

9709 STONEBRIDGE WY

13903362

1/11/2008

duponbj

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

Groundwater & Wastewater Services
Septic Project File & Data Review Worksheet

GWS File #: _____ WASPS App #: _____

Primary ES assigned to project: DC

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: 5 Were sufficient auger borings made?	Yes ☑	No ☐	N/A ☐
.1939(d), .1955, .1956, .1957	LTAR 3	Yes ☑	No ☐	N/A ☐
	Improvement Permit/Construction Authorization			
.1937(g) 130A-336(a)	Proposed System Type stated-Initial	Yes ☑	No ☐	N/A ☐
.1945(b) 130A-336 (a)(3)	Proposed System Type stated-Repair System location identifiable by setbacks - Initial	Yes ☑	No ☐	N/A ☐
.1937(g) .1945(b)	System components shown -- Initial	Yes ☑	No ☐	N/A ☐
.1945(b)	Repair area shown	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Does System design match facility, flow & WWcharacteristics?	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Is System design consistent with soil/site conditions?	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Is the System located in the approved area?	Yes ☐	No ☐	N/A ☐
130A-336(a)	Is the Design flow (gpd) indicated?	Yes ☑	No ☐	N/A ☐

130A-336(a)	Number of Bedrooms, employees, seats, etc. indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench depth indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench width indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench length indicated?	Yes ☑	No ☐	N/A ☐
130A-336(a)(1)	Proposed/existing well shown?	Yes ☑	No ☐	N/A ☐
130A-336(a)(1)	Property line lengths shown?	Yes ☑	No ☐	N/A ☑
130A-336(a)	Facility/appurtenance setbacks shown from fixed points?	Yes ☑	No ☐	N/A ☐
	Operation Permit			
.1937(i)	System type as described in table V(a) of rule .1961	Yes ☑	No ☐	N/A ☐
.1937(i)	Conditions for system performance, operation, maintenance, monitoring and reporting.	Yes ☐	No ☐	N/A ☐
		Yes ☐	No ☐	N/A ☐

II. WASPS Review:

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

Items requiring correction/modification: _____

Comments:

_____

_____

_____

_____

_____

IA issued date: _____

OP issued date: _____

Review performed by: IR

Date performed: 2 Nov 07

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date: 03/19/08
Receipt #: 56534
Check / Auth #: CHARGE
Received By: CRAIGGY

Amount: 150.00
Tendered: 0.00
Returned: 0.00

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 9709 STONEBRIDGE WAY/FILE 6965B		1	150.00	150.00

Outstanding Balances

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
16,855.40	20,500.19				

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date: 03/19/08
Receipt #: 56535
Check / Auth #: CHARGE
Received By: CRAIGGY

Amount: 150.00
Tendered: 0.00
Returned: 0.00

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 9709 STONEBRIDGE WAY/FILE 6965B		1	150.00	150.00

Outstanding Balances

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
17,005.40	20,500.19				

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 #: 30001938 GWS File #: 69650

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 3 years by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- This type of septic system requires a Certified Operator to maintain the system. A system maintenance contract with a Certified Operator must be on file prior to issuance of an Operation Permit.
- Additional soil cover, as specified on the plot plan, required over the drain field must be inspected and approved prior to issuance of an Operation Permit.
- This Improvement Permit is being issued based on a supplemental soil investigation performed by staff from our office.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- All components of the septic system must be installed in accordance with the required setbacks listed on the corresponding plot plan.
- All components of the septic system must be located at least 100 ft. (50 ft. minimum) from all private wells.
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- The system must be water tested during the final inspection to verify proper operation and set system pressure.
- An effluent filter is required on the pump discharge pipe exiting the pump tank.
- Install according to plans on file submitted by Larry Thompson, 2/12/08. Maintenance contract required before CO release.

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: David Cornelius

Signature:

Date Issued: 2/15/2008

Owner/Legal Agent: Kim Widenhouse
Print Name

Signature: Kim Widenhouse

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NC DENR
Division of Environmental Health
On Site Wastewater Section

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

Permit #: 30001938 GWS File #: 6965B Tax Parcel #: 139-033-62

- 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):** 2/15/2013

Type of Installation: **Residential - New System** Lot Number: 80

Structure Type: HOUSE Size (ft^2): 3500 # Bedrooms: 5 # Occupants: 6

Building Foundation: Basement With Plumbing Water Supply: Municipal

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

Initial System Specifications:

Design Flow (gpd): 600 LTAR (gpd/ft^2): 0.3 Septic Tank Size (gal): 1500 Pump Tank Size (gal): 1000

Trench Width (ft): 3 Trench Spacing (ft): 9 Absorption Area (ft^2): 999 Total Trench Length (ft): 333

Maximum Trench Depth (in): 28 Depth of Media (in): N/A Distribution Device: Pressure Manifold

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

Repair System Specifications:

Design Flow (gpd): 600 LTAR (gpd/ft^2): 0.3 Septic Tank Size (gal): 1500 Pump Tank Size (gal): 1000

Trench Width (ft): 3 Trench Spacing (ft): 9 Absorption Area (ft^2): 1000 Total Trench Length (ft): 333

Maximum Trench Depth (in): 28 Depth of Media (in): N/A Distribution Device: Pressure Manifold

IV. Permit Conditions/Comments:

(Please See the Following Page for Permit Conditions.)

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DENR Authorized Agent: David Cornelius Owner/Legal Agent: Kim Widenhouse
Print Name

Signature: Signature: Kim Widenhouse

Date Issued: 2/15/2008

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NC DENR
Division of Environmental Health
On-Site Wastewater Section

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

Permit #: **30001938** GWS File #: **6965B** Tax Parcel #: **139-033-62**

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- 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):** 2/15/2013

Type of Installation: Residential - New System Lot Number: 60

Structure Type: HOUSE Size (ft^2): 3500 # Bedrooms: 5 # Occupants: 5

Building Foundation: Basement With Plumbing Water Supply: Municipal

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

Initial System Specifications:

Design Flow (gpd):	600	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	999	Total Trench Length (ft):	333
Maximum Trench Depth (in):	28	Depth of Media (in):	N/A	Distribution Device:	Pressure Manifold		

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

Repair System Specifications:

Design Flow (gpd):	600	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	1000	Total Trench Length (ft):	333
Maximum Trench Depth (in):	28	Depth of Media (in):	N/A	Distribution Device:	Pressure Manifold		

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DENR Authorized Agent: David Cornelius Owner/Legal Agent: _____
Print Name

Signature: _____ Signature: _____

Date Issued: 2/15/2008

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On-Site Wastewater Section

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- An effluent filter is required on the pump discharge pipe exiting the pump tank.
- Install according to plans on file submitted by Larry Thompson, 2/12/08. Maintenance contract required before CO release.

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- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: David Cornelius

Signature: _____

Date Issued: 2/15/2008

Owner/Legal Agent: _____
Print Name

Signature: _____

Residential Subsurface Wastewater Treatment and Disposal System Design

for

Lot 60 – Stonebridge at Mint Hill
9709 Stonebridge Way
Mint Hill, North Carolina

Tax Parcel # 139-033-62
Mecklenburg County File # 6965B
February 12, 2008

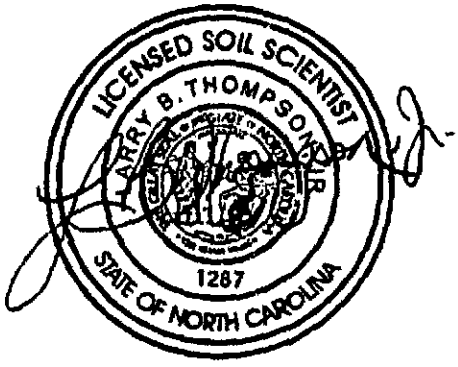
GWS Septic System Design Review

GWS File #: 6965B **Approved** ☒ **Disapproved** ☐

Design Review: TCT 2-13-08

Field Review: JC 2/14/08

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



Prepared for:

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

Prepared by:

Larry Thompson, RS, PWS, LSS
Thompson Environmental Consulting, Inc.
114 Orchard Ridge Road
Locust, NC 27278
Phone: 704-301-4881
Fax: 704-888-1496
larry@thompsonenv.com



cc: Mr. David Cornelius, RS
Mecklenburg County Environmental Health

Details

The following proposal is submitted to the Mecklenburg County Health Department (MCHD), Ground Water Section, to help assist the county in the issuance of an Improvement Permit and Construction Authorization for a 5-bedroom residence served by a municipal water supply on Lot 60 of the Stonebridge at Mint Hill Subdivision.

