MECK COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH
RECEIVED
OCT 18 1983

Date Received 10-18-83

APT No 20149

T. C. No 001-164-21

Map Date _____

MECKLENBURG COUNTY
DEPARTMENT OF ENVIRONMENTAL HEALTH

APPLICATION FOR SOIL INVESTIGATION

1) NAME OF OWNER Stephens (LAST) Dallas (FIRST) L. (MIDDLE)

2) ADDRESS OF OWNER 1407 E. Third St., Charlotte, N. C. ZIP 28204

3) PHONE NO. Home 364-6171 Office 376-2121

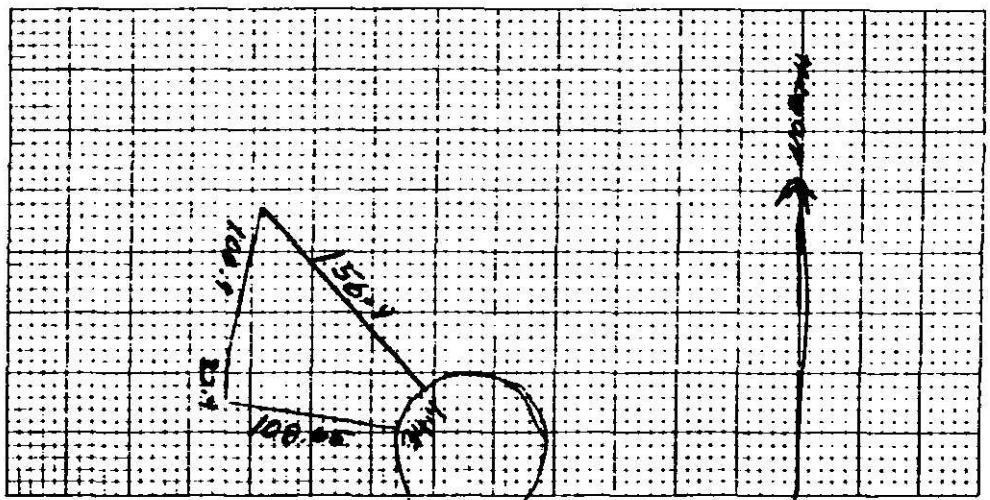
4) LOCATION OF PROPERTY ~~21447~~ 21449 Country Club Drive, Davidson, N. C. (Lake Norman)
(STREET OR COUNTY ROAD)

5) SUBDIVISION Country Club Shores No. 2 LOT NO. ~~11~~ 12 BLOCK NO. _____

MAP BOOK NO 12 PAGE NO. 21 Tax Code 001-164-21

6) DEED REFERENCE DEED BOOK _____ PAGE NO. _____

Application is hereby made to the Mecklenburg County Department of Environmental Health for the conduct of a soil investigation and an on site inspection of the lot hereinabove described for the purpose of determining if the lot is suitable for the installation of an individual septic tank wastewater treatment system with subsurface, soil absorption, effluent discharge



7) ACCURATELY DIAGRAM & DIMENSION LOT

Dallas L Stephens
OWNER Dallas L. Stephens

EHD-5-76

Environmental Health Department's Copy

MECKLENBURG COUNTY
DEPARTMENT OF ENVIRONMENTAL HEALTH
1200 BLYTHE BOULEVARD
CHARLOTTE, NORTH CAROLINA 28203

SIR. NO. 20149
T.C. NO. 001-164-21-22
DATE: 10-28-83

Dallas L. Stevens
1407 E. Third Street
Charlotte, NC 28204

Re: Property located at ~~21447~~ 21449 Country Club Drive

Dear Mr. Stevens:

At your request, a field investigation was conducted on the property designated above. The soils on the property were found to contain a limited area of provisionally suitable soil for the installation of a ground absorption sewage disposal system. A copy of the site evaluation report is enclosed for your information.

Should you desire to file for permission to install a ground absorption sewage disposal system, please submit plot plans for the proposed construction, well, and ground absorption sewage disposal system to this office. They will be reviewed and if it is found that there is an adequate area of provisionally suitable soil to accommodate the proposed installation, an Improvements Permit will be issued by this office.

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

Sincerely,

Bill D. Hardister, Jr.
Environmental Health Supervisor

BDH/kbg

Enclosure

DEPARTMENT OF ENVIRONMENTAL HEALTH
MECKLENBURG COUNTY, NORTH CAROLINA

SITE EVALUATION

S.I.R. NO. 20149

T.C. NO. 001-164-~~81~~22

(Ground Absorption Sewage Disposal)

OWNER: DALLAS L. STEVENS
ADDRESS: 1407 E. ~~TRADE~~ 3rd ST. 28204
LOCATION OF SITE: 21449 Country Club Drive

PLAT NO:
LOT SIZE: 10,428

FACTORS	AREA 1	AREA 2	AREA 3	AREA 4
1. SLOPE (%)	S (PS) U 2-5	S PS U	S PS U	S PS U
2. SOIL TEXTURE (12-36 inches) Sandy, Loamy, Clayey (Use 2-1 Clay)	S (PS) U Clayey	S PS U	S PS U	S PS U
3. SOIL STRUCTURE (12-36 inches)	S (PS) U Blocky	S PS U	S PS U	S PS U
4. SOIL DEPTH (inches)	S (PS) U 40-48	S PS U	S PS U	S PS U
5. RESTRICTIVE HORIZONS (Inches) (Impervious strata, Rock)	S (PS) U None	S PS U	S PS U	S PS U
6. SOIL DRAINAGE/GROUNDWATER (external and internal)	S (PS) U Adequate	S PS U	S PS U	S PS U
7. OTHER (Specify)	S PS (U) Restrictive Area	S PS U	S PS U	S PS U
8. SOIL GROUP	IIIa			
9. SITE CLASSIFICATION	Unsuitable			
10. SOIL SERIES	Cecil			

S - Suitable PS - Provisionally Suitable U - Unsuitable

**See Diagram on Back (includes: soil areas, property lines, roads, streams, gullies, wet areas, fill areas, wells, water bodies, slopes)

Recommendations/Comments: When SOFT Set Back From Lake 4,278 Is Left. Also a 20x20 ± Building with Deck on property

Described by: W.B. Ramsey
Title: Soil Scientist

Date: 10-24-83

EHD 539 (Revised: 6/82)

