

12005 JUMPER DR

19724127

1/9/2008

duponbj

Groundwater and Wastewater Services File Imaging Project
May 2007
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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 #: 6244B Permit #: _____ Tax Parcel #: 197-241-27

Property Owner: NVR, Inc.

Job Location Address: 12005 JUMPER DR. (LOT # 37)

City: MINT HILL State: NC Zip Code: 28227

Operation Permit Issuance Date: _____ Contractor Name: RCS

Permitted Design Flow: 480 GPD

Liquid Capacity of Septic Tank: 1500 gallons

Liquid Capacity of Dosing Tank: 1000 gallons

Effluent Pump Model: GOULDS-WE0511H

Drainfield Installation ☐ N/A

Trench Depth: 36 inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 320 feet

# of Lines: 8 @ 40 feet

Depth of Media: 24 inches (Type) SAND

Depth of Cover: 12 inches

Distribution Device: GATE VALVE

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

Bed Depth: _____ inches

Bed Width: _____ feet

Total line length: _____ feet

# of Lines: _____ @ _____ feet

Depth of Media: _____ inches (Type) _____

Depth of Cover: _____ inches

Distribution Device: _____

Water Supply Source

☑ Municipal ☐ Private Well ☐ Community Well

☐ Other _____

System Installation Setbacks

Distance from Building Foundation: 25 feet

Distance from Property Line: 10 feet

Distance from Water Supply Source: 10 feet

Inspection Dates

Tank(s) Inspected: 5/3/07

Excavation Inspected: 5/3/07

Pump & Controls Inspected: 6/6/07

SKETCH OF SYSTEM INSTALLATION
(As-Built Drawing)

INSTALLED IN ACCORDANCE W/ CONSULTANTS DESIGN CMS 6-6-07

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: IIa PFBPS (50% REDUCTION) SYSTEM; CERTIFIED OPERATOR TO MAINTAIN; INSPECTED EVERY 3 YRS BY MCHD

DENR Authorized Agent: Chris Sherrill, RS, LSS Signature: _____

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On-Site Wastewater Section

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

File #: 6244.3 Permit #: _____ Tax Parcel #: 197-241-27

Property Owner: NVR Inc

Job Location Address: 12005 Juniper Dr

City: Mint Hill State: NC Zip Code: _____

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: IVa

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

Subsurface system operator required: Yes ☑ No ☐

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

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

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

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

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

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

V. Other:

_____

_____

_____

_____

DENR Authorized Agent: Chris Sherrill RS, LSS

Signature: Christopher M. Sherrill

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 #: 6244B Permit #: _____ Tax Parcel #: 197-241-27

Property Owner: NVR, Inc.

Job Location Address: 12005 JUMPER DR. (LOT # 37)

City: MINT HILL State: NC Zip Code: 28227

Installation Approval Issuance Date: 4/12/07

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 5/14/07, 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: 480 GPD

Site LTAR: 0.25 GPD/ft² (For new installations only.)

Liquid Capacity of Septic Tank: 1500 gallons

Liquid Capacity of Dosing Tank: 1000 gallons

Drainfield Design ☐ N/A

Trench Depth: 36 inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 320 feet

# of Lines: 8 @ 40 feet

Depth of Media: 24 inches (Type) SAND

Distribution Device: GATE VALVE

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: _____ feet

Distance from Property Line: _____ feet

Distance from Water Supply Source: _____ feet

SKETCH OF SYSTEM LAYOUT
(Proposed Layout)

INSTALL IN ACCORD. W/ PLANS SUBMITTED BY WASTEWATER CONSULTANT

CMS

4-12-07

Comments: System Classification & Type: IVa PPBPS 50% REDUCTION. MAINTENANCE CONTRACT REQUIRED; INSPECTED BY GWS EVERY 3 YRS.

DENR Authorized Agent: Chris Sherrill, RS, LSS Signature: Christy M Sherrill

File # 62448

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

THIS AGREEMENT is made and entered into this 29 day of May, 2007 by and between Ryan Homes (hereinafter the "Owner") and R.C.S., Inc. , Joe R. Hudson (hereinafter the "Contractor").

WITNESSETH

WHEREAS, the Owner owns or controls the property upon which a ground absorption sewage treatment (hereinafter the "system") is installed, such system being designated a Type lpp system under the Rules for Sanitary Sewage Colection, Treatment and Disposal found at 15A N.C. Admin. Code 18A.1900 et seq.; and

WHEREAS, 15A N.C. Admin.Code 18A.1961 requires a contract to be executed between the system owner and a management entity prior to the issuance of an Operation Pernit for said system: and

WHEREAS, 15A N.C. Admin. Code 18A.1961 requires that a condition of the Operation Permit for said system be that a properly executed contract between the system owner and a management entity shall be in effect for as long as the system is in use; and

WHEREAS, the Contractor is a management entity of a type authorized by 15A N.C. Admin. Code 18A.1961 to manage a Type lpp system.

NOW THEREFORE, in consideration of the premises and of the mutual covenants and promises contained in this Agreement, it is hereby agreed by and between the Owner and the Contractor as stipulated below.

1. The Contractor's Obligations. The Contractor shall perform the following services on the Owner's system located at 12005 Juniper Drive Lot 37 Meadows of West Hill

a. The Contractor shall inspect the system at least at the frequency required

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COUNTY OF MECKLENBURG

in Table V(b) of 15A N.C. Admin. Code 18A.1961(b) for a Type lpp system.

b. The Contractor shall perform th following routine maintenance procedures in accordance with the conditions of the Operation Permit:

(1) (from the operation permit)
(2)
(3)

c. The Contractor shall report the results of its inspections to the local health department at the frequency specified in Table V(b) of 15A N.C. Admin. Code 18A.1961(b) for a Type lpp system.

d. If an inspection indicates the need for system repairs, the Contractor shall notify the local health department within 48 hours of the inspection.

e. The Contractor shall notify the Owner of needed repairs which are outside of the scope of routine maintenance described in subparagraph (b) above. The Contractor shall perform necessary repairs to the system at the request of the Owner and shall be entitled to payment therefor at the Contractor's normal charge for services and materials.

f. The Contractor shall employ of shall contract with a certified operator(s) if required by Table V(b) of 15A N.C. Admin. Code 18A.1961(b) for a Type lpp System.

g. The Contractor shall respond to a request for a nonscheduled service or maintenance call within 24-48 hours after receipt of such request depending on the urgency of the request.

2. The Owner's Obligations.

a. The Owner shall pay to the Contractor the sum of $ 200.00 per year for periodic inspections, routine maintenance procedures and periodic reports. The annual fee may be amended upon sixty(60) days advance notice to the Owner but may not be increased more than 20 percent per year. The Owner shall pay to the Contractor his normal and customary fees for any work performed on the system as a result of nonscheduled service or maintenance calls. All fees are due and payable within thirty (30) days shall accrue interest from the due date until paid at a rate of 15 percent per month.

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COUNTY OF MECKLENBURG

b. Within 10 days of receipt of notice of needed repairs pursuant to paragraph 1.e. above, the Owner shall request the Contractor to complete needed repairs or shall provide to the Contractor evidence that the needed repairs were satisfactorily completed by another entity.

c. The Owner shall provide the Contractor with such access to the system as is reasonably necessary tor the Contractor to comply with the terms of this Agreement.

3. Term. This Agreement shall remain in effect until terminated.

a. Automatic Termination.
This agreement shall automatically terminate if the Operation Permit for the system is revoked and all appeals of the revocation are exhausted or time for taking an appeal; has passed.

b. Termination by Mutual Consent.
The Parties may mutually agree to terminate this Agreement by giving written notice of termination by mutual consent to the local health department thirty (30) days in advance of the date of termination.

c. Termination by the Owner.
The Owner may terminate this Agreement by giving notice to the Contractor and to the local health department thirty (30) days in advance to the date of termination.

d. Termination by the Contractor.

(1.) The Contractor may terminate this Agreement for cause by giving written notice of intent to terminate this Agreement to the Owner and to the local health department thirty (30) days is advance of the date of termination. Cause shall be defined as:

(a) failure to remit payment for any bill for services performed under and in accordance with this Agreement if said bill is not is not paid within thirty (30) days of receipt by the Owner of the bill. If said bill is paid after notice of termination is given but prior to the date of termination of this Agreement, this Agreement shall continue in effect:

or

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(b) failure of the Owner to provide to the Contractor authorization to complete needed repairs or satisfactory evidence that needed repairs to the system were completed by another entity within 10 days of receipt of notice of needed repairs pursuant ot paragraph 1.e. above. If said authorization to comlete needed repairs or evidence of completion of said repairs is provided after notice of termination is given but prior to the date of termination of this Agreement, this Agreement shall continue in effect;

(c) failure of the Owner to allow the Contractor such access to the system as is reasonably necessary in order for the Contractor to comply with the terms of this Agreement.

(2) The Contractor may not terminate this Agreement without cause, but may assign its rights and duties under this Agreement as provided in paragraph 4, below.

4. Assignment.

a. Assignment by the Owner. The Owner shall notify the Contractor of the name and address of any purchaser of the property on which the system is located. The Owner shall also notify any purchaser of the property on which the system is located of the existence of this Agreement and shall assign all tights and duties under this Agreement to said purchaser.

b. Assignment by the Contractor. The Contractor may assign its rights and duties under this Agreement to another management entity which is qualified pursuant to 15A NC Admin. Code 18A.1961 to manage a Type Ipp system upon thirty (30) days written notice to the Owner and to the local health department.

5. Use of Subcontractors. The Contractor may subcontract with such manufacturers, suppliers and contractors as it deems desirable to perform any of the Contractor's duties under this Agreement. The Contractor shall at all times remain responsible for the performance of and payment for all work performed by all subcontractors.

6. Representations. The Parties represent to each other that each has the power, auhority and legal right to enter into and perform its obligations as set forth in this Agreement.

7. Regulatory Amendments. References in this Agreement to sections of the Administrative Code shall include such rules as they may be amended in the future.

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COUNTY OF MECKLENBURG

8. No Implied Waiver. The waiver by either Party of a default or a breach by the other Party of any provision of this Agreement shall not operate or be construed to operate as a waiver of any subsequent default or breach. The failure at any time of either Party to enforce any provision of this Agreement (a) shall not be construed to be a waiver of such provisions, or of any other provision; and (b) shall not in any way affect the validity of this Agreement, or any part of this Agreement, or the right of either Party thereafter to enforce each and every provision of this Agreement.

9. Notice. Every notice required under this Agreement shall be in writing and shall be deemed sufficiently given if delivered in person or sent by certified or registered mail, return receipt requested, postage prepaid to the Party to be notified and addressed as follows:

To the Owner: Ryan Homes
10815 David Taylor Drive
Charlotte, NC 28262

To the Contractor:
R.C.S. ,Inc.
Joe R. Hudson
PO Box 708
Monroe, NC 28111

To the Local Health Department:
Mecklenburg County Ground Water & Wastewater Services
&00 North Tryon Street, Suite 211
Charlotte, NC 28202

The date of any Notice shall be the date of personal delivery or the date shown on the return receipt as the date of delivery of attempted delivery, as the case may be. Changes in the respective addresses to which notice may be directed may be made form time to time by either Party by notice to the other party/

10. Place of Agreement. This Agreement and any questions concerning its validity, construction or performance shall be governed by the laws of the State of North Carolina, notwithstanding the place of execution, or the order in which the signatures of the Parties are affixed.

11. Entire Agreement and Amendment. This Agreement supersedes all prior negotiations, agreements and understandings between the Parties with respect to

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COUNTY OF MECKLENBURG

the subject matter hereof. To be effective, any amendment or modification to this Agreement must be in writing and must be signed by the Parties.

12. Severability. In the event that any provision of this Agreement shall, for any reason, be determined to be invalid, illegal or unenforceable in any respect, the Parties shall negotiate in good faith and agree to such amendments, modifications or supplements of or to this Agreement of such other appropriate actions as shall to the maximum extent practicable in light of such determination, implement and give effect to the intentions of the Parties as reflected in this Agreement, and the other provisions of this Agreement shall, as so amended, modified, supplemented or otherwise affected by such action, remain in full force and effect.

IN TESTIMONY WHEREOF, the Parties hereto have executed this Agreement in duplicate originals, one of which is retained by each of the Parties, the day and year first above written.