Based upon an investigation by Thompson Environmental Consulting, Inc. (TEC), it was determined that Lot 60 would be considered "Unsuitable" under 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). There is, however, a sufficient amount of "Suitable" Group IV soils located on the property which would allow for the installation of a shallow placed Type IV pressure dosed prefabricated porous block panel system (PPBPS) for a 5-bedroom residence (low-pressure pipe repair). It is the desire of the owner that the MCHD consider issuing an Improvement Permit, based upon the following proposal.

Location

The subject property is located in Stonebridge Subdivision (Lot 60 – 9709 Stonebridge Way) in the town of Mint Hill, North Carolina. From NC 51, travel south on NC 218 approximately 0.9 mile, turn left onto SR 3109 (Bartlett Road). Stonebridge is the first subdivision on the right after crossing the I-485 overpass. Turn right onto Stonebridge Way – Lot 60 is located on the left after passing the intersection of Castlestone Drive.

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, June 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 1500 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 and pressure rated.
- 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 196 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.

Valve Box

- 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 MCHD 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 (8) eight lateral trenches 3 feet wide by 45 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 28 inches. Each trench shall be placed on a minimum of 9 foot on centers.* Additional soil cover may be required.
- 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, or approved foam, should be placed in the "U" outs of each end of the panel to form seals. Once the tar rope is in place, the 1¼ 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 valve 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. If there are any questions regarding preferred routes, contact the MCHD as soon as possible. Irrigation systems should not be placed in the drain field area.

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.
- 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.

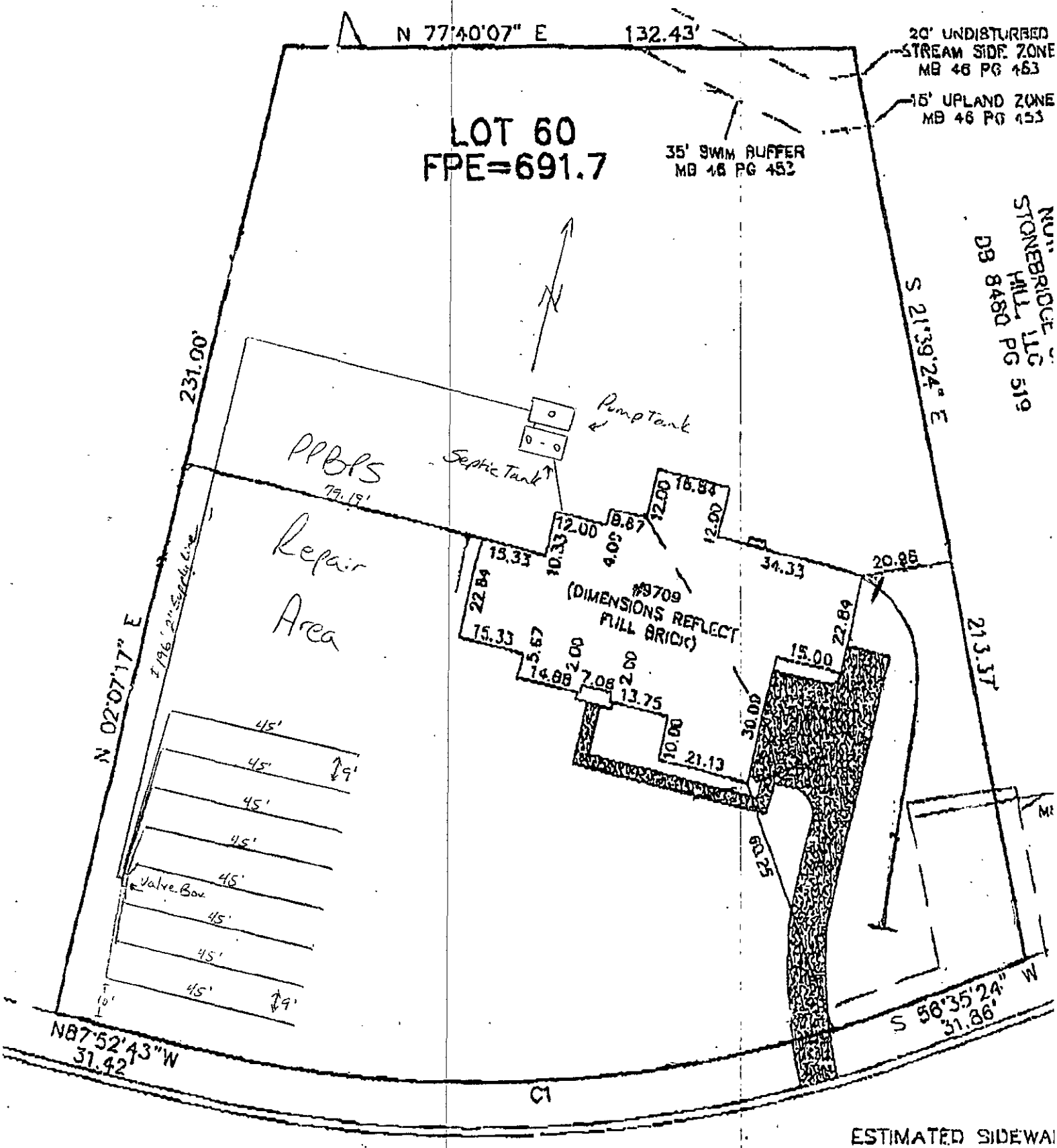
Design Specifics

Daily Design Flow:	600 GPD – 5 bedroom house
Septic Tank Size:	1500 gallons (2 compartments)
Pump Tank Size:	1500 gallons
Effluent Loading Rate:	Design = 0.3 GPD per sq. ft. (50 % reduction for the PPBPS)
Supply Length and Diameter:	Approx. 196 ft. of 2 in. SCH 40
Number and Size of Laterals:	(8) 1 ¼ inch x 45 feet long
Hole Size:	5/32 inch
Hole Spacing:	1 per panel = 80 total
Number of Panels:	80
Dosing Volume:	288 gallons per dose
Flow Rate Through System:	32.8 gallons per minute
Elevation Head:	12 feet (may vary, please see note at the bottom of this page)
Pressure Head:	2 feet
Pump Requirements:	34.8 GPM at 14 Feet TDH (2 GPM added for vapor lock)
Depth of Water Pumped:	12.52" 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

* 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 #:	6965B		
								Tax #:	139-033-62		
System Requirements								Address:	9709 Stonebridge Way		
Design Flow	600	gpd							Charlotte, NC 28227		
LTAR	0.300	gpd/ft.^2						Consultant:	Larry Thompson		
Linear footage	667	ft. (conventional)						Phone:	704-301-4881		
Linear footage	333	ft. (50% Reduction)									
								Reviewed By:	TCT ✓		
Design Layout								Date:	2-13-08		
Laterals	Length (ft)	# Panels									
Line # 1	45	10									
Line # 2	45	10									
Line # 3	45	10									
Line # 4	45	10									
Line # 5	45	10									
Line # 6	45	10									
Line # 7	45	10									
Line # 8	45	10									
Totals	**360**	**80**									
Absorption Area											
Length (ft)	Width (ft)	Area (ft^2)									
360	3	1,080									
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	32.8	gpm	Total number of panels required multiplied by the orifice flow rate								
System Dose Volume	288.00	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	12.52	in.	1,500 gal. Pump tank, volume is approximately 23 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.											

T & J Panels	
Linear Feet	# Panels
50	11
60	14
70	16
80	18
90	21
100	23



STONEBRIDGE WAY

60' PUBLIC R/W

Scale: 1" = 30'

ESTIMATED SIDEWAL
AREA = 188 SQ.FT

ESTIMATED DRIVEWA

AREA = 1308 SQ.F

NOTE:
TIGHT FIT, FO
MUST BE PI

CURVE TABLE

4-BEDROOM DESIGN PROPOSAL

Residential Subsurface Wastewater Treatment and Disposal System Design

for

Lot 60 – Stonebridge at Mint Hill
9709 Stonebridge Way
Mint Hill, North Carolina

Tax Parcel # 139-033-62
Mecklenburg County File # 6965B
January 18, 2008

GWS Septic System Design Review

GWS File #: 69658 Approved ☐ Disapproved ☐

Design Review: TG 1-28-08 ☒ ☐

Field Review: _____

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

*NEW 5-BEDROOM PLAN
RECEIVED ON 2-13-08

Prepared for:

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

LICENSED SOIL SCIENTIST
LARRY B. THOMPSON JR.
1287
STATE OF NORTH CAROLINA

Prepared by:

Larry Thompson, RS, PWS, LSS
Thompson Environmental Consulting, Inc.
114 Orchard Ridge Road
Locust, NC 27278
Phone: 704-301-4881
Fax: 704-888-1496
larry@thompsonenv.com

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

cc: Mr. David Cornelius, RS
Mecklenburg County Environmental Health

Details

The following proposal is submitted to the Mecklenburg County Health Department (MCHD), Ground Water Section, to help assist the county in the issuance of an Improvement Permit and Construction Authorization for a 4-bedroom residence served by a municipal water supply on Lot 60 of the Stonebridge at Mint Hill Subdivision.