It

20149

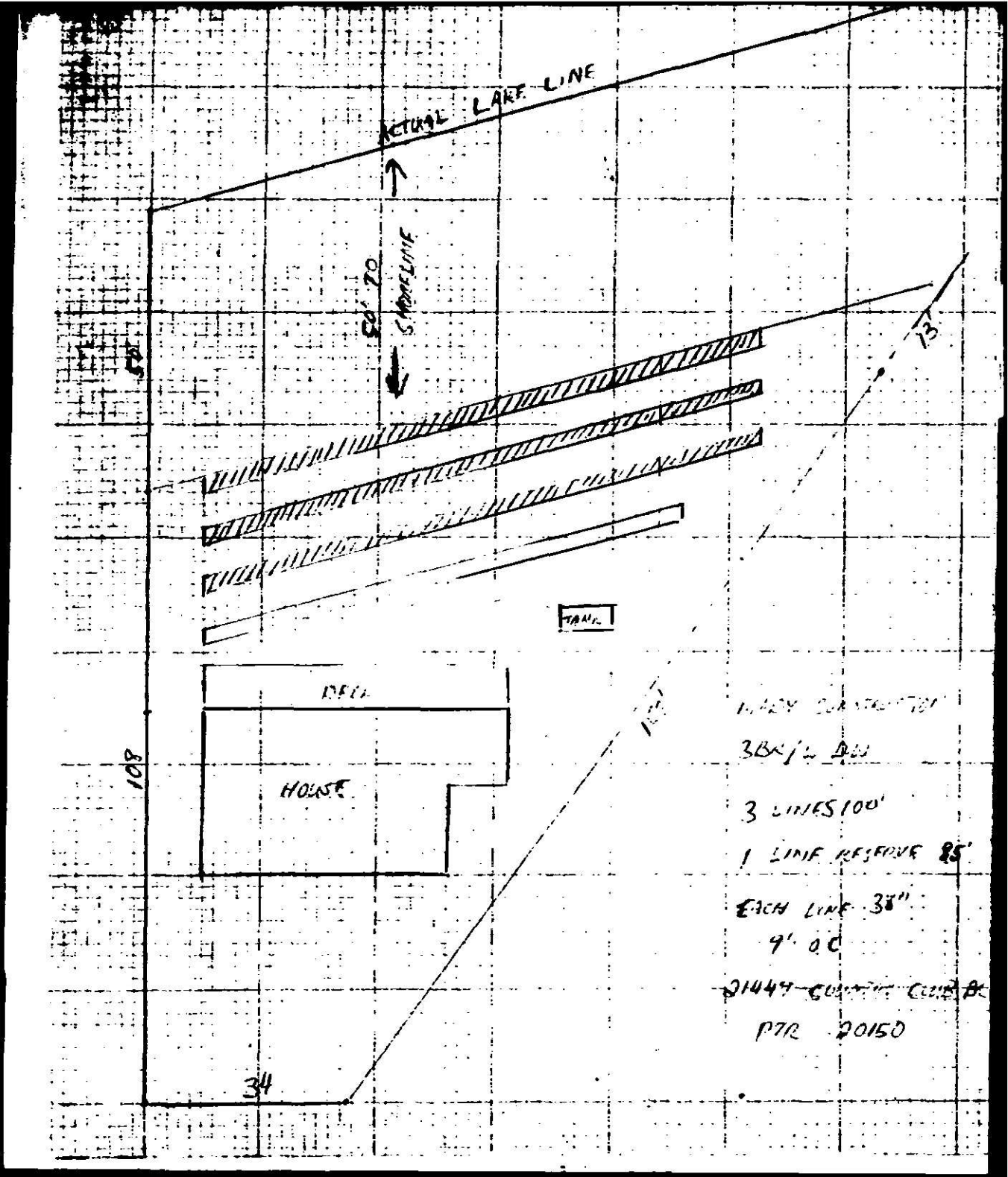
Apt

Lot # 12

cor. 164-

22

20149 Country Club Shore


ACTUAL LAKE LINE
SHORELINE
50' TO
108
HOUSE
TANK
34
13'
3BK/L DU
3 LINES 100'
1 LINE RESERVE 85'
EACH LINE 38"
9' OC
P7R 20150

Date Received 11-21-83

CAR(S) Application No. ~~20150~~ 20149

T. C. No. 001-164-~~30~~ 92

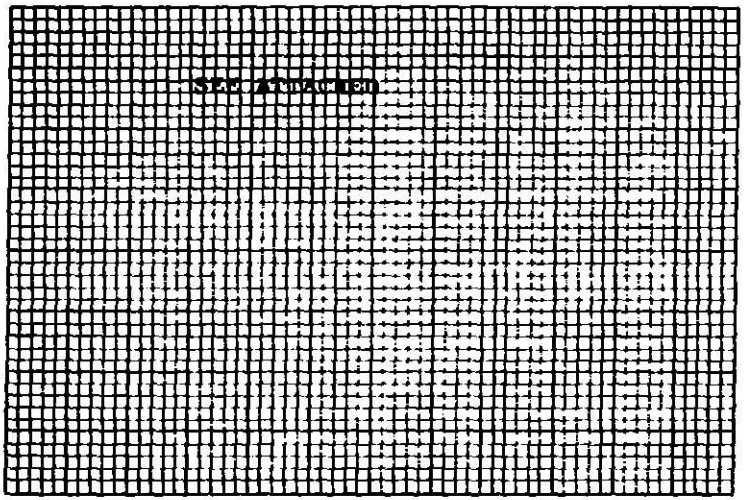
Map Date _____

MECKLENBURG COUNTY
DEPARTMENT OF ENVIRONMENTAL HEALTH

Application for an
Installation, Construction, Alteration, and/or Repair Permit
(Individual Septic Tank System with Subsurface, Soil Absorption, Effluent Discharge)

The owner of that property described hereinafter hereby applies to the Mecklenburg County Department of Environmental Health for a permit to:

1) X Install or Construct 2) ____ Alter or Repair an individual septic tank wastewater treatment system with a subsurface, soil absorption, effluent discharge.



3) PLOT PLAN (ACCURATELY DIMENSIONED)

Mobile Home ____ Yes X No
Residence X Yes ____ No
4) No. of Bedrooms 3
5) Business Use — Max. No. Employees NA
6) Washing Machine X Yes ____ No
7) Garbage Disposal ____ Yes X No
8) Dishwasher X Yes ____ No
9) Water Supply:
A) Individual Well X
B) Governmental System ____
C) Community System:
1. Well source ____
2. Governmental source ____
10) Sewage System:
House located within 200 feet of public sewer ____ Yes X No
House located within 200 feet of community sewer ____ Yes X No
11) FHA Case No. ____
12) VA Case No. ____

13) NAME OF OWNER Mady Construction Company, Inc.
LAST FIRST MIDDLE

14) ADDRESS OF OWNER 20347 Walter Henderson Road

15) PHONE NO. Home _____ Office 568-7740

16) LOCATION OF SYSTEM ~~21449~~ 21009 Country Club Drive
STREET OR COUNTY ROAD

17) SUBDIVISION Country Club Shores Lot No. 12 Block No. _____

Map Book No. 12 Page No. 21

18) DEED REFERENCE — DEED BOOK 2791 AT PAGE 263

19) HAS A SOIL INVESTIGATION BEEN RUN? X YES ____ NO DATE RUN 10-24-83

20) PTR NUMBER (See Instructions) ~~20150~~ 20149

The undersigned person hereby agrees that he has read the foregoing application and that the contents of same are true. It is understood that any permit applied for herein shall be void and of no effect if any of the above facts are not true.

November 3, 1983
DATE OF APPLICATION

Pat T. Pixley
OWNER

EHD-5-76

AT 11-22-83

Date Issued 11-21-83

Serial No. 6976

SIR No. 20149

T. C. No. 001-164-22

Map Date

MECKLENBURG COUNTY
DEPARTMENT OF ENVIRONMENTAL HEALTH

TO THE BUILDING INSPECTION DEPARTMENT

APPROVAL OF LOT FOR INSTALLATION OF AN INDIVIDUAL SEPTIC TANK WITH SUBSURFACE, SOIL ABSORPTION, EFFLUENT DISCHARGE

NAME OF OWNER Mady Construction Co., Inc.
(LAST / FIRST / MIDDLE)

ADDRESS OF OWNER 20347 Walter Henderson Rd., Davidson, NC ZIP 28036

LOCATION OF LOT ~~21447~~ 21449 Country Club Dr.
(STREET OR COUNTY ROAD)

SUBDIVISION Country Shores (Club) LOT NO 12 BLOCK NO.

MAP BOOK NO. PAGE NO.

The above specified lot is approved by the Mecklenburg County Department of Environmental Health for the installation of an individual septic tank system with subsurface, soil absorption, effluent discharge based on the soil investigation, on an on-site inspection of the said lot; and upon the information supplied in the "Application for an Installation, Construction, Alteration, and/or Repair Permit", number 20149. This approval is subject to the following terms and conditions:

1. That the nitrification field be installed, constructed, altered and/or repaired in the same area where the soil investigation was run.
2. That an "Installation, Construction, Alteration, and/or Repair Permit" be issued and in full force and effect when the system is installed, constructed, altered, and/or repaired and that the system be installed in accordance with same.

This approval may be revoked and the building inspection department requested to revoke any building permit(s) which have been issued to authorize construction on the said lot if at any time it is determined that any information contained in the "Application for an Installation, Construction, Alteration, and/or Repair Permit" is not correct or is untrue or that the septic-tank system is not being installed, constructed, altered and/or repaired in accordance with a valid Installation, Construction, Alteration, and/or Repair Permit.

