Groundwater & Wastewater Services
Septic Project File & Data Review Worksheet

GWS File #: 7454B WASPS App #: 2940

Primary ES assigned to project: OJ

Secondary ES assigned to project:

Project Type: New System [✓] Alteration [ ] Repair [ ] Modified Plot Plan [ ]

1. 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: 5 Were sufficient auger borings made?	Yes [✓]	No [ ]	N/A [ ]
.1939(d), .1955, .1956, .1957	LTAR -3	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?	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:

_____

_____

_____

_____

_____

IA issued date: _____

OP issued date: _____

Review performed by: IR Date performed: 8/1/08

FILE NUMBER: 7454B BM

Revised On: January 3, 2007

APPLICATION NUMBER: 2944

SEPTIC FEE: 200.00
DATE: 10/30/07
CK# 1281

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

WELL FEE: ____
DATE: ____

1. SEPTIC / TYPE APPLICATION: ☐ NONE ☒ NEW SYSTEM ☐ ALTERATION ☐ REPAIR ☐ MODIFIED PLOT PLAN

2. WELL / TYPE APPLICATION: ☐ NONE ☐ NEW WELL ☐ MAJOR REPAIR ☐ ABANDONMENT

3. JOB LOCATION INFORMATION:

TAX PARCEL NUMBER: 02301259
STREET ADDRESS: ARTHUR AUTEN RD.
CITY: HUNTERSVILLE
STATE: NC ZIP: 28078
SUBDIVISION NAME:
LOT #: LOT SIZE (acres): .39
TOWNSHIP:
☒ 0-MECKLENBURG ☐ 3-CORNELIUS ☐ 6-HUNTERSVILLE
☐ 1-CHARLOTTE ☐ 4-PINEVILLE ☐ 7-MINT HILL
☐ 2-DAVIDSON ☐ 5-MATTHEWS

4. BUILDING INFORMATION:

BUILDING TYPE:
☐ SINGLE MOBILE HOME ☐ MODULAR HOME
☐ DOUBLE WIDE ☐ MULTIPLE FAMILY
☒ HOUSE ☐ OTHER ____
HEATED SQUARE FOOTAGE: 3150 ☒ (?)
NUMBER OF BEDROOMS: 3
NUMBER OF OCCUPANTS: 3
FOUNDATION TYPE:
☐ CONCRETE SLAB ☐ BASEMENT WITH PLUMBING
☐ CRAWL SPACE ☒ BASMENT WITH NO PLUMBING

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

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

6. WATER SUPPLY: ☐ MUNICIPAL ☐ PUBLIC WELL ☒ PRIVATE WELL ☐ SHARED WELL ☐ SPRING

7. PROPOSED USE OF WELL: ☐ N/A ☐ IRRIGATION ☐ POTABLE ☐ GEOTHERMAL ☐ OTHER

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

8A. RANK: ☒ ANY TYPE ☐ CONVENTIONAL ☐ ACCEPTED ☐ INNOVATIVE ☐ ALTERNATIVE ☐ OTHER ____

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 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	

10. PROPERTY OWNER:

NAME: DALE & MELISSA HOLLAND
ADDRESS: 5736 NECK ROAD
CITY: HUNTERSVILLE
STATE: NC ZIP: 28078
HOME PHONE: 704-947-2666 WORK PHONE: 704-65-5124
MOBILE PHONE: 704-163-5878 FAX: 704-65-5088

11. OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:

NAME:
ADDRESS:
CITY:
STATE: ZIP:
HOME PHONE: WORK PHONE:
MOBILE PHONE: FAX:

12. WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 4/9/2007

13 WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? ____

14. SEPTIC SYSTEM PERMIT APPLICATION SIGNATURE SECTION:

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 60 months or is non-expiring depending upon the documentation submitted: complete site plan = 60 months, complete plat = non-expiring.

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

15. WELL PERMIT APPLICATION SIGNATURE SECTION:

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 12 months from the date of issuance.

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

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

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date: 10/31/07
Receipt #: 53456
Check / Auth #: CHECK 1281
Received By: GLADNAG