Based upon an investigation by Thompson Environmental Consulting, Inc. (TEC), it was determined that Lot 60 would be considered "Unsuitable" under 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). There is, however, a sufficient amount of "Suitable" Group IV soils located on the property which would allow for the installation of a shallow placed Type IV pressure dosed prefabricated porous block panel system (PPBPS) for a 4-bedroom residence (low-pressure pipe repair). It is the desire of the owner that the MCHD consider issuing an Improvement Permit, based upon the following proposal.

Location

The subject property is located in Stonebridge Subdivision (Lot 60 – 9709 Stonebridge Way) in the town of Mint Hill, North Carolina. From NC 51, travel south on NC 218 approximately 0.9 mile, turn left onto SR 3109 (Bartlett Road). Stonebridge is the first subdivision on the right after crossing the I-485 overpass. Turn right onto Stonebridge Way – Lot 60 is located on the left after passing the intersection of Castlestone Drive.

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, June 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 and pressure rated.
- 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 160 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.

Valve Box

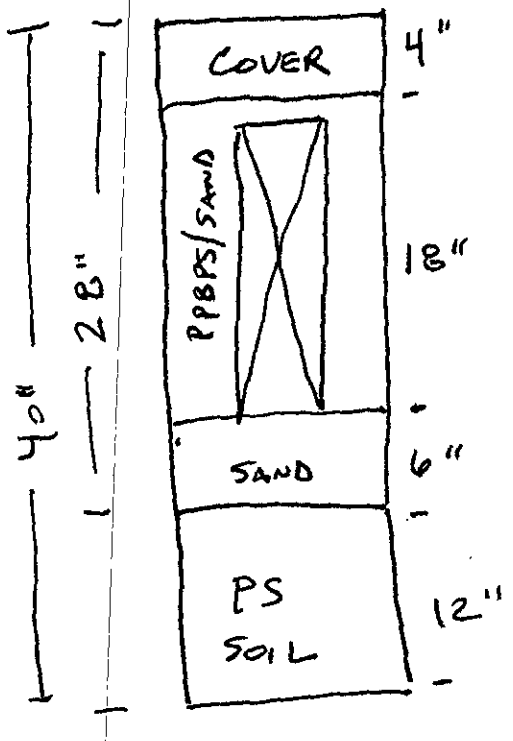
- The control valves (gate valves) for each lateral distribution line shall be contained within one manifold box/vault of adequate size. The box should be placed upon a gravel base.
- The supply manifold conveys effluent from the pump to the lateral distribution lines.
- The supply manifold should be 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).

TRENCH DETAIL

28" MAX DEPTH



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 MCHD 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) six lateral trenches 3 feet wide by 45 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 28 inches. Each trench shall be placed on a minimum of 9 foot on centers. Additional soil cover may be required.
- 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, or approved foam, should be placed in the "U" outs of each end of the panel to form seals. Once the tar rope is in place, the 1¼ 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 valve 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. If there are any questions regarding preferred routes, contact the MCHD as soon as possible. Irrigation systems should not be placed in the drain field area.

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.

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- 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.
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- 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.
- 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
Effluent Loading Rate:	Design = 0.3 GPD per sq. ft. (50 % reduction for the PPBPS)
Supply Length and Diameter:	Approx. 58 ft. of 2 in. SCH 40
Number and Size of Laterals:	(6) 1 ¼ inch x 45 feet long
Hole Size:	5/32 inch
Hole Spacing:	1 per panel = 60 total
Number of Panels:	60
Dosing Volume:	216 gallons per dose
Flow Rate Through System:	24.6 gallons per minute
Elevation Head:	12 feet (may vary, please see note at the bottom of this page)
Pressure Head:	2 feet
Pump Requirements:	26.6 GPM at 14 Feet TDH (2 GPM added for vapor lock)
Depth of Water Pumped:	10.28" 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

* 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.

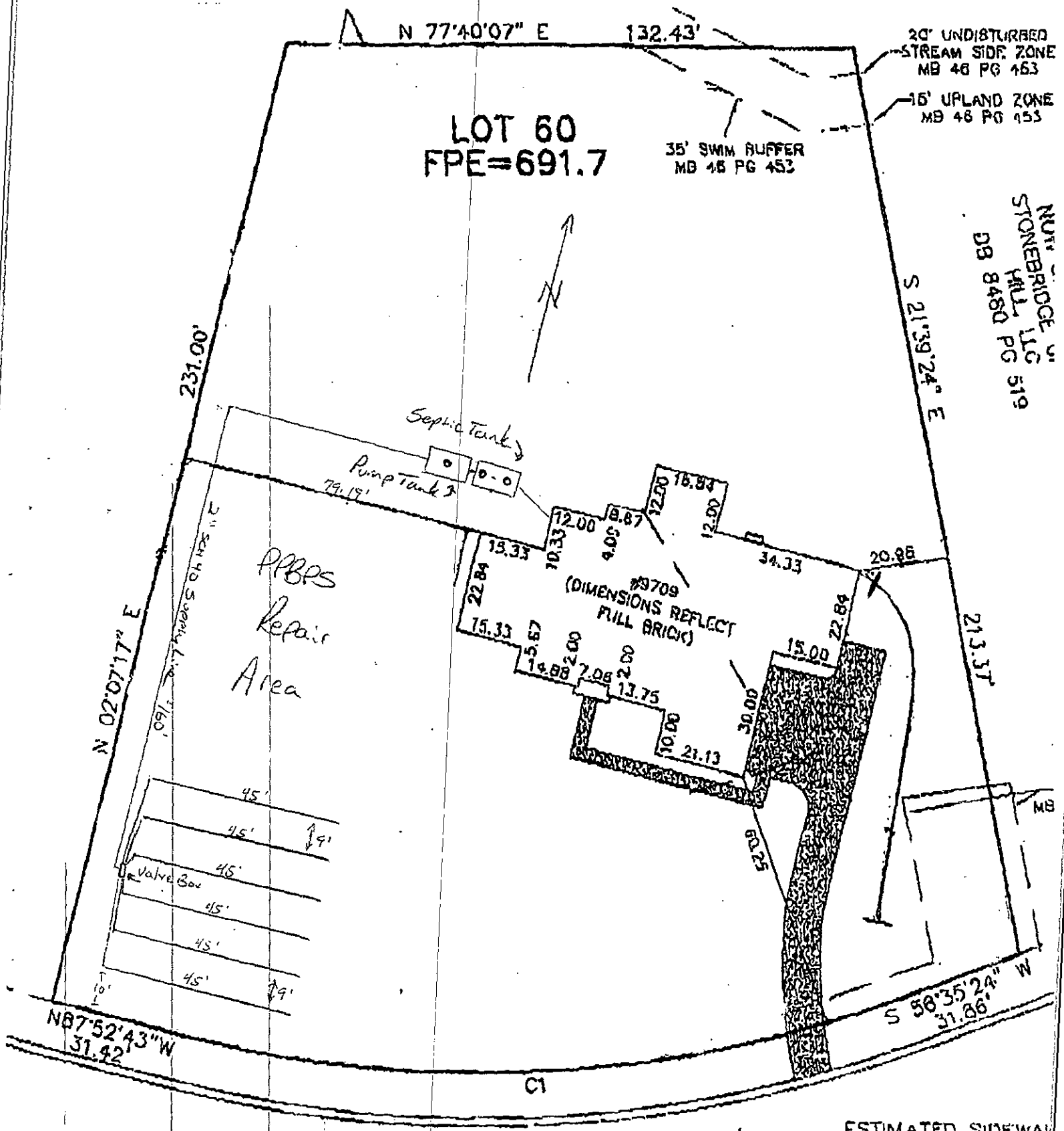
PPBPS Design Worksheet			File #:	6965B	
			Tax #:	139-033-62	
System Requirements			Address:	9709 Stonebridge Way	
Design Flow	480	gpd		Charlotte, NC 28227	
LTAR	0.300	gpd/ft.^2	Consultant:	Larry Thompson	
Linear footage	533	ft. (conventional)	Phone:	704-301-4881	
Linear footage	267	ft. (50% Reduction)			
			Reviewed By:	TeT	
Design Layout			Date:	1-28-08 ✓	
Laterals	Length (ft)	# Panels			
Line # 1	45	10			
Line # 2	45	10			
Line # 3	45	10			
Line # 4	45	10			
Line # 5	45	10			
Line # 6	45	10			
Line # 7					
Line # 8					
Totals	**270**	**60**			
Absorption Area					
Length (ft)	Width (ft)	Area (ft^2)			
270	3	810			

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	24.6	gpm	*Total number of panels required multiplied by the orifice flow rate*
System Dose Volume	216.00	gal.	*Total number of panels required multiplied by 3.6 gal./panel*
Pump Run Time	8.78	min.	System dose volume divided by the total system flow rate
Pump Tank Drawdown	10.28	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.

