

14925

~~14901~~ RAMAH CHURCH RD

01126119 29

LOT4

1/10/2008

duponbj

Groundwater and Wastewater Services File Imaging Project
May 2007
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28078

GWS – RES. APP 07/05

SEPTIC FEE: 210.00 CK # 9501
DATE: 3/24/06
CRT [ ]

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

WELL FEE:
DATE:
CRT [ ]

FILE # 64018

SEPTIC / TYPE APPLICATION: ☐ NONE ☐ NEW SYSTEM ☐ ALTERATION ☐ REPAIR ☐ MODIFY PLOT PLAN

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

WSS 3

JOB LOCATION INFORMATION:

TAX/PARCEL #: 011-261-20
STREET ADDRESS: Ramah Church Rd
CITY: Huntersville NC
STATE: NC ZIP:
SUBDIVISION OR MOBILE HOME PARK NAME:
LOT #: 4 5.83AC
TOWNSHIP:

☐ 0-MECKLENBURG ☐ 4-PINEVILLE
☐ 1-CHARLOTTE ☐ 5-MATTHEWS
☐ 2-DAVIDSON ☑ 6-HUNTERSVILLE
☐ 3-CORNELIUS ☐ 7-MINT HILL

BUILDING INFORMATION:

TYPE OF BUILDING:

☐ SINGLE MOBILE HOME (S) ☐ MODULAR HOME (M)
☐ DOUBLE WIDE (D) ☐ MULTIPLE FAMILY (U)
☑ HOUSE (H) ☐ OTHER

HEATED SQUARE FOOTAGE: 10K
NUMBER OF BEDROOMS: 5
NUMBER OF OCCUPANTS: 10

FOUNDATION FOR RESIDENCE:

☐ CONCRETE SLAB ☐ BASEMENT WITH PLUMBING
☑ CRAWLSPACE ☐ BASEMENT WITH NO PLUMBING

IF PLANNING TO EXPAND/ALTER THE EXISTING SYSTEM INDICATE THE FOLLOWING CHANGES:

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

WILL THERE BE A HOME BUSINESS IN THE RESIDENCE? ☐ YES ☐ NO TYPE:

WATER SUPPLY:

☐ MUNICIPAL (M) ☑ PUBLIC (C) ☐ PRIVATE WELL (P) ☐ SHARED WELL (S) ☐ OTHER 'SPRINGS' (O)

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

ARE ANY OF THE FOLLOWING LOCATED ON THE PROPERTY? IF SO, PLEASE SHOW LOCATION ON SITE PLAN/PLAT.

BURIED CABLES, LANDFILLS, STUMPHOLES	☐ YES	☑ NO	WELLS, SPRINGS, OR WATER LINES	☐ YES	☑ NO
EXISTING WASTEWATER SYSTEMS	☐ YES	☑ NO	DESIGNATED WETLANDS	☐ YES	☑ NO
EASEMENTS OR RIGHT-OF-WAYS	☑ YES	☐ NO	GRADING/SOIL REMOVAL PERFORMED	☐ YES	☑ NO

PROPERTY OWNER:

NAME: Augusta Homes
ADDRESS: 10602 B Bailey Rd
CITY: Cornelius
STATE: NC ZIP: 28031
HOME PHONE: 892-7795 WORK PHONE:
MOBILE PHONE: 582-9219 Toney FAX:

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME: Toney Jacobs @ STMT
ADDRESS: 385 Timber Rd.
CITY: Mooresville
STATE: NC ZIP: 28115
HOME PHONE: 704 662-8625 WORK PHONE:
MOBILE PHONE: 704-582-9219 FAX: 662-8735

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 2006
WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? NA

*An Improvement Permit is subject to suspension or revocation if site plans or the intended use change or if information submitted in this application is falsified or changed. The undersigned, owner, or legal agent for the 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 the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

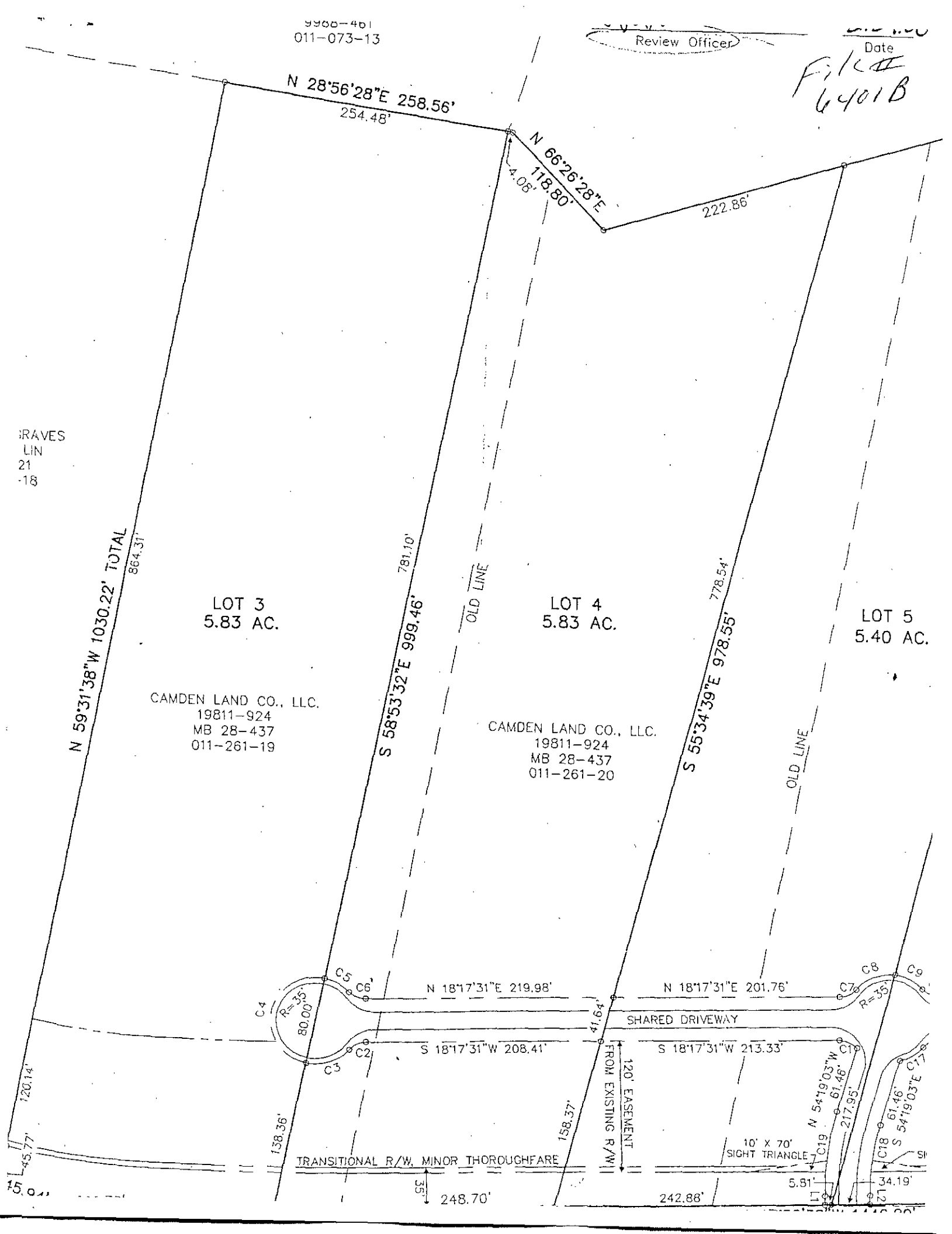
Owner's/Agent's Signature Date 3/23/06

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT & NATURAL RESOURCES DIVISION
OF ENVIRONMENTAL HEALTH ON-SITE
WASTEWATER SECTION

*A Well Permit is subject to suspension or revocation if site plans or the intended use change or if information submitted in this application is falsified or changed. The undersigned, owner, or legal agent for the 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 the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

Owner's/Agent's Signature Date

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


9966-461
011-073-13
Review Officer
Date
File
6401B
N 28°56'28"E 258.56'
254.48'
N 66°26'28"E
118.80'
4.08'
222.86'
GRAVES
LIN
21
-18
N 59°31'38"W 1030.22' TOTAL
864.31'
781.10'
S 58°53'32"E 999.46'
OLD LINE
778.54'
S 55°34'39"E 978.55'
OLD LINE
LOT 3
5.83 AC.
CAMDEN LAND CO., LLC.
19811-924
MB 28-437
011-261-19
LOT 4
5.83 AC.
CAMDEN LAND CO., LLC.
19811-924
MB 28-437
011-261-20
LOT 5
5.40 AC.
C4
R=35'
80.00'
C5
C6
N 18°17'31"E 219.98'
N 18°17'31"E 201.76'
C7
C8
C9
R=35'
41.64'
SHARED DRIVEWAY
C2
C3
S 18°17'31"W 208.41'
S 18°17'31"W 213.33'
C1
120' EASEMENT FROM EXISTING R/W
120.14'
138.36'
158.37'
N 54°19'03"W
61.46'
217.95'
10' X 70'
SIGHT TRIANGLE
C19
C18
61.46'
S 54°19'03"E
C17
45.77'
TRANSITIONAL R/W, MINOR THOROUGHFARE
35'
248.70'
242.88'
5.81'
L1
34.19'
L2

