Site Address: 208 High Lake Dr - Stvl.

IREDELL COUNTY HEALTH DEPARTMENT

THIS PERMIT VOIDS PREVIOUS ISSUED 11-19-98

STATESVILLE 704-878-5305 MOORESVILLE 704-664-5281

IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM INSPECTION

PERMIT# 25038 19619 PIN# 3L-B-52 (PT) 4710.39.1640 DATE 9-7-99

OWNER OR CONTRACTOR HAROLD MICHAEL PHONE: Business Home (704) 849-9590

ADDRESS 2117 COURTSIDE LANE APT. 203, CHARLOTTE NC 28270

LOCATION BUFFALO SHOALS RD, TL LAUREL COVE, TR HARBOR GATE, TL HARBOR POINT, TL HIGH LAKE, LOT AT END

SUBDIVISION HARBOR WATCH BLOCK / SECTION I LOT 15 LOT AREA 0.753 ACRE SITE CLASS. PS DESIGN FLOW 360' L.T.A.R. 0.25 gpd/ft²

Septic Tank: 1000 Gallons; STB 1012 Date 7/7/99

Pump Tank: 1000 Gallons; PT 17 Date 4/25/99

Pump Make: Model Serial No.

Nitrification Field: No Fields 1 Square Feet EQ. TO 1440' Linear Feet 240'

No Lines EIGHT Trench Width 24" Max Trench Bottom Depth 36" Gravel Depth SAND 6"

☑ New System ☐ Repair System Type: I, II, III, IV, V, VI

System Description: LOW PRESSURE PANELS

Repair System Description: LOW PRESSURE PIPE

Maintenance Agreement Required: ☑ Yes ☐ No

☑ House/Mod. Home No. Bedrooms 3

☐ Mobile Home No. Bathrooms 2+

☐ Business No. Employees

☐ Other

☐ Slab ☐ Crawl Space ☑ Basement w/plumbing ☐ Basement wo/plumbing

Water Supply: ☑ Individual ☐ Public ☐ Community

WELL

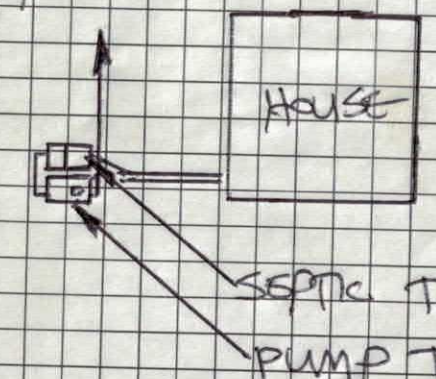
Comments:/Conditions: ① INSTALL 50% REDUCTION SYSTEM USING FIFTY-SIX (56) PPBPS PANELS IN EIGHT EQUAL LENGTH LINES AS SHOWN ON ATTACHED PLAN. ② INSTALL LINES IN ACCORDANCE WITH THE GUIDELINES SET FORTH IN .1956 (5) ③ SYSTEM TO BE INSTALLED AS SPECIFIED IN ATTACHED PLAN ④ CERTIFIED MANAGEMENT ENTITY SHALL BE CONTRACTED WITH PRIOR TO ISSUING OPERATION PERMIT

INITIAL SITE SKETCH

SEE ATTACHED SITE PLAN DATED AUGUST 28, 1999 PREPARED BY B. K. BARRINGER

Comments:/Conditions: ① SYSTEM SIZED FOR THREE BEDROOMS ONLY ② DRAINFIELD INSPECTED 9-24-99. LINES WERE COVERED AT INSPECTION AND OUT OF CONTOUR BY N/2 INCHES. 9-27 Tanks Inspected & Located Side by Side ③ PRESSURE CHECK - OK 9-29-99 ④ ELECTRICAL CHECK - OK - 9-29-99 ⑤ SURFACE DIVERSION DITCH TO BE INSTALLED WHEN WEATHER CONDITIONS PERMIT. ⑥ MAINTENANCE AGREEMENT SIGNED WITH RICHARD ABERNATHY.

AS BUILT SKETCH



SEPTIC & PUMP TANKS ORIENTED AS SHOWN DUE TO ROCK.

Permit can be suspended or revoked if any false information is supplied toward securing the permit/any unauthorized changes are made to the site/any unauthorized changes are made in the installation of the system. Improvement Permit with plat valid without expiration. Improvement Permit with site plan valid for sixty months. Authorization to Construct is valid for a period equal to that of Improvement Permit – not to exceed sixty months.