T & J Panels	
Linear Feet	# Panels
50	11
60	14
70	16
80	18
90	21
100	23


N 77°40'07" E 132.43'
20' UNDISTURBED STREAM SIDE ZONE MB 46 PG 453
15' UPLAND ZONE MB 46 PG 453
LOT 60
FPE=691.7
35' SWIM BUFFER MB 46 PG 453
231.00'
S 21°39'24" E
213.37'
N 02°07'17" E
Septic Tank
Pump Tank
79.19'
PPBRS Repair Area
#9709
(DIMENSIONS REFLECT FULL BRICK)
15.33
10.33
4.00
12.00
8.87
12.00
16.84
12.00
34.33
20.86
22.84
15.33
5.67
14.88
2.00
7.08
2.00
13.75
10.00
21.13
30.00
15.00
22.84
50.25
45'
45'
45'
45'
45'
9'
9'
10'
Valve Box
MB
N87°52'43"W 31.42'
S 56°35'24" W 31.86'
C1
STONEBRIDGE WAY
60' PUBLIC R/W
Scale: 1" = 30'
ESTIMATED SIDEWAL
AREA = 188 SQ.FT
ESTIMATED DRIVEWA
AREA = 1308 SQ.F
NOTE:
TIGHT FIT, FO
MUST BE PIN
CURVE TABLE

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

Sheet: 1 of 2
Property ID: 139-033-62
Lot #: 60
File #: 6965B
AppID: 1938

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: 2/27/2007
Proposed Facility: Residence
Design Flow (.1949): 600 gpd
Property Size:
Location of Site: 9709 Stonebridge Way
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,8	0-15	GR/SCL	FR/SS/SP/SEXP	>40" TO SOIL WETNESS	40	NA	NONE	PS,IV
		15-40	SBK/C	FI/S/P/SEXP					.3 GPD/FT^2
2	"	0-11	GR/SCL	FR/SS/SP/SEXP	44"	47	"	"	PS,IV
		11-47	SBK/C	FI/S/P/SEXP	5YR 6/2				.3 GPD/FT^2
3	"	0-8	GR/SCL	FR/SS/SP/SEXP	>22" TO SOIL WETNESS	22	"	"	US
		8-22	SBK/C	FI/S/P/SEXP					
		22+	M/SAP						
4	"	0-12	GR/SCL	FR/SS/SP/SEXP	>27" TO SOIL WETNESS	27	"	"	US,IV
		12-27	SBK/C	FI/S/P/SEXP					.15 GPD/FT^2/LPP
		27+	M/SAP						
5	"	0-12	GR/SCL	FR/SS/SP/SEXP	>48" TO SOIL WETNESS	48	"	"	PS,IV
		12-48	SBK/C	FI/S/P/SEXP					.3 GPD/FT^2
					SITE LTAR				.3 GPD/FT^2

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

Other Factors (.1946): None
Soil Evaluation By: Chris Sherrill, RS, LSS
Others Present: No
Site Classification (.1948): Provisionally Suitable
Site Evaluation By: David Cornelius, RS
Others Present:

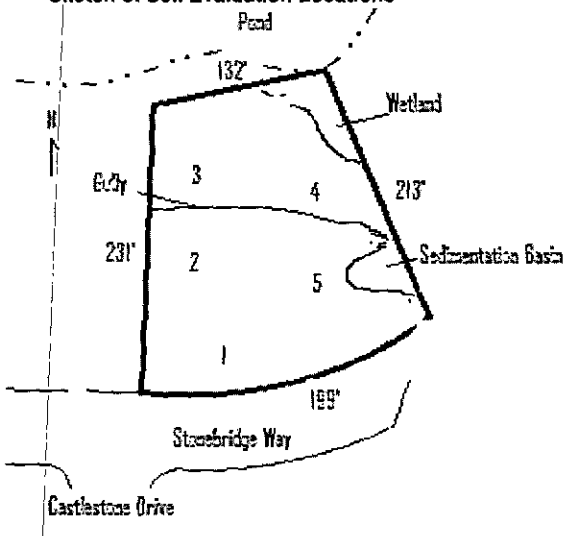
COMMENTS: 100% Repair Area Required

FILE #: 6965B

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



BR 1060

FILE NUMBER: 69652

SEPTIC FEE: 200.00
DATE: 2/19/07
#33575 JKH

Revised On: January 3, 2007

APPLICATION NUMBER: 1938

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

WELL FEE _____
DATE: _____

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

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

3. JOB LOCATION INFORMATION:
TAX PARCEL NUMBER: 139 03 225 3-62
STREET ADDRESS: 9709 Stonebridge Way
CITY: Mint Hill
STATE: NC ZIP: 28227
SUBDIVISION NAME: Stonebridge off Mint Hill
LOT #: 60 LOT SIZE (acres): 1/3 acres
TOWNSHIP:
☐ 0-MECKLENBURG ☐ 3-CORNELIUS ☐ 6-HUNTERSVILLE
☐ 1-CHARLOTTE ☐ 4-PINEVILLE ☒ 7-MINT HILL
☐ 2-DAVIDSON ☐ 5-MATTHEWS

4. BUILDING INFORMATION:
BUILDING TYPE:
☐ SINGLE MOBILE HOME ☐ MODULAR HOME
☐ DOUBLE WIDE ☐ MULTIPLE FAMILY
☒ HOUSE ☐ OTHER _____
HEATED SQUARE FOOTAGE: 3,500
NUMBER OF BEDROOMS: 5
NUMBER OF OCCUPANTS: 5
FOUNDATION TYPE:
☐ CONCRETE SLAB ☒ BASEMENT WITH PLUMBING
☐ CRAWL SPACE ☐ BASMENT WITH NO PLUMBING

5. IF PLANNING TO EXPAND OR ALTER THE EXISTING SYSTEM PLEASE COMPLETE THE FOLLOWING SECTION: ☒ N/A
NUMBER OF BEDROOMS TO BE ADDED: _____ NUMBER OF ADDITIONAL OCCUPANTS IN THE RESIDENCE: _____

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

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

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

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

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

BURIED CABLES, LANDFILLS, STUMPHOLES	☐ YES ☒ NO	GRADING/SOIL REMOVAL PERFORMED	☐ YES ☒ NO
EXISTING WASTEWATER SYSTEMS	☐ YES ☒ NO	JURISDICTIONAL WETLANDS	☐ YES ☒ NO
WELLS, SPRINGS, OR WATER LINES	☐ YES ☒ NO	APPROVAL REQUIRED BY ANY OTHER PUBLIC AGENCY	☐ YES ☒ NO
EASEMENTS OR RIGHT-OF-WAYS	☒ YES ☐ NO	WASTEWATER OTHER THAN DOMESTIC SEWAGE	☐ YES ☒ NO

10. PROPERTY OWNER:
NAME: NVR, INC.
ADDRESS: 10815 David Taylor Dr., Ste 100
CITY: Charlotte
STATE: NC ZIP: 28262
HOME PHONE: WORK PHONE: 704-548-3534
MOBILE PHONE: FAX:

11. OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:
NAME: Kim Widenhouse
ADDRESS:
CITY:
STATE: ZIP:
HOME PHONE: WORK PHONE:
MOBILE PHONE: 704-791-6852 FAX:

12. WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 5-18-06
13 WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? JUNE 2007

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

Kim Widenhouse 2/19/07
Property Owner's or Owner's Legal Representative Signature Date

