

9945 SAW MILL RD

19940123

1/4/2008

duponbj

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

Mecklenburg County
Health Department

April 23, 2002

Clinton and Sandra Burke
8029 Steele Creek Road
Charlotte, NC 28217

Dear Mr. and Mrs. Burke:

Our files indicate that the type IVa septic system that serves as the wastewater treatment and disposal system for the residence located at 9945 Saw Mill Road, has been operating without a maintenance contract with a certified operator as required by the North Carolina Administrative Code.

Periodic maintenance of this type wastewater system is an important factor in extending the life of the drain field as well as a requirement found in the General Statutes of North Carolina to protect public health. Section .1900 of the North Carolina Administrative Code, North Carolina Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, Subchapter 10A, Sanitation, states in part: "System management in accordance with Tables V (a) and V (b) of this rule shall be required for all systems installed or repaired after July 1, 1992."

A list of certified operators in the immediate vicinity of Mecklenburg County is attached. Please submit a new contract to our office by May 23, 2002.

If you have any questions regarding this matter please feel free to contact me at (704) 336-5571.

Sincerely,

David Cornelius, R.S.I, Coordinator
Managed Systems Program
Individual Water and Wastewater Systems

Enclosure: Certified Operators List

CERTIFICATE OF COMPLETION/OPERATION PERMIT

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

FILE: 43258 DATE: 11/12/01
TC: 199-401-23 ☒ L ☐ CRT
SERIAL Nº 18762

Name of Owner Kenneth Goulet Juris.:
Address of Property 9945 Saw Mill Road

Inspection Data:

Tank Material PCC
Total Length of Drainfield 320' varying
Number of Lines 8 @ lengths
Cover Depth 18"
Water Supply Source Well
Distance to Water Source 60'
Excavation Inspected 11/7/01
Tank(s) Inspected 11/7/01
Wash Line Inspected N/A
High Water Alarm Inspected 11/7/01

Installed according to Engineers plot plan.

PLOT

Design 2001, PPBPS, Type ~~III-B~~ IV-A, 960SFT, 4S, Cecil, 150GST, 1000PT CTR# Steve Henry

The undersigned has inspected the Septic Tank System described above, and certifies it has been
☑ installed or constructed ☐ altered or repaired
☐ in accordance with the permit issued ☐ as detailed in the plot above
and meets the provisions of 15A NCAC 18A. 1900, "Laws And Rules For Sewage Treatment and Disposal Systems" in effect on the date of issuance of the permit. This issuance of this
☐ Certificate of Completion ☑ Operation Permit
does not in any way guarantee that the system will operate properly or relieve any person now or hereafter owning, controlling, or using such system from any liability resulting from the failure of the system to operate properly. This document is issued subject to those restrictions and conditions shown on the permit(s) and the provisions of 15A NCAC 18A. 1990 in addition to those listed below under "COMMENTS." This document shall be null and void if any information contained in the application is untrue or if any additions are made to the property which would increase the requirements for said system.

Notice: Disturbance of the designated repair area may result in the suspension/revocation of this permit.

COMMENTS: 4 Bedroom House, Type ~~III-B~~ IV-A system

Environmental Health Specialist

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

INSTALLATION, CONSTRUCTION, ALTERATION, AND/OR REPAIR APPROVAL

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

FILE: 4325B DATE: 11/7/01

TC: 199-401-23 X L

SERIAL Nº 18893

Permission is hereby given to _____ Install or Construct, _____ Alter or Repair the individual septic tank wastewater treatment system with subsurface, soil absorption, effluent discharge as specified herein at the described location. This permit is granted based upon the information supplied in the application dated 11/7/01. All work shall be completed on or before 12/7/01, after which date this permit shall be null and void. The system shall meet all of the construction requirements of 15A NCAC 18A. 1900 which are in effect on the date of the granting of this permit. A Certificate of Completion or an Operation Permit must be obtained from the Mecklenburg County Health Department before any system can be covered up or placed into service. The issuance of this permit does not in any way guarantee that the system anticipated to be constructed will operate properly, or relieve any person now or hereafter owning, controlling or using such system from any liability resulting from the failure of the system to operate properly.