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

Sheet: 1 of 2
Property ID: PO 011-261-20
Lot #: 4
File #: 6401B
Code: 1

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: Augusta Homes
Applicant: Toney Jacobs/S&ME
Address: 10602 B Bailey Road, Cornelius, N. C. 28031
Date Evaluated: 4/19/06
Proposed Facility: Residence
Design Flow (.1949): 600gpd
Property Size: .46gpd
Location of Site: Ramah Church Road
Property Recorded:
Water Supply: [x] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [ ] 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	OTHER PROFILE FACTORS 1942 Soil Wetness/ Color	1943 Soil Depth (IN.)	1956 Sapro Class	1944 Restr. Horiz	Profile Class & LTAR
1	LS, 8	0-7	GR/SCL	FR/SEXP/SS/SP	>48" TO SOIL WETNESS	48+	N/A	NONE	PS, IV
		7-48	SBK/C	FI/SEXP/S/P					.3GPD/FT^2
2	"	0-6	GR/SCL	FR/SEXP/SS/SP	>49" TO SOIL WETNESS	49+	"	"	"
		6-38	SBK/C	FI/SEXP/S/P					
		38-49	SBK/C:	FR/SEXP/SS/SP					
3	"	0-10	GR/SCL	"	>38" TO SOIL WETNESS	38+	"	"	"
		10-38	SBK/C	FI/SEXP/S/P					
		BORING TERMINATED AT 38", FLOATER ROCK							
4	"	0-4	GR/SCL	FR/SEXP/SS/SP	>49" TO SOIL WETNESS	49+	"	"	"
		4-28	SBK/C	FI/SEXP/S/P					
		28-49	SBK/CL	FR/SEXP/SS/SP					

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)		
Site LTAR	.3GPD/FT^2	.3GPD/FT^2

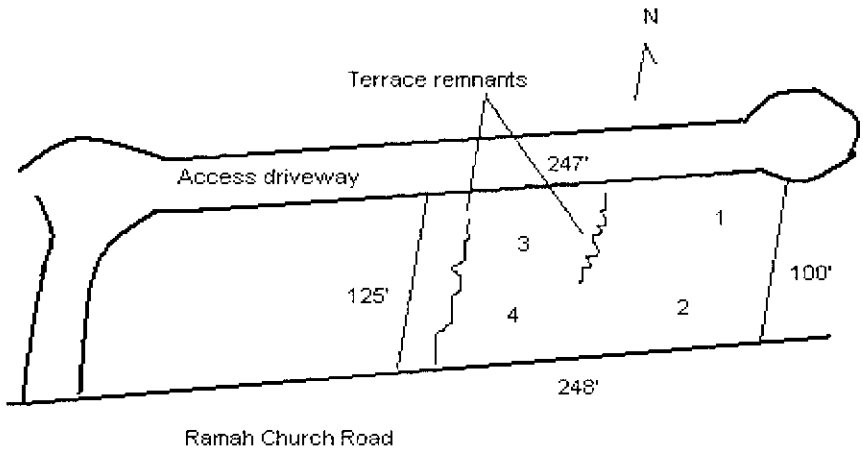
Other Factors (.1946):
Site Classification (.1948): PROVISIONALLY SUITABLE
Evaluated By: W. R. Marlin, LSS, 4/24/2006, W. R. Marlin.
Others Present:

COMMENTS:
100% repair, will need pump and easement

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-Food 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 #: **30000573** GWS File #: **6401B** Tax Parcel #: **011-261-20**

- 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):** 11/8/2011

Type of Installation: Residential - New System Lot Number: 4

Structure Type: HOUSE Size (ft^2): 10000 # Bedrooms: 5 # Occupants: 10

Building Foundation: Crawl Space Water Supply: Community

II. Initial System Type: Pump to Approved Accepted **System Classification:** IIIb

Initial System Specifications:

Design Flow (gpd):	600	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1500
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	2000	Total Trench Length (ft):	667
Maximum Trench Depth (in):	30	Depth of Media (in):	N/A	Distribution Device:	Pressure Manifold		

III. Repair System Type: Pump to Approved Accepted **System Classification:** IIIb

Repair System Specifications:

Design Flow (gpd):	600	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1500
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	1500	Total Trench Length (ft):	500
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 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: Cina Buchanan Owner/Legal Agent: Tony C Jacobs
Print Name

Signature: Cina Buchanan, RS Signature: Tony C Jacobs

Date Issued: 11/8/2006

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 #: **30000573** GWS File #: **6401B**

IV. Permit Conditions/Comments:

- Easement agreement forms shall be on file and the property shall be deeded and recorded prior to issuance of Construction Authorization.
- 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.
- This type of repair system requires periodic inspections by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- 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.
- The supply pipe shall be installed with a minimum of 30" of compacted cover over the pipe or properly sleeved under areas that are subject to vehicular traffic.

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:

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- 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: Cina Buchanan Owner/Legal Agent: Tonya C. Jacobs
Print Name

Signature: Cina Buchanan, RS Signature: Tonya C. Jacobs

Date Issued: 11/8/2006

10/23/06
Site Eval
Cina Buchanan

RESIDENTIAL LOW PRESSURE DOSING

25% REDUCTION SEPTIC SYSTEM

FOR

SUBSURFACE WASTEWATER DISPOSAL

10-23-06

MEADOWBROOK FARMS-LOT 4

MECKLENBURG COUNTY, NC

(1) CORRECT SYSTEM FLOW CALCS. 32.88 GPM

(2) UPDATE TABLE FOR DRAIN FIELD CALCS. 6 TRPS

MCHD FILE #6401B

Changed 12/1/06 CAB

Prepared for:
Augusta Homes
10602 B Bailey Road
Cornelius, North Carolina 28031
(704) 892-7795

Prepared by:
S&ME, Inc.
385 Timber Road, Suite 104
Mooresville, North Carolina 28115
(704) 662-8625

October 17, 2006

Copy: Cina Buchanan, R.S.
Mecklenburg County Health Dept. – IWWS
700 North Tryon Street
Charlotte, North Carolina 28202
(704) 336-8993

Toney C. Jacobs, LSS

BACKGROUND

A 25% reduction system is used for conserving space. Soil profiles by Mr. Bill Marlin (MCHD) were ps soils to approximately 48" and 0.275 LTAR. This lot does require 100% repair. All system and repair lines have been laid out in the field.

APPLICATION INFORMATION

1. Owner: Augusta Homes
10602 B Bailey Road
Cornelius, North Carolina 28031

Soil Scientist
And Designer: Toney C. Jacobs, LSS
S&ME, Inc.
385 Timber Road, Suite 104
Mooresville, North Carolina 28115

2. Water supply is provided by CMUD.
3. Facility to be served by the proposed system is a 5 bedroom single family residence.

LOCATION

The property is located off Rama Church Road near Highway 73.

REFERENCES

Law and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, Department of Environment, Health, and Natural Resources.

PLANS AND SPECIFICATIONS FOR SPECIFIC SYSTEM COMPONENTS

Septic Tank

1. The septic tank receives wastewater directly from the house.
2. A septic tank shall be watertight, structurally sound, and not subject to excessive corrosion or decay.
3. The septic tank must be of two-compartment design for maximum solids and retention. The inlet compartment of two-compartment tank shall hold between two-thirds and three-fourths of the total tank capacity.
4. Effluent from the two-compartment septic tank flows by gravity through a State approved effluent filter and a four-inch solid PVC pipe to the pumping tank.
5. Both the septic tank and pumping tank must be provided with above ground approved *manhole risers to provide easy access for clean-out and pump service.*

6. When prefabricated concrete thanks or tanks of other mater are used, they shall be constructed in accordance with the plans which have been approved by the State and shall comply with all requirements of Section .1953 of 15A NCAC 18A.
7. On the outlet tee of the septic tank an effluent filter must be installed. This filter should be equivalent to a Zabel Model A1800 or other State approved unit supplied by the tank Manufacturer.

Pumping Tank

1. The pumping tank shall have an access manhole extending at least 6 inches above finished grade.
2. A septic tank effluent pump that will not be corroded by sewage shall be used in the pumping tank.
3. The pump must be placed on two concrete blocks set next to each other on the bottom of the tank. This prevents the pumping of any solid particles that can clog the system.
4. A piece of nylon rope or other non-corrodible material should be attached to the pump and to the outlet pipe for lifting the pump in and out of the chamber.
5. The lower level control or "pump-off" must be positioned above the pump, so that the pump remains submerged at all times.
6. The pump outlet pipe should be connected to the supply manifold with a threaded PVC union to allow quick removal.
7. Pump and Simplex control circuits shall be provided with manual circuit disconnects within a watertight, corrosion-resistant, outside enclosure (NEMA 4X or equivalent) adjacent to the pump tank, securely mounted at least 12 inches above finished grade. Pump control (Simplex) may be mounted on side of house if long cord pump is used. The pump shall be manually operable without requiring the use of special tools or entrance into the tank for testing purposes. Conductors shall able conveyed to the disconnect enclosure through water proof, gas proof, and corrosion-resistant conduits, with no splices or junction boxes provided inside the tank. Wire grips, duct seal or other suitable material shall be used to seal around wire and wire conduit openings inside the pump tank and disconnect enclosure. There shall be two electric circuits for controls: one for pump power, one for the alarm. These will require 2 circuit breakers.
8. The pump tank shall have a properly functioning high-water alarm. The alarm circuit shall be supplied ahead of any pump overload and short circuit protective devices. It should be on a separate electrical circuit from the pump power line. The alarm shall be audible and visible by system users and included in the pump and control enclosure (Simplex Panel). The alarm is activated if the water level in the pump tank rises above the "pump-on" float control. The tank provides at least one day or more of excess storage capacity (depending on water use in the home) during which time the system must be repaired.
9. Float switch for the high water alarm shall be set no more than 3 inches above the high water level of pump cycle.
10. Float switch tie downs to be made of corrosion resistant material, no tape or metal hose clamps. For maintenance flexibility, tree must be used to set floats.
11. Watertight testing per .1900 rules shall be required on two piece pump tanks.

