page**
Information for the Installer	1
Design Specifications	2
Layout Specifications	3
System Flow	4
Site Plan	5
Pump Specifications	6
Pressure Manifold Specifications	7
Calculations	8
Soil Descriptions	9
Floor Plans	10-16

Jul 2023
Design By: Overby

VPPBPS using PMANIFOLD distribution
Site location: 116 Emmaline Ct, Lot # 4

* **CALL 811 BEFORE DIGGING**
* The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.
* Tanks shall be approved by DHHS, and certification supplied by the that must be considered along with all other considerations.
* The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
* The supply trench shall be compacted to eliminate cavities left during initial fill placement.
* Installation of the system shall be during dry conditions in order to protect the soil
* All fittings shall be pressure rated fittings.
* All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
* Where required by the county health department, post installation inspections by the designer must be scheduled 5 week days in advance.
* Trenches shall be carefully excavated so the bottom is within 2" from the highest to the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
* All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
* All tanks shall be properly back filled and compacted to prevent slump at a later date.
* Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
* No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat) or a trencher (i.e. Ditch Witch 2300/2310) may be used.
* Elevations at pinflag locations should be checked by the installer prior to beginning
* Pump tank riser should be 6" above grade, control panel should be 12" above grade.
* Septic tank riser shall be a minimum of 6" above finished grade.
* **System specified as VPPBPS type using PMANIFOLD distribution**
* **Repair specified as VPPBPS type using LPP distribution**
* **System trench depth specified at 33"**
* **System trenches installed on 8' minimum; 24" wide trenches**
* **Installation does not require a soil cap**
* **Sewage pump and settling tank may be required if basement elevation does not allow gravity to septic tank**

VPPBPS using PMANIFOLD distribution
Site location: 116 Emmaline Ct, Lot # 4

Business (if applicable):	IQ Construction
Contact:	Jason slagle
Phone:	704-400-6472
Email:	iqcustomconstruction@gmail.com
County:	Iredell
Location:	116 Emmaline Ct

Source of Wastewater Flow:	5 bedroom home
Estimated Daily Wastewater Production:	600 gpd
System Flow:	28.44 gpm
Drain field Size:	336 lf
Lateral Length Required:	333 lf
Loading Rate:	0.3 gpd/ft.^{2}
Trench Depth:	33 in
Trench Width:	24 in
Soil Cap:	0 in
Total Area Trench Bottom:	666 sf
Septic Tank Size:	1500 gal
Pump Tank Size:	1500 gal
Estimated Supply Line Length:	190 lf
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	33 gal
Dosing Volume:	154 gal
Pump Draw Down:	5.3 in
Pressure Head:	2 ft
Friction Head:	3.1 ft
Elevation Head:	18.0 ft
Total Dynamic Head:	23.4 ft
Threaded Union:	In Tank
Gate Valves:	1 in Tank: 1 @ manifold
Check Valves:	In Tank
Anti-Siphon Hole:	n/a
Recommended Pump:	Zoeller 152 or County Approved Effluent Rated Pump Capable of Delivering 23 ft.of Head at 28 gpm Total Flow

VPPBPS using PMANIFOLD distribution
Site location: 116 Emmaline Ct, Lot # 4

Daily Flow (gpd) 600 **Jul 2023**

LINE #	FLAG COLOR	BS	HI	FS	ELEV	FLAGGED LENGTH	DESIGN LENGTH
TBM		0.0			100.0		
INSTR. 1			100.0				
			REPAIR				
1	Red			5.2	94.8	41	36
2	Orange			5.8	94.2	37	36
3	Yellow			6.3	93.7	40	38
4	Blue			7.2	92.8	65	63
5	Pink			8.1	91.9	78	75
6	Red			8.9	91.1	93	85
			SYSTEM				
7	Orange			9.7	89.5	87	84
8	Yellow			10.5	88.9	93	84
9	Blue			11.1	88.3	99	84
10	Pink			11.7	100.0	101	84

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	REDUCTION TYPE	DIST	TRENCH DEPTH	SOIL CAP
SYSTEM	336	0.300	VPPBPS	50%	PMANIFOLD	33	0
REPAIR	333	0.300	VPPBPS	50%	LPP	33	0

Notes:
**TBM is assumed to be 100'
**All measures in feet
**Nitrification lines are demonstrated on contour via colored pin flags
**BS and FS indicate rod readings