(Owner) Ryan Homes

Attest:

(Contractor)

Attest:

Groundwater & Wastewater Services
Septic Project File & Data Review Worksheet

GWS File #: 6243 WASPS App #: 1148

Primary ES assigned to project:

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 .25	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?			
.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 ☐

Comments: # Items requiring correction/modification: _____

IA issued date: 4-12-07

OP issued date: _____

Review performed by: ICL Date performed: 6-14-07

Residential Subsurface Wastewater Treatment and Disposal System Design

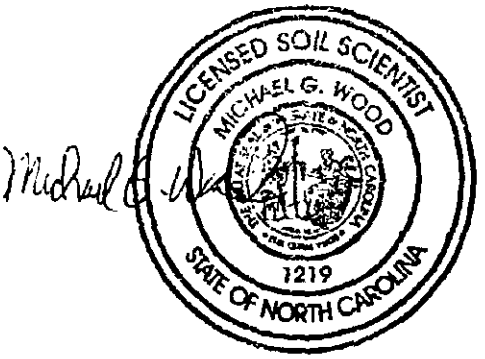
for

Lot 37 – The Meadows of Mint Hill
12005 Jumper Drive
Mint Hill, North Carolina

Tax Parcel # 197-241-27
Mecklenburg County File #
February 27, 2007

Prepared for:

NVR, Inc.
10815 David Taylor Drive, Ste. 100
Charlotte, NC 28262



Prepared by:

Larry Thompson, RS, PWS, SSIT
Michael Wood, LSS
The Catena Group, Inc.
410-B Millstone Drive
Hillsborough, NC 27278
Phone: 704-301-4881
Fax: 704-888-1496



CC: Mr. Chris Sherrill, RS, LSS
Mecklenburg County Environmental Health

Details

In an application for an Improvement Permit filed with the Mecklenburg County Health Department (MCHD) by NVR, Inc., the subject property was proposed to be developed with a single family 5-bedroom residence served by a municipal water supply. Based upon this information, a soil and site evaluation was conducted by the MCHD where the lot was determined to be "Unsuitable" for the installation of a subsurface wastewater treatment and disposal system in accordance with the *Laws and Rules for Sewage Treatment, and Disposal Systems* 15A NCAC 18A .1900 (North Carolina Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section).

Upon further investigation by The Catena Group, Inc. (TCG), it was determined that a sufficient amount of "Suitable" Group III soils are located on the property which would allow for the installation of a Type IV pressure dosed prefabricated porous block panel system (PPBPS) for a 4-bedroom residence (initial and repair). It is the desire of the owner that the MCHD consider reclassifying this lot as "Suitable", allowing for the issuance of a Construction Authorization, based upon the following proposal.

Location

The subject property is located in The Meadows of Mint Hill (Lot 37 – 12005 Jumper Drive) in the town of Mint Hill, North Carolina. From NC 51, travel south on SR 1004 (Bain School Road) approximately 0.8 mile, turn left onto Gait Drive and right onto Canter Lane, left onto Filly Road, and left onto Jumper Drive. Lot 37 is located on the right.

References

Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, May 2006.

Onsite Wastewater Treatment and Disposal Systems; EPA 625/R-00/008 Design Manual, February 2002.

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

Design and Installation of Low Pressure Pipe Wastewater Treatment Systems; by Craig Cogger, Bobby Carlisle; Dennis Osborne and Ed Holland. Published by UNC Sea Grant College Pub. UNC-SC-82-03, May 1982.

Plans and Specifications

Septic Tank

- The septic tank shall be State approved (Section .1953 of 15A NCAC 18A), watertight, structurally sound, and 1500 gallons in capacity.
- The septic tank will be fitted with an approved effluent filter and riser for easy access and periodic maintenance.
- It is the responsibility of the septic contractor to thoroughly inspect the septic tank prior to accepting delivery to assure that the tank has had time to properly cure and is free of cracks or other structural deficiencies.

Pump Tank

- The pump tank shall be State approved, of one-piece construction, watertight, structurally sound and 1000 gallons in capacity. Again, it is the responsibility of the septic tank contractor to thoroughly inspect each pump tank prior to accepting delivery.
- The pump tank shall have access risers that extend, at a minimum, 6 inches above finished grade and must have less than 36 inches of fill over its top once finished grade has been established (a reinforced concrete tank will be required if finished soil cover is 36 inches or greater in depth).
- The pump and alarm controls shall be provided with manual circuit disconnects within a watertight, corrosion resistant, Nema 4X rated control panel. The control panel must be securely mounted outside, adjacent to the pump tank riser and at a minimum of 12 inches above finished grade. Pump and float control wiring should be long enough to reach from the tank to the control panel without splicing, routed through wire conduit, and sealed at the openings within the pump tank as well as the control panel enclosure. It is paramount that the conduit is properly sealed to prevent the escape of flammable gases from the pump tank. Furthermore, there must be two electrical circuits for the pump tank controls: one for the pump and one for the alarm controls.
- The pump tank shall have a properly functioning high water alarm incorporated into the control panel. The alarm circuit shall be supplied separate from any pump overload and short circuit devices. The alarm shall be both audible and visible by the system users.
- The float switch for the high water alarm should be mounted at a location slightly above the "pump on" elevation for the pump float control switch. The high water alarm float switch shall not be set more than 3 inches above this elevation.
- Pump float(s) shall be mounted so that the effluent at the end of a pump cycle is above the top of the effluent pump. The septic contractor must determine pump draw down and set the float switch accordingly.
- Float switch tie downs must be made of a corrosion resistant material (do not use electrical tape or metal hose clamps to secure these switches). Floats should be mounted on a separate "float tree" rather than the pump supply line (see pump tank detail).

- The pump must be placed on two 4-inch concrete blocks to allow for some settling of solid particulates within the pump tank.

Pump Tank Effluent

- The pump discharge piping shall be fitted with a pressure effluent filter. The filter must be equivalent to the GAG Sim Tech Filter, Boyne City, Michigan, 49712, telephone: 1-888-999-3290. This device provides a very high degree of filtration and is highly recommended.

Pipe and Fittings

- All discharge piping, supply lines, valves and disconnects should be made of PVC.
- All joints must be properly "welded" utilizing the appropriate PVC cement for each application.
- The supply line from the pump tank to the pressure manifold shall be 2 inch Schedule 40 PVC (approximate length of supply line is 115 feet).
- The lateral distribution lines shall be 1¼ inch Schedule 40 PVC. Holes in the laterals should be drilled on site and at the 12 o'clock position (one hole per panel). Lateral hole size is 5/32 of an inch.
- There shall be a threaded PVC union above each pump to facilitate easy removal of the pumps for maintenance or replacement.
- The end of each lateral is to be provided with a "turn up", contained within a turf/gate valve box, that provides above ground access for periodic clean out and pressure head adjustment.

Supply Manifold

- The control valves (gate valves) for each lateral distribution line shall be contained within one manifold box/vault of adequate size. The box should be placed upon a gravel base.
- The supply manifold conveys effluent from the pump to the lateral distribution lines.
- The supply manifold should be constructed by connecting a series of (8) 2" x 2" x 1 ¼" tees to the 2 inch supply line.

Backfill

- Backfill sand shall be a clean, washed, medium sand that is naturally occurring and falls within the gradation of ASTM C-33 specification (used in the ready mix industry and is readily available).

Drain Field Installation

- The drain field has been previously laid out on-site utilizing metal stemmed flags. Once this area has been approved by the MCHD, the property owner/builder should mark this area and isolate it as much as possible from construction traffic. Prior to

the system installation, the septic contractor shall contact the MCHD and the system designer for a preconstruction conference at which time the drain field area will be re-verified.

- Under no circumstances shall any construction take place within the drain field area while the soil is in a wet condition. If the installer has doubts as to whether or not the drain field area is dry enough to begin construction, the Mecklenburg County Health Department should be contacted for permission to proceed with the installation.
- The specified system is a Type IVa, pressure dosed, pre-fabricated permeable block panel system – specifically the 16 inch high panel system manufactured by T&J Panel Wastewater Treatment System, Patent No. 4013559; telephone: 1-800-222-2577. The installer must follow the manufacturer's guidelines for installing the T&J Panel System and should request an installation manual from the manufacturer prior to beginning construction.
- The initial drain field consists of (6) lateral trenches to be constructed 3 feet wide by 50 feet in length. It is essential that the lateral trenches be constructed on contour with the land, with each trench being excavated level from beginning to end. The use of a tripod mounted engineer's level is essential to assure that each trench is constructed as level as possible.
- The maximum trench depth for this system shall be 36 inches and each trench shall be placed on a minimum of 9 foot on centers.
- Once trenches are dug, the side walls shall be raked and a light dusting of lime applied.
- Backfill the trench with 6 inches of sand and level to grade. Once leveled, place 1 x 4 or 6 inch boards on top of the sand the entire length of each trench. Once the grade boards have been set, the panels may be set into the trench. The panels should be placed 6 inches apart.
- Once the panels have been set, line the top chamber of each panel with 10 – 12 pounds of clean particle sand (medium sand blasting sand). Coverage depth should be approximately 1 inch thick. *Please note that this sand is not the same material specified for backfill.*
- Tar seal rope should be placed in the "U" outs of each end of the panel to form seals. Once the tar rope is in place, the 1 ¼ inch Schedule 40 PVC laterals can be added and the seal completed by the addition of more tar rope on the top and sides of the pipe. Now that the connection and seals are complete, a block cap is placed on each end of the panel so that all openings are covered.
- The end of each lateral should be fitted with a short turn up topped by a threaded female coupling with cap. Each turn up must be fitted with a turf/gate valve box with lid fitted flush to finished grade.
- Once the lateral has been installed and the panels closed, the trench is ready to be backfilled to the top with the sand used in the trench bottom. At this point, the trenches should be left open for the final inspection by the MCHD.

Proper Operation Check

- After all components of the waste water disposal system have been installed and connected, the system shall be checked for proper operation.
- With the electrical power turned off, fill the pump tank with water until the liquid rises to a level high enough to activate the high water alarm float. Turn on the electrical power. The alarm, alarm light and pump should activate at this time. Turn off the electrical power once these checks have been performed and prepare to set the head pressure at the manifold box.

Pressure Head Adjustment

- The pressure head must be adjusted to match the design specifications. The pressure head is measured by the height of the liquid coming from the turn ups at the end of each lateral when the pump is running (utilizing stand pipes).
- Prepare a length of pipe (stand pipe), cut to the desired head pressure height and fitted with a threaded adapter that will screw into the turn up couplings at the end of each lateral. Thread the stand pipes into each lateral and then turn the power on to the pump, allowing the water to rise within the stand pipes. Adjust the gate valves within the supply manifold box to achieve the specified head pressure (liquid height in the stand pipes should equal the design head pressure).
- Once the pressure head has been adjusted, allow the pump to run through the remainder of the cycle. The pump float switch will automatically turn the pump off if it is operating properly. Make sure that the effluent pump is completely submerged in the remaining water, making adjustments to the float switch(es) as needed. This completes the checks for proper operation of the pump, alarm and float switches.
- At this point, the standpipes may be removed and replaced with the threaded turn up caps.

Final Landscaping

- The drainfield shall be shaped to shed rainwater and be free from low spots.
- The entire area of the drainfield should be planted with grass as soon as possible to prevent erosion. The soil should be properly tilled, limed (if necessary) and fertilized prior to planting. After applying grass seed, the area should be heavily mulched with straw or other suitable material.

Utility Conflicts

- The builder and property owner must take special care in planning for water, power, gas, telephone and cable lines. These utilities shall be kept clear of all parts of the septic system and its proposed repair area. Improper planning for underground utilities can negatively impact the installation and, in some cases, cause irreparable damage. Irrigation systems must not be placed over the septic drain field area. If there are any questions regarding preferred routes, contact the MCHD as soon as possible.

Maintenance

Operation and Maintenance

The designed system is classified as a Type IVa wastewater treatment and disposal system and will require ongoing maintenance. State regulations require that a system of this type be managed by a person certified (Certified Subsurface System Operator) by the North Carolina Department of Environment and Natural Resources to operate subsurface wastewater systems (Section .1961 Maintenance of Sewage Systems). A "Maintenance Contract" between the system owner and a Certified Operator will be required by the MCHD prior to the issuance of a final system approval or Operation Permit.

- The minimum inspection/maintenance and reporting frequency for a Type IVa system is twice a year by the Certified Operator. The local health department is required to inspect the system once every three years.
- The septic and pump tanks shall be pumped every 4 years or when the solids within the septic tank reach an elevation that is equivalent to 1/3 of the volume of the tank. In some situations, the tanks may need to be pumped more frequently; for example, if you are using a garbage disposal, it is recommended that the septic and pump tanks be cleaned out annually. Regardless, the Certified Operator will be able to advise when it is necessary to pump out tank solids.
- Pressure head for laterals should be checked and adjusted semi-annually, flushing with clean water as necessary to remove any accumulated solids.
- The effluent filters should be inspected semi-annually. When it becomes necessary to clean the effluent filters, the filters should be removed and the accumulated debris washed back into the septic or pump tank – not onto the lawn.
- All piping and valves should be inspected semi-annually for damage and corrections/repairs made immediately.
- The pump and float controls/switches should be inspected semi-annually to assure proper operation
- The drain field area should be maintained to prevent over growth of vegetation. Any damp areas, leakages or malfunctions should be addressed immediately.
- Divert gutter downspouts and surface water runoff away from the septic and pump tanks.