12. Wiring between the pumping tank and the house should meet State and local code requirements.

Pipe and Fittings

1. All pipes and fittings should be made of SCH 40 PVC.
2. All joints must be sealed with appropriate PVC-solvent cement.
3. There should be a threaded PVC union above the pump to allow easy removal or replacement.
4. A gate valve for final pressure adjustment is installed in the supply line inside the pumping tank.
5. Manifold and valve as shown in specifications.

CONSTRUCTION INSTALLATION

Site Preparation

1. One of the most important concerns for an on-site system is to protect the site from soil disturbance by heavy equipment.
2. Now that the absorption area has been designed and flagged, it should be roped off and protected from construction traffic. No site preparation or construction work should occur if the soil is wet.
3. No cleaning will be required.
4. After the old terrace has been shaped, the location of the lateral lines and supply manifold should be accurately re-flagged according to design specifications. Each lateral line must be laid out along a level contour using a transit. This step can be completely avoided if flags are protected during clearing.

Tank Installation

1. The two-compartment septic tank is installed.
2. The pumping tank is installed next to the septic tank.
3. The tanks are connected with an appropriate length of solid, four-inch PVC pipe.

Supply Manifold

1. The supply manifold conveys effluent from the pump to the distribution laterals.
2. Design of the pressure manifold is shown on attached diagram.
3. After the supply manifold has been placed in its trench and lateral lines connected, it should be backfilled with tightly tamped soil. The supply manifold trench must not be backfilled with gravel, or the trench may become a conduit for down slope flow effluent from the laterals.

Lateral Lines

1. Approved 25% reduction shall be used.
2. Regulation backfill shall be placed over the vents on the side of the chambers.
3. A minimum of 12" of cover shall be placed over the chambers.
4. Follow manufacturer's guides.

PROPER OPERATION CHECK AND PRESSURE HEAD ADJUSTMENT

1. After all connections have been installed and connected, the system should be checked for proper operation. With electrical power turned off, fill the pump tank with a garden hose until the liquid rises to the level of the high-water alarm float.
2. Turn on the electrical power. The alarm light should go off when the liquid level falls below the high-water float. The pump should turn off when the liquid reaches the lowest float control. Be sure the pump is still completely submerged.
3. The pressure head is measured as the height liquid will rise above the pressure manifold when the pump is running. To set or check the pressure head:

    - Glue a three-foot length of pipe (preferable clear) to a threaded adapter that will screw into the pressure manifold.
    - Turn the power on to allow liquid to rise in the pip.
    - Adjust the gate valve until the effluent reaches the desired height in the pipe.

FINAL LANDSCAPING

1. After the system is installed, the following should be checked to ensure that the system will not be overloaded with excess rainwater and runoff:
    - The distribution field is shaped to shed rainwater and is free of low areas.
2. Finally, the entire area should be planted with grass in order to prevent erosion. The soil should be properly tilled, limed (if necessary) and fertilized before planting. After applying an appropriate grass seed, the area should be heavily mulched with straw or other suitable material.

QUALITY ASSURANCE REQUIREMENTS

The system must be installed by a qualified contractor that is on the Mecklenburg County list of competent contractors. Critical stages of the installation which should be checked are:

1. System layout.
2. Septic and pump tank installation prior to backfilling.
3. Manifold and lateral installation prior to backfilling.
4. Final landscaping, operation and pressure head check.

The system design is based on a maximum waste flow of 600 gallons per day. Homeowners should pay particular attention to the section titled Homeowner Suggestions for ways to minimize the burden on the system.

OPERATION AND MAINTENANCE PROCEDURE

The system is classified as Type III and does not require a maintenance contract with a certified operator. The following are operating, maintenance and inspection procedures the homeowner should follow.

- Septic system shall be pumped every 4 years or when solids accumulate to 1/3 the volume of the tank.
- At 6 month intervals, inspect the effluent filter. When washing the filter, debris must be sprayed directly back into the septic tank and not onto the lawn.
- Pressure head at manifold should be checked and adjusted one month after installation and annually thereafter.
- All piping and fittings shall be checked annually for damage and/or proper operation and corrections made immediately.
- The property should be inspected to insure all surface water is diverted away from the fields and tank. Any ponding of surface water should be corrected.
- Grasses shall be mowed and maintained and any erosion shall be corrected promptly.
- The nitrification field area shall be checked for leakages, blowouts or malfunction, indications of damp or mushy areas compared to surrounding area or evidence of noticeable odor of sewage. Repairs shall be made immediately.
- The pump electrical should be checked to insure tight, clean connections with no corrosion and proper operation.
- Pump switches shall be checked for free operation and proper level set.
- Pump draw down depth and delivery rate shall be checked each year.
- Check septic tank and pump tank for evidence of damage or leakage. Check the quality of effluent including grease and sludge accumulation.

HOMEOWNER SUGGESTION

Most systems do not require much effort to operate and maintain. Even though the effort is small, the system must be maintained properly so that it operates reliably and at a minimum cost. Following are suggestions for the homeowner to minimize the burden on the septic system.

1. Garbage disposals should not be used in on-site systems. The ground garbage adds large amounts of solids to a septic tank, causing sludge to build up at a quicker rate than without. If disposal is installed, use should be limited.
2. Grease, cooking oils and coffee grounds should never be put into a septic tank.
3. Items such as disposable diapers, cigarettes, facial tissues and other solid or paper wastes should not be flushed into the on-site system.
4. Used motor oil and other such oily liquids should not be put into a septic tank.
5. Using less water can reduce the amount of water flowing to the treatment and disposal field.

6. Water-saving fixtures and devices can be installed on sinks, toilets and showers to reduce the rate at which the water flows from the fixture.
7. Dishwashers and washing machines should only be run with full loads.
8. Leaky faucets and toilets can add large volumes of water to the daily flow of water into the on-site system. Repair the leaks to save water and give the treatment and disposal field a rest.
9. Roof drains, basement sump pumps, foundation drains, and other such drains should not empty into or onto the surface above the on-site system. These drains should be directed to another part of the lot away from the treatment and disposal field.

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

Property ID: PO 011-261-20
Lot #: 4
File #: 5401B
Code: 1

attachment 4

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: Augusta Homes
Address: 10602 B Bailey Road, Cornelius, N. C. 28031
Proposed Facility: Residence Design Flow (.1949): 600gpd
Location of Site: Ramah Church Road
Water Supply: [x] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

Applicant: Toney Jacobs/S&ME
Date Evaluated: 4/19/06
Property Size: .46gpd
Property Recorded:

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 .1941 Structure/ Texture	.1941 Consistence Mineralogy	OTHER PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
1	LS, 8	0-7	GR/SCL	FR/SEXP/SS/SP	>46" TO SOIL WETNESS	46+	N/A	NONE	PS, IV
		7-46	SBK/C	FI/SEXP/S/P					.3GPD/FT^2
2	"	0-6	GR/SCL	FR/SEXP/SS/SP	>49" TO SOIL WETNESS	49+	"	"	"
		6-38	SBK/C	FI/SEXP/S/P					
		38-49	SBK/C	FR/SEXP/SS/SP					
3	"	0-10	GR/SCL	"	>38" TO SOIL WETNESS	38+	"	"	"
		10-38	SBK/C	FI/SEXP/S/P					
		BORING TERMINATED AT 38", FLOATER ROCK							
4	"	0-4	GR/SCL	FR/SEXP/SS/SP	>49" TO SOIL WETNESS	49+	"	"	"
		4-28	SBK/C	FI/SEXP/S/P					
		28-49	SBK/CL	FR/SEXP/SS/SP					

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)		
Site LTAR	.3GPD/FT^2	.3GPD/FT^2

Other Factors (.1946):
Site Classification (.1948): PROVISIONALLY SUITABLE
Evaluated By: W. R. Marlin, LSS, 4/24/2006, W. R. Marlin
Others Present:

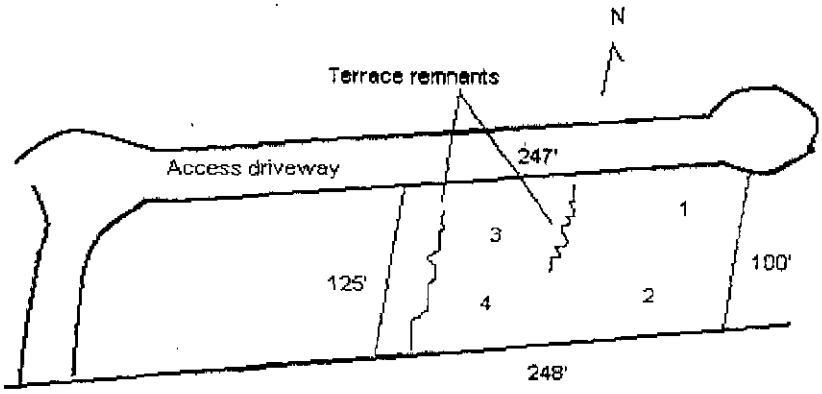
Sheet: 2 of 2
FILE #: 6401B

COMMENTS:
100% repair, will need pump and easement

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-Food 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		CL-Clay Loam		
FP-Flood Plain		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