Environmentalist

Environmental Health Director, or Authorized Section Head

EHD-S-76

Environmental Health Department's Copy

Date Received 3-18-85

SEE INSTRUCTIONS ON BACK OF THIS FORM

RECEIVED
MECKLENBURG COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

ICAR(S) Application No. 20149

T. C. No. 001-161-22

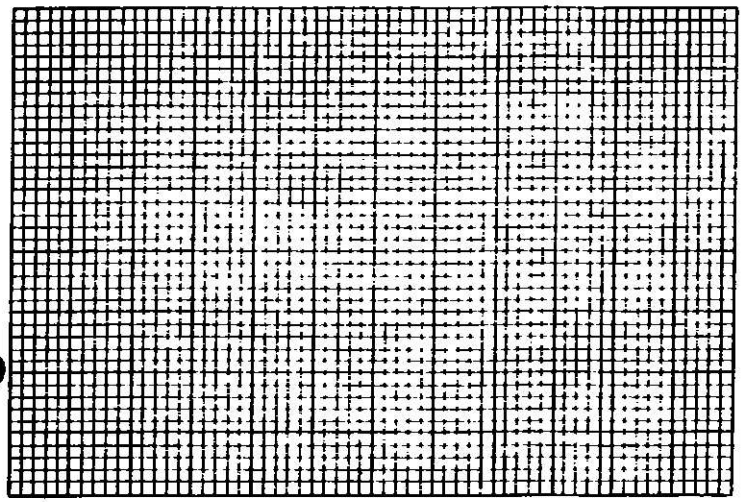
Map Date L

MECKLENBURG COUNTY
DEPARTMENT OF ENVIRONMENTAL HEALTH

Application for an
Installation, Construction, Alteration, and/or Repair Permit
(Individual Septic Tank System with Subsurface, Soil Absorption, Effluent Discharge)

The owner of that property described hereinafter hereby applies to the Mecklenburg County Department of Environmental Health for a permit to:

1) ✓ Install or Construct 2) ____ Alter or Repair an individual septic tank wastewater treatment system with a subsurface, soil absorption, effluent discharge.



3) PLOT PLAN (ACCURATELY DIMENSIONED)

Mobile Home ____Yes ____No
Residence ✓Yes ____No
4) No. of Bedrooms 3
5) Business Use — May (No)
Employees ____
6) Washing Machine ✓Yes ____No
7) Garbage Disposal ____Yes ✓No
8) Dishwasher ✓Yes ____No
9) Water Supply:
A) Individual Well ✓
B) Governmental System ____
C) Community System:
1. Well source ____
2 Governmental source ____
10) Sewage System:
House located within 200 feet of public sewer ____Yes ✓No
House located within 200 feet of community sewer ____Yes ✓No
11) FHA Case No. ____
12) VA Case No. ____

13) NAME OF OWNER ESTWANIK JOSEPH JOHN
LAST FIRST MIDDLE

14) ADDRESS OF OWNER 1935 CLEMATIS DR. 28211

15) PHONE NO. Home ____ Office 334-4663

16) LOCATION OF SYSTEM 2149 COUNTRY CLUB DR.
STREET OR COUNTY ROAD

17) SUBDIVISION COUNTRY CLUB SHORES Lot No. ____ Block No. ____

Map Book No. ____ Page No. ____

18) DEED REFERENCE — DEED BOOK ____ AT PAGE ____

19) HAS A SOIL INVESTIGATION BEEN RUN? ____ YES ____ NO DATE RUN ____

20) PTR NUMBER (See Instructions) ____

The undersigned person hereby agrees that he has read the foregoing application and that the contents of same are true. It is understood that any permit applied for herein shall be void and of no effect if any of the above facts are not true.

3-18-85
DATE OF APPLICATION

J. J. Estwanik MD
OWNER

EHB-5-76

Permittee's Copy

AS BUILT SPECS.

B. K. BARRINGER, JR., P.E.
Post Office Box 388—Telephone 704-888-1888
MOORESVILLE, NORTH CAROLINA 28115

Engineer/Designer

July 25, 1985

Mr. F. J. Ervin
Rt. 2, Box 190
Mooresville, N. C. 28115

Re: Dr. & Mrs. Joseph Estwanik Residence
Lot 12, Country Club Shores No. Two
Mecklenburg County, N. C.

Dear Mr. Ervin:

Attached are prints of the original plan and specifications for this job reflecting as built information as determined by field inspection.

Please provide this information to the Mecklenburg County Environmental Health Department for their file.

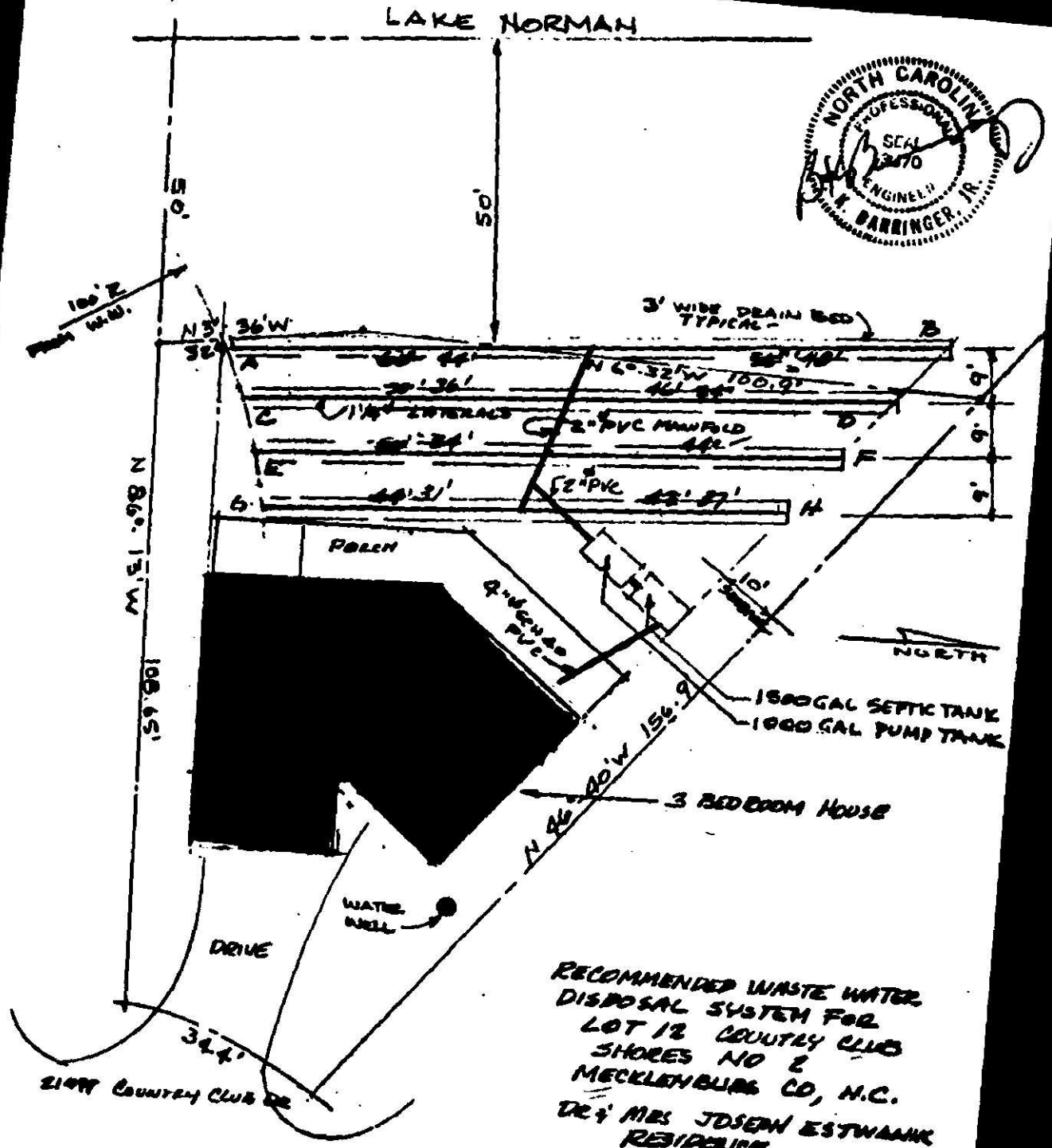
Yours truly,

B. K. Barringer, Jr., P.E.

BKB/ib

Enclosure: 3 prints

001 16422



RECOMMENDED WASTE WATER DISPOSAL SYSTEM FOR LOT 12 COUNTRY CLUB SHORES NO 2 MECKLENBURG CO, N.C.

