

18345 HIDEAWAY RD

21717222

1/9/2008

duponbj

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

Groundwater & Wastewater Services
Septic Project File & Data Review Worksheet

GWS File #: _____ WASPS App #: _____

Primary ES assigned to project: _____

Secondary ES assigned to project: _____

Project Type: New System ☐ Alteration ☐ Repair ☐ Modified Plot Plan ☐

I. File Review:

Rule or Law	Permit Application			
.1937(d)	Is the Application complete	Yes ☑	No ☐	N/A ☐
.1937(d)	Is there a Site plan/Plat with application	Yes ☐	No ☐	N/A ☐
.1937(d)	Is the Facility shown?	Yes ☐	No ☐	N/A ☐
.1937(d)	Are appurtenances shown	Yes ☐	No ☐	N/A ☐
	Site Evaluation Information			
.1939 (a)(1)	Topography and Landscape Position Recorded?	Yes ☑	No ☐	N/A ☐
.1940 (a-g)	Slope % Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Texture Class Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Structure type Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Consistence Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Mineralogy Recorded?	Yes ☐	No ☐	N/A ☑
.1939 (a)(3)	Soil Wetness Condition Recorded?	Yes ☐	No ☐	N/A ☑
.1939 (a)(4)	Soil Depth to Rock or Parent Material Recorded When Encountered	Yes ☐	No ☐	N/A ☑
.1939 (a)(5)	Depth to Restrictive Horizons Recorded When Encountered?	Yes ☐	No ☐	N/A ☑
.1939 (a)(6)	Sufficient Available Space Recorded?	Yes ☑	No ☐	N/A ☐
.1937(m)	Are the Profile Locations Shown?	YES		
.1939(a)	Are the S/PS Profiles in system & in repair area?	Yes ☑	No ☐	N/A ☐
& .1945(b)	Number of auger borings made: 5 Were sufficient auger borings made?	Yes ☐	No ☐	N/A ☐
.1939(d), .1955, .1956, .1957	LTAR 3	Yes ☐	No ☐	N/A ☐
	Improvement Permit/Construction Authorization			
.1937(g) 130A-336(a)	Proposed System Type stated-Initial	Yes ☑	No ☐	N/A ☐
.1945(b)	Proposed System Type stated-Repair	Yes ☐	No ☐	N/A ☑
130A-336 (a)(3)	System location identifiable by setbacks - Initial	Yes ☑	No ☐	N/A ☐
.1937(g) .1945(b)	System components shown – Initial	Yes ☑	No ☐	N/A ☐
.1945(b)	Repair area shown	Yes ☐	No ☐	N/A ☑
.1937 (f)(g)	Does System design match facility, flow & WWcharacteristics?	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Is System design consistent with soil/site conditions?	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Is the System located in the approved area?	Yes ☑	No ☐	N/A ☐
130A-336(a)	Is the Design flow (gpd) indicated?	Yes ☑	No ☐	N/A ☐

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

II. WASPS Review:

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

Items requiring correction/modification: _____

Comments:

_____

_____

_____

_____

_____

IA issued date: 5-20 07

OP issued date: 5 15 07

Review performed by: KR

Date performed: 5.22.07

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

NC DENR
Division of Environmental Health
On-Site Wastewater Section

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

File #: 5745B Permit #: 5745B Tax Parcel #: 217-172-22

Property Owner: BILL HODGES

Job Location Address: 18345 HIDEAWAY RD.

City: CHARLOTTE State: NC Zip Code: 28278

Operation Permit Issuance Date: 5/15/07 Contractor Name: STEVE AUTRY

Permitted Design Flow: 600 GPD

Liquid Capacity of Septic Tank: 1500 gallons

Liquid Capacity of Dosing Tank: 1500 gallons

Effluent Pump Model: GOULDS 0.5 HP

Drainfield Installation ☐ N/A INNOVATIVE 25% REDUCTION E-Z FLOW

Trench Depth: 30 inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 504 feet

# of Lines: 8 @ 63 feet

Depth of Media: N/A inches (Type) 1116 pg

Depth of Cover: 12-15 inches

Distribution Device: D-box

Inspection Dates

Tank(s) Inspected: 5/15/07

Excavation Inspected: 5/15/07

Pump & Controls Inspected: 5/15/07

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

Bed Depth: _____ inches

Bed Width: _____ feet

Total line length: _____ feet

# of Lines: _____ @ _____ feet

Depth of Media: _____ inches (Type) _____

Depth of Cover: _____ inches

Distribution Device: _____

SKETCH OF SYSTEM INSTALLATION
(As-Built Drawing)

INSTALLED ACCORDING TO PLANS ON FILE SUBMITTED BY TOBY JACOBS 1/15/05

ALL REQUIREMENTS OF N.C. ADMINISTRATIVE CODE 1961.D SHALL BE MET.

Water Supply Source

☐ Municipal ☑ Private Well ☐ Community Well

☐ Other _____

System Installation Setbacks

Distance from Building Foundation: 15 feet

Distance from Property Line: 10 feet

Distance from Water Supply Source: 750 feet

The undersigned has inspected the Septic Tank System described above, and certifies it has been ☑ installed ☐ altered ☐ repaired ☐ as detailed in the plot above ☑ in accordance with the permit issued and meets the provisions of 15A NCAC 18A. 1900, "Laws and Rules for Sewage Treatment and Disposal Systems" in effect on the date of issuance of the permit. The issuance of this Operation Permit does not in any way guarantee that the system will operate properly or *relieve any person now or hereafter owning, controlling,* or using such system from any liability resulting from the failure of the system to operate properly. This document is issued subject to those restrictions *and conditions shown on the permit(s)* and the provisions of 15A NCAC 18A. 1900 in addition to those listed below under "Comments." This document shall be null and void if any information contained in the application is untrue or if any additions are made to the property which would increase the requirements for said system.

Notice: Disturbance of the designated repair area may result in the Suspension or Revocation of this permit.

Comments: System Classification & Type: 1116.b. INNOVATIVE, 25% REDUCTION, E-Z FLOW. INSTALLED ACCORDING TO PLANS ON FILE. OPERATE maintain per 1930.e

DENR Authorized Agent: PAUL CARELLI, RS Signature: _____

Ellen Hancock
Senior Vice President
Science and Technology

NetFrame Systems Incorporated
1545 Barber Lane
Milpitas, California 95035
408-944-1711
408-942-0626 Fax

Internet: ellen@netframe.com
CompuServe: 75076,1711

Ellen Hancock
M
Silicon Graphics, Inc.
2011 N. Shoreline Blvd.
Mountain View, CA 94039-7311

415-960-1980
415-961-0595 Fax

Dear Ellen:

I'm pleased to confirm our offer of employment with NetFrame Systems Incorporated. Your starting salary will be $130,000 per year, payable in accordance with the Company's standard payroll practices. You will be eligible for a performance review and salary adjustment in January 1994.

In addition, you will be granted an option to purchase 30,000 shares of the Company's common stock at the fair market value on the date of grant. The option will vest over a four year period at the rate of 25% per year. Vesting will commence on the date you begin employment with the Company.

You will be eligible to participate in the Company's Executive Bonus Plan. Under the plan, you will be eligible to receive a bonus of up to 30% of your annual salary, based on the achievement of certain objectives established by the Board of Directors.

You will be eligible to participate in the Company's benefit plans, including medical, dental, life insurance, and 401(k) plans, subject to the terms and conditions of those plans.

Your employment with the Company is at will, meaning that either you or the Company may terminate your employment at any time for any reason, with or without cause or notice.

Please sign and return this letter to indicate your acceptance of these terms.

Sincerely,

Ellen Hancock

Agreed:

Date: 4/13/94

FEE: 300.00
DATE: 6/30/05
Checks 1024 VW

AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION

Project # 133700 LD AC5

PERMIT NUMBER: 5745B
PARCEL NUMBER: 217-172-22

JOB LOCATION ADDRESS: 18345 Hideaway Rd
PROPERTY OWNER: William A. Hodges
BUILDING CONTRACTOR:
SUBDIVISION NAME:
AUTHORIZATION ISSUED BY: David Cornelius, RS DATE: 03/22/05

DENR/DEH AUTHORIZED AGENT 3/22/05

AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 5745B, 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:
Install according to plans on file submitted by Toney Jacobs and associates.

CONDITIONS OF IMPROVEMENT PERMIT

Permit Number: **5745B**

Tax Number: **217-172-22**

- The IMPROVEMNET 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:

0.3 Long-term acceptance rate (GPD/ft^2)	**600** Max gallons/day wastewater flow	**1500** Absorption Area (ft^2)	**9** Trench spacing (min. on centers) (ft)
Serviced by private well: ☒ Yes ☐ No	**1500** Gallon septic tank	**504** Total trench length (ft)	**24** Maximum trench depth (in) (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions.)
5 Bedrooms in residence	**1500** Gallon pump tank	**na** Depth of stone (in)	

Any surface water present: **Yes** Type: **Lake Wylie** Minimum separation distance (ft): **50**

Additional conditions: **Install according to plans on file submitted by Toney Jacobs and Associates. 100% repair not 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:

____ Absorption Area (ft^2) ____ Total trench length (ft)	__ Depth of stone (in)	__ Trench spacing (min. on centers) (ft)	__ Maximum trench depth (in)

The undersigned, an authorized agent of the MECKLENBURG COUNTY HELTH 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 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.

IWWS, RS 3/22/05

DENR Authorized Agent Date

MECKLENBURG COUNTY
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
c/o HAL MARSHALL CTR.
SUITE 211
700 N. TRYON ST.
CHARLOTTE, NC 28202
(704) 336-5103

Owner/Agent Signature CKS 3/24/05 Date

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENTAL, HEALTH, AND
NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

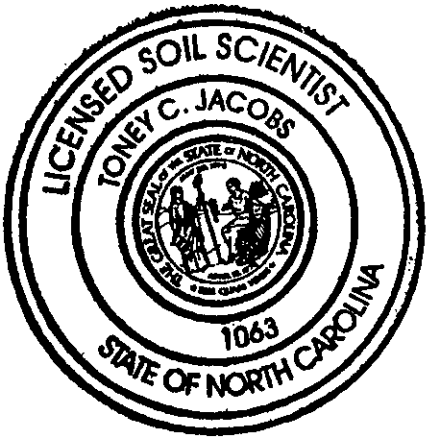
RESIDENTIAL LOW PRESSURE DOSING
25% REDUCTION SEPTIC SYSTEM
FOR
SUBSURFACE WASTEWATER DISPOSAL
HIDEAWAY ROAD - LOT 37
MECKLENBURG COUNTY, NC

MCHD FILE #~~5693B~~ 5745B

Prepared for:
William A. Hodges
17224 Due West Drive
Charlotte, North Carolina 28278

Prepared by:
Toney C. Jacobs & Associates, Inc.
168 Broadbill Drive
Mooresville, North Carolina 28117
office (704) 663-6905
fax (704) 662-9845
e-mail jacobs@i-america.net

January 15, 2005



Copy: Mr. David Cornelius, R.S.
Mecklenburg County Health Dept.-IWWS
700 N. Tryon Street
Charlotte, N.C. 28202

Toney C. Jacobs, LSS

BACKGROUND

A 25% reduction system is used for conserving space. Soil profiles by Mr. Bill Marlin (MCHD) were ps soils to approximately 48" and 0.3LTAR. This lot does not require 100% repair.

