

11930 JUMPER DR

19724176

1/9/2008

duponbj

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

CERTIFICATE OF COMPLETION/OPERATION PERMIT

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 6118B DATE: 2/3/06

TC: 197-241-76 ☐ L ☐ CRT

SERIAL 19988

Name of Owner NUR, INC. Juris.: _____

Address of Property 11930 JUMPER DR., LOT #23

Inspection Data:

Tank Material PCC

Total Length of Drainfield 300

Number of Lines 6 @ 50'

Cover Depth 12"

Water Supply Source MUNICIPAL

Distance to Water Source 7100

Excavation Inspected 2/3/06

Tank(s) Inspected 2/3/06

Wash Line Inspected N/A

High Water Alarm Inspected N/A

INSTALL ACCORDING TO PLANS ON FILE SUBMITTED BY LARRY THOMPSON FOR THE CATENA GROUP, 12/2/05.

PLOT

Design 2006, IW, PPBS, 50%RED., 1200GF, 1500ST, T CTR# RLS

The undersigned has inspected the Septic Tank System described above, and certifies it has been

☑ installed or constructed ☐ altered or repaired

☑ in accordance with the permit issued ☐ as detailed in the plot above

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. This issuance of this

☐ Certificate of Completion ☑ 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. 1990 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/revocation of this permit.

COMMENTS: 50% REDUCTION SYSTEM, INSTALLED ACCORDING TO PLANS ON FILE SUBMITTED BY LARRY THOMPSON FOR CATENA GROUP, 12/2/05

TYPE IIIe

RS

Environmental Health Specialist

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

INSTALLATION, CONSTRUCTION, ALTERATION, AND/OR REPAIR APPROVAL

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5103

FILE: 6118B DATE: 2/3/06

TC: 197-241-76 ☐ L

SERIAL Nº 20655

Permission is hereby given to _____ Install or Construct, _____ Alter or Repair the individual septic tank wastewater treatment system with subsurface, soil absorption, effluent discharge as specified herein at the described location. This permit is granted based upon the information supplied in the application dated 8/29/05. All work shall be completed on or before _____, after which date this permit 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 the granting of this permit. A Certificate of Completion or 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 or hereafter owning, controlling or using such system from any liability resulting from the failure of the system to operate properly.

INSTALL ACCORDING TO PLANS ON FILE
SUBMITTED BY LARRY THOMPSON
FOR THE CATENA GROUP, 12/2/05

PLOT OF SYSTEM

Liquid Capacity of Septic Tank 1500 gallons

Liquid Capacity of Dosing Tank N/A gallons

Tank Construction PCC

Trench Depth 36"

Absorption and/or Nitrification Lines:

Trench Width 3 feet

Trench Walls Scored and Porous YES

Total Line Length 300 feet

Number of Lines 6@50'

Depth of Stone N/A inches

Distance from House 75 feet

Distance from Property Line 710 feet

Distance from Well 7100 feet

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

NAME OF OWNER NVR, INC.

LOCATION OF PROPERTY 11930 JUMPER DR., LOT #23

Comments: TYPE III, PPBPS 50% REDUCTION. 6 LINES @ 50'
INSTALL LINES LEVEL & ON CONTOUR, 75' FROM HOUSE FOUNDATION,
710' FROM PROPERTY LINES.

[signature] RS

Environmental Health Specialist

WHITE - HEALTH DEPARTMENT's COPY • CANARY - E.H.S. COPY • PINK - OWNER OR AGENT's COPY

FEE: 300.00

DATE: 3/9/2006

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

MECKLENBURG COUNTY

GROUNDWATER & WASTEWATER SERVICES

FILE NUMBER: 6118B

PERMIT NUMBER: 30000476

PARCEL NUMBER: 19724176

JOB LOCATION INFORMATION

ADDRESS: 11930 JUMPER DR

CITY: CHARLOTTE **STATE: NC** **ZIP:** 28227

ISSUED TO: NVR INC

CONSTRUCTION AUTHORIZATION ISSUANCE DATE: 11/22/2005

CONSTRUCTION AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 30000476, AND THE ATTACHED SITE PLAN WITH SYSTEM DETAILS. CONSTRUCTION AND INSTALLATION MUST ALSO MEET ALL REQUIREMENTS SET FORTH IN THE RULES GOVERNING SANITARY SEWAGE COLLECTION, TREATMENT, AND DISPOSAL AND ANY OTHER APPLICABLE RULES AND LAWS.