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

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

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

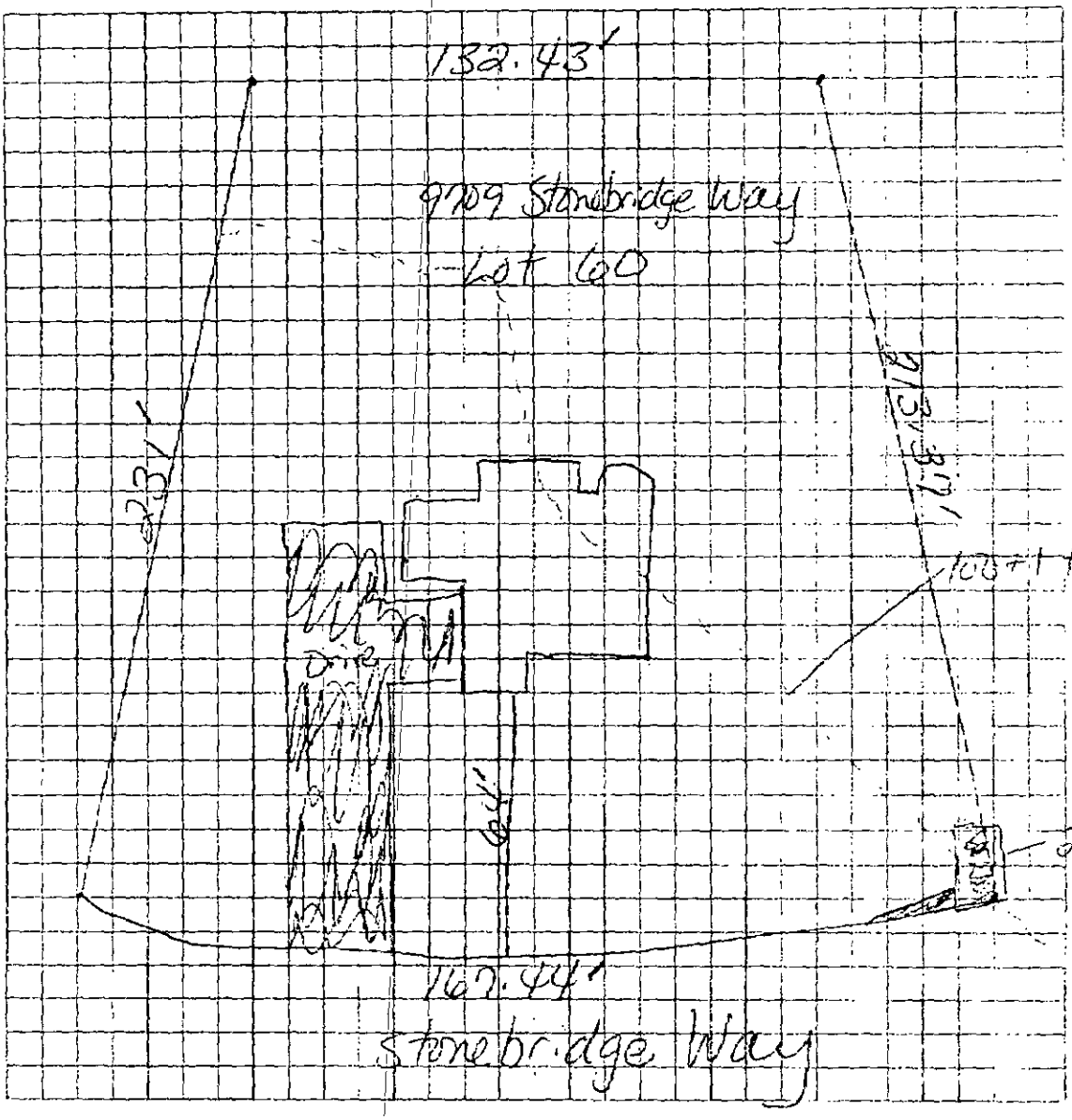
BR1060

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

File #_____
Date_____

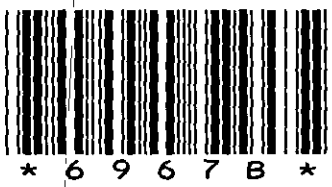
PROPOSED PLOT PLAN

A map showing existing and proposed property lines and easements with dimensions, the location of the single family residence, non-single family residence, or other facility, and appurtenances, the site for the proposed well, and the location of existing or proposed sewer lines and/or sewage disposal systems, surface water bodies, aboveground or underground storage tanks. Name all roads adjoining the property. If this a repair indicate the type of repair.



Owner/Agent Signature
Date

LBC 12/15/04



9335 MISENHEIMER RD

11114311

1/11/2008

duponbj

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

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

Sheet: 1 of 2
Property ID: 111-143-11
Lot #: 164-166
File #: 6967B
AppID: 1943

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: Azizy Haim
Address: PO Box 221932, Charlotte, N. C. 28222
Proposed Facility: Residence Design Flow (.1949): 360gpd
Location of Site: 9335 Misenheimer Road
Water Supply: [x] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

Applicant: Olutoyin Ogundipe
Date Evaluated: 10/17/07
Property Size: .3a
Property Recorded:

PROFILE #	1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY 1941		PROFILE FACTORS b				
			1941 Structure/ Texture	1941 Consistence Mineralogy	1942 Soil Wetness/ Color	1943 Soil Depth (IN.)	1956 Sapro Class	1944 Restr Horiz	Profile Class & LTAR
1	LS, 8	0-8	GR/CL	FR/SEXP/SS/SP	>30" TO SOIL WETNESS	30	N/A	NONE	US, IV
		8-30	SBK/ABK/C	FI/SEXP/S/P					.2GPD/FT^2
2	LS, 6	0-5	GR/CL	FR/SEXP/SS/SP	>48" TO SOIL WETNESS	48+	"	"	PS, IV
		5-48	SBK/ABK/C	FI/SEXP/S/P					.25GPD/FT^2
3	FS, 5	0-6	GR/CL	FR/SEXP/SS/SP	"	"	"	"	"
		6-48	SBK/ABK/C	FI/SEXP/S/P					
					SITE LTAR .25GPD/FT^2				

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

Other Factors (.1946):
Soil Evaluation By: W. R. Marlin, LSS, 10/17/2007 W. R. Marlin
Others Present:
Site Classification (.1948):
Site Evaluation By:
Others Present:

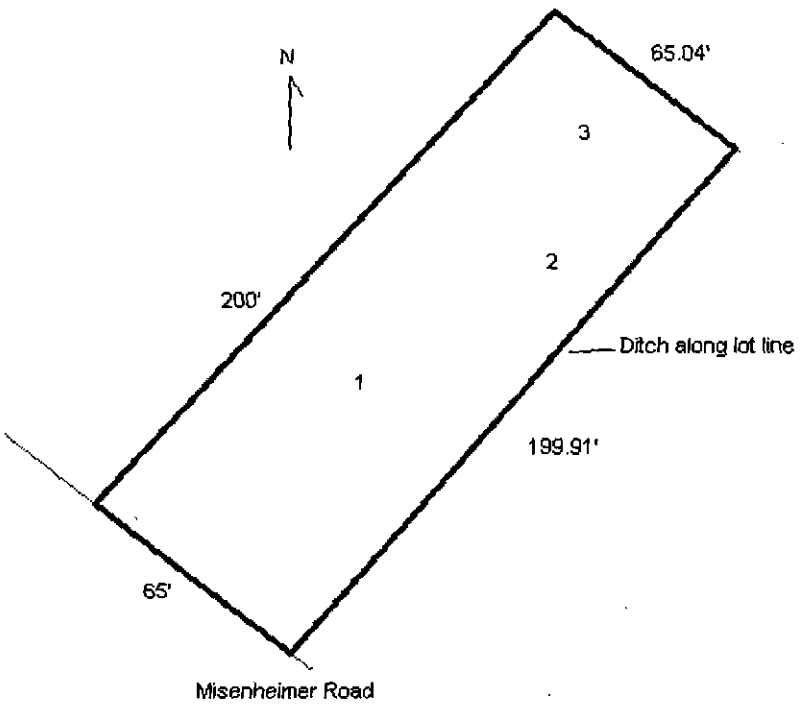
COMMENTS:

Does not appear to be 100% repair, lot must be mowed before attempting to make system layout