APPLICATION INFORMATION

1. Owner: William A. Hodges
   17224 Due West Drive
   Charlotte, N. C. 28278

   Soil Scientist
   and Designer: Toney C. Jacobs, LSS
   Toney C. Jacobs & Associates, Inc.
   168 Broadbill Drive
   Mooresville, NC 28117
   (704) 663-6905 (Office)
   (704) 662-9845 (fax)
   e-mail jacobs@i-america.net

2. Water supply is provided by an on-site well (shown on site plan).
3. Facility to be served by the proposed system is a 5-bedroom single family residence.

LOCATION

The property is located off Youngblood-Snug Harbor-Hideaway, at the end of Hideaway.

REFERENCES

Law and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, Department of Environment Health and Natural Resources, August 1, 1998.

PLANS AND SPECIFICATIONS FOR SPECIFIC SYSTEM COMPONENTS

Septic Tank

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

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

Pumping Tank

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

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

Pipe and Fittings

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

CONSTRUCTION INSTALLATION

Site Preparation

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

Tank Installation

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

Supply Manifold

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

Lateral Lines

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

PROPER OPERATION CHECK AND PRESSURE HEAD ADJUSTMENT

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

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

FINAL LANDSCAPING

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

QUALITY ASSURANCE REQUIREMENTS

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

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

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

OPERATION AND MAINTENANCE PROCEDURE

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

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

HOMEOWNER SUGGESTION

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

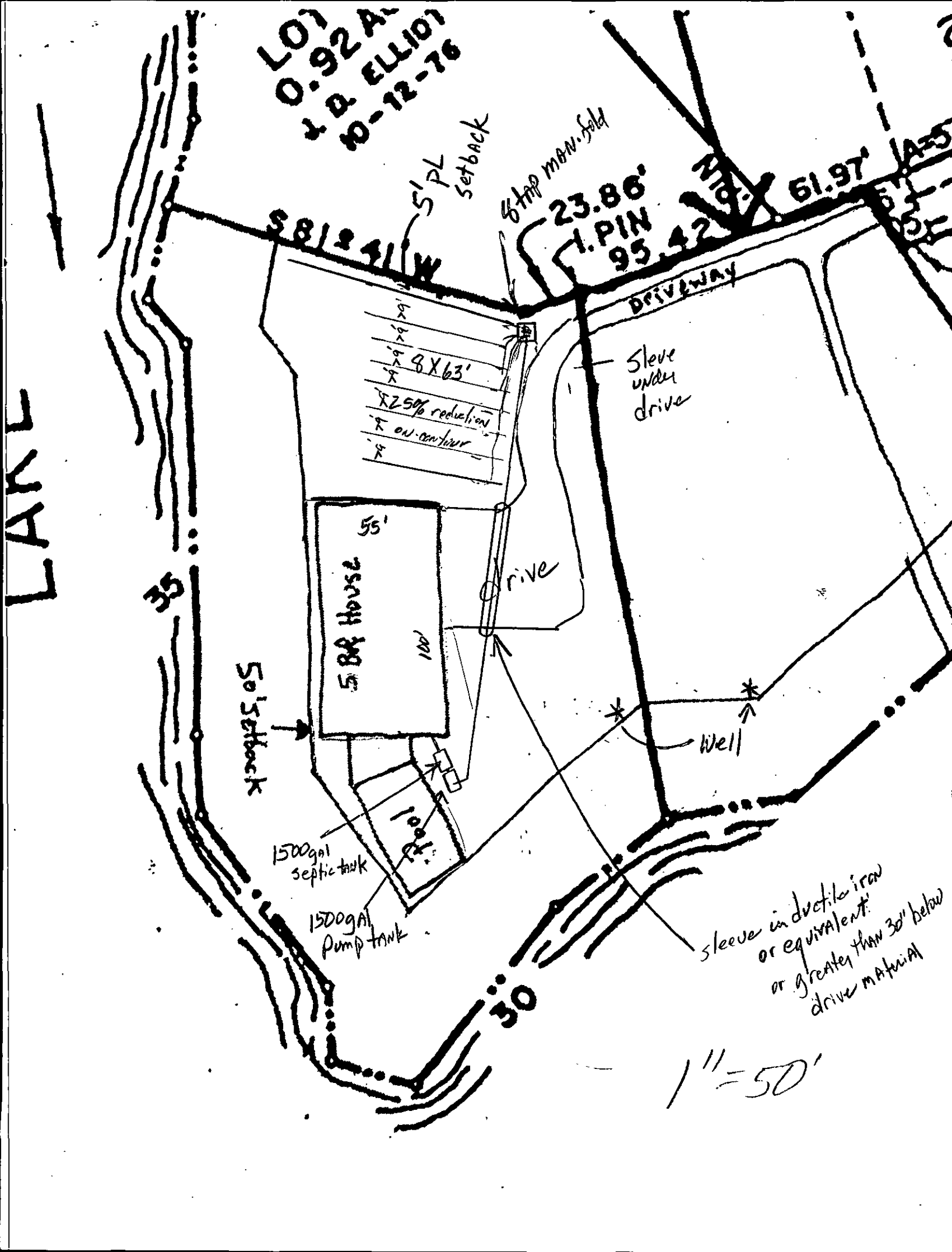
1. Garbage disposals should not be used in on-site systems. The ground garbage adds large amounts of solids to a septic tank, causing sludge to build up at a quicker rate than without. If disposal is installed, use should be limited.
2. Grease, cooking oils and coffee grounds should never be put into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

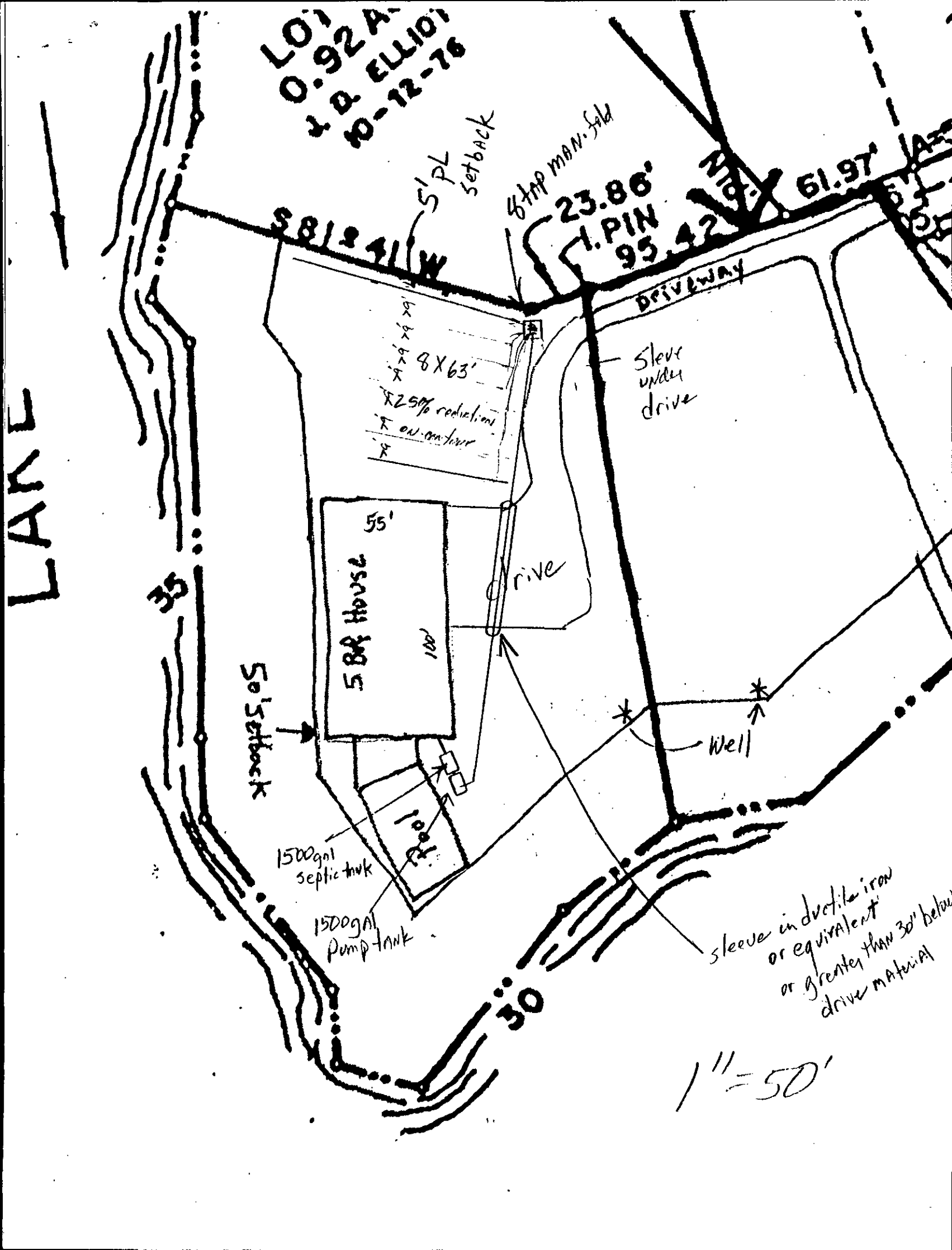
4. Used motor oil and other such oily liquids should not be put into a septic tank.
5. Using less water can reduce the amount of water flowing to the treatment and disposal field.
6. Water-saving fixtures and devices can be installed on sinks, toilets and showers to reduce the rate at which the water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

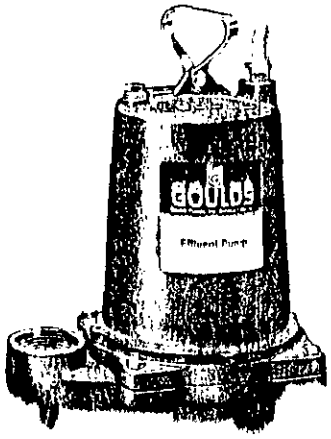
DESIGN SPECIFICATIONS

Lot 37 - Hideaway Road

Daily design flow:	600 gpd.
Septic tank size:	1500 gal. (2 compartments)
Pumping tank size:	1500 gal.
Effluent loading rate:	0.3 gpd/ft^2
Total length and diameter of supply pipe:	app. 160' of 2" SCH 40 PVC
Number and length of laterals:	8 @63' long
Number and length of repair laterals:	not required
Pressure Manifold:	8 taps at 3/8" (SCH 80 PVC)
Flow rate through the system:	26.2 gpm capability
Elevation head:	Approx. 30.0'
Pressure head:	2.0'
Friction head:	6.0'
20% contingency	4.6'
Total head:	46' (to be verified at installation after tanks are set)
Pump requirements:	26.2 gpm at 46' of head; use Goulds WE07H ¾ hp pump or equivalent with compatible electrical
Dosing volume:	300 gal. – 2.0 doses/day at design flow
Depth of water pumped per dose:	calculated to specific tank by measure or dealer engineering specifications(1 cubic ft. of water equals 7.48 gal.)
Pump run per dose:	approx. 11.5 min
Check valve:	yes
Siphon break hole:	no


LOT
0.92 A
J. D. ELLIOT
10-12-76
5' PL setback
6 hp manifold
23.86'
1. PIN
95.42'
61.97'
S 81° 21' W
DRIVEWAY
8 X 63'
25% reduction
on center
Sleeve under drive
55'
5 BR House
100'
drive
50' setback
Well
10' x 10'
1500 gal septic tank
1500 gal pump tank
sleeve in ductile iron or equivalent or greater than 30" below drive material
LAKE
35
30
1" = 50'


LOT
0.92 A
J. D. ELLIOT
10-12-76
5' PL setback
4 hp man. fold
23.86'
1. PIN
95.42
61.97'
S 81° 21' W
Driveway
8 X 63'
25% reduction
ow contour
Sleeve under drive
55'
5 BR House
100'
Drive
50' setback
Well
1500 gal septic tank
1500 gal Pump tank
sleeve in ductile iron or equivalent or greater than 30" below drive material
LANE
35
30
1" = 50'



Goulds

Submersible Effluent Pump

MODEL

3885

APPLICATIONS

Specifically designed for the following uses:

- Homes
- Farms
- Trailer courts
- Motels
- Schools
- Hospitals
- Industry
- Effluent systems

SPECIFICATIONS

Pump

- Solids handling capabilities: ¾" maximum.
- *Discharge size:* 2" NPT.
- Capacities: up to 128 GPM.
- Total heads: up to 123 feet TDH.
- Mechanical seal: silicon carbide-rotary seat/silicon carbide-stationary seat, 300 series stainless steel metal parts, BUNA-N elastomers.
- Temperature: 104°F (40°C) continuous 140°F (60°C) intermittent.
- Fasteners: 300 series stainless steel.
- Capable of running dry without damage to components.