Amount: 200.00
Tendered: 200.00
Returned: 0.00

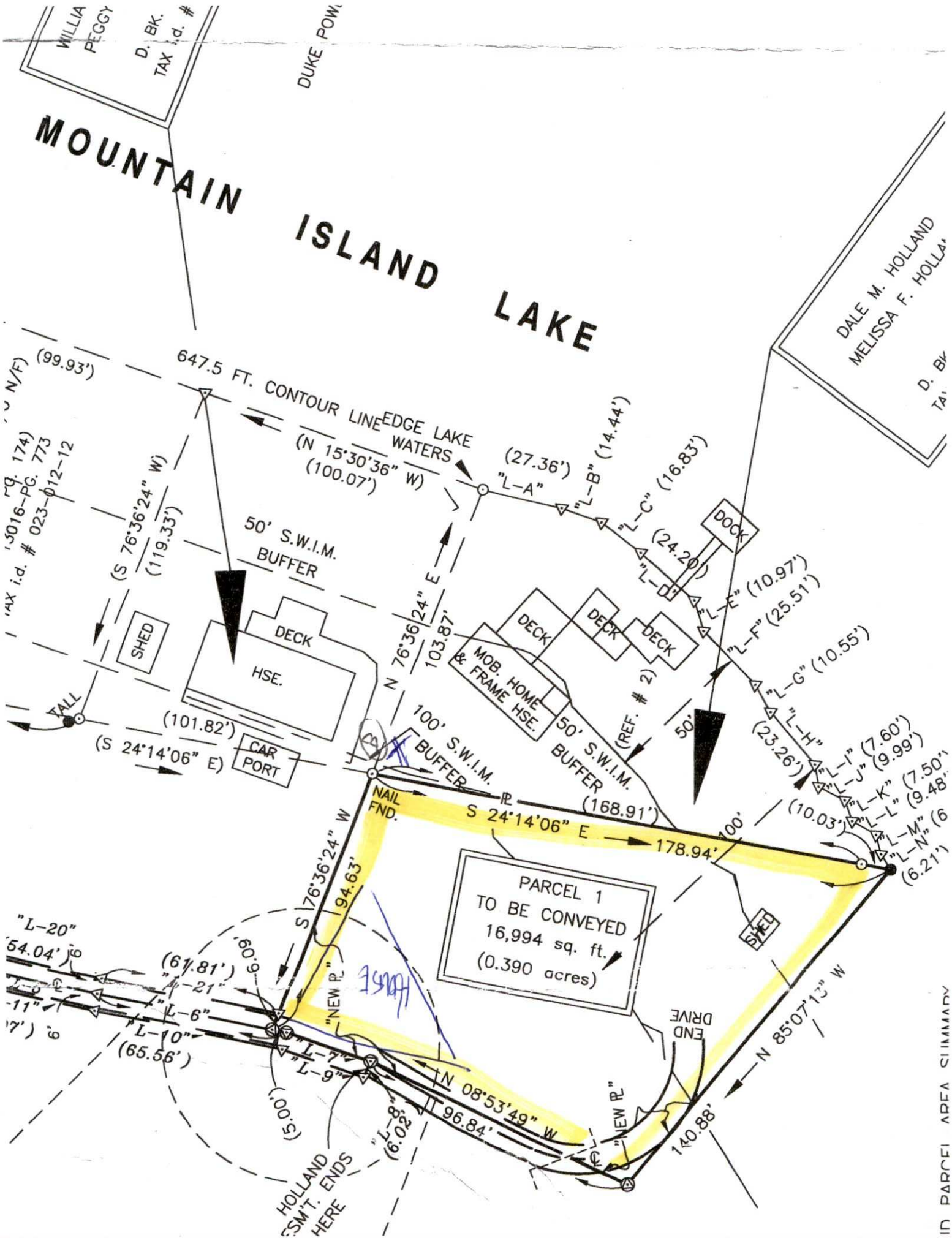
Account Information

Account #: 200000
Contractor: HOLLAND DALE
Attn:
Address: 7804 FAIRVIEW RD, # 118
Address:
City/State/Zip: CHARLOTTE, NC 28226

Item	Description	Permit#	Quantity	Unit Price	Total Price
0701	Improvment Permit App-Residen ARTHUR AUTEN RD		1	200.00	200.00

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

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


MOUNTAIN ISLAND LAKE
DUKE POWER
WILLIA PEGGY D. BK. TAX i.d. #
DALE M. HOLLAND
MELISSA F. HOLLA
D. BK.
TAX i.d. # 023-012-12
647.5 FT. CONTOUR LINE EDGE LAKE WATERS
(N 15°30'36" W)
(100.07')
(27.36')
"L-A"
"L-B" (14.44')
"L-C" (16.83')
(24.20')
"L-D"
"L-E" (10.97')
"L-F" (25.51')
"L-G" (10.55')
"L-H"
(23.26')
"L-I" (7.60')
"L-J" (9.99')
"L-K" (7.50')
"L-L" (9.48')
"L-M" (6
"L-N" (6.21')
(10.03')
(99.93')
(S 76°36'24" W)
(119.33')
50' S.W.I.M. BUFFER
SHED
DECK
HSE.
FALL
(101.82')
(S 24°14'06" E)
CAR PORT
N 76°36'24" E
103.87'
DECK
DECK
DECK
MOB. HOME & FRAME HSE.
(REF. # 2)
50' S.W.I.M. BUFFER
50'
100' S.W.I.M. BUFFER
NAIL FND.
RL
(168.91')
S 24°14'06" E
178.94'
100'
S 76°36'24" W
94.63'
PARCEL 1
TO BE CONVEYED
16,994 sq. ft.
(0.390 acres)
SHED
"NEW RL"
END DRIVE
N 85°07'13" W
140.88'
"L-20"
(61.81')
"L-21"
"L-6"
"L-10"
(65.56')
"L-7"
"L-9"
N 08°53'49" W
96.84'
"L-8"
(6.02')
(5.00')
HOLLAND
ESM'T. ENDS
HERE
"NEW RL"