Lot 4 Meadowbrook Farms #6401B

Number of Bedrooms	**5**
Design Flow (gpd)	**600**
Primary System LTAR (gpd/ft2)	**0.275**
Primary System Type	**25% Reduction**
No. Lines	6 (See Table)
Total Linear Feet	544'
Trench Width	3' min.
Trench Spacing	9' min.
Pump Required	Yes
Distribution Device	Pressure Manifold
Maintenance Agreement Required	Yes
Length and Diameter of Supply Pipe Size of laterals	1255' of 3" SCH 40 PVC
Flow Rate through the system	32.88 gpm
Elevation head	Approx. 41'
Pressure head	2.0'
Friction head	1.76'
20% Contingency	8.95'
Total Head	53.7'
Pump Requirements	32.88 gpm @ 2' of head; use Goulds WE07H pump or equivelent with compatible electrical*
Maximum Dosing Volume	300 gal -2 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. 13.6 min.
Check Valve	Yes
Siphon Break hole	Yes
Repair System	**25% Reduction**
Total Linear Feet	544'
Repair Loading Rate	0.275

Table: Summary of Primary and Repair Nitrification Line Specifications

Line No.	Use	Line Color	System Type	Line Length (Ft.)	Rod Reading Elevation (Ft.)
1	System	Blue	25% Reduction	91' endfed	750'
2	System	White	25% Reduction	91' endfed	
3	System	Pink	25% Reduction	91' endfed	
4	System	Orange	25% Reduction	91' endfed	
5	System	Blue	25% Reduction	91' endfed	
6	System	White	25% Reduction	91' endfed	
7	Repair	Pink	25% Reduction		
8	Repair	Orange	25% Reduction		
9	Repair	Blue	25% Reduction		
10	Repair	White	25% Reduction		
11	Repair	Pink	25% Reduction		
12	Repair	Orange	25% Reduction		
				Total System: 544'	
				Total Repair: 544'	

Tank		1500 gal (2 compartment)	715 asi
Pump Tank		1500 gal.	715 asi
			715 asi

Manifold Information	
Tap Size (In.)	1/2
Tap Material	SCH 80 PVC
No. Taps	6
Barrel Size (In.)	4
Barrel Material	SCH 80 PVC
Flow (gpm)/Tap	5.5

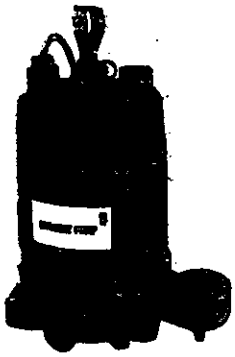
GOULDS PUMPS

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.

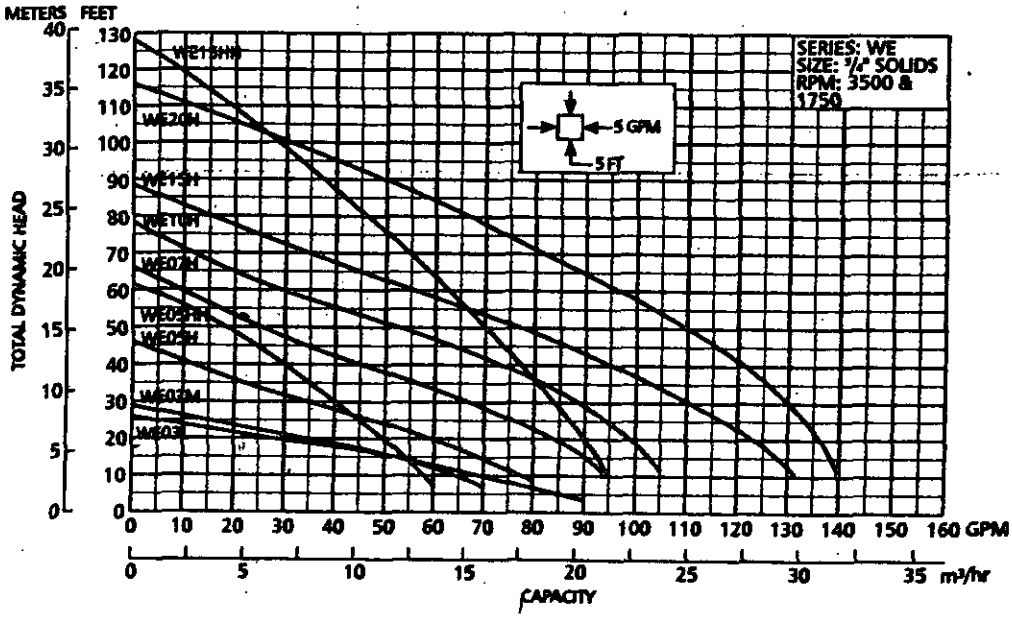
Power Cable: Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.

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 #LR38548

Goulds Pumps is ISO 9001 Registered.



Goulds Pumps

ITT Industries

© 2003 Goulds Pumps
Effective July, 2003
B3885

FEE: 300.00
DATE: 3/13/2008

CONSTRUCTION AUTHORIZATION FOR AN ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

MECKLENBURG COUNTY
GROUNDWATER & WASTEWATER SERVICES

FILE NUMBER: 6401B

PERMIT NUMBER: 30000573

PARCEL NUMBER: 01126120

JOB LOCATION INFORMATION

ADDRESS: 14925 RAMAH CHURCH RD

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

ISSUED TO: Augusta Homes

CONSTRUCTION AUTHORIZATION ISSUANCE DATE: 3/13/2008

CONSTRUCTION AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 30000573, 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. AN INSTALLATION APPROVAL MUST BE SECURED PRIOR TO INSTALLATION OF THE SEPTIC TANK SYSTEM. THE INSTALLER OF THE SYSTEM SHALL BE A REGISTERED SEPTIC TANK CONTRACTOR WITH THE MECKLENBURG COUNTY HEALTH DEPARTMENT.

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.
   *CONSTRUCTION AUTHORIZATION EXPIRATION DATE: 11/8/2011

FOR REGISTRATION JUDITH A. GIBSON
REGISTER OF DEEDS
MECKLENBURG COUNTY, NC
2006 DEC 01 10:19 AM
BK:21438 PG:881-888 FEE:$32.00

INSTRUMENT # 2006249605



2006249605

lot 7

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

SEPTIC SYSTEM EASEMENT AGREEMENT

This EASEMENT made this 11th day of November, 2006, by and between

GRANTOR	GRANTEE
Ken Wrench - President Augusta Homes, Inc. 10602-B Bailey Road Cornelius, NC 28031	Augusta Homes, Inc. 10602-B Bailey Road Cornelius, NC 28031

Enter in appropriate block for each party: name, address, and, if appropriate, character or entity, e.g., corporation or partnership.

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee an easement as hereinafter described, to run with the land upon that certain lot or parcel of land owned by Grantor and located in the city of _____, ~~Huntersville~~ _____ Township, Mecklenburg County, North Carolina, and more particularly described as follows:

This instrument was prepared by: Ken Wrench - President Augusta Homes, Inc.
Grantor

Mail after recording to: Ken Wrench
Augusta Homes
10602 Bailey Rd
Cornelius, N.C. 28031

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

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WITNESSETH, that the Grantor, for a valuable consideration paid by Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee an easement as hereinafter described, to run with the land upon that certain lot or parcel of land owned by Grantor and located in the city of _____, Huntersville Township, Mecklenburg County, North Carolina, and more particularly described as follows:

This instrument was prepared by: Ken Wrench - President Augusta Homes, Inc.

Grantor

Mail after recording to: _____

Mecklenburg Tax Parcel No. 011-261-23 as shown on a page of the County Tax Map attached hereto as Exhibit A
Lot 7 Block _____ of Meadowbrook Farms recorded In Map Book 45 Page 828 (if applicable)

See the plat attached hereto as Exhibit B and the parcel shown thereon identified with Grantor's name for the legal description of Grantor's parcel and of the Septic System Easement Area located thereon, said parcel labeled threon and hereinafter referred to as the "Easement Parcel."

Grantor hereby imposes said easement for the benefit of Grantee as the present owner and for the benefit of future owners of the following lot or parcel of land, situated in the City of _____, Huntersville Township, Mecklenburg County, North Carolina, and more particularly described as follows:

Mecklenburg Tax Parcel No. 001-261-20 as shown on a page of the County Tax Map attached hereto as Exhibit A
Lot 4 Block _____ of Meadowbrook Farms recorded In Map Book 45 Page 828 (if applicable)

See the plat attached hereto as Exhibit B and the parcel shown thereon identified with Grantee's name for the legal description of Grantee's parcel, said parcel labeled thereon and hereinafter referred to as the "Benefited Parcel."

Said Easement shall enable the Grantee to place, if, as and when needed, such need to be determined by the Grantee in his sole discretion, a septic tank and drain field or portions thereof, upon the Septic System Easement Area on the Easement Parcel and to inspect, maintain, repair and replace components of said septic system at any time and from time to time. If the Easement Area also includes a connector strip for ingress and egress, Grantee shall have the right to use said connector strip for access as needed. *This Easement may not be altered, amended or cancelled without the express written permission of the Mecklenburg County Health Department, which written permission must be part of any document recorded to alter, amend or cancel this Easement.* This Easement shall automatically expire, however, should Grantee ever hook up the structure located or to be located on the Benefited Parcel to a public or community sanitary sewage system but shall otherwise be perpetual.