Motor

Single phase:

- ⅓ HP, 115 V, 200 V, 230 V, 60 Hz, 1750 RPM; ½ HP, 115 V, 60 Hz, 3500 RPM; ½ HP – 1½ HP, 230 V, 60 Hz, 3500 RPM.
- Built-in overload with automatic reset.
- Class B insulation.

Three phase:

- ½ HP – 1½ HP 200/230/460 V, 60 Hz, 3500 RPM.
- Class B insulation.
- Overload protection must be provided in starter unit.
- Shaft: threaded, 400 series stainless steel.
- Bearings: ball bearings upper and lower.
- Power cord: 20 foot standard length (optional lengths available).

Single phase:

- ⅓ and ½ HP – 16/3 SJTO with 115 V or 230 V three prong plug.
- ¾-1½ HP – 14/3 STO with bare leads.

Three phase:

- ½-1½ HP – 14/4 STO with bare leads. On CSA listed models – 20 foot length SJTW and STW are standard.

FEATURES

■ **Impeller:** Cast iron, semi-open, non-clog with pump-out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller available as an option.

■ **Casing:** Cast iron volute type for maximum efficiency. 2" NPT discharge adaptable for slide rail systems.

■ **Mechanical Seal: SILICON CARBIDE VS. SILICON CARBIDE** sealing faces. Stainless steel metal parts, BUNA-N elastomers.

■ **Shaft:** Corrosion-resistant stainless steel. Threaded design. Locknut on three phase models to guard against component damage on accidental reverse rotation.

■ **Motor:** Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.

■ **Designed for Continuous Operation:** Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage.

■ **Bearings:** Upper and lower heavy duty ball bearing construction.

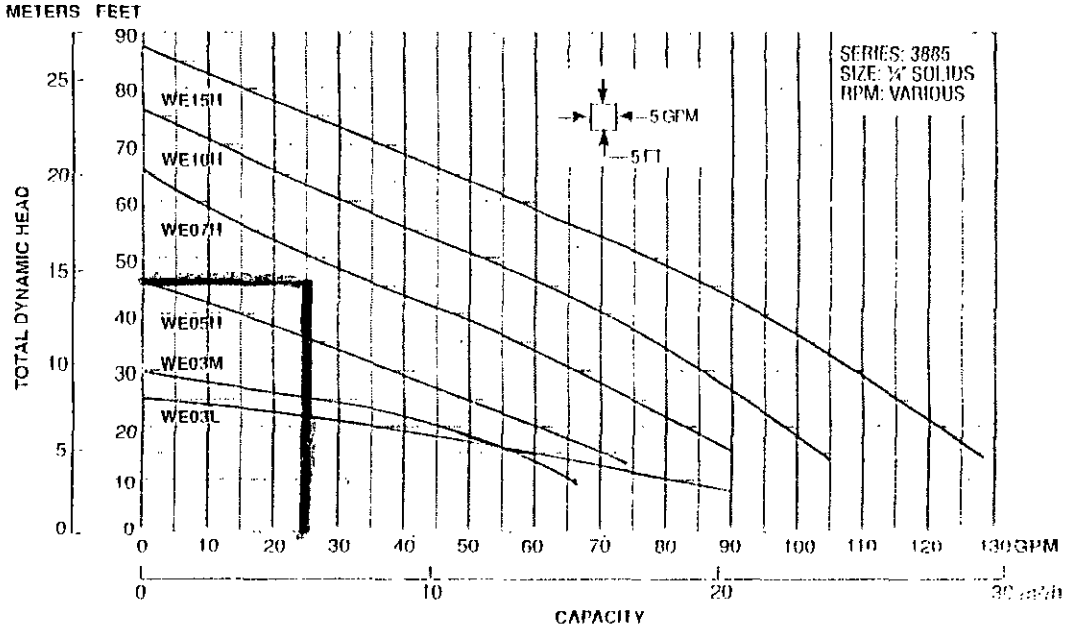
■ **Power Cable:** Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking.

■ **O-ring:** Assures positive sealing against contaminants and oil leakage.

AGENCY LISTINGS

Canadian Standards Association

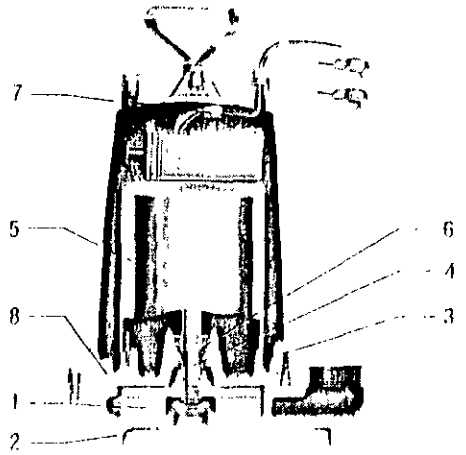
Underwriters Laboratories



© 1995 Goulds Pumps

PARTS

Item No.	Description
1	Impeller
2	Casing
3	Mechanical seal
4	Shaft
5	Motor
6	Bearings – upper and lower
7	Power cable
8	O-ring



Goulds Submersible Effluent Pump

MODEL

3885

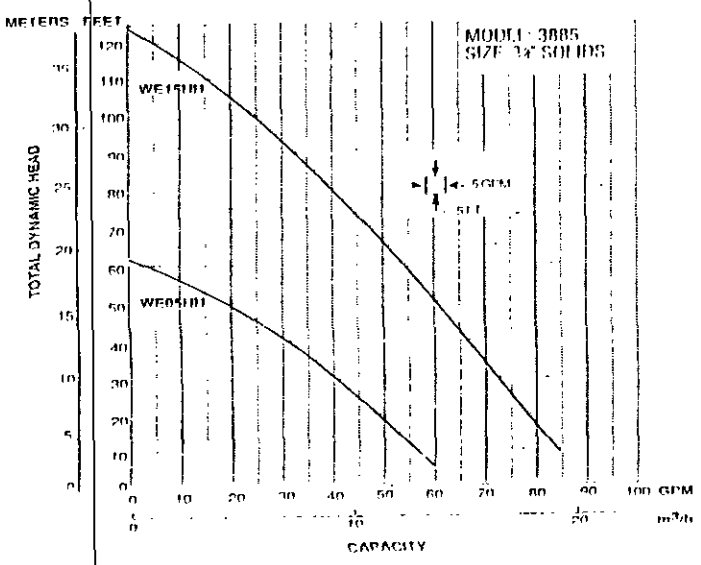
MODELS

Order No.	HP	Volts*	Phase	Max. Amp.	RPM	3ø Heater Size	Wt. (lbs.)
WE0311L	⅓	115	1	9.4	1750	N/A	56
WE0312L		230		4.7			
WE0318L		200		5.4			
WE0311M		115		9.4			
WE0312M		230		4.7			
WE0318M		200		5.4			
WE0511H	½	115	1	14.5	3500	N/A	70
WE0512H		230		7.3			
WE0518H		200		8.4			
WE0538H		200	3	3.9		K32	
WE0532H		230		3.4		K32	
WE0534H		460		1.7		K21	
WE0511HH		115	1	14.5		N/A	
WE0512HH		230		7.3			
WE0518HH		200		8.4			
WE0538HH		200	3	3.8		K32	
WE0532HH		230		3.3		K31	
WE0534HH		460		1.65		K21	
WE0712H	¾	230	1	10.0		N/A	
WE0718H		200		11.5			
WE0738H		200	3	6.2		K49	
WE0732H		230		5.4		K39	
WE0734H		460		2.7		K28	
WE1012H	1	230	1	12.5		N/A	
WE1018H		200		14.4			
WE1038H		200	3	8.1		K43	
WE1032H		230		7.0		K43	
WE1034H		460		3.5		K32	
WE1512H	1½	230	1	15.7		N/A	80
WE1538H		200	3	10.6		K53	
WE1532H		230		9.2		K50	
WE1534H		460		4.6		K36	
WE1512HH		230	1	15.0		N/A	
WE1538HH		200	3	10.6		K53	
WE1532HH		230		9.2		K50	
WE1534HH		460		4.6		K36	

* For 575 V consult factory.

PERFORMANCE RATINGS (gallons per minute)

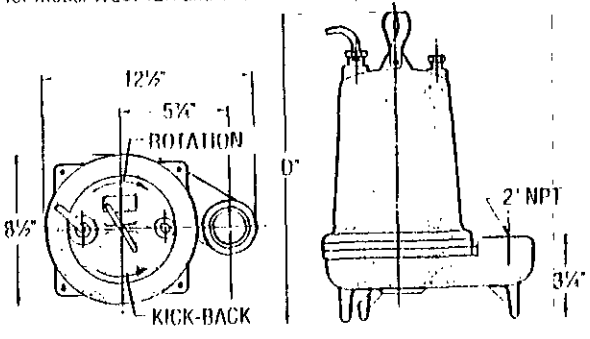
Order No.		WE0311L WE0312L WE0318L	WE0311M WE0312M WE0318M	WE0511H WE0512H WE0538H WE0532H WE0534H WE0518H	WE0712H WE0738H WE0732H WE0734H WE0718H	WE1012H WE1038H WE1032H WE1034H WE1018H	WE1512H WE1538H WE1532H WE1534H	WE0511HH WE0512HH WE0538HH WE0532HH WE0534HH WE0518HH	WE1512HH WE1538HH WE1532HH WE1534HH
	HP	⅓	⅓	½	¾	1	1½	½	1½
	RPM	1750	1750	3500	3500	3500	3500	3500	3500
Total Head Feet of Water	5	–	–	–	–	–	–	60	–
	10	80	65	–	–	–	–	56	84
	15	60	57	69	90	104	128	53	82
	20	36	45	60	83	98	122	48	77
	25	–	25	50	76	92	116	45	75
	30	–	–	38	67	85	109	40	72
	35	–	–	26	58	78	102	35	70
	40	–	–	15	47	70	94	30	67
	45	–	–	–	36	62	86	25	64
	50	–	–	–	25	52	77	18	60
	55	–	–	–	17	42	67	12	58
	60	–	–	–	8	32	56	3	54
	65	–	–	–	–	21	46	–	51
	70	–	–	–	–	11	35	–	47
	75	–	–	–	–	–	25	–	43
	80	–	–	–	–	–	15	–	40
	90	–	–	–	–	–	–	–	33
	100	–	–	–	–	–	–	–	24
	110	–	–	–	–	–	–	–	15
	120	–	–	–	–	–	–	–	5



DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)

D* ⅓, ½, ¾ and 1 HP = 15"
except for model WE0712H and WE1012H = 18"; 1½ HP = 18"



EFFLUENT EJECTOR SYSTEM

Effluent ejector system offers ease of ordering and installation. A single ordering number specifies a complete system designed for most residential and commercial sump and effluent pump applications.