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

Sheet: 1 of 2
Property ID: 023-012-39
Lot #:
File #: 7454B
AppID: 2944

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: Dale & Melissa Holland
Applicant:
Address: 5736 Neck Road, Huntersville, N. C. 28078
Date Evaluated: 1/29/08
Proposed Facility: Residence
Design Flow (.1949): 360gpd
Property Size: .39a
Location of Site: Arthur Auten Road
Property Recorded:
Water Supply: [ ] Public [x] Individual [x] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [x] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

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	Profile Class & LTAR
1	LS, 15	0-4	GR/SL	FR/SEXP/NS/NP	>44" TO SOIL WETNESS	44	N/A	NONE	PS, IV
		4-44	SBK/SC	FI/SEXP/S/P					.3GPD/FT^2
2	"	0-6	GRAVEL		>48" TO SOIL WETNESS	48	"	"	"
		6-18	SBK/SCL	FR/SEXP/SS/SP					
		18-48	SBK/SC	FI/SEXP/S/P					
3	"	0-18	DISTURBED	MIXED	>58" TO SOIL WETNESS	32	"	"	US, IV
		18-32	SBK/SC	FI/SEXP/S/P		SEE NOTE			
		32-58	M/SCL	FR/SEXP/SS/SP					
4	18	0-8	GR/SCL	FR/SEXP/SS/SP	>50" TO SOIL WETNESS	50	"	"	PS, IV
		8-50	SBK/SC	FI/SEXP/S/P					.3GPD/FT^2
5	"	0-8	GR/SCL	FR/SEXP/SS/SP	>49" TO SOIL WETNESS	49	"	"	"
		8-38	SBK/SC	FI/SEXP/S/P					
		38-49	SBK/SCL	FR/SEXP/SS/SP					
					SITE LTAR .3GPD/FT^2				

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	IV a	IV a
Site LTAR	0.3	0.3

Other Factors (.1946):
Soil Evaluation By: W. R. Marlin, LSS, 1/30/2008,
Others Present: J. Michelone, D. Holland
Site Classification (.1948): PS
Site Evaluation By: Jeremy Michelone, R.S.
Others Present:

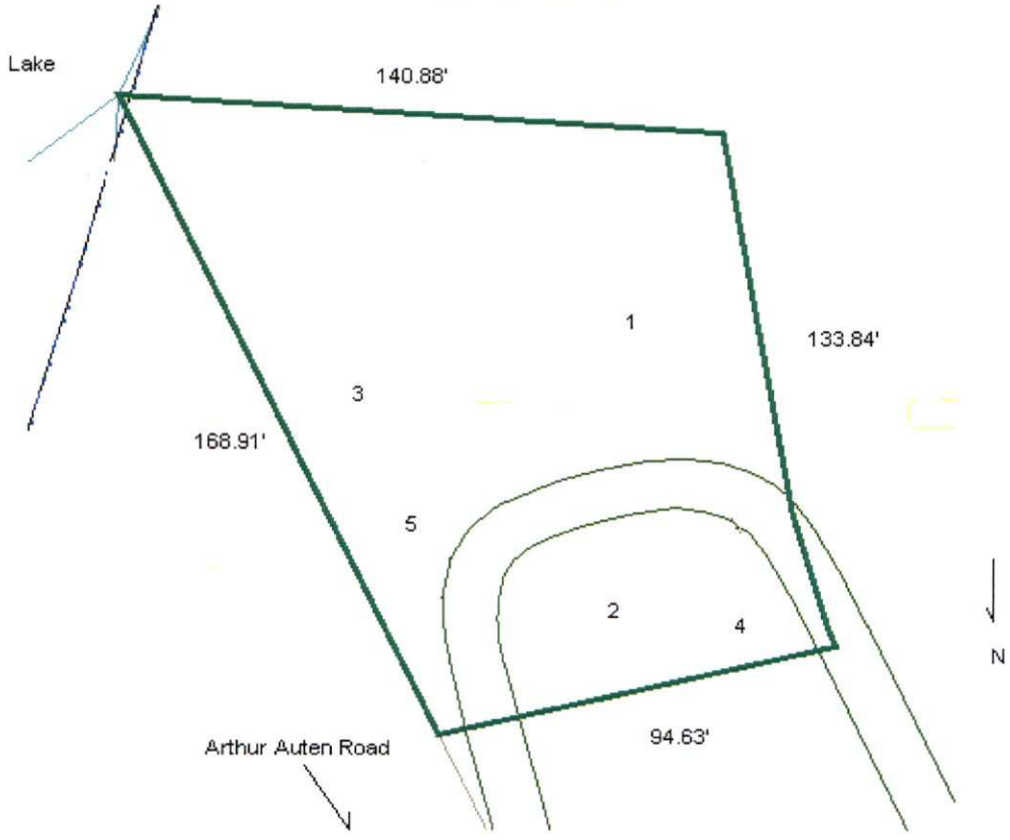
COMMENTS:

100% repair, Profile #3 has 18" of mixed fill over original soil

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		M-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				
FP-Flood Plain		CL-Clay Loam		
		SCL-Sandy Clay Loam		
	IV	SC-Sandy Clay	0.4 - 0.1	
		SIC-Silty Clay		
		C-Clay		

