

11133 WINDY GROVE RD

11325141

5/18/2007

duponbj

Groundwater and Wastewater Services File Imaging Project

May 2007

Barcode Font = IDAutomationHC39M

CERTIFICATE OF COMPLETION/OPERATION PERMIT

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
1200 BLYTHE BOULEVARD
CHARLOTTE, NC 28203
PHONE (704) 376-4603

FILE: 4482-A DATE: 7-27-90

TC: 113-251-41 ☑ L ☐ CRT

SERIAL Nº 13374

Name of Owner Stephen Geiger Juris.:

Address of Property 11133 Windy Grove Rd

Inspection Data:

Tank Material PCC

Total Length of Drainfield 200'

Number of Lines 6 @ 34'

Cover Depth T&J panel

Water Supply Source well

Distance to Water Source > 50'

Excavation Inspected 7-27-90

Tank(s) Inspected 7-27-90

Wash Line Inspected

High Water Alarm Inspected 7-27-90

PLOT

Design: 1990/1500ST/1000DT, PI, MOD, 400SFT, cecil CTR# 163

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 10 NCAC 10A .1900, "Laws And Rules For Sanitary Sewage Collection, Treatment, And Disposal" in effect on the date of issuance of the permit. The 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 10 NCAC 10A .1900 in addition to those listed below under "COMMENTS." This document shall be null and void if any information contained in the application is untrue or if any additions are made to the property which would increase the requirements for said system.

COMMENTS: T&T panel system for 3 bedrooms

B.R. Ferguson
Environmentalist

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

INSTALLATION, CONSTRUCTION, ALTERATION, AND/OR REPAIR PERMIT

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
1200 BLYTHE BOULEVARD
CHARLOTTE, NC 28203
PHONE (704) 376-4603

FILE: #482-A DATE: 6-29-90

TC: 113-251-41 ℄ L

SERIAL Nº 13321

Permission is hereby given to V 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 5-11-89. All work shall be completed on or before 7-29-90, after which date this permit shall be null and void. The system shall meet all of the construction requirements of 10 NCAC 10A .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.

See plot plan on file for details on T & T panel

Liquid Capacity of Septic Tank _____ gallons

Liquid Capacity of Dosing Tank _____ gallons

Tank Construction _____

Absorption and/or Nitrification Lines:

Trench Width _____ feet

Total Line Length _____ feet

Number of Lines _____

Depth of Stone _____ inches

Distance from House _____ feet

Distance from Property Line _____ feet

Distance from Well _____ feet

PLOT OF SYSTEM

NAME OF OWNER Stephen Geiger

LOCATION OF PROPERTY 11133 Windy Grove Rd

Comments: _____

Division or Section Head

B. R. Ferguson
Environmentalist

* If this permit is for the installation or construction of a new system, it must be signed by the division or a section head of the Mecklenburg County Health Department in order to be valid. Only the signature of the Environmentalist is required where an existing system is being altered or repaired.

WHITE - HEALTH DEPARTMENT'S COPY • CANARY - ENVIRONMENTALIST'S COPY • PINK - OWNER OR AGENT'S COPY

000232

REAL ESTATE
BOOK PAGE

PRESENTED FOR REGISTRATION [redacted] 63 085 | FILE NO. 4482A

89 JUL -7 PM 2:36

ANNE A. POWERS
REGISTER OF DEEDS
MECKLENBURG CO., N.C.

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

ACKNOWLEDGEMENT OF REQUEST BY OWNER FOR RECLASSIFICATION OF SITE FROM "UNSUITABLE" TO "PROVISIONALLY SUITABLE" UNDER 10 NCAC 10A .1948(c)

The undersigned, STEPHEN E. AND REBA S. GEIGER GEIGER

owner of property located at 11133 WINDY GROVE RD. CHARLOTTE, N.C.

("the site") and described in an instrument recorded in Book PARCEL # 11325141 at Page _____, Mecklenburg Public Registry,

hereby acknowledges that he applied to the Mecklenburg County Department of Environmental Health ("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 10 NCAC 10A .1934 et seq; that the Department originally classified the site as "unsuitable" pursuant to the standards set forth in the regulations; that the undersigned requested pursuant to 10 NCAC 10A .1948(c) 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 can reasonably be expected to function satisfactorily and thus that the findings specified in 10 NCAC 10A .1948(c)(1), (2), and (3) can be made; 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 his responsibility 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 agrees for himself, his heirs and assigns that he shall indemnify and hold harmless the Department, its employees and officials, as well as Mecklenburg County and its employees and officials, for any damages or other claims of any person or persons whatsoever arising out of the installation, operation, or failure of said septic tank system.

The undersigned further agrees for his heirs and assigns that, in the event any septic tank system installed under authority of the aforesaid permit fails to perform adequately in any respect, he will take whatever measures are required to correct same; or if such is impossible he will discontinue use of said system immediately.

Use of the singular masculine pronoun forms herein shall be deemed to also include the plural and feminine forms as the context may require.

This document shall be placed on the public records of the Register of Deeds of Mecklenburg County and indexed therein under the Grantor Index in the name or names of the undersigned, and the foregoing acknowledgements shall henceforth be binding on all persons claiming any right, title, or interest in the site.

This 6th day of July, 1989.

Drawn By"

Stephen E. Geiger (SEAL) 6.00
<> 6.00
Reba S. Geiger CASH (SEAL) .00

10:45 #1978 000
07/07/89

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

I, Marsha Norwood, a Notary Public for said County and State, do hereby certify that Stephen E. Geiger & Reba S. Geiger personally appeared before me this date and acknowledged the due execution of the foregoing instrument.

WITNESS my hand and notarial seal, this 6 day of July, 1989.

Marsha Norwood
Notary Public

My Commission Expires: 9/14/90

Return to Dept. of Environmental Health

REAL ESTATE
BOOK PAGE

6063 0852

State of North Carolina, County of Mecklenburg

The foregoing Certificate(s) of

MANSON ARROWOOD

Notary(ies) Public is/are certified to be correct. This instrument and this certificate are duly registered at the date and time and in the Book and Page shown on the first page hereof.

ANNE A. POWERS, REGISTER OF DEEDS

By Verna W. Meaner Deputy - Register of Deeds

RECOMMENDED INDIVIDUAL RESIDENCE

T & J PANEL

GROUND ABSORPTION, WASTEWATER

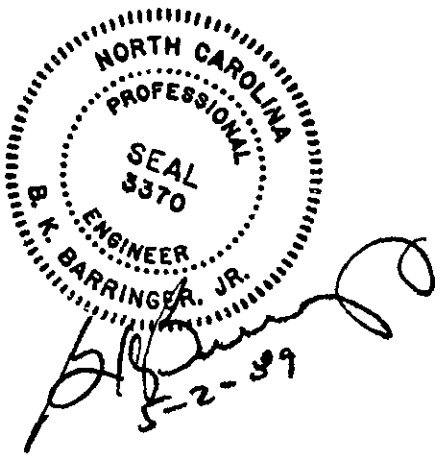
DISPOSAL SYSTEM

for

Stephen E. Geiger
Windy Grove Road
Part of Lot 54, Section 36
File 4482A: Parcel 11355141
Mecklenburg County, N.C.

May 1, 1989

Owner:
Stephen E. Geiger
11133 Windy Grove Road
Charlotte, N. C. 28208



Prepared By:
B. K. Barringer, Jr., P.E.
N. C. Registration No. 3370
104 Westfield Center
Mooresville, N. C. 28115
(704)664-7888

T & J PANEL SYSTEM

DESIGN CONSIDERATIONS:

The Owner has an existing two bedroom house. He wishes to add a third bedroom. The existing septic tank and field is to be abandoned because the tank is located in the area where the new bedroom is to be constructed. Also the existing nitrification field is partially on lot 55, which is owned by another party. It is desired to construct a completely new septic system within the bounds of the owned property.

A new water well has been drilled near the Windy Grove Road right-of-way, more than 50' from the proposed nitrification field. The existing water well is to be abandoned as required by the Health Department, and shall include filling and capping of the well.

LOCATION: The property is located on Windy Grove Road. The proposed field is to be located to the east of the house location.

TERRAIN: The property, where the field is to be located, slopes east to west at approximately 8%.

REFERENCE MATERIAL:

(1) DESIGN AND INSTALLATION (Manual)
OF LOW PRESSURE PIPE WASTE WATER TREATMENT SYSTEMS
By: Craig Cogger; Bobby L. Carlisle; Dennis Osborne; Ed Holland
Published by: UNC Sea Grant College Pub. UNC-SC-82-03
May, 1982.

(2) LAWS AND RULES FOR GROUND ABSORPTION SEWAGE DISPOSAL SYSTEMS. SECTION .1956 OF THE N.C. Administrative Code: Title 10 Health Services; Environmental Health; Subchapter 10a; Sanitation. Published by: N.C. Dept. of Human Resources; July 1, 1982. Paragraph .1956 (a)(ii)(B).

(3) EPA 625/1-80-012 Design Manual
Onsite Wastewater Treatment and Disposal System Oct.,1980; Chapter 7.

RECOMMENDATIONS: Due to the restricted available space, the nitrification field is to be a T & J Panel system. The location of the field necessitates the use of a pumping system with pressure manifold to charge the nitrification field. Trees and underbrush shall be removed as called for herein from the area of the drain field. Layout of the field and preparation hereafter called for shall be strictly followed to the approval of the Engineer and the Mecklenburg County Sanitarian. The location of all nitrification lines has been marked in the field.

A 1500 gal. septic tank is to be located to allow gravity flow from the home. The effluent from the tank will gravity flow to a 1000 gal. pumping tank. Effluent from this tank is pumped to a pressure manifold for distribution into a field of 16" high T & J panels.

AVAILABLE SPACE: This property qualifies under Rule 10 NCAC 10A. 1945. Available space is not required; however a repair area has been provided.

OWNERSHIP RESPONSIBILITY FOR A LOW PRESSURE PIPING SYSTEM

It must be kept in mind that this system is designed to accept a moderate amount of waste water (which is called the EFFLUENT), in a minimal water absorbing soil.

Conservation measures must be undertaken by all members of the organization to minimize the volume of waste water entering the disposal system, including, but not limited to, the following precautions:

(a) Provide water conserving plumbing fixtures within the facility;

(b) Develop conservative water use habits;

(c) Monitor and maintain the system as necessary for proper operation;

(d) Check and pump the septic tank sludge on a regular basis of approximately every year if garbage disposal is included in the residence, or approximately every three years otherwise.

(e) Make rapid repairs to leaking plumbing fixtures and faucets.

(f) Avoid excessive watering of the lawn in the vicinity of the disposal field.

CONSTRUCTION SEQUENCE AND COMPONENTS OF THE SYSTEM

Refer to T & J Panel System's manufacturing and installment manual. Furnish and install all items required for a complete system in accordance with plans and specifications; for requirements of the County Dept. of Environmental Health (CDEH); the N. C. Dept. of Environmental Health (NCDEH); the N. C. Building Code, Plumbing Code and Electrical Code; and the National Electric Code. System must be properly installed by a qualified, competent contractor.

COMPONENTS OF SYSTEM

1. Two compartment septic tank
2. Pumping chamber
3. Submersible effluent pump and level controls
4. High water alarm signals (audible and visible)
5. Supply pipe
6. Ball valves
7. T & J 16" high panels & distribution laterals

CONSTRUCTION SEQUENCE:

(1) Lay out T & J, 16" high, Panel System network area and repair area with stakes and flagging to ten feet (minimum) beyond the limits of the network. As soon as the absorption area is designated, it should be flagged, roped off and isolated from construction traffic. This barrier should be maintained until the system is accepted by the Owner. Refer to site plan for the size of absorption area. The Engineer has previously flagged the general limits of the nitrification field. See site plans for flag locations.

(2) Clear area of all trees, undergrowth, stumps, and other material to provide an open area for the nitrification fields. Care shall be taken to insure that a minimum amount of disturbing of the soil takes place in the nitrification field area. The terrain shall be graded to minimize any flow of surface water onto the nitrification field area.

(3) Clear trees and undergrowth as necessary to allow adequate room for setting of the septic tank and pumping tank. Also the supply pipe and sewer collection pipe right-of-way shall be cleared as necessary.

(4) Prior to actually beginning construction of the system, carefully locate, lay out and identify the disposal site, supply line, and the T & J panel piping networks, using a tripod mounted engineer's leveling instrument to accurately establish each lateral along a level contour. Note: Lateral panel runs which conflict with cut-off-in-place stumps or trees shall "snake" by with a 12" minimum trench clearance and then continue along its projection run. (The 6' minimum trench separation must be maintained.)

(5) Excavate for and construct curtain drain (if shown on the plan.)

(6) Excavate lateral network trenches 24" wide by 28" deep (see detail). Remove loose soil from bottom of trench.

(7) Install sand in bottom of the lateral trench to the proper depth of approximately 22" below finish ground level.

(8) Follow the manufacturer's guidelines for installing the T & J Panel System.

(9) All joints in lateral and the manifold piping shall be water tight connections to insure that the only source of the water seepage from the system is through the orifices as designed. See layout and details. Carefully install manifold and lateral network according to the attached designed layout. A larger diameter protective sleeve with cap or approved box with lid shall be placed over the turned up lateral and positioned level with the ground surface (so as not to be damaged by mowing machine.)

(10) Carefully backfill manifold trenches to finish grade with clean (debris free earth (no stone).

(11) Leave absorption area with a raked surface, ready for grassing.

(12) The installation contractor shall stabilize the area of construction by planting and seeding with Kentucky 31 tall fescue and shall keep the planted area watered and mulched until such time that a hardy stand of grass is established. (See Grassing Specification.)

(13) The septic tank shall consist of a 1,500 gallon capacity, reinforced, precast concrete tank with full baffle and shall have easy access to each chamber from ground level for checking and pumping. The first chamber of the septic tank shall consist 2/3 to 3/4 of the volume of the total tank and the baffle shall contain a horizontal opening across the tank at about midway its height. Locate the septic tank at such height as to provide approximately 8" of cover soil over top of the tank.