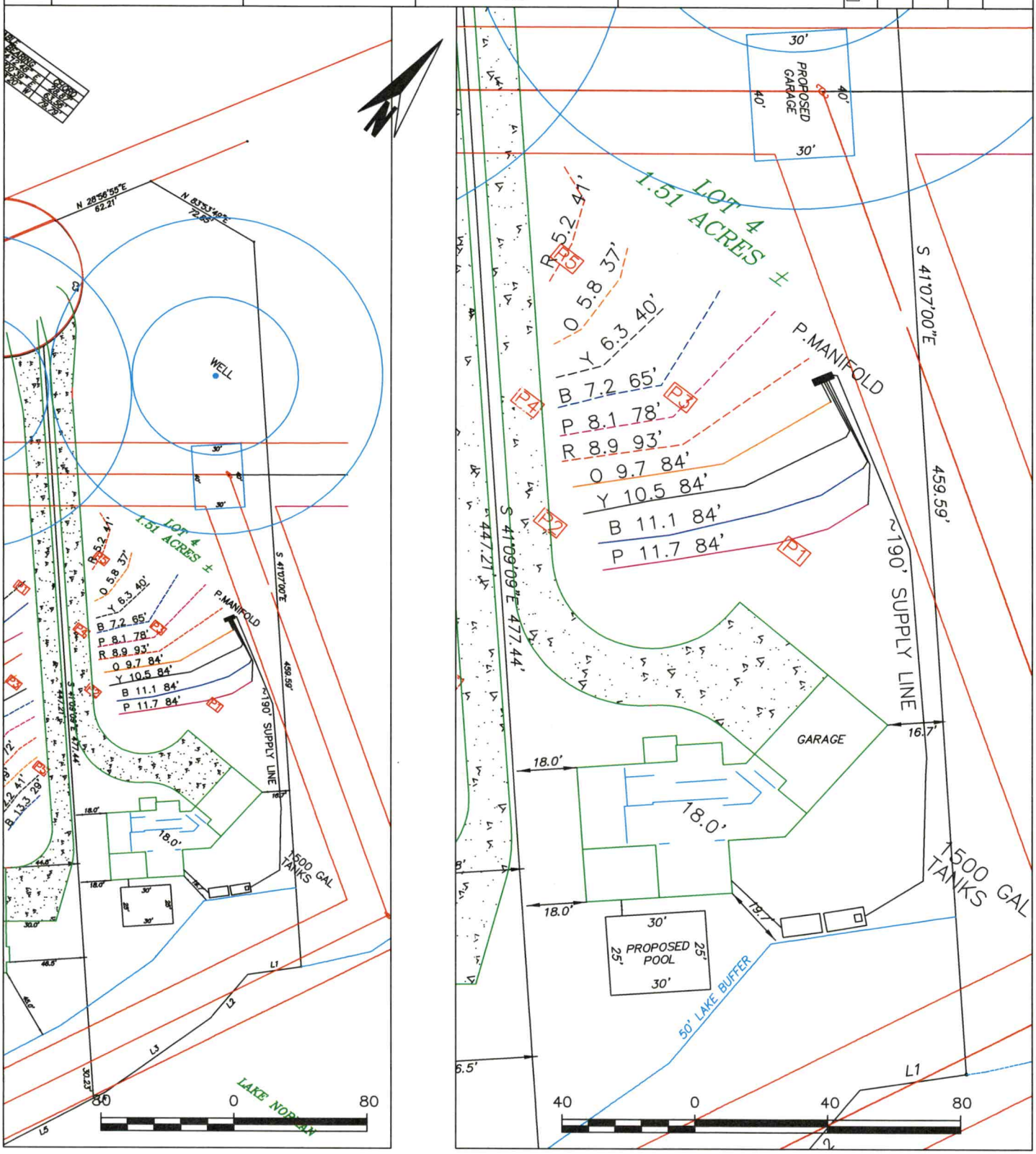
Page 4	SYSTEM FLOW	Project #23-1076

VPPBPS using PMANIFOLD distribution
Site location: 116 Emmaline Ct, Lot # 4

Line #	Color	Elev	Length	Hole Size	Flow/Tap	Line gpd	Line Trench Area	Flow/Line	Line LTAR	Number of Panels
7	Orange	9.7	84	SCH 40 1/2	**7.11**	150	252	**0.085**	**0.60**	19
8	Yellow	10.5	84	SCH 40 1/2	**7.11**	150	252	**0.085**	**0.60**	19
9	Blue	11.1	84	SCH 40 1/2	**7.11**	150	252	**0.085**	**0.60**	19
10	Pink	11.7	84	SCH 40 1/2	**7.11**	150	252	**0.085**	**0.60**	19
	total	**feet =**	336	**gal/min =**	**28.4**					**76**

Design Flow	**600**	gpd
Pump Run to Dose 600 gpd=	**21.10**	
Soil LTAR	**0.300**	
Accepted LTAR	**0.40**	

SHEET	SHEET TITLE:	PROJECT NAME:					
SHEET 1 OF 1	SEPTIC SYSTEM LAYOUT SKETCH MAP	DRAGON PROPERTIES HONEYCUTT RD LOT 4 IREDELL COUNTY JULY 2023	SOIL & FORESTRY SERVICES OF THE CAROLINAS, PA	Soil & Forestry Services of the Carolinas, PA 813 Davidson Dr NW Concord NC 28025 usablesoil@gmail.com 980-439-5007 soilandforestryservices.com	SCALE [1" = 80'] [1' = 40']	FIELD WORK WO	DRAWN BY WO	PROJECT MGR. WO	PROJECT NO. 23-1075



~~151~~, 152, ~~153~~

Dose-Mate

This is our fastest growing line of effluent pumps. The 150 series is truly a workhorse designed for reliability under extreme conditions in an effluent environment. 150 series pump curves cover a wide range of applications. They are well suited to applications with low pressure pipe (LPP) and enhanced flow STEP systems. Zoeller's cool run design and corrosion-resistant, powder coated epoxy finish, in addition to the hermetically sealed, oil-filled motor and non-clogging vortex impeller add up to a long-lasting, trouble-free product.



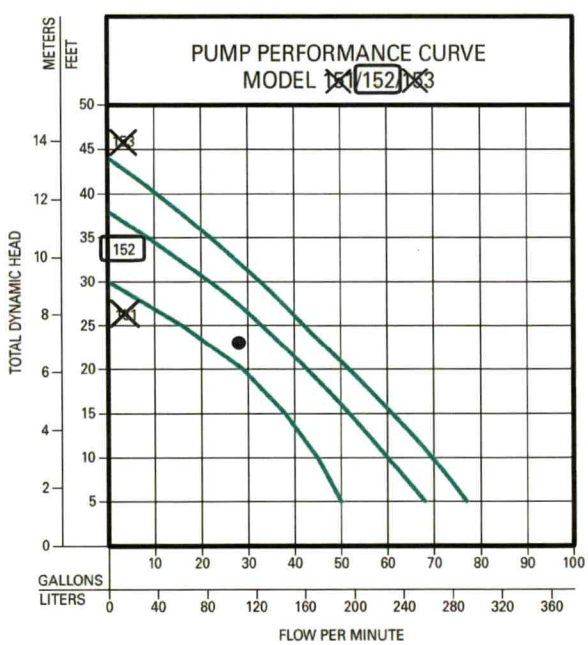
APPLICATIONS:

- STEP or onsite applications
- Light commercial dewatering

SPECIFICATIONS:

- 1-1/2" NPT discharge
- 3/10 HP through 1/2 HP
- Available in nonautomatic or with a variable level piggyback mechanical switch
- 1/2" (12 mm) spherical solids capacity with vortex thermoplastic impeller