Consistence Moist	Consistence Wet	Mineralogy
VFR-Very Friable	NS-Non-Sticky	SEXP-Slightly Expansive
FR-Friable	SS-Slightly Sticky	EXP-Expansive
FI-Firm	S-Sticky	
VFI-Very Firm	VS-Very Sticky	
EFI-Extremely Firm	NP-Non-Plastic	
	SP-Slightly Plastic	
	P-Plastic	
	VP-Very Plastic	

Sketch of Soil Evaluation Locations



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 #: **30002944** GWS File #: **7454B** Tax Parcel #: **023-012-39**

- 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: Not Expire with Plat Provided **Expiration Date (If Applicable):** N/A

Type of Installation: Residential - New System Lot Number: 0

Structure Type: HOUSE Size (ft^2): 3150 # Bedrooms: 3 # Occupants: 3

Building Foundation: Basement Without Plumbing Water Supply: Private Well

II. Initial System Type: PPBPS (pressurized) **System Classification:** IVa

Initial System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1500
Trench Width (ft):	2	Trench Spacing (ft):	8	Absorption Area (ft^2):	400	Total Trench Length (ft):	200
Maximum Trench Depth (in):	30	Depth of Media (in):	N/A	Distribution Device:	Manifold (LPP Distri		

III. Repair System Type: PPBPS (pressurized) **System Classification:** IVa

Repair System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1500
Trench Width (ft):	2	Trench Spacing (ft):	8	Absorption Area (ft^2):	600	Total Trench Length (ft):	300
Maximum Trench Depth (in):	30	Depth of Media (in):	N/A	Distribution Device:	Manifold (LPP Distri		

IV. Permit Conditions/Comments:

(Please See the Following Page for Permit Conditions.)

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, 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 an INSTALLATION APPROVAL is granted by the Department.
- The septic system installer shall be a registered septic contractor with Mecklenburg County Health Department.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: Jeremy Michelone

Signature: Jeremy Michelone, R.S.

Date Issued: 8/5/2008

Owner/Legal Agent: Dale Hollands
Print Name

Signature: Dale Hollands

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 #: **30002944** GWS File #: **7454B**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 3 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.
- This type of septic system requires a Certified Operator to maintain the system. A system maintenance contract with a Certified Operator must be on file prior to issuance of an Operation Permit.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, 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 an INSTALLATION APPROVAL is granted by the Department.
- The septic system installer shall be a registered septic contractor with Mecklenburg County Health Department.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: Jeremy Michelone

Signature: Jeremy Michelone, L.S.

Date Issued: 8/5/2008

Owner/Legal Agent: Dale Holland

Print Name

Signature: Dale Holland

July 18, 2008

Mr. Dale Holland
7536 Neck Road
Huntersville, North Carolina 28078

Reference: **Request for a Septic Improvement Permit for 5736 Neck Road**
Mecklenburg County Health Department (MCHD) File #7454B
S&ME Job No. 1588-06-031

Dear Mr. Holland,

Attached is the request for the Improvement Permit for the above referenced lot. We are requesting an Improvement Permit for a new 3 bedroom house. We are proposing a LPP PPBPS system and repair. Mr. Bill Marlin, LSS and Mr. Jeremy Michelone, R.S., with the MCHD, have evaluated the soils (see attached MCHD soil sheets) and approved the proposed septic area at a 0.3 gpd/sqft LTAR. Mr. Michelone flagged the proposed septic system in the field. S&ME, Inc. reviewed this layout, shifted some lines, and had your surveyor locate the flagged lines. A few of the lines were adjusted or sketched on the attached map provided by the surveyor to meet required setbacks. The attached sketch and specifications are not an Improvement Permit and are intended only to assist the MCHD in permitting the referenced lot.

As the site plan shows, there is an existing home, well and septic system on the site. We understand you intend to demolish the existing home, but use the existing well. For the new proposed buildable area, the lot is extremely "tight" with little room for error in locating the proposed house or septic system. We recommend fencing off the septic area prior to any grading or construction on the site. There should be no driving or storage of building material on the septic field. A building permit cannot be issued until the MCHD issues an Authorization to Construct (ATC). Your designed house pad must fit in the "building envelope" shown on the Improvement Permit. **No grading shall take place on the lot prior to obtaining the ATC from the MCHD.**

The proposed system is a TYPE IV and will require a contract with a Certified Operator to supply maintenance services for the septic system. Please review the attached system sketch and design specifications for the Improvement Permit. If necessary, the MCHD may add comments to the site plan or specifications. Please call if you have any questions or comments.

Sincerely,

S&ME, Inc.



Paul G. Penninger, LSS
Licensed Soil Scientist

Rob Willcox, LSS
Natural Resources Department Manager

Attachments:
1. System Specifications
2. Site Plan
3. MCHD Soil Evaluation

Copy: Mr. Jeremy Michelone, R.S.
MCHD

Design Specifications for 5736 Neck
MCHD File # 7454B

Daily Design Flow:	360 gpd
Number Bedrooms:	3 bdr.
Basement or Crawlspace:	Crawlspace
Septic Tank Size:	1500 gal
Pump Tank Size:	1500 gal
Primary System Loading Rate:	0.3 gpd/ft^2
Primary System:	LPP PPBPS
Total Length of Primary	211 feet (200 required)
Repair System Loading Rate:	0.3 gpd/ft^2
Repair System:	LPP PPBPS
Total ft. of repair shown	205 ft.