DR & MRS JOSEPH ESTWANIK RESIDENCE

SCALE: 1" = 20'

MARCH 26, 1985

7/23/85 SHOW AS BUILT INFO.

B.K. BARRINGER JR PE.
MORRESVILLE N.C.
PERMIT NO:

INSPECTOR: Kelly Rawlé

DESIGN SPECIFICATION - LOW PRESSURE PIPING SYSTEM

Lot 12 Country Club Shores No. 2

Mecklenburg County, N. C.

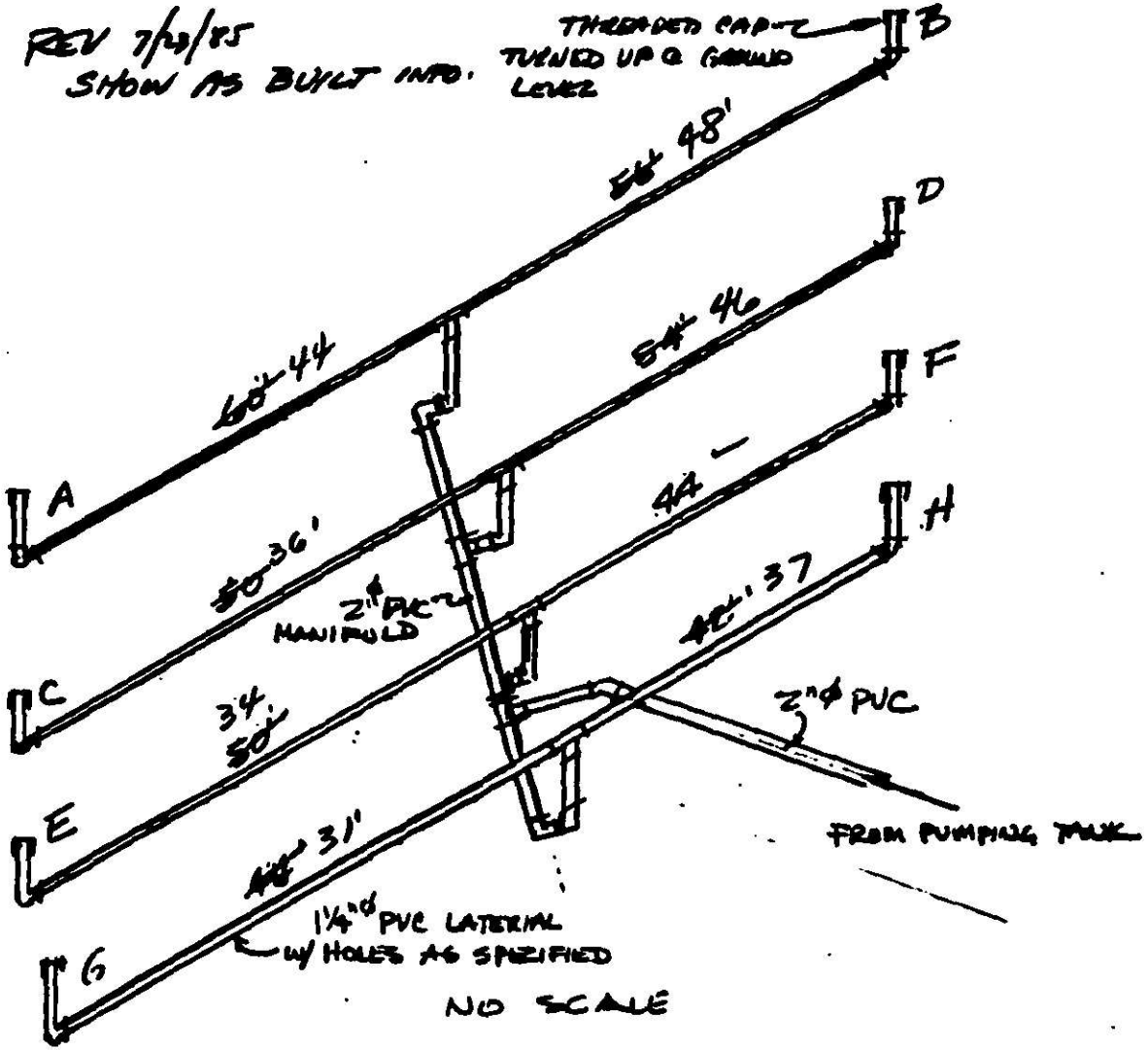
7/28/05
As-Built Info Added

Dr. & Mrs. Joseph Estwanik - March 26, 1985

Daily Wasteflow:	360 gpd
Septic tank size:	1,500 gal. (2 compartments)
Pumping tank size:	1,000 gal.
Effluent loading rate:	0.375 ~~0.3~~ gpd/sf
Total absorption area:	960 SF ~~1200~~ sf active
Total linear feet and diameter of laterals:	320 ~~400~~ ft. of 1-1/4" dia. PVC
Total length and diameter of supply manifold	40 lf 2" PVC
Number and length of laterals:	1 at ~~44'~~ 40 1 at 36 1 at 30 1 at 34 1 at 46 1 at ~~34~~ 40 1 at ~~46~~ 46 1 at ~~44~~ 44
Manifold placement:	Middle of field 1 @ 31 1 @ 37
Hole size:	5/32" dia.
Hole spacing:	5'0"
Total number of holes:	~~64~~ 80
Total flow through the system:	~~34~~ 40 gpm
Elevation head (pump to end of manifold):	5.0
Pressure head:	3.0 average
Friction head:	1.05
Total head:	9.05
Pump requirements:	42 gpm at 9.05' Use Myers 1/2hp SRM4 pump
Storage volume in pipes:	Supply Manifold = 7.13 gal. Lateral Network = ~~34.8~~ gal. 19.84 Total storage = ~~41.93~~ gal. 26.97
Dosing volume:	290 gal = 11" in 1,000 gal. tank
Depth of water pumped per dose:	11"
Check-valve used:	Yes
Syphon break hole	Yes



REV 7/29/85
SHOW AS BUILT INTO.



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

SCHEMATIC MANIFOLD & LATERIAL LAYOUT
LOT 12 COUNTRY CLUB SHORES NO 2

B.K. BARRINGER JR PE
3-26-85

LINE ORIFICE SIZE & SPACING

LATERAL	LENGTH	ORIFICE SIZE	DIST. FROM MANIFOLD TO FIRST ORIFICE	ORIFICE SPACING	DIST FROM LAST ORIFICE TO END OF LATERAL	NUMBER OF ORIFICES PER LINE
A	46' 60'	5/32"	1'-9"	5'-0"	3'-3"	9 ~~11~~
B	42' 36'		3'-3"		2'-9	10 ~~11~~
C	38' 50'		3'-3"		1'-9"	7 ~~10~~
D	46' 54'		1'-9"		2'-3	9 ~~11~~
E	34' 60'		1'-9"		3'-3	7 ~~10~~
F	44'-		3'-3"		0'-9"	9
G	31' 46'		3'-3"		0'-9"	6 ~~7~~
H	37' 44'	↓	1'-9	↓	5'-3"	7 ~~8~~
TOTAL		280 LF 320 LF				60 64

REV 7/23/85 SHOW AS BUILT INFO.