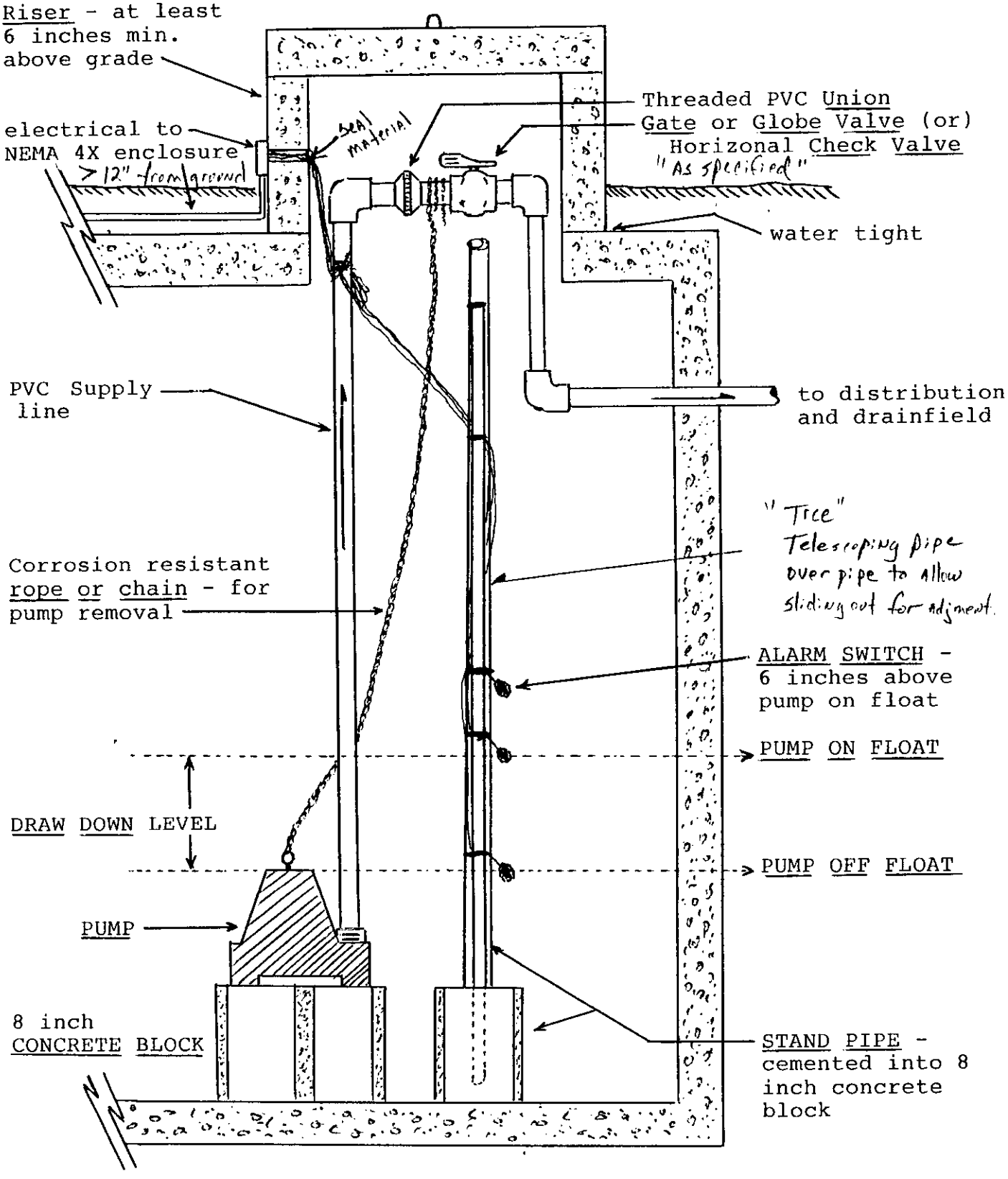


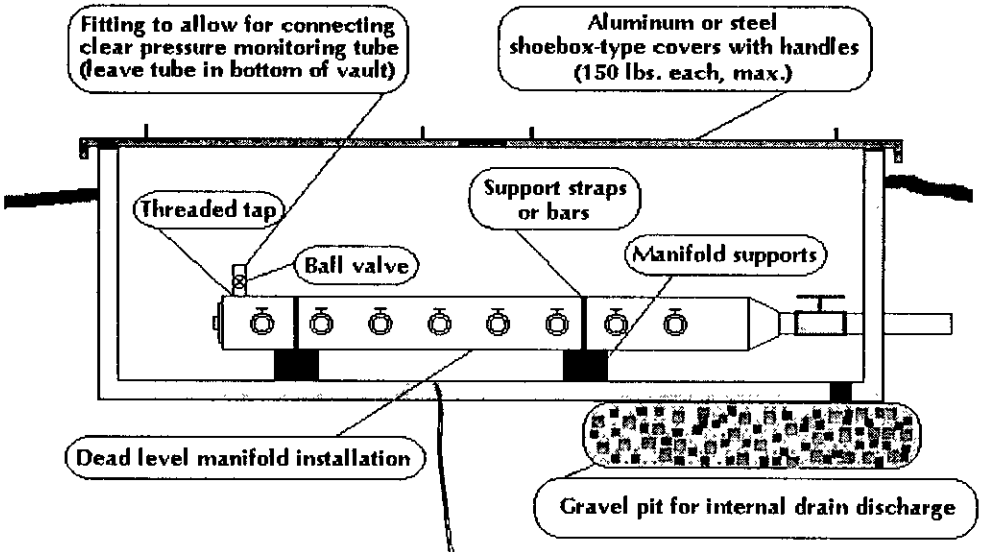
Package Includes:
Submersible Effluent Pump WE0311L, 12L or WE0311M, 12M, WE0511HH, 12 Mechanical Level Control Switch: A2-5 (115V), A2-6 (230V)
Basin A7-1801S, Basin Cover A8-1822
Check Valve A9-2P
Order No.: SWE0311L, SWE0312L, SWE0311M, SWE0312M, SWE0511HH, SWE0512HH

GOULDS PUMPS
WATER TECHNOLOGIES NORTH AMERICA

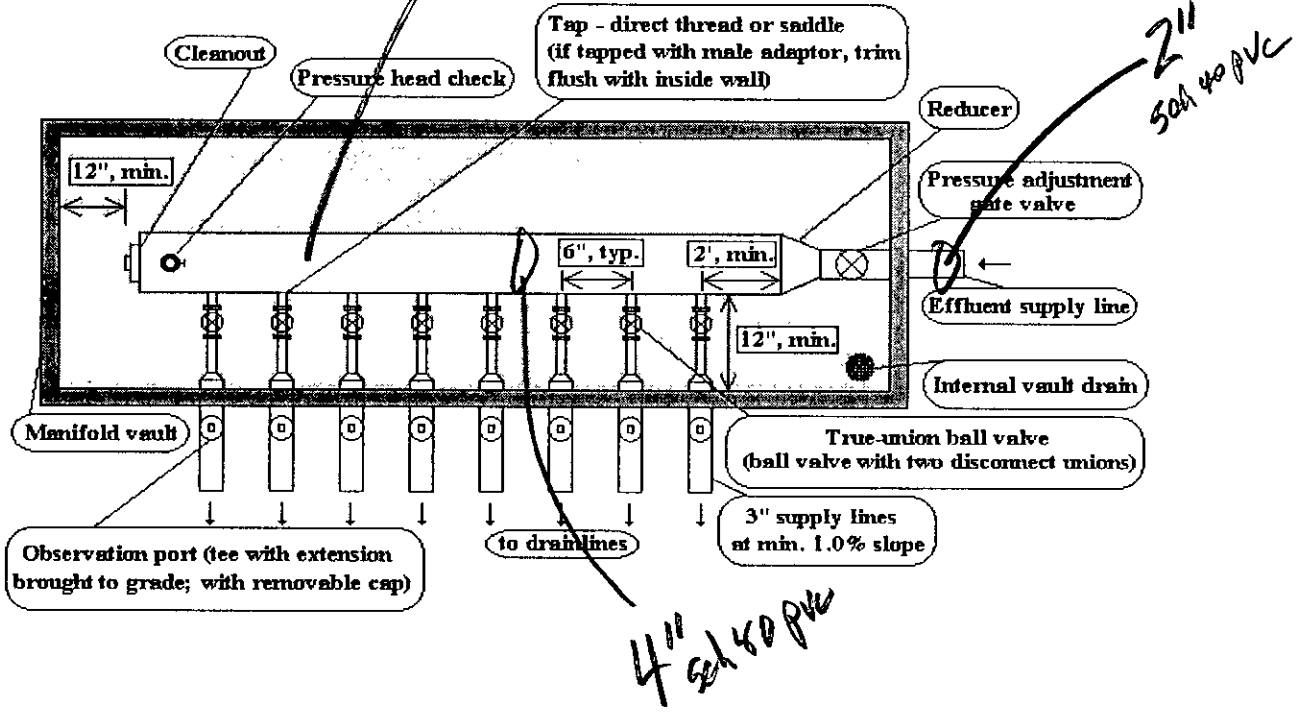
SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. PRINTED IN U.S.A.