Signed: date 9-9-99

Improvement Permit by: STEVE HEDRICK date 9-7-99

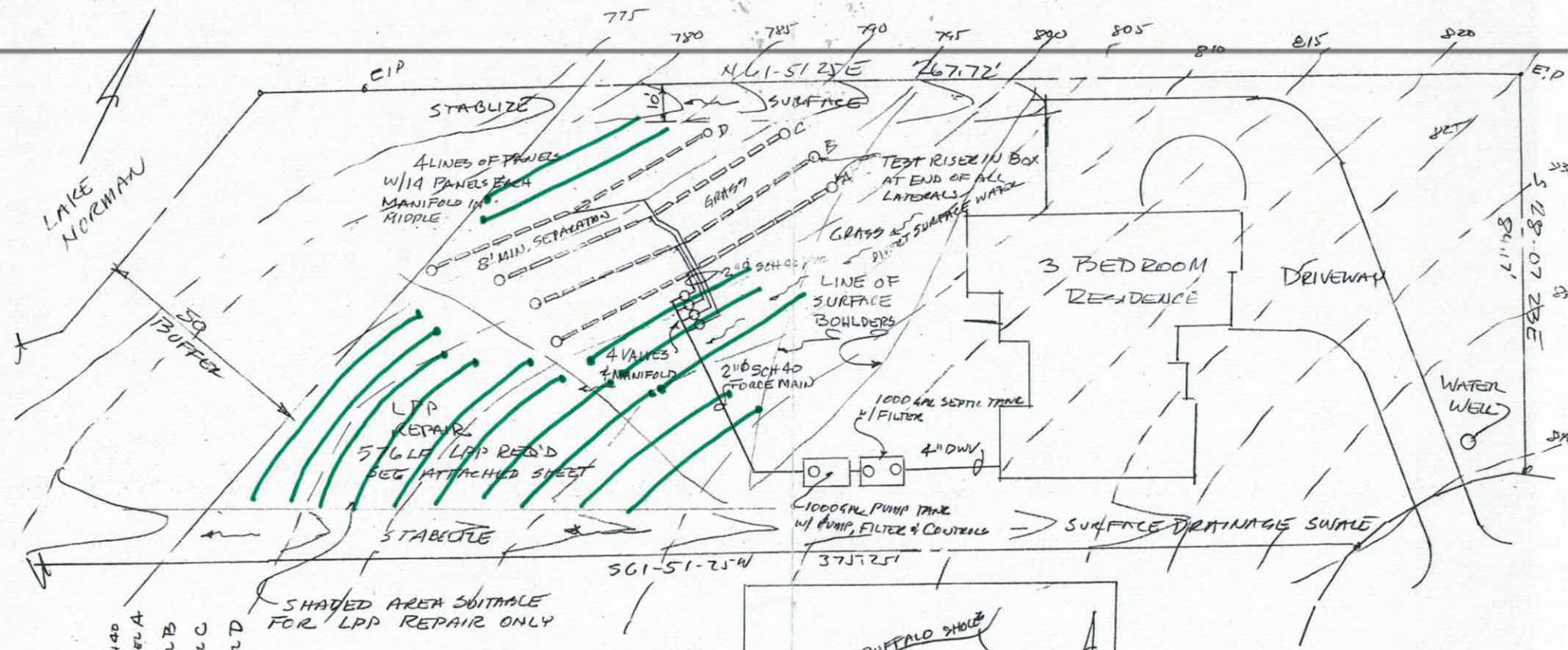
Authorization to Construct by: STEVE HEDRICK date 9-7-99

Installed by: RICHARD ABERNATHY SEPTIC TANK & GRADING

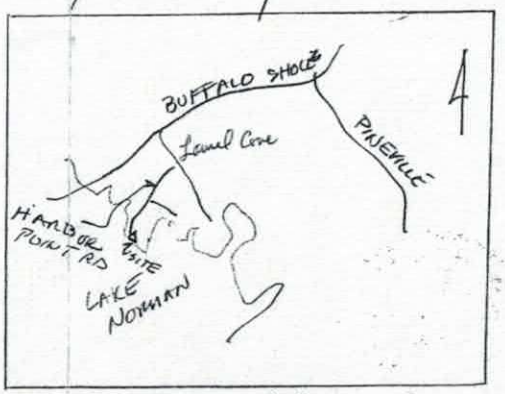
Operation Permit by: STEVE HEDRICK date 9-29-99

Existing System Inspection by: date

HEALTH DEPT. COPY: WHITE OWNER COPY (FINAL): YELLOW OWNER COPY (INITIAL): PINK



MANIFOLD DETAIL



VICINITY MAP.

NORTH CAROLINA PROFESSIONAL SEAL 3370 ENGINEER B.K. BARRINGER, JR.

8-20-99

T & J PANEL SYSTEM FOR
HAROLD MICHAEL
LOT 15 HARBOR WATCH SECT 1
FALLSTOWN TOWNSHIP
IREDELL CO N C

SCALE: 1" = 20' AUG 20 1999
DRAWN BY: BK BARRINGER JR PE
9/3/99 REV: REDRAWN PER STEVE HEDRICK INPUT

PROPOSED LPP REPAIR LAYOUT
15- 40' LPP LATERALS = 600 LF (576 LF REQ'D

Specifications & Scope of Work

for an Individual Residence

T & J Panel

Ground Absorption, Wastewater

Disposal System

for

Lot 15 Harbor Watch Section One
Fallstown Township
Iredell County, NC

August 28, 1999

NORTH CAROLINA PROFESSIONAL SEAL 3370 ENGINEER B. K. BARRINGER, JR.