LOT 12 COUNTRY CLUB SHORES NO 2.
LINE ORIFICE SIZE & SPACING
B.K. BARRINGER JR PE
3-26-85

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

RECOMMENDED INDIVIDUAL RESIDENCE MODIFIED LOW-PRESSURE PIPING GROUND ABSORPTION, WASTEWATER DISPOSAL SYSTEM

FOR

Dr. & Mrs. Joseph Estvanik

Lot 12 Country Club Shores

Mecklenburg Co., N. C.

PREPARED BY;

B. K. Barringer Jr., P. E.

N. C. Registration #3370

154 E. Iredell Avenue

Mooresville, N. C. 28115

(704)663-1859 or NCWats 1-800-222-3600

March 27, 1985



LOW PRESSURE PIPING SYSTEM

DESIGN CONSIDERATIONS:

PROPOSED RESIDENCE: of three bedrooms with two baths, garbage disposal, clothes washer and dish washer to be located on owner's property of approximately 10,000 sf in area. There is no basement. Water well is located 100' from any sewage treatment facility.

LOCATION: The lot is located at the end of Country Club Dr. on a cul-de-sac on a point into Lake Norman. and is a part of a subdivision declared before July 1, 1982.

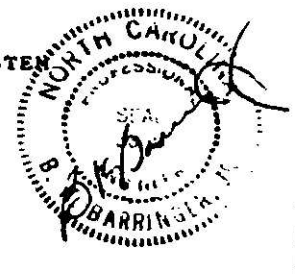
TERRAIN: The lot is located such that the terrain slopes slightly from the road (front) to the lake (rear of property). At present there is a masonery out building on the lot that is to be removed. The lot is clear of any trees in the area of the improvements.

REFERENCE MATERIAL:

(1) DESIGN AND INSTALLATION (Report)
Low Pressure Pipe System (LPP)
Published by: Triangle J Council of Governments
Research Triangle Park, N. C.
September, 1979

(2) DESIGN AND INSTALLATION (Manual)
OF LOW-PRESSURE PIPE WASTE TREATMENT SYSTEMS
by: Craig Cogger; Bobby L. Carlise; Dennis Osborne; Ed Holland
Published by: UNC Sea Grant College Publication UNC-SG-82-03
May, 1982

(3) LAWS AND RULES FOR GROUND ABSORPTION SEWAGE DISPOSAL SYSTEM
SECTION .1900 of the N. C. administrative Code
Title 10
Dept. of Human Resources
Chapter 10
Health Services; Environmental Health
Subchapter 10A; Sanitation
Published by: N. C. Dept. of Human Resources
July 1, 1982



RECOMMENDATION: This lot, due to limited size, is not suitable for a conventional LPP System, yet the need for maximum equal distribution of effluent over the absorption field is important. A conventional gravity flow system only partially fills this need. Proposed is a modified LPP system pumping effluent under pressure into a 36" wide crushed stone filled trench. This provides maximum dispursement of effluent over the field. The dosing cycle is to be set to allow a desired resting period.

The system would consist of a 1,500 gallon, two compartment septic tank; 1,000 gallon dosing tank; 2" diameter p.v.c. manifold; 1-1/4" diameter p.v.c. distribution system; pump; controls; and pump malfunction warning system.

OWNERSHIP RESPONSIBILITIES FOR A LPP 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.

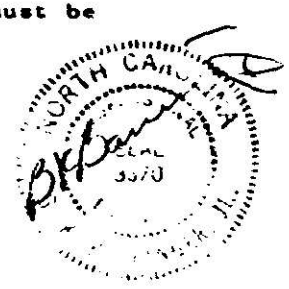
Conservation measures must be undertaken by all members of the household to minimize the volume of waste water entering the disposal system, including, but not limited to, the following precautions:

(a) provide water conserving plumbing fixtures within the house;
(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 disposals (grinders) are included in the residence, or approximately every three years otherwise.
(e) make rapid repairs to leaking plumbing fixtures and faucets;
(f) avoid excessive watering of the lawn in the vicinity of the disposal field.

CONSTRUCTION SEQUENCE AND COMPONENTS OF THE SYSTEM

Furnish and install all items required for a complete system in accordance with plans and specifications; the requirements of the County Department of Environmental Health (CDEH); the N. C. Dept. of Environmental Health; 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.



LOW PRESSURE PIPE SYSTEM COMPONENTS:

1- Two compartment septic tank.
2- Pumping chamber
3- Submersible effluent pump and level controls
4- High water alarm signals (audible & visible)
5- Supply pipe.
6- Distribution manifold.
7- Suitable area , depth of soil and topography.

Rule of Thumb: "If soil is too wet to plow, it is too wet to disturb for LPP system construction."

(1) Lay out low pressure pipe (LPP) network area with stakes and flagging to ten feet (minimum) beyond the limits of the LPP network, in most cases to the property lines. As soon as the absorption area is designated, it should be flagged, roped off and isolated from contruction traffic. This barrier should be maintained until the system is accepted by the owner. Refer to site plan for size of absorption area.

(2) Clear site of any and all man-made debris, construction materials, etc. Dispose of legally.

(3) Clear site of all trees selected for removal.

(4) Construct upslope intercepter ditch (grassed swale) and/or French drain as called for on the site plan and details and maintain.

(5) Place borrow fill if called for. (See Imported Soil Specification.)

(6) Prior to actually beginning construction of the system, carefully locate, lay out and identify the disposal site, manifolds and the lateral piping networks, using a triped mounted Engineer's leveling instrument to accurately establish each lateral along a level contour.

(7) Excavate for and construct "French" drain (if shown on plan).

(8) Excavate lateral network trenches approximately 36" wide by 16" deep (see detail). Remove loose soil from bottom of trench. At approximately 20 foot intervals, leave undisturbed earthen dam in bottom of the trench approximately 6" high and 12" long. Excavate for manifold piping.

(9) Install small stone (~~1/2 to 3/4~~ 3/4 - 2 1/2" size) in bottom of the lateral trench to the proper depth of approximately 10" below finish ground level. Rake the stone level and smooth in preparation to receive the p.v.c. lateral.

(10) Prior to installation of PVC (PR 160 or PR 200) manifold and lateral piping, fabricate lateral piping with 5/32" orifices (holes) at scheduled locations along the bottom of the pipe. Stagger holes on alternate lateral runs. 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, details, and data sheet.

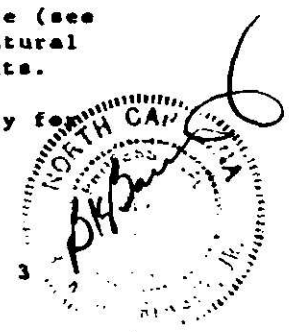
(11) Carefully install manifold and lateral network according to the attached designed layout using care to insure that hole shall be located at required intervals and as shown on the "typical section through the lateral trench". Turn up the end of each lateral and plug with a removable plug at ground level.

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

(13) Carefully backfill lateral trenches with washed stone (size ~~1/2 to 3/4~~ 3/4 - 2 1/2") to a depth of 6" below finish grade, avoiding displacement of piping. Then backfill to finish grade with clean (debris free) earth.

(14) Distribute excess earth from trenches on the site (see site plan). Provide the absorption area with a gentle, natural slope, without depressions to avoid storm water impoundments.

(15) Leave absorption area with a raked surface, ready for grassing by others.



(16) The installation contractor shall stabilize the area of construction by planting and seeding with Kentucky 31 tall fescue and shall keep the planted areas watered and mulched until such time that a hadry stand of grass is established. Prier to seeding, evenly distribute and mix with the soil 8-8-8 commercial fertilizer at the rate of approximately 40 sf per pound (1,000 pounds per acre). For soils with a pH of 6.5 or less, hydrated agricultural lime shall be applied at the rate of 20 sf per pound (2,000 pounds per acre), and at a rate of 40 sf per pound (1,000 pounds per acre) for soils with a pH greater than 6.5 as determined by soil samples tested by the N.C. Agriculture Dept. or as approved by the Engineer. Seed shall be sowed at a rate of 200 sf of area planted per pound of grass seed and shall be raked lightly into the top 1/8" of soil, rolled lightly with a light weight lawn roller, and watered with a fine spray. On the slope of the mount, the rate of seeding shall be increased by 50%.