PUMP DIAGRAM





Profile View of Pressure Manifold for Sloping Site Installation (not to scale)



Plan View of Pressure Manifold for Sloping Site Installation (not to scale)

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

Sheet: 1 of 2
Property ID: 217-172-22
Lot #: 37
File #: 5745B
Code: 1

ACS

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: Crescent Resources
Applicant: W. A. Hodges
Address: PO Box 1003, Charlotte, N. C. 28201
Date Evaluated: 11/8/2004
Proposed Facility: Residence
Design Flow (.1949): 480gpd
Property Size: 1.32a
Location of Site: Hideaway Road
Property Recorded:
Water Supply: [ ] Public [x] Individual [x] 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	0-5	GR/SL	FR/SEXP/NS/NP	>46" TO SOIL WETNESS	46	N/A	NONE	PS, IV
		5-38	SBK/C	FI/SEXP/S/P					.3GPD/FT^2
		38-46	SBK/SCL	FR/SEXP/SS/SP					
2	"	0-4	GR/SCL	"	>48" TO SOIL WETNESS	48	"	"	"
		4-38	SBK/SC	FI/SEXP/S/P					
		38-48	SBK/SCL	FR/SEXP/SS/SP					
3	LS, 10	0-6	GR/SL	FR/SEXP/NS/NP	"	"	"	"	"
		6-33	SBK/C	FI/SEXP/S/P					
		33-48	SBK/SCL	FR/SEXP/SS/SP					
4	"	0-8	GR/SL	FR/SEXP/NS/NP	"	"	"	"	"
		8-48	SBK/C	FI/SEXP/S/P					
5	LS, 8	0-12	GR/SL	FR/SEXP/NS/NP	>45" TO SOIL WETNESS	45	"	"	"
		12-45	SBK/C	FI/SEXP/S/P					

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

Other Factors (.1946):
Site Classification (.1948): PROVISIONALLY SUITABLE
Evaluated By: W. R. Marlin, LSS, 11/9/2004, W. R. Marlin
Others Present: W. Hodges

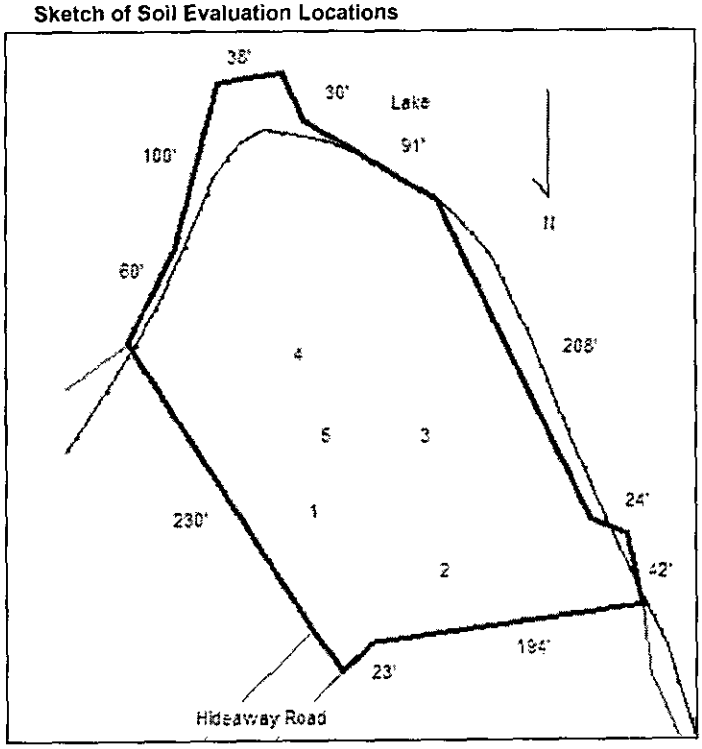
Sheet:
FILE #: 5745B

COMMENTS:
Does not require 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



FEE: 200.00
DATE: 10/22/04
Check 2518 JKA

APPLICATION FOR IMPROVEMENT PERMIT FOR RESIDENTIAL SITE INDIVIDUAL WATER AND WASTEWATER SYSTEMS PROGRAM

#2338

1 1 CRT

TYPE APPLICATION: ✓ NEW SYSTEM __ EXPANSION/ ALTERATION OF EXISTING SYSTEM __ REPAIR OF EXISTING SYSTEM

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

FILE #: 5745B

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 21717222

STREET ADDRESS: Hideaway Rd. 18345

SUBDIVISION OR MOBILE HOME PARK NAME:

LOT NUMBER: Lot #37

TYPE OF BUILDING (CHECK ONE):

__ SINGLE MOBILE HOME(S)
__ DOUBLE WIDE (D)
✓ HOUSE (H)
__ MODULAR HOME (M)
__ MULTIPLE FAMILY (U)
__ OTHER (O)

TOWNSHIP (CHECK ONE):

✓ 0 MECKLENBURG
__ 1 CHARLOTTE
__ 2 DAVIDSON
__ 3 CORNELIUS
__ 4 PINEVILLE
__ 5 MATTHEWS
__ 6 HUNTERSVILLE
__ 7 MINT HILL

HEATED SQUARE FOOTAGE: ≈ 6,500

NUMBER OF BEDROOMS: ~~4~~ 5 NUMBER OF OCCUPANTS: 6

CLOSING DATE _____

FOUNDATION FOR RESIDENCE:

__ WITHOUT BASEMENT
__ ON SLAB
✓ CRAWL SPACE
__ WITH BASEMENT /PLUMBING
__ WITH BASEMENT /NO PLUMBING

IF EXPANSION/ALTERATION OF EXISTING SYSTEM, DESCRIBE THE PROPOSED BUILDING ADDITION:

WILL THERE BE A HOME BUSINESS IN THE RESIDENCE: __ YES ✓ NO TYPE: _____

WATER SUPPLY (CHECK ONE):

__ COMMUNITY (C)
__ MUNICIPAL (M)
✓ PRIVATE WELL (P)
__ SHARED WELL (S)
__ OTHER 'SPRINGS' (O)

IF ANY OF THE FOLLOWING ARE LOCATED ON THE PROPERTY, PLEASE SHOW LOCATION ON PLAT:

BURIED CABLES, LANDFILLS, STUMPHOLES __ YES ✓ NO
EXISTING WASTEWATER SYSTEMS __ YES ✓ NO
EASTMENTS OR RIGHT-OF-WAYS ✓ YES __ NO
WELL, SPRINGS OR WATERLINES __ YES ✓ NO
DESIGNATED WETLANDS __ YES ✓ NO

Property Owner

~~PROPERTY OWNER:~~ Buyer

NAME: Hodges, William A.
(LAST) (FIRST) (MI)

ADDRESS: 17224 Due West Dr.

CITY: Charlotte STATE: NC ZIP: 28278

DAYTIME PHONE: (704 388 - 5235

~~LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:~~

NAME: Crescent Resources LLC
(LAST) (FIRST) (MI)

DAYTIME PHONE: 704 373 - 5829

Box 1003

Charlotte NC 28201

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? March 1, 1976

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 agents of the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

SIGNED: William A. Hodges DATE: 10/21/04

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
c/o HAL MARSHALL CTR., SUITE 211, 700 N. TRYON ST., CHARLOTTE, N.C. 28202., (704) 336-5102

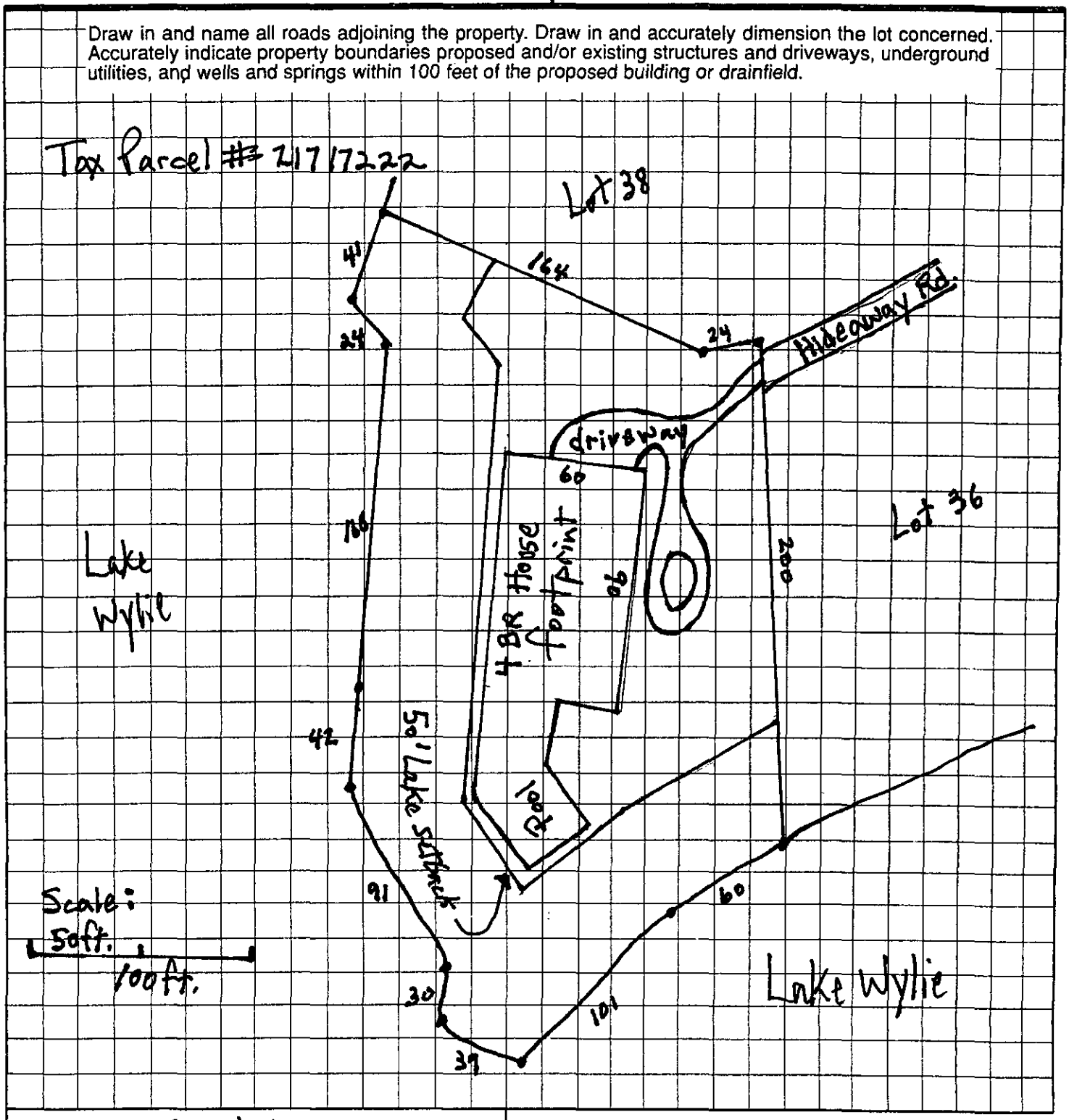
PROPOSED PLOT PLAN

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 574513

TC: 217-172-22

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.