(14) The dosing tank shall consist of a 1,000 gallon capacity, reinforced, precast concrete tank without baffle and shall have a concrete mounting pad (concrete blocks) for accommodating the pump. Provide access for entry into the tank directly over the pump location, and extending 6" above final grade. Use a 30" diameter concrete well casing and concrete well cap.

(15) All piping and fittings shall be PR160 PVC. Glue for all PVC pipe joints shall be as recommended by the pipe manufacturer.

(16) PUMP: The submerged pump shall be Model SSM4A manufactured by F.E.Meyers Co., Ashland, OH, or equal, 4/10hp, 115v/1ph; 12 amps; capable of pumping 60 gallons per minute at an 24' head.

(17) PUMP ON-OFF water level control switch shall by Myers, Model MLC-20, mercury switch, with three prong, piggy back plug.

(18) HIGH WATER ALARM SWITCH shall be equal to Myers, model FLCA-30, mercury switch, red colored ball with support bracket.

(19) HIGH WATER ALARM CONTROL BOX shall be equal to Myers, model FLCA CA-SS4 with connection box having buzzer alarm, on, off, test switch with terminal block for all connections. Control box shall be supplied by two separate 115 volt circuits, one plug circuit, and one alarm circuit.

(20) A "HOME OWNER'S WARNING SIGN" shall be located within the house to inform the owner of what action to take in case the "High Water Alarm" is activated. This sign shall contain the name, address, telephone number, and emergency telephone number of the person to contract immediately upon malfunction of the system.

(21) PUMP AND CONTROLS: Details of pump installation are shown on the plan. The pump must be placed on two concrete blocks next to each other on the bottom of the tank. This prevents the pumping of any solid particles which can clog the LPP system. A piece of nylon rope or other non corrodible material should be attached to the pump and to the outlet pipe for lifting the pump in and out of the chamber. (The PVC outlet pipe is too fragile to support the pump.)

Controls are fastened to the outlet pipe with clamps or brackets supplied by the manufacturer. The lower level control or "pump-off" must be positioned above the pump, so that the pump remains submerged at all times. The supper level control "pump-on" is positioned to pump a specified volume of effluent. The high water control float is then mounted about 3" above the upper pump-on control. (Note: Care must be taken to insure that floats do not become fouled by other components in the tank such as the electric power cord or the lifting rope.)

The pump outlet pipe should be connected to the supply manifold with a threaded PVC union (or dresser coupling) to allow quick removal. The gate valve must also be installed in the supply line (within the pump chamber) to allow final adjustment of the pressure. If effluent will be pumped down hill, a 1/4" siphon-breaker hole must be drilled in the bottom of the supply line before it leaves the pump tank. This breaks any vacuum in the system and prevents the inadvertent siphoning of effluent out of the tank. This hole is very important.

(22) ELECTRICAL CONNECTIONS: The pump and high water alarm must be placed on separate electrical circuits. (If the pump circuit fails, the alarm must still be able to operate.) Follow the manufacturers' recommendations for the proper fuses or circuit-breakers. All electrical connections must be made outside the pumping chamber. Power cords from the pumps and controls should be plugged into a NEMA approved outdoor receptacle mounted outside of the pumping chamber. The receptacle must not be located inside the pumping chamber due to the corrosive and explosive gasses that may form from the sewage.

Electrical connections may be made inside the pumping tank only if wired inside a sealed, water tight box. Some level control switches have a box built into the housing,k but are more expensive than the plug-in devices.

Wiring between the pumping chamber and the house should meet State and local code requirements. A lightning arrester is recommended to protect the pump and controls from electrical surges.

(23) PROPER OPERATION CHECK: After all components have been installed and connected, the system should be checked for proper operation. With electrical power turned off, fill the pumping chamber with water from a garden hose (or allow effluent to accumulate) until the liquid rises to the level of the high-water alarm float. Turn on the electrical power. The alarm light should go on in the house, and the pump should start operating. The alarm light should go off when the liquid level falls below the high-water float. The pump should turn off when the liquid reaches the lowest float control. Be sure the pump is still completely submerged.

(24) PRESSURE HEAD ADJUSTMENT: The pressure head must be adjusted to match that specified in the design. The pressure head is measured as the height liquid will rise above the turn-up elbow when the pump is running. To adjust the head:

(a) Glue a 4' length of pipe (preferably clear) to a threaded adapter that will screw onto the turn-up adapters. (Call this the "test tube".)

(b) Replace the turn-up cap with the "test tube".

(c) Turn the power on to allow liquid to rise in the "test tube".

(d) Adjust the ball valve beginning at the end of each lateral until the effluent reaches the desired height in the "test tube". Remember to include the distance below the ground surface to the lateral line when measuring the height. The pressure head should be 2' for each line. This is the height above the lateral the liquid should be in the temporary "test tube".

(25) FINAL LANDSCAPING: After the T & J System is installed, the following should be checked to insure that the system will not be overloaded with excess rain water and run off:

(a) The distribution field is shaped to shed rain water and is free of low area.

(b) Gutter and downspout drains are directed away from the system.

Any problems should be corrected before approving the system.

Finally, the entire area should be planted with grass according to specifications.

DESIGN SPECIFICATIONS - I & J PANEL SYSTEM
Stephen Geiger 11133 Windy Grove Road
Mecklenburg County May 1, 1989

Daily design waste flow:	360 gpd
Septic tank size:	1,500 gal. (2 compartment)
Pumping tank size:	1,000 gal.
Effluent loading rate:	0.30 gpd/sf
Total linear feet and diameter of laterals	200 ft. of 1-1/4" dia. PVC and T & J 16" high panels
Total length and diameter of supply manifold:	75 lf - 2" dia. PVC
Number and length of laterals:	2 laterals at 34 lf 4 laterals at 33 lf
Number of panels:	44
Manifold placement:	See layout sheet
Hole size:	5/32"
Hole spacing:	2 holes per panel
Total number of holes:	88
Flow rate through the system:	36 gpm
Elevation head (pump to end of manifold):	8.5'
Pressure head:	2'
Friction head:	1.9'
Total head:	12.4'
Pump requirements:	36 gpm at 12.4'; use Myers 4/10 hp SSM4A pump
Dosing volume:	158 gal.
Depth of water pumped per dose:	7.3"
Pump run per dose:	4.4 min.
Check valve:	yes
Syphon break hole:	yes

SEEDING SPECIFICATIONS

3:1 SLOPES OR FLATTER

1. Apply agricultural lime at the rate of 30 lbs/1000 sf.
2. Apply 10-10-10 commercial fertilizer at the rate of 20 lb/1000 sf.
3. Seed in accordance with the following schedule and application rate:

DATE	TYPE	PLANTING RATE
8/15 - 11/1	Tall Fescue	200 lb/ac or 7 lb/1000 sf
11/1 - 3/1*	Tall Fescue and	200 lb/ac or 7 lb/1000 sf
	Abruzzi Rye	25 lb/ac or 1/2 lb/1000 sf
3/1 - 4/15	Tall Fescue	200 lb/ac or 7 lb/1000 sf
4/15 - 7/30	Mulled Common or Bermuda Grass	30 lb/ac or 1 lb/1000 sf
7/15 - 8/15	Tall Fescue and	200 lb/ac or 7 lb/1000 sf
	Browntop Millet or	35 lb/ac or 7/8 lb/1000 sf
	Sorghum-Sudan Hybrids	30 lb/ac or 3/4 lb/1000 sf

4. Mulch with straw applied at the rate of 75-100 lb/1000 sf.

* Heavily mulched during January - March period.

SLOPES GREATER THAN 3:1 TO 2:1 SLOPES

1. Apply agricultural lime at the rate of 50 lb/1000 sf.
2. Apply 10-10-10 commercial fertilizer at the rate of 20 lb/1000 sf.
3. Seed in accordance with the following schedule & application rate:

DATE	TYPE	PLANTING RATE
3/1 - 6/1	Sericea Lespediza (scarified) and	50 lb/ac or 11 lb/1000 sf
3 - 4	Add Tall Fescue or	150 lb/ac or 3-1/2 lb/1000 sf
3 - 6	Add Weeping Lovegrass	5 lb/ac or 1/8 lb/1000 sf
6 - 9/1**	Tall Fescue and	60 lb/ac or 1-1/2 lb/1000 sf
	Brown Top Millet	35 lb/ac or 7/8 lb/1000 sf
	or Sorghum Sudan Hybrids	30 lb/ac o 3/4 lb/1000 sf
9 - 3/1	Sericea Lespediza (unhulled-unscarified)	70 lb/ac or 1-3/4 lb/1000 sf
	Tall Fescue	150 lb/ac or 3-1/2 lb/1000 sf
	Millet or Sudan	20 lb/ac or 1/2 lb/1000 sf

** Temporary - Reseed September 1 at recommended rates.

4. Mulch with 3" straw applied at the rate of 50-90 lb/1000 sf and anchor with asphalt emulsion tack coat applied at the rate of 14-28 gal/1000 sf or 800-1200 gal/ac.

SITE EVALUATION REPORT
SERIAL NUMBER 15168

Parcel: 11325141

☐ PC

Location: 11133 Windy Grove Road

Subdivision:

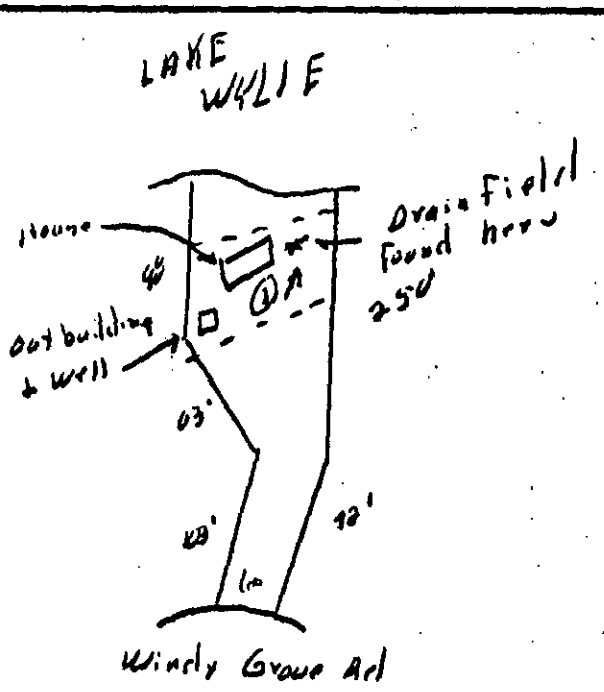
Lot: Block: Acres: Approx .3 Inv

Owner: Stephen Earle Geiger
Address: 11133 Windy Grove Road
Charlotte, NC 28208

Comments:

Described by:

Date:



*** EVALUATION KEY ***
S = Suitable U = Unsuitable
PS = Provisionally Suitable
The "Area Classification" below indicates the suitability of areas in the diagram.

FACTORS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
Topography	(S) PS U 6-12%	S PS U	S PS U	S PS U	S PS U	S PS U
Texture	S (PS) U Clay	S PS U	S PS U	S PS U	S PS U	S PS U
Structure	S (PS) U Blocky	S PS U	S PS U	S PS U	S PS U	S PS U
Drainage	S (PS) U >36" To water	S PS U	S PS U	S PS U	S PS U	S PS U
Depth	S (PS) U 36"+	S PS U	S PS U	S PS U	S PS U	S PS U
Restrictive Horizons	S (PS) U >36"	S PS U	S PS U	S PS U	S PS U	S PS U
Available Space	S PS (U) Not Trifled	S PS U	S PS U	S PS U	S PS U	S PS U
Other (specify)	S PS U	S PS U	S PS U	S PS U	S PS U	S PS U
Soil Group/Series	10A Cecil-Urban					
Area Classification	S PS (U)	S PS U	S PS U	S PS U	S PS U	S PS U

LAWS AND RULES FOR SANITARY SEWAGE COLLECTION, TREATMENT, AND DISPOSAL
10 NCAC 10A .1948(c)

Sites originally classified as UNSUITABLE may be used for soil absorption disposal systems, provided engineering, hydrogeologic, and soil studies indicate to the local health department that a suitable septic tank system or a suitable alternate system can reasonably be expected to function satisfactorily. Such sites may be reclassified as PROVISIONALLY SUITABLE upon submission to the local health department and when requested by the local health department to the state agency of the following:

(1) Adequate substantiating data to indicate that a ground absorption system can be installed so that the effluent will receive adequate treatment;

(2) Adequate substantiating data to indicate that the effluent will not contaminate any drinking water supply, ground water used for drinking water, or any surface water;

(3) Adequate substantiating data to indicate that the effluent will not be exposed on the ground surface or be discharged to surface waters where it could come in contact with people, animals, or vectors.

MECKLENBURG COUNTY
Department of Environmental Health

May 9th, 1988

Stephen Earle Geiger
11133 Windy Grove Road
Charlotte, NC 28208

RE: Property located at 11133 Windy Grove Road
FILE: 4482A
PARCEL: 11325141

Dear Sir:

At your request, a field investigation was conducted on the property designated above for the purpose of determining site suitability for the installation of a ground absorption sewage disposal system. The results of this investigation showed the property to be classified UNSUITABLE for the installation of such a system. A copy of the Site Evaluation Report (Serial Number 15168) is enclosed.

State regulations provide that sites originally classified unsuitable may be utilized for the installation of alternate or modified sewage disposal systems provided the requirements of 10 NCAC 10A .1948 (c) are met. A reprint of this section is enclosed for your information.

Should you desire to file for permission to install an alternate or modified sewage treatment system on the property, please submit an Application For An Improvement Permit with an ACCURATELY dimensioned plot plan detailing the location of current and/or proposed buildings, wells and sewage disposal systems to this office. They will be reviewed, and if it is determined that the proposed system may reasonably be expected to function satisfactorily, an Improvement Permit will be issued by the Department upon completion by you, of a formal request for lot reclassification.