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

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

(19) All piping and fittings shall be PVC Schedule 40 unless otherwise noted. Glue for all pvc pipe joints shall be as recommended by the pipe manufacturer.

(20) PUMP The submerged pump shall be Model SRM4 manufactured by F. E. Myers Co., Ashland, Ohio, or equal, 0.4 hp, 115v/iph, 12 amps, capable of pumping 42 gpm at a 9.05 head.

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

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

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

(24) A "Homeowner'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, addreess, telephone number, and emergency telephone number of the person to contact immediately upon malfunction of the system.

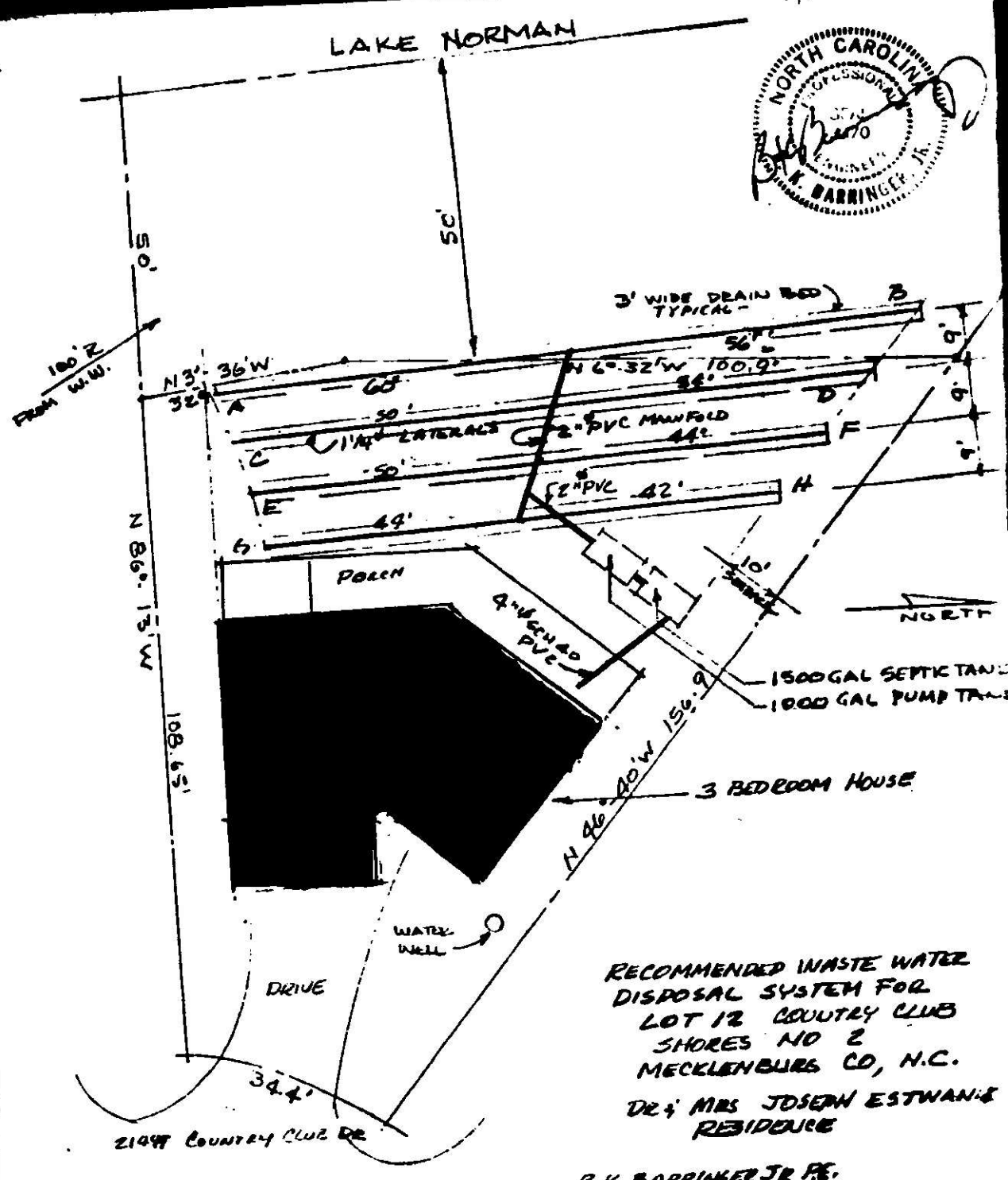
DESIGN SPECIFICATION - LOW PRESSURE PIPING SYSTEM

Lot 12 Country Club Shores No. 2

Mecklenburg County, N. C.

Dr. & Mrs. Joseph Estwanik - March 26, 1985

Daily Wasteflow:	360 gpd
Septic tank size:	1,500 gal. (2 compartments)
Pumping tank size:	1,000 gal
Effluent loading rate:	0.3 gpd/sf
Total absorption area:	1200 sf active
Total linear feet and diameter of laterals:	400 ft. of 1-1/4" dia. PVC
Total length and diameter of supply manifold	40 lf 2" PVC
Number and length of laterals:	1 at 60 2 at 50 2 at 44 1 at 56 1 at 54 1 at 42 = 400'
Manifold placement:	Middle of field
Hole size:	5/32" dia.
Hole spacing:	5'0"
Total number of holes:	80
Total flow through the system:	40 gpm
Elevation head (pump to end of manifold):	5.0
Pressure head:	3.0 average
Friction head:	1.05
Total head:	9.05
Pump requirements:	42 gpm at 9.05' Use Myers 1/2hp SRM4 pump
Storage volume in pipes:	Supply Manifold = 7.13 gal. Lateral Network = 24.8 gal. Total storage = 31.93 gal.
Dosing volume:	290 gal = 11" in 1,000 gal. tank
Depth of water pumped per dose:	11"
Check-valve used:	Yes
Syphon break hole	Yes



RECOMMENDED WASTE WATER DISPOSAL SYSTEM FOR LOT 12 COUNTRY CLUB SHORES NO 2 MECKLENBURG CO, N.C.

DR 4' MRS JOSEPH ESTWANIK RESIDENCE

B.K. BARRINGER JR P.E.
MOORESVILLE N.C.