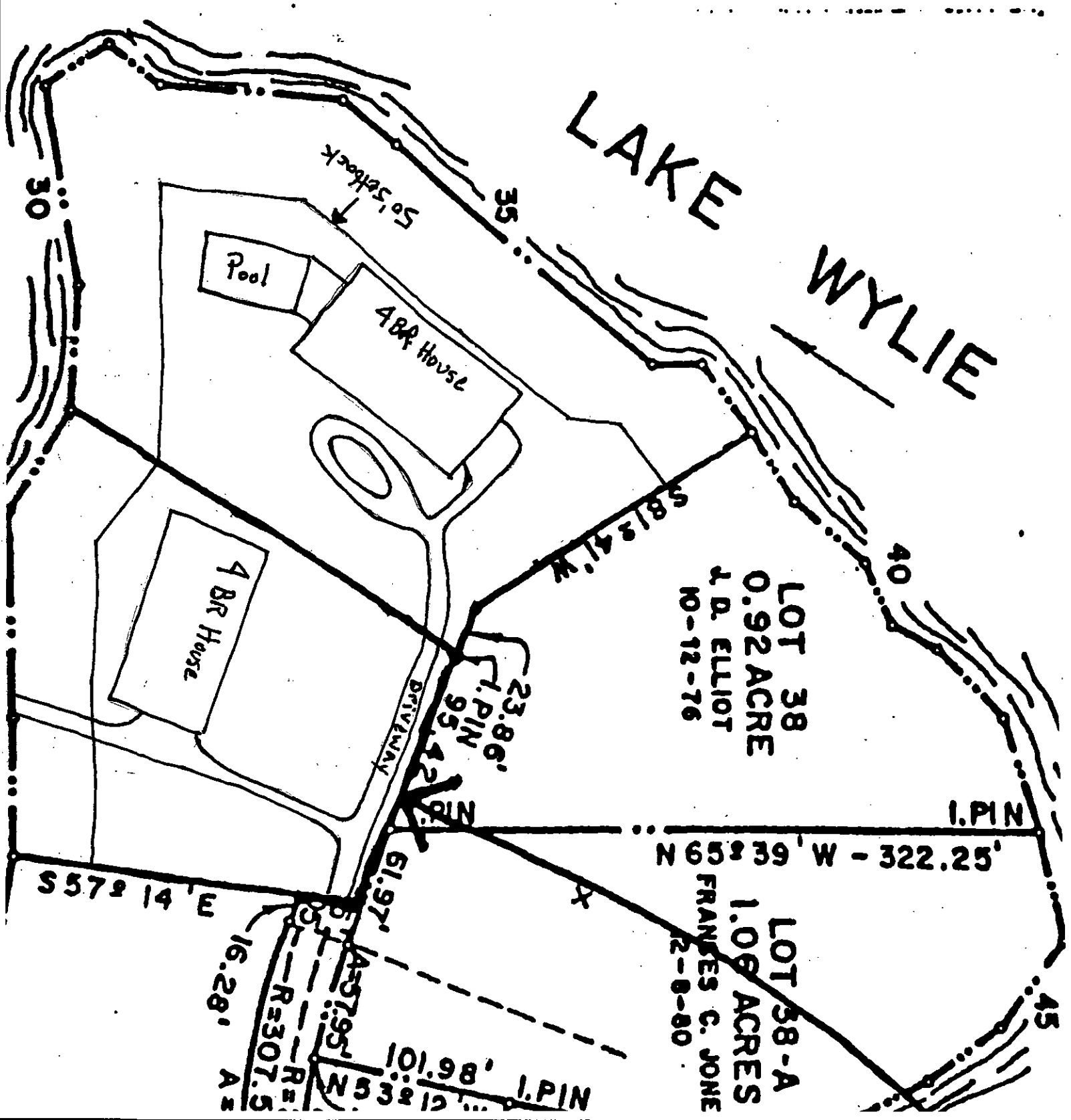


William A. Hudson
OWNER/AGENT SIGNATURE

DATE 10/21/04

APPROVAL DATE _____

White - Health Department's Copy Canary - E.H.S. Copy Pink - Owner's Copy


LAKE WYLIE
30
35
40
45
50' Setback
Pool
4BR House
4 BR House
Driveway
LOT 38
0.92 ACRE
J. D. ELLIOT
10-12-76
LOT 38-A
1.08 ACRES
FRANCES C. JONES
2-8-80
I.P IN
I.P IN
N 65° 39' W - 322.25'
S 57° 14' E
23.89'
N 65° 42' W
61.97'
16.28'
101.98'
I.P IN
N 53° 12'
R=307.5'

IN WITNESS WHEREOF, the parties have caused this Contract to be executed effective as of the Effective Date.

DATE OF OFFER:

August 26, 2004

ACQUIRING PARTY:

LKW DEVELOPMENT LLC, a North Carolina limited liability company

By: William G. Ashley

Its: Manager

DATE OF ACCEPTANCE:

10/01/04

CRESCENT:

CRESCENT RESOURCES, LLC,
a Georgia limited liability company

By: _____
James M. Short, Jr.
Senior Vice President

See file # 5744B for additional documents

On Contract. (offer to purchase)

JKH 10/22/04

57459

From: "Hodges, Bill A" <bill.hodges@bankofamerica.com>
To: <marliwr@co.mecklenburg.nc.us>
Date: 10/28/2004 12:44:36 PM
Subject: Fw: soil test

Bill,

Attached is authorization from Crescent.

I will call Thursday morning to coordinage scheduling the site visit.

Bill Hodges

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Philip M Hayes <PMHayes@duke-energy.com>
To: Hodges, Bill A <bill.hodges@bankofamerica.com>
Sent: Thu Oct 28 10:02:46 2004
Subject: Re: soil test

Bill,

You have Crescent's authorization to conduct the soil tests. Your contract to purchase should also serve as evidence of your standing with this property.

Philip M Hayes
Director, Land Sales
Crescent Resources, LLC
(O) 704.382.7869 (M) 704.614.9531
email: pmhayes@duke-energy.com
http://www.crescent-resources.com

"Hodges, Bill A" <bill.hodges@bankofamerica.com> 10/28/2004 07:52 AM
To: "Phil Hayes (E-mail)" <PMHayes@duke-energy.com>
cc:
Subject: soil test

Phil,

I spoke to Bill Marlin at the county this morning and they will schedule my soil test soon and need only from Crescent an indication that such is OK with you. A reply from you to this email message would suffice just fine.

Thank you,

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	06/30/05	**Amount:**	150.00
Receipt #:	35504	**Tendered:**	150.00
Check / Auth #:	CHECK 1024	**Returned:**	0.00
Received By:	WALKEVA		

Account Information

Account #: 200000
Contractor: LKW DEVELOPMENT LLC
Attn:
Address: 17224 DUE WEST DRIVE
Address:
City/State/Zip: CHARLOTTE, NC 28278

Item	Description	Permit#	Quantity	Unit Price	Total Price
0703	Installation/Final Approval 18345 HIDEAWAY ROAD		1	150.00	150.00

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

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

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	06/30/05	**Amount:**	150.00
Receipt #:	35505	**Tendered:**	150.00
Check / Auth #:	CHECK 1024	**Returned:**	0.00
Received By:	WALKEVA		

Account Information

Account #: 200000
Contractor: LKW DEVELOPMENT LLC
Attn:
Address: 17224 DUE WEST DRIVE
Address:
City/State/Zip: CHARLOTTE, NC 28278

Item	Description	Permit#	Quantity	Unit Price	Total Price
0734	Auth for Waste Wtr Sys Constr 18345 HIDEAWAY RD		1	150.00	150.00