Install according to Enjineers plans

PLOT OF SYSTEM

Liquid Capacity of Septic Tank 1500 gallons

Liquid Capacity of Dosing Tank 1000 gallons

Tank Construction PCC

Trench Depth 28"

Absorption and/or Nitrification Lines:

Trench Width 3 feet

Trench Walls Scored and Porous YES

Total Line Length 300 feet

Number of Lines 8

Depth of Stone 28" inches

Distance from House >25' feet

Distance from Property Line >10' feet

Distance from Well >50' feet

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

NAME OF OWNER Kenneth Goulet

LOCATION OF PROPERTY Saw mill Road

Comments: 2001, PPBS, ~~Type III-B~~ Type IV-A, 1500 septic tank 1000 pump tank,

Brandt Smith RSI
Environmental Health Specialist

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

TONEY C. JACOBS & ASSOCIATES, INC.

Consulting Soil Scientists

Licensed by the North Carolina Board for Licensing of Soil Scientists
Certified by the American Registry of Certified Professionals in Agronomy, Crops and Soils

168 Broadbill Drive
Mooresville, NC 28117
Phone (704) 663-6905
Fax (704) 662-9845 E-mail jacobs@i-america.net

November 18, 2001

To: Mr. Brandon Smith, R.S.
Mecklenburg County Health Dept.-IWWS
700 N. Tryon St.
Charlotte, NC 28202