2. AN INSTALLATION APPROVAL MUST BE SECURED PRIOR TO INSTALLATION OF THE SEPTIC TANK SYSTEM. THE INSTALLER OF THE SYSTEM SHALL BE A REGISTERED SEPTIC TANK CONTRACTOR WITH THE MECKLENBURG COUNTY HEALTH DEPARTMENT.

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

4. THIS CONSTRUCTION AUTHORIZATION AS PROVIDED IN G.S. 130A-335(f) AND G.S. 130A-336(b) SHALL BE VALID FOR A PERIOD EQUAL TO THE VALIDITY OF THE IMPROVEMENT PERMIT, NOT TO EXCEED 60 MONTHS.
   *CONSTRUCTION AUTHORIZATION EXPIRATION DATE: 11/22/2010

X2325715

FEE: 306.00 — **AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION**
DATE: 12/5/05 JKA

Project 155374

PERMIT NUMBER: 6118B
PARCEL NUMBER: 197-241-~~16 PO~~ 11930

JOB LOCATION ADDRESS: JUMPER DRIVE, LOT23
PROPERTY OWNER: NVR, INC.
BUILDING CONTRACTOR: RYAN HOMES
SUBDIVISION NAME: MEADOWS OF MINT HILL
AUTHORIZATION ISSUED BY: PHILO WALKER DATE: 11/22/05

Philo S Walker ZS 11/22/05
DENR/DEH AUTHORIZED AGENT

AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 6118B, AND THE ATTACHED SITE PLAN WITH SYSTEM DETAILS. CONSTRUCTION AND INSTALLATION MUST ALSO MEET ALL REQUIREMENTS SET FORTH IN THE RULES GOVERNING SANITARY SEWAGE COLLECTION, TREATMENT, AND DISPOSAL AND ANY OTHER APPLICABLE RULES AND LAWS.

2. AN *INSTALLATION, CONSTRUCTION, ALTERATION AND/OR REPAIR APPROVAL* MUST BE SECURED PRIOR TO INSTALLATION OF THE SEPTIC TANK SYSTEM. THE INSTALLER OF THE SYSTEM SHALL BE A REGISTERED SEPTIC TANK CONTRACTOR WITH THE MECKLENBURG COUNTY HEALTH DEPARTMENT.

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

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

5. OTHER CONDITIONS:
   AGREEMENT FORMS REQUIRED

Project No. 155374

FILE COPY	
FILED FOR REGISTRATION	DOC. # 897722
DATE 11/15/05	TIME 1:54 pm
BOOK 19630	PAGE 179
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

Mnt 1023

FILE # 6118B
PARCEL # 19724176

The undersigned, NVR, INC. DBA Ryan Homes, owner of property located at 11930 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: 1015 David Taylor Dr
Charlotte NC 28262

CONDITIONS OF IMPROVEMENT PERMIT / CONSTRUCTION AUTHORIZATON

Permit Number: **56117B** Tax Number: **197-241-16 PO**

- The 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.

Basement: ☐ Yes ☒ No ☐ Partial Basement

Primary Wastewater System

Type: ☐ I ☐ II ☒ III ☐ IV ☐ V ☐ VI

☐ Conventional
☒ Prefabricated, permeable block panel system
☐ Shallow Placed Conventional
☐ Low Pressure Pipe
☐ Large Diameter Pipe
☐ Fill
☐ Other
☐ Innovative or Experimental:

.3 Long-term acceptance rate (GPD/ft^2)	480 Max gallons/day wastewater flow	533 Absorption Area (ft^2)	9 Trench spacing (min. on centers) (ft)
Serviced by private well: ☐ Yes ☒ No	1500 Gallon septic tank	300 Total trench length (ft)	36 Maximum trench depth (in) (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions.)
4 Bedrooms in residence	NA Gallon pump tank	NA Depth of stone (in)	

Any surface water present: **NO** Type: Minimum separation distance (ft):

Additional conditions: **PPBPS SYSTEM, AGREEMENT FORMS REQUIRED**

Repair Area System

Type: ☐ I ☐ II ☐ III ☒ IV ☐ V ☐ VI

☐ Conventional
☒ Prefabricated, permeable block panel system
☐ Shallow Placed Conventional
☐ Low Pressure Pipe
☐ Large Diameter Pipe
☐ Fill
☐ Other
☒ Innovative or Experimental:

533 Absorption Area (ft^2) 300 Total trench length (ft)	NA Depth of stone (in)	9 Trench spacing (min. on centers) (ft)	36 Maximum trench depth (in)

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

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

*** This Improvement permit is transferable.

Phillip S. Walker RS 11/22/05
DENR Authorized Agent Date

Patrice Garner 12/5/05
Owner/Agent Signature Date

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
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