8-31-99

OWNER:

Harold Michael
2117 Courtside Lane; Apt. 203
Charlotte, NC 28270
Phone: 704/ 849-9590

PREPARED BY:

B. K. Barringer, Jr., P.E.
N. C. Registration No. 3370
B.K. Barringer & Associates, PA
Westfield Center Suite 104
125 East Plaza Drive
Mooresville, N. C. 28115
Phone: 704/ 664-7888 EXT 204
Fax: 704/ 664-1778

Ground Absorption Wastewater Disposal System
Lot 15 Harbor Watch Section One
Fallstown Township, Iredell County

T & J Panel System

I. NARRATIVE:

The Owner is constructing a three bedroom residence served by a private water well a minimum of 50' from the septic system.

A septic system permit, (No.: 25038), has been issued for this project on 11-19-98 based on plans prepared by Gerold Grant, PE. These plans and specifications are a modification to that permit.

A pressurized Pre-fabricated Permeable Block Panel (PPBP) System is proposed for this residence due to limited available space.

The septic system plan has been prepared locating existing contours, proposed panels, nitrification line, tanks, house and repair area.

The Sanitarian has set an LTAR of 0.25 G/SF/D.

II. LOCATION:

From Buffalo Shoals Road, turn south on Laurel Cove Road (SR 1437). Then turn right onto Harbour Point Drive, and the lot is at the end of the road at a cul-de-sac.

III. 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.

IV. OWNERSHIP RESPONSIBILITY FOR A PANEL 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 household 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. Water closets shall not use more than 1.6 gallons/flush. Shower head shall have a maximum allowable flow of 3.0 gallons/minute. All fixtures shall conform to Table 901.2.2 of the NCBC Volume II, Plumbing;
(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.

V. CERTIFICATION:

The Owner shall employ the Design Engineer to make timely observations of the project during construction. Upon completion of the project, the Contractor shall provide the Engineer an "as built" plan of the project. The Engineer shall certify that the project has been constructed in accordance with the plans and specifications and shall further certify that the various apparatuses including fixtures within the house meet the intent of the specifications. A copy of the "as-built" plan and certification shall be provided to the County Sanitarian.

VI. COMPONENTS OF THE SYSTEM AND CONSTRUCTION SEQUENCE:

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. 1,000 gallon two compartment septic tank with effluent filter
2. 1,000 gallon pumping tank with access
3. Submersible effluent pump, level controls and filter
4. Pump Control and 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 with stakes and flagging to ten feet (minimum) beyond the limits of the network. As soon as the absorption area is designated, it shall 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. See site plan for flag locations.

(2) Prior to actually beginning construction of the system, carefully locate, lay out and identify disposal site, manifolds and the lateral 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 8' minimum trench separation must be maintained.)

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

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

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

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

(7) 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.)

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

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

(10) 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 Seeding Specification.)

(11) SEPTIC TANK The septic tank shall consist of a 1,000 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. The outlet of the tank shall have an effluent filter as specified herein. Locate the septic tank at such height as to provide approximately 8" of cover soil over top of the tank. The tank shall have a DHS approved access with lid over the filter.

(12) SLOTTED-FILTER A Zabel A300 micro-filter, with 1/32" infiltration shall be installed in lieu of the outlet tee in the septic tank. The filter shall be manufactured by ZABEL or approved equal, Zabel Environmental Technology, 10409 Watterson Trail, Louisville, KY, 40299, 1-800-221-5742, Fax 502-267-8801 Fax.

(13) PUMP 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. Access shall be provided for entry into the tank directly over the pump location, and extending 6" above final grade or as called for on the plan. Use a DHS approved tank riser with approved lid. The tank shall be supplied by a manufacturer approved by DHS and bear the manufacturer's serial number. The tank shall be positioned to allow gravity flow of the effluent from the septic tank. Immediately down stream from the pump shall be an approved effluent filter system.

All tanks shall be tested for water tightness by an approved method such as 24 hour water tightness test with maximum allowable leakage not to exceed ½ inch per 24 hours. Testing shall begin after the water level in the tank has stabilized. Any leaking shall be corrected and the tanks retested.

Once testing of the tank has been completed, the tank shall be backfilled in lifts with well compacted, debris free earth to a level which directs surface water away from the tanks. Tank access holes shall be installed and grouted water tight and the earth raked smooth for grassing. Grade over the tank shall be sloped to prevent surface water from entering the tank through the access.

(14) PIPING All piping and fittings shall be Schedule 40 PVC except LPP piping in the panels shall be PR160 PVC. Glue for all PVC pipe joints shall be as recommended by the pipe manufacturer.

(15) PUMP The submerged pump shall be Model ME 40 manufactured by F. E. Meyers Co., Ashland, OH, or equal, 4/10 hp, 230v/1ph; capable of pumping 28.0 gallons per minute at a 10.8' head.