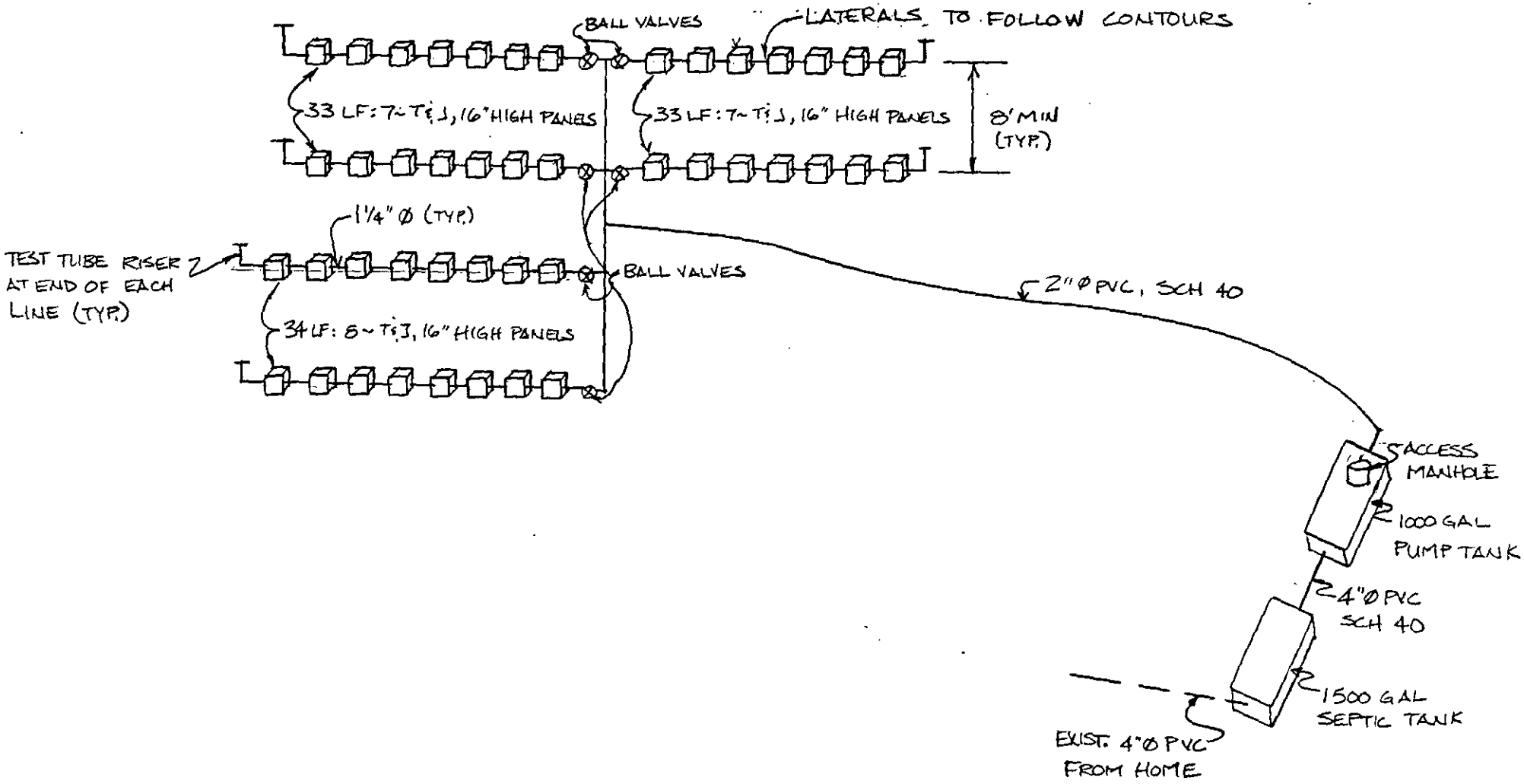
If I may be of any assistance, please feel free to call.

Sincerely,

Sylvia D. Daniel, R.S.
Environmental Health Supervisor
Environmental Resources Division

Enclosure (2)