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

Sheet: 1 of 2
Property ID # PO 197-241-16
Lot #: 23
File #: ~~01168~~ 6118B
Code: 2

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: NVR, Inc.
Applicant: Kim Stanley
Address: 10815 David Taylor Drive, Ste 100, Charlotte, N. C. 28262
Date Evaluated: 9/1/05
Proposed Facility: Residence
Design Flow (.1949): 600gpd
Property Size: .69a
Location of Site: 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	OTHER PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
1	LS, 8	0-3	GR/CL	FR/SEXP/SS/SP	>48" TO SOIL WETNESS	48+	N/A	NONE	PS, IV
		3-33	SBK/C	FI/SEXP/S/P					.3GPD/FT^2
		33-48	SBK/CL	FR/SEXP/SS/SP					
2	"	0-4	GR/CL	"	"	"	"	"	"
		4-34	SBK/C	FI/SEXP/S/P					
		34-48	SBK/CL	FR/SEXP/SS/SP					
3	"	0-12	GR/CL	"	"	"	"	"	"
		12-30	SBK/C	FI/SEXP/S/P					
		30-48	SBK/CL	FR/SEXP/SS/SP					
4	"	0-4	GR/CL	"	>47" TO SOIL WETNESS	47	"	"	"
		4-35	SBK/C	FI/SEXP/S/P					
		35-47	SBK/CL	FR/SEXP/SS/SP					

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

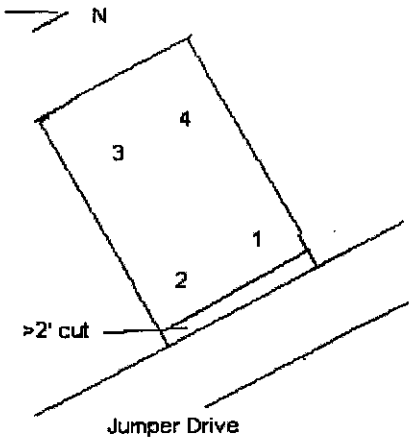
Other Factors (.1946):
Site Classification (.1948): UNSUITABLE
Evaluated By: W. R. Marlin, LSS, 9/6/2005, W. R. Marlin
Others Present: J. Stutts, L. Corbitt

COMMENTS:
100% repair

Landscape Position	Group	Texture	.1955 LTAR	Structure
R-Ridge	I	S-Sand	1.2 - 0.8	SG-Single Grain
SS-Shoulder Slope		LS-Loamy Sand		M-Massive
LS-Linear Slope				CR-Crumb
FS-Food Slope	II	SL-Sandy Loam	0.8 - 0.6	GR-Granular
NS-Nose Slope		L-Loam		SBK-Subangular Blocky
HS-Head Slope				ABK-Angular Blocky
CC-Concave Slope	III	SI-Silt	0.6 - 0.3	PL-Platy
CV-Convex Slope		SICL-Silty Clay Loam		PR-Prismatic
T-Terrace		CL-Clay Loam		
FP-Flood Plain		SCL-Sandy Clay Loam		
	IV	SC-Sandy Clay	0.4 - 0.1	
		SIC-Silty Clay		
		C-Clay		

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

Sketch of Soil Evaluation Locations



Residential Subsurface Wastewater Treatment and Disposal System Design

for

Lot 23 – The Meadows of Mint Hill
Jumper Drive
Mint Hill, North Carolina

Tax Parcel # 197-24-116 PO
Mecklenburg County File # 6118B
December 2, 2005

Prepared for:

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

Prepared by:

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



CC: Mr. Philo Walker, RS
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 4-bedroom residence served by a municipal water supply. Based upon this information, a soil and site evaluation was conducted by the MCHD where the subject lot was determined to be "Unsuitable" for the installation of a conventional 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).

After revising the original site plan and further investigation by The Catena Group, Inc. (TCG), it was determined that a sufficient amount of "Suitable" Group IV soils are located on the property which would allow for the installation of a Type III(e) pre-fabricated porous block panel system (PPBPS) to serve as the wastewater treatment and disposal system for a 4-bedroom residence. 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 23 – 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 23 is located on the left hand side of Jumper 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, February 1, 2005.

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.

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.

Distribution Box

- Wastewater from the septic tank will be directed to a distribution box for equal distribution to the (6) six drain lines.
- The distribution box shall be level, watertight, and the flow adjusted (equalized) at the time of the final inspection.

Pipe and Fittings

- All discharge piping and supply lines should be made of Schedule 40 PVC.
- All joints must be properly "welded" utilizing the appropriate PVC cement for each application.