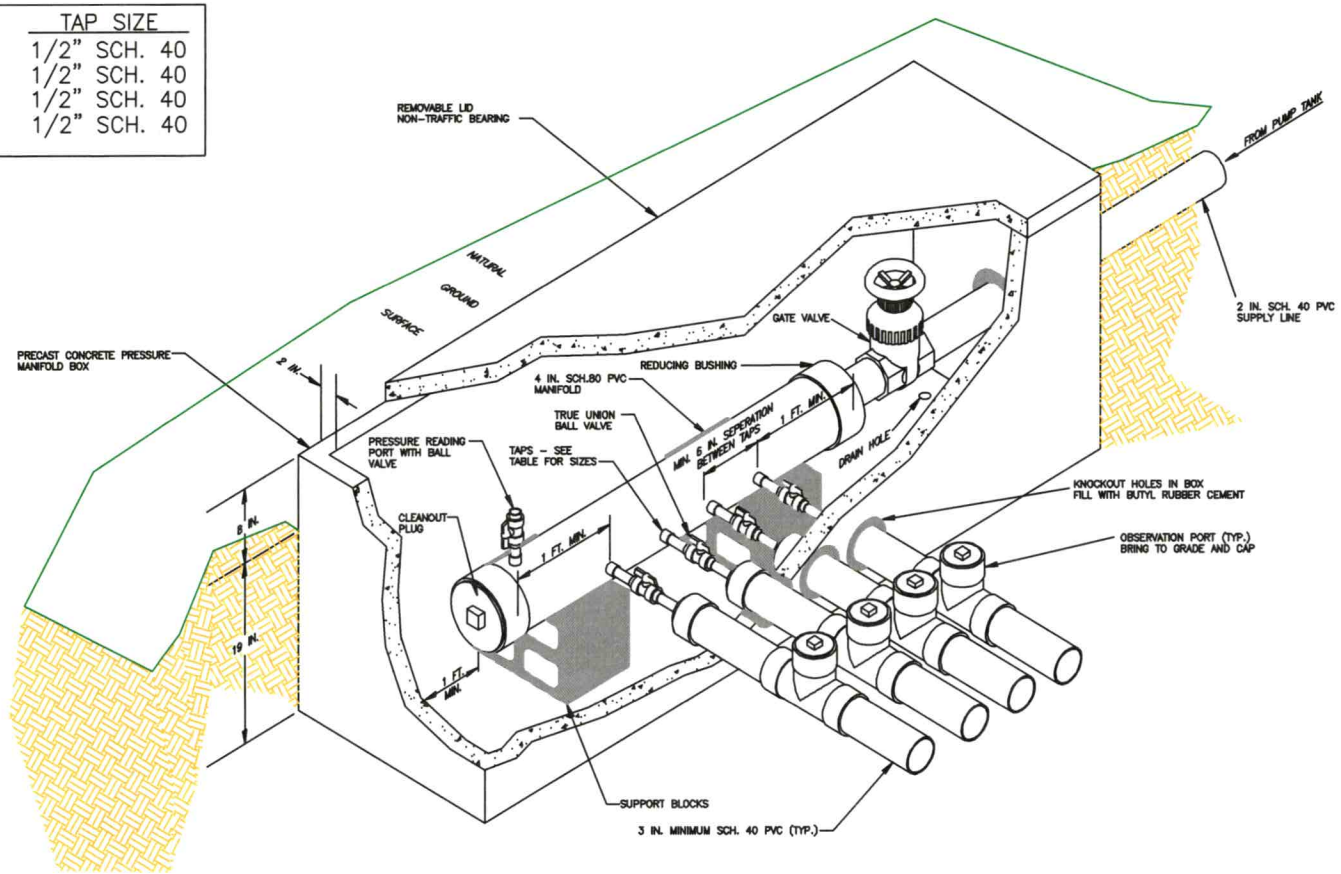
For more information, see Technical Data Sheet FM2784.



PRESSURE MANIFOLD DETAILS
110 EMMALINE CT

TAP SIZES

LINE No.	TAP SIZE
1	1/2" SCH. 40
2	1/2" SCH. 40
3	1/2" SCH. 40
4	1/2" SCH. 40



Page 8	CALCULATIONS	Project #23-1076

VPPBPS using PMANIFOLD distribution
Site location: 116 Emmaline Ct, Lot # 4

PROJECT INFO	Designer	Overby
	Project #	23-1076
	Project MM YYYY	Jul 2023
	Project Location	116 Emmaline Ct
	Lot # (if applicable)	4
	Subdivision (if applicable)	Louise Honeycutt
	Parcel #	4730513337.000
	Lot size (acres)	1.513
	Contact (Owner)	Jason slagle
	Business (if applicable)	IQ Construction
	Phone	704-400-6472
	Email	iqcustomconstruction@gmail.com
	County	Iredell
	Bedrooms	5
	Daily Flow	600
SYSTEM	System LTAR	0.3
	System Type	VPPBPS
	System Distribution	PMANIFOLD
	System Trench Center Distance (feet)	8
	System Trench Width (inches)	24
	System Trench Depth (inches)	33
	Soil Cap (inches)	0
	Tank Size	1500
	Supply Line Length (feet)	190
	Supply Line Volume (gal)	33
	Supply Line Diameter	2 in. SCH 40 PVC
	Required Feet of Line (system)	333
REPAIR	Repair LTAR	0.3
	Repair Type	VPPBPS
	Repair Distribution	LPP
	Repair Trench Center Distance (feet)	8
	Repair Trench Width (inches)	24
	Repair Trench Depth (inches)	33
	Soil Cap (inches)	0
	Tank Size	1500
	Required Feet of Line (repair)	333
SYSTEM PUMP VARIABLES	Amount of Line from Layout (feet)	336
	Gallons per Minute	28.4
	Required Septic Tank Capacity (gal)	1500
	Minimum Standard Tank Size (gal)	1500
	Lateral Line Volume (gal)	219
	Dosing Volume (gal)	154
	Tank Draw Down (inches)	5.3
	Pump Run Time (min)	5.4
	Elevation Head (feet)	18
	Pressure Head (feet)	2
	Friction Factor (ft/100ft from the interpolater)	1.6
	Friction Head (feet)	3.1
	Friction Head +10% (feet)	3.4
	Total Dynamic Head (feet)	23.4
	Pump Recommendation	Zoeller 152

PROPERTY ID #: 4730513337.000
COUNTY: Iredell

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

OWNER: Jason slagle // IQ Construction
ADDRESS: 301 Watkins Farm Rd
PROPOSED FACILITY: 5 bedroom house
LOCATION OF SITE: 116 Emmaline Ct

APPLICATION DATE:
DATE EVALUATED: 5/27/2023
PROPERTY SIZE: 1.513 acres
PROPERTY RECORDED:

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

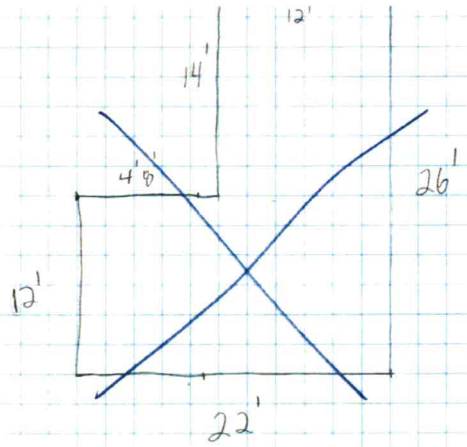
PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPR CLASS	.1944 RESTR HORIZ	
1	L/8%	0 - 9	B SCL WFG	FR SS SP	N/A	40	N/A	N/A	0.3
		9 - 20	R C WMS	FR SS SP					
		20 - 40	B CL WFS	FR SS SP					
		40 - 64	L MASS SAP	FR SS SP					
2	L/7%	0 - 11	B SCL WFG	FR SS SP	N/A	60	N/A	N/A	0.3
		11 - 34	R C WFS	FR SS SP					
		34 - 60	BR SCL WFS	FR SS SP					
3	L/11%	0 - 22	R CL WFG	FR SS SP	N/A	22	PS	N/A	0.4
		22 - 60	VAR SL MASS	VFR NS NP					
4	L/11%	0 - 17	R CL WMS	FR SS SP	N/A	27	PS	N/A	0.4
		17 - 27	R SCL WFS	FR SS SP C SAP					
		27 - 60	YB SL MASS SAP	FR SS SP F ROCK					
5	L/4%	0 - 6	RB SCL WFG	FR SS SP	N/A	60	N/A	N/A	0.3
		6 - 28	R C WMS	FR SS SP					
		28 - 45	R CL WFS	FR SS SP					
		45 - 60	RB L WMS	FR SS SP C SAP					
		0 -							

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	333	333
System Types(s)	VPPBPS	VPPBPS
Site LTAR	0.3	0.3

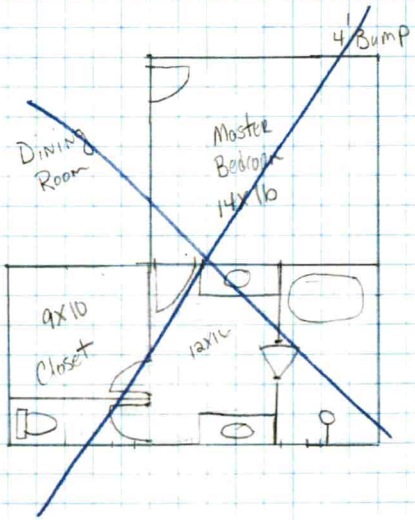
OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: OVERBY
OTHER(S) PRESENT:

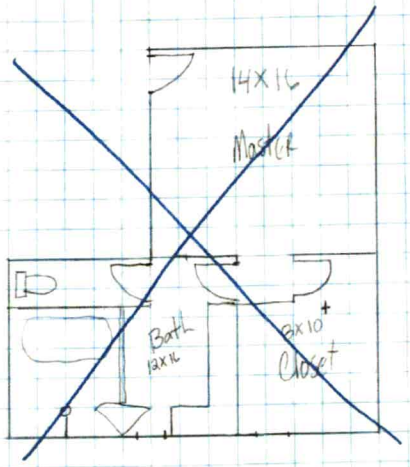
LICENSED SOIL SCIENTIST — LEE WENDELL OVERBY — 1215 — NORTH CAROLINA

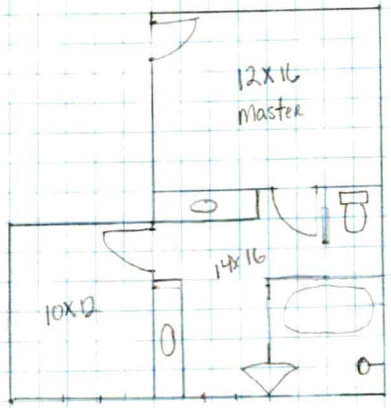
COMMENTS:



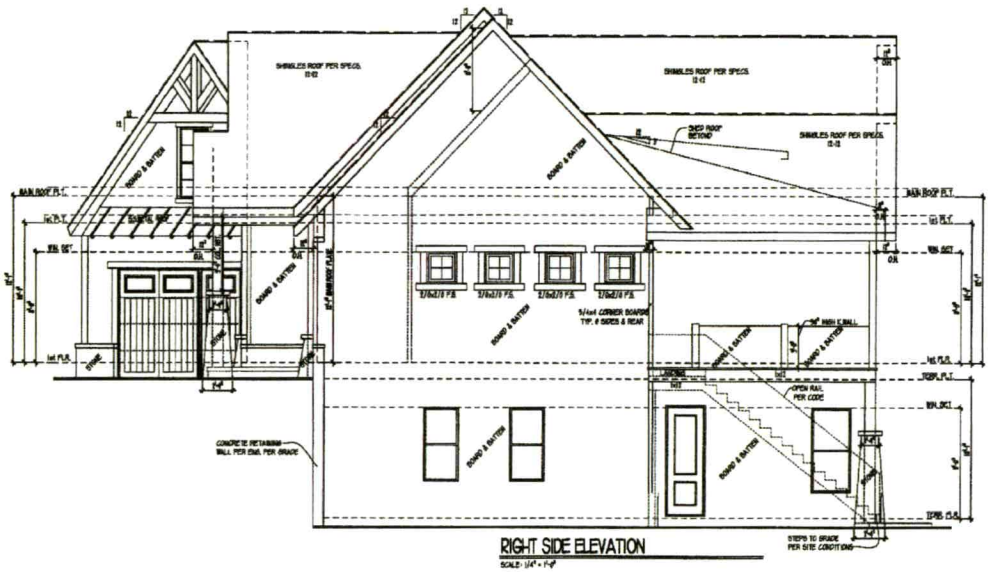
□ = 2' X 2'







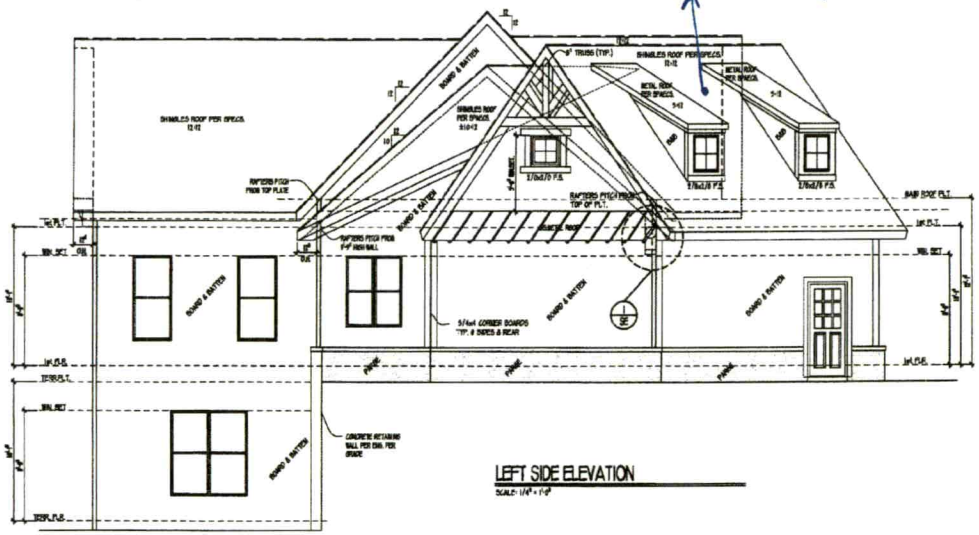
master Bath



RIGHT SIDE ELEVATION

SCALE: 1/4" = 1'-0"

one big shed if possible



LEFT SIDE ELEVATION

SCALE: 1/4" = 1'-0"

LICENSED TO:

JEFF MORGAN

GARRELL ASSOCIATES INC.

