

16023 SUNSET DR

00102340

5/18/2007

duponbj

Groundwater and Wastewater Services File Imaging Project
May 2007
Barcode Font = IDAutomationHC39M

4/6/88 P.O. #50- Comp Permit

APPLICATION FOR AN IMPROVEMENT PERMIT

MECKLENBURG COUNTY · ENVIRONMENTAL HEALTH ·

1200 BLYTHE BOULEVARD
CHARLOTTE, NC 28203
PHONE (704) 376-4603

Mecklenburg County services are available without regard to ethnic origin, sex, or disability.

(OFFICE USE ONLY)
FILE: 4428A
TC: _____
SERIAL: Nº 15919 ☐ L ☐ CRT

JOB LOCATION

① ADDRESS: 16023 SunSet Dr. (STREET NO. / STREET) ② FILE: _____
③ JURISDICTION: _____ ④ TAX PARCEL NO.: 00102340
⑤ SUBDIVISION: _____ ⑥ LOT: 8 ⑦ BLOCK: _____

OWNER

⑧ NAME: John (FIRST) Hope (MIDDLE) Adams (LAST)
⑨ MAILING ADDRESS: 924 Mallard Creek Church Rd. West
⑩ CITY: Charlotte ⑪ STATE: NC ⑫ ZIP: 28213
⑬ PHONE: (WORK) N/A ⑭ (HOME) 547-1249

REQUEST

This request is for a(n):

⑮ ☐ New permit
⑯ ☐ Repair or alteration permit
⑰ ☐ Authorization for mobile home exchange
⑱ ☒ Other (specify) Garage

DESIGN CRITERIA

System will serve:

⑲ ☒ Residence ⑳ ☐ Mobile home
㉑ ☐ Business or place of public assembly
㉒ Number of bedrooms? 4
㉕ Type? _____
㉓ Maximum occupancy? 5
㉖ Maximum number of employees? _____
㉔ Basement? ☒ yes ☐ no
㉗ Maximum number of seats? _____

WATER SUPPLY

㉘ Water supply from (present or proposed):

A ☒ Individual well
B ☐ Municipal system
C ☐ Community well
D ☐ Community system

㉙ The undersigned, owner of the property described above as the "JOB LOCATION" has read the foregoing application, acknowledges that the contents of same are true, and authorizes agents of the MECKLENBURG COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH to enter onto the property for the purpose of processing this request.

Signed: John H. Adams
Date: 4/5/88

IMPROVEMENT PERMIT

The undersigned, an authorized agent of the MECKLENBURG COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH, certifies that the Department has approved the Request for the Job Location contained in this document. This approval is granted in accordance with the provisions of Laws And Rules For Sanitary Sewage Collection, Treatment And Disposal in effect at the time of issuance of the permit and is subject to the following provisions:

. . . No work shall be conducted on the septic tank system until an Installation, Construction, Alteration and/or Repair permit is issued by this Department.

. . . This permit is not transferable, and shall become null and void 36 months from the date of issuance.

_____ / _____
Environmentalist Date

_____ / _____
Director or Authorized Section Head Date

*This permit must be signed by the Director of Environmental Health or an authorized section head in order to be valid.

4428A #7617

Supervisor/Administrative Professional Checklist

New Septic ☐ **New Well** ☐ **Use Existing** ☑ **Alteration** ☒ **Modified Plot Plan** ☐

New Septic Fees Paid:

IP ($250.00) _____ Initials/Date

CA ($200.00) _____ Initials/Date

OP ($200.00) _____ Initials/Date

(CA and OP fees need to be paid before a building permit can be issued)

New Well Fee Paid: $550.00 _____ Initials/Date

Use Existing Fee Paid: $100.00 _____ Initials/Date

Alteration Fee Paid: $300.00 (Total) $200 (If use existing was paid) 300 LE 7/7/15 Initials/Date

Modified Plot Plan Fee Paid: $100.00 _____ Initials/Date

Floor plans need to be submitted and reviewed before CA can be issued. ☒ Reviewed ☒ JPM

This site is served by septic and well. Verify each is complete before final hold is released. ☐

Septic file completed. ☐ _____ Well file completed. ☐ _____

Send permit for signature. ☒ Signature received. ☒ _____

This septic system requires a certified operator contract before final hold is released. ☐

Certified operator contract is on file. ☐ _____

Groundwater & Wastewater Services
Septic Project File & Data Review Worksheet

GWS File #: 9428A WASPS App #: 7617

Primary ES assigned to project: Jeremy Michelene

Secondary ES assigned to project: _____

Project Type: New System ☐ Alteration ☒ Repair ☐ Modified Plot Plan ☐

I. File Review:

Rule or Law	Permit Application			
.1937(d)	Is the Application complete	Yes ☑	No ☐	N/A ☐
.1937(d)	Is there a Site plan/Plat with application	Yes ☑	No ☐	N/A ☐
.1937(d)	Is the Facility shown?	Yes ☑	No ☐	N/A ☐
.1937(d)	Are appurtenances shown	Yes ☑	No ☐	N/A ☐
	Site Evaluation Information			
.1939 (a)(1)	Topography and Landscape Position Recorded?	Yes ☑	No ☐	N/A ☐
.1940 (a-g)	Slope % Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Texture Class Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Structure type Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Consistence Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Mineralogy Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(3)	Soil Wetness Condition Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(4)	Soil Depth to Rock or Parent Material Recorded When Encountered	Yes ☑	No ☐	N/A ☐
.1939 (a)(5)	Depth to Restrictive Horizons Recorded When Encountered?	Yes ☑	No ☐	N/A ☐
.1939 (a)(6)	Sufficient Available Space Recorded?	Yes ☑	No ☐	N/A ☐
.1937(m)	Are the Profile Locations Shown?			
.1939(a)	Are the S/PS Profiles in system & in repair area?	Yes ☑	No ☐	N/A ☐
& .1945(b)	Number of auger borings made: 2 PITS			
	Were sufficient auger borings made?	Yes ☑	No ☐	N/A ☐
.1939(d), .1955, .1956, .1957	LTAR 0.3 LTAR	Yes ☐	No ☐	N/A ☐
	Improvement Permit/Construction Authorization			
.1937(g) 130A-336(a)	Proposed System Type stated-Initial	Yes ☑	No ☐	N/A ☐
.1945(b)	Proposed System Type stated-Repair	Yes ☑	No ☐	N/A ☐
130A-336 (a)(3)	System location identifiable by setbacks - Initial	Yes ☑	No ☐	N/A ☐
.1937(g) .1945(b)	System components shown – Initial	Yes ☑	No ☐	N/A ☐
.1945(b)	Repair area shown	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Does System design match facility, flow & WWcharacteristics?	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Is System design consistent with soil/site conditions?	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Is the System located in the approved area?	Yes ☑	No ☐	N/A ☐
130A-336(a)	Is the Design flow (gpd) indicated? 480	Yes ☑	No ☐	N/A ☐

130A-336(a)	Number of Bedrooms, employees, seats, etc. indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench depth indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench width indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench length indicated?	Yes ☑	No ☐	N/A ☐
130A-336(a)(1)	Proposed/existing well shown?	Yes ☐	No ☐	N/A ☑
130A-336(a)(1)	Property line lengths shown?	Yes ☑	No ☐	N/A ☐
130A-336(a)	Facility/appurtenance setbacks shown from fixed points?	Yes ☑	No ☐	N/A ☐

Operation Permit

.1937(i)	System type as described in table V(a) of rule .1961	Yes ☐	No ☐	N/A ☐
.1937(i)	Conditions for system performance, operation, maintenance, monitoring and reporting.	Yes ☐	No ☐	N/A ☐

II. WASPS Review:

Construction authorization issued	Yes ☐	No ☐	N/A ☐
Installation approval issued	Yes ☐	No ☐	N/A ☐
Operation permit issued	Yes ☐	No ☐	N/A ☐
Other related documentation	Yes ☐	No ☐	N/A ☐

Items requiring correction/modification: _____

Comments: SEND FOR SIGNATURES

IA issued date: 2-7-17

OP issued date: 6-7-17

Review performed by: _____ Date performed: _____

4428A

7 JUL '15 PM12:00

MECKLENBURG COUNTY
HEALTH DEPARTMENT

APPLICATION FOR A RESIDENTIAL SITE IMPROVEMENT PERMIT/ CONSTRUCTION AUTHORIZATION FOR AN ON-SITE WASTEWATER SYSTEM, NEW WELL INSTALLATION, OR REPAIR OF EXISTING WELL

1. SEPTIC / TYPE APPLICATION: ○ N/A ○ NEW SYSTEM ◉ ALTERATION ○ REPAIR ○ MODIFIED PLOT PLAN

2. WELL / TYPE APPLICATION: ○ N/A ○ NEW WELL ○ MAJOR REPAIR ○ ABANDONMENT

Application # 7617

3. JOB LOCATION INFORMATION:
TAX PARCEL NUMBER: 00102340
STREET ADDRESS: 16023 Sunset Drive
CITY: Huntersville
STATE: NC ZIP: 28078
SUBDIVISION NAME: _____
LOT #: _____ LOT SIZE (acres): _____
TOWNSHIP:
○ MECKLENBURG ○ CORNELIUS ◉ HUNTERSVILLE
○ DAVIDSON ○ CHARLOTTE ○ PINEVILLE
○ MATTHEWS ○ MINT HILL

4. BUILDING INFORMATION:
BUILDING TYPE:
○ SINGLE MOBILE HOME ○ MODULAR HOME
○ DOUBLE WIDE ○ MULTIPLE FAMILY
◉ HOUSE ○ OTHER _____
HEATED SQUARE FOOTAGE: 2381
NUMBER OF BEDROOMS: 3
NUMBER OF OCCUPANTS: 4
FOUNDATION TYPE:
○ CONCRETE SLAB ○ BASEMENT WITH PLUMBING
◉ CRAWL SPACE ○ BASEMENT WITH NO PLUMBING

5. IF PLANNING TO EXPAND OR ALTER THE EXISTING SEPTIC SYSTEM PLEASE COMPLETE THE FOLLOWING SECTION: ☐ N/A

NUMBER OF BEDROOMS TO BE ADDED: 1 NUMBER OF ADDITIONAL OCCUPANTS IN THE RESIDENCE: _____

6. WATER SUPPLY: ○ MUNICIPAL ◉ PRIVATE WELL ○ PUBLIC WELL ○ SHARED WELL ○ OTHER _____

7. PROPOSED USE OF WELL: ○ N/A ○ IRRIGATION ◉ POTABLE (DRINKING WATER) ○ OTHER _____

8. PLEASE INDICATE AND RANK DESIRED SEPTIC SYSTEM TYPE(S) IN ORDER OF PREFERENCE *(1-MOST DESIRED 5-LEAST DESIRED)*:

☐ N/A ☐ ANY TYPE ☐ CONVENTIONAL ☐ ACCEPTED ☐ INNOVATIVE ☐ ALTERNATIVE ☐ OTHER _____

8A. RANK: ____ ____ ____ ____ ____

9. DO ANY OF THE FOLLOWING APPLY TO THE PROPERTY IN QUESTION? IF "YES" PLEASE ATTACH SUPPORTING DOCUMENTATION.

BURIED CABLES, LANDFILLS, STUMPHOLES	○ YES ◉ NO	GRADING/SOIL REMOVAL PERFORMED	○ YES ◉ NO
EXISTING WASTEWATER (SEPTIC) SYSTEMS	○ YES ◉ NO	JURISDICTIONAL WETLANDS	○ YES ◉ NO
WELLS, SPRINGS, OR WATER LINES	○ YES ◉ NO	APPROVAL REQUIRED BY ANY OTHER PUBLIC AGENCY	○ YES ◉ NO
EASEMENTS OR RIGHT-OF-WAYS	○ YES ◉ NO	WASTEWATER OTHER THAN DOMESTIC SEWAGE	○ YES ◉ NO
CHEMICAL/PETROLEUM STORAGE TANKS	○ YES ◉ NO	KNOWN UNDERGROUND CONTAMINATION	○ YES ◉ NO
WASTE STORAGE	○ YES ◉ NO	GROUNDWATER USE RESTRICTIONS/VARIANCES	○ YES ◉ NO

10. WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 1966 ☐ UNKNOWN

11. WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? June 23 2015 ☐ N/A

12. PROPERTY OWNER:
NAME: Stan Holt
ADDRESS: 16023 Sunset Drive
CITY: Huntersville
STATE: NC. ZIP: _____
WORK PHONE: _____
MOBILE PHONE: 336 259 0294
FAX: _____
E-MAIL: _____

13. OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:
NAME: Nelson Dellinger
ADDRESS: 170 Pisgah Church Rd.
CITY: Statesville
STATE: NC. ZIP: 28625
WORK PHONE: 704 902 0429
MOBILE PHONE: 704 902 0429
FAX: 704 876 4387
E-MAIL: Hammerman5499@aol.com

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST. SUITE 211 CHARLOTTE, NC 28202, OFFICE: 704-336-5108, FAX: 704-336-6894

Revised on: 12/15/10

14. SEPTIC SYSTEM PERMIT APPLICATION:

If the information in this application is falsified, changed, or the site is altered, then the Improvement Permit and Authorization to Construct shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for either sixty (60) months or is non-expiring depending upon the documentation submitted: complete site plan = 60 months, complete plat = non-expiring.

MD (Initial here for septic system applications)

15. WELL PERMIT APPLICATION:

If the information in this application is falsified, changed, or the site is altered, then the Well Permit shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for a period of twelve (12) months from the date of issuance.

_____ (Initial here for well applications)

16. APPLICATION SIGNATURE SECTION:

ONLY COMPLETE APPLICATIONS WILL BE PROCESSED. A proper signature is required in order to process your application. Please review the application carefully and sign in the space provided below. A PROPOSED PLOT PLAN is required to be submitted with each application.