Drain Field Installation

- The drain fields have been previously laid out on-site utilizing metal stemmed flags. Once these areas have been approved by the MCHD, the property owner/builder should mark these areas and isolate them much as possible from construction traffic. Prior to the installation of these systems, the septic contractor shall contact the MCHD for a preconstruction conference at which time the drainfield area will be re-verified.
- Under no circumstances shall any construction take place within the drainfield area while the soil is in a wet condition. If the installer has doubts as to whether or not the drainfield area is dry enough to begin construction, the Mecklenburg County Health Department should be contacted for permission to proceed with the installation.
- The specified septic system drain field is a Type III(e) pre-fabricated porous block panel system (PPBPS).
- The septic system drain field will consist of (6) lateral trenches to be constructed 3 feet wide by 50 feet in length at a maximum trench depth of 36 inches.
- All laterals are to be installed on contour with the land, keeping the individual trench bottoms level from beginning to end.
- The trenches should be left open for the final inspection by the MCHD.

PPBS Details

- The septic system drain field shall consist of a 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 drain field consists of four (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 9 foot 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 PVC connections 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.

Final Landscaping

- The drain fields shall be shaped to shed rainwater and be free from low spots.
- The entire area of the drain fields 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.

Maintenance

In General

- The septic tank 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 tank may need to be pumped more frequently. If using a garbage disposal, it is recommended that the homeowner have the septic tank cleaned out annually.
- When it becomes necessary to clean the effluent filters, the filters should be removed and the accumulated debris washed back into the septic tank/washer box – not onto the lawn.
- The drain field areas 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 may precipitate in the drain field and lead to a premature failure.
- 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

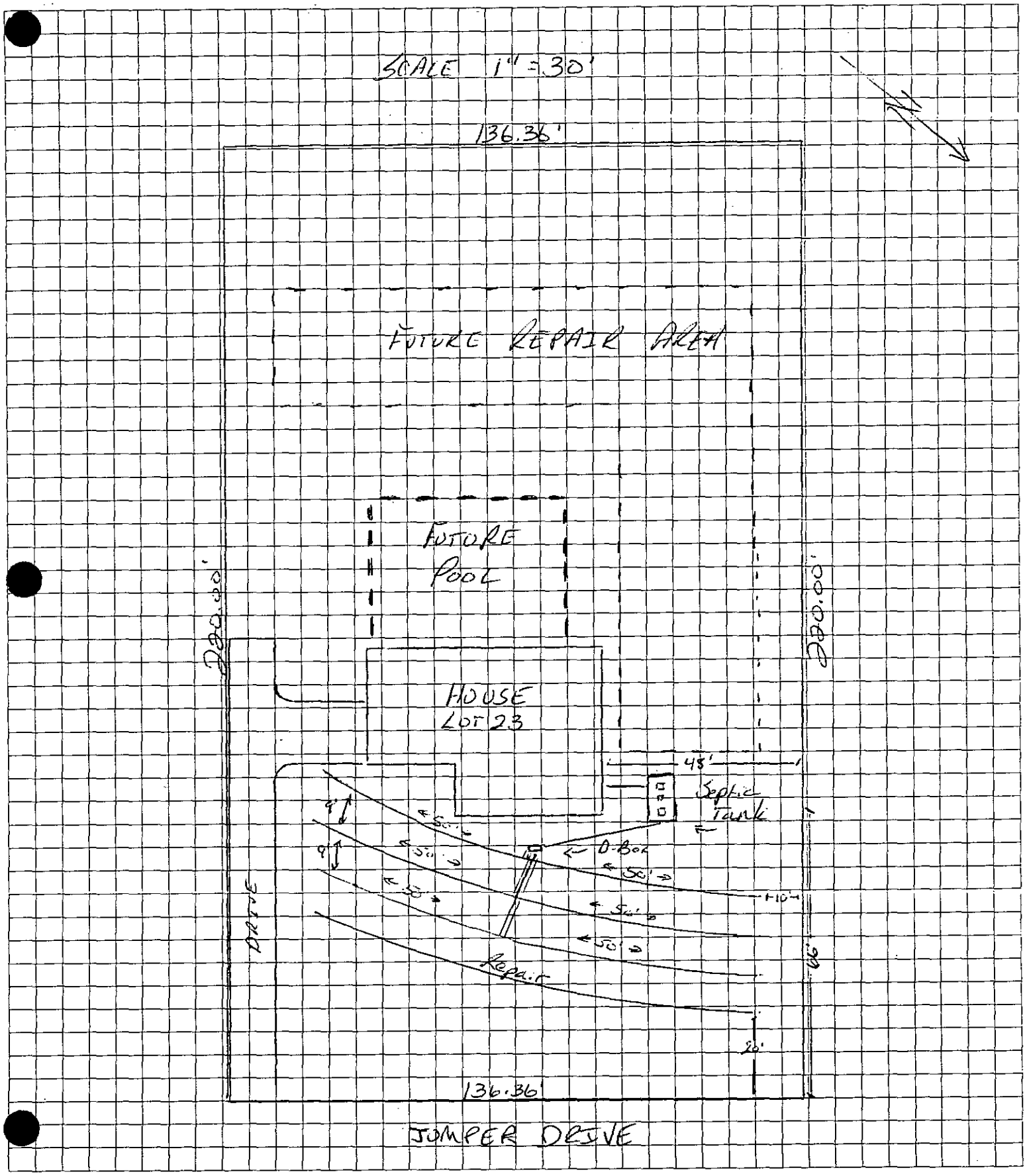
Daily Design Flow:	480 GPD – 4 bedroom house
Septic Tank Size:	1500 gallons (2 compartments)
Pump Tank Size:	N/A
Effluent Loading Rate:	Design = 0.3 GPD per sq. ft.
Drainline Required:	533 linear feet – use 300 (50 % reduction for the PPBPS)
Supply Length and Diameter:	Approx. 30 feet of 4 inch Sch. 40 PVC
Number of Drainlines:	(6) 3 feet wide x 50 feet long
Distribution Method:	Distribution Box
Number of Panels:	11 per line = 66 total