Grantor acknowledges that the Septic Tank System Easement Area cannot be used and will not be used for any of the following activities or in any of the following ways:

- Grading or filling
- Parking or driving heavy equipment in the area or in any other way compacting the soil in the Area
- Excavating soil from the Area
- Placing footings or foundations or engaging in any other construction activity in the Area
- Placing in-ground or above-ground swimming pools in the Area
- Placing irrigation systems in the Area

- Placing underground utility lines or cables in the Area
- Planting trees or gardens in the Area
- Removing any large trees in the Area unless dead or diseased
- Using the Area for the burial of stumps, trash, or any other type of construction material
- Using the Area for gravesites
- Diverting the natural flow of water onto the Area by way of drainage ditches or diversion ditches or using the Area to receive water from any gutter or downspout discharges

IN WITNESS WHEREOF, the Grantor and Grantee have hereunto set their hands and seals, or if corporate, have caused this instrument to be signed in their corporate names by their duly authorized officers and their seals to be hereunto affixed by authority of their Boards of Directors, the day and year first above written.

GRANTOR

Augusta Homes, Inc. _____ (SEAL)
(Corporate Name)

BY: _____ _____ (SEAL)
Ken Wrench President

ATTEST: _____ (SEAL)

_____ _____ (SEAL)
_____ Secretary (Corporate Seal)

SEAL-STAMP

North Carolina, Mecklenburg County

I, Carmen Howard, a Notary Public of the Cabarrus County and State aforesaid, certify that Ken Wrench, Grantor, personally appeared before me this day and acknowledged the execution of the foregoing instrument. WITNESS my hand and official stamp or seal, this 29th day of November, 2006.

My Commission Expires: 11-4-07 Carmen Howard
(Notary Public)

SEAL-STAMP North Carolina, _____ County

I, _____, a Notary Public of the County and State aforesaid, certify that _____ personally came before me this day and acknowledged the ___he is _____ Secretary of _____, a corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its _____ President, sealed with its corporate seal, and attested by _____ as its _____ Secretary. WITNESS my hand and official stamp or seal, this _____ day of _____, 20_____.

My Commission Expires: _____ _____
(Notary Public)

GRANTEE

Augusta Homes, Inc. _____ (SEAL)
(Corporate Name)

BY: _____ _____ (SEAL)
Ken Wrench President

ATTEST: _____ (SEAL)

_____ _____ (SEAL)
_____ Secretary (Corporate Seal)

SEAL-STAMP North Carolina, Mecklenburg County

I, Carmen Howard, a Notary Public of the Cabarrus County and State aforesaid, certify that Ken Wrench, Grantee, personally appeared before me this day and acknowledged the execution of the foregoing instrument. WITNESS my hand and official stamp or seal, this 29th day of November, 2006.

My Commission Expires: 11-4-07 Carmen Howard
(Notary Public)

SEAL-STAMP North Carolina, _____ County

I, _____, a Notary Public of the County and State aforesaid, certify that _____ personally came before me this day and acknowledged the ___he is _____ Secretary of _____, a corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its _____ President, sealed with its corporate seal, and attested by _____ as its _____ Secretary. WITNESS my hand and official stamp or seal, this _____ day of _____, 20_____.

My Commission Expires: _____ _____
(Notary Public)

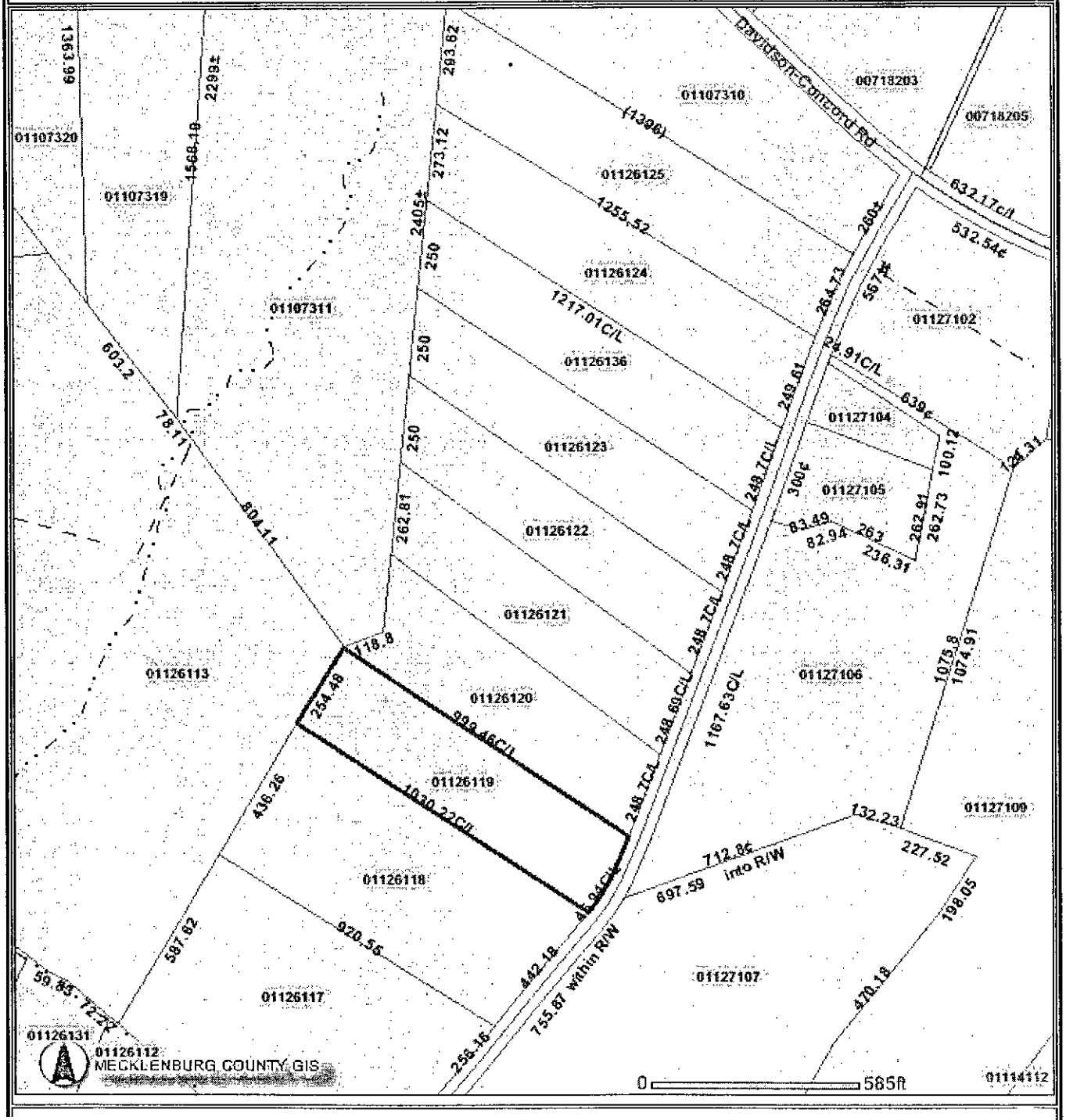
Approval by the Mecklenburg County Health Department does not certify or extend to matters of title. The purchaser of property subject to or affected by this easement is responsible for ascertaining all matters affecting the validity and enforceability of this instrument.

Mecklenburg County, North Carolina

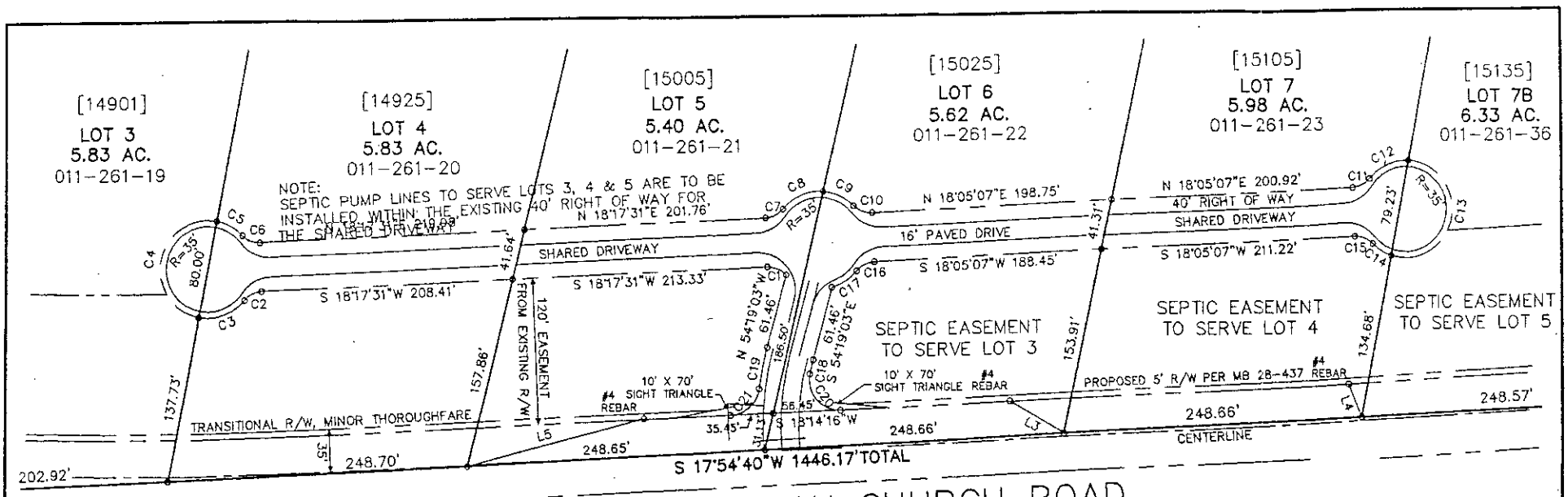
POLARIS

Property Ownership Land Records Information System

Date Printed: Thu Nov 16 10:28:30 EST 2006



THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS.



THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS.

PYRAMID

LAND SURVEYING
RUFUS JACKSON LOVE
PROFESSIONAL LAND SURVEYOR L-2844
P.O. Box 11
Davidson, NC 28036
(704) 892-4249

CURVE TABLE

Curve	Length	Radius	Chord	Chord Bearing
C1	20.01'	16.82'	18.93'	S 05°48'10" E
C2	20.05'	16.82'	18.93'	S 05°48'10" E
C3	40.00'	42.59'	40.61'	S 00°36'18" W
C4	40.00'	125.66'	80.00'	N 58°53'32" W
C5	40.00'	25.07'	24.66'	N 49°03'54" E
C6	20.01'	16.45'	15.99'	N 41°49'45" E
C7	20.00'	16.82'	16.33'	N 05°48'10" W
C8	40.00'	38.29'	36.85'	N 02°28'21" W
C9	40.00'	28.85'	28.23'	N 45°36'50" E
C10	20.00'	16.82'	16.33'	N 42°10'48" E
C11	20.00'	16.82'	16.33'	N 06°00'35" W
C12	40.00'	37.42'	36.07'	N 03°18'06" W
C13	40.00'	136.76'	79.23'	S 58°33'01" E
C14	40.00'	18.76'	18.59'	S 52°50'12" W
C15	20.00'	16.82'	16.33'	S 42°10'48" W
C16	20.00'	16.82'	16.33'	S 06°00'35" E
C17	40.00'	24.98'	24.58'	S 12°12'39" E
C18	210.00'	11.60'	11.60'	S 55°54'01" E
C19	250.00'	34.44'	34.42'	N 58°15'52" W
C20	25.00'	45.50'	39.48'	N 70°22'38" E
C21	25.00'	35.10'	32.29'	N 21°59'12" W

BASED ON MB 45-828

LINE TABLE

Course	Bearing	Distance
L3	S 51°36'47" W	52.53' (TIE)
L4	S 88°28'15" W	29.61' (TIE)
L5	N 06°07'52" E	152.03' (TIE)

NUMBERS IN [ ] ARE ADDRESSES

NOTE:
SEPTIC PUMP LINES TO SERVE LOTS 3, 4 & 5 ARE TO BE INSTALLED WITHIN THE EXISTING 40' RIGHT OF WAY FOR THE SHARED DRIVEWAY

SEPTIC PUMP LINE EXHIBIT

FOR
LOTS, 3, 4 & 5, MEADOWBROOK FARMS, MB 45-828
HUNTERSVILLE TOWNSHIP, MECKLENBURG COUNTY
NORTH CAROLINA
NOVEMBER 27, 2006

FILE: AUGUSTA-97SEPTIC

100 0 100 200 300
GRAPHIC SCALE - FEET 1"=100'

S&ME

July 26, 2005

To: Ken Wrench
Augusta Homes
Cornelius, NC

Kelly Randall, R.S.
Cina Buchanan, R.S.
Mecklenburg County Health Department
Charlotte, NC

From: Toney Jacobs, CPSS

The following are overall requirements for individual single family force mainlines for **Meadowbrook Farms:**

1. All material to be 3" SCH 40 PVC as specified on site plan. Any variation of this must be approved in writing by the Mecklenburg County Health Department (MCHD).

2. Septic supply lines will run on the opposite side of the street from water lines. There must be a 10' separation if septic supply lines and water lines run parallel to each other. Septic supply lines will cross water lines at perpendicular angles, with septic supply lines below water line with at least 18" separation.

3. At street and other driveway crossings and along parallel runs, septic supply lines will be at least 48" deep (State requirement 30"). At this depth there is no need for sleeves or metal pipes.

4. In trenches with multiple pipe runs, color code (spray paint) the pipe at all joints and riser both inside and out with same color. Mark pipes at any coupling and no less than 10' of run. An "as-built" drawing with location and colors must be supplied at testing. Pipes must not cross in ditch and location must be provided.

5. Should septic supply lines cross storm drains, there must be 12" minimum separation. If supply lines run parallel to storm drains, there must be at least 5' separation.

6. After lines are installed and marked, they should be capped on both ends to keep out water which could freeze and damage pipe. While laying pipe avoid getting dirt, debris, and excessive cuttings into pipe which will foul manifold or distribution system.

7. Prior to acceptance of pipe runs, lines must be pressure tested to 40 psi 24 hours. Arrange test 2 days in advance with Toney Jacobs (704-582-9219). Toney will notify MCHD and they may participate as desired.

8. All risers to be 10' off property lines and 10' behind front corners to reduce chance of damage during street, sidewalk, and curb construction.

Please call if you or the installer have any questions.

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

INSTALLATION APPROVAL for an
ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #: 6401B Permit #: 573 Tax Parcel #: 011 261 20

Property Owner: Augusta Homes

Job Location Address: 14925 Ramah Church Rd

City: Huntersville State: NC Zip Code: 28078

Installation Approval Issuance Date: 11/20/08

Permission is hereby given to ☑ install ☐ alter ☐ repair an on-site wastewater treatment & and disposal system, with subsurface soil absorption and effluent discharge, as specified herein at the described location. This approval is granted based upon the application information submitted to our office. All work shall be completed on or before 12/20/08, after which date this approval shall be null and void. The system shall meet all of the construction requirements of 15A NCAC 18A. 1900 which are in effect on the date of granting this approval. An **Operation Permit** must be obtained from the Mecklenburg County Health Department before any system can be covered up or placed into service. The issuance of this permit does not in any way guarantee that the system anticipated to be constructed will operate properly, or relieve any person now of hereafter owning, controlling or using such system from any liability resulting from the failure of the system to operate properly.

***NOTICE: This system shall not be installed while soils are in a wet condition.**

Permitted Design Flow: 600 GPD Site LTAR: .3 GPD/ft² (For new installations only.)

Liquid Capacity of Septic Tank: 1500 gallons Liquid Capacity of Dosing Tank: 1500 gallons

Drainfield Design ☐ N/A

Trench Depth: 30 inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 667 feet

# of Lines: 6 @ 90 feet 25% Reduction

Depth of Media: 12 inches (Type) _____

Distribution Device: pressure manifold

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

Bed Depth: _____ inches

Bed Width: _____ feet

Total line length: _____ feet

# of Lines: _____ @ _____ feet

Depth of Media: _____ inches (Type) _____

Distribution Device: _____

Water Supply Source

☒ Municipal ☐ Private Well ☐ Community Well

☐ Other _____

Minimum System Setbacks

Distance from Building Foundation: 5 feet

Distance from Property Line: 10 feet

Distance from Water Supply Source: >100' feet

SKETCH OF SYSTEM LAYOUT
(Proposed Layout)

Install in accordance w/ approved plot plan on file

Comments: System Classification & Type: Install in accordance w/ approved plot plan on file Type IIIb Pump to 25% Reduction

DENR Authorized Agent: Philo Walker Signature: Philo Walker RS

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 #: 6401B Permit #: 573 Tax Parcel #: 011 261 20

Property Owner: Augusta Homes

Job Location Address: 14925 Ramah Church Rd Lot 4 meadowbrook Farm

City: Huntersville State: NC Zip Code: 28078

Operation Permit Issuance Date: 4/30/09 Contractor Name: R & H Septic

Permitted Design Flow: .3 GPD

Liquid Capacity of Septic Tank: 1500 gallons

Liquid Capacity of Dosing Tank: 1500 gallons

Effluent Pump Model: Gould

Drainfield Installation ☐ N/A

Trench Depth: 30 inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 667 feet

# of Lines: 6 @ 90 feet

Depth of Media: 12 inches (Type) EZ Flow

Depth of Cover: 18 inches

Distribution Device: pressure 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: 15 feet

Distance from Property Line: 10 feet

Distance from Water Supply Source: >100' (50' min) feet

Inspection Dates

Tank(s) Inspected: 12/4/08

Excavation Inspected: 12/4/08

Pump & Controls Inspected: 4/30/09 JPM

SKETCH OF SYSTEM INSTALLATION
(As-Built Drawing)

Septic system installed in accordance with Approved plot plan from consultant.