(16) EFFLUENT FILTER The effluent filter shall be connected directly to the pump outlet. The filter shall be equal to the GAG Sim Tech Filter, Boyne City, Michigan, 49712, telephone 1-888-999-3290. The contractor shall furnish the following with the filter: STF 100 Filter, an STF 102 Filter Screen, an STF 103 Wrench, an STF 104 Sock, an STF 101 Pressure Alarm Switch and an STF 107 Tank Alert. Filter can be obtained through Confederate Sales Associates, 8205 Brooknell Terrace, Charlotte, NC 28270, telephone 704/ 364-1372.

(17) PUMP ON-OFF water level control switch shall by Myers, Model MLC-20, mercury switch, connected to the simplex pump control.

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

(19) FLOAT TREE The "float tree" can be constructed of an 1-1/2" diameter PVC pipe anchored in a gallon bucket filled with concrete and a 2" diameter PVC sleeve over the 1-1/2" pipe to which the floats are attached. The PVC pipe shall be long enough to reach from about the tank extending into the access riser. The "tree" allows easy and quick access to the float switches for adjustment. Float switches shall be mounted to the tree with non-corrosive clamps furnished by the float manufacturer. Float shall be positioned to not tangle.

(20) PUMP INSTALLATION: 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 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.)

The pump outlet pipe should be connected to the supply manifold with a threaded PVC union (or dresser coupling) to allow quick removal. A check valve shall also be installed in the supply line (within the pump chamber). If effluent will be pumped down hill, a 3/16" 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.

(21) PUMP CONTROL PANEL: The pump shall be powered by a simplex control panel with standard features including: a corrosion resistant enclosure, an aluminum back panel, silver cadmium contacts (IEC Contactor), an IEC motor starter, a 100VA control circuit transformer, a main circuit breaker, a 1 amp control circuit fuse, a 1 amp alarm circuit fuse, a Hand-Off-Auto switch, an alarm test switch, a pump run light, a seal leak light, terminal blocks for pump and float connections, a ground lug, an alarm light and an alarm buzzer. Panel shall be equal to Myers CE 21510 NEMA 4X.

(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 shall extend to a NEMA approved outdoor control panel mounted outside of the pumping chamber. There are to be no junction boxes inside the tank. Power and control conductors shall be conveyed through 2" conduit with Seal-off.

Wiring between the pumping chamber and the house should meet State and local code requirements. Conductors from the tank to the control panel shall be conveyed through 2" conduit with Seal-off.

(23) 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.

(24) 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.

(25) 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 at the head 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 3' for each line. This is the height above the lateral the liquid should be in the temporary "test tube". Continue to adjust valves until all "test tubes" have an equal amount of liquid.

(26) 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.

VII. OPERATION AND MAINTENANCE:

The system is classified as a Type III e. The Regulations allow the system to be managed by the Owner. Operating, Maintenance and Inspection procedures shall be conducted by the Owner on a timely basis. Procedures shall include but not be limited to the following:

- Minimum inspection/maintenance frequency shall be conducted on a timely and routine basis.
- Septic system shall be pumped every 4 years or when solids accumulate to a the volume of the tank.
- Effluent filters shall be cleaned on routine basis as required.
- The PPBPS system should be observed by the regulatory agency one, three, six and nine months after initial installation, and every 3 years. An inspection report should be completed and filed each time the system is checked.
- All laterals shall be pressure back-washed annually with clean water.
- Pressure head for upper and lower laterals should be checked and adjusted one month after installation and annually thereafter.
- All piping, fittings turn-ups and valve boxes 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 deflected 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.
- Check septic tank and pump tank for evidence of damage or leakage. Check the quality of effluent including grease and sludge accumulation.
- The management entity in conjunction with the local Health Department shall establish an operation and maintenance program and procedure based on experience obtained from similar installations.

DESIGN SPECIFICATIONS - T & J PANEL SYSTEM
Lot 15 Harbor Watch Section One
Fallstown Township
Iredell County, NC

Daily design waste flow:	360 gpd
Septic tank size:	1,000 gal. (2 compartment)
Septic tank filter:	Zabel A300 filter
Pumping tank size:	1,000 gal.
Effluent loading rate:	0.25 gpd/sf (50% increase with PPBPS)
Total linear feet and diameter:	252 ft. of 1-1/4" dia. PVC of laterals and T & J 16" high panels (allow 4.5 ft per panel)
Total length and diameter of supply manifold:	50 LF - 2" dia. Schedule 40 PVC
Number and length of laterals:	4 laterals w/14 panels each with manifold in center
Number of panels:	56
Hole size:	5/32"
Hole spacing:	1 hole per panel
Total number of holes:	56
Flow per hole at 3' head	0.50 gpm
Flow rate through the system:	28 gpm
Elevation head:	6'
Pressure head:	3'
Friction head:	1.8'
Total head:	10.8'
Pump requirements:	28 gpm at 10.8'; use Myers 4/10 hp ME 40 pump; 230V/Single Phase
Force main filter:	GAG Sim/Tech Filter w/Sock and Pressure Alarm
Dosing volume:	202 gal.
Depth of water pumped per dose:	8.1"
Pump run per dose:	7.2 min.
Check valve:	yes
Siphon break hole:	yes