WALKERS RIDGE

SIDE ELEVATIONS

09/10/20

REV. NO.	REV. DATE/ INIT.
1	09/25/19 (DS)
	04/13/20 (DS) (CHG)

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FILE LOCATION: n:\plans\walkers park

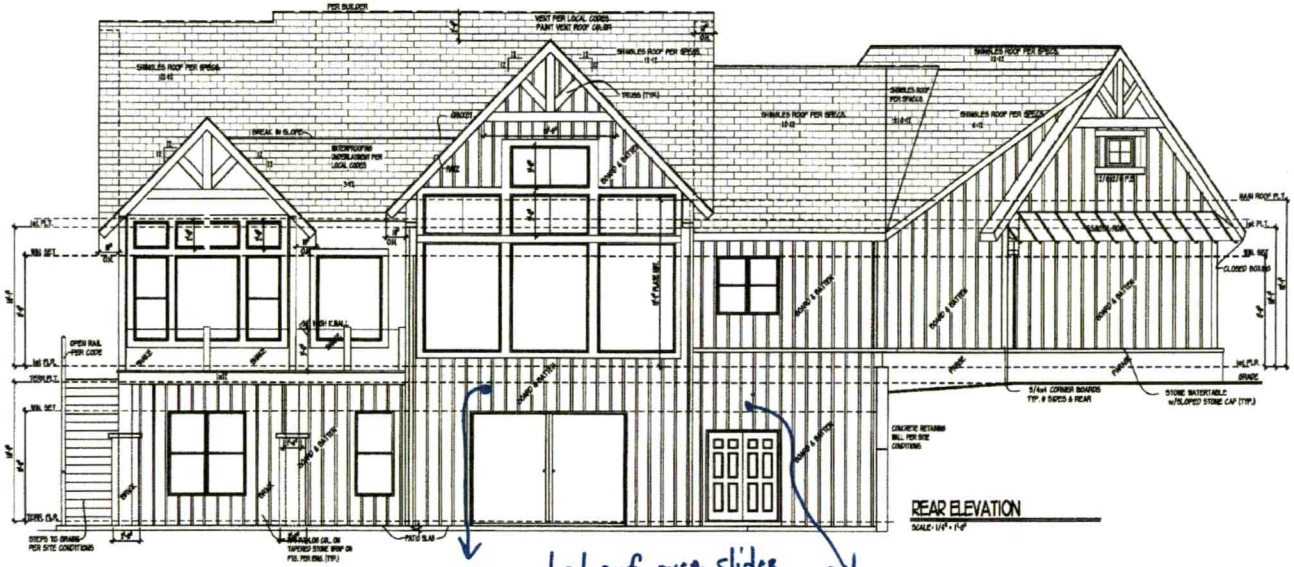
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DRAWN BY:	SHEET NO.:
PS	SE



FRONT ELEVATION

SCALE: 1/4" = 1'-0"



REAR ELEVATION

SCALE: 1/4" = 1'-0"

LICENSED TO:

JEFF MORGAN

GARRELL ASSOCIATES INC.

WALKERS RIDGE

FRONT & REAR ELEVATIONS

09/10/20

REV. NO.	REV. DATE/INIT.
0	09/23/20 BM
	09/11/20 BM [illegible]

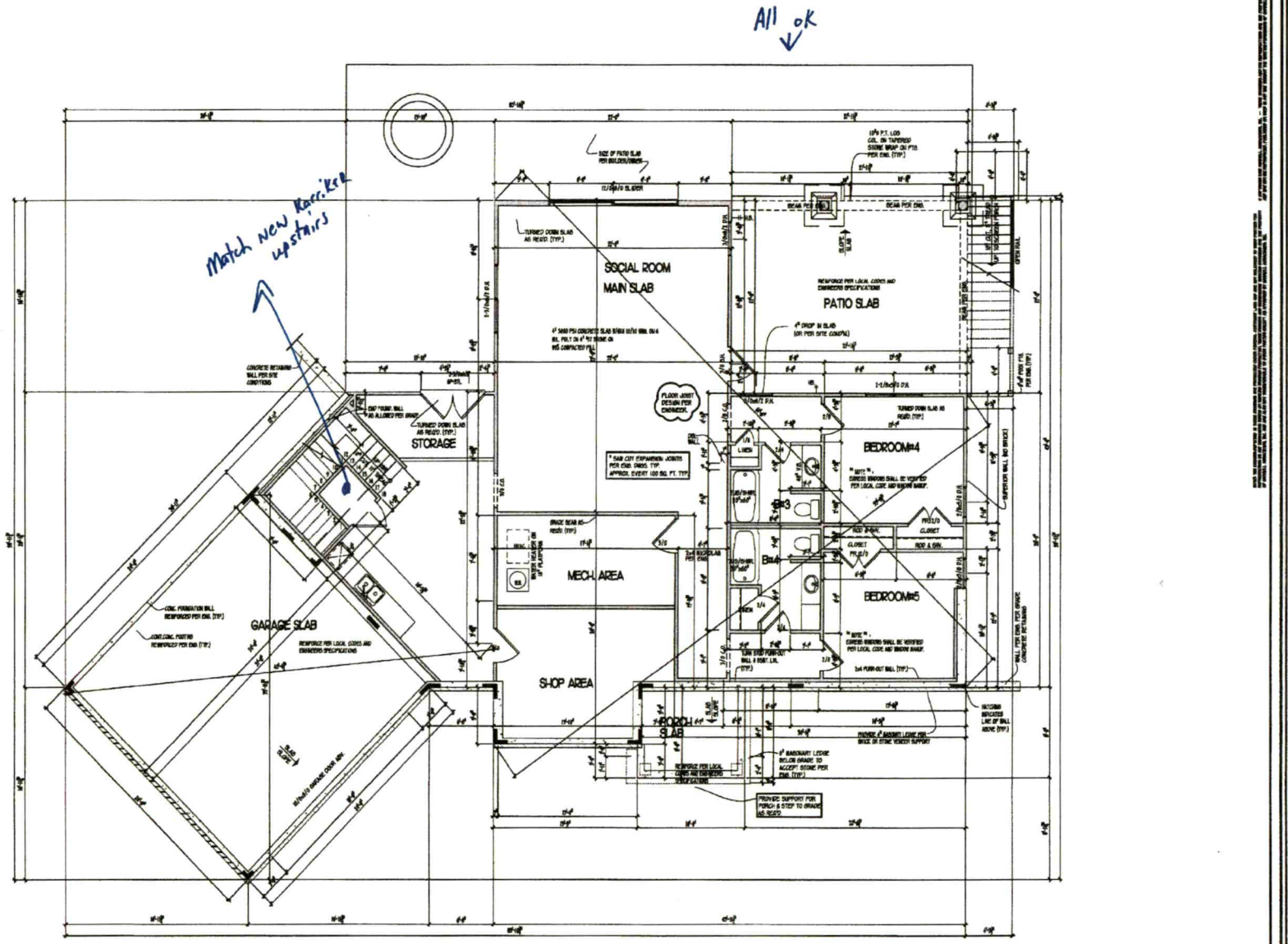
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WALKERS RIDGE