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

Permit Number: 6118B

Location: Lot 23 – The Meadows

Date: November 22, 2005



Division of Environmental Health
On-site Wastewater Section

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Lot #: 23
File #: 61186
Code: 2

Owner: NVR, Inc.
Address: 10815 David Taylor Drive, Ste 100, Charlotte, N. C. 28262
Proposed Facility: Residence Design Flow (.1949): 600gpd
Location of Site: Jumper Drive
Water Supply: [x] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

Applicant: Kim Stanley
Date Evaluated: 9/1/05
Property Size: .69a
Property Recorded:

PROFILE #	1940 Landscape Position/ Slope%	Horizon Depth (IN)	SOIL MORPHOLOGY 1941		OTHER PROFILE FACTORS				
			1941 Structure/ Texture	1941 Consistence Mineralogy	1942 Soil Wetness Color	1940 Soil Depth (IN)	1950 Saprolite Class	1944 Restr. Horiz	Profile Class & LTAR
1	LS, 8	0-3	GR/CL	FR/SEXP/SS/SP	>48" TO SOIL WETNESS	48+	N/A	NONE	PS, IV .3GPD/FT²
		3-33	SBK/C	FI/SEXP/S/P					
		33-48	SBK/CL	FR/SEXP/SS/SP					
2	"	0-4	GR/CL	"	"	"	"	"	"
		4-34	SBK/C	FI/SEXP/S/P					
		34-48	SBK/CL	FR/SEXP/SS/SP					
3	"	0-12	GR/CL	"	"	"	"	"	"
		12-30	SBK/C	FI/SEXP/S/P					
		30-48	SBK/CL	FR/SEXP/SS/SP					
4	"	0-4	GR/CL	"	>47" TO SOIL WETNESS	47	"	"	"
		4-35	SBK/C	FI/SEXP/S/P					
		35-47	SBK/CL	FR/SEXP/SS/SP					

Description	Initial System	Repair System
Available Space (.1945)	PS	US
System Type(s)		
Site LTAR	.3GPD/FT²	.3GPD/FT²

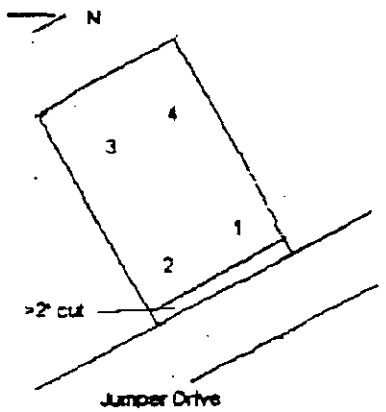
Other Factors (.1946):
Site Classification (.1948): UNSUITABLE
Evaluated By: W. R. Martin, LSS, 9/6/2005
Others Present: J. Stutts, L. Corbitt