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: Type III-B Pump to EZ Flow EZ1003T, P

DENR Authorized Agent: Philo Walker RS Signature: Philo Walker RS

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 #: 6401B Permit #: 573 Tax Parcel #: 011 261 20

Property Owner: Augusta Homes

Job Location Address: 14925 Ramah Church Rd Lot 4

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: Type IIIb

*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: Type IIIb Pump to 25% Reduction

DENR Authorized Agent: Philo Walker RS Date: 4/30/09

Signature: Philo Walker RS

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	03/13/08	**Amount:**	150.00
Receipt #:	56439	**Tendered:**	0.00
Check / Auth #:	CHARGE	**Returned:**	0.00
Received By:	GLADNAG		

Account Information

Account #: X30400
Contractor: AUGUSTA HOMES INC
Attn:
Address: 10602 BAILEY ROAD SUITE B
Address:
City/State/Zip: CORNELIUS, NC 28031

Item	Description	Permit#	Quantity	Unit Price	Total Price
0703	Installation/Final Approval 14925 RAMAH CHURCH RD		1	150.00	150.00

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

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
850.00	50.00				

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	03/13/08	**Amount:**	150.00
Receipt #:	56440	**Tendered:**	0.00
Check / Auth #:	CHARGE	**Returned:**	0.00
Received By:	GLADNAG		

Account Information

Account #: X30400
Contractor: AUGUSTA HOMES INC
Attn:
Address: 10602 BAILEY ROAD SUITE B
Address:
City/State/Zip: CORNELIUS, NC 28031

Item	Description	Permit#	Quantity	Unit Price	Total Price
0734	Auth for Waste Wtr Sys Constr 14925 RAMAH CHURCH RD		1	150.00	150.00

----------**Outstanding Balances**----------

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
1,000.00	50.00				

City of Charlotte / Mecklenburg County

CHARLOTTE

Services Bill

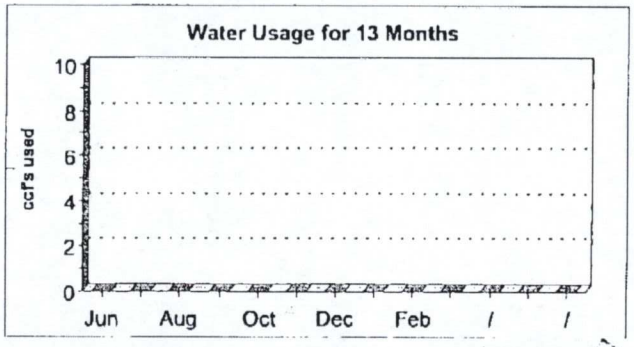
Name	AUGUSTA HOMES
Mailing Address	10602 BAILY RD SUITE B CORNELIUS NC 28031
Service Address	14925 RAMAH CHURCH RD HUNTERSVILLE NC 28078

Account Number	Parcel
71220-361229	011-261-20

Bill Summary

Bill Date	02/10/08
Amount Due	$6.57
Past Due Date	
Past Due Amount	
Current Amount Due Date	**03/02/08**
Current Amount Due	$6.57

704-1400
10025



PREVIOUS BALANCE		$6.41
PAYMENTS		6.41
NEW CHARGES		
Water (Includes a $1.80 Fixed Charge)	2.04	
Storm Water	4.53	
TOTAL NEW CHARGES		6.57
AMOUNT DUE		**$6.57**

Impervious Area for Storm Water: 2,000 or more square feet
Billing period for Storm Water: 01/08/08 - 02/10/08 = 33 Days.

Meter Readings

Meter No	Current Read		Previous Read		Usage (ccf)	Days of Service
106287196	Jan 15	0	Dec 12	0	0	34

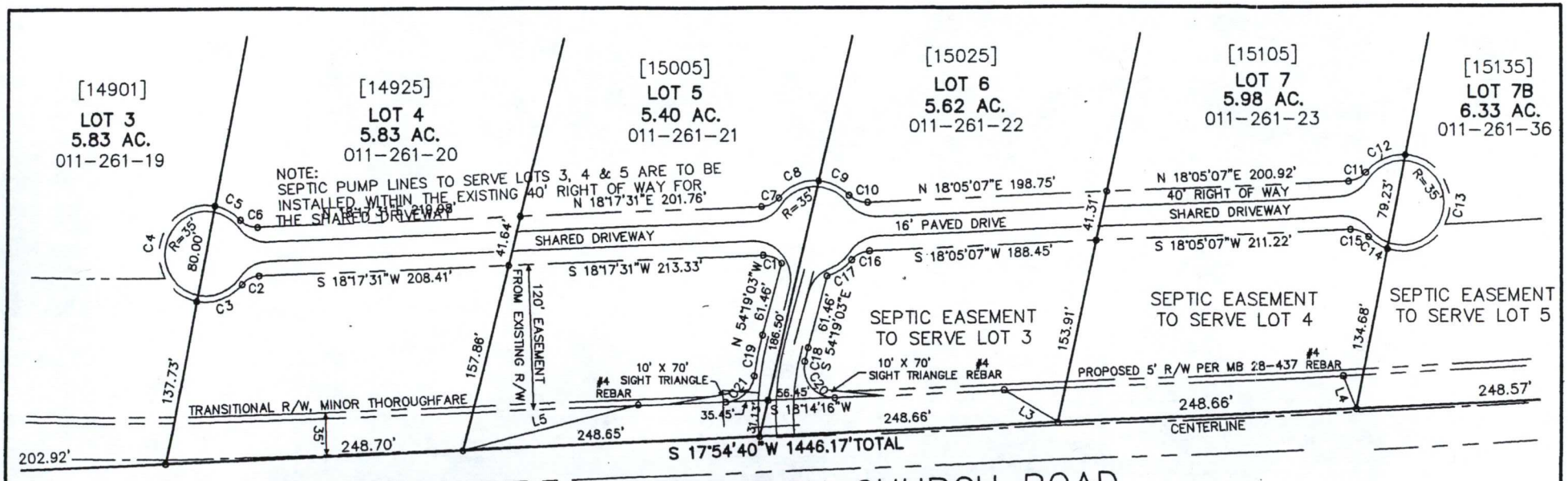
Your water usage for this period that is subject to conservation rates:

Rate Tiers:	1-11 ccf	12-22 ccf	over 22 ccf	Total Usage	
Rates per ccf	$1.33	$2.18	$4.31	ccf	Gallons
Water				0	0

V61

FEB

From:AUGUSTA HOMES NC 7048927244 03/13/2008 10:14 #918 P.002/002



THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS.

PYRAMID

LAND SURVEYING
RUFUS JACKSON LOVE
PROFESSIONAL LAND SURVEYOR L-2844
P.O. Box 11
Davidson, NC 28036
(704) 892-4249

CURVE TABLE

Curve	Radius	Length	Chord	Chord Bearing
C1	20.01'	16.82'	16.33'	S 42°10'48" E
C2	20.00'	16.82'	16.33'	S 05°48'10" E
C3	40.00'	42.59'	40.61'	S 00°36'18" W
C4	40.00'	125.66'	80.00'	N 58°53'32" W
C5	40.00'	25.07'	24.66'	N 49°03'54" E
C6	20.01'	16.45'	15.99'	N 41°49'45" E
C7	20.00'	16.82'	16.33'	N 05°48'10" W
C8	40.00'	38.29'	36.85'	N 02°28'21" W
C9	40.00'	28.85'	28.23'	N 45°36'50" E
C10	20.00'	16.82'	16.33'	N 42°10'48" E
C11	20.00'	16.82'	16.33'	N 06°00'35" W
C12	40.00'	37.42'	36.07'	N 03°18'06" W
C13	40.00'	136.76'	79.23'	S 58°33'01" E
C14	40.00'	18.76'	18.59'	S 52°50'12" W
C15	20.00'	16.82'	16.33'	S 42°10'48" W
C16	20.00'	16.82'	16.33'	S 06°00'35" E
C17	40.00'	24.98'	24.58'	S 12°12'39" E
C18	210.00'	11.60'	11.60'	S 55°54'01" E
C19	250.00'	34.44'	34.42'	N 58°15'52" W
C20	25.00'	45.50'	39.48'	N 70°22'38" E
C21	25.00'	35.10'	32.29'	N 21°59'12" W

BASED ON MB 45-828

NORTH CAROLINA PROFESSIONAL SEAL L-2844 LAND SURVEYOR RUFUS JACKSON LOVE

LINE TABLE

Course	Bearing	Distance
L3	S 51°36'47" W	52.53' (TIE)
L4	S 88°28'15" W	29.61' (TIE)
L5	N 06°07'52" E	152.03' (TIE)

NUMBERS IN [ ] ARE ADDRESSES

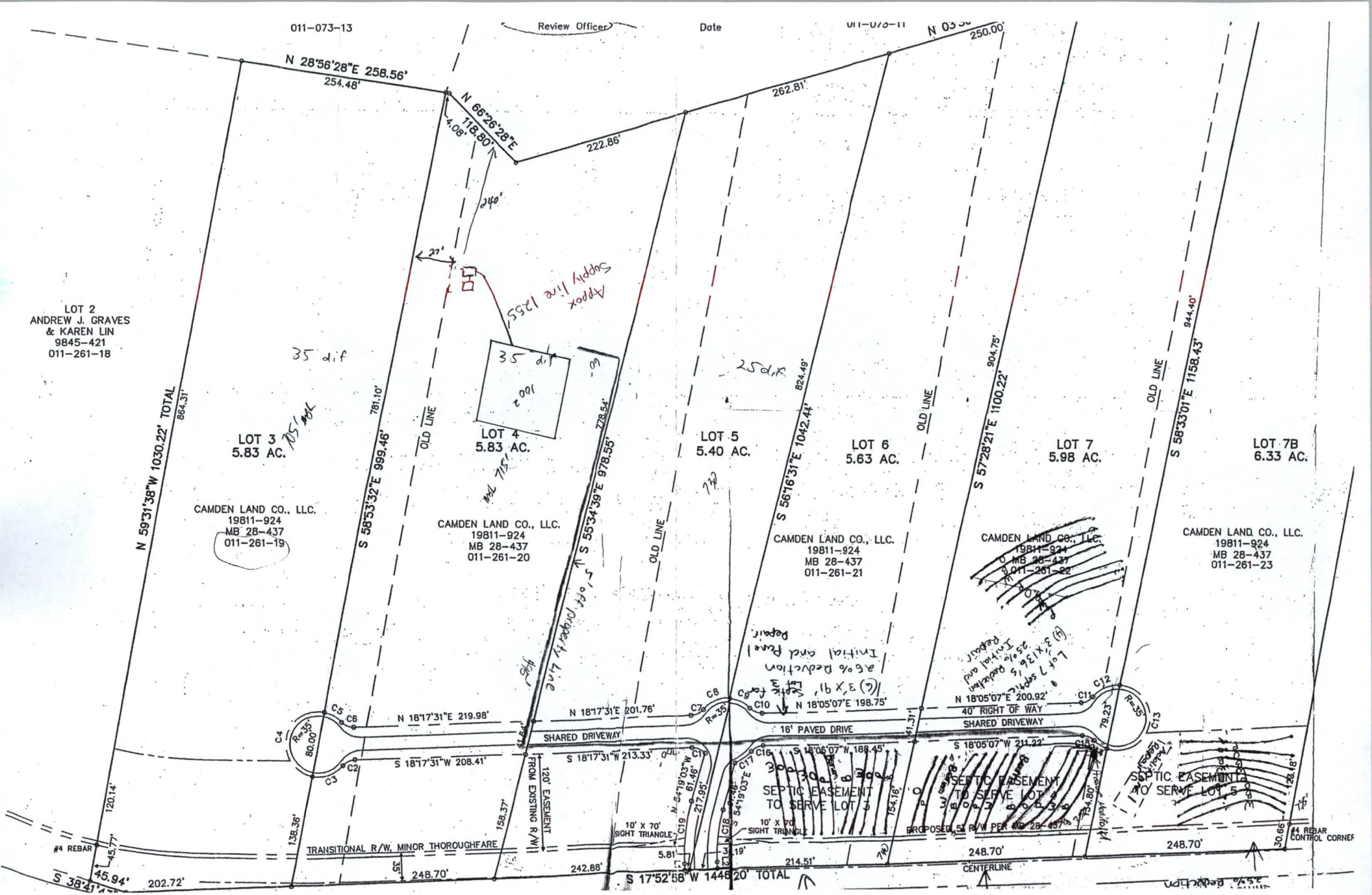
NOTE:
SEPTIC PUMP LINES TO SERVE LOTS 3, 4 & 5 ARE TO BE INSTALLED WITHIN THE EXISTING 40' RIGHT OF WAY FOR THE SHARED DRIVEWAY