Property Owner's or Owner's Legal Representative Signature

6-22-15
Date

OFFICE USE ONLY

○ SURVEY PLAT TO SCALE SUBMITTED ○ SCALED SITE PLAN SUBMITTED ○ UN-SCALED SITE PLAN SUBMITTED

SEPTIC APPLICATION FEE RECEIVED: $ _____ DATE FEE RECEIVED: _____

WELL APPLICATION FEE RECEIVED: $ _____ DATE FEE RECEIVED: _____

APPLICATION PROCESSED BY: _____

GWS FILE NUMBER ASSIGNED: _____

APPLICATION ID NUMBER ASSIGNED: _____

COMMENTS:

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST. SUITE 211 CHARLOTTE, NC 28202, OFFICE: 704-336-5103, FAX: 704-336-6894

Revised on: 12/15/10

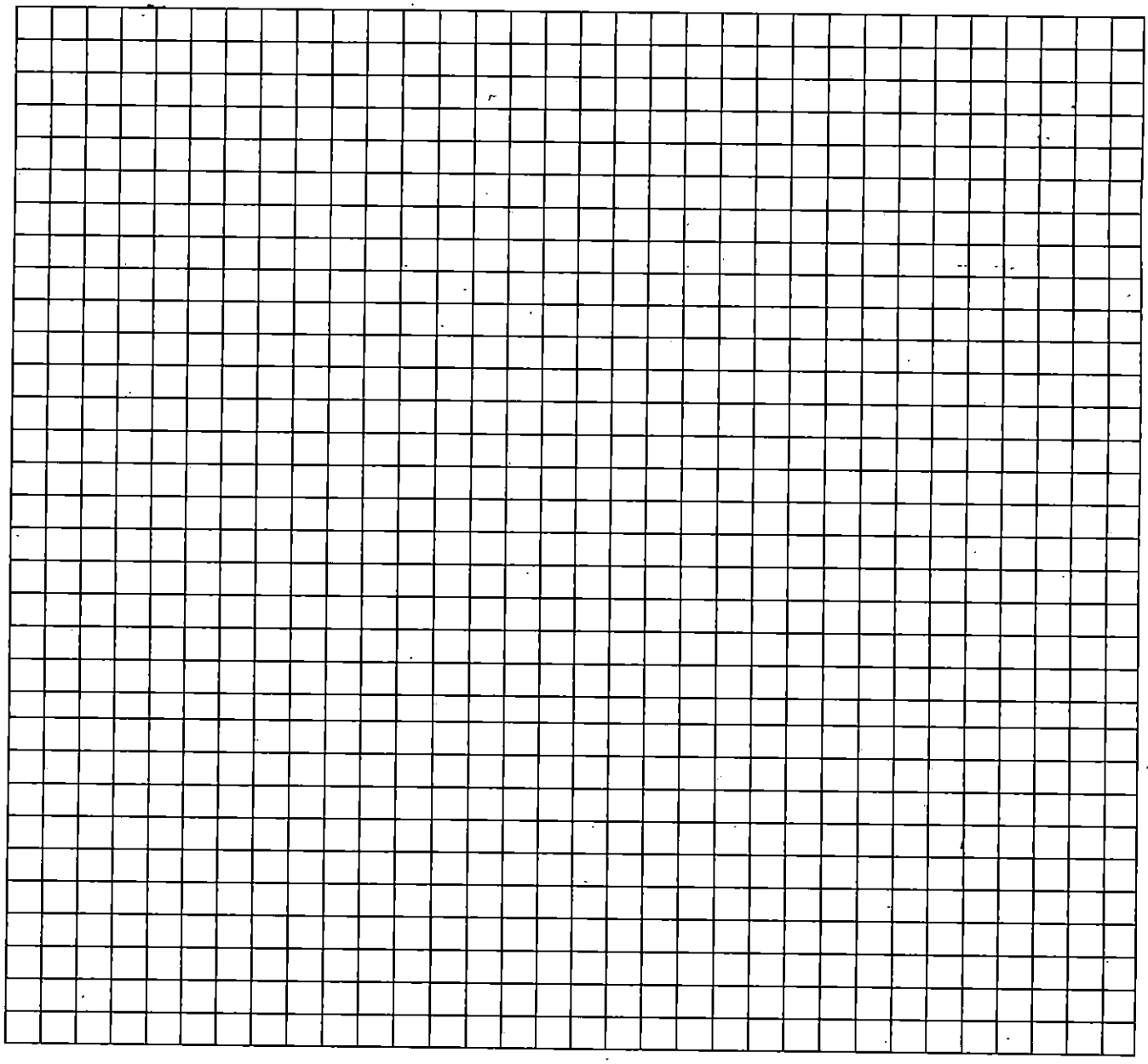
File #: _____

PROPOSED PLOT PLAN

A drawing showing the locations of the following items is required: existing and proposed property lines with dimensions, easements or right-of-ways, proposed building pad(s) or existing building footprint(s), all appurtenances (garage, driveway, deck, pool, etc.), location of existing or proposed well(s), location of existing or proposed sewer lines and sewage disposal systems, surface water bodies, and any aboveground or underground storage tanks. Provide names for all roads that adjoin the property.

Street Address: _____ Tax Parcel #: _____

Subdivision Name: _____ Lot #: _____



_____ _____

Property Owner's or Owner's Legal Representative Signature Date

MECKLENBURG COUNTY

E. Winters Mabry, MD
Director

Health Department

(704) 432-3199

Addendum to Application for
New Well or Septic System Installation
Abandonment or Repair of Existing Well or Septic System

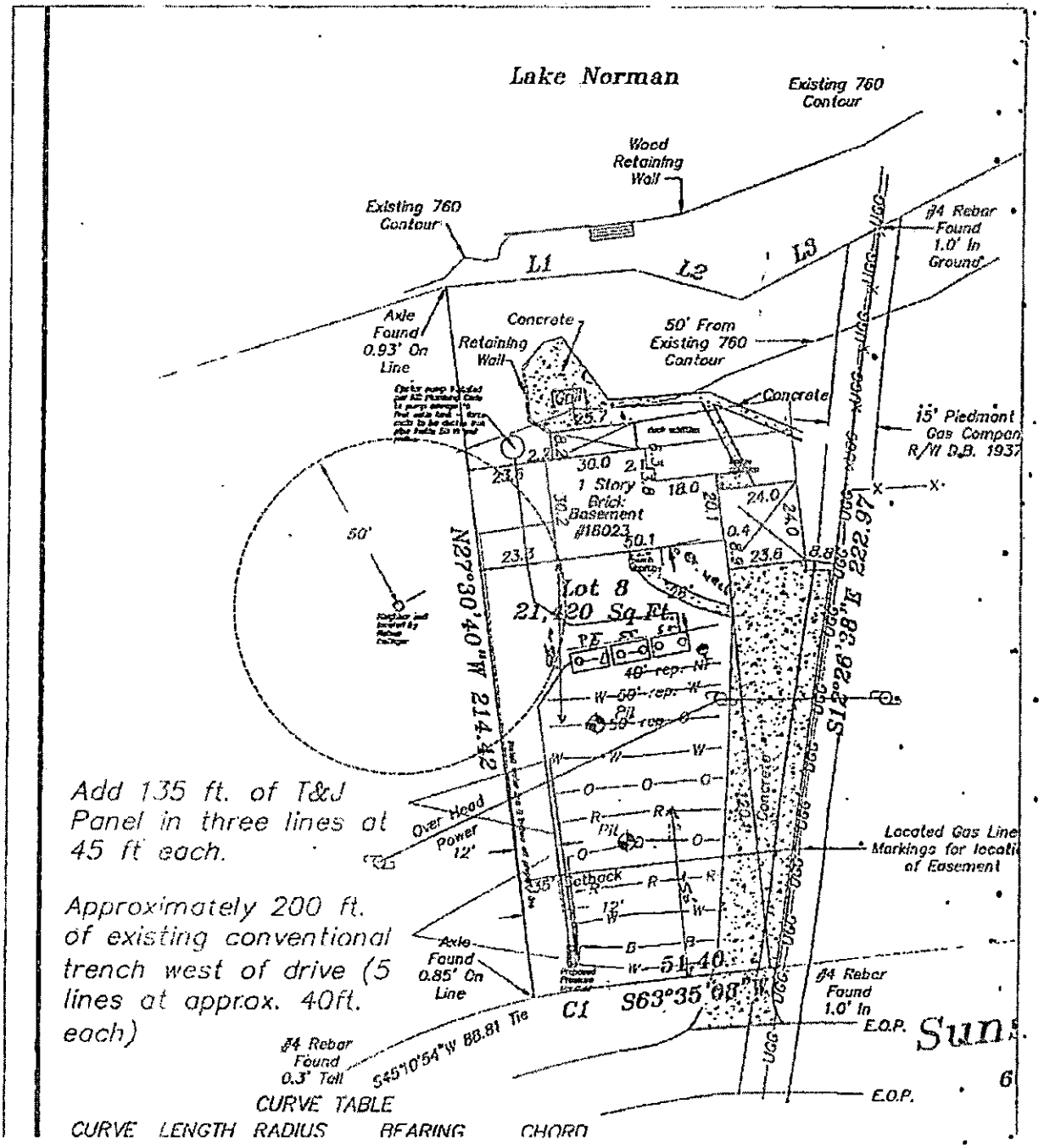
Your signature below confirms the following:

1. The information on the application is true, complete and accurate.
2. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliances with applicable laws and rules.
3. I acknowledge that Nelson Dellinger is acting as my legal representative (agent) in the submittal of the application for a water supply well or septic permit located at 16023 Sunset Drive, Huntersville, NC 28078
   Number Street Town
   (Or Parcel Number)

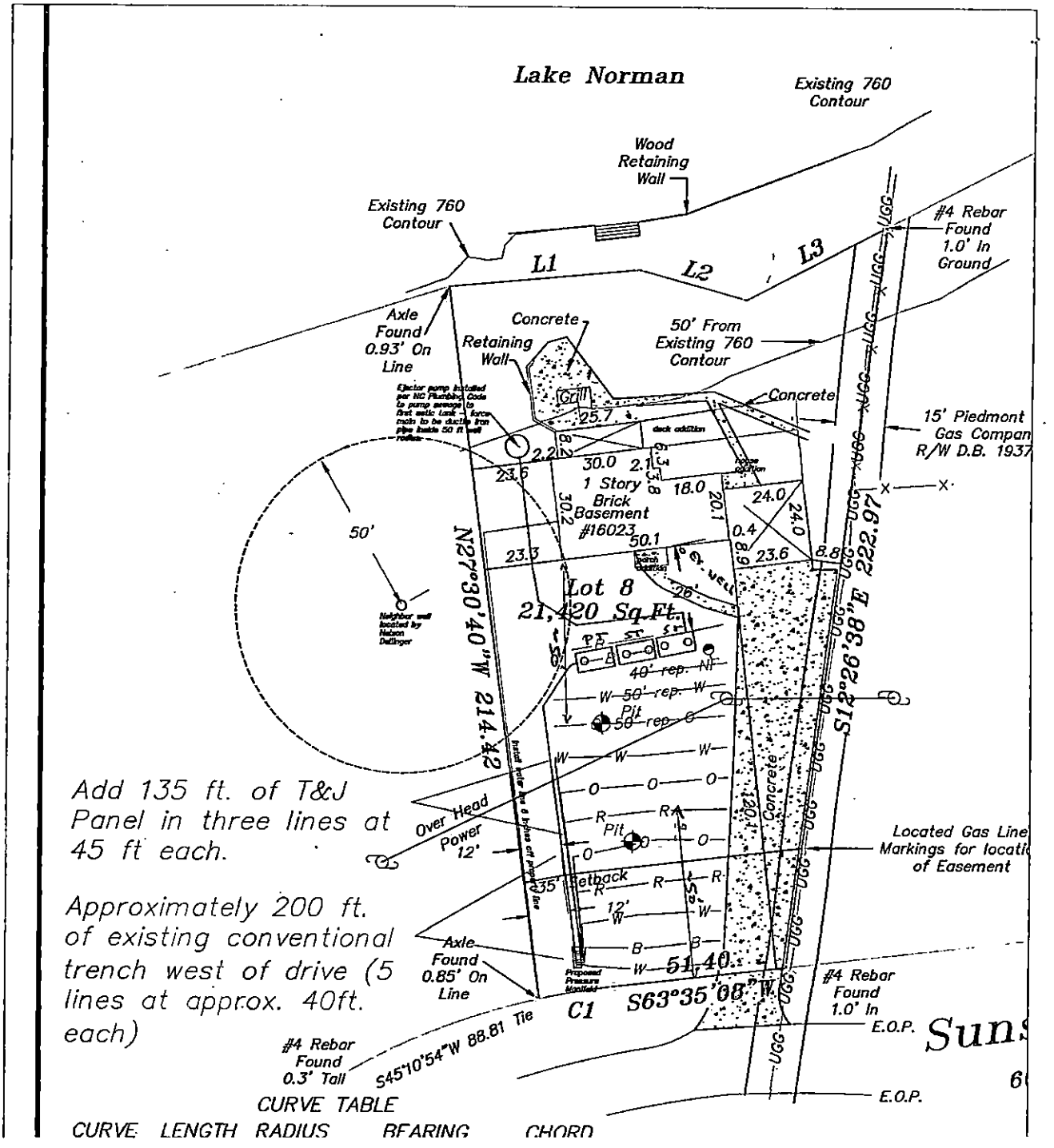
Stanley D. Holt
Property Owner (print name)

Stanley D. Holt
Property Owner (signature)

6/23/15
Date


Lake Norman
Existing 760 Contour
Wood Retaining Wall
Existing 760 Contour
#4 Rebar Found 1.0' In Ground
L1
L2
L3
Axle Found 0.93' On Line
Concrete Retaining Wall
50' From Existing 760 Contour
Concrete
15' Piedmont Gas Compan
R/W D.B. 1937
30.0
1 Story Brick Basement #18023
18.0
24.0
50'
N27°30'40"W 214.42
Lot 8
21,120 Sq Ft
S18°26'E 222.97
PE
40' rep. W
50' rep. W
Pit
50' rep. W
Add 135 ft. of T&J Panel in three lines at 45 ft each.
Approximately 200 ft. of existing conventional trench west of drive (5 lines at approx. 40ft. each)
Over Head Power 12'
Located Gas Line Markings for locati of Easement
35' Setback
12'
Axle Found 0.85' On Line
S63°35'08"W 54.40
#4 Rebar Found 1.0' In
E.O.P.
#4 Rebar Found 0.3' Tall
S45°10'54"W 88.81 Tie
C1
E.O.P.
CURVE TABLE
CURVE LENGTH RADIUS BEARING CHORD