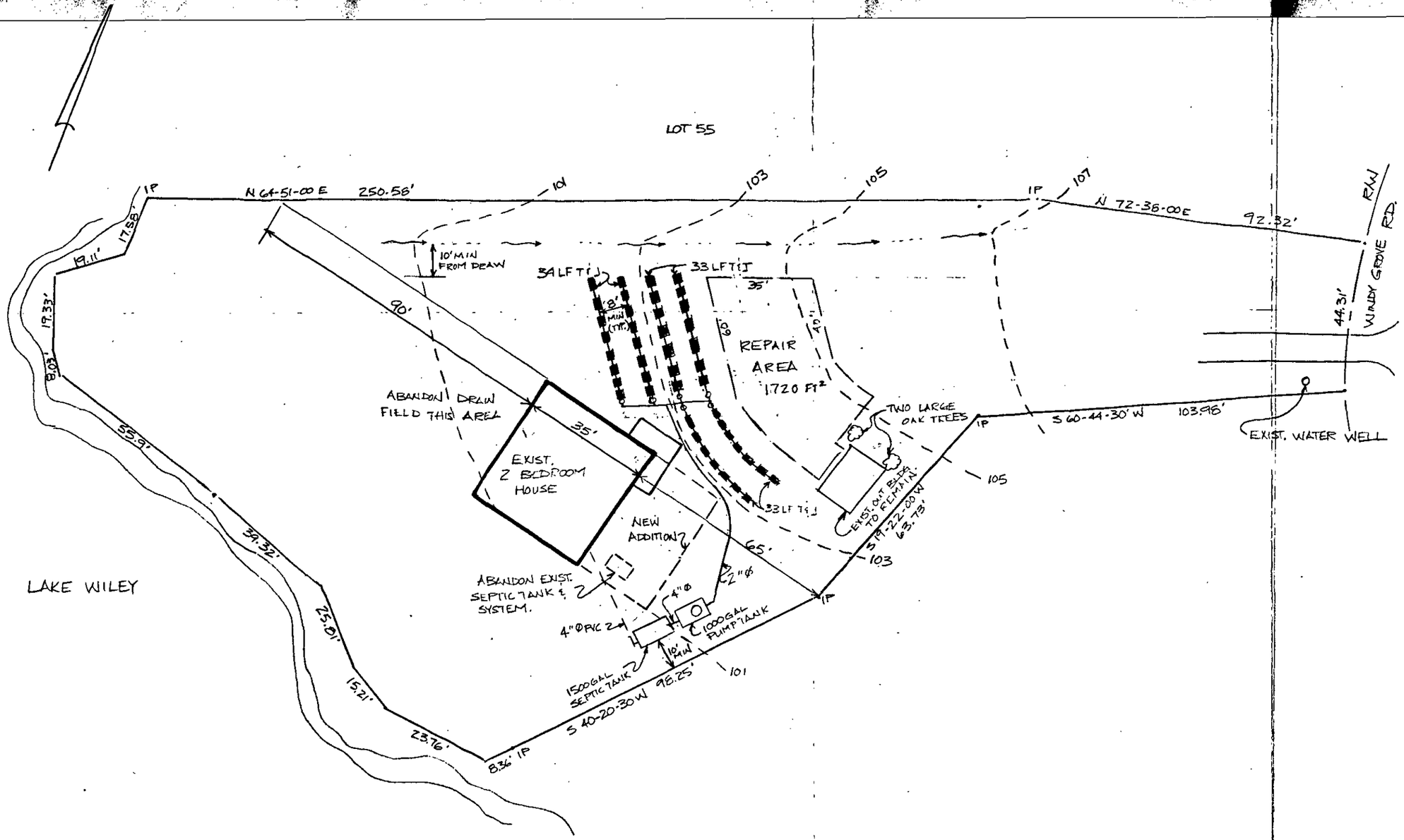
STEPHEN E. GEIGER
11133 WINDY GROVE RD.
CHARLOTTE, NC 28208



B.K. Barringer, Jr. P.E.
104 Westfield Center
MOORESVILLE, NORTH CAROLINA 28115

(704) 664-7888

SCHEMATIC LAYOUT
NO SCALE



IMPROVEMENT PERMIT
~~#75.~~ MP.
PROPOSED
ALT. SYSTEM

B.K. Barringer, Jr. P.E.
104 Westfield Center
MOORESVILLE, NORTH CAROLINA 28115

T&J PANEL SYSTEM

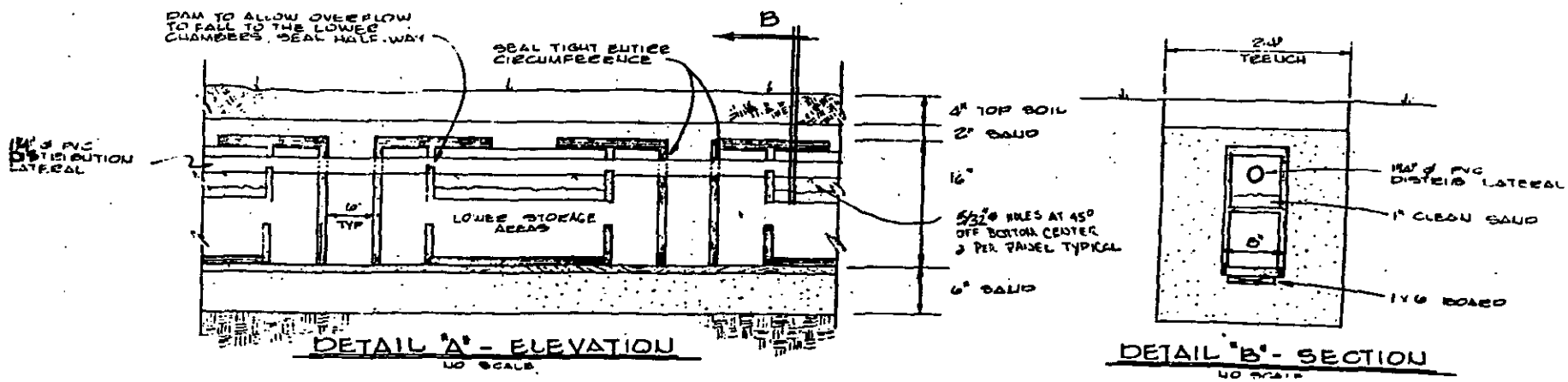
FOR: STEPHEN E. GEIGER
11133 WINDY GROVE RD.
CHARLOTTE, NC 28208

PART OF LOT 54, SECTION 36
LAKE WILEY

FILE: 4482A PARCEL 1132514

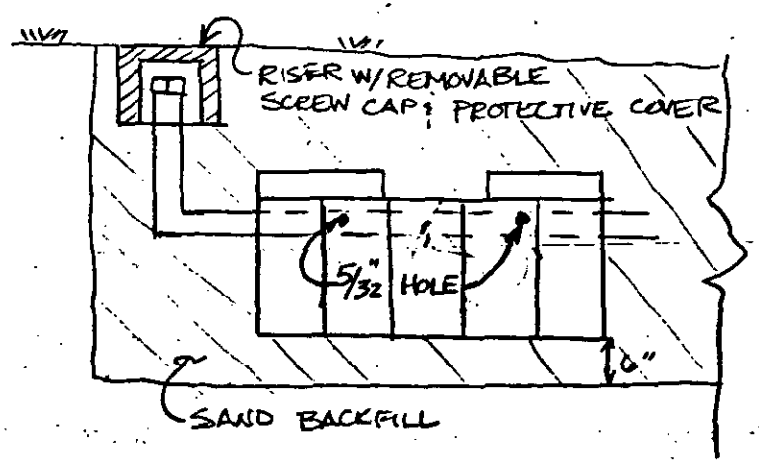
DATE: 5-1-87

T & J PANEL AS MFGE'D
BY STATESVILLE
CONCRETE PRODUCTS

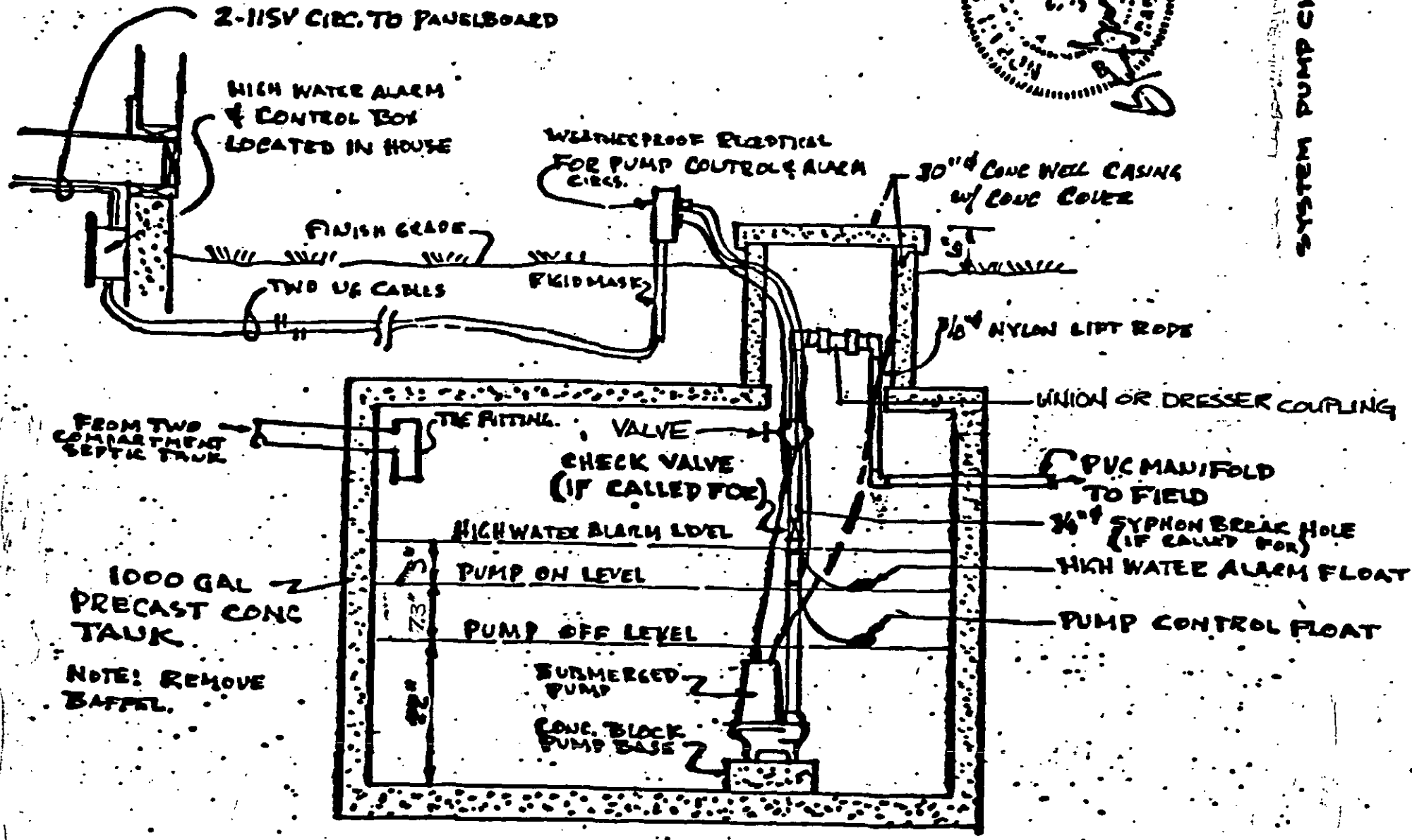


DETAIL "A" - ELEVATION
NO SCALE

DETAIL "B" - SECTION
NO SCALE



B.K. Barringer, Jr. P.E.
104 Westfield Center
MOORESVILLE, NORTH CAROLINA 28115



PUMPING CHAMBER DIAGRAM

NO SCALE

1000 GAL TANK

SYSTEM PUMP CHAMBER

STEPHEN E. GEIGER

T & J PANEL SYS.

→ 3 BDR HOME:

120 GPD/BR x 3 BR = 360 GPD

→ USE EFFLUENT LOADING RATE OF 0.30 GPD/SF

360 GPD / 0.30 GPD/SF = 1200 SF

1200 SF / 3 FT WIDE TRENCH = 400 LF

→ T & J PANEL:

FOR 16" HIGH PANEL: 400 LF x 0.5 = 200 LF

USE 2 - 34 LF & 2 ~ 66' LF LINES (SPLIT)

→ PANELS ARE 46" WIDE WITH APPROX. 6" SEPARATION B/W PANELS

NO. OF PANELS IN 34' LINE: $\frac{34' \times 12''}{52''} = 7.8$

NO. OF PANELS = 8 WITH 5" B/W PANELS

NO. OF PANELS IN 33' LINE (66' SPLIT) = $\frac{33' \times 12''}{52''} = 7.6$

NO. OF PANELS = 7 WITH 10.6" B/W PANELS

→ PUMP TANK SIZE = 2 x DAILY WASTE FLOW

= 2 x 360 GPD = 720 GPD

USE 1000 GAL TANK

→ SEPTIC TANK SIZE: USE 1500 GAL TANK

STEPHEN E. GEIGER

T & J PANEL SYSTEM

→ DOSING VOLUME:

THE DOSING CICLE IS DESIGNED TO PUMP ENOUGH EFFLUENT TO FILL TOP CHAMBER (3.6 GAL FOR A 16" PANEL) OF EACH PANEL IN THE SYSTEM.

TOT. NO. OF PANELS = 2(8) + 4(7) = 44

44 x 3.6 GAL = 158.4 GAL/DOSE

DOSING DEPTH = (158.4 GAL/DOSE / 1000 GAL TANK)(50" - 4") / 12"/FT = 0.607'
= 7.3"

(50" = DEPTH TO OUTLET "T"; 4" = THICKNESS OF CONC.)

→ CALC. NO. OF HOLES:

2 ~ 5/32" HOLES PER PANEL

44 PANELS x 2 = 88 HOLES

W/2' PRESSURE HEAD & 5/32" HOLES

FLOW RATE = 0.41 GPM

TOT. DOSING RATE = 0.41 GPM x 88 = 36 GPM

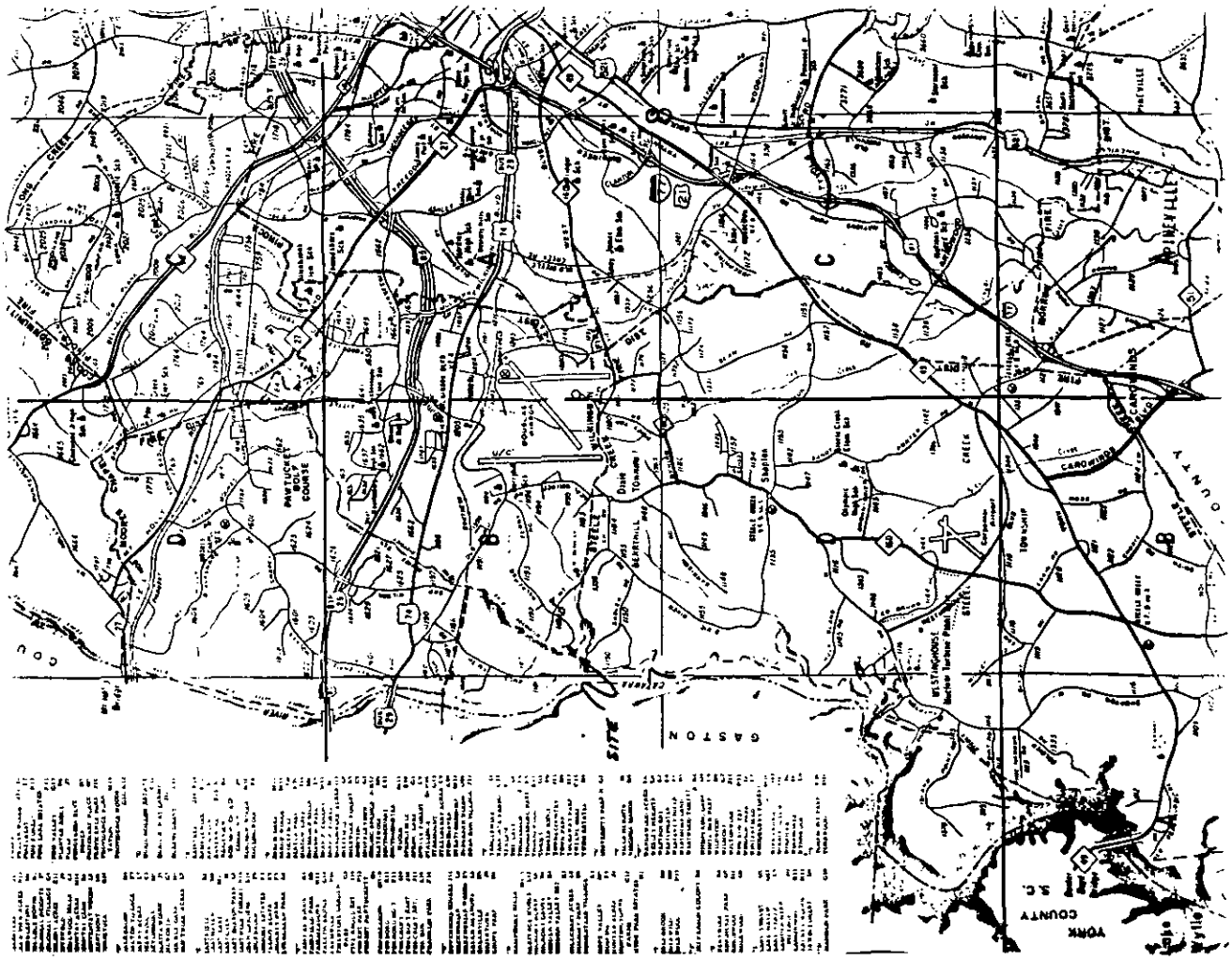
→ PUMP: PRESSURE HEAD = 2' (MIN)

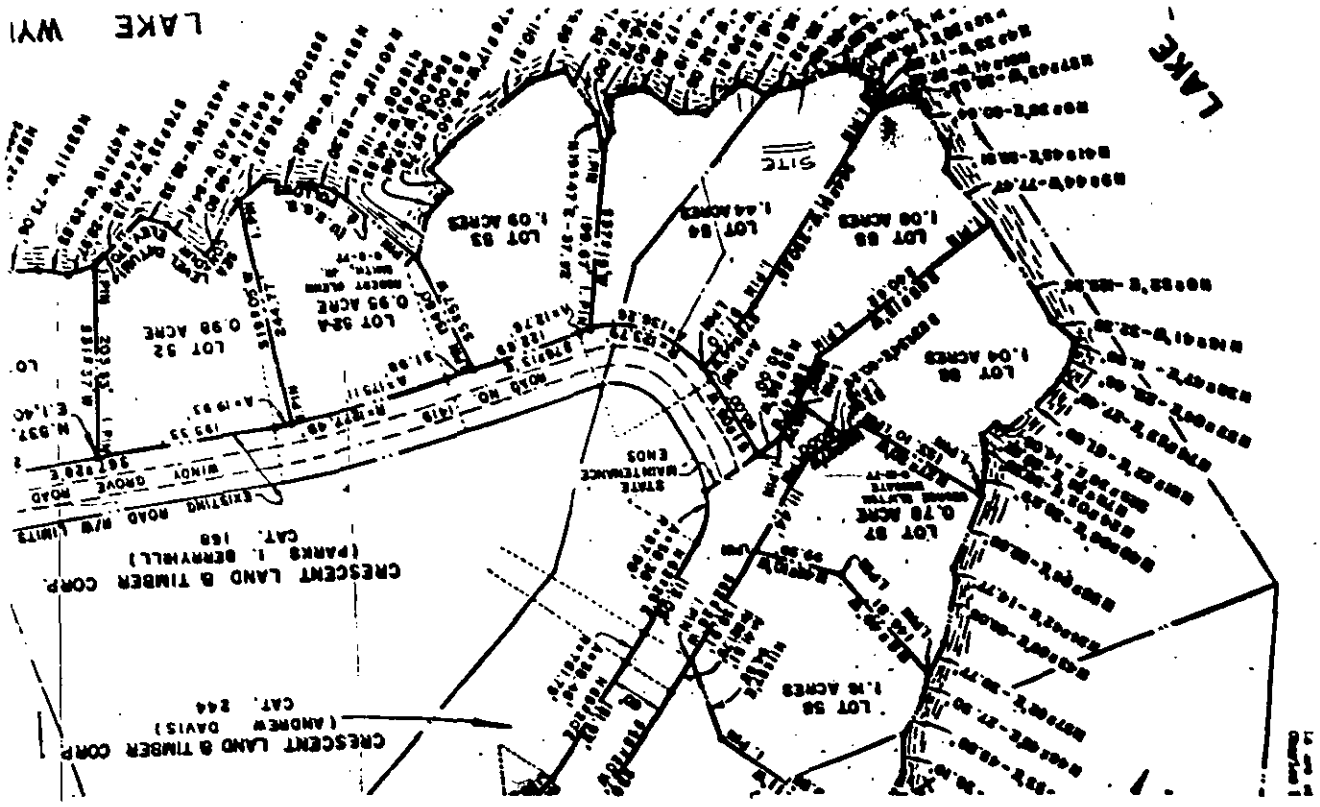
ELEV. HEAD = 8.5'

FRICTION HEAD = 1.2 (75/100)(2.16) = 1.9' (2" Ø LINE)

TOT. HEAD = 12.4'

USE MYERS SSM4A - 4/10 HP PUMP


SITE
GASTON
YORK COUNTY
S.C.


LAKE
SITE
LOT 83
1.09 ACRES
LOT 84
1.44 ACRES
LOT 85
1.08 ACRES
LOT 86
1.04 ACRES
LOT 87
0.78 ACRE
LOT 88
1.16 ACRES
LOT 92
0.98 ACRE
LOT 92-A
0.93 ACRE
CRESCENT LAND & TIMBER CORP.
(ANDREW DAVIS)
CAT. 244
CRESCENT LAND & TIMBER CORP.
(PARKS & BERRYHILL)
CAT. 168
EXISTING ROAD R/W LIMITS
WINDY GROVE ROAD
STATE MAINTENANCE ENDS

Design, Installation and Maintenance

of the

T & J Panel Wastewater Treatment System

draft

This manual has special sections for:

Sanitarians
Septic Tank Installers

Although this manual is sectioned for specific user groups, we at T & J Panel suggest that you familiarize yourself with the complete manual.

Sanitarians

In the early days of the T & J Panel System, when it was still considered an experimental system, the primary reason for permitting the Panel System was because of insufficient space for a conventional system. Now with inclusion in the Sewage Regulations (10NCAC 10A .1956(3)(a)(ii)), the Panel System should be considered when a quality effluent may be needed, space is limited, usuable soil is limited, or there are indications that at some future time space may be needed for other uses. When there is a trend for added development such as pools, other special landscaping, or additions to the home, the T & J Panel System may prevent insufficient space later. As an example, there was a subdivision where three of five homes in the same block added in-ground pools. Each of these pools impacted the existing nitrification lines. As the sanitarian, if you can forsee such a trend developing, discuss the Panel System with the home owner.

As noted in the regulations, the PPBPS is only permitted where soils are suitable for a conventional system, however, only one-half of the space is needed. The Panel System will allow the use of the best soils on the lot. This system may be gravity fed or pumped using the LP Panel System as described. Most of the concepts for T & J Panel layout are the same as for a conventional system. The biggest differences are areal needs and quality of effluent being introduced into the soil.