.

PPBPS Design Worksheet For Dale Holland MCHD File # 7454B

File #: 7454B
Tax #: 023-012-39
Address: 5736 Neck Road
Consultant: Paul Penninger, LSS - S&ME,
Phone:
Reviewed By:
Date:

System Requirements

Design Flow	360	gpd
LTAR	0.300	gpd/ft.^2
Linear footage	400	ft. (conventional)
Linear footage	200	ft. (50% Reduction)

Primary System Design Layout

Laterals	Length (ft)	# Panels	Calculated
Line # 1	41	9	9.46
Line # 2	50	11	11.54
Line # 3	56	13	12.92
Line # 4	64	14	14.77
Line # 5	0	0	0.00
Line # 6	0	0	0.00
Line # 7	0	0	0.00
Line # 8	0	0	0.00
Line # 9	0	0	0.00
Totals	**211**	**47**	48.69

T & J Panels

Linear Feet	# Panels
20	5
30	7
40	9
50	11
60	14
70	16

Absorption Area

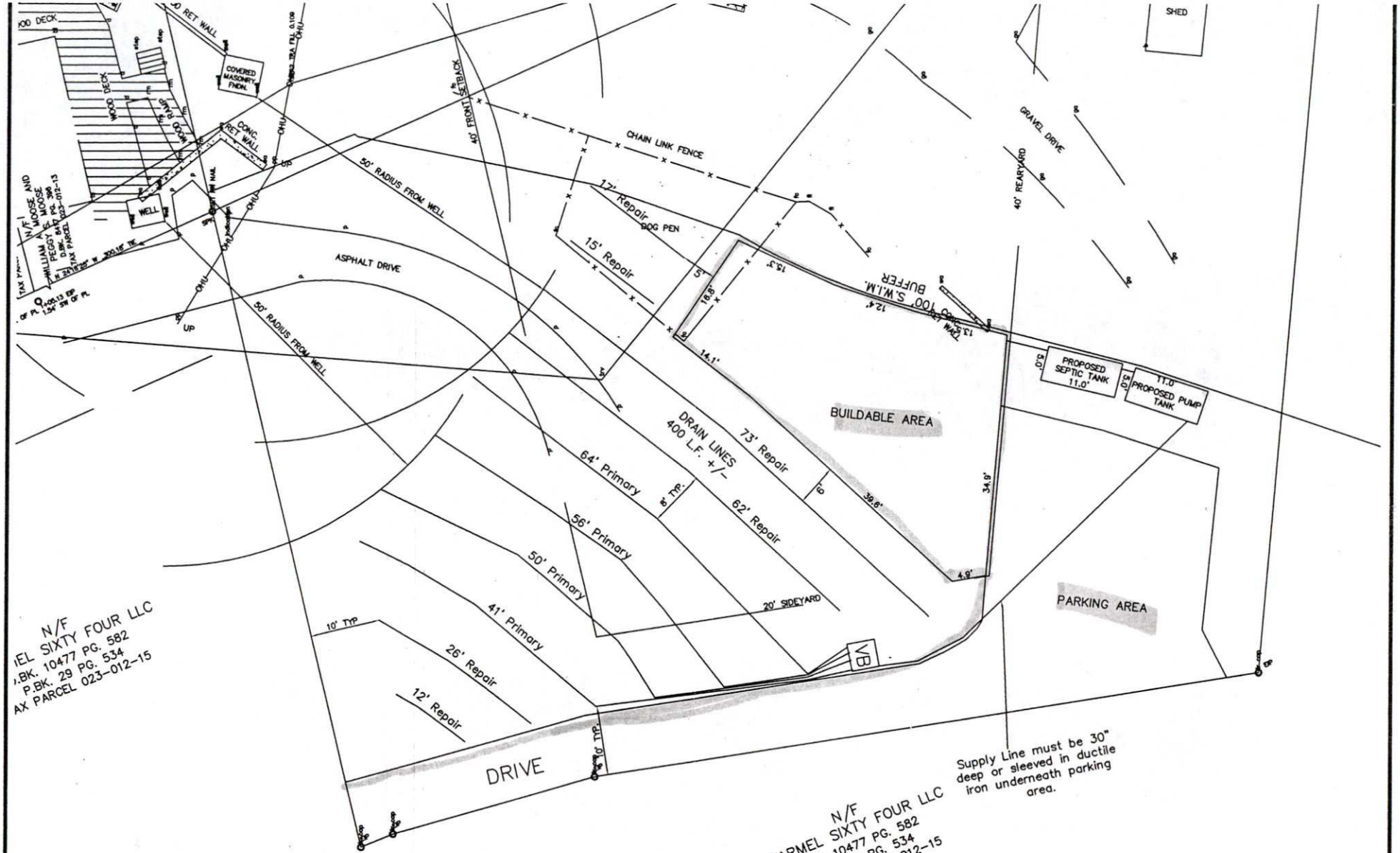
Length (ft)	Width (ft)	Area (ft^2)
211	2	422