Suggestions to the Homeowner

- As previously mentioned, if you plan to use a garbage disposal in your home you should plan to have your septic and pump tanks cleaned out annually. The ground up garbage adds large amounts of solids into a septic tank that tend to degrade at a very slow rate.
- Grease, cooking oils, coffee grounds and non-degradable solids (disposable diapers, cigarettes and solid paper wastes) should never be put into a septic tank.
- Used motor oil or any oily liquids should not be disposed of in a septic tank.

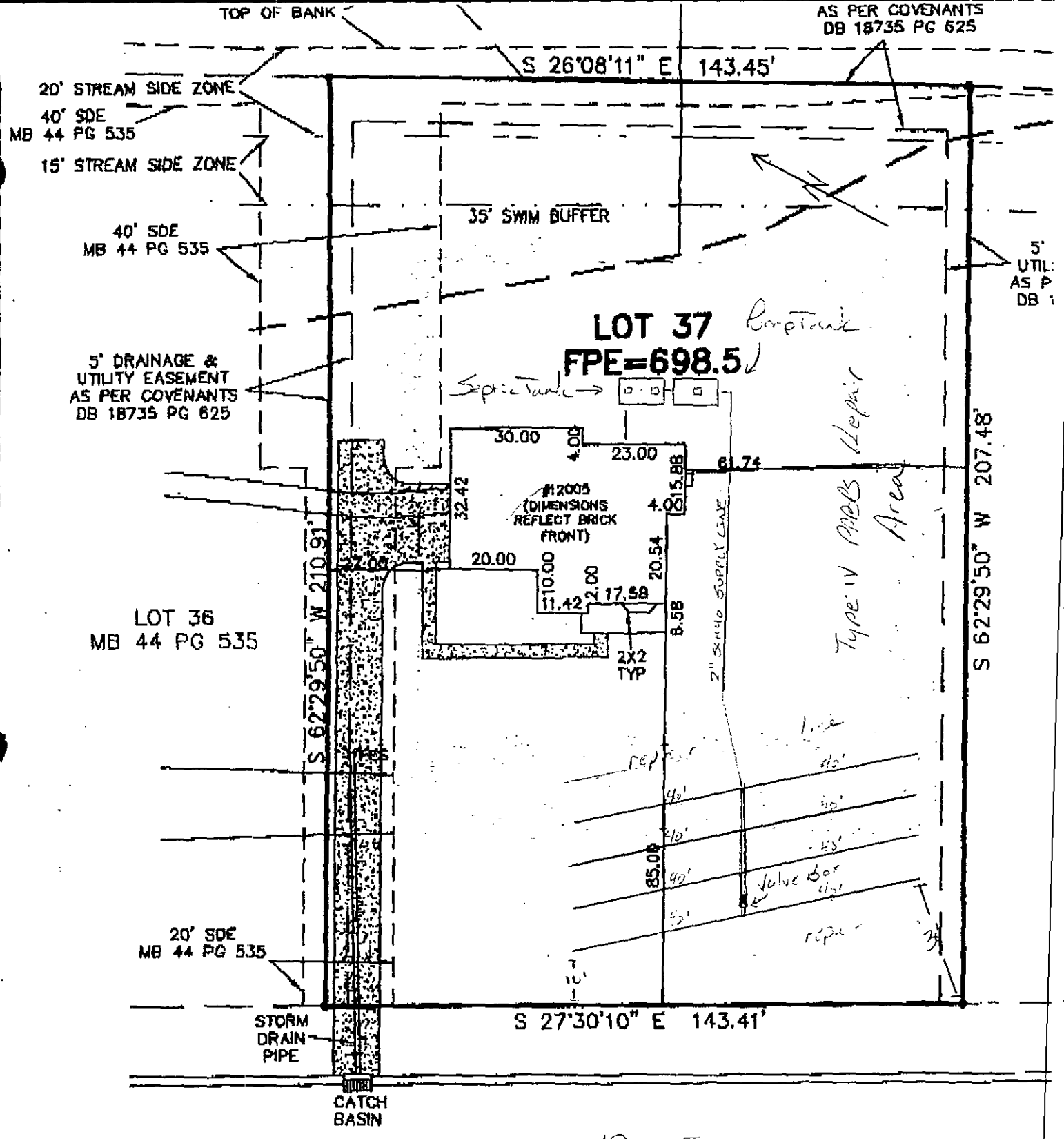
- Be aware of the amount of water that you are using in your home. Water saving fixtures and devices can be installed on sinks, toilets and showers to reduce the volume of wastewater that you are sending to your drain field.
- Run dishwashers and washing machines only when you have a full load.
- Use liquid detergents. Powdered detergents have binding agents in them that tend to solidify in the wastewater disposal system.
- Repair leaky faucets and toilets. Small drips equal large volumes of water over time and can over burden your drain field.
- Divert gutter water away from the septic system.
- Do not irrigate the septic drain field area.
- Do not use chemical additives in your system. Studies have indicated that they do not increase the biological activity that naturally occurs in the septic system and in some cases certain additives have been found to be detrimental to the life of a system.
- Finally, taking good care of your septic system will help to assure that you experience years of trouble free service at a relatively low cost. On-site wastewater treatment and disposal is still the most environmentally friendly method of treating residential/commercial waste and you should keep your system in use for as long as it is properly functioning! If you have additional questions, please feel free to contact your system designer or the MCHD.

Design Specifics

Daily Design Flow:	480 GPD – 4 bedroom house
Septic Tank Size:	1500 gallons (2 compartments)
Pump Tank Size:	1000 gallons (one piece)
Effluent Loading Rate:	Design = 0.25 GPD per sq. ft. (50 % reduction for the PPBPS)
Supply Length and Diameter:	Approx. 115 ft. of 2 in. SCH 40 PVC (please see note at the bottom of this page.)
Number and Size of Laterals:	(8) 1 1/4 inch x 40 feet long
Hole Size:	5/32 inch
Hole Spacing:	1 per panel = 72 total
Dosing Volume:	259.20 gallons per dose
Flow Rate Through System:	29.52 gallons per minute
Elevation Head:	23.0 feet (may vary, please see note at the bottom of this page)
Pressure Head:	2 feet
Pump Requirements:	31.52 GPM at 25.0 feet of head (2 GPM added for Vapor Lock)
Depth of Water Pumped:	12.34" (J&S STB-97-1000 used) check with individual tank manufacturer (1 cu. Ft. of water equals 7.5 gal.)
Pump Run:	8.78 minutes
Check Valve:	Yes
Vapor Lock Hole:	Yes (A vapor lock hole can reduce vibrations in the discharge pipe upon start up and shut down)

* Please note that supply line and elevation head measurements are approximate. It is the contractor's responsibility to confirm these values based upon the actual house and plumbing location. If there is a discrepancy, contact the system designer prior to beginning construction.

PPBPS Design Worksheet							File #:	
							Tax #:	197-241-27
System Requirements							Address:	12005 Jumper Drive
								Lot 37 - The Meadows
Design Flow	480	gpd					Consultant:	Larry Thompson
LTAR	0.250	gpd/ft.^2					Phone:	704-301-4881
Linear footage	640	ft. (conventional)						
Linear footage	320	ft. (50% Reduction)						
							Reviewed By:	
Design Layout							Date:	
Laterals	Length (ft)	# Panels						
Line # 1	40	9						
Line # 2	40	9						
Line # 3	40	9						
Line # 4	40	9						
Line # 5	40	9						
Line # 6	40	9						
Line # 7	40	9						
Line # 8	40	9						
Totals	**320**	**72**						
Absorption Area								
Length (ft)	Width (ft)	Area (ft^2)						
320	3	960						
System Pressure Head	2	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	0.41	gpm	Determined from orifice flow design table (value dependent on pressure head & orifice diameter)					
Total System Flow Rate	29.52	gpm	Total number of panels required multiplied by the orifice flow rate					
System Dose Volume	259.20	gal.	Total number of panels required multipled by 3.6 gal./panel					
Pump Run Time	8.78	min.	System dose volume divided by the total system flow rate					
Pump Tank Drawdown	12.34	in.	1,000 gal. Pump tank, volume is approximately 21 gallons per inch					
Comments:								
1. Install system using 3 ft. wide trenches.								
2. Install drainlines on 9 ft. centers, level, and on contour.								
3. System design requires effluent pump for distribution.								
4. 100% repair area (PPBPS) required for property.								



12005

JUMPER DRIVE

60' PUBLIC R/W

Scale 1" = 30'

NOT FOR RECORDATION, CONVEYANCES OR SALES

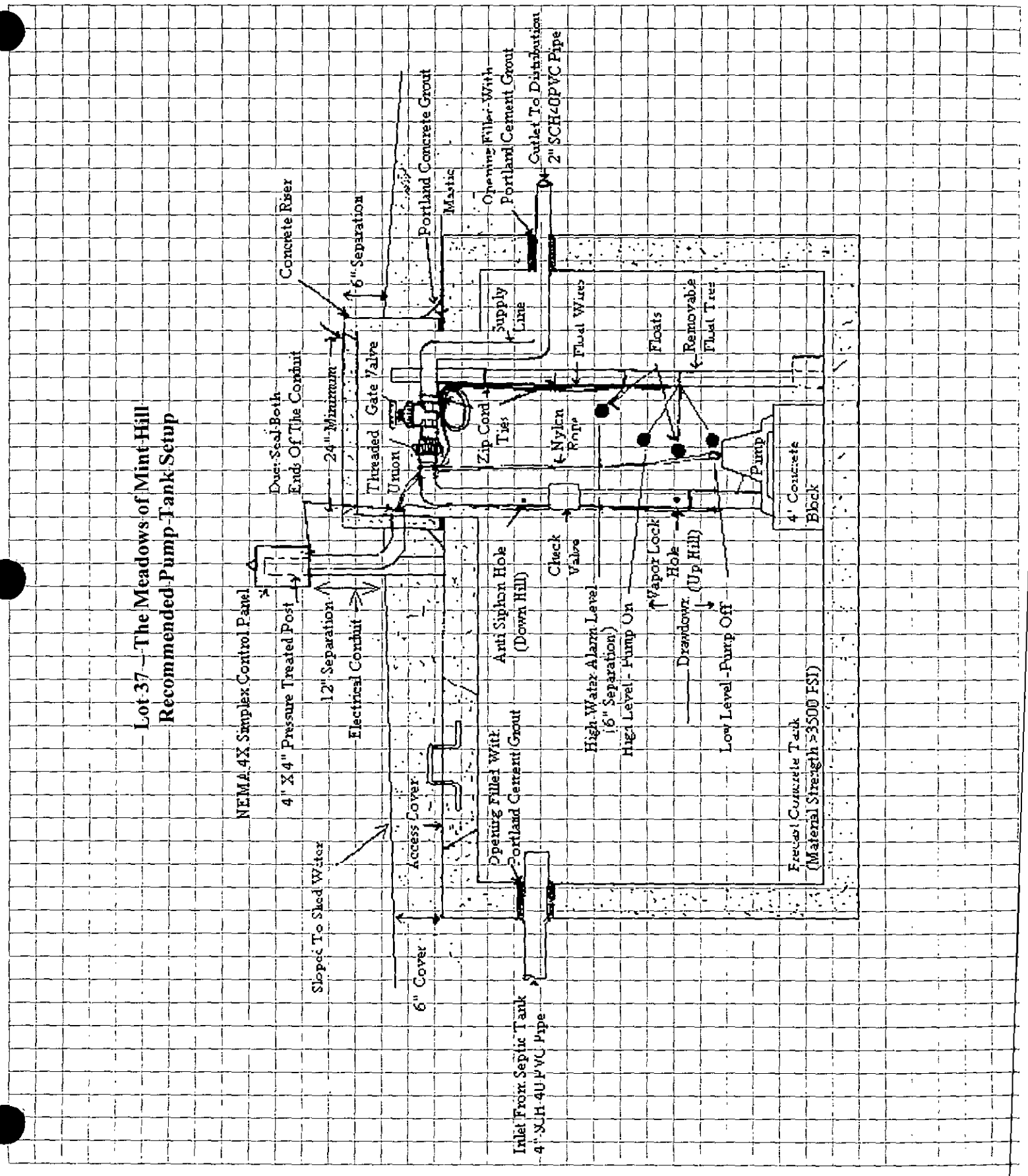
The Catena Group
410-B Millstone Drive
Hillsborough, NC 27278

Permit Number:

Location: Lot 37 – The Meadows

Date: February 27, 2007

Lot 37 – The Meadows of Mint Hill
Recommended Pump Tank Setup



DEPARTMENT OF ENVIRONMENT,
HEALTH & NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

SHEET 1 OF 1

COUNTY: Mecklenburg
PROPERTY I.D. #
TAX #:

SUBDIVISION: The Meadows Lots 37, 36 & 35
SECTION/PHASE:

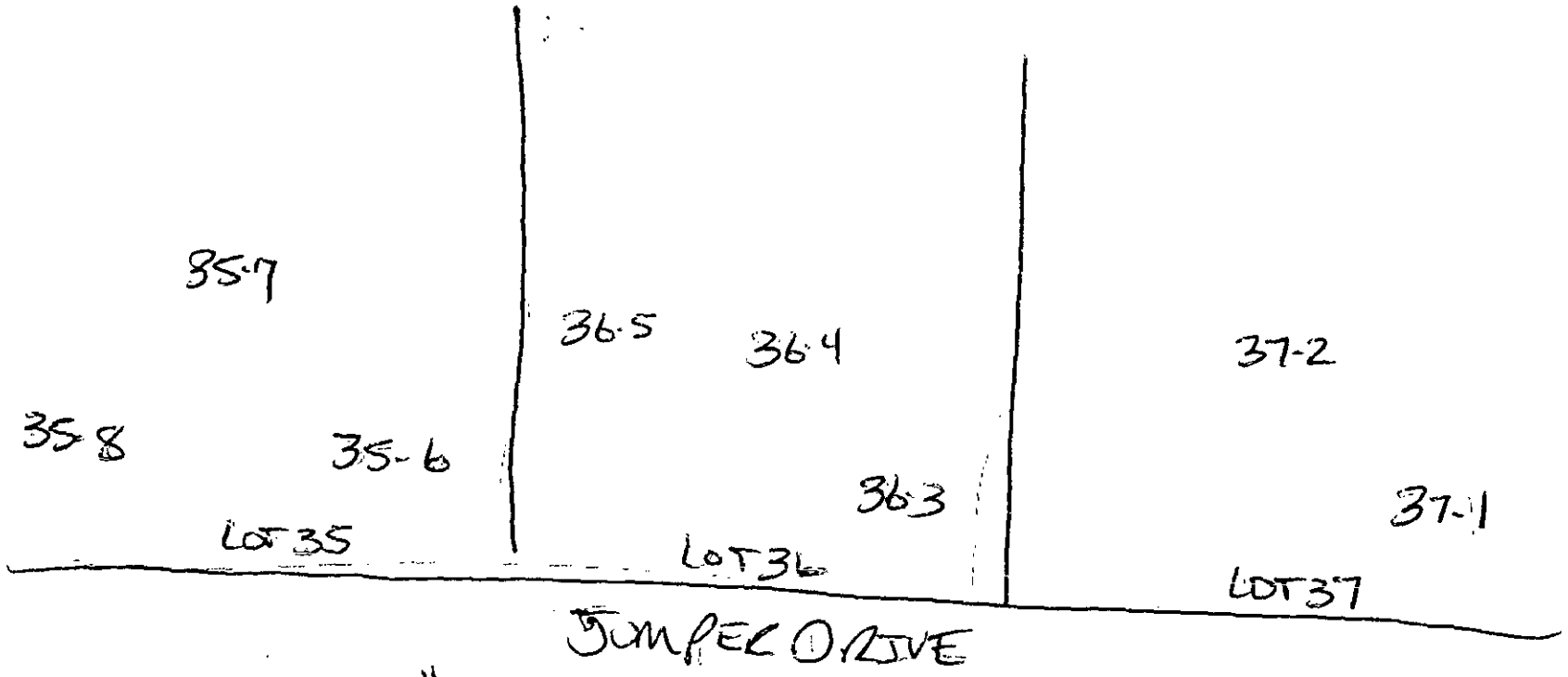
10/25/06 — PROFILES: 37-1 | 37-2 | 36-3 | 36-4 | 36-5 | 35-6 | 35-7 | 35-8

FACTORS		1	2	3	4	5	6	7	8	9	10
LANDSCAPE POSITION	.1940										
SLOPE (%)	.1940										
HORIZON 1 DEPTH	.1943	0-8	0-17	0-60	0-42	0-24	0-46	0-26	0-8		
TEXTURE	.1941 (a)(1)	scl	FILL	Fill	Fill	Fill	Fill	Fill	scl		
CONSISTENCE	.1941	VFR*							fr*		
STRUCTURE	.1941 (a)(2)	PL→GR							gr		
CLAY MINERALOGY	.1941 (a)(3)	S									
HORIZON 2 DEPTH	.1943	8-19	17-24			24-35	40-51	26-30	8-16		
TEXTURE	.1941 (a)(1)	cl	scl			sl	scl	scl	scl		
CONSISTENCE	.1941	fi	FR			fr	fr	fi*	fr		
STRUCTURE	.1941 (a)(2)	a-sbk	GR			gr	gr	sbk	sbk		
CLAY MINERALOGY	.1941 (a)(3)	S	S								
HORIZON 3 DEPTH	.1943	19-30	24-33			35-60	51-74	30-46	16-32		
TEXTURE	.1941 (a)(1)	cl	cl			cl	cl	scl	cl		
CONSISTENCE	.1941	fr	fi			fr	fi	fr	fr		
STRUCTURE	.1941 (a)(2)	a-sbk	sbk			sbk	sbk	sbk	sbk		
CLAY MINERALOGY	.1941 (a)(3)										
HORIZON 4 DEPTH	.1943	30-60+	33-61		Auger→	74-100	46-66+	32-46			
TEXTURE	.1941 (a)(1)	l	cl				cl	scl	cl		
CONSISTENCE	.1941	FR	fi				fi	fi	fi		
STRUCTURE	.1941 (a)(2)	M	a-sbk				sbk	a-sbk	a-sbk		
CLAY MINERALOGY	.1941 (a)(3)	S									
SOIL WETNESS	.1942								46-64+		
RESTRICTIVE H ORIZON	.1944								cl		
SAPROLITE	.1943/.1956	30"	61+ sl			60+	100+		fi		
CLASSIFICATION	.1948								abk		
L. T. A. R. (gpd/ft2)	.1955										

OTHER FACTORS (.1946):
SITE LTAR (gpd/ft2):
AVAILABLE SPACE (.1945):
SITE CLASSIFICATION (.1948):
SYSTEM TYPE:
EVALUATED BY: M. WOOD, L. THOMPSON
OTHERS PRESENT:

COMMENTS: 37-1 0-8 STRONGLY COMPACTED
35-7 ORIGINAL A HORIZON REMOVED
35-8 0-8 WEAKLY COMPACTED
Recommend additional Fill removal on lot 35

LOT #


35-7
36-5
36-4
37-2
35-8
35-6
36-3
37-1
LOT 35
LOT 36
LOT 37
JUNIPER DRIVE
"THE MEADOWS"

Project No. 209580

FILE COPY	
FILED FOR REGISTRATION	DOC # 1067180
DATE 12/4/06	TIME 9:53 am
BOOK 21449	PAGE 271
STAMPS	REC FEE 20.00
JUDITH A. GIBSON REGISTER OF DEEDS MECKLENBURG COUNTY, NC	

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

WASTEWATER TREATMENT AND DISPOSAL SYSTEM DESIGN AGREEMENT: 15A NCAC 18A .1948 AND ANY OF THE FOLLOWING RULES: .1956; .1957(a); .1957(b); or .1957(c); OR .1969

MA 1037

FILE # 6244B

PARCEL # 197-241-27

The undersigned, NVR Inc. DBA Ryan Homes, owner of property located at 13005 JUMPER DR., (the "site") and described in an instrument recorded in Book 44 at Page 535, Mecklenburg Public Registry, hereby acknowledges that the undersigned applied to the Mecklenburg County Health Department (the 'Department") for a permit to install a septic tank sewage disposal system on the site; that the Department evaluated the site for suitability for such a system in accordance with the regulations promulgated by the North Carolina Commission for Health Services as 15A NCAC 18A .1900 et seq.; that the Department originally classified the site as "unsuitable" pursuant to the standards set forth in the regulations; that the undersigned requested that the Department reclassify the site as "provisionally suitable" in light of the particular septic tank system proposed by the undersigned; that the Department considered various studies, data, and other information which indicate to the Department that the septic tank system proposed by the undersigned is allowed by the rules; and that the Department therefore reclassified the site as "provisionally suitable" and issued an appropriate permit for such proposed septic tank system.

The undersigned further acknowledges that the proper design, construction, operation and maintenance of such septic tank system is the responsibility of the designer, owner, developer, installer, or user of the system, as applicable, and that neither the Department nor its officials, employees, or agents warrant or guarantee that the said system installed pursuant to the permit issued by the Department will function in a satisfactory manner for any given period of time or that the Department, its officials, employees or agents assume any liability for any damages of any kind which are caused, or which may be caused, by a malfunction of such system.

The undersigned further acknowledges that the following conditions will apply to the site:

This instrument was prepared by: NVR Inc. DBA Ryan Homes

Mail after recording to: 10815 David Taylor DR. Charlotte, NC 28262

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	02/09/07	**Amount:**	150.00
Receipt #:	48417	**Tendered:**	0.00
Check / Auth #:	CHARGE	**Returned:**	0.00
Received By:	AIDOOJK		

Account Information

Account #:	X33575
Contractor:	NVR INC (EAST)
Attn:	
Address:	10815 DAVID TAYLOR DR 100
Address:	
City/State/Zip:	CHARLOTTE, NC 28262

Item	Description	Permit#	Quantity	Unit Price	Total Price
0703	Installation/Final Approval 12005 JUMPER DRIVE		1	150.00	150.00

Outstanding Balances

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
6,320.98	31,223.40	15,216.41			

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	02/09/07	**Amount:**	150.00
Receipt #:	48416	**Tendered:**	0.00
Check / Auth #:	CHARGE	**Returned:**	0.00
Received By:	AIDOOJK		

Account Information

Account #:	X33575
Contractor:	NVR INC (EAST)
Attn:	
Address:	10815 DAVID TAYLOR DR 100
Address:	
City/State/Zip:	CHARLOTTE, NC 28262

Item	Description	Permit#	Quantity	Unit Price	Total Price
0734	Auth for Waste Wtr Sys Constr 12005 JUMPER DRIVE		1	150.00	150.00

Outstanding Balances

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
6,170.98	31,223.40	15,216.41			

MECKLENBURG COUNTY
Health Department

December 29, 2005

NVR, Inc.
10815 David Taylor Drive, Suite 100
Charlotte, NC 28262

Re: Application for improvement permit for
Property Site: Lot 37, Meadows of Mint Hill
Health Department file number: **6244B**

Dear Property Owner or Owner's Agent:

The Mecklenburg County Health Department, Environmental Health Division on **December 21, 2005** evaluated the above-referenced property at the site designated on the site plan that accompanied your improvement permit application. According to your application the site is to serve a 5-bedroom residence, with a design wastewater flow of 600 gallons per day. The evaluation was done in accordance with the laws and rules governing wastewater systems in North Carolina General Statute 130A-333 and related statutes and Title 15A, Subchapter 18A, of the North Carolina Administrative Code, Rule .1900 and related rules.

Based on the criteria set out in Title 15A, Subchapter 18A, of the North Carolina Administrative Code, Rules .1940 through .1948, the evaluation indicated that the site is **UNSUITABLE for** a ground absorption sewage system. Therefore, your request for an improvement permit is **DENIED.** A copy of the site evaluation is enclosed. The site is unsuitable based on the following:

- ☒ Unsuitable soil topography and/or landscape position (Rule .1940)
- ☐ Unsuitable soil characteristics (structure or clay mineralogy) (Rule .1941)
- ☐ Unsuitable soil wetness condition (Rule .1942)
- ☐ Unsuitable soil depth (Rule .1943)
- ☐ Presence of restrictive horizon (Rule .1944)
- ☒ Insufficient space for septic system and repair area (Rule .1945)
- ☐ Unsuitable for meeting required setbacks (Rule .1950)
- ☒ Other (Rule .1946) FILL

These severe soil or site limitations could cause premature system failure, leading to the discharge of untreated sewage on the ground surface, into surface waters, directly to ground water or inside your structure.

The site evaluation included consideration of possible site modifications, and modified, innovative or alternative systems. However, the Health Department has determined that none of the above options will overcome the severe conditions on this site. A possible option might be a system designed to dispose of

sewage to another area of suitable soil or off-site to additional property.

For the reasons set out above, the property is currently classified **UNSUITABLE,** and an improvement permit shall not be issued for this site in accordance with Rule .1948 (c).