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



FILE NUMBER: 69678

Revised On: January 3, 2007

APPLICATION NUMBER: 1943

SEPTIC FEE: 200.00
DATE: 2-20-07
CK# 1135 JAA

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

WELL FEE: _____
DATE: _____

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

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

3. JOB LOCATION INFORMATION:

TAX PARCEL NUMBER: 111-143-11
STREET ADDRESS: 9335 Miserheimer rd
CITY: Charlotte
STATE: NC ZIP: 28215
SUBDIVISION NAME:
LOT #: 164 LOT SIZE (acres): 67ft/200ft
TOWNSHIP:
☒ 0-MECKLENBURG ☐ 3-CORNELIUS ☐ 6-HUNTERSVILLE
☐ 1-CHARLOTTE ☐ 4-PINEVILLE ☐ 7-MINT HILL
☐ 2-DAVIDSON ☐ 5-MATTHEWS

4. BUILDING INFORMATION:

BUILDING TYPE:
☐ SINGLE MOBILE HOME ☐ MODULAR HOME
☐ DOUBLE WIDE ☐ MULTIPLE FAMILY
☑ HOUSE ☐ OTHER _____
X HEATED SQUARE FOOTAGE: ~~1200 sq ft~~ 1400 sq ft.
X NUMBER OF BEDROOMS: 3 bed / 2 bath.
X NUMBER OF OCCUPANTS: One family 4
FOUNDATION TYPE:
☒ CONCRETE SLAB ☐ BASEMENT WITH PLUMBING
☐ CRAWL SPACE ☐ BASMENT WITH NO PLUMBING

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

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

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

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

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

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

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

BURIED CABLES, LANDFILLS, STUMPHOLES	☐ YES	☒ NO	GRADING/SOIL REMOVAL PERFORMED	☐ YES	☒ NO
EXISTING WASTEWATER SYSTEMS	☐ YES	☒ NO	JURISDICTIONAL WETLANDS	☐ YES	☒ NO
WELLS, SPRINGS, OR WATER LINES	☐ YES	☒ NO	APPROVAL REQUIRED BY ANY OTHER PUBLIC AGENCY	☐ YES	☒ NO
EASEMENTS OR RIGHT-OF-WAYS	☐ YES	☒ NO	WASTEWATER OTHER THAN DOMESTIC SEWAGE	☐ YES	☒ NO

10. PROPERTY OWNER:

NAME: ~~Dominick~~ ~~Mehrooian~~ Azizy Haim
ADDRESS: P.O Box 221932
CITY: Charlotte
STATE: NC ZIP: 28222
HOME PHONE: WORK PHONE:
MOBILE PHONE: FAX:

11. ~~OWNER'S~~ LEGAL REPRESENTATIVE, IF APPLICABLE: buyers Agent

NAME: Olutoyin Ogundipe
ADDRESS: 3111 Springbank Ln
CITY: Charlotte
STATE: NC ZIP: 28226
HOME PHONE: WORK PHONE: 7045417100
MOBILE PHONE: 7045199807 FAX: 7045416319

12. WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 06-03-2003
13 WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? March 15th 2007

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

Ogundipe 02-20-07
Property Owner's or Owner's Legal Representative Signature Date

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

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

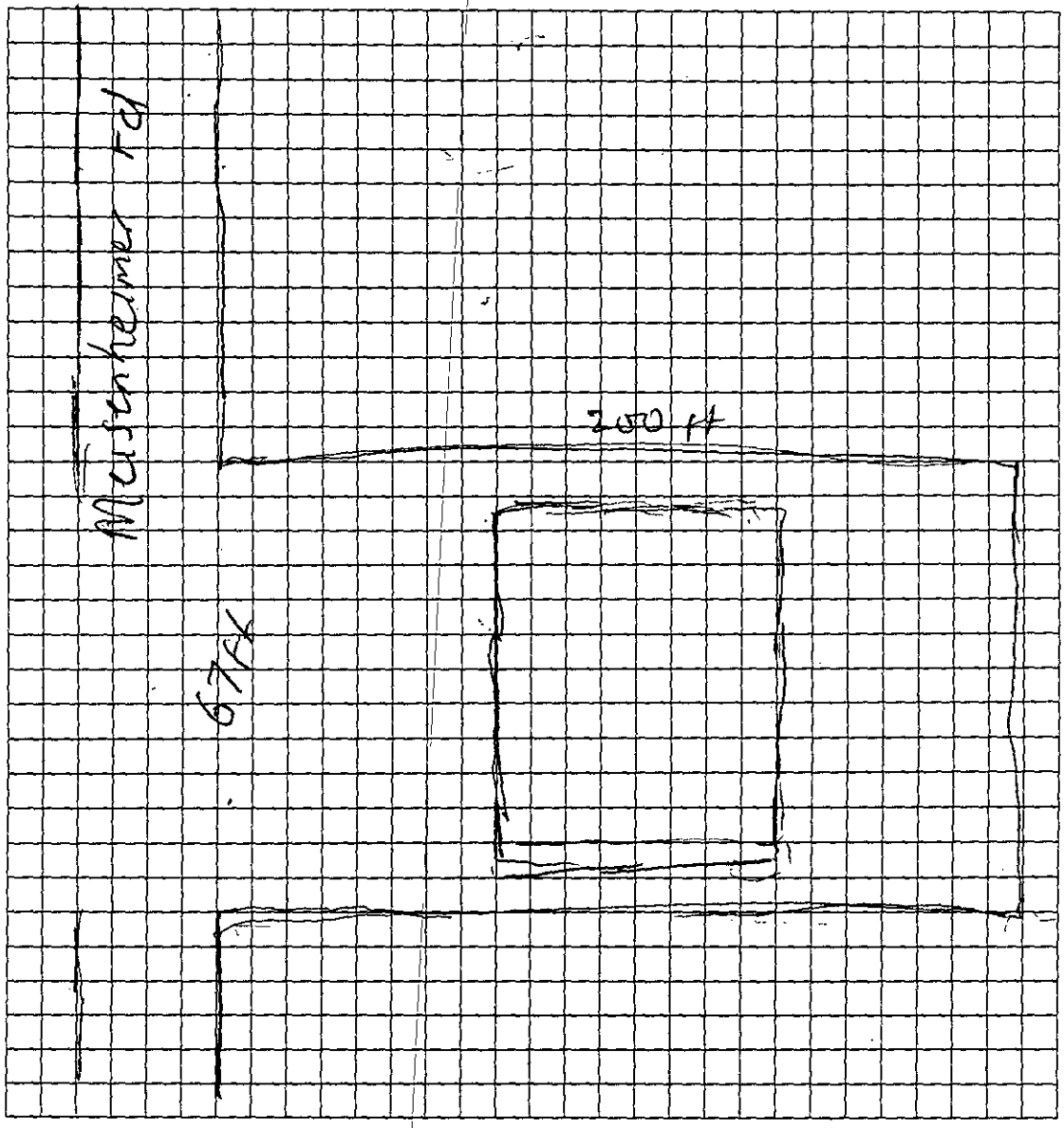
☐ SURVEY PLAT TO SCALE SUBMITTED ☐ SCALED SITE PLAN SUBMITTED ☐ UN-SCALED SITE PLAN SUBMITTED

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

File # 69670
Date 9-21-07

PROPOSED PLOT PLAN

A map showing existing and proposed property lines and easements with dimensions, the location of the single family residence, non-single family residence, or other facility, and appurtenances, the site for the proposed well, and the location of existing or proposed sewer lines and/or sewage disposal systems, surface water bodies, aboveground or underground storage tanks. Name all roads adjoining the property. If this a repair indicate the type of repair.



Owner/Agent Signature	
Date	02/20/07

LBC 12/15/04

OFFER TO PURCHASE AND CONTRACT - VACANT LOT/LAND

NOTE: This contract is intended for unimproved real property that Buyer will purchase only for personal use and will not subdivide. It should not be used to sell subdivided property that has not been platted, properly approved and recorded with the register of deeds as of the date of the contract. If Seller is Buyer's builder and the sale involves the construction of a new single family dwelling prior to closing, use the standard Offer to Purchase and Contract (Form 2-T) with the New Construction Addendum (Form 2A3-T).

Wilson Contreras, as Buyer,
hereby offers to purchase and 12124 Helm, as Seller,
upon acceptance of said offer, agrees to sell and convey, all of that plot, piece or parcel of land described below (hereafter referred to as the "Property"), upon the following terms and conditions:

1. **REAL PROPERTY:** Located in the City of Charlotte, County of Mecklenburg, State of North Carolina, being known as and more particularly described as: Street Address 9335 Musgrave Rd Zip 28215-4421
Subdivision Name None
Plat Reference: Lot 154, Block or Section M, as shown on Plat Book or Slide 5 at Page(s) 61 (Property acquired by Seller in Deed Book 15480 Page 806).
☒ All ☐ A portion of the property in Deed Reference: Book 15480 Page No. 806, Mecklenburg County
NOTE: Prior to signing this Offer to Purchase and Contract - Vacant Lot/Land, Buyer is advised to review any Restrictive Covenants, if any, which may limit the use of the Property, and to read the Declaration of Restrictive Covenants, By-Laws, Articles of Incorporation, Rules and Regulations, and other governing documents of the owners' association and/or the subdivision, if applicable.