System Pressure Head	3	ft.	Value selected by system designer (must be between 2-5 ft.)
Orifice Diameter	5/32	in.	Size selected by system designer (1/8 in. minimum)
Flow Rate per Orifice	0.5	gpm	Determined from orifice flow design table (use table from Flow Rate tab)
Total System Flow Rate	23.5	gpm	Total number of panels required multiplied by the orifice flow rate
System Dose Volume	169.20	gal.	Total number of panels required multipled by 3.6 gal./panel
Doses Per Day	2.13	cycles	Number of dose cycles per day based on daily design flow
Pump Run Time	7.20	min.	System dose volume divided by the total system flow rate
Pump Tank Volume / Inch	29	gal./in.	1,000 gal. Pump tank, volume is approximately 21 gallons per inch. 1,500 gal. pump tank, volume is approximately 29 gallons per inch
Pump Tank Drawdown	5.83	in.	Depth of effluent pumped per dose cycle.

Cells with blue shading require user input.
Cells with yellow shading are automatically calculated.

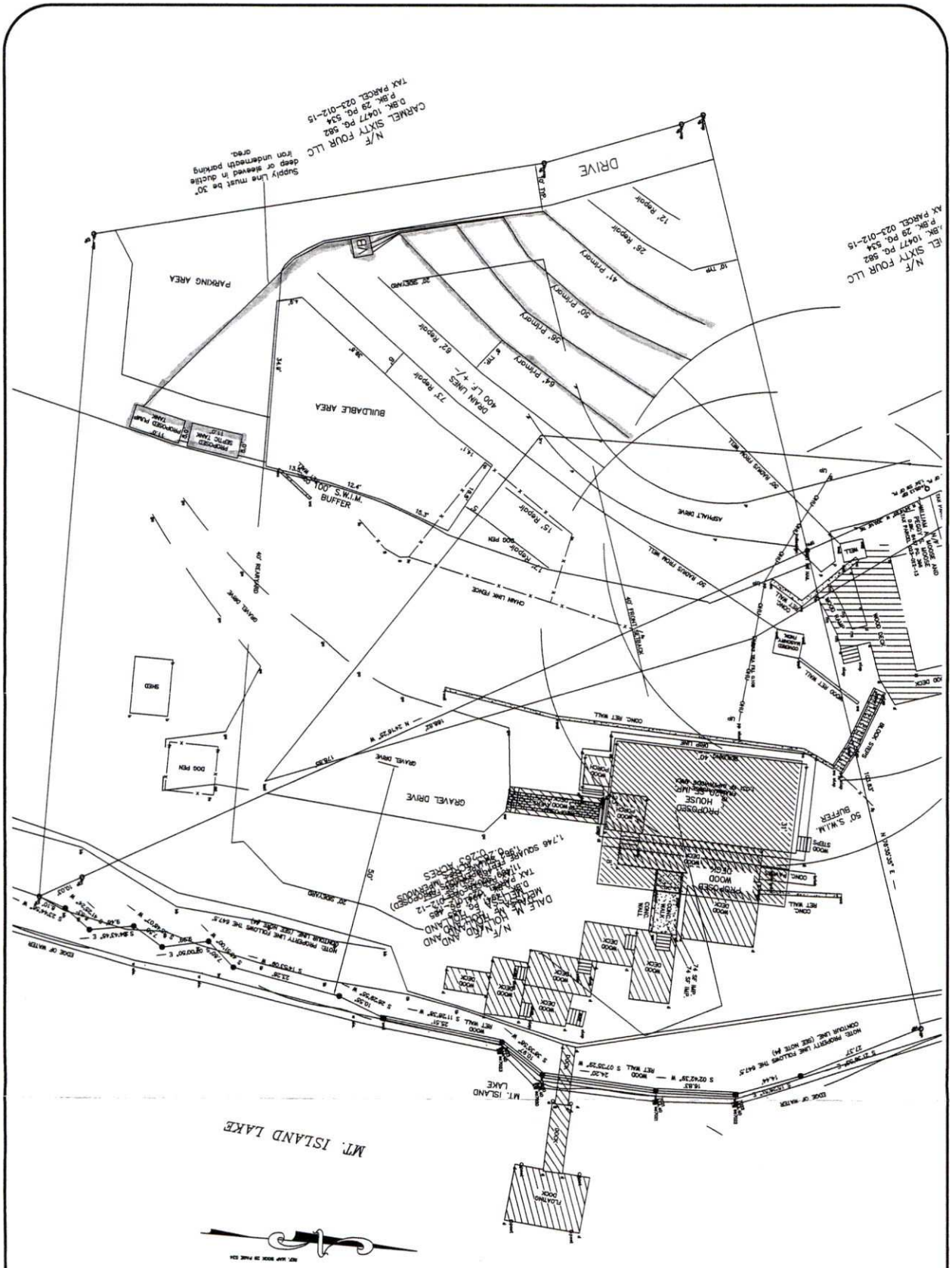
Comments:

1. Install system using 2 ft. wide trenches.
3. System design requires effluent pump for distribution.
4. 100% Repair area is required.



211' Primary T.S.

205' Repair T.S.