Ms. Jean Correll
Citadel Homes, Inc.
1005 N. Church St.
Charlotte, NC 28206

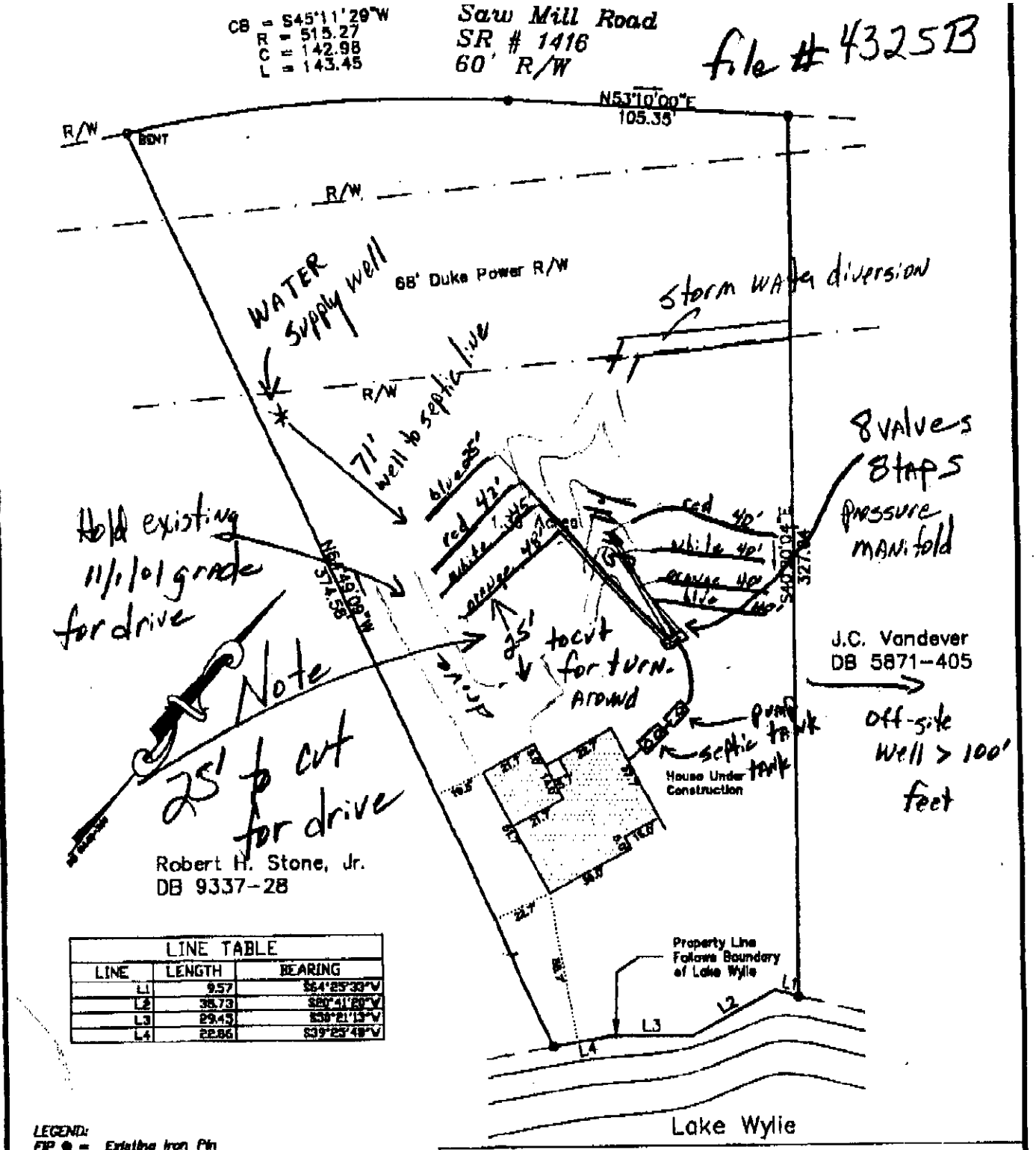
From: Toney C. Jacobs, CPSS

Ref: Revised site plan for 9945 Saw Mill Road (File 43258B)

All specifications and conditions of the plan approved on May 12, 2000 remain the same. Only the enclosed revised site plan and schematic are to change. Pre-construction meeting has been completed with Ron Autry.

Received 11/19/01 Approved Brandon Smith RS

file # 4325B



LINE TABLE		
LINE	LENGTH	BEARING
L1	9.57	S64°25'39"W
L2	38.73	S80°41'50"W
L3	29.45	N59°21'13"W
L4	22.86	S39°25'48"W

LEGEND:
EIP ● = Existing Iron Pin
NIP ○ = New Iron Pin
NPS = No Point Set
R/W = Right Of Way
⌀ = Power Pole
MBSL = Minimum Building Setback Line
ESMT = Easement

Scale: 1" = 50'

50 0 25 50 100

Physical Survey

for

Clinton I. Burke, Jr. & Sandra G. Burke

of

9945 Saw Mill Road

Steele Creek Township, Mecklenburg County, N.C.