Outstanding Balances

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



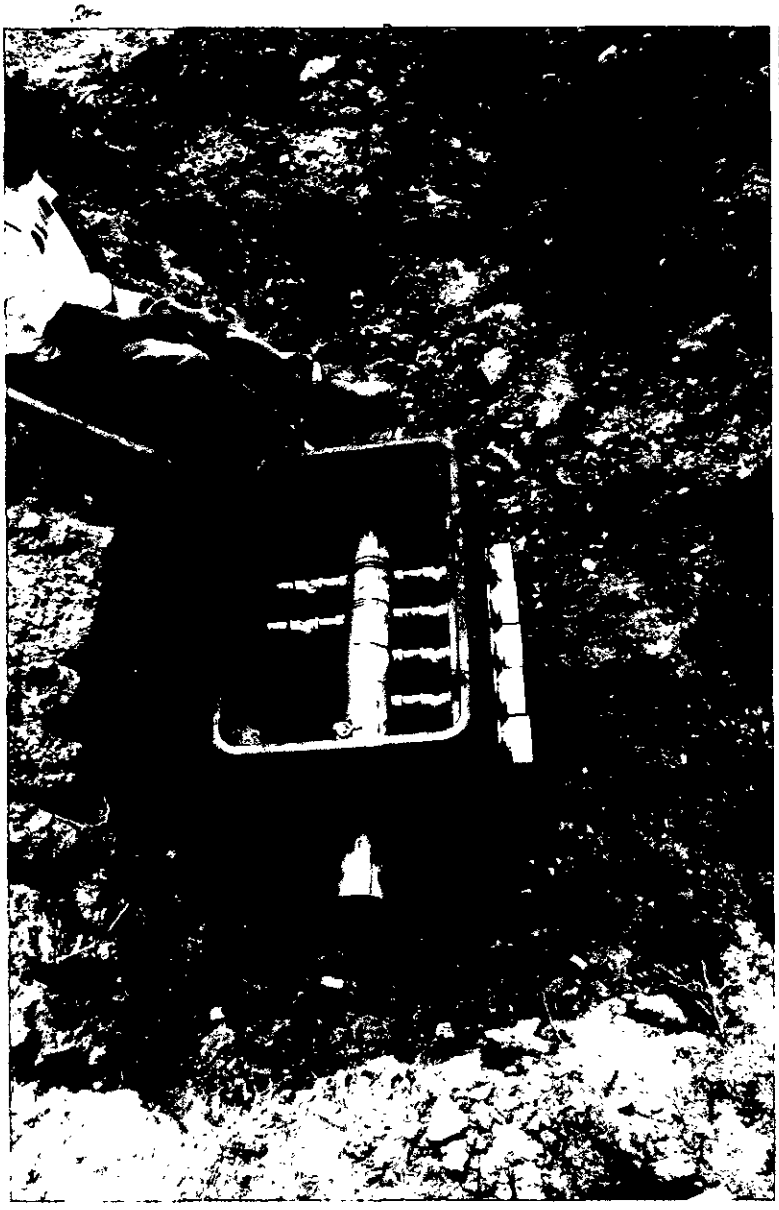






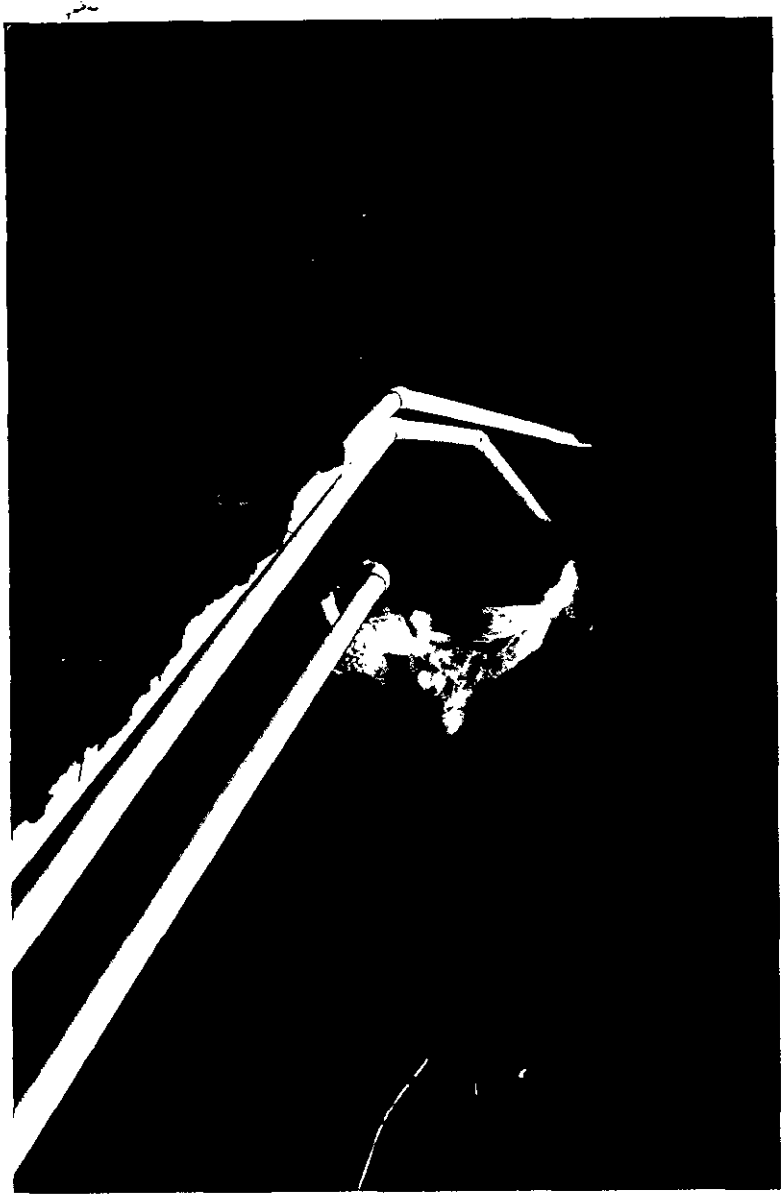


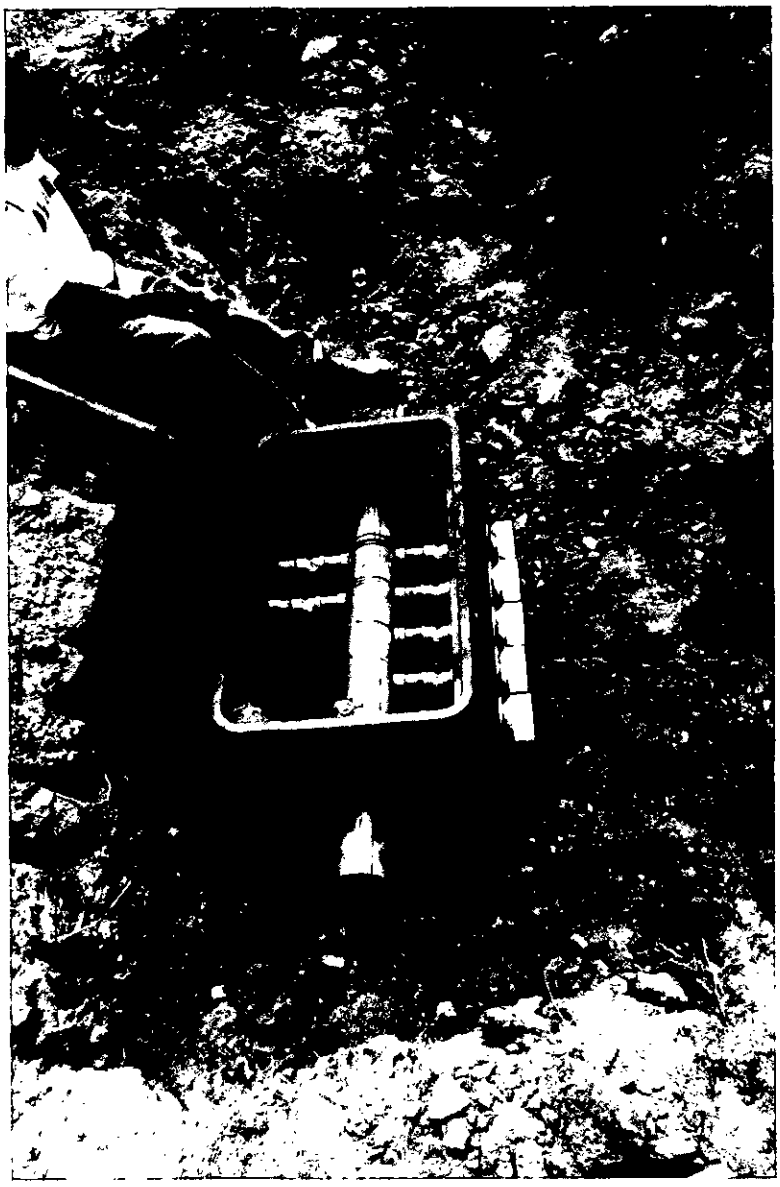
















Groundwater & Wastewater Services
Well Project File & Data Review Worksheet

GWS File #: 5745B WASPS App #: 60

Primary ES assigned to project: David Cornelius

Secondary ES assigned to project: Debra Howell

Project Type: New Well ☑ Well Abandonment ☐ Major Repair ☐

Septic System Status: Permit in progress ☐ System installation completed ☑ N/A-Sewer ☐

I. File Review:

Completed application	Yes ☑	No ☐		
ARGU review report	Yes ☐	No ☐	N/A ☑	
Signed permit	Yes ☑	No ☐		
Notification of disinfection	Yes ☐	No ☐	N/A ☑	
Sample Results	TC ☑	Nitrate/Nitrite ☑	Other ☐	N/A ☐
GW-1 Form / GW-30 Form	Yes ☑	No ☐		
Other related documentation	Yes ☐	No ☑	N/A ☐	

Comments: # Items requiring correction/modification: _____

II. WASPS Review:

Completed application w/ valid address	Yes ☑	No ☐	
ARGU review completed	Yes ☐	No ☐	N/A ☑
Permit issued	Yes ☑	No ☐	
Activity checklist completed	Yes ☑	No ☐	
Appropriate comments included	Yes ☑	No ☐	
Site information record completed	Yes ☑	No ☐	
Well detail record completed	Yes ☑	No ☐	

Comments: # Items requiring correction/modification: _____

5/31/07 - Please release GWS Hold For well. JLS

Application received date: 5/20/05 ES assigned date: 5/20/05 Permit issued date: 5/25/05

Well approval date: 5/31/07 Number of days to complete project: _____

Review performed by: J. L. Stalls Date performed: 5/31/07

CHARLOTTE.
CHARLOTTE-MECKLENBURG UTILITIES

Laboratory Analysis Report
Report Date: 5/31/2007 10:56 AM

LABORATORY SERVICES DIVISION

LOCATION: GWO-73214
LOC ID: G-NEW
SAMPLE DATE-TIME: 5/24/2007 12:20 CHAIN OF CUSTODY #: 070524134405
SAMPLE DESCRIPTION: Grab

	Parameter	Result	Units	RL	Method	Start Date/	Time	Analyst
AC19545	**NITRATE**	**<0.05**	**mg/L**	0.05	EPA 353.2	5/25/2007	14:19	EWN
AC19545	**NITRITE**	**<0.05**	**mg/L**	0.05	EPA 353.2	5/25/2007	9:56	EWN
AC19545	**E. COLI-PA**	**Absent**	**P/A**		SM 9223B	5/24/2007	14:23	SLT
AC19545	**Total Coliform- P/A**	**Absent**	**P/A**		SM 9223B	5/24/2007	14:23	SLT

Comment:

Laboratory Supervisor: _____

Laboratory Certifications: McAlpine NC DENR No.148; Brookshire NC DENR No.162; Hal Marshall N.C. DENR No. 192, N.C. DHHS Laboratory No. 37527

CHARLOTTE-MECKLENBURG UTILITIES - LABORATORY SERVICES DIVISION

Hal Marshall Laboratory, 700 North Tryon St., Charlotte, NC 28202, 704/336-5460

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CLIENT:	**Mecklenburg County, LUESA - Groundwater & Wastewater Services**
FACILITY:	Groundwater **(Potable Water)**
ADDRESS:	183214 Hideaway Rd., Charlotte, NC 28278
LAB CODE:	REAL PRIV (NEW) TNC MPL PME AMB LM OTHER

Send Report To:
Debra Howell
700 N. Tryon St., Suite 211
Charlotte, NC 28202

Sampled By (Print Name)
Debra Howell

SAMPLE ID	Sample Collector's Initials	Sample Collection: Begin Date and Time	Sample Collection: End Date and Time	Chlorinated System: Y or N	Sample Temperature: Collection Temp °C	Sample Temperature: Receipt Temp °C	Sample Type: Depth Composite	Sample Type: Auto Composite	Sample Type: Hand Comp	Sample Type: Grab	Sample Containers: Plastic	Sample Containers: Glass	Sample Containers: # Containers	Chemical Preservative: None	HNO3	H2SO4	NaOH	HCl	Na2S2O3	pH Correct	Analyses Requested: Total Coliform
GWO-73214 AC19545	DEH	5/24/07 12:20 PM	N/A N/A	N	NA					X	100 ml		2						X		X

Instructions:
Complete all yellow shaded sections
For each parameter requested circle the X to verify your request.
Nutrients include: Ammonia, TKN, Total Phosphorus, Nitrate/Nitrite
Metals: Itemize the individual metals requested here -
For Composite samples record the autosampler Begin date/time and End date/time, for Grab samples record the collect time as the Begin date/time only.

Comments: **3-DAY TAT REQUESTED**

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Debra Howell	[signature]	5/24/07	13:37

Form Revision 07; effective 02/16/2006

Lab Codes: REAL=Real Estate, PRIV=Private Well, NEW=New Permitted Well, TNC=Transient Non-Community, AMB=Ambient, LM=Landfill

CHARLOTTE-MECKLENBURG UTILITIES - LABORATORY SERVICES DIVISION

Hal Marshall Laboratory, 700 North Tryon St., Charlotte, NC 28202, 704/336-5460

CHAIN OF CUSTODY RECORD

CLIENT:	**Mecklenburg County, LUESA - Groundwater & Wastewater Services**
FACILITY:	Groundwater **(Potable Water)**
ADDRESS:	18345 Hideaway Rd., Charlotte, NC 28278
LAB CODE:	REAL PRIV (NEW) TNC MPL PME AMB LM OTHER

Send Report To:
Debra Howell
700 N. Tryon St., Suite 211
Charlotte, NC 28202

Sampled By (Print Name)
Debra Howell

SAMPLE ID	Sample Collectors Initials	Sample Collection: Begin Date and Time	Sample Collection: End Date and Time	Chlorinated System: Y or N	Sample Temperature: Collection Temp °C	Sample Temperature: Receipt Temp °C	Sample Type: Depth Composite	Sample Type: Auto Composite	Sample Type: Hand Comp	Sample Type: Grab	Sample Containers: Plastic	Sample Containers: Glass	Sample Containers: # Containers	Chemical Preservative: None	Chemical Preservative: HNO3	Chemical Preservative: H2SO4	Chemical Preservative: NaOH	Chemical Preservative: HCl	Chemical Preservative: Na2S2O3	Chemical Preservative: pH Correct	Analyses Requested: Nitrate	Analyses Requested: Nitrite
GWO-73214 AC19545	DEH	5/24/07 12:20pm	N/A	N	16.1°C	[redacted]				X	500 ml		1			X				X	X	
GWO-73214 AC19545	DEH	5/24/07 12:20pm	N/A	N	16.1°C					X	125 ml		1	X							X	

Instructions:

Complete all yellow shaded sections

For each parameter requested circle the X to verify your request.

Nutrients include:

Metals: Itemize the individual metals requested here -

For Composite samples record the autosampler Begin date/time and End date/time, for Grab samples record the collect time as the Begin date/time only.