2. **PURCHASE PRICE:** The purchase price is $ ~~100,000.00~~ 130000.00 and shall be paid as follows:
(a) $ 1000.00, EARNEST MONEY DEPOSIT with this offer by ☐ cash ☒ personal check ☐ bank check ☐ certified check ☐ other: ____ to be deposited and held in escrow by Ashley Helm ("Escrow Agent"); until the sale is closed, at which time it will be credited to Buyer, or until this contract is otherwise terminated. In the event: (1) this offer is not accepted; or (2) any of the conditions hereto are not satisfied, then all earnest monies shall be refunded to Buyer. In the event of breach of this contract by Seller, all earnest monies shall be refunded to Buyer upon Buyer's request, but such return shall not affect any other remedies available to Buyer for such breach. In the event of breach of this contract by Buyer, then earnest monies shall be forfeited to Seller upon Seller's request, but such forfeiture shall not affect any other remedies available to Seller for such breach.
NOTE: In the event of a dispute between Seller and Buyer over the return or forfeiture of earnest money held in escrow by a broker, the broker is required by state law to retain said earnest money in the broker's trust or escrow account until a written release from the parties consenting to its disposition has been obtained or until disbursement is ordered by a court of competent jurisdiction.
(b) $ 0, ADDITIONAL EARNEST MONEY DEPOSIT to be paid to Escrow Agent no later than ____, TIME BEING OF THE ESSENCE WITH REGARD TO SAID DATE.
(c) $ 0, OPTION FEE in accordance with paragraph 11, Alternative 2, to be paid to Seller on the Effective Date as set forth in paragraph 19. (NOTE: If Alternative 2 applies, then do not insert $0, N/A, or leave blank).
(d) $ 0, BY ASSUMPTION of the unpaid principal balance and all obligations of Seller on the existing loan(s) secured by a deed of trust on the Property in accordance with the attached Loan Assumption Addendum.
(e) $ 0, BY SELLER FINANCING in accordance with the attached Seller Financing Addendum.
(f) $ 129,000.00, BALANCE of the purchase price in cash at Closing.

3. **CONDITIONS:** (State N/A in each blank that is not a condition to this contract.)
(a) Buyer must be able to obtain a ☐ Conventional ☐ Other: CASH loan at a ☐ fixed Rate ☐ Adjustable Rate in the principal amount of $ 129,000.00 0 for a term of N/A year(s), at an initial interest rate not to exceed N/A % per annum, with mortgage loan discount points not to exceed ____ % of the loan amount. Buyer shall apply for said loan within N/A days of the Effective Date of this contract. Buyer shall use Buyer's best efforts to secure the lender's customary loan commitment letter on or before N/A and satisfy all terms and conditions of the loan commitment letter by Closing. After the above letter date, Seller may request in writing from Buyer a copy of the loan commitment letter. If Buyer fails to provide Seller a copy of the loan commitment letter or a written waiver of this loan condition within five days of receipt of Seller's request, Seller may terminate this contract by written notice to Buyer at any time thereafter, provided Seller has not then received a copy of the letter or the waiver.

This form jointly approved by:
North Carolina Bar Association
North Carolina Association of REALTORS®, Inc.
REALTOR®
STANDARD FORM 12 - T
© 7/2006

Buyer Initials WC ____ Seller Initials HA ____

(b) There must be no restriction, easement, zoning or other governmental regulation that would prevent the reasonable use of the Property for RESIDENTIAL (Intended Use").

(c) The Property must be in substantially the same or better condition at Closing as on the date of this offer, reasonable wear and tear excepted.

(d) All deeds of trust, liens and other charges against the Property, not assumed by Buyer, must be paid or satisfied by Seller prior to or at Closing such that cancellation may be promptly obtained following Closing. Seller shall not be obligated to obtain any such cancellations following Closing.

(e) Title must be delivered at Closing by GENERAL WARRANTY DEED unless otherwise stated here, and must be fee simple marketable and insurable title, free of all encumbrances except ad valorem taxes for the current year (prorated through the date of Closing); utility easements and unviolated restrictive covenants that do not materially affect the value of the Property; and such other encumbrances as may be assumed or specifically approved by Buyer. The Property must have legal access to a public right of way.

4. SPECIAL ASSESSMENTS: Seller warrants that there are no pending or confirmed governmental special assessments for sidewalk, paving, water, sewer, or other improvements on or adjoining the Property, and no pending or confirmed owners' association special assessments, except as follows: None

(Insert "None" or the identification of such assessments, if any.) Seller shall pay all owners' association assessments and all governmental assessments confirmed through the time of Closing, if any, and Buyer shall take title subject to all pending assessments, if any, unless otherwise agreed as follows: None

5. PRORATIONS AND ADJUSTMENTS: Unless otherwise provided, the following items shall be prorated and either adjusted between the parties or paid at Closing: (a) Ad valorem taxes on real property shall be prorated on a calendar year basis through the date of Closing; (b) All late listing penalties, if any, shall be paid by Seller; (c) Rents, if any, for the Property shall be prorated through the date of Closing; (d) Owners' association dues and other like charges shall be prorated through the date of Closing. Seller represents that the regular owners' association dues, if any, are $ 0 per

6. EXPENSES: Unless otherwise agreed, Buyer shall be responsible for all costs with respect to any loan obtained by Buyer, title search, title insurance, recording the deed and for preparation and recording of all instruments required to secure the balance of the purchase price unpaid at Closing. Seller shall pay for preparation of a deed and all other documents necessary to perform Seller's obligations under this agreement, and for excise tax (revenue stamps) required by law. Seller shall pay at Closing $ N/A toward any of Buyer's expenses associated with the purchase of the Property including any FHA/VA lender and inspection costs that Buyer is not permitted to pay, but excluding any portion disapproved by Buyer's lender.

7. EVIDENCE OF TITLE: Seller agrees to use his best efforts to deliver to Buyer as soon as reasonably possible after the Effective Date of this contract, copies of all title information in possession of or available to Seller, including but not limited to: title insurance policies, attorney's opinions on title, surveys, covenants, deeds, notes and deeds of trust and easements relating to the Property. Seller authorizes (1) any attorney presently or previously representing Seller to release and disclose any title insurance policy in such attorney's file to Buyer and both Buyer's and Seller's agents and attorneys; and (2) the Property's title insurer or its agent to release and disclose all materials in the Property's title insurer's (or title insurer's agent's) file to Buyer and both Buyer's and Seller's agents and attorneys.

8. LABOR AND MATERIALS: Seller shall furnish at Closing an affidavit and indemnification agreement in form satisfactory to Buyer showing that all labor and materials, if any, furnished to the Property within 120 days prior to the date of Closing have been paid for and agreeing to indemnify Buyer against all loss from any cause or claim arising therefrom.

9. CLOSING: Closing shall be defined as the date and time of recording of the deed. All parties agree to execute any and all documents and papers necessary in connection with Closing and transfer of title on or before 03-15-07 at a place designated by Buyer. The deed is to be made to Wilson Gutierrez.

CLOSING SHALL CONSTITUTE ACCEPTANCE OF THE PROPERTY IN ITS THEN EXISTING CONDITION UNLESS PROVISION IS OTHERWISE MADE IN WRITING.

10. POSSESSION: Unless otherwise provided herein, possession shall be delivered at Closing. No alterations, excavations, tree removal or other such activities may be done before possession is delivered.

Buyer Initials WG _____ Seller Initials _____ _____

11. PROPERTY INSPECTION, APPRAISAL, INVESTIGATION (Choose ONLY ONE of the fo wing Alternatives):

☐ ALTERNATIVE 1:

(a) Soil, Water, Utilities And Environmental Contingency: This contract is contingent upon Buyer soil is suitable for Buyer's Intended Use, (ii) utilities and water are available to the Property, (i contamination, law, rule or regulation that prohibits, restricts or limits Buyer's Intended Use, and (iv prohibits, restricts or limits Buyer's Intended Use (collectively the "Reports"). All costs and expenses he borne by Buyer. Buyer shall use Buyer's best efforts to obtain such Reports. If the Reports ca terminate this contract and the Earnest Money Deposit shall be refunded to Buyer. Buyer waives this co written notice to Seller by 10 days after contract that this condition cannot be essence.

aining report(s) that (i) the there is no environmental here is no flood hazard that Obtaining the Reports shall ot be obtained, Buyer may lition unless Buyer provides isfied, time being of the

(b) Sewer System (check only ONE):

☐ Buyer has investigated the costs and expenses to install the sewer system approved by the Improvem Exhibit A and hereby approves and accepts said Improvement Permit.