SEEDING SPECIFICATIONS

SLOPES 3:1 or FLATTER

1. Apply agricultural lime at the rate of 90 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 and application rate:

DATE	TYPE	PLANTING RATE
Aug 15 - Nov 1	Tall Fescue	200 lb/ac or 7 lb/1000 sf
Nov 1 - Mar 1*	Tall Fescue and	200 lb/ac or 7 lb/1000 sf
	Abruzzi Rye	25 lb/ac or 2 lb/1000 sf
Mar 1 - Apr 15	Tall Fescue	200 lb/ac or 7 lb/1000 sf
Apr 15 - Jul 30	Hulled Common or Bermuda	30 lb/ac or 1 lb/1000 sf
Jul 15 - Aug 15	Tall Fescue and	200 lb/ac or 7 lb/1000 sf
	Brown Millet or	35 lb/ac or f lb/1000 sf
	Sorghum-Sudan Hybrids	30 lb/ac or : 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

1. Apply agricultural lime at the rate of 90 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 and application rate.

DATE	TYPE	PLANTING RATE
Mar 1 - Jun 1	Sericea Lespediza (scarified) &	50 lb/ac or 11 lb/1000 sf
Mar - Apr	Add Tall Fescue or	150 lb/ac or 32 lb/1000 sf
Mar - Jun	Add Weeping Lovegrass	5 lb/ac or c lb/1000 sf
Jun - Sep 1**	Tall Fescue and	60 lb/ac or 12 lb/1000 sf
	Brown Top Millet	35 lb/ac or f lb/1000 sf
	Sorghum Sudan Hybrids	30 lb/ac or : lb/1000 sf
Sep - Mar 1	Sericea Lespediza (unhulled-unscarified)	70 lb/ac or 1: lb/1000 sf
	Tall Fescue	150 lb/ac or 32 lb/1000 sf
	Millet or Sudan	20 lb/ac or 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 3-5 gal/1000 sf or 200-300 gal/ac.

IREDELL COUNTY HEALTH DEPARTMENT

STATESVILLE 704-878-5305 MOORESVILLE 704-664-5281

IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM INSPECTION

PERMIT# 26038 PIN# 3L-B-52 (PT) DATE 11-19-98

OWNER OR CONTRACTOR HAROLD MICHAEL PHONE: Business Home (704) 849-9590

ADDRESS 2117 COURTSIDE LANE APT. 203 CHARLOTTE, NC 28270

LOCATION BUFFALO SHOALS RD. TL LAUREL COVE TR HARBOR POINT, TR HIGH LAKE, LOT AT END of CUL-DE-SAC

SUBDIVISION HARBOR WATCH BLOCK / SECTION I LOT 15 LOT AREA 0.753 ACRE SITE CLASS. PS DESIGN FLOW 360 L.T.A.R. 0.25 GPD/FT²

Septic Tank: 1000 Gallons; STB ____ Date ____

Pump Tank: ____ Gallons; PT ____ Date ____

Pump Make: ____ Model ____ Serial No. ____

Nitrification Field: No Fields 1 Square Feet 480 Linear Feet 240

No Lines SIX Trench Width 24" Max Trench Bottom Depth 36" Gravel Depth SAND 6'

☑ New System ☐ Repair System Type: I, II, (III), IV, V, VI

System Description: 7 30% SLOPE PPBPS SAND

Repair System Description: LOW PRESSURE PIPE

Maintenance Agreement Required: ☐ Yes ☑ No

☑ House/Mod. Home No. Bedrooms 3

☐ Mobile Home No. Bathrooms 2+

☐ Business No. Employees ____

☐ Other ____

☐ Slab ☐ Crawl Space ☑ Basement w/plumbing ☐ Basement wo/plumbing

Water Supply: ☑ Individual ☐ Public ☐ Community WELL

Comments:/Conditions: (1) THIS PERMIT VOIDS PREVIOUS ISSUED 4-15-97 (3) INSTALL FIFTY FOUR (54) PPBPS PANELS IN SIX EQUAL LENGTH LINES AS SHOWN ON ATTACHED SITE PLAN.

Comments:/Conditions:

INITIAL SITE SKETCH

(3) INSTALL LINES IN ACCORDANCE WITH GUIDELINES SET FORTH IN .1956 (5)

SEE ATTACHED SITE PLAN

AS BUILT SKETCH

I understand that this permit can be suspended or revoked if any false information is supplied toward securing the permit/any unauthorized changes are made to the site/any unauthorized changes are made in the installation of the system. Improvement Permit with plat valid without expiration. Improvement Permit with site plan valid for sixty months. Authorization to Construct is valid for a period equal to that of Improvement Permit – not to exceed sixty months.