X _____
Signature


Lake Norman
Existing 760 Contour
Wood Retaining Wall
Existing 760 Contour
#4 Rebar Found 1.0' In Ground
L1
L2
L3
Axle Found 0.93' On Line
Concrete Retaining Wall
50' From Existing 760 Contour
Concrete
Grill
15' Piedmont Gas Compan R/W D.B. 1937
1 Story Brick Basement #16023
Lot 8
21,420 Sq.Ft.
50'
N27°30'40"W 214.42'
S12°26'38"E 222.97'
Add 135 ft. of T&J Panel in three lines at 45 ft each.
Approximately 200 ft. of existing conventional trench west of drive (5 lines at approx. 40ft. each)
Over Head Power 12'
Pit
Setback
Located Gas Line Markings for locati of Easement
Axle Found 0.85' On Line
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#4 Rebar Found 1.0' In
E.O.P.
#4 Rebar Found 0.3' Tall
S45°10'54"W 88.81 Tie
E.O.P.
CURVE TABLE
CURVE LENGTH RADIUS BEARING CHORD

X

Signature

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte NC 28202
Phone: (704) 336-5103 Fax: (704) 336-8894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: 30007617 GWS File #: 4428A Tax Parcel #: 001-023-40

- This IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change. There is to be NO grading, filling, or disturbance of the soil in the area of the septic tank system or repair area.
- CONSTRUCTION AUTHORIZATION must be obtained prior to receiving a Building Permit. The Construction Authorization is NOT transferable. Do not clear, grade, fill or disturb soil prior to obtaining a Construction Authorization.
- Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

I. This Improvement Permit Shall: Expire in Five (5) Years **Expiration Date (If Applicable):** 9/30/2020

Type of Installation: Residential - Alteration Lot Number: 0

Structure Type: HOUSE Size (ft^2): 2381 # Bedrooms: 4 # Occupants: 4

Building Foundation: Crawl Space Water Supply: Private Well

II. Initial System Type: PPBPS (gravity) + EXISTING CONVENTIONAL SYSTEM **System Classification:** IIIb (SEE CONSULTANT PLAN)

Initial System Specifications:

Design Flow (gpd): 480 LTAR (gpd/ft^2): 0.3 Septic Tank Size (gal): 1000 (2) Pump Tank Size (gal): 1000

Trench Width (ft): 2 Trench Spacing (ft): 6 Absorption Area (ft^2): new Total Trench Length (ft): EXISTING 220' CONV. 135' PPBPS (NEW)

Maximum Trench Depth (in): 30 Depth of Media (in): N/A Distribution Device: Pressure Manifold

III. Repair System Type: PPBPS (gravity) **System Classification:** IIIb

Repair System Specifications:

Design Flow (gpd): 240 LTAR (gpd/ft^2): 0.3 Septic Tank Size (gal): 1000 Pump Tank Size (gal): 1000

Trench Width (ft): 2 Trench Spacing (ft): 6 Absorption Area (ft^2): 800 Total Trench Length (ft): 133

Maximum Trench Depth (in): 30 Depth of Media (in): N/A Distribution Device: Pressure Manifold

IV. Permit Conditions/Comments:

(Please See the Following Page for Permit Conditions.)

The undersigned, an authorized agent of the STATE OF NORTH CAROLINA, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment, and Disposal Systems* and is subject to the following provisions:

- No work shall be conducted on the septic system until a Pre-Construction meeting has been completed by the Department.
- The septic system installer shall be a licensed septic contractor with the North Carolina Wastewater Contractor Inspector Certification Board.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

Authorized Agent: Jeremy Michelone Owner/Legal Agent: Nelson Dellinger

Signature: Jeremy Michelone, REHS Signature: Nelson Dellinger

Print Name

Date Issued: 9/30/2015

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: 30007617 GWS File #: 4428A

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 5 years by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- Proper well abandonment is required prior to receiving an Installation Approval from our office to install the septic system.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- All components of the septic system must be installed in accordance with the required setbacks listed on the corresponding plot plan.
- All components of the septic system must be located at least 100 ft. (50 ft. minimum) from all private wells.
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- All components of the septic system must be located a minimum distance from the normal pool elevation or mean high water mark for the nearby body of water. See plot plan for minimum setback requirements.
- Upon completion of the project the system designer shall provide Groundwater & Wastewater Services with a letter certifying that the system was installed in accordance with the approved design.
- The septic system shall be located at least 25 feet from any foundation drain.

The undersigned, an authorized agent of the STATE OF NORTH CAROLINA, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment and Disposal Systems* and is subject to the following provisions:

- No work shall be conducted on the septic system until a Pre-Construction meeting has been completed by the Department.
- The septic system installer shall be a licensed septic contractor with the North Carolina Wastewater Contractor Inspector Certification Board.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

Authorized Agent: Jeremy Michelone

Signature: Jeremy Michelone

Date Issued: 9/30/2015

Owner/Legal Agent: Nelson Dellinger

Print Name

Signature: Nelson Dellinger

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DHHS
Division of Environmental Health
On-Site Wastewater Section

OPERATION PERMIT for an ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #: 4428A Permit #: 7617 Tax Parcel #: 001-023-40

Property Owner: Stan Holt

Job Location Address: 16023 Sunset Drive

City: Huntersville State: NC Zip Code: 28078

Operation Permit Issuance Date: 6/7/17 Contractor Name: R+A

Permitted Design Flow: 480 GPD Liquid Capacity of Dosing Tank: 1000 gallons

Liquid Capacity of Septic Tank: 1000 (2) gallons Manufacture Pellinger Effluent Pump Model: Goulds WE0511

Drainfield Installation ☐ N/A

Trench Depth: 30 inches

Trench Width: 2 feet

Line Spacing: 8 feet (O.C.)

Total line length: 135 feet

# of Lines: 3 @ 45 feet

Depth of Media: 16 inches (Type) PPBPS

Depth of Cover: 12 inches

Distribution Device: P. Manifold

Bed Installation *(For Repair Installations ONLY.)* ☒ N/A

Bed Depth: _____ inches

Bed Width: _____ feet

Total line length: _____ feet

# of Lines: _____ @ _____ feet

Depth of Media: _____ inches (Type) _____

Depth of Cover: _____ inches

Distribution Device: _____

Water Supply Source

☒ Municipal ☐ Private Well ☐ Community Well

☐ Other _____

System Installation Setbacks

Distance from Building Foundation: 25' feet

Distance from Property Line: 11' feet

Distance from Water Supply Source: 51' feet

Inspection Dates

Tank(s) Inspected: 2/7/17

Excavation Inspected: 2/7/17

Pump & Controls Inspected: 6/7/17

SKETCH OF SYSTEM INSTALLATION
(As-Built Drawing)

System Installed
Exactly as Designed
By Pennington Soil Consulting, PLLC

The undersigned has inspected the Septic Tank System described above, and certifies it has been ☒ installed ☐ altered ☐ repaired ☐ as detailed in the plot above ☒ in accordance with the permit issued and meets the provisions of 15A NCAC 18A. 1900, "Laws and Rules for Sewage Treatment and Disposal Systems" in effect on the date of issuance of the permit. The issuance of this Operation Permit does not in any way guarantee that the system will operate properly or relieve any person now or hereafter owning, controlling, or using such system from any liability resulting from the failure of the system to operate properly. This document is issued subject to those restrictions and conditions shown on the permit(s) and the provisions of 15A NCAC 18A. 1900 in addition to those listed below under "Comments." This document shall be null and void if any information contained in the application is untrue or if any additions are made to the property which would increase the requirements for said system.

Notice: Disturbance of the designated repair area may result in the Suspension or Revocation of this permit.

Comments: System Classification & Type: III b, Pressure, PPBPS, NA, NA

DENR Authorized Agent: Jeremy Michelone REHS Signature: Jeremy Michelone, REHS

S

FEE: 200.00
DATE:10/5/2015

MECKLENBURG COUNTY
GROUNDWATER & WASTEWATER SERVICES

FILE NUMBER: 4428A

PERMIT NUMBER: 4428A

PARCEL NUMBER: 00102340

JOB LOCATION INFORMATION

ADDRESS: 16023 SUNSET DR

CITY: HUNTERSVILLE **STATE: NC** **ZIP:** 28078

ISSUED TO: STANLEY HOLT

CONSTRUCTION AUTHORIZATION ISSUANCE DATE: 10/5/2015

CONSTRUCTION AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 30007617, AND THE ATTACHED SITE PLAN WITH SYSTEM DETAILS. CONSTRUCTION AND INSTALLATION MUST ALSO MEET ALL REQUIREMENTS SET FORTH IN THE RULES GOVERNING SANITARY SEWAGE COLLECTION, TREATMENT, AND DISPOSAL AND ANY OTHER APPLICABLE RULES AND LAWS.

2. A PRE-CONSTRUCTION MEETING MUST BE SECURED PRIOR TO INSTALLATION OF THE SEPTIC TANK SYSTEM. THE INSTALLER OF THE SYSTEM SHALL BE A LICENSED SEPTIC TANK CONTRACTOR WITH THE NORTH CAROLINA ONSITE WASTEWATER CONTRACTOR INSPECTOR CERTIFICATION BOARD.

3. ANY ALTERATION IN SITE OR SOIL CONDITIONS (INCLUDING LOCATION OF STRUCTURES AND APPURTENANCES) OR MODIFICATION IN USE, DESIGN WASTEWATER FLOW, OR WASTEWATER CHARACTERISTICS AS SPECIFIED IN THE ASSOCIATED IMPROVEMENT PERMIT AND APPLICATION, MAY SUBJECT THIS CONSTRUCTION AUTHORIZATION AND ASSOCIATED PERMIT(S) TO REVOCATION.

4. THIS CONSTRUCTION AUTHORIZATION AS PROVIDED IN G.S. 130A-335(f) AND G.S. 130A-336(b) SHALL BE VALID FOR A PERIOD EQUAL TO THE VALIDITY OF THE IMPROVEMENT PERMIT, NOT TO EXCEED 60 MONTHS.

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

OPERATION PERMIT for an
ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #: 4428A Permit #: 7617 Tax Parcel #: 001-023-40

Property Owner: Stan Holt

Job Location Address: 16023 Sunset Drive

City: Huntersville State: NC Zip Code: 28078

OPERATION PERMIT CONDITIONS:

I. Performance: System shall perform in accordance with 15A NCAC 18A .1961.

II. Monitoring: System shall be monitored as required by 15A NCAC 18A .1961.

III. Maintenance: Ground absorption sewage treatment and disposal systems shall be checked, and the contents of the septic tank removed, periodically from all compartments, to ensure proper operation of the system. The contents shall be pumped whenever the solids level is found to be more than 1/3 of the liquid depth in any compartment.

IV. Operation: System shall be operated in accordance with 15A NCAC 18A .1961.

System Classification: III-b

*Operation Permits for Type V and VI systems expire five (5) years from the date of issuance (in accordance with Table V(a)). The system owner must contact GWS six (6) months prior to expiration for permit renewal.

Subsurface system operator required: Yes ☐ No ☒

☐ This type of system requires the system owner to maintain a contract with a certified operator to perform system inspection, maintenance, and reporting as required in 15A NCAC 18A .1961. and Table V(a). The system owner is responsible for all fees associated with these services.

☐ System does not require inspection by GWS on a routine frequency.

☒ System requires inspection by GWS once every five (5) years. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every three (3) years. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every twelve (12) months. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every six (6) months. The system owner is responsible for all fees associated with the inspection.

V. Other:

DENR Authorized Agent: Jeremy Mickelson REHS Date: 6/7/17

Signature: Jeremy Mickelson REHS

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

Septic System Pre-Construction Meeting Checklist

File # 4428A App # 7617 Tax Parcel # 001-023-40

Property Owner: STAN HOLT

Job Location Address: 16023 Sunset Drive

City: Huntersville State: NC Zip Code: 28078

1. **Does System design match facility, flow & wastewater characteristics?**

   ☒ YES ☐ NO

   Comments:

2. **Is there sufficient available space for the septic systems initial and repair areas?**

   ☒ YES ☐ NO

   Comments:

3. **Can the septic system be installed per the permit conditions and drawing on file?**

   ☒ YES ☐ NO

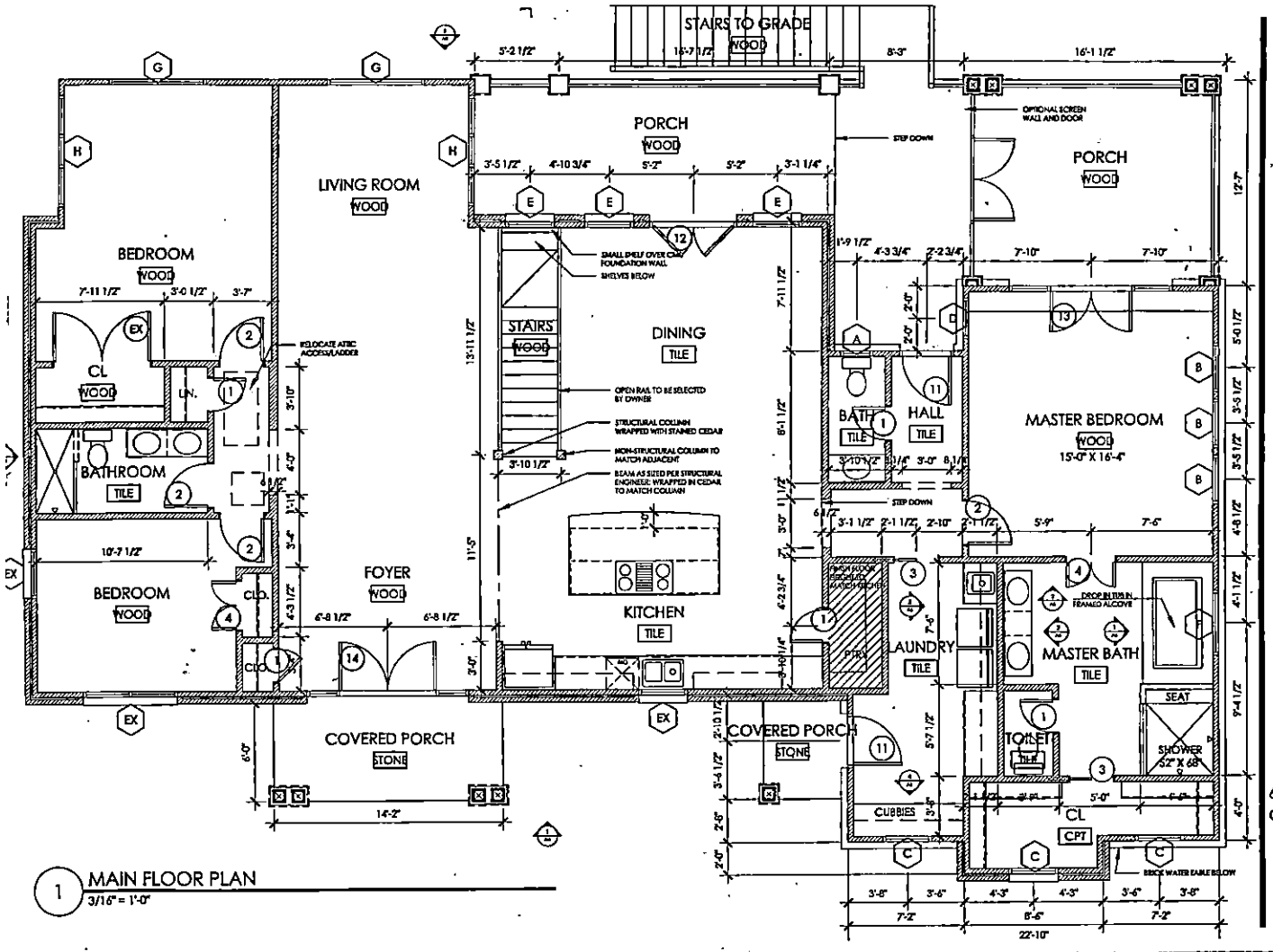
   Comments: Remove the pile of soil & debris from off of the existing drain field

*** If "NO" is checked for any of the above the existing permit may need to be revoked.**

Permission is hereby given to ☐ install ☐ alter ☐ repair an on-site wastewater treatment & and disposal system, with subsurface soil absorption and effluent discharge meeting all of the construction requirements of 15A NCAC 18A .1900 which are in effect on the date of granting this approval. System shall not be installed while soils are in wet condition.