100% repair

Landscape Position	Group	Texture	.1955 LTAR	Structure
R-Ridge	I	S-Sand	1.2 - 0.8	SG-Single Grain
SS-Shoulder Slope		LS-Loamy Sand		M-Massive
LS-Linear Slope				CR-Crumb
FS-Food Slope	II	SL-Sandy Loam	0.8 - 0.5	GR-Granular
NS-Nose Slope		L-Loam		SBK-Subangular Blocky
HS-Head Slope				ABK-Angular Blocky
CC-Concave Slope	III	SI-Silt	0.5 - 0.3	PL-Platy
CV-Convex Slope		SICL-Silty Clay Loam		PR-Prismatic
T-Terrace		CL-Clay Loam		
FP-Flood Plain		SCL-Sandy Clay Loam		
	IV	SC-Sandy Clay	0.4 - 0.1	
		SIC-Silty Clay		
		C-Clay		

Consistence	Consistance	
Moist	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



PROPOSED MODEL FIT

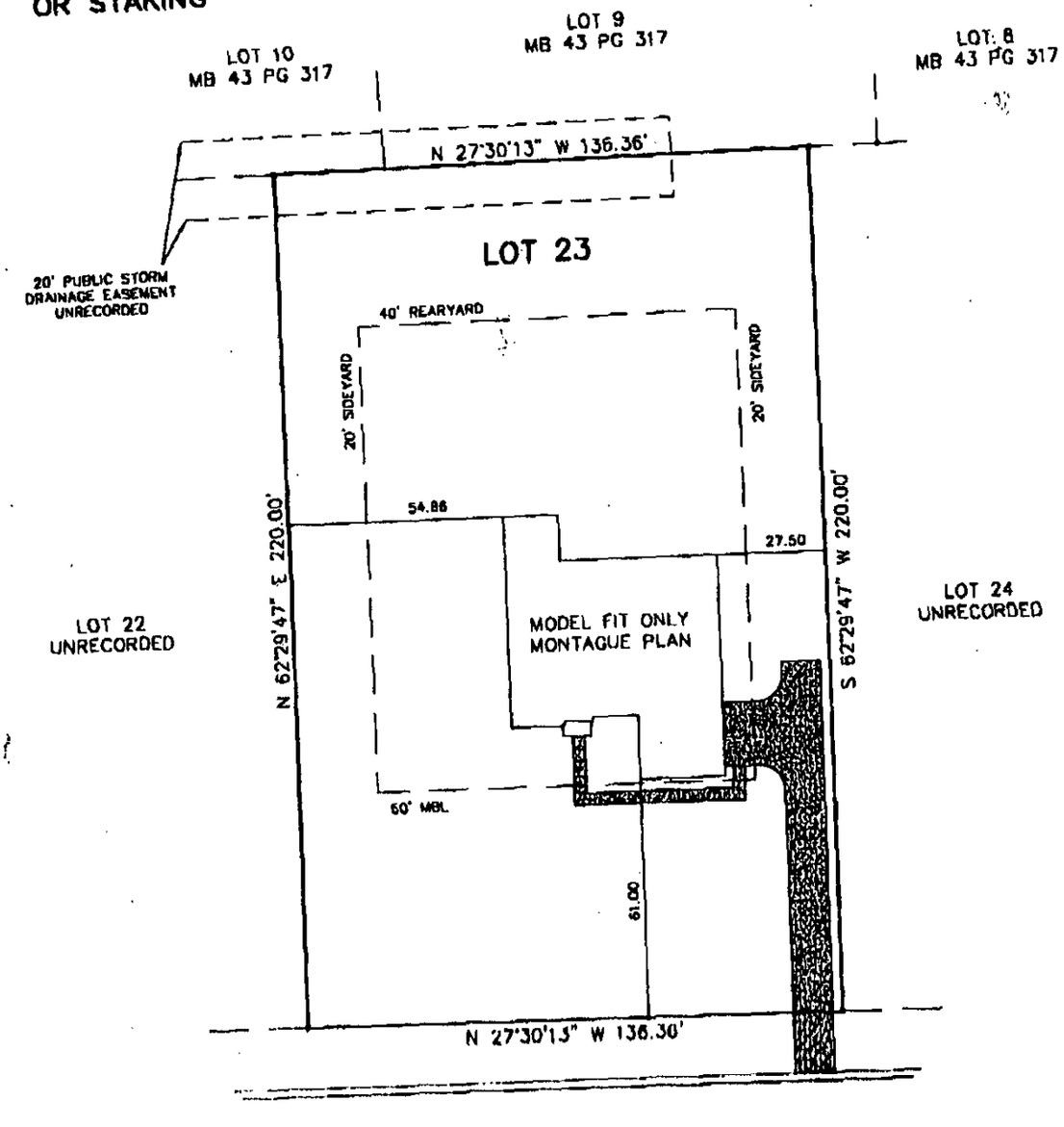
PREPARED BY:

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

MODEL FIT ONLY NOT TO BE USED FOR CONSTRUCTION OR STAKING

THE MEADOWS AT MINT HILL
MAP 1

SCALE: 1"=40'



JUMPER DRIVE

60' PUBLIC R/W
UNRECORDED

ESTIMATED DRIVEWAY
AREA = 1152.7 SQ.FT.±

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

STAKEOUT [ ]

NOT FOR RECORDATION, CONVEYANCES OR SALES

Subdivision MEADOWS @ MINT HILL, MAP 2 UNRECORDED County MECKLENBURG
Address JUMPER DRIVE Owner RYAN HOMES
Lot 23 Block ___ Plan MONTAGUE Elevation B Drive (Left) ___ (Right) X (Courtyard) ___ Deck ___
Patio ___ Fireplace ___ Garage (1 Car) ___ (2 Car) X (3 Car) ___ Brick FRONT Basement ___ Curtain Wall ___
Crawl ___ Slab X Other MORNING ROOM

REVISED:

DWN: BEC CKD: [illegible] DATE: 08/ 15/ 05

#4916

GWS – RES. APP 12/04

SEPTIC FEE: $200.00
DATE: 8/31/05
CRT [X] 33575 V.W.

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

FILE # 6118B

WELL FEE: _____
DATE: _____
CRT [ ]

SEPTIC / TYPE APPLICATION: [ ] NONE [X] NEW SYSTEM EXISTING SYSTEM: [ ] EXPANSION/ALTERATION [ ] REPAIR

WELL / TYPE APPLICATION: [X] NONE [ ] NEW WELL [ ] MAJOR REPAIR [ ] ABANDONMENT

JOB LOCATION INFORMATION:

TAX/PARCEL #: 19724116
STREET ADDRESS: Jumper Dr.
CITY: Mint Hill
STATE: NC ZIP: 28027
SUBDIVISION OR MOBILE HOME PARK NAME: Meadows of Mint Hill
LOT #: 23
TOWNSHIP:

- [ ] C-MECKLENBURG
- [ ] 1-CHARLOTTE
- [ ] 2-DAVIDSON
- [ ] 3-CORNELIUS
- [ ] 4-PINEVILLE
- [ ] 5-MATTHEWS
- [ ] 6-HUNTERSVILLE
- [X] 7-MINT HILL

BUILDING INFORMATION:

TYPE OF BUILDING:

- [ ] SINGLE MOBILE HOME (S)
- [ ] MODULAR HOME (M)
- [ ] DOUBLE WIDE (D)
- [ ] MULTIPLE FAMILY (U)
- [X] HOUSE (H)
- [ ] OTHER

HEATED SQUARE FOOTAGE: 3,500
NUMBER OF BEDROOMS: 4 pg
NUMBER OF OCCUPANTS: 4

FOUNDATION FOR RESIDENCE:

- [ ] CONCRETE SLAB
- [ ] BASEMENT WITH PLUMBING
- [X] 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:

- [X] MUNICIPAL (M)
- [ ] PUBLIC (C)
- [ ] PRIVATE WELL (P)
- [ ] SHARED WELL (S)
- [ ] OTHER 'SPRINGS' (O)

PROPOSED USE OF WELL: [X] 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	[X] NO	WELLS, SPRINGS, OR WATER LINES	[ ] YES	[X] NO
EXISTING WASTEWATER SYSTEMS	[ ] YES	[X] NO	DESIGNATED WETLANDS	[ ] YES	[X] NO
EASEMENTS OR RIGHT-OF-WAYS	[X] YES	[ ] NO	GRADING/SOIL REMOVAL PERFORMED	[ ] YES	[X] NO

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:

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME: Kim Stanley
ADDRESS: PO Box 176
CITY: Stanfield
STATE: NC ZIP: 28163
HOME PHONE: WORK PHONE: 704-752-9639
MOBILE PHONE: FAX: 704-785-8721

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED?
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 8/29/05
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 legal agent for the owner, of the property described above as the "Job Location" has read the foregoing application, acknowledges that the contents of same are true, and authorizes the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

Owner's/Agent's Signature Date

MECKLENBURG COUNTY HEALTH DEPARTMENT
GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST., SUITE 211
CHARLOTTE, NC 28202
704-336-5103 / FAX: 704-336-6694

PROPOSED MODEL FIT

PREPARED BY:

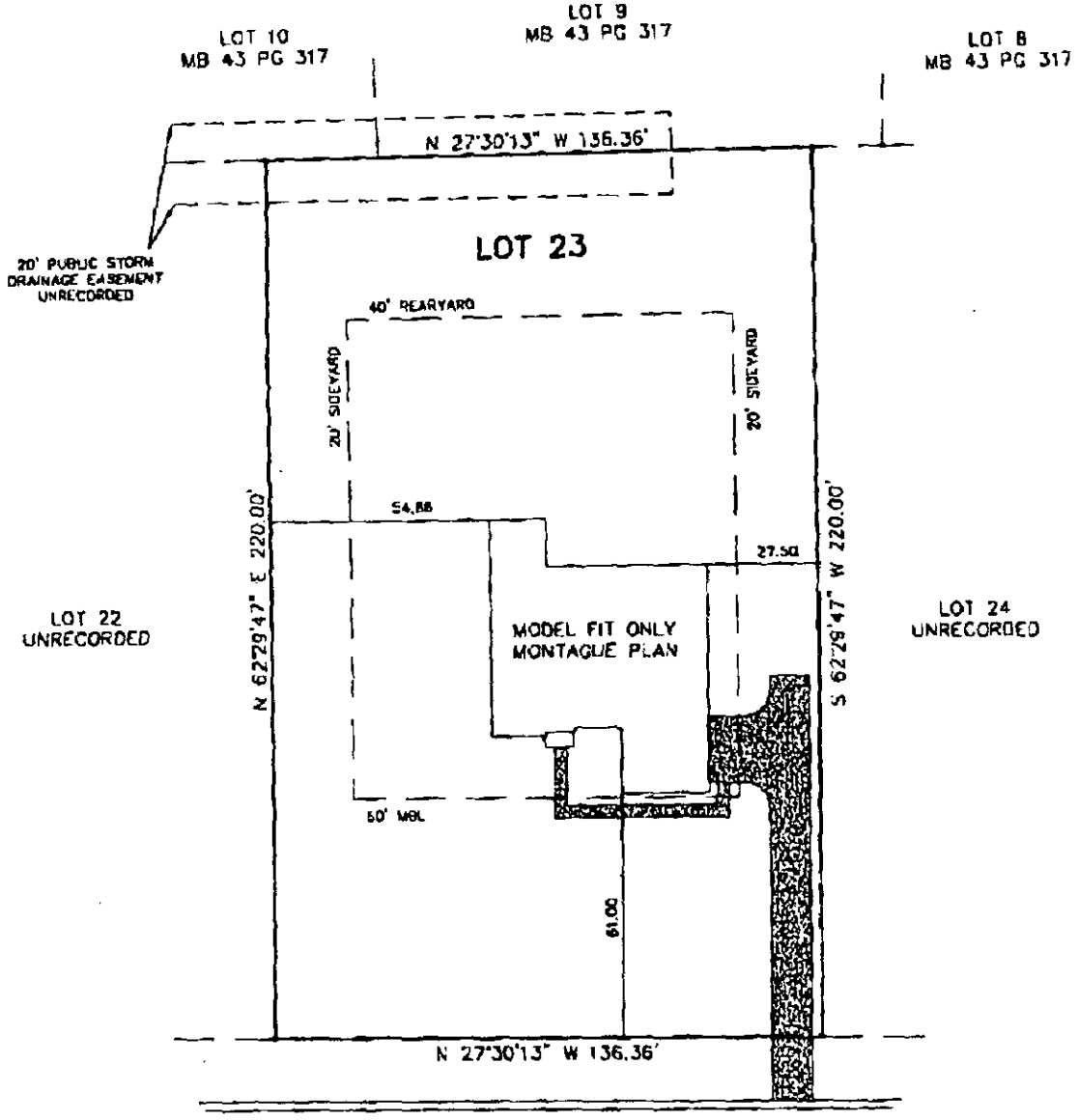
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UNRECORDED

SCALE: 1"=40'



JUMPER DRIVE

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UNRECORDED

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ESTIMATED DRIVEWAY AREA = 1152.7 SQ.FT.±

STAKEOUT ☐

NOT FOR RECORDATION, CONVEYANCES OR SALES

Subdivision MEADOWS @ MINT HILL, MAP 2 UNRECORDED County MECKLENBURG
Address JUMPER DRIVE Owner RYAN HOMES

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	08/31/05	**Amount:**	200.00
Receipt #:	36703	**Tendered:**	0.00
Check / Auth #:	CHARGE	**Returned:**	0.00
Received By:	WALKEVA		

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
0701	Improvment Permit App-Residen JU,PER DRIVE LOT 23		1	200.00	200.00

Outstanding Balances

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
15,298.75					