For comparison, a 3 bedroom house with a 0.4 gpd application rate is compared.

(These 3 steps are the same as with the conventional system.)

1) 120 gal. per bedroom x 3 bedroom=360 gal./day design flow

2) 360/0.4 application rate=900 ft. sq. of trench bottom

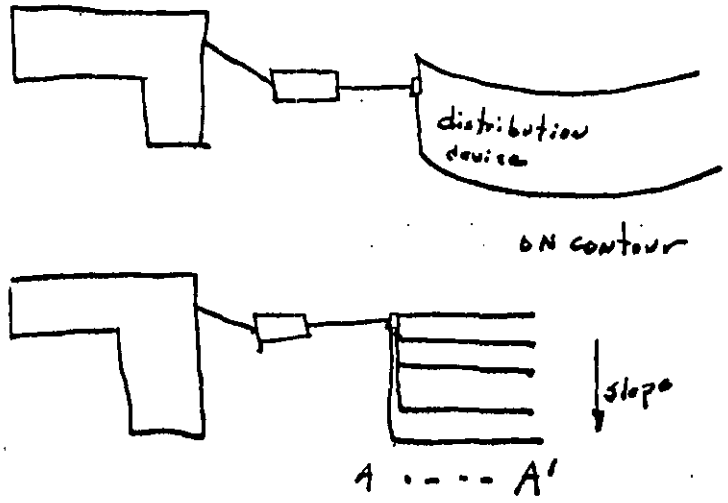
3) 900 ft. sq. 3 ft. wide trench=300 lineal feet of conventional system.

This system requires a 2700 ft. sq. area on the lot for the system and equal space for repair which equals 5400 sq. ft. of suitable and useable area. To calculate the T & J Panel System, the above calculations must be made thru step (3). For the Panel System an additional step 10NCAC 10A .1956(3)(a)(ii)(B) allows for a PPBPS (this is the T & J Panel System).

300 lineal feet of conventional system x 0.5 for the 16" high panel=150 lineal feet of Panel trench.

This PPBPS requires a 1200 ft. sq. area on the lot for the system and equal space for the repair. With the Panel System the installation and repair can go into the same space as the conventional gravel trench.

Areal space should always be a consideration for any system, but especially noteable with the Panel System. The following is a simplistic example of this concept.

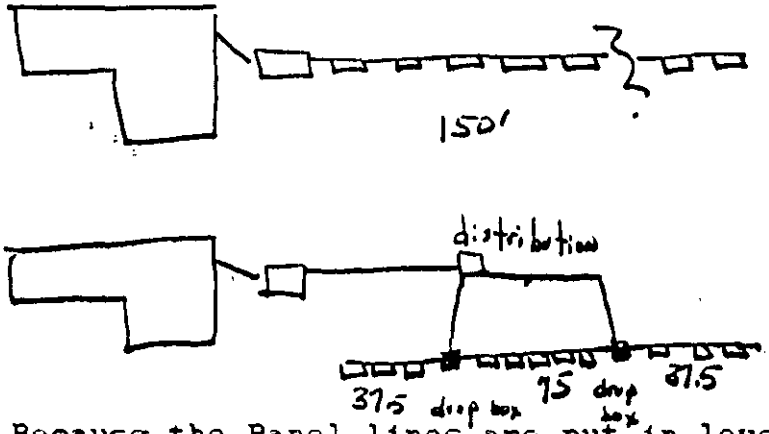


System of 150 lineal feet of Panel System

Here are the five lines of 30 feet each.

This is not a desireable design because the effluent must pass the thru the area A-A' which can place a strain on that area and cause a failure because of hydraulic overload.

Another extreme with this same example would be the use of a single trench fed from only one point.



Here the areal space is good and chance of hydraulic overloading is greatly reduced in a properly designed system; but downline distribution in the Panel line does not give optimum treatment.

In this situation a multiple feed shall be used.

Because the Panel lines are put in level, they feed both ways equally. No gravity line should exceed 75', unless it is fed from multiple points. If this 75 foot line can be fed from the middle, it will provide a much better system. In both of these examples, we are specifying the Panel System, but the logic applies to the conventional as well.

To calculate the number of panels needed for 150 lineal feet, multiply 150x12=1800", then divide by 52 which is 46 inches for the panel, plus 6 inches of space, which equals 34.6 panels or 34 panels in the system, or see design chart that follows. If these go into 2 trenches or more, there should be a balanced number of panels between lines, not 14 in one line and 20 in the other. An 18 and 16 split would be acceptable. Usually on the permit, the lines are illustrated as small blocks. (Enclosed are two actual permits used for Panel

COUNTY HEALTH DEPARTMENT

(SEPTIC TANK) IMPROVEMENTS PERMIT AND CERTIFICATE OF COMPLETION
(Ground Absorption Sewage Disposal System -- G. S. Chapter 130-Article 13C)

ER OR CONTRACTOR _____ DATE _____ PERMIT NO. _____

NE: Business _____ Home _____

TION _____

_____ S. R. No. _____

IVISION NAME _____ LOT NO. _____ SECTION OR BLOCK NO. _____

(✓) Mobile Home ( ) Business ( ) Other _____

drooms _____ No. Bathrooms _____

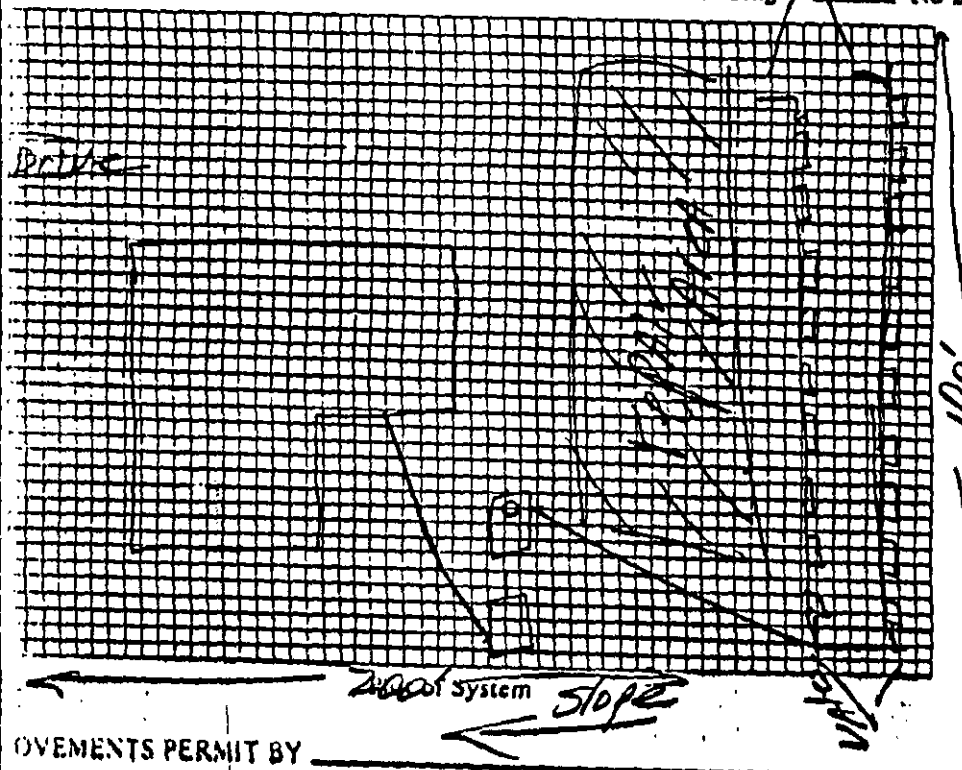
e Disposal Unit	N/A	Yes	( )	No ( )
Dishwasher		Yes	(✓)	No ( )
Wash. Machine		Yes	(✓)	No ( )
ntable		Yes	(✓)	No ( )

rea 20,000

Character & Porosity of Soil Clay loam over clay
Percolation Rate 0.4 gal/ft²/day 6" to 36"
Topography Slope
Depth to Water Table >60"
Rock or other impervious formations N/A

_ Basement with Plumbing _____ Basement without Plumbing _____ No Basement

Pressure Distribution



Size of Tank 1000 gal septic 1000 gal
Nitrification Field:
No. of Lines (2) 75' PPBS of Tr-
Sq. Ft. _____ Linear Ft. _____ Pvc.
Depth of Stone in Lines N/A
Water Supply: Individual ( )
Public ( )

Installed by _____

I understand and agree to install septic tank system as specified on this Improvements Permit.

Signed: Homeowner

OVEMENTS PERMIT BY _____

IENTS: _____

IFICATE OF COMPLETION BY _____ DATE _____

ING SYSTEM CHECKED BY: _____ DATE _____

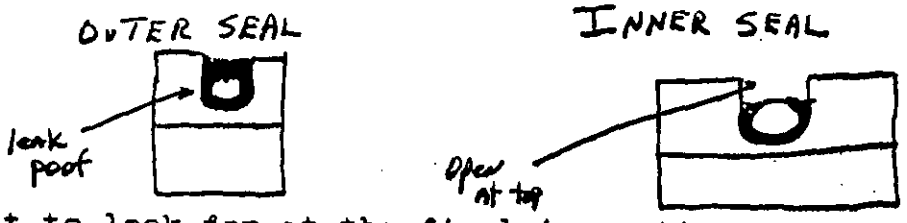
CONSTRUCTION MUST COMPLY WITH ALL OTHER APPLICABLE STATE AND LOCAL REGULATIONS.

VOID if any unauthorized changes are made in installation of system and/or if any false information is supplied in making ... Permit.

Health Dept Copy: White Inspection Dept. Copy: Yellow Sanitarian's Copy: Pink Owner's Copy: Gold

The Panel System may be installed as either a gravity or pumped system. When pumped, the designer should consult the LPP manual for specifics (See permits).

Backfill sand should be a clean, washed, medium creek sand. The ASTM C33 specification is one used for ready mix concrete sand and this should be available from any concrete plant. Clean particle sand for use in the top chamber of each panel is available from the Panel System distributor. This sand should be about 1 inch thick. Please note the seals on the drawing. The outer seals are closed completely. The inner seals only come to the top of the pipe (see drawing below). This causes downline flow and also allows for overflow should the system become filled. Sidewalls should be raked and limed when installed in clay soils.



What to look for at the final inspection.

Gravity system	Depth of panels Is the system level Are the seals properly constructed Was the proper sand used Were sidewalls raked and limed
Pumped system	All those above Size of pump-dose cycle and correct head Even distribution of effluent 3.6 gal/per panel

Installer

Generally, on level open land, a Panel System can be installed in about the same time as a conventional system; however, traditionally, Panel Systems have been installed where space and topography have restricted use of a conventional system, and for this reason system installations have required more time. Many installers enjoy the change of working with panels, not handling gravel, and the satisfaction of knowing a system is being installed where previously a conventional system was not possible.

Enclosed is an order sheet for the T & J Panel System indicating materials which will be needed. The Panel distributor for your area will lead you through this sheet when ordering or pricing the system. The order sheet has been filled in for a 300 lineal feet conventional system, which equals a 150 feet Panel System, gravity and pressure dosed. After ordering, your panels will be shipped to the job site on pallets, banded together.

Materials Chart For 16 Inch Panels

Materials needed per panel:

- Three feet of half inch tar seal rope per panel.
- Two feet of two inch PR160 pipe per panel or same linear feet as line layout of pressure system of one and a quarter inch pipe. Add pipe for tie in of lines to tank and house.
- One hundred pounds of partical sand (sand blasting sand fine texture) per eight panels.
- Same linear feet of one by six boards as line length.
- Bag powder lime when in clay soils.

Panel and C-33 Sand fill

50 LF - 11 panels
8½ tons sand

60 LF - 14 panels
10 tons sand

70 LF - 16 panels
11½ tons sand

80 LF - 18 panels
13½ tons sand

90 LF - 21 panels
15 tons sand

100 LF - 23 panels
16½ tons sand

110 LF - 25 panels
18½ tons sand

120 LF - 27 panels
20 tons sand

130 LF - 30 panels
21½ tons sand

140 LF - 32 panels
23 tons sand

150 LF - 34 panels
25 tons sand

160 LF - 37 panels
26½ tons sand

170 LF - 39 panels
28 tons sand

180 LF - 41 panels
30 tons sand

190 LF - 43 panels
31½ tons sand

200 LF - 46 panels
33 tons sand

DATE:

T S J PANEL MATERIAL WORKSHEET

HOMEOWNER: _____ COUNTY: _____

ADDRESS: _____

DESCRIPTION OF SYSTEM: Gravity System

# or Size		COST
34	T S J Panel _____ Inch (caps N/C)	
*	2" PR 160 Pipe	
*	2" Fitting _____	
102	Tar Seal Rope For Panels(3' per panel)	
4	Bag Partical Sand (1-100lb bag per 10 panels)	
2	Pallets (returnable)	
25 tons	Screen Creek Sand (FM 2.3 - 2.8)	
150'	1 X 4 Boards	
1	Powder Lime	
1	Septic Tank 1000 gallon	
4yds	Tar Seal Rope for Septic Tank	
* 1	4" PVC Pipe Schedule 40	
*	4" Fittings _____	
2	Distribution Box	
*	4" Flex pipe	
1	Flow Divider	

* job specific

Sub-Total

Del. Charge

Tax (4.5%)

TOTAL

DATE:

T S J [illegible] MATERIAL WORKSHEET

HOMEOWNER: _____

ADDRESS: _____ COUNTY: _____

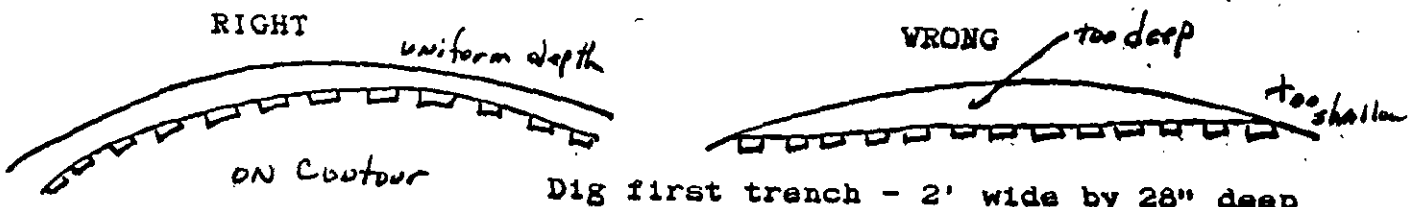
DESCRIPTION OF SYSTEM: Pressure Distribution

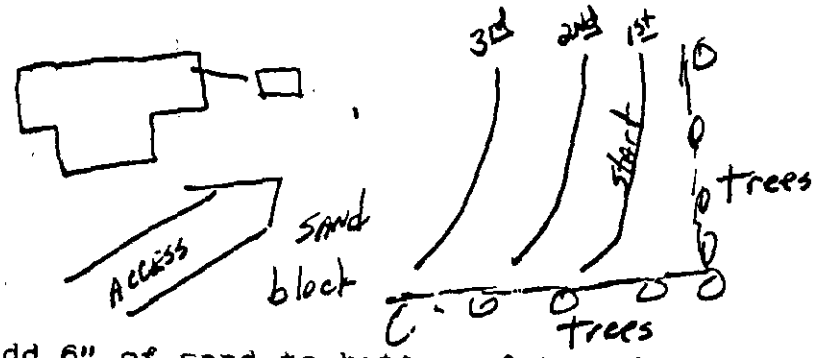
# or Size		COST
34	T S J Panel 16 Inch (eps N/C)	
*	2" PR 160 Pipe	
*	2" Fitting _____	
102	Tar Seal Rope For Panels(3' per panel)	
4	Bag Partical Sand (1-100lb bag per 10 panels)	
2	Pallets (returnable)	
25 tons	Screen Creek Sand (FM 2.3 - 3.8)	
150'	1 X 4 Boards	
1	Powder Lime	
2	Septic Tank 1000 Gallon	
yes	Tar Seal Rope for Septic Tank	
*	4" PVC Pipe Schedule 40	
*	4" Fittings _____	
	Distribution Box	
*	4" Flex Pipe	
*	Pump + Alarm	
	Sub-Total	
	Del. Charge	
	Tax (4.5%)	
	TOTAL	

* job specific

Installation for multiple line systems should begin in the most confining area and be worked to the more open areas. This is an example of a multiple line installation-Gravity fed System. Start at the furtherest or most confining line (this is to avoid running over newly installed panels).

Lines should be dug on contour to avoid deep placement or running out of the ground.



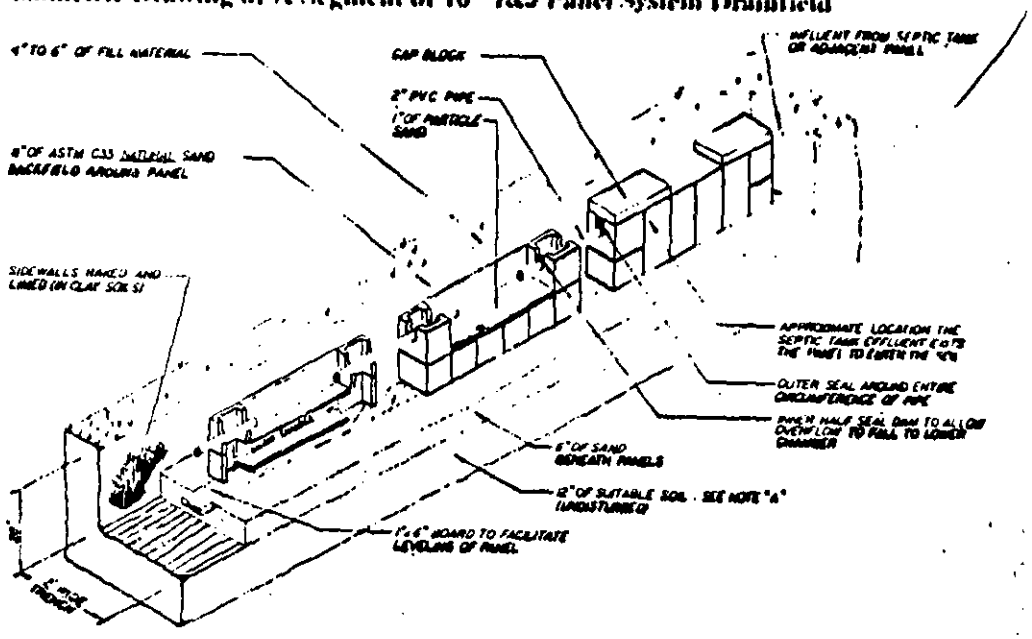


Dig first trench - 2' wide by 28" deep
Check grade for level
Rake sidewalls in clayey soils
Do not add lime until all smeared areas on the sides have been raked or picked off
Add a dusting of agricultural lime to both sides of trench
Set grade stakes

Add 6" of sand to bottom of trench and level. This will be firmed by foot traffic during leveling. After leveling, lay 1x6 boards flat on the sand and level. (These boards must be level as panels will sit directly on them.)

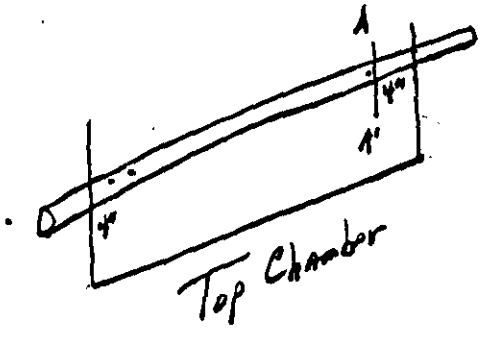
After the grade board is leveled, panels can be set onto the board either by two people or the backhoe or loader. Each panel weighs approximately 155 pounds and can be handled by two men. Panels should be set 6" apart. Six pounds of clean particle sand is then added to a depth of 1" to each end of the Panel in the upper chamber. After the line is set, appropriate sections of 2 inch PR160 PVC pipe or equivalent is used to tie each panel together. This pipe should be placed where the effluent discharges into the upper-middle chamber between the air chambers on either side. This pipe shall be sealed at the outer cradle completely, while the inner cradle shall be sealed only to the top radius of the pipe to allow air flow from the air chambers to the upper-middle chamber. This seal shall be made with a tar or butyl seal rope product that is pliable and soft. Once this is completed, there shall be a cap block placed over the air chamber and inlet of the upper-middle chamber. After the placement of the cap block, which may serve as an inspection port at a later date, the nitrification trench is backfilled to the top of the cap blocks with the sand as previously specified. With the sand to the top of the cap block, trenches should be left for the sanitarian to inspect. Soil cover should be added after the final inspection.

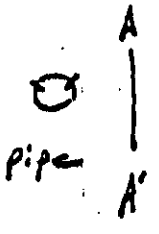
Isometric Drawing of A Segment of 16" T&J Panel System Drainfield



The LP Panel uses technology similar to that of Low Pressure Pipe (LPP) System. The tables and distribution design described in the LPP manual is applicable to the Panel System. The system should be used with 2-4 feet of head. In many respects a LP Panel is similar to an LPP with the holes discharging into the panels.

The dosing cycle for the Panel System is designed to pump enough effluent to fill the top chamber of each panel in the system. The top chamber of each 16" panel holds 3.6 gallons of waste water. In the 34 panel example 34 x 3.6=122 gallons per cycle. Two holes are drilled in the distribution pipe of each panel, one on each end at the clock positions of 10 and 2 o'clock, 4 inches back from the end of the top chamber.

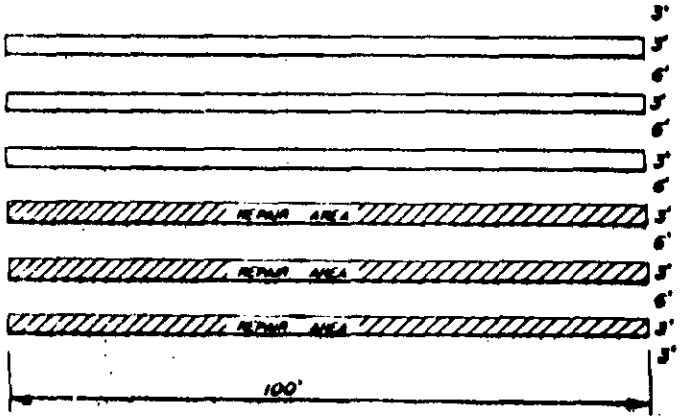




For specific details, or a pictoral demonstration, there is a special VCR film showing the complete installation of the Panel system available from T & J. T & J representatives will work with the counties on their first Panel System to insure a quality installation.

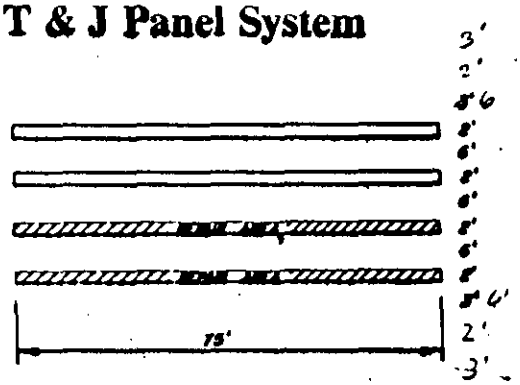
See the difference in a real space needed with the T&J Panel System Wastewater Treatment System when compared to a conventional tile/stone nitrification system.

Conventional System



A total suitable and usable area of 5400 square feet is needed for a conventional system.

T & J Panel System



A total suitable and usable area of 2400 square feet is needed for the T & J Panel System**.

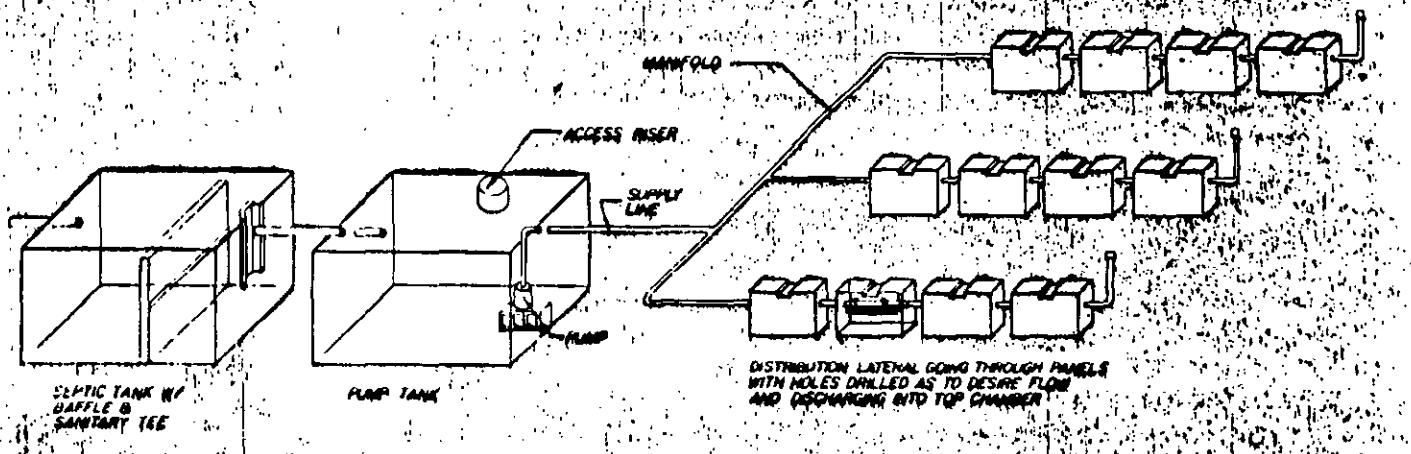
*Typical 3 bedroom house in a clay soil with 0.4 gallon per day per foot square application rate with a design flow on 120 gallons per day per bedroom.

**The T & J Panel Wastewater Treatment System is included in the North Carolina Sewage regulations as a PPBPS as of August 1, 1988. This allows for a 50% reduction in lineal footage of trench with the 16 inch panel as illustrated above. (See note "A")

Note A - This reflects North Carolina Codes. Please check local codes and practices for your area.

Low Pressure Panels (LP Panel) - Alternative installation for the T&J Panel System.

The LP offers a high quality effluent with a uniform distribution of wastewater throughout the entire system.



- Uniform distribution of the effluent.
- Elimination of localized overloading.
- Works with 2-4 feet of pressure head.
- Dosing and resting cycles.
- Placing of the effluent into the sidewall near the surface—where the more porous soils are found.
- The aerobic action of the T&J Panel's design.
- The filtration of the effluent through the T&J Panel System and its sand backfill.

THE T.&J. PANEL
WASTEWATER TREATMENT SYSTEM
PATENT NUMBER 4013559

P.O. Box 288 • Statesville, North Carolina 28677
N.C. WATS 1-800-222-2577 • (704) 872-9566

There are many new developments in ground absorption sewage disposal system on the market today. The T&J Panel System is designed to make the most out of the least amount of space possible. This is made possible by the fuller use of the more porous top soil and the limited effect of evapotranspiration and the wicking action of the block as the effluent is kept close to the surface of the ground and fused through the pores of the block to the sidewall area of the drainfield lines. This more general distribution and wicking allows for the use of the entire sidewall area and helps prevent the sealing off of the bottom and lower sidewalls that often occurs in a conventional system.

A 16 inch high panel is 46 inches long, 8 inches wide, and weighs about 155 pounds. There is a 6 inch by 6 inch air chamber at each end of the panel which extends from top to bottom to ensure aerobic action in each level of the field lines. Each panel has a storage chamber just below the top chamber for storage during peak use periods. A 24 inch panel is also available for use in repair or specially engineered systems.