Authorized Agent — Date: 2/7/06

Others Present: Brad Russell / Kris Hedrick



1 MAIN FLOOR PLAN
3/16" = 1'-0"

ALISON HALL ARCHITECT

ALISON HALL
REGISTERED ARCHITECT
11875
CHARLOTTE, NC
6-16-2015

ALISON HALL ARCHITECT, INC.
CERT NO. C2794
CHARLOTTE, NC

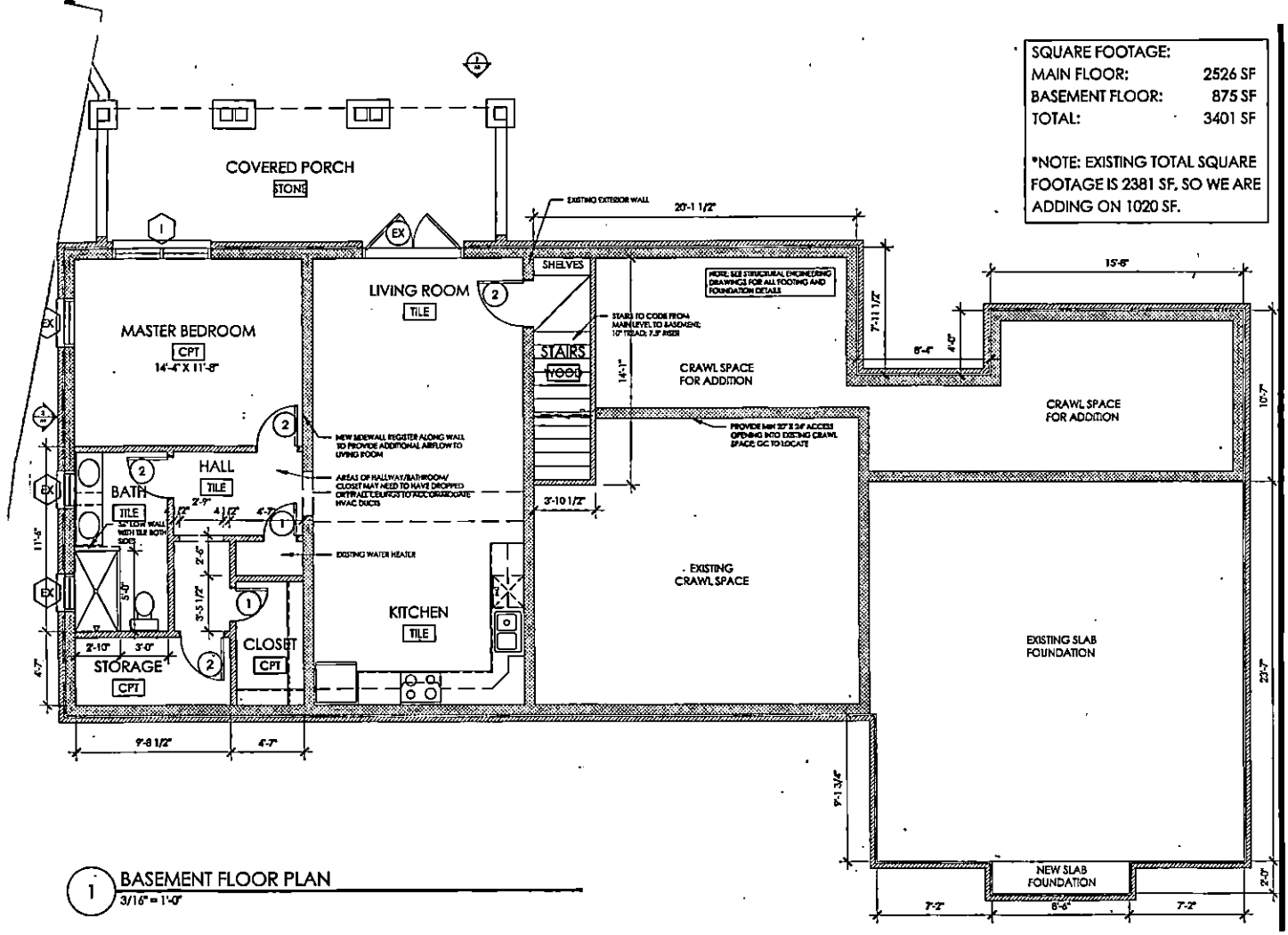
HOLT RENOVATION

16023 SUNSET DRIVE
HUNTERSVILLE, NORTH CAROLINA

6-16-2015
CONSTRUCTION SET

MAIN FLOOR PLAN

A1



1 BASEMENT FLOOR PLAN
3/16" = 1'-0"

SQUARE FOOTAGE:	
MAIN FLOOR:	2526 SF
BASEMENT FLOOR:	875 SF
TOTAL:	3401 SF

*NOTE: EXISTING TOTAL SQUARE FOOTAGE IS 2381 SF. SO WE ARE ADDING ON 1020 SF.

ALISON HALL
. ARCHITECT

ALISON HALL
11875
REGISTERED ARCHITECT
CHARLOTTE, NC
6-16-2015

ALISON HALL ARCHITECT, INC
CERT. NO. C-2794
NORTH CAROLINA
CHARLOTTE, NC

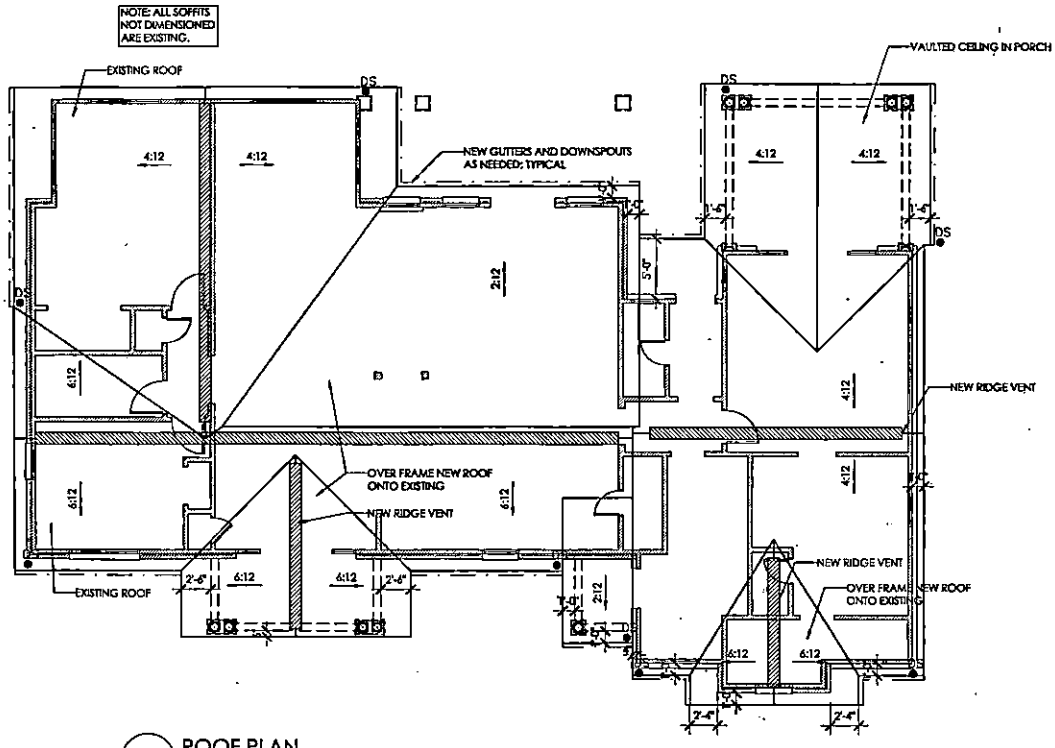
HOLT RENOVATION

16023 SUNSET DRIVE
HUNTERSVILLE, NORTH CAROLINA

6-16-2015
CONSTRUCTION SET

. BASEMENT FLOOR PLAN

A2



1 ROOF PLAN
1/8" = 1'-0"

ALISON HALL
ARCHITECT

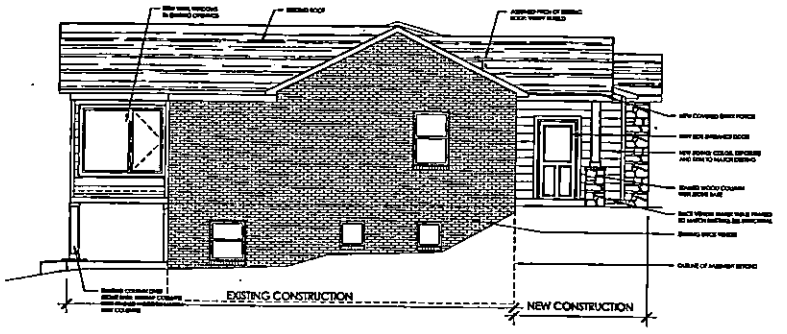
ALISON HALL 11875 REGISTERED ARCHITECT NORTH CAROLINA CHARLOTTE, NC 04-16-2015

ALISON HALL ARCHITECT INC. CERT NO. C-2794 NORTH CAROLINA CHARLOTTE, NC

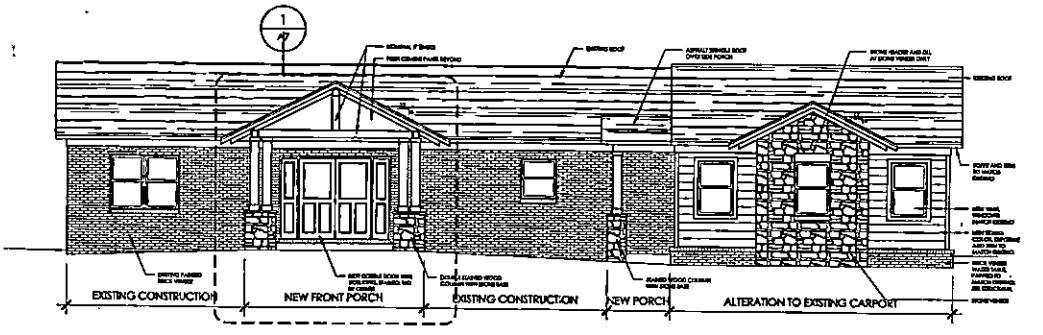
HOLT RENOVATION
16023 SUNSET DRIVE
HUNTERSVILLE, NORTH CAROLINA

6-16-2015
CONSTRUCTION SE

ROOF PLAN
A3



2 LEFT SIDE ELEVATION
1/8" = 1'-0"



1 FRONT ELEVATION
1/8" = 1'-0"

ALISON HALL
ARCHITECT

ALISON HALL
REGISTERED ARCHITECT
11875
CHARLOTTE, NC
6-16-2015

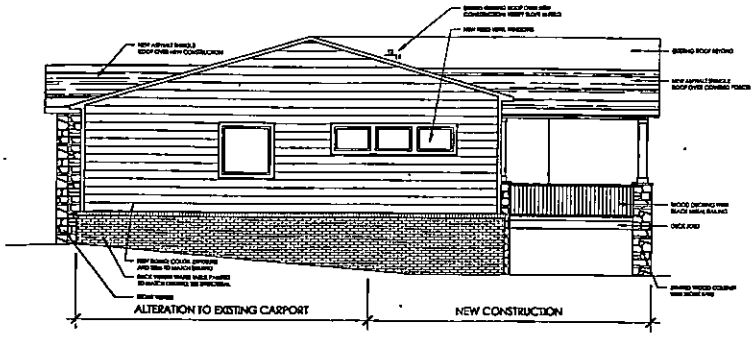
ALISON HALL ARCHITECT, INC.
CERT. NO. C-2794
NORTH CAROLINA
CHARLOTTE, NC

HOLT RENOVATION
16023 SUNSET DRIVE
HUNTERSVILLE, NORTH CAROLINA

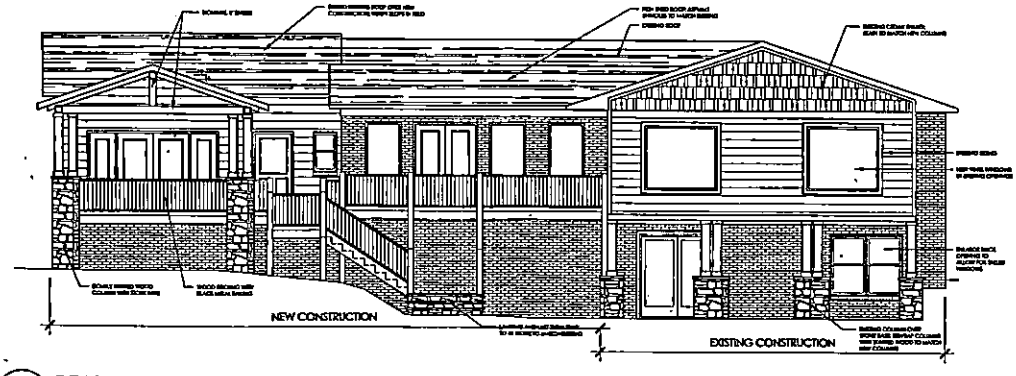
6-16-2015
CONSTRUCTION SET

FRONT & SIDE ELEVATION

A4



2 RIGHT SIDE ELEVATION
1/8" = 1'-0"



1 REAR ELEVATION
1/8" = 1'-0"

ALISON HALL
ARCHITECT

ALISON HALL
11875
CHARLOTTE, NC
6-16-2015

ALISON HALL ARCHITECT INC.
CERT. NO. C-2794
NORTH CAROLINA
CHARLOTTE, NC

HOLT RENOVATION

16023 SUNSET DRIVE
HUNTERSVILLE, NORTH CAROLINA

6-16-2015
CONSTRUCTION SET

SIDE & REAR ELEVATION

A5

Department of Environment, Health, and Natural Resources
Division of Environmental Health
On-site Wastewater Section