However, the site classified as **UNSUITABLE** may be classified as **PROVISIONALLY SUITABLE** if written documentation is provided that meets the requirements of Rule .1948(d). A copy of this rule is enclosed. You may hire a consultant to assist you if you wish to try to develop a plan under which your site could be reclassified as **PROVISIONALLY SUITABLE.**

You have a right to an informal review of this decision. You may request an informal review by the soil scientist or environmental health supervisor at the local health department. You may also request an informal review by the
N. C. Department of Environment and Natural Resources regional soil specialist. A request for informal review must be made in writing to the local health department.

You also have a right to a formal appeal of this decision. To pursue a formal appeal, you must file a petition for a contested case hearing with the Office of Administrative Hearings, 6714 Mail Center, Raleigh, NC 27699-6714. To get a copy of a petition form, you may write the Office of Administrative Hearings or call the office at (919) 733-0926 or from the OAH web site at www.oah.state.nc.us/form.htm. The petition for a contested case hearing must be filed in accordance with the provision of North Carolina General Statutes 130A-24 and 150B-23 and all other applicable provisions of Chapter 150B. N. C. General Statue 130A-335(g) provides that your hearing would be held in the county where your property is located.

Please note: If you wish to pursue a formal appeal, you must file the petition form with the Office of Administrative Hearings **WITHIN 30 DAYS OF THE DATE OF THIS LETTER.** The date of this letter is **December 29, 2005**. Meeting the 30-day deadline is critical to your right to a formal appeal. Beginning a formal appeal within 30 days will not interfere with any informal review that you might request. Do not wait for the outcome of any informal review if you wish to file a formal appeal.

If you file a petition for a contested case hearing with the Office of Administrative Hearings, you are required by law (N.C. General Statute 150B-23) to send a copy of your petition to the North Carolina Department of Environment and Natural Resources. Send the copy to: Office of General Counsel, N. C. Department of Environment and Natural Resources, 1601 Mail Service Center, Raleigh, NC. 27699-1601. Do **NOT** send the copy of the petition to your local health department. Sending a copy of your petition to the local health department will **NOT** satisfy the legal requirement in N.C. General Statute 150B-23 that you send a copy to the Office of General Counsel, NCDENR.

You may call or write the local health department if you need any additional information or assistance.

Sincerely,

Chris Sherrill, R.S, L.S.S.
Authorized Agent - DENR

Encl: (2)

Residential Subsurface Wastewater Treatment and Disposal System Design

for

Lot 37 – The Meadows of Mint Hill
12005 Jumper Drive
Mint Hill, North Carolina

Tax Parcel # 197-241-27
Mecklenburg County File # 6244B
November 11, 2006

VOID

Prepared for:

NVR, Inc.
10815 David Taylor Drive, Ste. 100
Charlotte, NC 28262

Prepared by:

Larry Thompson, RS, PWS, SSIT
Michael Wood, LSS
The Catena Group, Inc.
410-B Millstone Drive
Hillsborough, NC 27278
Phone: 704-301-4881
Fax: 704-888-1496

LICENSED SOIL SCIENTIST MICHAEL G. WOOD 1219 STATE OF NORTH CAROLINA

NORTH CAROLINA REGISTERED SEAL 1208 SANITARIAN LARRY B. THOMPSON, JR.

APPROVED ON
12-22-06
TREVOR

CC: Mr. Chris Sherrill, RS, LSS
Mecklenburg County Environmental Health

Details

In an application for an Improvement Permit filed with the Mecklenburg County Health Department (MCHD) by NVR, Inc., the subject property was proposed to be developed with a single family 5-bedroom residence served by a ~~municipal water supply~~. Based upon this information, a soil and site evaluation was conducted by the MCHD where the lot was determined to be "Unsuitable" for the installation of a subsurface wastewater treatment and disposal system in accordance with the *Laws and Rules for Sewage Treatment, and Disposal Systems* 15A NCAC 18A .1900 (North Carolina Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section).

IV SOILS

Upon further investigation by The Catena Group, Inc. (TCG), it was determined that a sufficient amount of "Suitable" Group ~~III~~ soils are located on the property which would allow for the installation of a Type IV pressure dosed prefabricated porous block panel system ~~(PPBPS) for a 4-bedroom residence (initial and repair)~~. It is the desire of the owner that the MCHD consider reclassifying this lot as "Suitable", allowing for the issuance of a Construction Authorization, based upon the following proposal.

Location

The subject property is located in The Meadows of Mint Hill (Lot 37 – 12005 Jumper Drive) in the town of Mint Hill, North Carolina. From NC 51, travel south on SR 1004 (Bain School Road) approximately 0.8 mile, turn left onto Gait Drive and right onto Canter Lane, left onto Filly Road, and left onto Jumper Drive. Lot 37 is located on the right.

References

Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, May 2006.

Onsite Wastewater Treatment and Disposal Systems; EPA 625/R-00/008 Design Manual, February 2002.

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

Design and Installation of Low Pressure Pipe Wastewater Treatment Systems; by Craig Cogger, Bobby Carlisle; Dennis Osborne and Ed Holland. Published by UNC Sea Grant College Pub. UNC-SC-82-03, May 1982.

Plans and Specifications

Septic Tank

- The septic tank shall be State approved (Section .1953 of 15A NCAC 18A), watertight, structurally sound, and ~~1500 gallons~~ in capacity.
- The septic tank will be fitted with an approved effluent filter and riser for easy access and periodic maintenance.
- It is the responsibility of the septic contractor to thoroughly inspect the septic tank prior to accepting delivery to assure that the tank has had time to properly cure and is free of cracks or other structural deficiencies.

Pump Tank

- The pump tank shall be State approved, of one-piece construction, watertight, structurally sound and ~~1000 gallons~~ in capacity. Again, it is the responsibility of the septic tank contractor to thoroughly inspect each pump tank prior to accepting delivery.
- The pump tank shall have access risers that extend, at a minimum, 6 inches above finished grade and must have less than 36 inches of fill over its top once finished grade has been established (a reinforced concrete tank will be required if finished soil cover is 36 inches or greater in depth).
- The pump and alarm controls shall be provided with manual circuit disconnects within a watertight, corrosion resistant, Nema 4X rated control panel. The control panel must be securely mounted outside, adjacent to the pump tank riser and at a minimum of 12 inches above finished grade. Pump and float control wiring should be long enough to reach from the tank to the control panel without splicing, routed through wire conduit, and sealed at the openings within the pump tank as well as the control panel enclosure. It is paramount that the conduit is properly sealed to prevent the escape of flammable gases from the pump tank. Furthermore, there must be two electrical circuits for the pump tank controls: one for the pump and one for the alarm controls.
- The pump tank shall have a properly functioning high water alarm incorporated into the control panel. The alarm circuit shall be supplied separate from any pump overload and short circuit devices. The alarm shall be both audible and visible by the system users.
- The float switch for the high water alarm should be mounted at a location slightly above the "pump on" elevation for the pump float control switch. The high water alarm float switch shall not be set more than 3 inches above this elevation.
- Pump float(s) shall be mounted so that the effluent at the end of a pump cycle is above the top of the effluent pump. The septic contractor must determine pump draw down and set the float switch accordingly.
- Float switch tie downs must be made of a corrosion resistant material (do not use electrical tape or metal hose clamps to secure these switches). Floats should be mounted on a separate "float tree" rather than the pump supply line (see pump tank detail).

- The pump must be placed on two 4-inch concrete blocks to allow for some settling of solid particulates within the pump tank.

Pump Tank Effluent

- The pump discharge piping shall be fitted with a ~~pressure effluent filter~~. The filter must be equivalent to the GAG Sim Tech Filter, Boyne City, Michigan, 49712, telephone: 1-888-999-3290. This device provides a very high degree of filtration and is highly recommended.

Pipe and Fittings

- All discharge piping, supply lines, valves and disconnects should be made of PVC.
- All joints must be properly "welded" utilizing the appropriate PVC cement for each application.
- The supply line from the pump tank to the pressure manifold shall be 2 inch Schedule 40 PVC (approximate length of supply line is 85 feet).
- The lateral distribution lines shall be 1¼ inch Schedule 40 PVC. Holes in the laterals should be drilled on site and at the 12 o'clock position (one hole per panel). Lateral ~~hole size is 5/32 of an inch~~.
- There shall be a threaded PVC union above each pump to facilitate easy removal of the pumps for maintenance or replacement.
- The end of each lateral is to be provided with a "turn up", contained within a turf/gate valve box, that provides above ground access for periodic clean out and pressure head adjustment.

Supply Manifold

- The control valves (gate valves) for each lateral distribution line shall be contained within one manifold box/vault of adequate size. The box should be placed upon a gravel base.
- The supply manifold conveys effluent from the pump to the lateral distribution lines.
- The supply manifold should be constructed by connecting a series of (6) 2" x 2" x 1 ¼" tees to the 2 inch supply line.

Backfill

- Backfill sand shall be a clean, washed, medium sand that is naturally occurring and falls within the gradation of ASTM C-33 specification (used in the ready mix industry and is readily available).

Drain Field Installation

- The drain field has been previously laid out on-site utilizing metal stemmed flags. Once this area has been approved by the MCHD, the property owner/builder should mark this area and isolate it as much as possible from construction traffic. Prior to

the system installation, the septic contractor shall contact the MCHD and the system designer for a preconstruction conference at which time the drain field area will be re-verified.

- Under no circumstances shall any construction take place within the drain field area while the soil is in a wet condition. If the installer has doubts as to whether or not the drain field area is dry enough to begin construction, the Mecklenburg County Health Department should be contacted for permission to proceed with the installation.
- The specified system is a Type IVa, pressure dosed, pre-fabricated permeable block panel system – specifically the 16 inch high panel system manufactured by T&J Panel Wastewater Treatment System, Patent No. 4013559; telephone: 1-800-222-2577. The installer must follow the manufacturer's guidelines for installing the T&J Panel System and should request an installation manual from the manufacturer prior to beginning construction.
- The initial drain field consists of ~~(6) lateral trenches to be constructed 3 feet wide by 50 feet in length.~~ It is essential that the lateral trenches be constructed on contour with the land, with each trench being excavated level from beginning to end. The use of a tripod mounted engineer's level is essential to assure that each trench is constructed as level as possible.
- ~~The maximum trench depth for this system shall be 36 inches and each trench shall be placed on a minimum of 9 foot on centers.~~
- Once trenches are dug, the side walls shall be raked and a light dusting of lime applied.
- Backfill the trench with 6 inches of sand and level to grade. Once leveled, place 1 x 4 or 6 inch boards on top of the sand the entire length of each trench. Once the grade boards have been set, the panels may be set into the trench. The panels should be placed 6 inches apart.
- Once the panels have been set, line the top chamber of each panel with 10 – 12 pounds of clean particle sand (medium sand blasting sand). Coverage depth should be approximately 1 inch thick. *Please note that this sand is not the same material specified for backfill.*
- Tar seal rope should be placed in the "U" outs of each end of the panel to form seals. Once the tar rope is in place, the 1 ¼ inch Schedule 40 PVC laterals can be added and the seal completed by the addition of more tar rope on the top and sides of the pipe. Now that the connection and seals are complete, a block cap is placed on each end of the panel so that all openings are covered.
- The end of each lateral should be fitted with a short turn up topped by a threaded female coupling with cap. Each turn up must be fitted with a turf/gate valve box with lid fitted flush to finished grade.
- Once the lateral has been installed and the panels closed, the trench is ready to be backfilled to the top with the sand used in the trench bottom. At this point, the trenches should be left open for the final inspection by the MCHD.

Proper Operation Check

- After all components of the waste water disposal system have been installed and connected, the system shall be checked for proper operation.
- With the electrical power turned off, fill the pump tank with water until the liquid rises to a level high enough to activate the high water alarm float. Turn on the electrical power. The alarm, alarm light and pump should activate at this time. Turn off the electrical power once these checks have been performed and prepare to set the head pressure at the manifold box.

Pressure Head Adjustment

- The pressure head must be adjusted to match the design specifications. The pressure head is measured by the height of the liquid coming from the turn ups at the end of each lateral when the pump is running (utilizing stand pipes).
- Prepare a length of pipe (stand pipe), cut to the desired head pressure height and fitted with a threaded adapter that will screw into the turn up couplings at the end of each lateral. Thread the stand pipes into each lateral and then turn the power on to the pump, allowing the water to rise within the stand pipes. Adjust the gate valves within the supply manifold box to achieve the specified head pressure (liquid height in the stand pipes should equal the design head pressure).
- Once the pressure head has been adjusted, allow the pump to run through the remainder of the cycle. The pump float switch will automatically turn the pump off if it is operating properly. Make sure that the effluent pump is completely submerged in the remaining water, making adjustments to the float switch(es) as needed. This completes the checks for proper operation of the pump, alarm and float switches.
- At this point, the standpipes may be removed and replaced with the threaded turn up caps.