[redacted]

Comments: ****Nitrate and Nitrate Analysis Requested****

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Debra Howell	[signature]	5/24/07	13:37
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Form Revision 07; effective 02/16/2006

Lab Codes: REAL=Real Estate, PRIV=Private Well, NEW=New Permitted Well, TNC=Transient Non-Community, AMB=Ambient, LM=Landfill

Rush Please!

RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2226

1. WELL CONTRACTOR:
Richard Dobson
Well Contractor (Individual) Name
McCall Brothers
Well Contractor Company Name
STREET ADDRESS 6700 Brookshire
Charlotte NC 28216
City or Town State Zip Code
704-394-1506
Area code- Phone number

2. WELL INFORMATION:
SITE WELL ID #(if applicable) N-A
STATE WELL PERMIT#(if applicable) 100060
DWQ or OTHER PERMIT #(if applicable) N-A
WELL USE (Check Applicable Box): Residential Water Supply ☑
DATE DRILLED 12-30-06
TIME COMPLETED 12:00 AM ☐ PM ☐

3. WELL LOCATION:
CITY: Charlotte COUNTY Mech.
18345 Wideaway Rd. 28278
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
TOPOGRAPHIC / LAND SETTING:
☐Slope ☐Valley ☑Flat ☐Ridge ☐Other
(check appropriate box)
LATITUDE 35° 03.390'
LONGITUDE 81° 02.873'
May be in degrees, minutes, seconds or in a decimal format
Latitude/longitude source: ☐GPS ☐Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS).

4. WELL OWNER
OWNER'S NAME LKW Development
STREET ADDRESS 17224 Due West Dr.
Charlotte NC 28278
City or Town State Zip Code
704-562-1279
Area code - Phone number

5. WELL DETAILS:
a. TOTAL DEPTH: 410 ft.
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑
c. WATER LEVEL Below Top of Casing: 40 FT.
(Use "+" if Above Top of Casing)
d. TOP OF CASING IS 1.8 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): 9 METHOD OF TEST air lift

f. DISINFECTION: Type 12-14 Amount 2 Cups
g. WATER ZONES (depth):
From 280 To 285 From ____ To ____
From 360 To 365 From ____ To ____
From ____ To ____ From ____ To ____

6. CASING:

	Depth		Diameter	Thickness/ Weight	Material
From	0 To	53 Ft.	6	6 3	PVC
From	To	Ft.			
From	To	Ft.			

7. GROUT:

	Depth		Material	Method
From	0 To	20 Ft.	Cement	grout
From	To	Ft.		
From	To	Ft.		

8. SCREEN:

	Depth		Diameter	Slot Size	Material
From	To	Ft.	in.	in.	
From	To	Ft.	in.	in.	
From	To	Ft.	in.	in.	

9. SAND/GRAVEL PACK:

	Depth		Size	Material
From	To	Ft.		
From	To	Ft.		
From	To	Ft.		

10. DRILLING LOG

From	To	Formation Description
0	40	sandy soil - mix
40	50	sandy clay - mix
50	100	granite & mix
100	200	gray granite
200	400	gray granite mix

11. REMARKS:
O.K.

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.
Richard Dobson 12-30-06
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE
Richard Dobson
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1a
Rev. 7/05

Mecklenburg County Health Department
Groundwater & Wastewater Services
700 N. Tryon St, Suite 211
Charlotte, NC 28202
Phone: (704) 336-5103
Fax: (704) 336-6894

PERMIT TO CONSTRUCT A WATER SUPPLY WELL

Permit #: 10000060 **File #:** 5745B **Tax Parcel #:** 217-172-22
Property Owner: LKW DEVELOPMENT
Job Location Address: 18345 HIDEAWAY RD
City/ETJ: CHARLOTTE **State:** NC **Zip Code:** 28278
Permit Issuance Date: 5/23/2005
Use of Well: Potable
Type of Facility Served by Well: Single-mobile home
Sewage System Type: None

Area of Regulated Groundwater Usage Restrictions Apply: NO

Replacement for Existing Well: *If Yes, see requirements in Other Conditions of This Permit.*

General Conditions of This Permit:

- Water Supply Well construction must meet all requirements set forth in the *Mecklenburg County Groundwater Well Regulations* and any other applicable rules and laws.
- A North Carolina Certified Well Contractor must perform the well construction activities.
- The permitted Water Supply Well shall be located in accordance with the attached SITE PLAN.
- Any alteration of the site (including location of structures and appurtenances) or modification in use of the well, may subject this Permit to revocation.
- The Department will collect an initial sample of water from the Water Supply Well and analyze the sample for total coliform bacteria, nitrate, and nitrite. A review of the analysis by the Department must find the sample to meet the groundwater quality standards specified in Chapter 5 of the Mecklenburg County Groundwater Well Regulations before the Water Supply Well can be placed in service.
- This Permit shall be VALID for a period not to exceed 12 months from the date of issuance.

Specific Conditions of This Permit (Check all that apply):

☐ Grout must be placed the full extent of the casing. ☐ *Casing to bedrock*

☐ Initial water sample to be taken and analyzed for (check all that apply):

☐ Volatile Organic Compounds (VOC's) ☐ Semi-volatile Compounds ☐ Metals (Specify in Other Conditions)

☐ Pesticides ☐ Herbicides ☐ Other (See Below)

The analysis must be submitted to the Department for review and approval prior to the Water Supply well being placed in service.

Other Conditions of This Permit:

Authorized Agent: Print Name

Signature: 5/23/07

Owner/Legal Agent: William A. Hodges Print Name

Signature: William A. Hodges

#60

GWS – RES. APP 12/04

SEPTIC FEE: _____
DATE: _____
CRT [ ]

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

FILE # 57458

WELL FEE: 400
DATE: 4/20/05
CRT [ ] Check 1012 JKA

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

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

JOB LOCATION INFORMATION:

TAX/PARCEL #: 21717222
STREET ADDRESS: 18345 Hideaway Road
CITY: Charlotte
STATE: NC ZIP: 28278
SUBDIVISION OR MOBILE HOME PARK NAME:
LOT #: 37
TOWNSHIP:

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

BUILDING INFORMATION:

TYPE OF BUILDING:

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

HEATED SQUARE FOOTAGE: 7,100
NUMBER OF BEDROOMS: 5
NUMBER OF OCCUPANTS: 6

FOUNDATION FOR RESIDENCE:

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

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

NUMBER OF BEDROOMS TO BE ADDED: NUMBER OF ADDITIONAL OCCUPANTS IN THE RESIDENCE: 0

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

WATER SUPPLY:

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

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

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

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

PROPERTY OWNER:

NAME: LKW Development LLC
ADDRESS: 17224 DVC West Dr.
CITY: Charlotte
STATE: NC ZIP: 28278
HOME PHONE: 704-583-0668 WORK PHONE: 704-504-9353
MOBILE PHONE: 704-562-1279 FAX: 704-583-8337

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME:
ADDRESS:
CITY:
STATE: ZIP:
HOME PHONE: WORK PHONE:
MOBILE PHONE: FAX:

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? Before 1982
WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? Property closed on 1-14-05

*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.

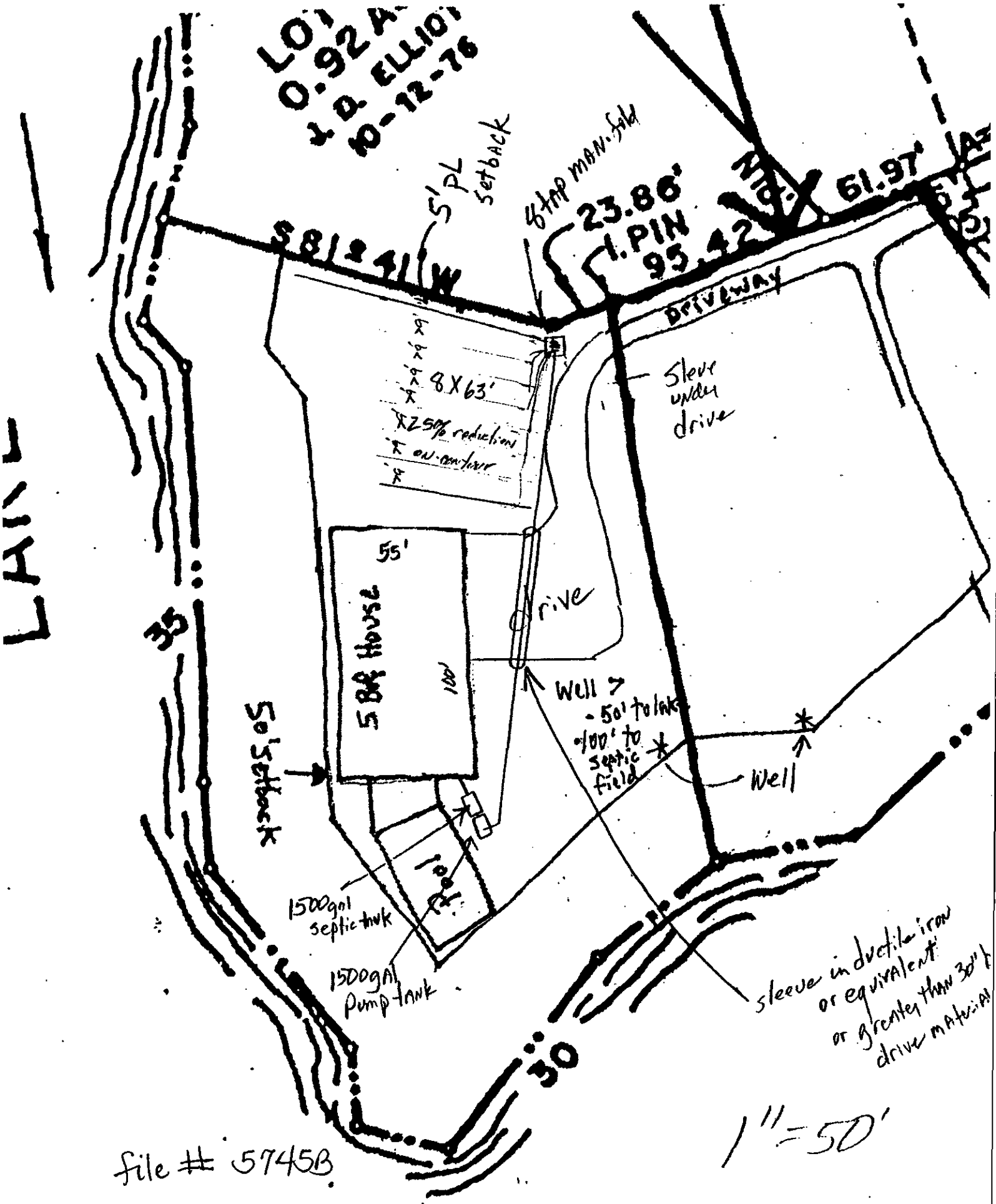
LKW Development LLC
Willie A. Hodges 5-20-05
Owner's/Agent's Signature Date
President

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.

Willie A. Hodges 5-20-05
Owner's/Agent's Signature Date

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



This Site Map is taken from Application for Improvement Permit for Residential Site Wastewater Disposal which was approved by MCHD on 3/22/05, Permit No. 5745B