Sheet: 1 of 2
Property ID: 001-023-40
Lot #: NA
File #: 4428A
AppID: 7617

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Property Owner: Stan Holt
Address: 16023 Sunset Dr, Huntersville, NC 28078
Proposed Facility: 4 Bedroom House
Design Flow (.1949): 480 GPD
Location: 16023 Sunset Dr, Huntersville, NC 28078
Water Supply: [ ] Public [ ] Individual [ ] Well [ ] Spring [X] Municipal
Evaluation Method: [ ] Auger Boring [X] Pit [ ] Cut
Type of Wastewater: [X] Sewage [ ] Industrial Process [ ] Mixed

Applicant: Nelson Dellinger
Date Evaluated: 8/28/15
Property Size: 0.492 ac
Property Recorded: 1966

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 .1941 Structure/ Texture	.1941 Consistence Mineralogy	b PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	General Comments	Profile Class & LTAR	Maximum Trench Bottom Depth for 3' Wide Conventional Trench
Pit	LS	0 - 7	Fill								
#1	4%	7 - 25	mmsbk C	S P FI SEXP	>63"	63	NA	NA		PS IV 0.3	36"
		25 - 63	wfsbk CL	SS SP FR SEXP							
Pit	LS	0 - 12	Fill								
#2	4%	12 - 42	mmsbk C	S P FI SEXP	>60"	60	NA	NA		PS IV 0.3	36"
		42 - 60	wfsbk CL	SS SP FR SEXP							

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	III b	III b
Site LTAR (gpd/sq ft)	0.3	0.3

Other Factors (.1946): NA
Soil Evaluation By: Jacob Presley, REHS, LSS
Others Present:
Site Classification (.1948): Provisionally Suitable
Site Evaluation By: Jeremy Michelow
Others Present: Paul Pennington, Homeowners, Nelson Dellinger

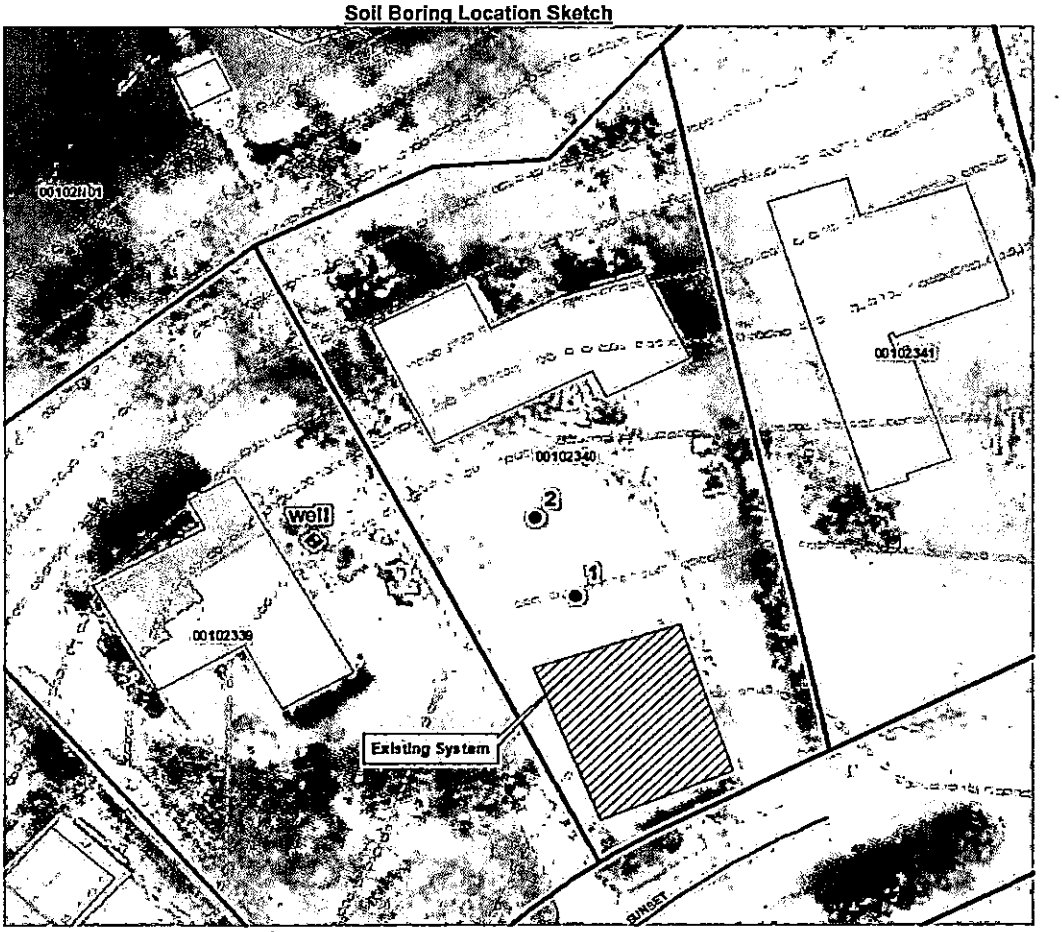
Jeremy Michelow REHS

COMMENTS: Existing 3 bedroom house that is adding a bedroom.

Landscape Position	Group	Texture	.1955 LTAR	Structure
R-Ridge	I	S-Sand	1.2 - 0.8	sg-Single Grain
SS-Shoulder Slope		LS-Loamy Sand		mass-Massive
LS-Linear Slope				cr-Crumb
FS-Foot Slope	II	SL-Sandy Loam	0.8 - 0.6	gr-Granular
NS-Nose Slope		L-Loam		sbk-Subangular Blocky
HS-Head Slope				abk-Angular Blocky
CC-Concave Slope	III	Si-Silt	0.6 - 0.3	pl-Platy
CV-Convex Slope		SiCL-Silty Clay Loam		pr-Prismatic
T-Terrace				Sap-Saprolite
FP-Flood Plain		CL-Clay Loam		**Structure Prefixes**
D-Drainage Way		SCL-Sandy Clay Loam		w-weak
		SiL-Silt Loam		m-moderate
				s-strong
	IV	SC-Sandy Clay	0.4 - 0.1	f-fine
		SiC-Silty Clay		m-medium
		C-Clay		c-coarse

Consistence	Consistence	Mineralogy
Moist	**Wet**	SEXP-Slightly Expansive
VFR-Very Friable	SS-Slightly Sticky	EXP-Expansive
FR-Friable	S-Sticky	
FI-Firm	VS-Very Sticky	**Classification**
VFI-Very Firm	NP-Non-Plastic	US-Unsuitable
EFI-Extremely Firm	SP-Slightly Plastic	PS-Provisionally Suitable
	P-Plastic	S-Suitable
	VP-Very Plastic	NA-Not Applicable

Soil Boring Location Sketch



MCHD

GWS Septic System Design Review

GWS File #: 4428A

Approved Disapproved

Design Review: [signature] ☒ ☐

Field Review: [signature] ☐ ☐

*Projects are not considered "APPROVED" until both sections above are completed and indicate an APPROVED status.

Penninger Soil Consulting, PLLC
Ph: 704-996-6330 Email: pgpenninger@gmail.com

September 21, 2015

Mr. Nelson Dellinger
170 Pisgah Church Road
Statesville, North Carolina 28625

Reference: **Technical Assistance with Septic Permitting**
16023 Sunset Road – Lot 8 Sunset Cove
MCHD File No. 4428A
Mecklenburg County, North Carolina
Project No. 15-124

Dear Mr. Dellinger:

Penninger Soil Consulting, PLLC has provided technical assistance to obtain a possible new, 4-bedroom septic system Improvement Permit for the above referenced lot from the Mecklenburg County Health Department (MCHD). The technical assistance was performed in general accordance with our written proposal dated July 31, 2015.

We understand that you have a contract to remodel the existing three bedroom home to four bedrooms. We understand the current owner recently purchased the lot and that the existing home was built in the 1960's and the lot was recorded in 1964 and is considered repair exempt and can utilize the reduced setbacks described in NCAC 18A.1951. Our site review indicated that Lot 8 has an existing conventional septic system that is installed adjacent to Sunset Drive. The MCHD was unable to locate any permit information for the existing system. An existing system inspection report by Stevens Trucking and Septic Systems submitted by you to Penninger Soil Consulting indicates that the "pump would not turn on and that the pump tank was a "washer box". The existing tanks were located under a concrete patio and could not be observed during our site visits. Based on the attached survey, the existing tanks could be located too close to the foundation or inside the lake setback. The report also indicates that an "old drainline gravity feeds to the back yard". This drainline was not observed during our site visit.

We visited the lot with you on August 3, 2015 to review the lot and possible system options. We visited the lot again on August 27, 2015 with Mr. Jacob Presley and Mr. Jeremy Michelone of the MCHD to review the soils with backhoe pits and to review permitting options to expand the existing system. Two backhoe pits were dug and described in the potential system expansion and repair area. The attached MCHD Soil Evaluation Report indicates the soil is Provisionally Suitable at a 0.3 gpd/sqft LTAR with a 36 inch trench bottom.

The existing conventional trenches in the front yard were located with a tile probe and were located by your surveyor as shown on the attached site plan. One pit was dug adjacent to the lowest conventional trench. The existing conventional trench was verified to be 36 inches wide. A D-Box was uncovered near the west end of the upper white line. Five outlet holes were observed in the D-Box corresponding to the five conventional trenches located.

Possible system options were reviewed and discussed with Mr. Michelone and Mr. Presley. The following were discussed to expand the existing conventional drainfield to 4 bedrooms:

- For the lot to be considered repair exempt, the existing conventional trenches must be used for part of the new primary system. Repair area will be required for the bedrooms added to the existing system.
- The existing conventional trenches are partially under the concrete drive. It appears the drive was widened and concrete was placed over the end of the lines. Mr. Michelone indicated that the approximate 200 feet of the conventional lines west of the drive (5 lines at approximately 40 ft.) could be approved for two bedrooms of the expanded drainfield. Mr. Michelone indicated that the length of line under the drive could still be used and the lines could be cut and capped with a bentonite plug at the edge of the drive in the future if necessary.
- Two bedrooms of T&J Panel trenches will be added in 3 lines at 45 ft. each. Your surveyor has located the flagged T&J Panel expansion lines.
- The system will be dosed with a pressure manifold. The tap sizes in the attached specifications must be used unless otherwise specified by the MCHD.
- The system must maintain a 50 ft. setback to the neighbors' well.
- The new septic and pump tank cannot be placed downslope or west of the existing house and meet the required setbacks. A sewage ejector pump shall be designed and installed according to the NC Plumbing Code requirements by a Licensed Plumbing Contractor to pump the sewage to two 1,000 gallon septic tanks in series. A 1,000 gallon pump tank will dose the expanded drainfield. The septic tanks and pump tank must be located at least 25 feet upslope of the basement foundation wall/drain.
- The existing well on Lot 8 must be properly abandoned prior to the MCHD issuing a Construction Authorization for the expanded septic system.
- The new water line and meter shall be located at least 10 feet from the expanded drainfield. The water line must cross over the sewage force line with at least 18 inches of separation.

Once the septic area is permitted, it should be fenced off for protection during home construction. Access to the lot should only be by the existing drive. There shall not be cuts of 2 feet or greater within 15 feet of any part of the permitted septic system.

Penninger Soil Consulting, PLLC appreciates the opportunity to provide these services to you. The attached information is not an Improvement Permit or Authorization to Construct, and is only to assist you with the septic system permitting process. The MCHD may show any changes or modifications they want to the proposed system on the MCHD Permits or attached site plan. The MCHD must approve each lot and only the MCHD can issue these permits. The MCHD should verify all soils and system specifications, required setbacks,

and whether a professional engineer plan is required before permitting and/or septic system installation. Soil evaluations and system layouts are done based on interpretations of the rules governing wastewater treatment and disposal systems and are not guarantees for site approval or future septic system performance.

If you have any questions or require additional information please contact us at your convenience.