Deed Book: 11449-269

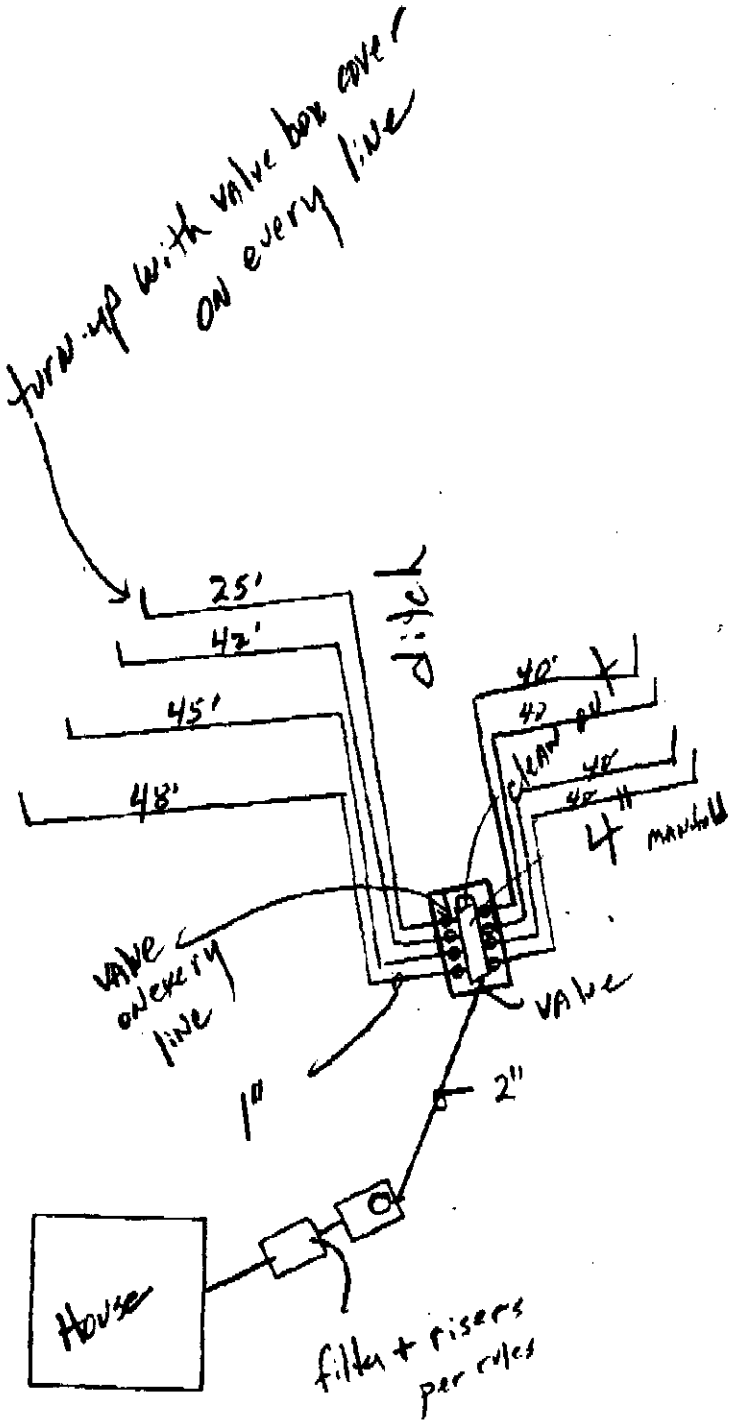
JOB # 01052

Map Book:

TAX ID 19940123

file 4325B

Schematic



320' of line

73 panels

@ 0.5 gal/min

thru 5/32" hole at 2'

head = 36.5 gpm

pump size
elev head 25
friction 5
working 2
TDH 32'

B87570

FEE: 300 AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION ACS X
DATE: 6/22 VOID SIXTY (60) MONTHS FROM DATE OF ISSUANCE

DATE: _____ PERMIT NO: 4325B

PARCEL NO: 199-401-23

JOB LOCATION ADDRESS: 9945 Saw Mill Road
PROPERTY OWNER: Clinton Burke Jr.
BUILDING CONTRACTOR: Citadel Homes
SUBDIVISION NAME: Saw Mill Point
AUTHORIZATION ISSUED BY: Jeanny P. Michels RS DATE: 6/21/01
DEHNR AUTHORIZED AGENT

AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NO. 4325B, 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 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 AUTHORIZATION AND ASSOCIATED PERMIT(S) TO REVOCATION.