SCALE: 1" = 20'
MARCH 26, 1985

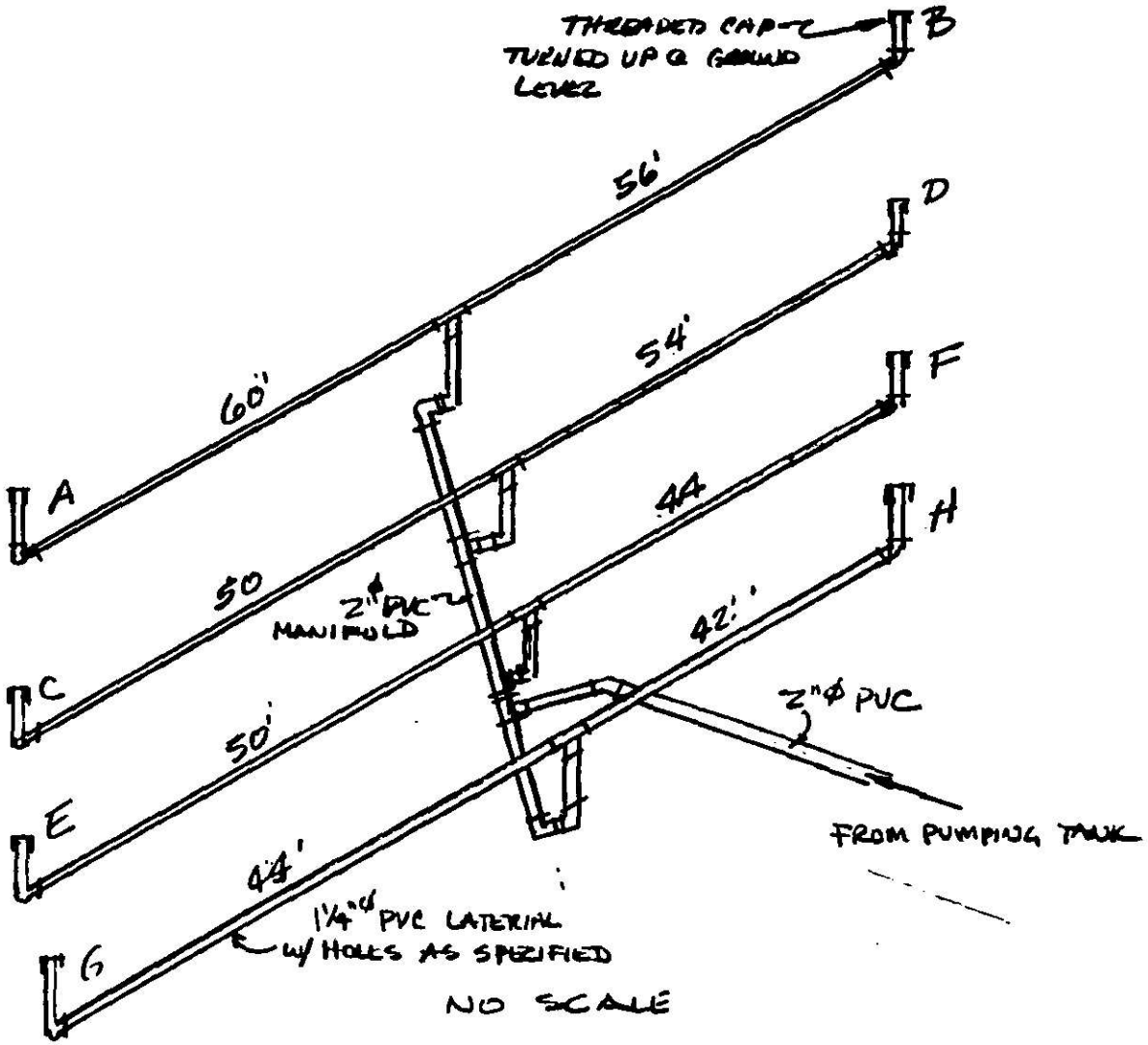
LINE, ORIFICE SIZE & SPACING

LATERAL	LENGTH	ORIFICE SIZE	DIST. FROM MANIFOLD TO FIRST ORIFICE	ORIFICE SPACING	DIST FROM LAST ORIFICE TO END OF LATERAL	NUMBER OF ORIFICES PER LINE
A	60'	5/32"	1'-9"	5'-0"	3'-3"	12
B	56'		3'-3"		2'-9	11
C	50'		3'-3"		1'-9"	10
D	54'		1'-9"		2'-3	11
E	50'		1'-9"		3'-3	10
F	44'		3'-3"		0'-9"	9
G	46'		3'-3"		0'-9"	9
H	42'	↓	1'-9	↓	5'-3"	8
TOTAL		400 LF				80

LOT 12 COUNTRY CLUB SHORES NO 2.
LINE ORIFICE SIZE & SPACING
B.K. BARRINGER JR PE
3-26-85

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

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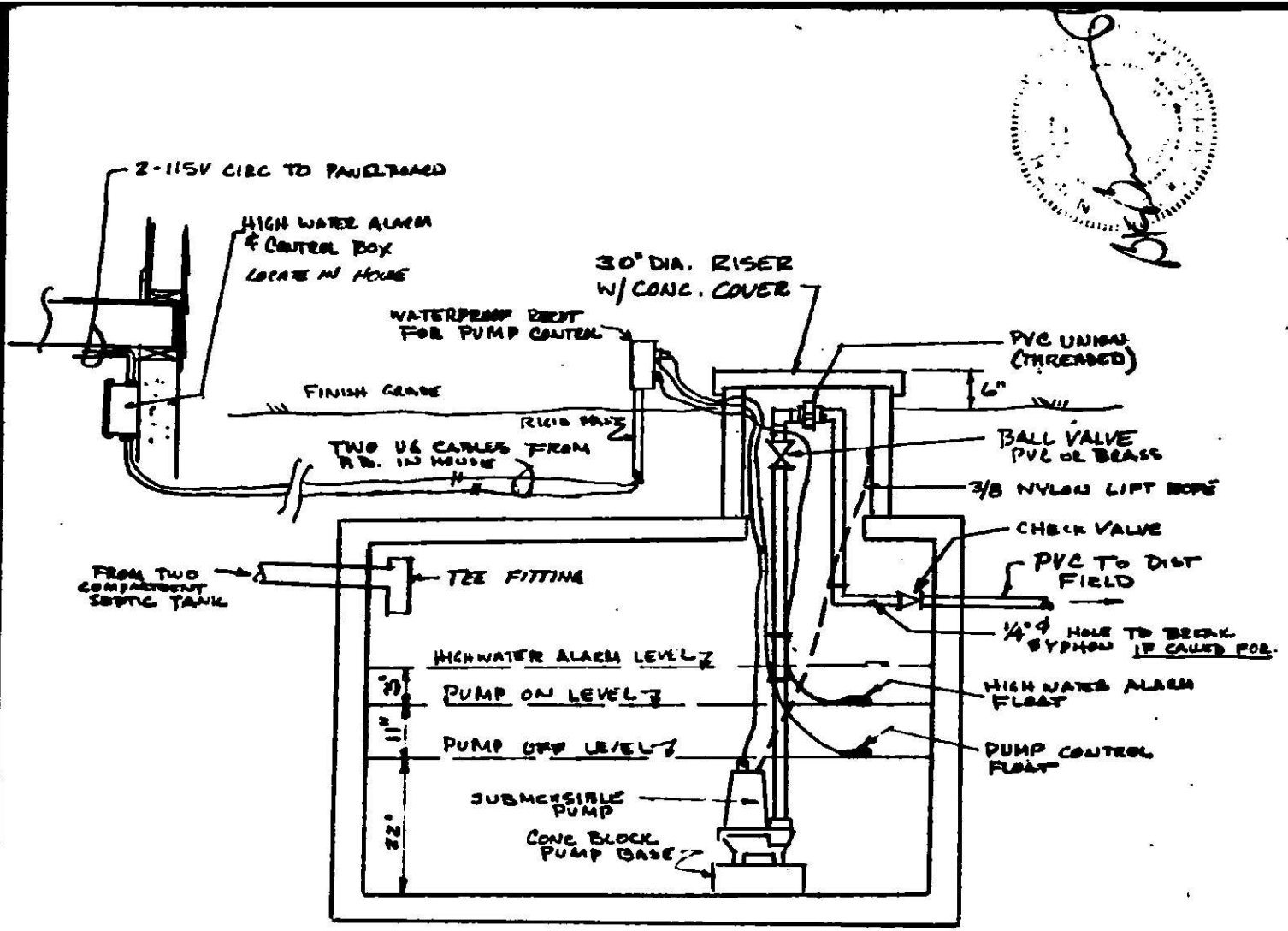