Signed: ____ date ____

Improvement Permit by: STEVE HENDRICK date 11-19-98

Authorization to Construct by: STEVE HENDRICK date 11-19-98

Installed by: ____

Operation Permit by: ____ date ____

Existing System Inspection by: ____ date ____

HEALTH DEPT. COPY: WHITE INSPECTION COPY (FINAL): GREEN OWNER COPY (FINAL): YELLOW INSPECTION COPY (INITIAL): PINK OWNER COPY (INITIAL): GOLD

8-27-99

HAGGD MICHAEL LOT 3 HEMBOLT

DESIGN FLOW 3 BR @ 120 = 360 GPD

LTAR 0.25 G/D/SF

$\frac{360}{0.25} = \frac{1440}{3}$ SF = 480 LF CONVENTIONAL

REDUCTION FOR PPBPS = 50%

480 LF X .5 = 240 LF

ALLOW 4.5'/PANEL ∴ $\frac{240}{4.5}$ = 54 PANELS

> USE 4 LATERALS W/ 14 PANELS EACH W/ MANIFOLD IN MIDDLE TOTAL 56 PANELS

> USE ZABEL A300 1/32" FILTER IN SEPTIC TK & GAS/SIMTECH FILTER W/SOCK & ALARM

> USE 1000 GAL SEPTIC & PUMP TANK

> ORFICE: 5/32" Φ HOLES @ 3' HEAD = 0.5 GPM/HOLE

> ONE HOLE/PANEL ∴ 56 HOLES X 0.5 G/H = 28 GPM FLOW RATE

FRICTION HEAD: 2" Φ PVC: 30' $\left(\frac{3.0}{100}\right)$ 1.2 = 1.8 ft

OPERATING HEAD 3.0

ELEV HD 6.0

TDH 10.8'

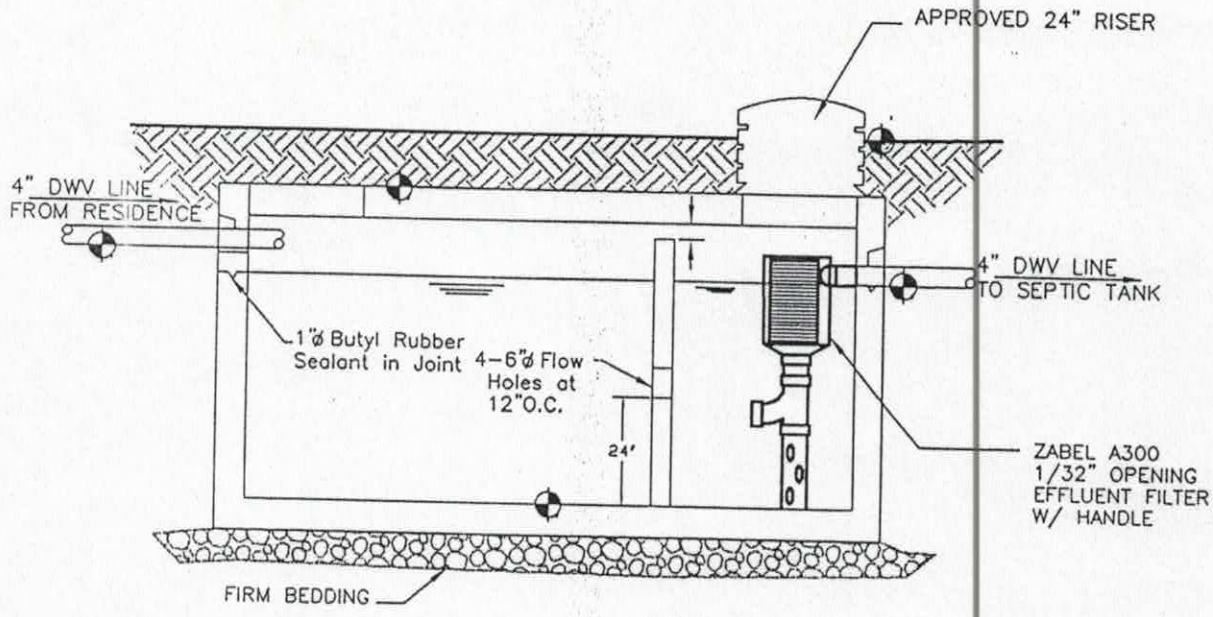
PUMP REQ'D: MYERS ME40 4/10 HP 230 V/1 PH PUMP 28 GPM @ 10.8 TDH