Limited Warranty

The structural integrity of each T&J Panel, when installed in accordance with manufacturer's instructions, is warranted against defective materials and workmanship for one year from date of manufacture. Should a defect appear within the warranty period, purchaser must inform T&J Panel System of the defect before the warranty expires. T&J Panel System will supply a replacement unit. T&J Panel System's liability specifically excludes the cost of removal and/or installation of the panels. There are no other warranties with respect to the units, including no warranties of merchantability or of fitness for a particular purpose. The warranty does not extend to incidental, consequential, special or indirect damages. The company shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other loss or expense incurred by buyer. Specifically excluded from warranty coverage are: Damage to the panels due to ordinary wear and tear; alteration, accident, misuse, abuse or neglect of the panels; the panels being subjected to stresses greater than those prescribed in the installation instructions; the placement by buyer of improper materials into buyer's system; or any other event not caused by the company. Furthermore, in no event shall the company be responsible for any loss or damage to the buyer, the panels or any third party resulting from its installation or shipment. Buyer shall be solely responsible for ensuring that installation of the system is completed in accordance with all applicable laws, codes, rules and regulations. Any alteration of this warranty must be noted as "Warranty" in writing by the company.

Engineering and Test Data by Law Environmental Services and Ayers and Associates is available from the manufacturer at the address below.

THE T&J PANEL
WASTEWATER TREATMENT SYSTEM
PATENT NUMBER 4013559

P.O. Box 288 • Statesville, North Carolina 28677
N.C. WATS 1-800-222-2577 • (704) 872-9566

Distributed by

Serving people with a better quality system

State of North Carolina
Department of Natural Resources and Community Development
Mooresville Regional Office

James G. Martin, Governor
William W. Cobey, Jr., Secretary

Albert F. Hilton, Regional Manager

DIVISION OF ENVIRONMENTAL MANAGEMENT

June 21, 1989

Ms. Lisa Corbitt
Mecklenburg County Environmental Protection
1200 Blythe Boulevard
Charlotte, North Carolina 28203

RE: Permanent Well Abandonment
Geiger Residence
Mecklenburg County, N.C.

Dear Lisa:

Please find enclosed a copy of a well abandonment record submitted to this Office by Lassiter Well Drilling Company on the behalf of Mr. Steve Geiger. A review of the information indicates that, as far as could be determined, the well is abandoned in accordance with requirements as set forth in 15 NCAC 2C .0013.

If you should have any questions, please call.

Sincerely,

Jesse W. Wells
Hydrogeological Technician

Enclosure

cc: Mr. Steve Geiger

JWW/bb

919 North Main Street, P.O. Box 950, Mooresville, N.C. 28115-0950 • Telephone 704-663-1699

An Equal Opportunity Affirmative Action Employer

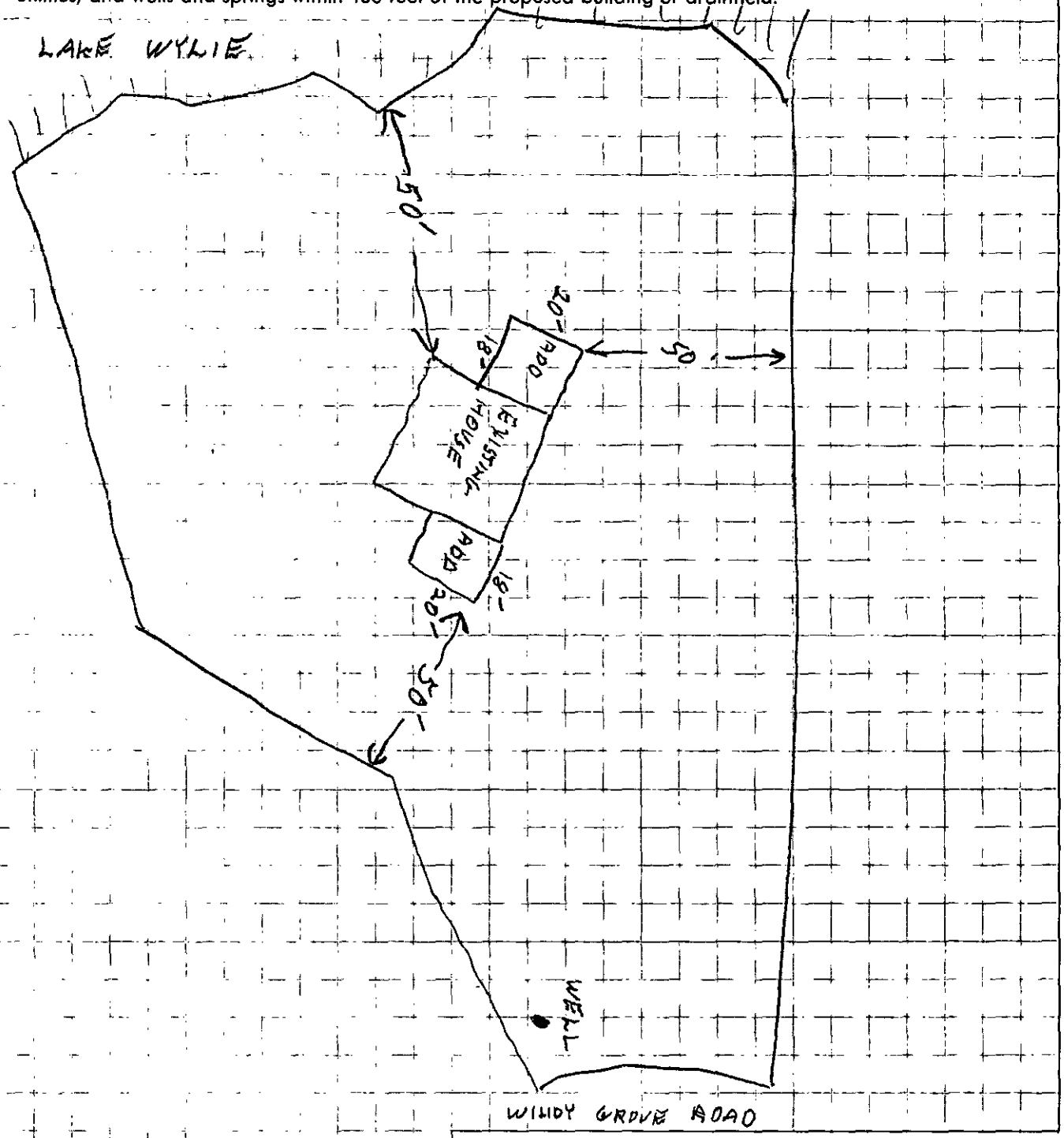
PROPOSED PLOT PLAN

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
1200 BLYTHE BOULEVARD
CHARLOTTE, NC 28203
PHONE (704) 376-4603

FILE: 4482A

TC: _____

Draw in and name all roads adjoining the property. Draw in and accurately dimension the lot concerned. Accurately indicate property boundaries, proposed and/or existing structures and driveways, underground utilities, and wells and springs within 100 feet of the proposed building or drainfield.



Signed: Stephen Gregg

Date: 5/11/89

7500

APPLICATION FOR AN IMPROVEMENT PERMIT

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
1200 BLYTHE BOULEVARD
CHARLOTTE, NC 28203
PHONE (704) 376-4603

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

(OFFICE USE ONLY)
FILE: 4482A
TC: _____
SERIAL: № 18412
☑ L ☐ CRT

JOB LOCATION

① ADDRESS: 11133 WINDY GROVE RD. (STREET NO. / STREET) ② FILE: 4482A
③ JURISDICTION: _____ ④ TAX PARCEL NO.: 11355141
⑤ SUBDIVISION: _____ ⑥ LOT: _____ ⑦ BLOCK: _____

OWNER

⑧ NAME: STEPHEN (FIRST) EARLE (MIDDLE) GEIGER (LAST)
⑨ MAILING ADDRESS: 11133 WINDY GROVE RD
⑩ CITY: CHARLOTTE ⑪ STATE: N.C. ⑫ ZIP: 28208
⑬ PHONE: (WORK) ~~393-7855~~ 372-4642 ⑭ (HOME) 393-7855

REQUEST

This request is for a(n):

⑮ ☒ New permit
⑯ ☐ Repair or alteration permit
⑰ ☐ Authorization for mobile home exchange
⑱ ☐ Other (specify) _____

DESIGN CRITERIA

System will serve:

⑲ ☒ Residence ⑳ ☐ Mobile home
㉑ ☐ Business or place of public assembly
㉒ Number of bedrooms? 3
㉕ Type? _____
㉓ Maximum occupancy? 4
㉖ Maximum number of employees? _____
㉔ Basement? ☐ yes ☒ no
㉗ Maximum number of seats? _____

WATER SUPPLY

㉘ *Water supply from (present or proposed):*

A ☒ Individual well
B ☐ Municipal system
C ☐ Community well
D ☐ Community system

㉙ The undersigned, 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 agents of the MECKLENBURG COUNTY HEALTH DEPARTMENT to enter onto the property for the purpose of processing this request.

Signed: Stephen Geiger
Date: 5/11/89

IMPROVEMENT PERMIT

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. This approval is granted in accordance with the provisions of Laws And Rules For Sanitary Sewage Collection, Treatment And Disposal 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 permit is issued by this Department.

... This permit is not transferable, and shall become null and void 36 months from the date of issuance.

Aggreement Form on file

Environmentalist _____ Date _____

Director or Authorized Section Head _____ Date 7-7-89

*This permit must be signed by the Director of Mecklenburg County Health Department or an authorized section head in order to be valid.

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION

CHARGE SLIP

Date 5/11/89

Name/Company Stephen Deiger

Sanitation _____

Vector Control ✓

O.P.W.D. _____

Service: UNP - new [redacted] 4482A

MECKLENBURG COUNTY
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
PAID

MAY 11 1989

Fee: $ [redacted] 75.00

Completed by

Collected by

Mecklenburg County
Health Department

July 5, 1989

Stephen Earle Geiger
11133 Windy Grove Road
Charlotte, NC 28208

Dear Mr. Geiger:

RE: Property located at 11133 Windy Grove Road
FILE: 4482A
PARCEL: 11133 Windy Grove Road

Receipt of your plans for a modified waste disposal system for the property referenced above is acknowledged.

Your plans for the modified system for the above property as submitted are approved with the following comments:

- The well should be located 100 feet or no less than 50 feet away from any part of the sewage disposal system and repair area.
- Water saving plumbing devices and low flush or microflush toilets must be installed when constructing the residence.

Upon execution and recording with the Register of Deeds Office, Mecklenburg County, of the enclosed "Septic Tank Agreement Form", an Improvements Permit may be issued by this office.

Sincerely,

Jim Ericson, R.S., Supervisor
On Premises Waste Disposal & Water Supply

JE/ir

Enclosures - 3 Septic Tank Agreement Forms

Environmental Health Division
1200 Blythe Boulevard • Charlotte, North Carolina 28203 • (704) 376-4603

Division of Environmental Management

P. O. Box 27687 - Raleigh, N. C. 27611

file #4482A

WELL ABANDONMENT RECORD

CONTRACTOR Lassiter Well Company REG. NO. 454

1. WELL LOCATION: (Show a sketch of the location on back of form.)

Nearest Town: Charlotte County Mecklenburg

Off Walkers Ferry Road Quadrangle No.

(Road, Community, Subdivision, Lot No.)

2. OWNER: Steve Geiger

3. ADDRESS: 11133 Windy Road Charlotte, NC

4. TOPOGRAPHY: draw, slope, hilltop, valley, flat

5. USE OF WELL: residence DATE: 6-15-89

6. TOTAL DEPTH: ~ 60 ft. DIAMETER: 2 in.

7. CASING REMOVED:

feet	diameter

8. SEALING MATERIAL:

Neat cement	Sand cement
bags of cement 3	bags of cement
gals. of water 18	yds. of sand
	gals. of water

Other

Type material

Amount

9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL.

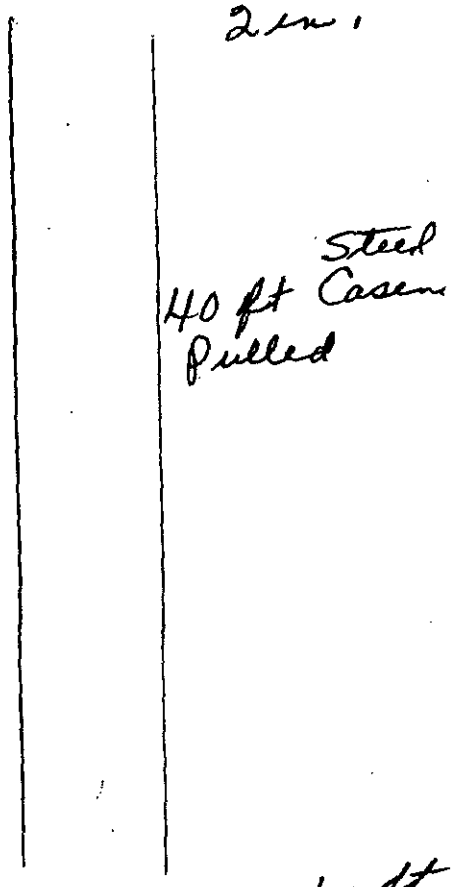
Pulled 2" Packer jet and cemented well with cement

I do hereby certify that this well abandonment record is true and exact.