4. OTHER CONDITIONS: Four Bedroom Residence
Install 5 Area x 60' x 3'
Type Ista Pump to Panel Block System
Agreement forms needed before CA Release

OWNER CERTIFICATION

I CERTIFY THAT THERE HAVE BEEN NO ALTERATIONS IN SITE OR SOIL CONDITIONS OR MODIFICATIONS TO FACILITY, WASTEWATER FLOW, OR WASTEWATER CHARACTERISTICS FROM THOSE SPECIFIED IN THE ORIGINAL APPLICATION OR ASSOCIATED IMPROVEMENT PERMIT UNLESS AUTHORIZED IN WRITING BY THE MECKLENBURG COUNTY HEALTH DEPARTMENT. I ALSO UNDERSTAND THAT ANY SUCH ALTERATIONS, MODIFICATIONS, OR FALSE INFORMATION ARE GROUNDS FOR REVOCATION OF PERMITS AND AUTHORIZATION TO CONSTRUCT.

John J. Carroll 6-22-01
SIGNATURE OF OWNER/OWNER'S REPRESENTATIVE DATE

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH FEES

Jean Cornell 392.0735 ex 130

Requestor (please print): Phone #: Date Requested: Date Filled:

Citadel Homes

Account Name: Cash Charge Account No.: C87570

I certify that I am authorized to charge this account for this service:

Signature: Printed Name: Date:

T.C.	Qty	Description	Unit Cost	Total Cost
0710		Additional Trips	$ 65.00	
0715		Admin. Fee - Field Activity Letter	$ 25.00	
0734	/	Authorization for Wastewater System Construction	$ 150.00	150 —
0704		Change in Plot Plan	$ 100.00	
0741		Contractor's Annual Fee	$ 50.00	
0735		Improvement Permit Application - Commercial	$ 400.00	
0701		Improvement Permit Application - Residential	$ 200.00	
0703	/	Installation and Final Approval	$ 150.00	150 —
0743		Maintenance Inspections to Homeowners w/ Type IIIB Systems (every 5 yrs)	$ 85.00	
0706		MH Exc/Add/Repl with System Modification	$ 300.00	
0705		MH Exc/Add/Repl without System Modification	$ 100.00	
0742		Operator's Annual Fee	$ 30.00	
0702		Optional Site Evaluations	$ 100.00	
0708		Realty Closing - Conventional	$ 85.00	
0709		Realty Closing - FHA with water	$ 135.00	
0718		Residential Pool Permit	$ 50.00	
0707		Site Consultation Visit	$ 100.00	
0711		Well Water Analysis-Bacteriological with regular parameters	$ 50.00	
0712		Well Water Analysis -Nitrates and Nitrites	$ 15.00	
0714		Well Water Analysis - Organic Analysis	$ 200.00	
0738		Tatoo Parlor Permits - Mecklenburg Co. resident	$ 125.00	
0739		Tatoo Parlor Permits - non resident	$ 87.50	
0723		Eval and Report Non-Permit Facility	$ 50.00	
0722		Home Day Care Evaluation and Annual Fee	$ 40.00	
0721		Home Day Care Evaluation and Permit	$ 70.00	
0733		Pool - Permit to Construct a Public Pool	$ 200.00	
0724		Pool - Private Testing	$ 15.00	
0740		Pool - Public Permit Prorated mos. X $30.00		
0719		Pool - Public Operating Permit	$ 240.00	
0720		Pool - Seasonal Operating Permit	$ 120.00	
0736		Pool - Late Fee	$ 120.00	
0725		Document Copies	$ 0.05	
Payment received by:		Date:	Total:	300 —

114525
9945 Saw Mill Rd.

CONDITIONS OF IMPROVEMENT PERMIT

Permit Number 4325B

Tax Number 199-401-23

The IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change. There is to be NO grading, filling or disturbance of the soil in the area of the septic tank system or repair area.

CONSTRUCTION AUTHORIZATION must be obtained prior to receiving a Building Permit. The Construction Authorization is NOT transferable. Do not clear, grade, fill or disturb soil prior to obtaining a Construction Authorization.

Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

Basement	✓ Yes	___ No	___ Partial Basement	
Type Primary Wastewater System Type (circle one): 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: ___ IWWS-93-1 ___ IWWS-93-2 ___ IWWS-94-1	
.275 Long-term acceptance rate	480 Max gallons/day wastewater flow	873' Absorption Area (sq ft)	9' Trench spacing (min. on centers)	
X Serviced by private well	1500 Gallon septic tank	291' Total trench length (ft)	28" Maximum trench depth (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions)	
4 Bedrooms in residence	1000 Gallon pump tank	NA Depth of stone		
Any surface waters present: Yes Type: Lake Wylie Minimum separation distance: 50'				
Site modifications required:				
Additional Conditions: - Agreement forms must be recorded before Construction Authorization can be issued. - Operation required - Contract with CO must be submitted before CO is issued. - Nema 4x Simplex Control Panel w/alarm required - 100% repair area required for PPAPS System use. - MAINTAIN 50' minimum distance between the well & Septic System.				
Repair Area System Type Type (circle one): 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: ___ IWWS-93-1 ___ IWWS-93-2 ___ IWWS-94-1	
873' Absorption Area (Sq ft). 291' Total Trench Length (Ft)	NA Depth of Stone Trench	9 Trench spacing (min. on centers)	28" Maximum Trench Depth	
For existing system, enter the year originally installed:				

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department has approved the Request for the Job Location contained in this document. This approval is granted in accordance with the provisions of Laws and Rules For 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.

Tommy L. Mubbs 6/21/01
DEHNR Authorized Agent Date

Diane H. Vadeen 7-16-00
Owner/Agent Signature Date

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

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

Permit Number: 4525B

Tax Number: 199-401-23

- The IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change. There is to be NO grading, filling or disturbance of the soil in the area of the septic tank system or repair area.
- CONSTRUCTION AUTHORIZATION must be obtained prior to receiving a Building Permit. The Construction Authorization is NOT transferable. Do not clear, grade, fill or disturb soil prior to obtaining a Construction Authorization.
- Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

Basement	X Yes	___ No	___ Partial Basement	
Type Primary Wastewater System Type (circle one): 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: ___ IWWS-93-1 ___ IWWS-93-2 ___ IWWS-94-1	
.275 Long-term acceptance rate	360 Max gallons/day wastewater flow	981' Absorption Area (sq ft)	9' Trench spacing (min. on centers)	
40% Serviced by private well	1500 Gallon septic tank	327 Total trench length (ft)	24" Maximum trench depth (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions)	
3 Bedrooms in residence	1000 Gallon pump tank	NA Depth of stone		

Any surface waters present: Yes Type: LAKE WYLIE Minimum separation distance: 50'

Site modifications required:

Additional Conditions:
→ 100% Repair Area Not Required
→ Agreement form to be on file before C.A. Release
→ Install 6 lins, + 55' Type III b Innovative System.

Repair Area System Type Type (circle one): 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: ___ IWWS-93-1 ___ IWWS-93-2 ___ IWWS-94-1	
___ Absorption Area (Sq ft) ___ Total Trench Length (Ft)	___ Depth of Stone Trench	___ Trench spacing (min. on centers)	___ Maximum Trench Depth	

For existing system, enter the year originally installed:

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department has approved the Request for the Job Location contained in this document. This approval is granted in accordance with the provisions of Laws and Rules For 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.