Sincerely,

Penninger Soil Consulting, PLLC

Paul G. Penninger, L.S.S.
Soil Scientist

Attachments:

1. Proposed Site Plan and System Information
   a) Site Plan
   b) System Information
   c) Tank Diagram
   d) Pressure Manifold Diagram
   e) Pump Curve
   f) Record Plat
   g) Dose Volume Calculations
2. MCHD Soil Evaluation Report

C:\Users\Paul G. Penninger\Documents\2015 Projects\15-124 Nelson Dellinger - 16023 Sunset Rd\Nelson Dellinger Lot 8 Sunset Cove Summary Letter.doc

1. Proposed Site Plan and System Information

16023 Sunset Drive System Information (9-21-15) Pg 1 of 2 B.

Nelson Dellinger	
Number of Bedrooms	**Expansion to 4**
Basement or Crawl	**Basement**
Design Flow (gpd)	**480**
Primary System LTAR (gpd/ft2)	**0.3 for T&J expansion**
Primary System Type	**2bdr Conv. Existing; adding 2 bdr T&J Panel**
No. Lines	5 lines ex. Conv. Trench; add 3 lines T&J Panel (see site plan)
Total Linear Feet	approx. 200 ft conv.; add 135 ft T&J Panel
Trench Width	2 ft min. T&J expansion
Trench Spacing	8 ft. min. T&J expansion
Pump Required	Yes
Distribution Device	Pressure Manifold
Maintenance Agreement Required	No
Length and Diameter of Supply Pipe	~100' of 2" SCH 40 PVC
Flow Rate through the system	50 gpm
Elevation head	approx. 12 ft
Pressure head	1.5 ft
Friction head	approx. 6 ft
20% Contingency	4 ft
Total Head	23.5 ft
Pump Requirements	50 gpm at 24 ft head Use Goulds WEO5H or equivalent
Maximum Dosing Volume	**175 gallon max (limited by T&J Panel lines) 2.7 doses/day @ design flow
Volume of water pumped per dose	Calculated to specific tank by measure or dealer engineering specifications (1 cubic ft. of water equals 7.48 gal.)
Pump Run per dose	approx. 3.5 min.
Check Valve	Yes
Siphon Break hole	no
Repair System	**Partial LP PPBPS - Repair Exempt**
Total Linear Feet	140' shown - Two bedrooms repair
Repair Loading Rate	0.3

16023 Sunset Drive System Information (9-21-15) Pg 2 of 2

Nelson Dellinger

Table: Summary of Primary Nitrification Lines

Line No.	Trench Type	Line Color	Line Length (Ft.)	*Rod Reading (Ft.)	Pressure Manifold Tap	Flow per line for 1.5 ft head (gpm)	No. Panels Per Line
1	Ex. Conv.	white	40	2.6	1/2 in SCH 80	4.75	n/a
2	Ex. Conv.	blue	40	2.9	1/2 in SCH 80	4.75	n/a
3	Ex. Conv.	white	40	3.2	1/2 in SCH 80	4.75	n/a
4	Ex. Conv.	red	40	3.5	1/2 in SCH 80	4.75	n/a
5	Ex. Conv.	orange	40	4.0	1/2 in SCH 80	4.75	n/a
6	T&J Panel	red	45	4.6	3/4 in SCH 80	8.77	10
7	T&J Panel	orange	45	5.0	3/4 in SCH 80	8.77	10
8	T&J Panel	white	45	5.4	3/4 in SCH 80	8.77	10
					Total	50.06	30

Existing Conv. System = 2 bdr = 23.75 gpm flow in 5 lines
T&J Panel Expansion = 2 bdr = 26.31 gpm flow in 3 lines
New T&J Panel expansion will receive approximately 10% more effluent per dose than existing conventional system

Tank	white	1500 gal (2 compartment)	*Rod Reading (ft)
Pump Tank	white	1000 gal.	6.3
House		FF at front door	6.1

Manifold Information	
Tap Size (In.)	1/2 and 3/4 inch
Tap Material	SCH 80 PVC
No. Taps	8
Barrel Size (In.)	4
Barrel Material	SCH 80 PVC
Flow (gpm)/Tap at 1.5 ft head	4.75/8.77

NOTES:

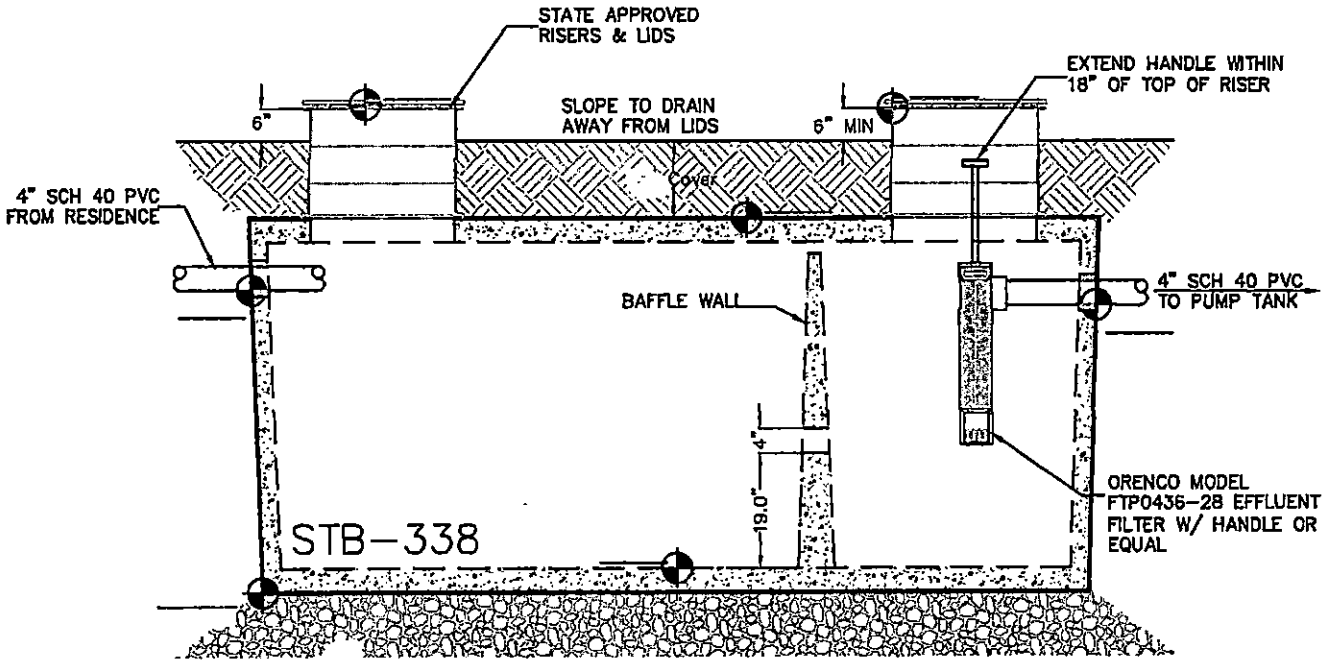
* Elevations must be verified by installer at installation and final tank placement.

**Before placement of cap block, one panel on each line near the center of the field should be observed filling to make certain that it does not overflow top chamber into air chambers of panel. If overflow occurs, reduce floats by 15 gallons and reset until no overflow is observed.

^Install system per MCHD permits and policies.

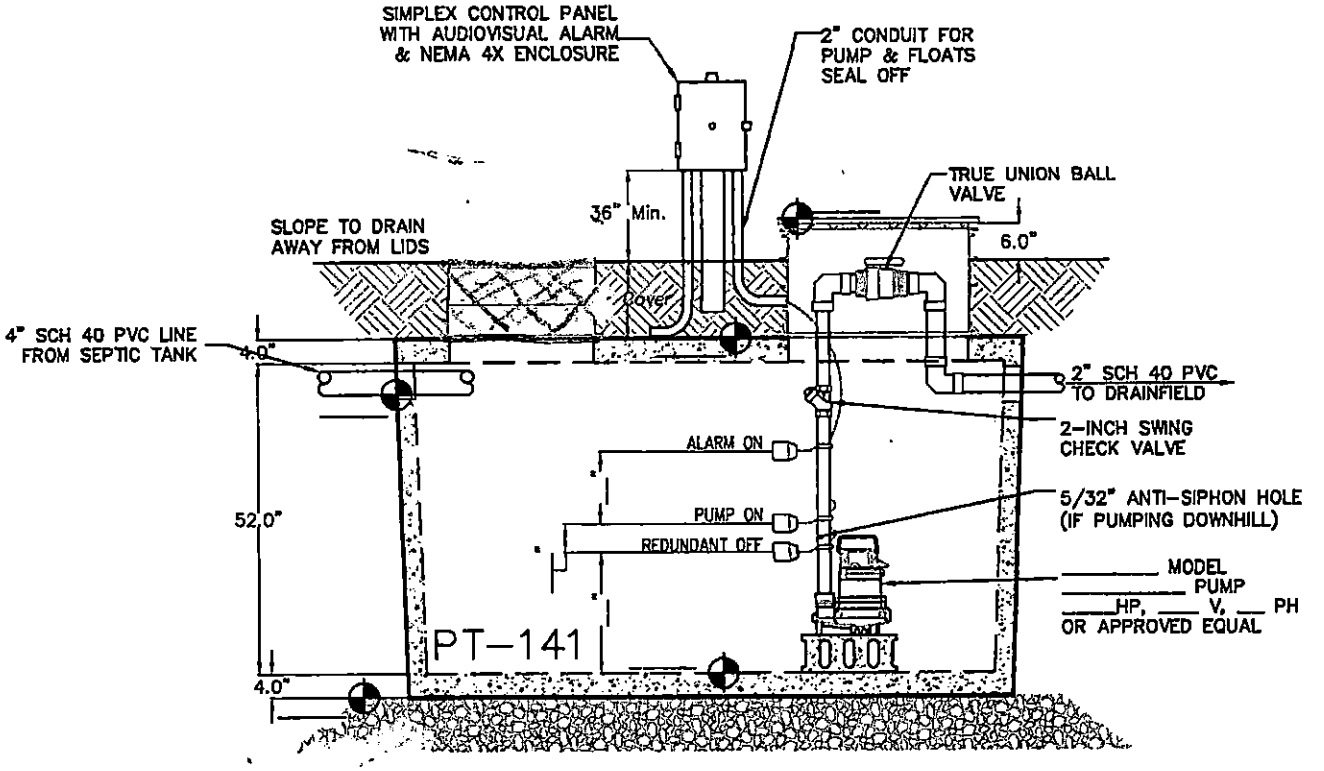
^ System information tables must accompany Penninger Soil Consulting written report dated 9-21-15

C.



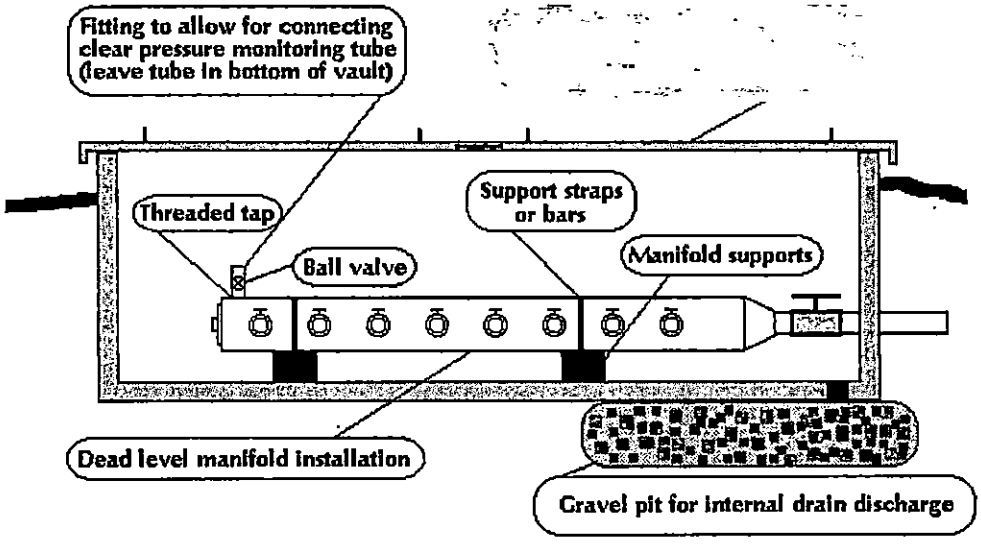
ELEVATION VIEW – 1,000 GAL SEPTIC TANK

N.T.S.

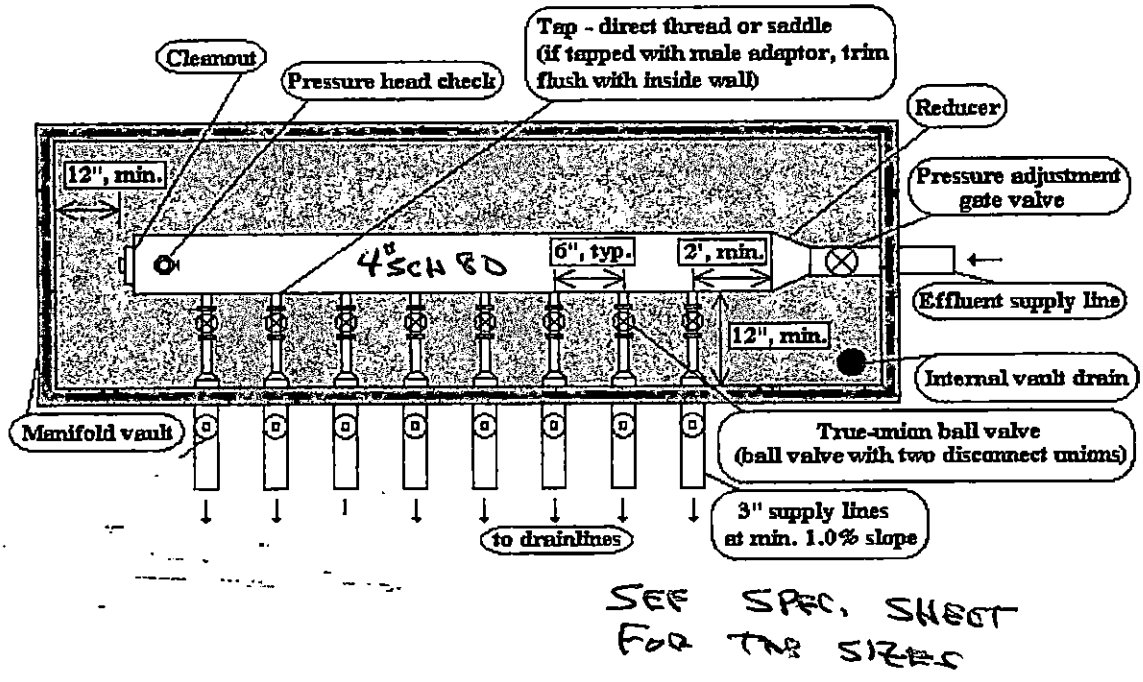


ELEVATION VIEW – 1000 GAL PUMP TANK

N.T.S.



D. Profile View of Pressure Manifold for Sloping Site Installation (not to scale)



SEE SPEC. SHEET FOR TNK SIZES

Plan View of Pressure Manifold for Sloping Site Installation (not to scale)

GOULDS PUMPS

Submersible Effluent Pump

MODEL 3885

WE Series



PROSURANCE AVAILABLE FOR RESIDENTIAL APPLICATIONS.

APPLICATIONS

Specifically designed for the following uses:

- Homes
- Farms
- Trailer courts
- Motels
- Schools
- Hospitals
- Industry
- Effluent systems

SPECIFICATIONS

Pump

- Solids handling capabilities: ¾" maximum.
- Discharge size: 2" NPT.
- Capacities: up to 140 GPM.
- Total heads: up to 128 feet TDH.
- Temperature: 104°F (40°C) continuous 140°F (60°C) intermittent.
- See order numbers on reverse side for specific HP, voltage, phase and RPM's available.

FEATURES

■ **Impeller:** Cast iron, semi-open, non-clog with pump-out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller available as an option.

■ **Casing:** Cast iron volute type for maximum efficiency. 2" NPT discharge.

■ **Mechanical Seal: SILICON CARBIDE VS. SILICON CARBIDE** sealing faces. Stainless steel metal parts, BUNA-N elastomers.