☐ Seller represents that the system has been installed, which representation survives Closing, but makes to the system. Buyer acknowledges receipt of the Improvement Permit attached hereto as Exhibit A. B inspecting or obtaining, at Buyer's expense, inspection(s) to determine the condition of the system. If the function for which intended and is in need of immediate repair, Buyer may terminate this Contract an shall be refunded to Buyer. Buyer waives this condition unless Buyer provides wri N/A that this condition cannot be satisfied, time being of the essence.

t Permit attached hereto as

o further representations as er shall have the option of ystem is not performing the he Earnest Money Deposit r notice to Seller by

☐ This Contract is contingent upon ☐ Buyer ☐ Seller ("Responsible Party") obtaining an Improvemen from the County Health Department ("County") for a (check only ONE) ☐ co N/A ground absorption sewage system (for a N/A expenses of obtaining such Permit or written evaluation shall be borne by Responsible Party unless oth Seller, by no later than N/A, shall be responsible for clearing that portion of County to perform its tests and/or inspections. Responsible Party shall use best efforts to obtain such Pe the Improvement Permit or written evaluation from the County cannot be obtained by N/A terminate this Contract and the Earnest Money Deposit shall be refunded to Buyer.

ermit or written evaluation ventional or ☐ other droom home. All costs and wise agreed. In any event Property required by the it or written evaluation. If (date), either party may

☒ Buyer has investigated and approved the availability, costs and expenses to connect to a ☐ public or ☒ mmunity sewer system.

(c) Appraisal Contingency: The Property must appraise at a value equal to or exceeding the purcha price or, at the option of Buyer, this contract may be terminated and all earnest monies shall be refunded to Buyer. If this contract not subject to a financing contingency requiring an appraisal, Buyer shall arrange to have the appraisal completed on or before 0 before Closing The cost of the appraisal shall be borne by Buyer.

HA

N/A

(d) CLOSING SHALL CONSTITUTE ACCEPTANCE OF THE PROPERTY IN ITS THEN EXI NG CONDITION UNLESS PROVISION IS OTHERWISE MADE IN WRITING.

☐ ALTERNATIVE 2: *(This Alternative applies ONLY if Alternative 2 is checked AND Buyer has paid th*

(a) Property Investigation with Option to Terminate: In consideration of the sum set forth in para Seller (not Escrow Agent) and other valuable consideration, the sufficiency of which is hereby ackno Buyer shall have the right to terminate this contract for any reason or no reason, whether related to t Property or otherwise, by delivering to Seller written notice of termination (the "Termination N , 20 , time being of the essence (the "Option Termination D Closing, Buyer shall have the right to inspect the Property at Buyer's expense (Buyer is advised to have a of the Property, including but not limited to those matters set forth in Alternative 1, performed prior to the

Option Fee.)

ph 2(a) paid by Buyer to dged (the "Option Fee"), physical condition of the tice") by 5:00 p.m. on te"). At any time prior to inspections and appraisals tion Termination Date).

(b) Exercise of Option: If Buyer delivers the Termination Notice prior to the Option Termination Date, th contract shall become null and void and all earnest monies received in connection herewith shall be refu Option Fee will not be refunded and shall be retained by Seller. If Buyer fails to deliver the Termination Option Termination Date, then Buyer will be deemed to have accepted the Property in its physical conditi Termination Date; provided such acceptance shall not constitute a waiver of any rights Buyer has under p is not refundable, is not a part of any earnest monies, and will be credited to the purchase price at Closing.

time being of the essence, this d to Buyer; however, the tice to Seller prior to the existing as of the Option graph 3. The Option Fee

(c) CLOSING SHALL CONSTITUTE ACCEPTANCE OF THE PROPERTY IN ITS THEN EXISTING CONDITION UNLESS PROVISION IS OTHERWISE MADE IN WRITING.

12. **RIGHT OF ENTRY, RESTORATION AND INDEMNITY:** Buyer and Buyer's agents and contrac[tors] shall have the right to enter upon the Property for the purpose of appraising the Property, and performing the tests and inspections per[mitted] in this contract. If Buyer terminates this contract as provided herein, Buyer shall, at Buyer's expense, restore the Property to substa[ntially] its pre-entry condition within thirty days of contract termination. Buyer will indemnify and hold Seller harmless from all loss, [damage], claims, suits or costs, which shall arise out of any contract, agreement, or injury to any person or property as a result of any activit[ies] of Buyer and Buyer's agents and contractors relating to the Property. This indemnity shall survive this contract and any termination [hereof]. Notwithstanding the foregoing, Seller shall be responsible for any loss, damage, claim, suit or cost arising out of pre-existing co[nditions] of the Property and/or out of Seller's negligence or willful acts or omissions.

13. **OTHER PROVISIONS AND CONDITIONS:** (ITEMIZE ALL ADDENDA TO THIS C[ONTRACT AND ATTACH HERETO.) currently lot is 75x200 ft. 10ft on Right side facing * for the depth of the lot will not be included in the contract. Seller to provide survey of land.

14. **RISK OF LOSS:** The risk of loss or damage by fire or other casualty prior to Closing shall be upon [Seller].

15. **ASSIGNMENT:** This contract may not be assigned without the written consent of all parties, but if assigned by agreement, then this contract shall be binding on the assignee and his heirs and successors.

16. **PARTIES:** This contract shall be binding upon and shall inure to the benefit of the parties, i.e., Buyer and Seller and their heirs, successors and assigns. As used herein, words in the singular include the plural and the masculine includ[e] the feminine and neuter genders, as appropriate.

17. **SURVIVAL:** If any provision herein contained which by its nature and effect is required to be obse[rved], kept or performed after the Closing, it shall survive the Closing and remain binding upon and for the benefit of the parties hereto [until] fully observed, kept or performed.

18. **ENTIRE AGREEMENT:** This contract contains the entire agreement of the parties and there are no [representations, inducements or other provisions other than those expressed herein. All changes, additions or deletions hereto must be in writing and signed by all parties. Nothing contained herein shall alter any agreement between a REALTOR® or broker and Seller [or Buyer] as contained in any listing agreement, buyer agency agreement, or any other agency agreement between them.

19. **NOTICE AND EXECUTION:** Any notice or communication to be given to a party herein may be [given] to the party or to such party's agent. This offer shall become a binding contract (the "Effective Date") when signed by both [Buyer] and Seller and such signing is communicated to the offering party. This contract is executed under seal in signed multiple ori[ginals], all of which together constitute one and the same instrument, with a signed original being retained by each party and each RE[ALTOR®] or broker hereto, and the parties adopt the word "SEAL" beside their signatures below.

Buyer acknowledges having made an on-site personal examination of the Property prior to the maki[ng] of this offer.

THE NORTH CAROLINA ASSOCIATION OF REALTORS®, INC. AND THE NORTH CAROLI[NA BAR ASSOCIATION] MAKE NO REPRESENTATION AS TO THE LEGAL VALIDITY OR ADEQUACY OF ANY PROVI[SION OF THIS FORM IN] ANY SPECIFIC TRANSACTION. IF YOU DO NOT UNDERSTAND THIS FORM OR FEEL THAT [IT] DOES NOT PROVIDE FOR YOUR LEGAL NEEDS, YOU SHOULD CONSULT A NORTH CAROLINA REAL ESTATE A[TTO]RNEY BEFORE YOU SIGN IT.

Date: 2/12/07 Date: 2-13-07

Buyer _____ (SEAL) Seller _____ (SEAL)

Date: _____ Date: _____

Buyer _____ (SEAL) Seller _____ (SEAL)

Escrow Agent acknowledges receipt of the earnest money and agrees to hold and disburse the same in accordance with the terms hereof.

Date _____ Firm: Azuby Homes

By: _____ (Signature)

Selling Agent/Firm/Phone Olutoyin Ogundipe / McGuire Associates / 704-519-9867

Acting as ☒ Buyer's Agent ☐ Seller's (sub)Agent ☐ Dual Agent

Individual license #: 220740

Listing Agent/Firm/Phone _____

Acting as ☐ Seller's (sub)Agent ☐ Dual Agent

Individual license #: _____

STANDARD FORM 12 - T
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