DOSE VOL = 3.6 G/P X 56 = 202 GAL/DOSE

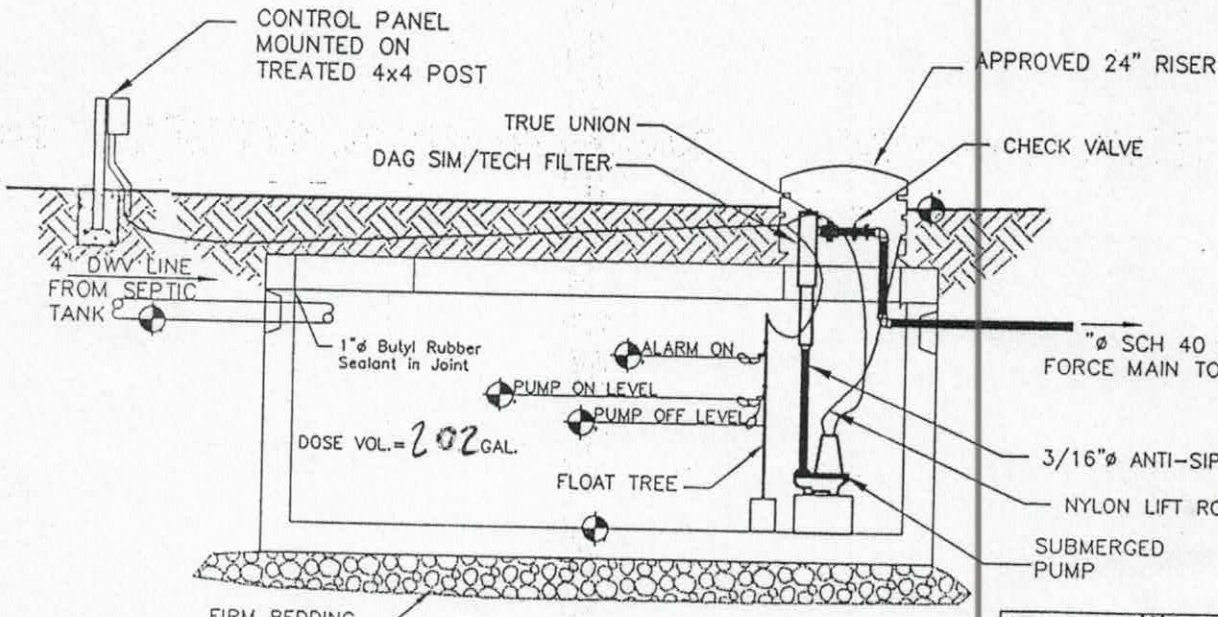
PUMP RUN TIME $\frac{202}{28}$ = 7.2 MIN

DOSE DEPTH: $\frac{60" \times 97" \times 1"}{12 \times 12 \times 12} \times 7.48$ = 25 G/in

$\frac{202}{25}$ = 8.08" DRAW DOWN



1/U1 SECTION VIEW- DEH APPROVED GAL SEPTIC TANK
N.T.S.



2/U1 SECTION VIEW- DEH APPROVED GAL PUMP TANK
N.T.S.

NORTH CAROLINA PROFESSIONAL SEAL 3370 ENGINEER B.K. BARRINGER, JR.

Publication or reuse of this drawing must be with the written consent of the Architect/ Engineer

SCALE: DATE: DRAWN BY: JSI CHK'D. BY: BKB DATE OF ISSUE:	1,000 GAL SEPTIC TANK & 1,000 GAL PUMP TANK IREDELL Co., North Carolina	B.K. BARRINGER & ASSOCIATES, P.A. ARCHITECTURE/PLANNING/ENGINEERING SUITE 104 WESTFIELD CENTER 125 EAST PLAZA DRIVE MOORESVILLE, NC 28115 PH:704-664-7888 FAX:664-1778	REVISIONS

25038

Call Sanitarian Between 8 a.m. and 9 a.m. 664-5281 / 878-5305

PROPERTY DESCRIPTION

APPLICATION FOR- (Not a Permit) ( ) Improvements Permit ( ) Zoning Permit ( ) Special Use ( ) Subdivision Approval ( ) Other

Proposed Use: TO CONSTRUCT A DWELLING

Location: LAUREL COVE RD NEW ST HARBOR POINT DR TL HIGH LAKE 15TH ON TL

Tax Map No.	Township	Jurisdiction	Zoning
3L B 52	FALLSTOWN	IREDELL	RA

Subdivision/Mobile Home Park	Lot No.	Lot Size	Flood Plain
HARBOR POINT POINT	15	21780	( ) yes (X) no

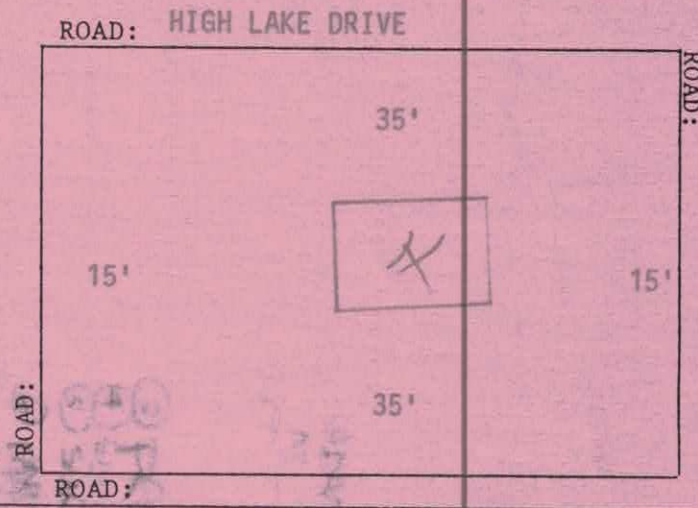
Approx. Area to be disturbed	Street Address	Phone	Watershed
			WS IV CA