■ **Shaft:** Corrosion-resistant, stainless steel. Threaded design. Locknut on all models to guard against component damage on accidental reverse rotation.

■ **Fasteners:** 300 series stainless steel.

■ Capable of running dry without damage to components.

■ Designed for continuous operation when fully submerged.

MOTORS

■ Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.

■ Class B insulation on ⅓-1½ HP models.

■ Class F insulation on 2 HP models.

Single phase (60 Hz):

- Capacitor start motors for maximum starting torque.
- Built-in overload with automatic reset.
- SJTOW or STOW severe duty oil and water resistant power cords.
- ⅓ and ½ HP models have NEMA three prong grounding plugs.
- ¾ HP and larger units have bare lead cord ends.

Three phase (60 Hz):

- Class 10 overload protection must be provided in separately ordered starter unit.
- STOW power cords all have bare lead cord ends.

■ **Designed for Continuous Operation:** Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.

■ **Bearings:** Upper and lower heavy duty ball bearing construction.

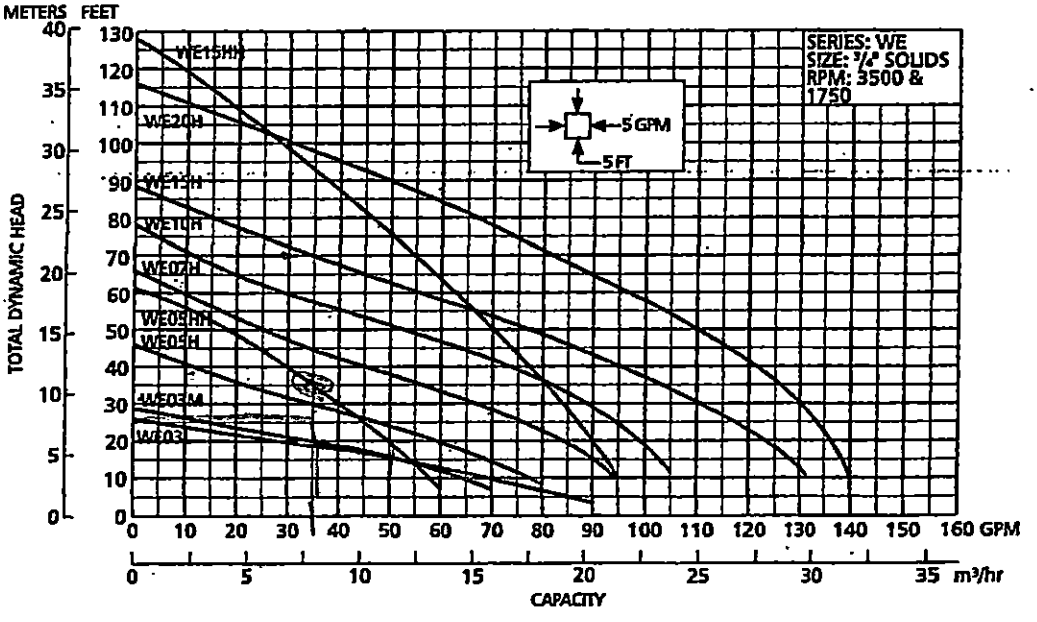
■ **Power Cable:** Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.

■ **O-ring:** Assures positive sealing against contaminants and oil leakage.

AGENCY LISTINGS

Tested to UL 778 and CSA 22.2 108 Standards By Canadian Standards Association File #LR38549

Goulds Pumps is ISO 9001 Registered.



Goulds Pumps

ITT Industries

© 2003 Goulds Pumps
Effective July, 2003
B3885

F

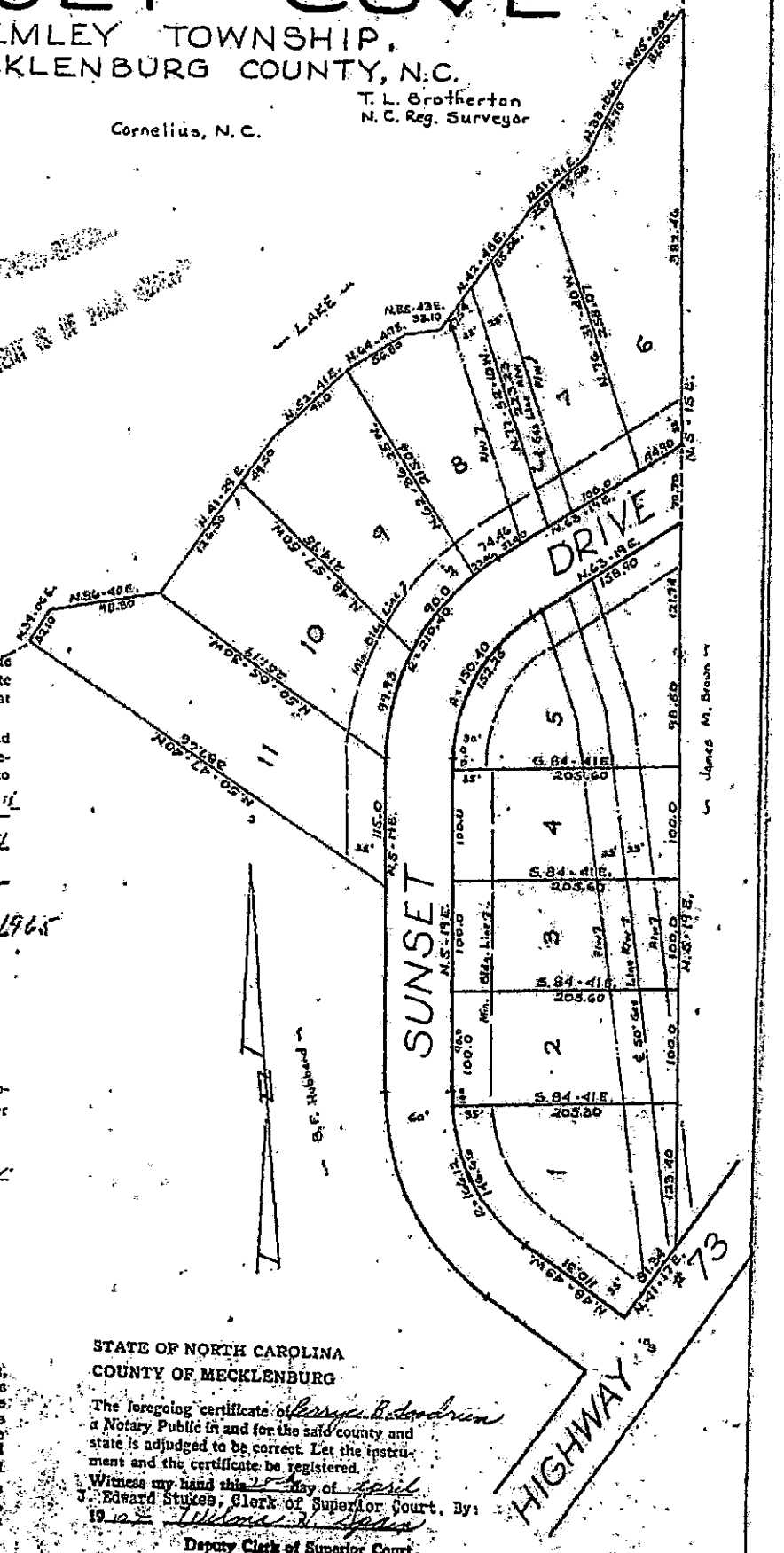
J 285

A PLAT SHOWING
SUNSET COVE
LEMLEY TOWNSHIP,
MECKLENBURG COUNTY, N.C.

Scale: 1" = 100'
April 24, 1964

T. L. Brotherton
N. C. Reg. Surveyor

Cornelius, N. C.


LAKE
SUNSET DRIVE
HIGHWAY 73
6
7
8
9
10
11
1
2
3
4
5
N.65-00E. 81.60
N.38-04E. 75.70
N.31-41E. 49.60
N.42-48E. 38.24
N.85-43E. 38.10
N.64-47E. 56.80
N.53-41E. 41.10
N.41-35E. 44.50
N.36-31-30W. 207.55
N.73-22-30W. 100.00
N.16-38E. 38.46
N.5-15E. 94.36
N.63-19E. 158.50
N.63-19E. 100.0
N.63-19E. 70.78
N.63-19E. 121.74
N.48-23-30W. 94.41
N.56-48E. 40.80
N.34-06E. 25.10
N.50-47-30W. 227.85
N.5-19E. 115.0
N.5-19E. 100.0
N.5-19E. 100.0
N.5-19E. 100

Lot 8 Sweet Cove 9-22-15

G. Dose Volume Calculations

MAX. Dose To T-5 Panels

- 10 panels per 45' Lines
- 3.6 gal/panel = max Dose

10 panels x 3.6 gal/panel = 36 gal

36 gal
6.77 gpm per 3/4" soaker hose 15' line

= 4.1 min pump run time

Total GPM for 8 Lines on Pressure manifold = 50 gpm

50 gpm x 4.1 min run time = 205 gal

205 x 85% = 174.25 gal

USE 175 gal Dose Volume

= 2.7 Doses/Day

2. MCHD Soil Evaluation Report

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: 30007617 GWS File #: 4428A Tax Parcel #: 001-023-40

- This IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change. There is to be NO grading, filling, or disturbance of the soil in the area of the septic tank system or repair area.
- CONSTRUCTION AUTHORIZATION must be obtained prior to receiving a Building Permit. The Construction Authorization is NOT transferable. Do not clear, grade, fill or disturb soil prior to obtaining a Construction Authorization.
- Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

I. This Improvement Permit Shall: Expire in Five (5) Years **Expiration Date (If Applicable):** 9/30/2020

Type of Installation: Residential - Alteration Lot Number: 0

Structure Type: HOUSE Size (ft^2): 2381 # Bedrooms: 4 # Occupants: 4

Building Foundation: Crawl Space Water Supply: Private Well

II. Initial System Type: PPBPS (gravity) + EXISTING CONVENTIONAL SYSTEM **System Classification:** IIIb (SEE CONSULTANT PLAN)

Initial System Specifications:

Design Flow (gpd): 480 LTAR (gpd/ft^2): 0.3 Septic Tank Size (gal): 1000 (2) Pump Tank Size (gal): 1000

Trench Width (ft): 2 Trench Spacing (ft): 8 Absorption Area (ft^2): 1000 Total Trench Length (ft): EXISTING 220' CONV. 135' PPBPS (NEW)

Maximum Trench Depth (in): 30 Depth of Media (in): N/A Distribution Device: Pressure Manifold

III. Repair System Type: PPBPS (gravity) **System Classification:** IIIb

Repair System Specifications:

Design Flow (gpd): 240 LTAR (gpd/ft^2): 0.3 Septic Tank Size (gal): 1000 Pump Tank Size (gal): 1000

Trench Width (ft): 2 Trench Spacing (ft): 8 Absorption Area (ft^2): 800 Total Trench Length (ft): 133

Maximum Trench Depth (in): 30 Depth of Media (in): N/A Distribution Device: Pressure Manifold

IV. Permit Conditions/Comments:

(Please See the Following Page for Permit Conditions.)

The undersigned, an authorized agent of the STATE OF NORTH CAROLINA, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment, and Disposal Systems* and is subject to the following provisions:

- No work shall be conducted on the septic system until a Pre-Construction meeting has been completed by the Department.
- The septic system installer shall be a licensed septic contractor with the North Carolina Wastewater Contractor Inspector Certification Board.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

Authorized Agent: Jeremy Michelone Owner/Legal Agent: _____
Print Name

Signature: _____ Signature: _____

Date Issued: 9/30/2015

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: **30007617** GWS File #: **4428A**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 5 years by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- Proper well abandonment is required prior to receiving an Installation Approval from our office to install the septic system.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- All components of the septic system must be installed in accordance with the required setbacks listed on the corresponding plot plan.
- All components of the septic system must be located at least 100 ft. (50 ft. minimum) from all private wells.
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- All components of the septic system must be located a minimum distance from the normal pool elevation or mean high water mark for the nearby body of water. See plot plan for minimum setback requirements.
- Upon completion of the project the system designer shall provide Groundwater & Wastewater Services with a letter certifying that the system was installed in accordance with the approved design.
- The septic system shall be located at least 25 feet from any foundation drain.

The undersigned, an authorized agent of the STATE OF NORTH CAROLINA, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment and Disposal Systems* and is subject to the following provisions:

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- The septic system installer shall be a licensed septic contractor with the North Carolina Wastewater Contractor Inspector Certification Board.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

Authorized Agent: Jeremy Michelone

Signature: Jeremy Michelone REHS

Date Issued: 9/30/2015

Owner/Legal Agent: _____
Print Name

Signature: _____

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	07/07/15	**Amount:**	300.00
Receipt #:	95321	**Tendered:**	300.00
Check / Auth #:	CHECK 6170	**Returned:**	0.00
Received By:	ELLISLW		

Account Information

Account #: 200000
Contractor: NELSON L DELLINGER BUILDING CO
Attn:
Address: 17 PISGAH CHURCH ROAD
Address:
City/State/Zip: STATESVILLE, NC 28625

Item	Description	Permit#	Quantity	Unit Price	Total Price
0706	Septic Alteration Permit 16023 SUNSET DRIVE		1	300.00	300.00

----------Outstanding Balances----------

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance

Penninger Soil Consulting, PLLC
Ph: 704-996-6330 Email: pgpenninger@gmail.com

June 13, 2017

Stan Holt
807 Murfield Court
High Point, North Carolina 27265

Reference: **Review of Pressure Manifold Existing Conventional / New T&J Panel System Installation**
Lot 8 Sunset Cove
16023 Sunset Drive
MCHD File No.: 4428A
Mecklenburg County, North Carolina
Project No. 17-106

Dear Mr. Holt:

At your request, Penninger Soil Consulting, PLLC reviewed the expansion of the existing septic system at the referenced lot. A pressure manifold was used to dose the existing 2-bedroom conventional lines and the new 2-bedroom T&J Panel lines for the 4 bedroom system permitted by the Mecklenburg County Health Department (MCHD). The review was performed in general accordance with our written proposal and letter of authorization dated February 13, 2017.

The following is a summary of the septic system installation review.