TERRACE LEVEL PLAN

09/10/20

REV. NO.	REV. DATE/INIT.
a	09/23/20 [DM]
	09/25/20 [DM] [GRR]

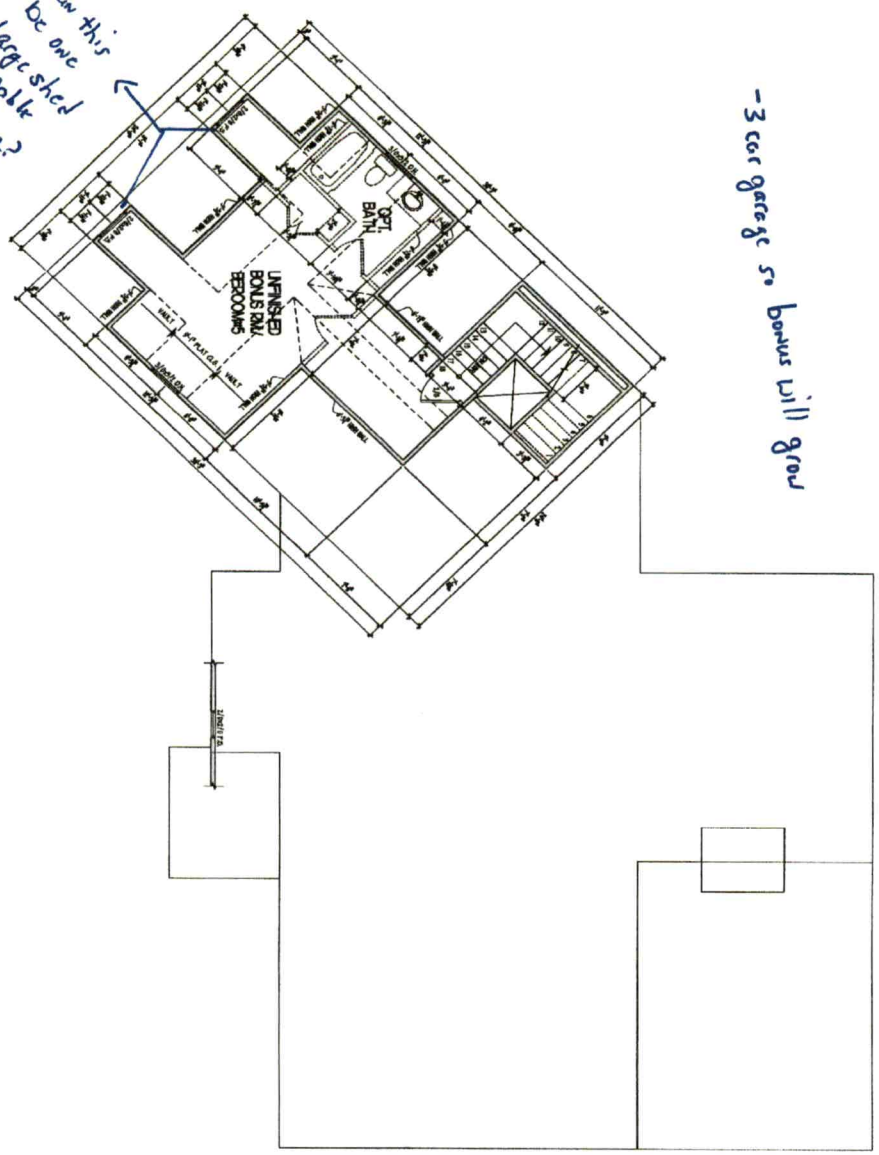
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FILE LOCATION:
w:\plans\walkers ridge\