Vernon Lassiter Jr 6-19-89

Signature of Contractor or Agent Date

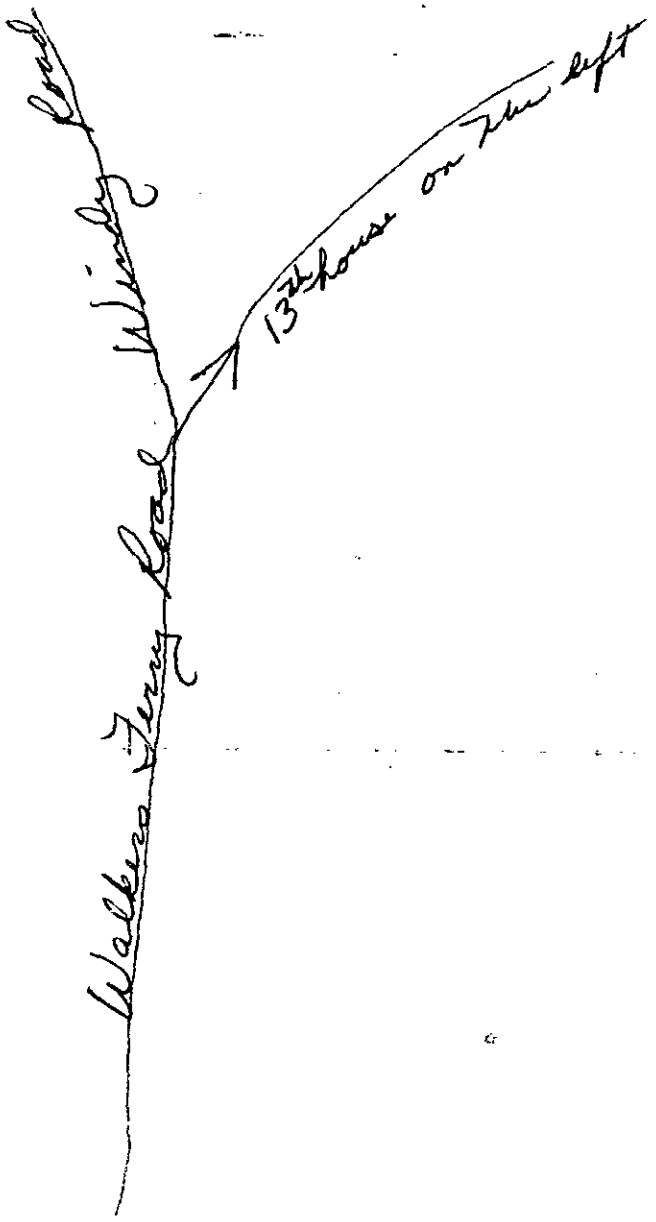
WELL DIAGRAM: Draw a detailed sketch of the well showing total depth, depth and diameter of screens remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.



Submit original to the Division of Environmental Management,

EW-30 Revised 10/1/80

WELL LOCATION: Draw a location sketch showing the direction and distance of the well to at least two (2) nearby reference points such as roads, intersections and streams. Identify roads with State Highway road identification numbers.



MECKLENBURG COUNTY ENVIRONMENTAL HEALTH
SITE EVALUATION REPORT
SERIAL NUMBER 15168

File: 4482A Action 2

Parcel: 11325141 ☐ PC

Location: 11133 Windy Grove Road

Subdivision:

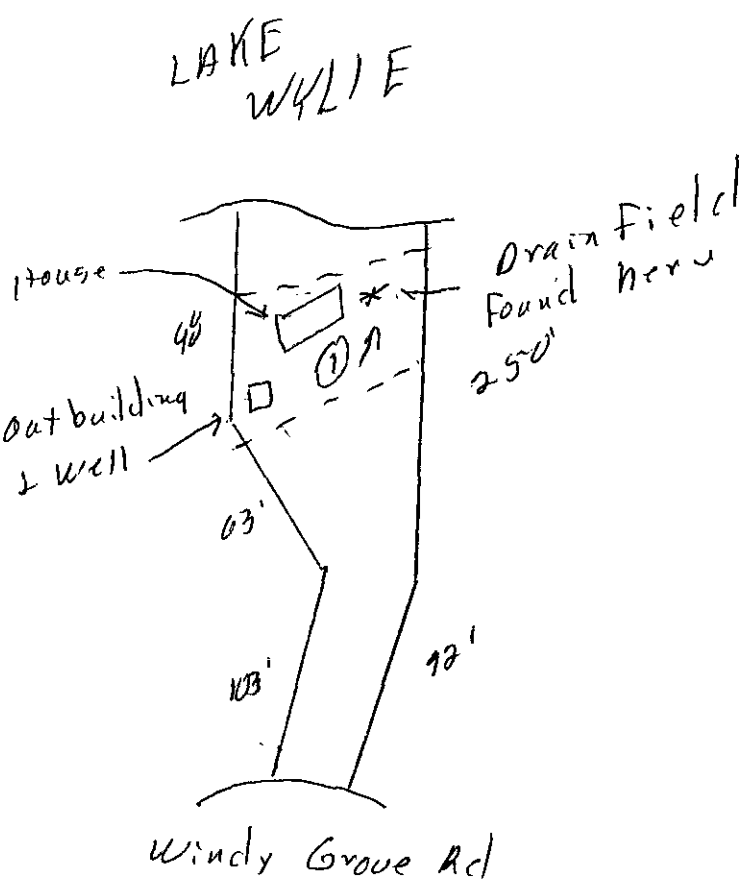
Lot: Block: Acres: Approx .3 Inc

Owner: Stephen Earle Geiger
Address: 11133 Windy Grove Road
Charlotte, NC 28208

Comments: _____

Described by: William A. Mack

Date: 5-9-08



***** EVALUATION KEY *****

S = Suitable U = Unsuitable
PS = Provisionally Suitable
The "Area Classification" below indicates the suitability of areas in the diagram.

FACTORS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
Topography	(S) PS U 6-12%	S PS U	S PS U	S PS U	S PS U	S PS U
Texture	S (PS) U Clay	S PS U	S PS U	S PS U	S PS U	S PS U
Structure	S (PS) U Blocky	S PS U	S PS U	S PS U	S PS U	S PS U
Drainage	S (PS) U >36" To Water	S PS U	S PS U	S PS U	S PS U	S PS U
Depth	S (PS) U 36" +	S PS U	S PS U	S PS U	S PS U	S PS U
Restrictive Horizons	S (PS) U >36"	S PS U	S PS U	S PS U	S PS U	S PS U
Available Space	S PS (U) Restricted	S PS U	S PS U	S PS U	S PS U	S PS U
Other (specify)	S PS U	S PS U	S PS U	S PS U	S PS U	S PS U
Soil Group/Series	IVA Cecil-Lilla					
Area Classification	S PS (U)	S PS U	S PS U	S PS U	S PS U	S PS U

MECKLENBURG COUNTY
Department of Environmental Health

May 9th, 1988

Stephen Earle Geiger
11133 Windy Grove Road
Charlotte, NC 28208

RE: Property located at 11133 Windy Grove Road
FILE: 4482A
PARCEL: 11325141

Dear Sir:

At your request, a field investigation was conducted on the property designated above for the purpose of determining site suitability for the installation of a ground absorption sewage disposal system. The results of this investigation showed the property to be classified UNSUITABLE for the installation of such a system. A copy of the Site Evaluation Report (Serial Number 15168) is enclosed.

State regulations provide that sites originally classified unsuitable may be utilized for the installation of alternate or modified sewage disposal systems provided the requirements of 10 NCAC 10A .1948 (c) are met. A reprint of this section is enclosed for your information.

Should you desire to file for permission to install an alternate or modified sewage treatment system on the property, please submit an Application For An Improvement Permit with an ACCURATELY dimensioned plot plan detailing the location of current and/or proposed buildings, wells and sewage disposal systems to this office. They will be reviewed, and if it is determined that the proposed system may reasonably be expected to function satisfactorily, an Improvement Permit will be issued by the Department upon completion by you, of a formal request for lot reclassification.

If I may be of any assistance, please feel free to call.

Sincerely,

Sylvia D. Daniel, R.S.
Environmental Health Supervisor
Environmental Resources Division

Enclosure (2)

4/20/88 Paid $30.00 cash Rec'd

APPLICATION FOR SOIL INVESTIGATION

MECKLENBURG COUNTY · ENVIRONMENTAL HEALTH ·

1200 BLYTHE BOULEVARD
CHARLOTTE, NC 28203
PHONE (704) 376-4603

(OFFICE USE ONLY)

FILE: 4482A

TC: 113-251-41

☐ PC ☐ REPT

JOB LOCATION

① ADDRESS: 11133 WINDY GROVE RD.

② SUBDIVISION: _____ ③ LOT: _____ ④ BLOCK: _____

⑤ PARCEL REFERENCE: BOOK NO.: _____ PAGE NO.: _____ PARCEL NO.: _____

⑥ DEED REFERENCE: BOOK NO.: _____ PAGE NO.: _____

OWNER

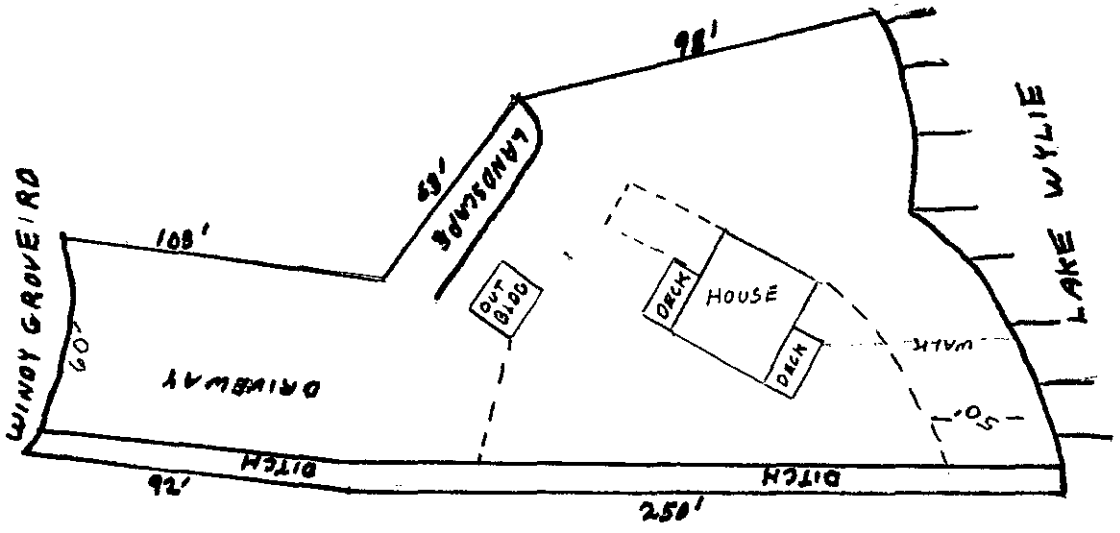
⑦ NAME: STEPHEN (FIRST) EARLE (MIDDLE) GEIGER (LAST)

⑧ MAILING ADDRESS: 11133 WINDY GROVE RD.

⑨ CITY: CHARLOTTE ⑩ STATE: N.C. ⑪ ZIP: 28208

⑫ PHONE: (WORK) 372-4642 (HOME) 393-7855

⑬ Accurately diagram and dimension lot.



SHADED AREA INDICATES PROPOSED FIELD

⑭ The undersigned, 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 agents of the MECKLENBURG COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH to enter onto the property for the purpose of processing this request.

Signed: Stephen Geiger

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

Date: 4/20/88

WHITE - ENVIRONMENTAL HEALTH DEPARTMENT'S COPY ● CANARY - ENVIRONMENTALIST'S COPY ● PINK - OWNER'S COPY

APPLICATION FOR AN IMPROVEMENT PERMIT

4482A

MECKLENBURG COUNTY · ENVIRONMENTAL HEALTH ·

1200 BLYTHE BOULEVARD
CHARLOTTE, NC 28203
PHONE (704) 376-4603

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

(OFFICE USE ONLY)

FILE: ~~20950~~ 4482A

TC: _____

SERIAL: Nº 15882 ☑ L ☐ CRT

JOB LOCATION

① ADDRESS: 11133 WINDY GROVE RD. (STREET NO. / STREET) ② FILE: _____

③ JURISDICTION: _____ ④ TAX PARCEL NO.: 113-251-12

⑤ SUBDIVISION: _____ ⑥ LOT: _____ ⑦ BLOCK: _____

OWNER

⑧ NAME: STEPHEN (FIRST) EARLE (MIDDLE) GEIGER (LAST)

⑨ MAILING ADDRESS: 11133 WINDY GROVE RD.

⑩ CITY: CHARLOTTE ⑪ STATE: N.C. ⑫ ZIP: 28208

⑬ PHONE: (WORK) 372-4642 ⑭ (HOME) 393-7855

REQUEST

This request is for a(n):

⑮ ☐ New permit ⑰ ☐ Authorization for mobile home exchange

⑯ ☒ Repair or alteration permit ⑱ ☐ Other (specify) _____

DESIGN CRITERIA

System will serve:

⑲ ☑ Residence ⑳ ☐ Mobile home ㉑ ☐ Business or place of public assembly

㉒ Number of bedrooms? 3 ㉕ Type? _____

㉓ Maximum occupancy? 4 ㉖ Maximum number of employees? _____

㉔ Basement? ☐ yes ☐ no ㉗ Maximum number of seats? _____

WATER SUPPLY

㉘ Water supply from (present or proposed):

A ☑ Individual well

B ☐ Municipal system

C ☐ Community well

D ☐ Community system

㉙ The undersigned, 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 agents of the MECKLENBURG COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH to enter onto the property for the purpose of processing this request.

Signed: Stephen Geiger

Date: 3/30/88

IMPROVEMENT PERMIT

The undersigned, an authorized agent of the MECKLENBURG COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH, certifies that the Department has approved the Request for the Job Location contained in this document. This approval is granted in accordance with the provisions of Laws And Rules For Sanitary Sewage Collection, Treatment And Disposal 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 permit is issued by this Department.

. . . This permit is not transferable, and shall become null and void 36 months from the date of issuance.

_____ / _____

Environmentalist Date

_____ / _____

Director or Authorized Section Head Date

*This permit must be signed by the Director of Environmental Health or an authorized section head in order to be valid.