- Mr. Jacob Presley, L.S.S., R.S. with the MCHD evaluated the soils on the lot with backhoe pits and reviewed the existing conventional drainfield on August 28, 2015. Mr. Presley determined the soils on the front of the lot were provisionally suitable to 60 inches below the ground surface (bgs) at a 0.3 gpd/sqft LTAR. Mr. Jeremy Michelone with the MCHD and Paul Penninger were also present for this evaluation.
- On February 8, 2017 Mr. Paul Penninger met Brad Russell and Chris Hedrick of R&H Septic and Mr. Michelone on the lot to review the partial system installation. The T&J Panel drainfield, two septic tanks, pump tank, and pressure manifold were generally installed in the area permitted and with the line lengths indicated in the permit.
    - Elevations of the top of the panels at two locations on each line were observed. The top of the panels were generally within 0.1 ft. of level grade.
    - The drainfield and repair area has not been stabilized.
    - The ejector pump that was to be designed and installed by an NC licensed plumber had not been installed at the time of this site visit and the control panel had not been installed for the septic pump tank.
- We understand that Mr. Jeremy Michelone made an additional site visit on June 7, 2017 to review the completed system. Penninger Soil Consulting was not contacted until the morning of June 7th and was unable to visit the site this day. Based on our conversation with Mr. Brad Russell, Mr. Michelone approved the system installation and components. Mr. Paul Penninger made an additional site visit on June 12, 2017 with Mr. Russell to review the completed system.

- A Keen Pump control panel was mounted on the left, front side of the house. The panel had an audible and visual alarm.
- Anchor floats in the pump tank controlled the pump and alarms. Separate circuit breakers were installed in the control panel for the pump and the alarm.
- A rope was installed for pump removal.
- The visible and audible alarm functioned when the control levels were manipulated by Mr. Russell.
- A Liberty ½ HP pump was installed.
- High water alarm float set approximately 18 inches above pump-on float.
- The septic tank and pump tank were located greater than 25 ft. in front of the house and greater than 50 ft. from the neighbor's well. Mr. Russell indicated two 1,000 gallon septic tanks and 1,000 gallon pump tank were installed. The tanks were supplied by Dellinger Precast.
- The second septic tank outlet had a tee and effluent filter supplied by the manufacturer.
- The pump tank riser was not located 6 inches above grade.
- The wall mounted electric outlet was used to operate the pump and control panel.
- A water hose was used to fill the pump tank to operate the pump. The tank was filled until the pump turned on and was observed until the pump turned off.
- The head pressure was initially set to 2 ft., but was adjusted by Mr. Russell to 1.5 ft. The dose volume observed was 100 gallons, which was less than the 175 gallon maximum dose volume in the permit. The 100 gallon dose will utilize a pump run time less than indicated in the permit.
- The ejector pump was located at the left rear house corner and should have been installed by a NC Licensed Plumber and approved by the plumbing inspector.
- We observed an irrigation system had been installed over the drainfield. The irrigation system was operating when we arrived at the site. The MCHD should determine if the system can remain as installed.
- A low area was observed near the middle of the septic area that may need to be leveled. The septic area has been seeded and grass was starting to grow over the field.

- While the system was not observed being installed and all components could not be observed due to being below the soil surface, it appeared the system was generally installed as permitted and we understand the MCHD has approved the installation. It is ultimately the responsibility of the MCHD to approve the system installation and issue the Operation Permit. The owner is responsible for maintaining the installed system.

Penninger Soil Consulting, PLLC appreciates the opportunity to provide these services to you. The attached information is not an Operation Permit and is only to assist you and the MCHD with the system review. The MCHD should verify all soils and system specifications and components prior to issuing permits. System layouts and reviews are done based on interpretations of the rules governing wastewater treatment and disposal systems and are not guarantees for site approval or future septic system performance.

If you have any questions or require additional information please contact us at your convenience.

Sincerely,

Penninger Soil Consulting, PLLC

Paul G. Penninger, L.S.S.

Attachments:

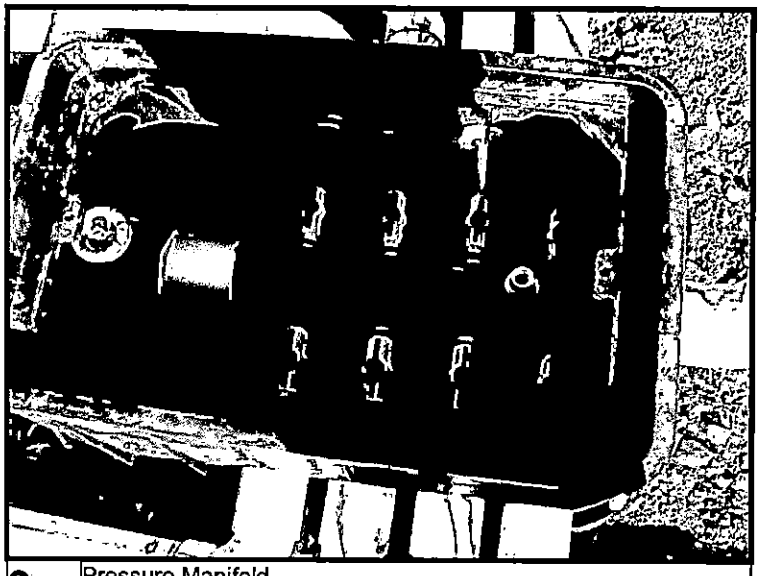
1. Site Photographs

Copy: MCHD

C:\Users\Paul G. Penninger\Documents\2017 Projects\17-106 Stan Holt - Sunset Dr\Sunset Dr. System Installation Summary Letter.doc



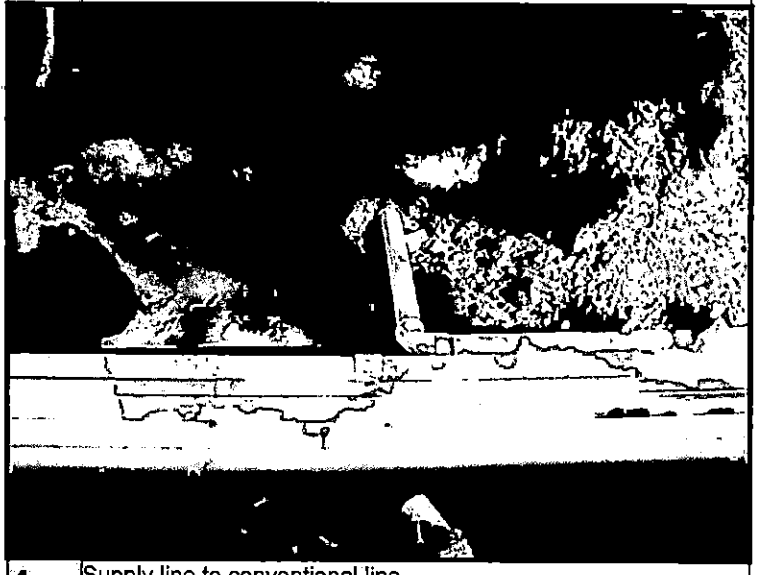
1 Pressure Manifold and supply lines at left property line.



2 Pressure Manifold.

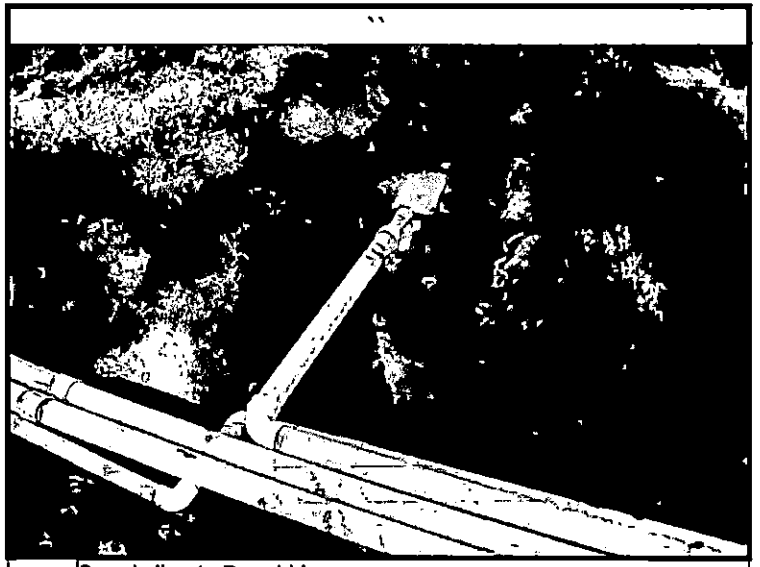


3 Septic and Pump tanks.

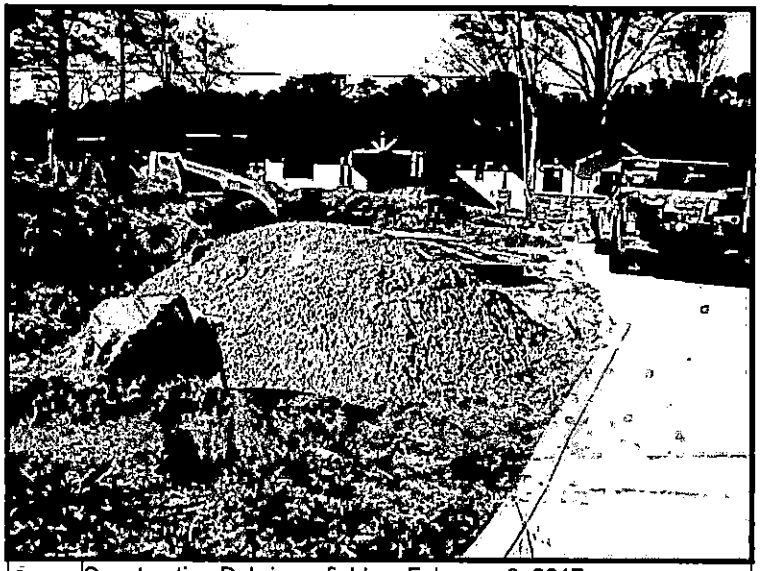


4 Supply line to conventional line.

Stan Holt	**16023 Sunset Drive Septic System Installation Review**		
		Taken by: PGP	Date Taken: 2/8/17;6/12/17



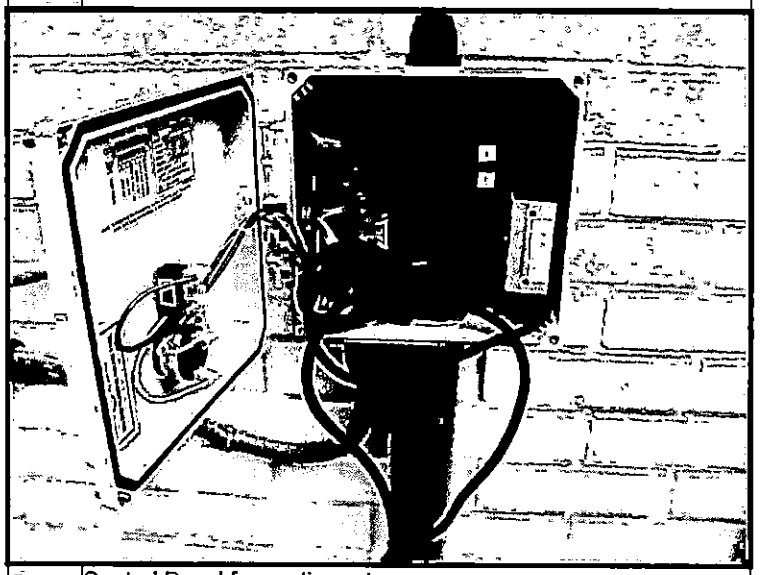
5 Supply line to Panel Line.



6 Construction Debris on field on February 8, 2017.



7 Ejector Pump tank lid.



8 Control Panel for septic system.

Stan Holt	**16023 Sunset Drive Septic System Installation Review**		
		Taken by: PGP	Date Taken: 2/8/17;6/12/17

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date: 11/21/16
Receipt #: 102556
Check / Auth #: VISA 130989
Received By: ELLISLW

Amount: 100.00
Tendered: 100.00
Returned: 0.00

Account Information

Account #: 200000
Contractor: HOLT,MISTY
Attn:
Address: 807 MUIRFIELD CT
Address:
City/State/Zip: HIGH POINT, NC 27265

Item	Description	Permit#	Quantity	Unit Price	Total Price
0704	Change in Plot Plan 16023 SUNSET DRIVE		1	100.00	100.00

----------Outstanding Balances----------

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance

Payment Receipt

Mecklenburg County POS

Environmental Health
700 N. Tryon Street
Charlotte, NC 28202
Phone: 704-336-5100

Enter Account # or Customer Name Here: MISTY HOLT

Bill To:

MISTY HOLT
807 MUIRFIELD CT

High Point, NC 27265

Single Payment

Transaction Date:	11/21/2016 8:46 AM Pacific Time
Pay Method:	VISA **********9263
Approval #:	130989
Trace Number:	9b068b29-1e5f-46c7-892c-786712b9692b
Amount:	$100.00

Payment Amount:	$100.00
Total:	**$100.00**

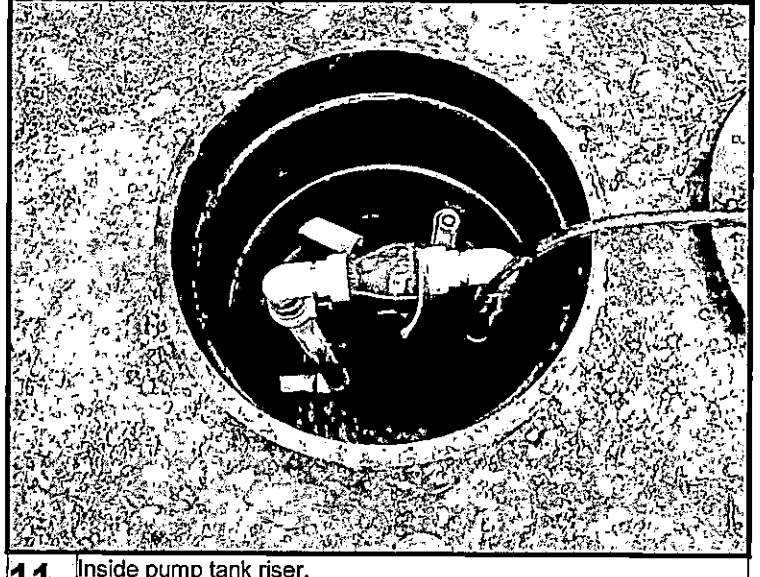
Thank you for your payment.



9 Filling Pump tank with water hose to operate pump.



10 Irrigation system spraying. View from subject property drive.



11 Inside pump tank riser.



12 Irrigation system spraying. View from neighbor drive.

Stan Holt	**16023 Sunset Drive Septic System Installation Review**		
		Taken by: PGP	Date Taken: 2/8/17;6/12/17