REQUIRED INFORMATION FOR IMPROVEMENTS PERMIT - IREDELL COUNTY HEALTH DEPARTMENT

SKETCH MAP

On the lot to be built on or to be used, show the property lines and the actual dimensions of the lot, the size and shape of any and all buildings located or to be located on the lot showing the distances from lot lines. Show setback of main building on adjacent lot and their use.

Z 15.00
HD50.00
65.00



OWNER	ADDRESS	PHONE NO.
LAKE NORMAN PROPERTIES INC K.E.I. MARKETING CO. INC	P O BOX 1627 MATTHEWS NC 28106	847 6006

I certify that all of the statements made in this application and any attached documents are true, complete and correct to the best of my knowledge and belief and are made in good faith. I understand that false information may be grounds for rejection of this application. Authorized Health Department and Inspection Department Representatives are granted right of entry to make evaluations or inspections and to release information upon public request.

R. Seitz — 9-17-96

Signature of Owner or Authorized Agent — Application Date

If permitted, the following minimum zoning requirements must be met, unless the Health Department requires more land area or other qualifications are indicated in the remarks.

Lot area 21780 sq. ft. Front yard depth 35 ft. Corner yard depth 25 ft.
Lot width 100 ft. Side yard depth 15 ft. Rear yard depth 35' ft.

LAND USE INDICATED (is) (~~is not~~) PERMITTED IN THE ZONING DISTRICT.

REMARKS: DO NOT ISSUE BUILDING PERMIT UNTIL PLAT IS RECORDED

ZONING ADMINISTRATION DIVISION

DDO — 8 30 96

Approved by — Date

WHITE: Original CANARY: Inspection Copy PINK: Health Dept. GOLD: Owner

TAX MAP NO. _____

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

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

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

g. The Contractor shall respond to a request for a nonscheduled service or maintenance call within 24 hours after receipt of such request.

2. The Owner's Obligations.

a. The Owner shall pay to the Contractor the sum of $300.00 per year for periodic inspections, routine maintenance procedures and periodic reports. The annual fee may be amended upon sixty (60) days advance notice to the Owner but may not be increased more than ____ percent per year. The Owner shall pay to the Contractor his normal and customary fees for any work performed on the system as a result of nonscheduled service or maintenance calls. All fees are due and payable within thirty (30) days of billing. Payments due to the Contractor and unpaid by the Owner after thirty (30) days shall accrue interest from the due date until paid at a rate of ____ percent per month.

b. Within 30 days of receipt of notice of needed repairs pursuant to paragraph 1.e. above, the Owner shall request the Contractor to complete needed repairs or shall provide to the Contractor evidence that the needed repairs were satisfactorily completed by another entity.

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

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

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

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

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

d. Termination by the Contractor.

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

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

(b) failure of the Owner to provide to the Contractor authorization to complete needed repairs or satisfactory evidence that needed repairs to the system were completed by another entity within 30 days of receipt of notice of needed repairs pursuant to paragraph 1.e. above. If said authorization to complete needed repairs or evidence of completion of said repairs is provided after notice of termination is given but prior to the date of termination of this Agreement, this Agreement shall continue in effect;

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

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

4. Assignment.

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

b. Assignment by the Contractor. The Contractor may assign its rights and duties under this Agreement to another management entity which is qualified pursuant to 15A N.C. Admin. Code 18A.1961 to manage a Type

___ system upon thirty (30) days written notice to the Owner and to the local health department.

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

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

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

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

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

To the Owner: Mr Harold Michaels Work
208 High Lake Dr 343 4200
Statesville, NC

To the Contractor:
Richard Abernathy
1397 Brawley School Rd
Mooresville NC 664 6508

To the Local Health Department:

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

10. Place of Agreement. This Agreement and any questions concerning its validity, construction or performance shall be governed by the laws of the State

of North Carolina, notwithstanding the place of execution, or the order in which the signatures of the Parties are affixed.

11. Entire Agreement and Amendment. This Agreement supersedes all prior negotiations, agreements and understandings between the Parties with respect to the subject matter hereof and constitutes the entire Agreement between the Parties with respect to the subject matter hereof. To be effective, any amendment or modification to this Agreement must be in writing and must be signed by the Parties.

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

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

(Owner)

Attest:

Rebecca L. Langford

(Contractor)

Attest:

Rebecca L. Langford

(hrmecontract.gm)