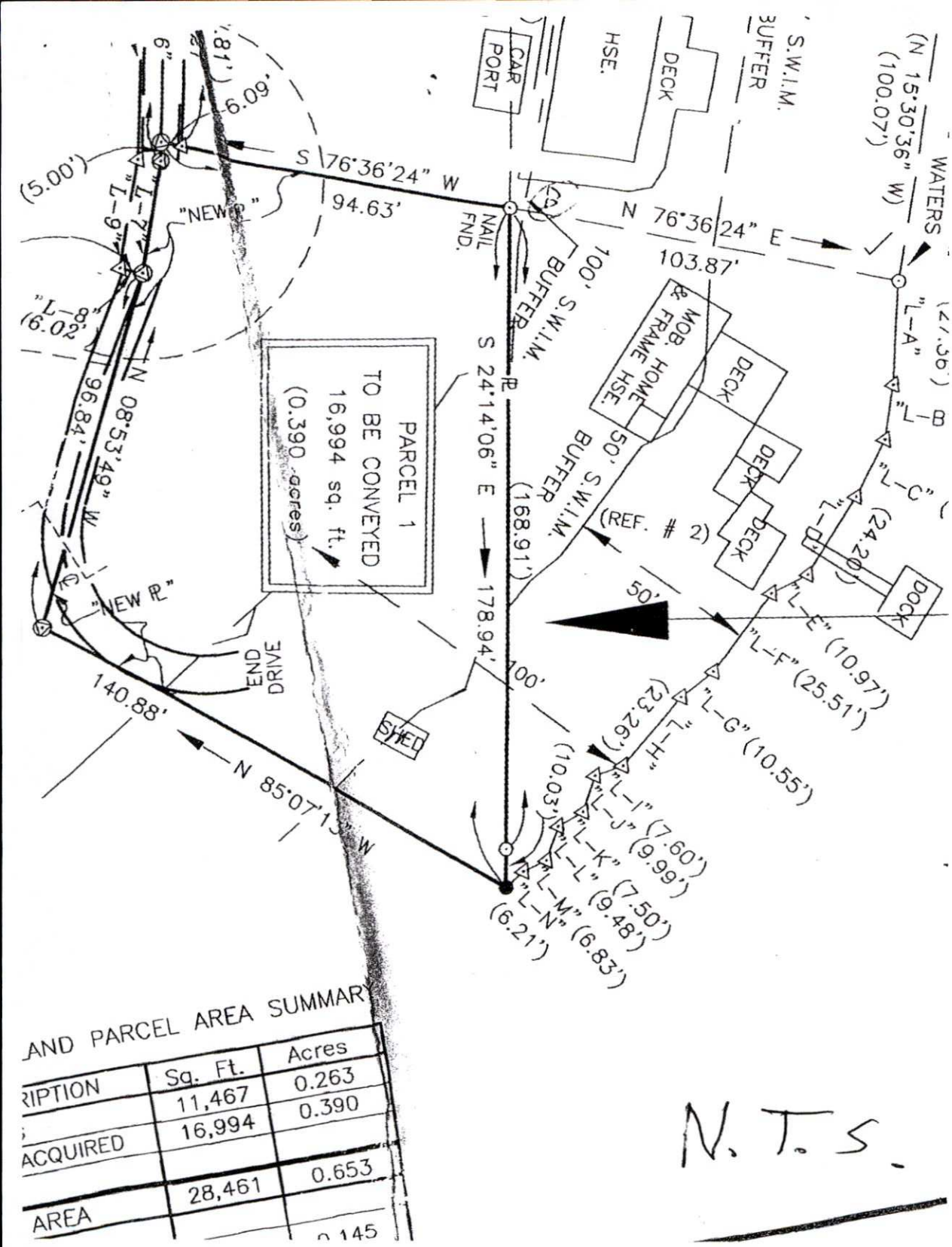
S&ME
3718 OLD BATTLEGROUND ROAD
GREENSBORO, NC. 27410
PH. 336-288-7180
FAX. 336-288-8680
WWW.SMEINC.COM

SITE PLAN

DALE HOLLAND

MECKLENBURG COUNTY, NORTH CAROLINA

SCALE: 1" = 20'	DRAWN BY: JBP	CHECKED BY: PGP
JOB NO. 1588-06-131	DATE: JUNE, 2008	FIGURE NO. 1



AND PARCEL AREA SUMMARY

RIPTION	Sq. Ft.	Acres
	11,467	0.263
ACQUIRED	16,994	0.390
	28,461	0.653
AREA		
		0.145

N.T.S.

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

Sheet: 1 of 2
Property ID: 023-012-39
Lot #:
File #: 7454B
AppID: 2944

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: Dale & Melissa Holland
Applicant:
Address: 5736 Neck Road, Huntersville, N. C. 28078
Date Evaluated: 1/29/2008
Proposed Facility: Residence
Design Flow (.1949) 360gpd
Property Size: .39a
Location of Site: Arthur Auten Road
Property Recorded:
Water Supply: [ ] Public [x] Individual [x] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [x] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