Final Landscaping

- The drainfield shall be shaped to shed rainwater and be free from low spots.
- The entire area of the drainfield should be planted with grass as soon as possible to prevent erosion. The soil should be properly tilled, limed (if necessary) and fertilized prior to planting. After applying grass seed, the area should be heavily mulched with straw or other suitable material.

Utility Conflicts

- The builder and property owner must take special care in planning for water, power, gas, telephone and cable lines. These utilities shall be kept clear of all parts of the septic system and its proposed repair area. Improper planning for underground utilities can negatively impact the installation and, in some cases, cause irreparable damage. Irrigation systems must not be placed over the septic drain field area. If there are any questions regarding preferred routes, contact the MCHD as soon as possible.

Maintenance

Operation and Maintenance

The designed system is classified as a Type IVa wastewater treatment and disposal system and will require ongoing maintenance. State regulations require that a system of this type be managed by a person certified (Certified Subsurface System Operator) by the North Carolina Department of Environment and Natural Resources to operate subsurface wastewater systems (Section .1961 Maintenance of Sewage Systems). ~~A "Maintenance Contract" between the system owner and a Certified Operator will be required by the MCHD prior to the issuance of a final system approval or Operation Permit.~~

- The minimum inspection/maintenance and reporting frequency for a Type IVa system is twice a year by the Certified Operator. The local health department is required to inspect the system once every three years.
- The septic and pump tanks shall be pumped every 4 years or when the solids within the septic tank reach an elevation that is equivalent to 1/3 of the volume of the tank. In some situations, the tanks may need to be pumped more frequently; for example, if you are using a garbage disposal, it is recommended that the septic and pump tanks be cleaned out annually. Regardless, the Certified Operator will be able to advise when it is necessary to pump out tank solids.
- Pressure head for laterals should be checked and adjusted semi-annually, flushing with clean water as necessary to remove any accumulated solids.
- The effluent filters should be inspected semi-annually. When it becomes necessary to clean the effluent filters, the filters should be removed and the accumulated debris washed back into the septic or pump tank – not onto the lawn.
- All piping and valves should be inspected semi-annually for damage and corrections/repairs made immediately.
- The pump and float controls/switches should be inspected semi-annually to assure proper operation
- The drain field area should be maintained to prevent over growth of vegetation. Any damp areas, leakages or malfunctions should be addressed immediately.
- Divert gutter downspouts and surface water runoff away from the septic and pump tanks.

Suggestions to the Homeowner

- As previously mentioned, if you plan to use a garbage disposal in your home you should plan to have your septic and pump tanks cleaned out annually. The ground up garbage adds large amounts of solids into a septic tank that tend to degrade at a very slow rate.
- Grease, cooking oils, coffee grounds and non-degradable solids (disposable diapers, cigarettes and solid paper wastes) should never be put into a septic tank.
- Used motor oil or any oily liquids should not be disposed of in a septic tank.

- Be aware of the amount of water that you are using in your home. Water saving fixtures and devices can be installed on sinks, toilets and showers to reduce the volume of wastewater that you are sending to your drain field.
- Run dishwashers and washing machines only when you have a full load.
- Use liquid detergents. Powdered detergents have binding agents in them that tend to solidify in the wastewater disposal system.
- Repair leaky faucets and toilets. Small drips equal large volumes of water over time and can over burden your drain field.
- Divert gutter water away from the septic system.
- Do not irrigate the septic drain field area.
- Do not use chemical additives in your system. Studies have indicated that they do not increase the biological activity that naturally occurs in the septic system and in some cases certain additives have been found to be detrimental to the life of a system.
- Finally, taking good care of your septic system will help to assure that you experience years of trouble free service at a relatively low cost. On-site wastewater treatment and disposal is still the most environmentally friendly method of treating residential/commercial waste and you should keep your system in use for as long as it is properly functioning! If you have additional questions, please feel free to contact your system designer or the MCHD.

✓ TCA 12-22-06

Design Specifics

Daily Design Flow:	480 GPD – 4 bedroom house
Septic Tank Size:	1500 gallons (2 compartments)
Pump Tank Size:	1000 gallons (one piece)
Effluent Loading Rate:	Design = 0.275 GPD per sq. ft. (50 % reduction for the PPBPS)
Supply Length and Diameter:	Approx. 85 ft. of 2 in. SCH 40 PVC (please see note at the bottom of this page.)
Number and Size of Laterals:	(6) 1 1/4 inch x 50 feet long
Hole Size:	5/32 inch
Hole Spacing:	1 per panel = 66 total
Dosing Volume:	237.60 gallons per dose
Flow Rate Through System:	27.06 gallons per minute
Elevation Head:	19.0 feet (may vary, please see note at the bottom of this page)
Pressure Head:	2 feet
Pump Requirements:	29.06 GPM at 21.0 feet of head (2 GPM added for Vapor Lock)
Depth of Water Pumped:	11.31" (J&S STB-97-1000 used) check with individual tank manufacturer (1 cu. Ft. of water equals 7.5 gal.)
Pump Run:	8.78 minutes
Check Valve:	Yes
Vapor Lock Hole:	Yes (A vapor lock hole can reduce vibrations in the discharge pipe upon start up and shut down)

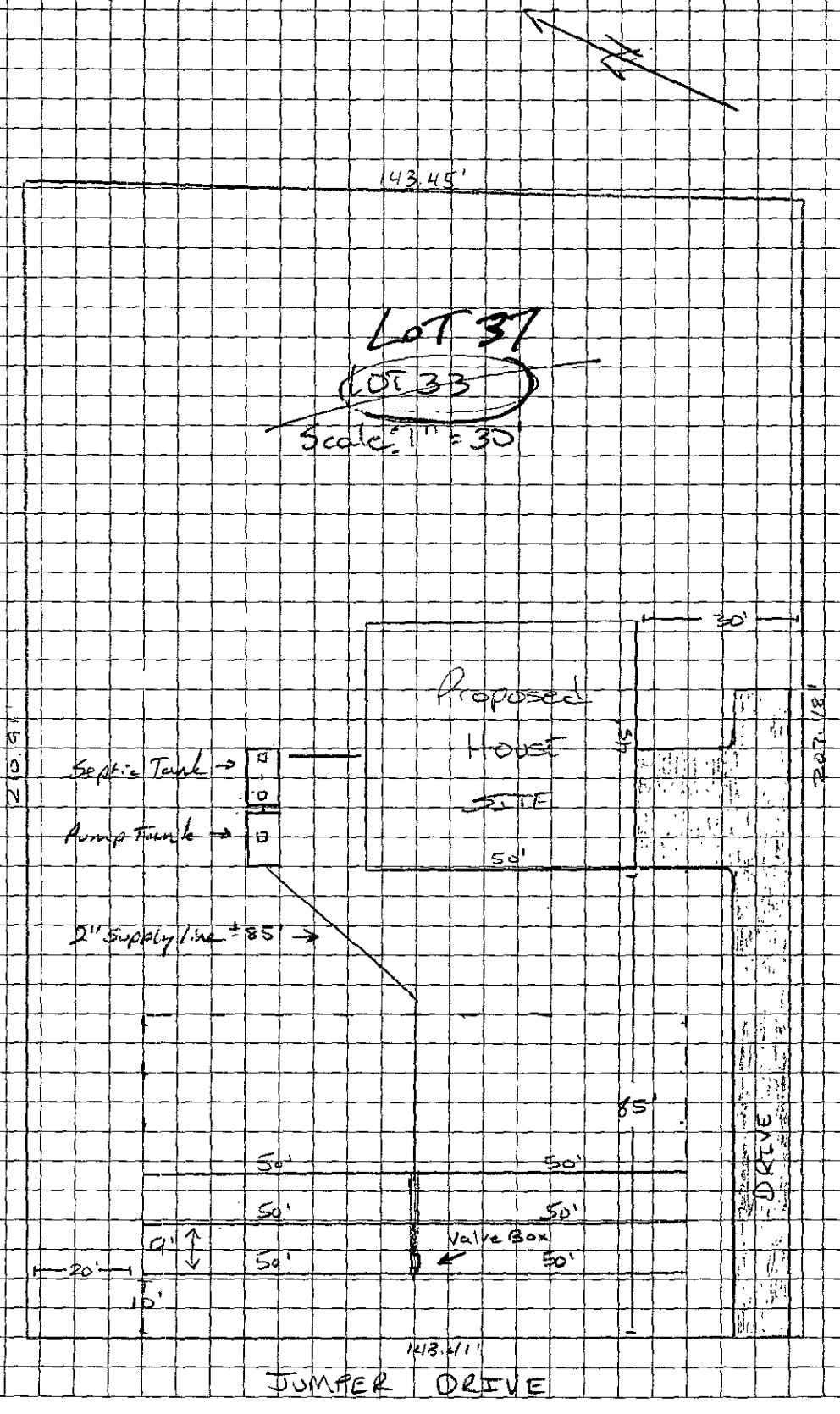
* Please note that supply line and elevation head measurements are approximate. It is the contractor's responsibility to confirm these values based upon the actual house and plumbing location. If there is a discrepancy, contact the system designer prior to beginning construction.

PPBPS Design Worksheet									
								File #:	
								Tax #:	197-241-27
System Requirements								Address:	12005 Jumper Drive
Design Flow	480	gpd							Lot 13 - The Meadows
LTAR	0.275	gpd/ft.^2						Consultant:	Larry Thompson
Linear footage	582	ft. (conventional)						Phone:	704-301-4881
Linear footage	291	ft. (50% Reduction)							
								Reviewed By:	TREVOR T.
Design Layout								Date:	12-22-06
Laterals	Length (ft)	# Panels							
Line # 1	50	11							
Line # 2	50	11							
Line # 3	50	11							
Line # 4	50	11							
Line # 5	50	11							
Line # 6	50	11							
Totals	**300**	**66**							
Absorption Area									
Length (ft)	Width (ft)	Area (ft^2)							
280	3	840							
System Pressure Head	2	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	0.41	gpm	Determined from orifice flow design table (value dependent on pressure head & orifice diameter)						
Total System Flow Rate	27.06	gpm	Total number of panels required multiplied by the orifice flow rate						
System Dose Volume	237.60	gal.	Total number of panels required multipled by 3.6 gal./panel						
Pump Run Time	8.78	min.	System dose volume divided by the total system flow rate						
Pump Tank Drawdown	11.31	in.	1,000 gal. Pump tank, volume is approximately 21 gallons per inch						
Comments:									
1. Install system using 3 ft. wide trenches.									
2. Install drainlines on 9 ft. centers, level, and on contour.									
3. System design requires effluent pump for distribution.									
4. 100% repair area (PPBPS) required for property.									