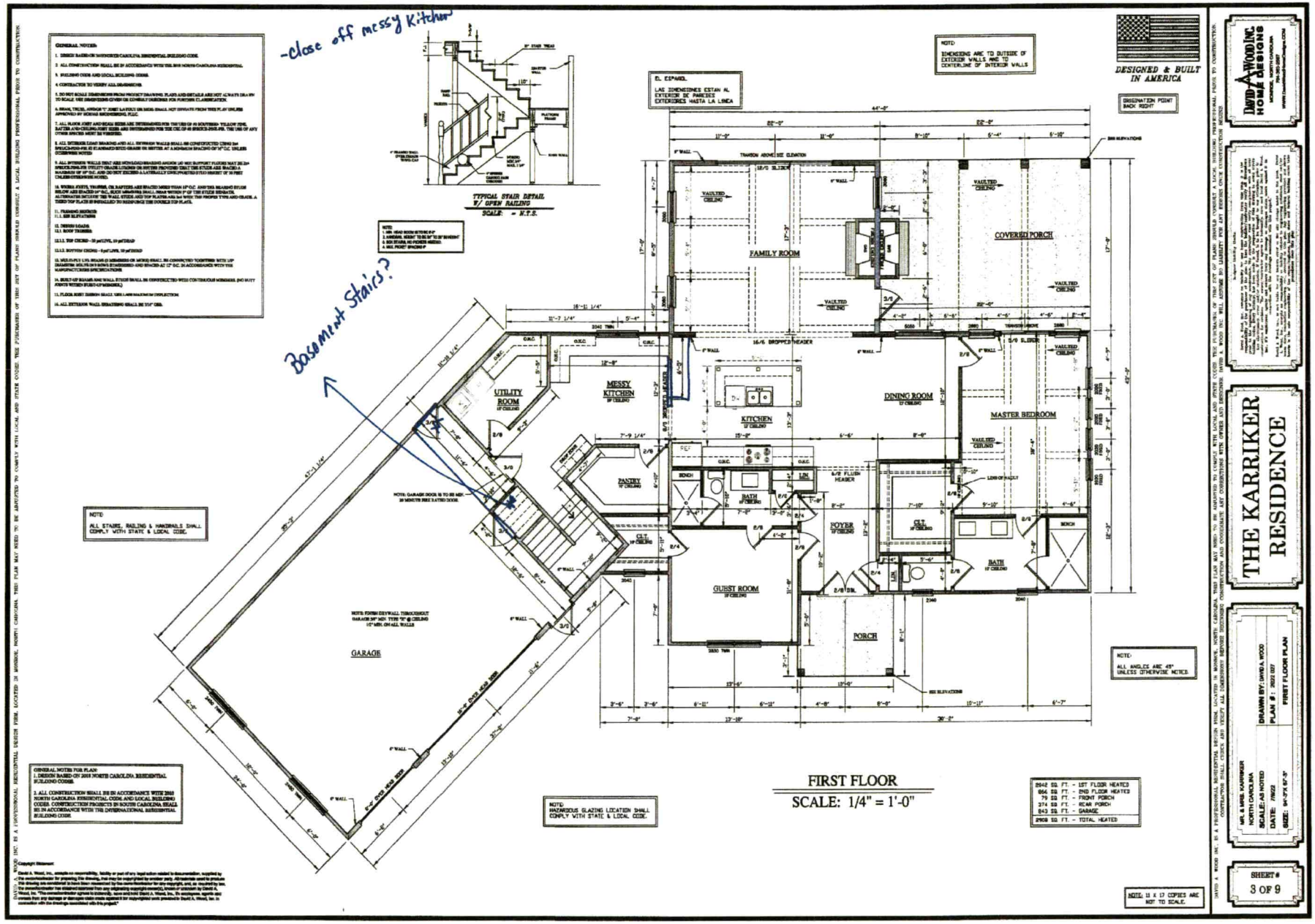
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PS	T1

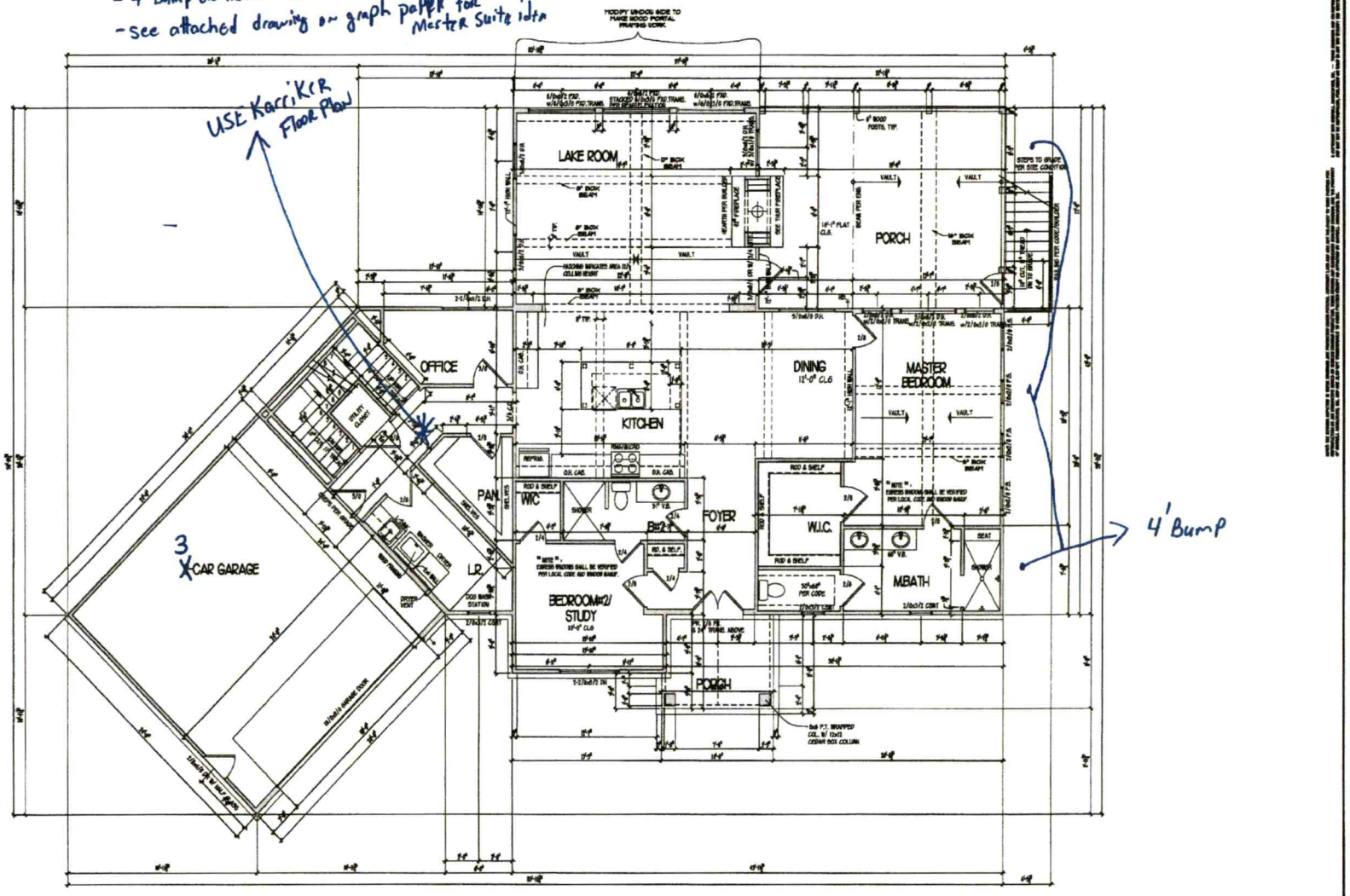


PS	A2	18050	09/10/20	WALKERS RIDGE 2nd FLR. & ELEC. PLANS	GARRELL ASSOCIATES INC.