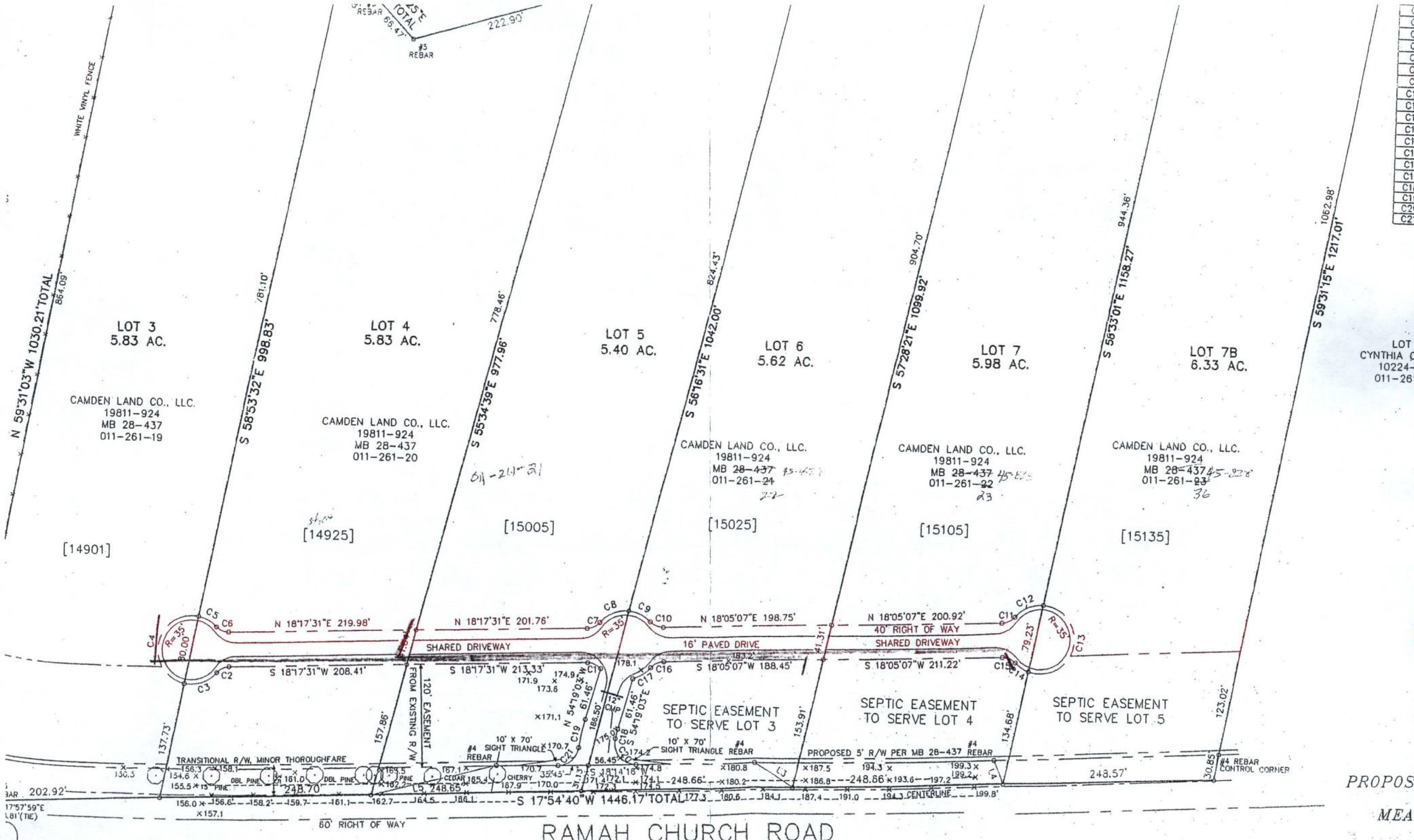
SEPTIC PUMP LINE EXHIBIT

FOR
LOTS, 3, 4 & 5, MEADOWBROOK FARMS, MB 45-828
HUNTERSVILLE TOWNSHIP, MECKLENBURG COUNTY
NORTH CAROLINA
NOVEMBER 27, 2006

FILE: AUGUSTA-97SEPTIC

100 0 100 200 300
GRAPHIC SCALE - FEET 1"=100'


011-073-13
Review Officer
Date
N 28°56'28"E 258.56'
254.48'
N 66°26'28"E
118.80'
4.08'
222.86'
262.81'
250.00'
N 03°
944.40'
904.75'
824.49'
778.54'
781.10'
664.31'
N 59°31'38"W 1030.22' TOTAL
S 58°53'32"E 999.46'
S 55°34'39"E 978.55'
S 56°16'31"E 1042.44'
S 57°28'21"E 1100.22'
S 58°33'01"E 1158.43'
OLD LINE
LOT 2
ANDREW J. GRAVES
& KAREN LIN
9845-421
011-261-18
LOT 3
5.83 AC.
LOT 4
5.83 AC.
LOT 5
5.40 AC.
LOT 6
5.63 AC.
LOT 7
5.98 AC.
LOT 7B
6.33 AC.
CAMDEN LAND CO., LLC.
19811-924
MB 28-437
011-261-19
CAMDEN LAND CO., LLC.
19811-924
MB 28-437
011-261-20
CAMDEN LAND CO., LLC.
19811-924
MB 28-437
011-261-21
CAMDEN LAND CO., LLC.
19811-924
MB 28-437
011-261-22
CAMDEN LAND CO., LLC.
19811-924
MB 28-437
011-261-23
35 d.f
25 d.f
Approx Septic line 125'
Approx property line
Initial and Future 85% reduction
Lot 7 septic 35% reduction Initial Repair
(4) 3'x36'
(4) 3'x9'
N 18°17'31"E 219.98'
N 18°17'31"E 201.76'
N 18°05'07"E 198.75'
N 18°05'07"E 200.92'
S 18°17'31"W 208.41'
S 18°17'31"W 213.33'
S 18°05'07"W 188.45'
S 18°05'07"W 211.22'
SHARED DRIVEWAY
16' PAVED DRIVE
40' RIGHT OF WAY
SHARED DRIVEWAY
R=35'
80.00'
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
C18
C19
79.23'
41.31'
61.46'
217.95'
154.16'
134.80'
128.18'
120.14'
138.36'
158.37'
45.77'
45.94'
202.72'
248.70'
242.88'
214.51'
248.70'
30.66'
5.81'
3.19'
55'
120' EASEMENT FROM EXISTING R/W
10' x 70' SIGHT TRIANGLE
10' x 70' SIGHT TRIANGLE
SEPTIC EASEMENT TO SERVE LOT 5
SEPTIC EASEMENT TO SERVE LOT 5
PROPOSED 55' R/W PER MB 28-437
TRANSITIONAL R/W, MINOR THOROUGHFARE
CENTERLINE
#4 REBAR
#4 REBAR
CONTROL CORNER
S 38°41'
S 17°52'58"W 1446.20' TOTAL
35% reduction



LEGEND:

PROPERTY LINE
TIE LINE

NOTES:

NUMBERS IN [ ] ARE ADDRESSES

1. THIS PROPERTY IS NOT LOCATED IN A DESIGNATED FLOOD ZONE.
2. AREA DETERMINED BY COORDINATE COMPUTATION.
3. CP DENOTES COMPUTED POINT, NO MONUMENT FOUND OR SET.

Groundwater & Wastewater Services
Septic Project File & Data Review Worksheet

GWS File #: 6401B WASPS App #: 573

Primary ES assigned to project: PW

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: 4			
	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: 11-20-08

OP issued date: 4-30-09

Review performed by: IR Date performed: 9-27-14