The Catena Group
410-B Millstone Drive
Hillsborough, NC 27278

File No.: LOT 37
Location: ~~Lot 13~~ The Meadows
Date: November 11, 2006

12005 JUMPER DRIVE 197-241-27

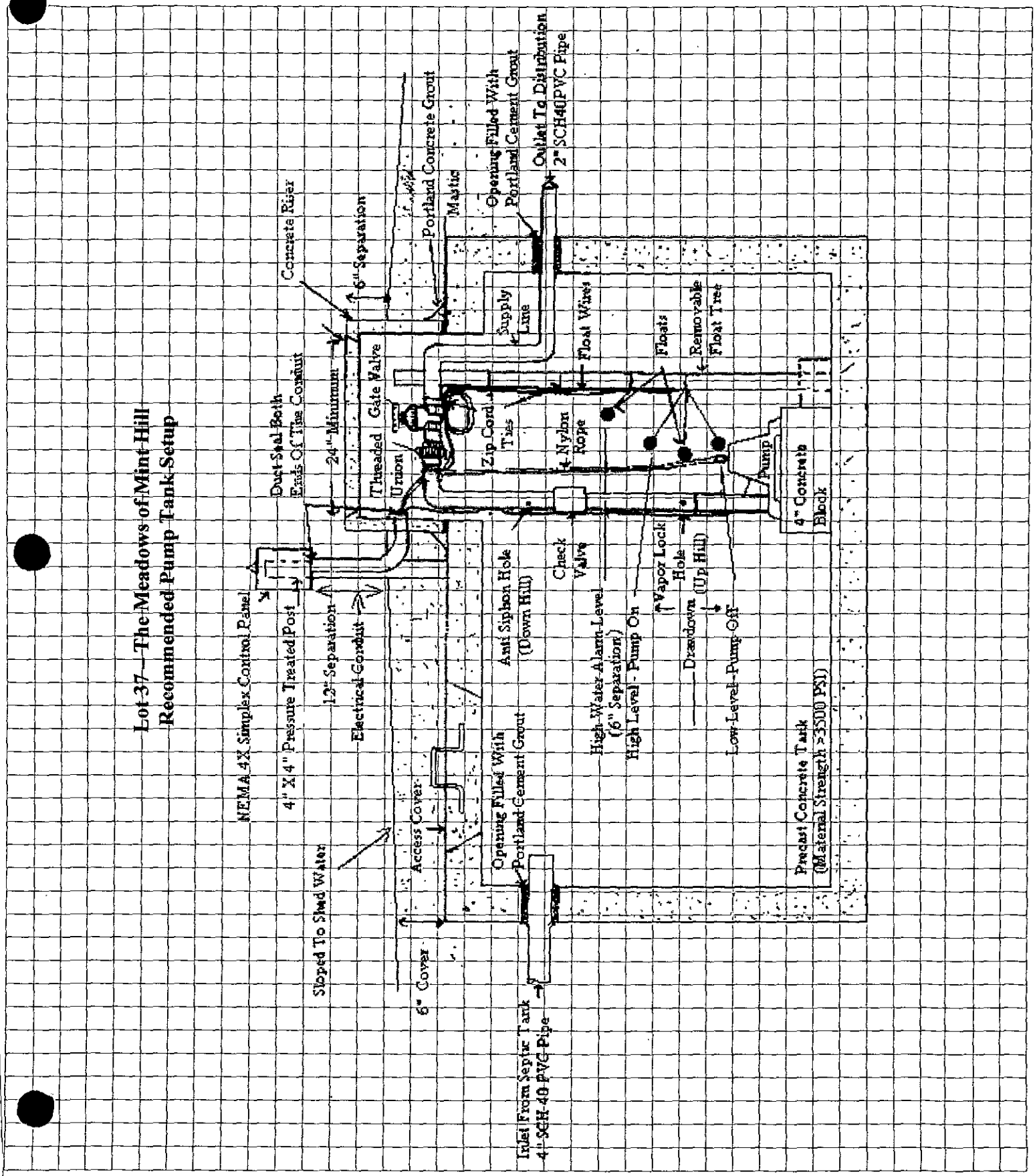


The Catena Group
410-B Millstone Drive
Hillsborough, NC 27278

Permit Number:

Location: Lot 37 – The Meadows

Date: November 11, 2006



DEPARTMENT OF ENVIRONMENT,
HEALTH & NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

SHEET 1 OF 1

COUNTY: Mecklenburg
PROPERTY I.D. #
TAX #:

SUBDIVISION: The Meadows LOTS 37, 36 & 35
SECTION/PHASE:

10/25/06 37-1 37-2 36-3 36-4 36-5 35-6 35-7 35-8 PROFILES

FACTORS		1	2	3	4	5	6	7	8	9	10
LANDSCAPE POSITION	.1940										
SLOPE (%)	.1940										
HORIZON 1 DEPTH	.1943	0-8	0-17	0-60	0-42	0-24	0-40	0-26	0-8		
TEXTURE	.1941 (a)(1)	scl	FILL	Fill	Fill	Fill	Fill	Fill	scl		
CONSISTENCE	.1941	VFR*							fr*		
STRUCTURE	.1941 (a)(2)	PL→GR							gr		
CLAY MINERALOGY	.1941 (a)(3)	S									
HORIZON 2 DEPTH	.1943	8-19	17-24			24-35	40-51	26-30	8-16		
TEXTURE	.1941 (a)(1)	cl	scl			sl	scl	scl	scl		
CONSISTENCE	.1941	fi	FI			fr	fr	fi*	fr		
STRUCTURE	.1941 (a)(2)	c-sbk	cbk			gr	gr	sbk	sbk		
CLAY MINERALOGY	.1941 (a)(3)	S	S								
HORIZON 3 DEPTH	.1943	19-30	24-33			35-60	51-74	30-46	16-32		
TEXTURE	.1941 (a)(1)	cl	cl			cl	cl	scl	cl		
CONSISTENCE	.1941	fr	fi			fr	fi	fr	fr		
STRUCTURE	.1941 (a)(2)	c-sbk	sbk			sbk	sbk	sbk	sbk		
CLAY MINERALOGY	.1941 (a)(3)										
HORIZON 4 DEPTH	.1943	30-60+	33-61		Auger→	74-100	46-66+	32-46			
TEXTURE	.1941 (a)(1)	l	cl				cl	scl	cl		
CONSISTENCE	.1941	FR	fi				fi	fi	fi		
STRUCTURE	.1941 (a)(2)	M	c-sbk				sbk	c-sbk	c-sbk		
CLAY MINERALOGY	.1941 (a)(3)	S									
SOIL WETNESS	.1942								46-61+		
RESTRICTIVE H ORIZON	.1944								cl		
SAPROLITE	.1943/.1956	30+	61+ sl			60+	100+		fi		
CLASSIFICATION	.1948								c-sbk		
L. T. A. R. (gpd/ft2)	.1955										

OTHER FACTORS (.1946):

SITE LTAR (gpd/ft2):

AVAILABLE SPACE (.1945):

SITE CLASSIFICATION (.1948):

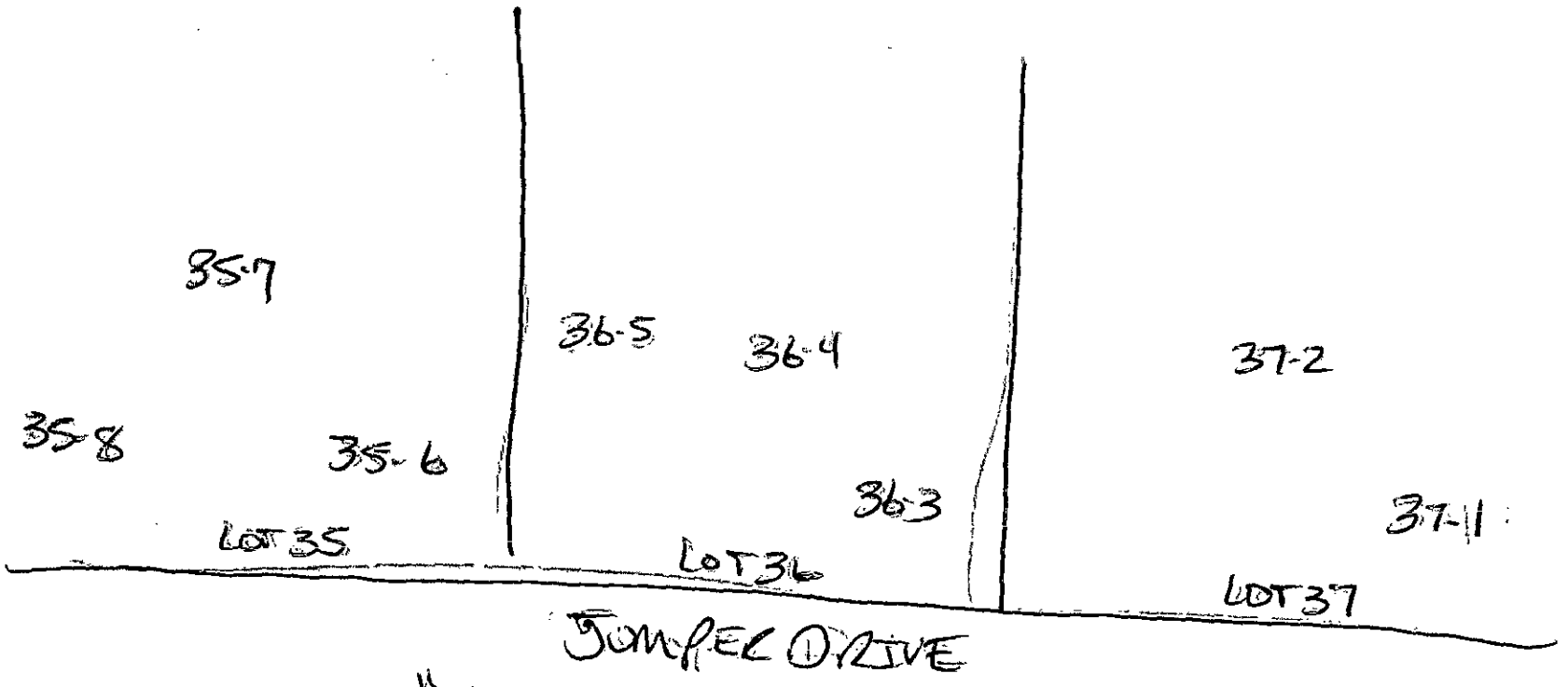
SYSTEM TYPE:

EVALUATED BY: M. WOOD, L. THOMPSON

OTHERS PRESENT:

COMMENTS: 37-1 0-8 STRONGLY COMPACTED
35-7 ORIGINAL A HORIZON REMOVED
35-8 0-8 WEAKLY COMPACTED
Recommend additional Fill removal on lot 35

LOT # _____


35-7
36-5
36-4
37-2
35-8
35-6
36-3
37-1
LOT 35
LOT 36
LOT 37
JUNIPER DRIVE

"THE MEADOWS"

#1748

GWS – RES. APP 12/04

SEPTIC FEE: 200.00 + 335.75 = net
DATE: 12/1/05
CRT [ ] SC

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 # 6244B

SEPTIC / TYPE APPLICATION: ☐ NONE ☒ NEW SYSTEM EXISTING SYSTEM: ☐ EXPANSION/ALTERATION ☐ REPAIR

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

JOB LOCATION INFORMATION:

TAX/PARCEL #: 19724127
STREET ADDRESS: 12005 Jumper Dr.
CITY: Mint Hill
STATE: NC ZIP:
SUBDIVISION OR MOBILE HOME PARK NAME: The Meadows of Mint Hill
LOT #: 37
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: 3,500
NUMBER OF BEDROOMS: 4
NUMBER OF OCCUPANTS: 4

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: NVR, INC.
ADDRESS: 10815 David Taylor Dr., Ste 107
CITY: Charlotte
STATE: NC ZIP: 28262
HOME PHONE: WORK PHONE: 704-548-3534
MOBILE PHONE: FAX:

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME: Kim Stanley
ADDRESS: PO Box 176
CITY: Stanfield
STATE: NC ZIP: 28163
HOME PHONE: 704-792-9639 WORK PHONE:
MOBILE PHONE: 704-791-6852 FAX: 704-785-8721

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 10/5/05
WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? Feb. 2006

"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.

Kim Stanley 11/28/05
Owner's/Agent's Signature Date

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 lege 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

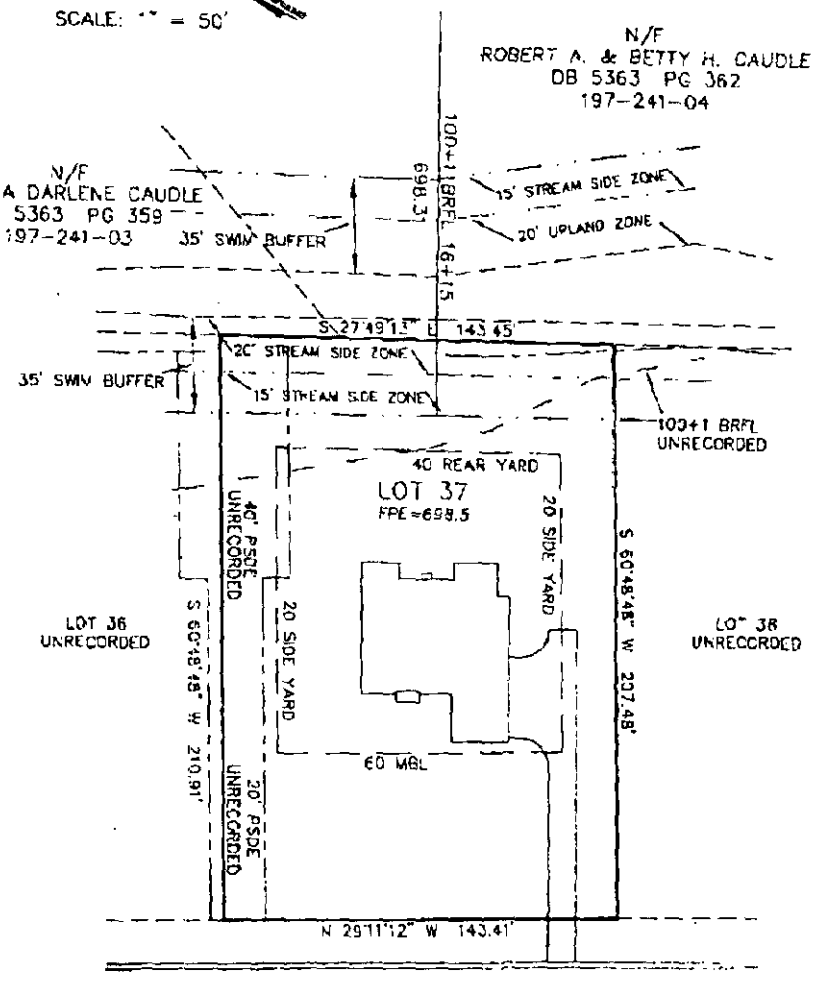
6144B

PROPOSED MODEL FIT

PREPARED BY:

DELTA LAND SERVICES, INC.
6033 FLORENCE AVENUE, SUITE 100
CHARLOTTE, NORTH CAROLINA 28212
(704) 536-6190

SCALE: 1" = 50'



NOTE: DELTA LAND SERVICES IS NOT RESPONSIBLE FOR ANY CHANGES DUE TO UNRECORDED COVENANTS AND RESTRICTIONS AND UNRECORDED PLAT

ESTIMATED DRIVEWAY AREA = 1678.4 SQ.FT.±

STAKEOUT ☐

NOT FOR RECORDATION, CONVEYANCES OR SALES

Subdivision MEADOWS AT MINT HILL(UNRECORDED) County MECKLENBURG
Address _____ Owner RYAN HOMES
Lot 37 Block ___ Plan AVALON Elevation C Drive (Left) ___ (Right) X (Courtyard) ___ Deck ___
Patio ___ Fireplace REAR Garage (1 Car) ___ (2 Car) ___ (3 Car) X Brick FRONT Basement X Curtain Wall ___
Crawl ___ Slab ___ Other SUN & MORNING RCOM

REVISED: DWN: EHD CKD: DATE: 10 / 22 / 05

G:\MEADOWS\SITE.DWG - EHD

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

Sheet: 1 of 2
Property ID: 197-241-27
Lot #: 37
File #: 6244B
AppID: 1748

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: NVR,Inc.
Applicant: Kim Stanley
Address: 10815 David Taylor Drive, Suite 100, Charlotte, NC 28262
Date Evaluated: 3/5/2007
Proposed Facility: Residence Design Flow (.1949): 480 gpd
Property Size:
Location of Site: 12005 Jumper Drive
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	b PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
1	LS,10	0-6	GR/CL	FR/SS/SP/SEXP	>48" TO SOIL WETNESS	48	NA	NONE	PS,IV
		6-48	ABK/SBK/C	FI/S/P/SEXP					.25 GPD/FT^2
2	"	0-10	FILL	MASSIVE	"	"	"	"	"
		10-48	ABK/SBK/C	FI/S/P/SEXP					
3	"	0-2	GR/CL	FR/SS/SP/SEXP	"	"	"	"	"
		2-48	ABK/SBK/C	FI/S/P/SEXP					
4	"	0-24	GR/CL	FR/SS/SP/SEXP	"	"	"	"	"
		24-48	ABK/SBK/C	FI/S/P/SEXP					
					SITE LTAR				.25 GPD/FT^2

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	IV a	IV a
Site LTAR	.25	.25

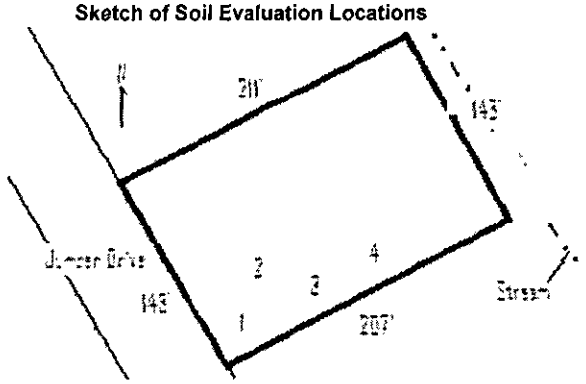
Other Factors (.1946): None
Soil Evaluation By: Chris Sherrill, RS, LSS
Others Present: No
Site Classification (.1948): PS
Site Evaluation By: Chris Sherrill, RS, LSS
Others Present: K. Stanley

COMMENTS: 100% Repair Area Required

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

LD 218751

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

Permit #: **30001748** GWS File #: **6244B** Tax Parcel #: **197-241-27**

- 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):** 1/3/2012

Type of Installation: Residential - New System Lot Number: 37

Structure Type: HOUSE Size (ft^2): 3500 # Bedrooms: 4 # Occupants: 4

Building Foundation: Basement With Plumbing Water Supply: Municipal

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

Initial System Specifications:

Design Flow (gpd):	480	LTAR (gpd/ft^2):	0.275	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	873	Total Trench Length (ft):	291
Maximum Trench Depth (in):	36	Depth of Media (in):	24	Distribution Device:	Manifold (LPP Distri		

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

Repair System Specifications:

Design Flow (gpd):	480	LTAR (gpd/ft^2):	0.275	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	873	Total Trench Length (ft):	291
Maximum Trench Depth (in):	36	Depth of Media (in):	24	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: Chris Sherrill Owner/Legal Agent: Patrice Garner

Signature: Christopher M Sherrill LRS, LSS Signature: Patrice Garner

Print Name

Date Issued: 1/3/2007

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 #: **30001748** GWS File #: **6244B**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every year 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 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.
- 100% repair area is not required for this property. However, the maximum feasible area shall be allocated for a repair area.
- This type of repair system requires the installation of a pump tank and all associated components. This type of system will require routine inspections by our office. The system owner is responsible for all fees associated with these inspections.
- This type of repair system requires the property owner to obtain a contract with a Certified Operator to perform routine inspections and maintenance on the system.
- Proper well abandonment is required prior to receiving an Installation Approval from our office to install the septic system.
- This septic system design requires pretreatment equipment to be installed. This equipment shall be installed as specified by the wastewater system design consultant.
- Upon completion of the project the system designer shall provide Groundwater & Wastewater Services with a letter certifying that the system was installed in accordance with the approved design.
- The permitted system design requires a pressure manifold with varying tap diameters and/or pipe schedules. The contractor should review the specification detail provided by the system designer prior to bidding the project.
- OWNER AGREEMENT FORMS FOR SITE RECLASSIFICATION SHALL BE ON FILE PRIOR TO ISSUANCE OF CONSTRUCTION AUTHORIZATION.

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: Chris Sherrill Owner/Legal Agent: Patrice Garner

Signature: [signature] LS Signature: Patrice Garner

Print Name

Date Issued: 1/3/2007

DEPARTMENT OF ENVIRONMENT,
HEALTH & NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

SHEET 1 OF 1

COUNTY: Mecklenburg
PROPERTY I.D. #
TAX #:

SUBDIVISION: The Meadows Lots 37, 36 & 35
SECTION/PHASE:

10/25/06 PROFILES

FACTORS		37-1	37-2	36-3	36-4	35-5	35-6	35-7	35-8	9	10
LANDSCAPE POSITION	.1940										
SLOPE (%)	.1940										
HORIZON 1 DEPTH	.1943	0-8	0-17	0-60	0-42	0-24	0-46	0-26	0-8		
TEXTURE	.1941 (a)(1)	scl	FILL	Fill	Fill	Fill	Fill	Fill	scl		
CONSISTENCE	.1941	vfr*							fr*		
STRUCTURE	.1941 (a)(2)	PL-GR							gr		
CLAY MINERALOGY	.1941 (a)(3)	S									
HORIZON 2 DEPTH	.1943	8-19	17-24			24-35	40-51	26-30	8-16		
TEXTURE	.1941 (a)(1)	cl	scl			sl	scl	scl	scl		
CONSISTENCE	.1941	fi	FI			fr	fr	fi*	fr		
STRUCTURE	.1941 (a)(2)	a-sbk	GR			gr	gr	sbk	sbk		
CLAY MINERALOGY	.1941 (a)(3)	S	S								
HORIZON 3 DEPTH	.1943	19-30	24-33			35-60	51-71	30-46	16-32		
TEXTURE	.1941 (a)(1)	cl	cl			cl	cl	scl	cl		
CONSISTENCE	.1941	fr	fi			fr	fi	fr	fr		
STRUCTURE	.1941 (a)(2)	a-sbk	sbk			sbk	sbk	sbk	sbk		
CLAY MINERALOGY	.1941 (a)(3)										
HORIZON 4 DEPTH	.1943	30-60+	33-61		Auger→		71-100	46-66+	32-46		
TEXTURE	.1941 (a)(1)	l	cl				cl	scl	cl		
CONSISTENCE	.1941	FR	fi				fi	fi	fi		
STRUCTURE	.1941 (a)(2)	M	a-sbk				sbk	a-sbk	a-sbk		
CLAY MINERALOGY	.1941 (a)(3)	S									
SOIL WETNESS	.1942								46-61+		
RESTRICTIVE HORIZON	.1944								cl		
SAPROLITE	.1943/.1956	30+	61+ sl			60+	100+		fi		
CLASSIFICATION	.1948								sbk		
L. T. A. R. (gpd/ft2)	.1955										

OTHER FACTORS (.1946):

SITE LTAR (gpd/ft2):

AVAILABLE SPACE (.1945):

SITE CLASSIFICATION (.1948):

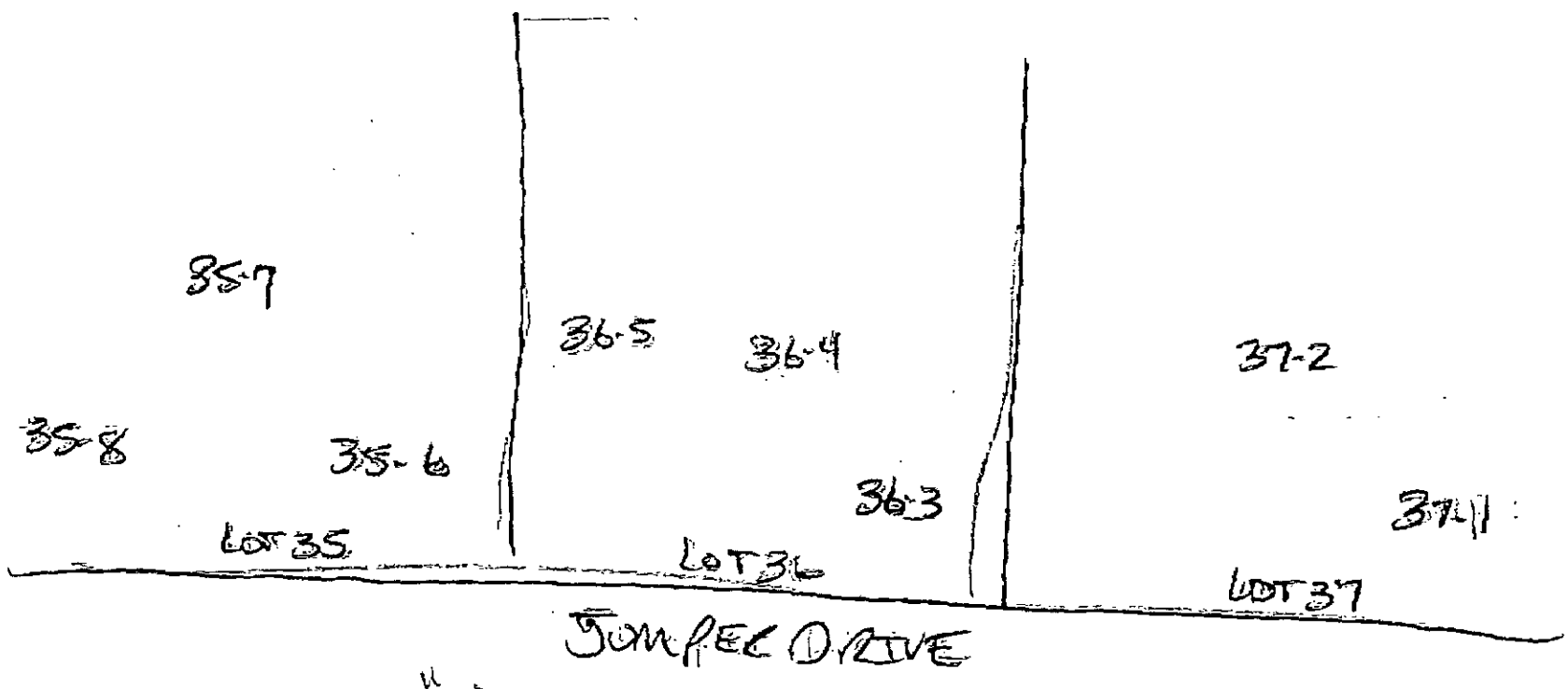
SYSTEM TYPE:

EVALUATED BY: M. WOOD, L. THOMPSON

OTHERS PRESENT:

COMMENTS: 37-1 0-8 STRONGLY COMPACTED
35-7 ORIGINAL A HORIZON REMOVED
35-8 0-8 WEAKLY COMPACTED
Recommend additional Fill removal on lot 35

LOT #


35-7
35-8
35-6
36-5
36-4
36-3
37-2
37-1
LOT 35
LOT 36
LOT 37
JUNIPER DRIVE

"THE MEADOWS"

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