LICENSED TO:
JEFF MORGAN


-close off messy Kitchen
Basement Stairs?
GENERAL NOTES:
1. DESIGN BASED ON 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2018 NORTH CAROLINA RESIDENTIAL
3. BUILDING CODE AND LOCAL BUILDING CODES.
4. CONTRACTOR TO VERIFY ALL DIMENSIONS.
5. DO NOT SCALE DIMENSIONS FROM PRODUCT DRAWING. PLANS AND DETAILS ARE NOT ALWAYS DRAWN TO SCALE. USE DIMENSIONS GIVEN OR CONSULT OMISSIONS FOR FURTHER CLARIFICATION.
6. BEAM, TRUSS, AND/OR "I" JOIST LAYOUT ON THESE SHALL NOT DEVIATE FROM THIS PLAN UNLESS APPROVED BY HOUSE ENGINEERING, PLLC.
7. ALL FLOOR JOIST AND HEAD BEDS ARE DETERMINED FOR THE USE OF #2 SOUTHERN YELLOW PINE. RAFTER AND CEILING JOIST SIZES ARE DETERMINED FOR THE USE OF #2 SPRUCE-PINE-FIR. THE USE OF ANY OTHER SPECIES MUST BE VERIFIED.
8. ALL INTERIOR LOAD BEARING AND ALL EXTERIOR WALLS SHALL BE CONSTRUCTED USING 2x4 SPRUCE-PINE-FIR #2 STANDARD STUD GRADE OR BETTER AT A MINIMUM SPACING OF 16" O.C. UNLESS OTHERWISE NOTED
9. ALL INTERIOR WALLS THAT ARE NON-LOAD-BEARING AND/OR DO NOT SUPPORT FLOORS MAY BE 2x4 SPRUCE-PINE-FIR UTILITY GRADE LUMBER OR BETTER PROVIDED THAT THE STUDS ARE MADE A MAXIMUM OF 10' IN LENGTH AND DO NOT EXCEED A LATERALLY UNSUPPORTED STUD HEIGHT OF 10 FEET UNLESS OTHERWISE NOTED.
10. WOOD, STEEL, TRUSSES, OR RAFTERS ARE SPACED MORE THAN 16" O.C. AND THE SHEATHING IS LESS THAN 1/2" THICK, THE SHEATHING SHALL BE SUPPORTED BY 1" BY 3" WOOD STRIPS SPACED AT 16" O.C. OR LESS.
11. FLOOR JOIST SPANS SHALL NOT EXCEED THE MAXIMUM SPANS SPECIFIED IN THE TABLES.
12. EXTERIOR WALL SHEATHING SHALL BE 7/16" OSB.
13. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED WITH A MINIMUM R-VALUE OF R-19 OR AS REQUIRED BY LOCAL CODE.
14. ALL EXTERIOR WINDOWS AND DOORS SHALL BE ENERGY STAR RATED AND HAVE A MINIMUM U-FACTOR OF 0.30 OR AS REQUIRED BY LOCAL CODE.
15. ALL EXTERIOR DOORS SHALL BE SOLID CORE OR HAVE A MINIMUM R-VALUE OF R-5 OR AS REQUIRED BY LOCAL CODE.
16. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED WITH A MINIMUM R-VALUE OF R-19 OR AS REQUIRED BY LOCAL CODE.
17. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED WITH A MINIMUM R-VALUE OF R-19 OR AS REQUIRED BY LOCAL CODE.
18. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED WITH A MINIMUM R-VALUE OF R-19 OR AS REQUIRED BY LOCAL CODE.
19. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED WITH A MINIMUM R-VALUE OF R-19 OR AS REQUIRED BY LOCAL CODE.
20. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED WITH A MINIMUM R-VALUE OF R-19 OR AS REQUIRED BY LOCAL CODE.
TYPICAL STAIR DETAIL W/ OPEN RAILING
SCALE: - N.T.S.
NOTE: DIMENSIONS ARE TO OUTSIDE OF EXTERIOR WALLS AND TO CENTERLINE OF INTERIOR WALLS
EL ESPANOL
LAS DIMENSIONES ESTAN AL EXTERIOR DE PAREDES EXTERIORES HASTA LA LINEA
DESIGNED & BUILT IN AMERICA
ORIGINATION POINT BACK RIGHT
FAMILY ROOM
COVERED PORCH
MESSY KITCHEN
UTILITY ROOM
KITCHEN
DINING ROOM
MASTER BEDROOM
PANTRY
FOYER
GUEST ROOM
PORCH
GARAGE
NOTE: GARAGE DOOR IS TO BE MIN. 20 MINUTE FIRE RATED DOOR.
NOTE: FURR DRYWALL THROUGHOUT GARAGE MIN. TYPE "X" @ CEILING 12" MIN. ON ALL WALLS
NOTE: ALL STAIRS, RAILING & HANDRAILS SHALL COMPLY WITH STATE & LOCAL CODE.
NOTE: ALL ANGLES ARE 45° UNLESS OTHERWISE NOTED.
NOTE: HAZARDOUS GLAZING LOCATION SHALL COMPLY WITH STATE & LOCAL CODE.
GENERAL NOTES FOR PLAN:
1. DESIGN BASED ON 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH 2018 NORTH CAROLINA RESIDENTIAL CODE AND LOCAL BUILDING CODES. CONSTRUCTION PROJECTS IN SOUTH CAROLINA SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL RESIDENTIAL BUILDING CODE.
FIRST FLOOR
SCALE: 1/4" = 1'-0"
2642 SQ. FT. - 1ST FLOOR HEATED
864 SQ. FT. - 2ND FLOOR HEATED
79 SQ. FT. - FRONT PORCH
374 SQ. FT. - REAR PORCH
843 SQ. FT. - GARAGE
3908 SQ. FT. - TOTAL HEATED
NOTE: 11 x 17 COPIES ARE NOT TO SCALE.
DAVID A WOOD INC.
HOME DESIGNS
MONROE, NORTH CAROLINA
704-283-2287
THE KARRIKER RESIDENCE
MR. & MRS. KARRIKER
NORTH CAROLINA
SCALE: AS NOTED
DATE: 7/8/22
SIZE: 94'-3"x 87'-9"
DRAWN BY: DAVID A. WOOD
PLAN # : 2022.007
FIRST FLOOR PLAN
SHEET # 3 OF 9

- use Morgan Elevation
- use Karrike floor plan in pantry, stairs, Laundry Room area
- 4' Bump on master bedroom side
- see attached drawing on graph paper for Master Suite idea



LICENSED TO:
JEFF MORGAN

GARRELL ASSOCIATES INC.

WALKERS RIDGE

1st FLOOR PLAN

09/10/20

REV. NO.	REV. DATE/INIT.
01	09/10/20 (jm)

18050

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