SCHEMATIC MANIFOLD & LATERIAL LAYOUT

LOT 12 COUNTRY CLUB SHORES NO 2

B.K. BARRINGER JR PE
3-26-85

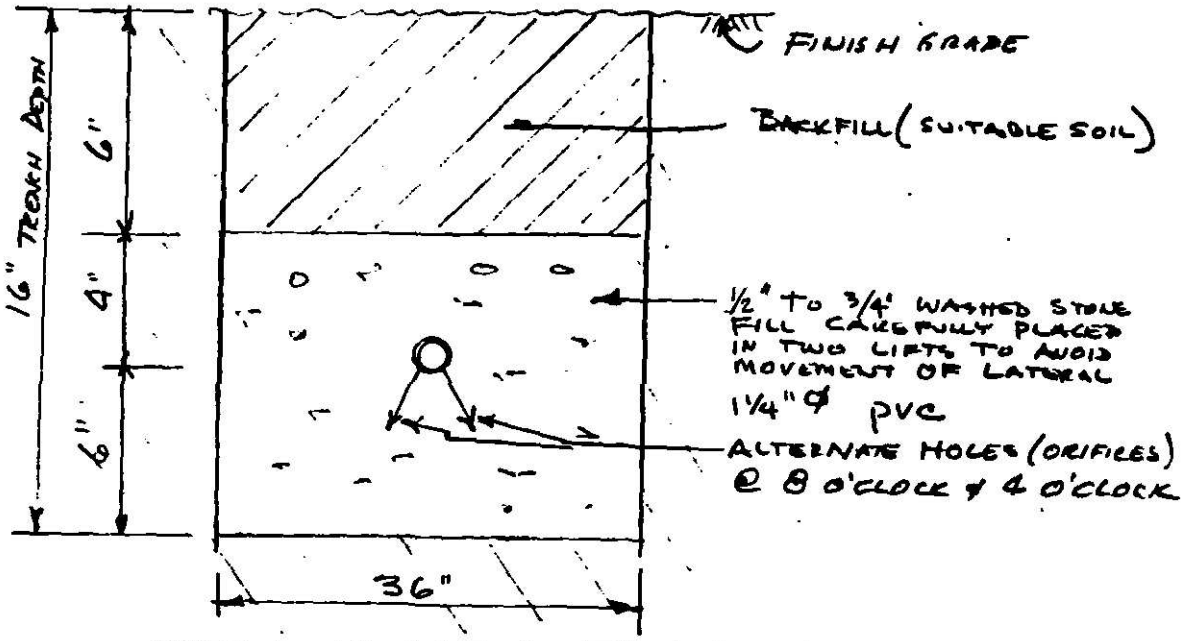


PUMPING CHAMBER DIAGRAM

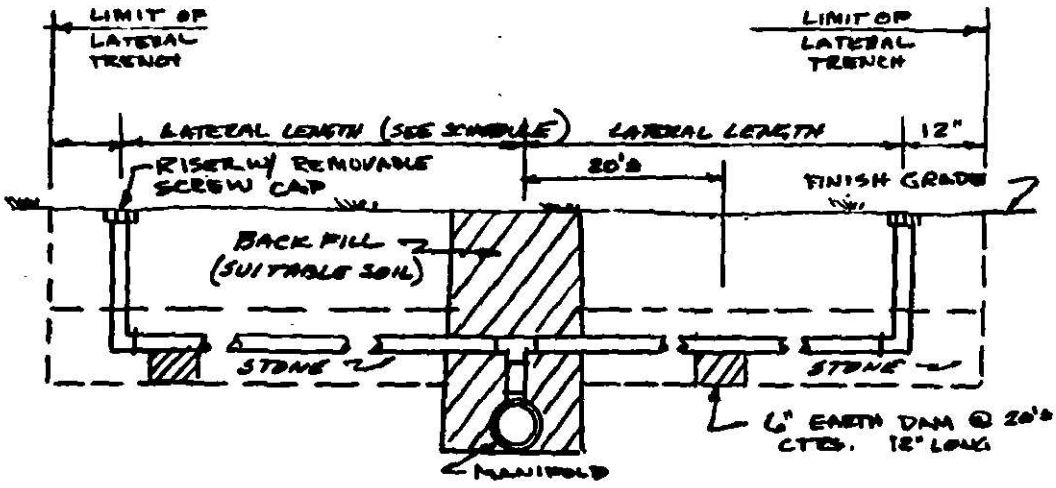
NO SCALE

1000 GAL PRECAST, REINF CONCRETE TANK

PUMPING SYSTEM DETAIL
B.K. BARRINGER P.E.



SECTION OF LATERAL TRENCH - No SCALE



SECTION OF MANIFOLD & ELEVATION OF LATERAL & TRENCH

NO SCALE

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

TYPICAL DETAILS FOR LOW PRESSURE PIPING SYSTEM

B.K. BARRINGER JR. PE.

Serial No. 8343

Date Issued 3-29-85

SIR No. 20149

T. C. No. 001-161-22

Map Date L Cct

MECKLENBURG COUNTY
DEPARTMENT OF ENVIRONMENTAL HEALTH

Permit

TO THE BUILDING INSPECTION DEPARTMENT

APPROVAL OF LOT FOR INSTALLATION OF AN INDIVIDUAL SEPTIC TANK WITH SUBSURFACE, SOIL ABSORPTION, EFFLUENT DISCHARGE

NAME OF OWNER Estwanik, (LAST) Joseph (FIRST) John (MIDDLE)

ADDRESS OF OWNER 1925 Clematis Drive, Charlotte, NC ZIP 28211

LOCATION OF LOT 21449 Country Club Drive (STREET OR COUNTY ROAD)

SUBDIVISION _____ LOT NO. _____ BLOCK NO. _____

MAP BOOK NO. _____ PAGE NO. _____

The above specified lot is approved by the Mecklenburg County Department of Environmental Health for the installation of an individual septic tank system with subsurface, soil absorption, effluent discharge based on the soil investigation, on an on-site inspection of the said lot; and upon the information supplied in the "Application for an Installation, Construction, Alteration, and/or Repair Permit", number 20149. This approval is subject to the following terms and conditions:

1. That the nitrification field be installed, constructed, altered and/or repaired in the same area where the soil investigation was run.
2. That an "Installation, Construction, Alteration, and/or Repair Permit" be issued and in full force and effect when the system is installed, constructed, altered, and/or repaired and that the system be installed in accordance with same.

This approval may be revoked and the building inspection department requested to revoke any building permit(s) which have been issued to authorize construction on the said lot if at any time it is determined that any information contained in the "Application for an Installation, Construction, Alteration, and/or Repair Permit" is not correct or is untrue or that the septic-tank system is not being installed, constructed, altered and/or repaired in accordance with a valid Installation, Construction, Alteration, and/or Repair Permit.

*** LIFT STATION MAY BE REQUIRED **

Jim Ervin
Environmentalist

Environmental Health Director, or Authorized Section Head

EHB-5-76

Environmental Health Department's Copy

C of A (s) No. 20149

Date Issued 10-30-85 Serial 7987 T. C. No. 001-161-22

CRT - L

MECKLENBURG COUNTY
DEPARTMENT OF ENVIRONMENTAL HEALTH

OPERATION PERMIT

CERTIFICATE OF APPROVAL

(Individual Septic Tank System with Subsurface, Soil Absorption, Effluent Discharge)

Name of Owner ESTWANIK (LAST) JOSEPH (FIRST) J (MIDDLE)

Location of Property 2449 COUNTRY CLUB DR

Application Number 20149 Permit Number 20149

Inspection Date: ST PT

Liquid Capacity of Tank 1500 + 1000 Tank Material PCC

Total Length of Drain Tile 320' AS BUILT Number of Lines 4

Depth of Filter Material 10" Cover Depth 6"

Water Supply Source well Distance from Water Source 50' AS BUILT SPECS.

Excavation Inspected AS BUILT SPECS DATED 7-25-85 (DATE) Tank Inspected 7-25-85 (DATE)

Nitrification Field Inspected 7-25-85 (DATE) - AS BUILT SPECS.

Washing Machine Line Inspected, If Applicable _____ (DATE)

The undersigned has inspected the Individual Septic Tank System with subsurface, soil absorption, effluent discharge as described above and it has been ✓ installed or constructed, _____ altered or repaired in accordance with the permit issued and the regulations of the Mecklenburg County Health Commission in effect on the date of issuance of the permit. The issuance of this Certificate of Approval 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 Certificate of Approval is issued subject to those restrictions and conditions shown on the permit(s) in addition to those listed below under comments. This Certificate of Approval shall be null and void if any information contained in the application is untrue or if any additions are made to the property which would increase the requirements for said system.

Comments SEE FILE FOR AS BUILT SPECS ISSUED BY DESIGNING ENGINEER - B.K BARRINGER PE # 3370

Environmentalist

EHD-S-76

Environmental Health Department's Copy