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	Profile Class & LTAR
1	LS, 15	0-4	GR/SL	FR/SEXP/NS/NP	>44" TO SOIL WETNESS	44	N/A	NONE	PS, IV
		4-44	SBK/SC	FI/SEXP/S/P					.3GPD/FT^2
2	"	0-6	GRAVEL		>48" TO SOIL WETNESS	48	"	"	"
		6-18	SBK/SCL	FR/SEXP/SS/SP					
		18-48	SBK/SC	FI/SEXP/S/P					
3	"	0-18	DISTURBED	MIXED	>58" TO SOIL WETNESS	32	"	"	US, IV
		18-32	SBK/SC	FI/SEXP/S/P		SEE NOTE			
		32-58	M/SCL	FR/SEXP/SS/SP					
4	18	0-8	GR/SCL	FR/SEXP/SS/SP	>50" TO SOIL WETNESS	50	"	"	PS, IV
		8-50	SBK/SC	FI/SEXP/S/P					.3GPD/FT^2
5	"	0-8	GR/SCL	FR/SEXP/SS/SP	>49" TO SOIL WETNESS	49	"	"	"
		8-38	SBK/SC	FI/SEXP/S/P					
		38-49	SBK/SCL	FR/SEXP/SS/SP					
					SITE LTAR .3GPD/FT^2				

Description	Initial System	Repair System
Available Space (.1945)		
System Type(s)		
Site LTAR		

Other Factors (.1946):
Soil Evaluation By: W. R. Marlin, LSS, 1/30/2008
Others Present: J. Michelone, D. Holland
Site Classification (.1948):
Site Evaluation By:
Others Present:

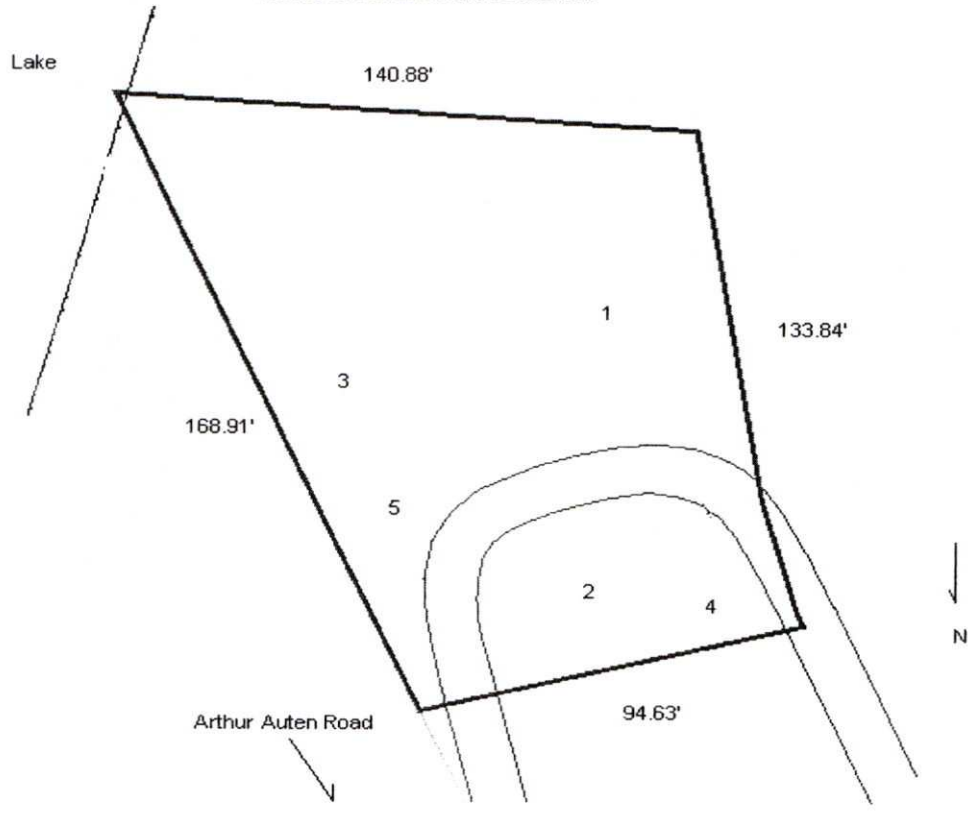
COMMENTS:

100% repair, Profile #3 has 18" of mixed fill over original soil

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		M-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				
FP-Flood Plain		CL-Clay Loam		
		SCL-Sandy Clay Loam		
	IV	SC-Sandy Clay	0.4 - 0.1	
		SIC-Silty Clay		
		C-Clay		

Consistence Moist	Consistence Wet	Mineralogy
VFR-Very Friable	NS-Non-Sticky	SEXP-Slightly Expansive
FR-Friable	SS-Slightly Sticky	EXP-Expansive
FI-Firm	S-Sticky	
VFI-Very Firm	VS-Very Sticky	
EFI-Extremely Firm	NP-Non-Plastic	
	SP-Slightly Plastic	
	P-Plastic	
	VP-Very Plastic	

Sketch of Soil Evaluation Locations



To Whom It May Concern:

Please call me and let me know when you will be coming out. I will need to give you specific directions as while the address is Arthur Auten Road, the access for the property is from the gravel Boat Ramp Road off Neck Road, not off Arthur Auten.

I will also have to let you in the chain/gate and put the dogs up. They are not aggressive but I do not want them jumping on anyone.

Attached is the survey and tax information from the GIS system.

Regards,

Dale Holland
704.763.5878.