Tommy L. Mills 6/29/00
DEHNR Authorized Agent Date

Tommy C. Parker 6/29/00
Owner/Agent Signature Date

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

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

IWWS-100195

PROPOSED PLOT PLAN

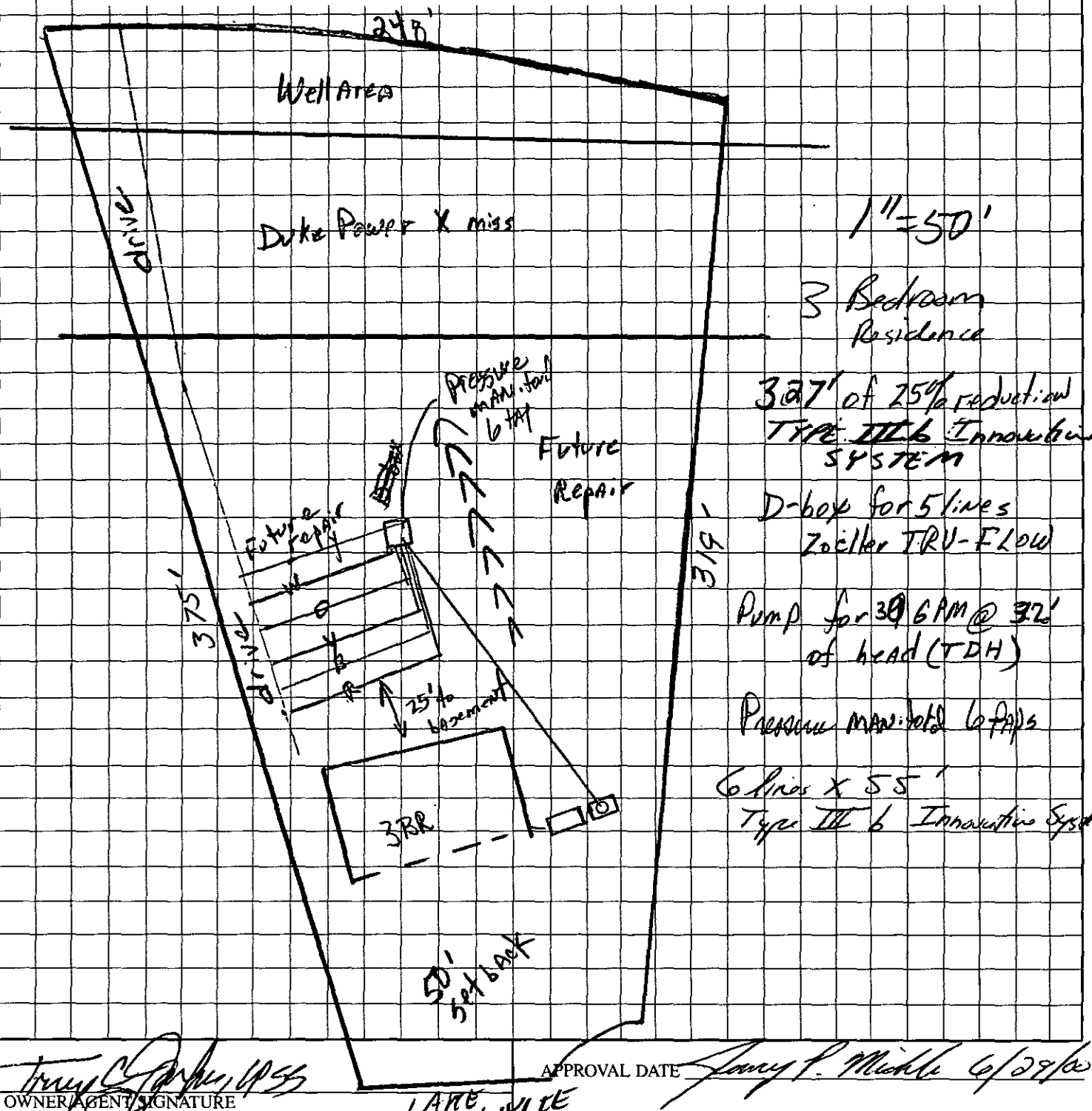
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

9945 Saw Mill Rd

FILE: 4325 B

TC: 199-401-23

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.



OWNER/AGENT SIGNATURE Tracy C. Parker, PSS

DATE 6/24/00

APPROVAL DATE Tracy L. Mickle 6/29/00

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

PROPOSED PLOT PLAN

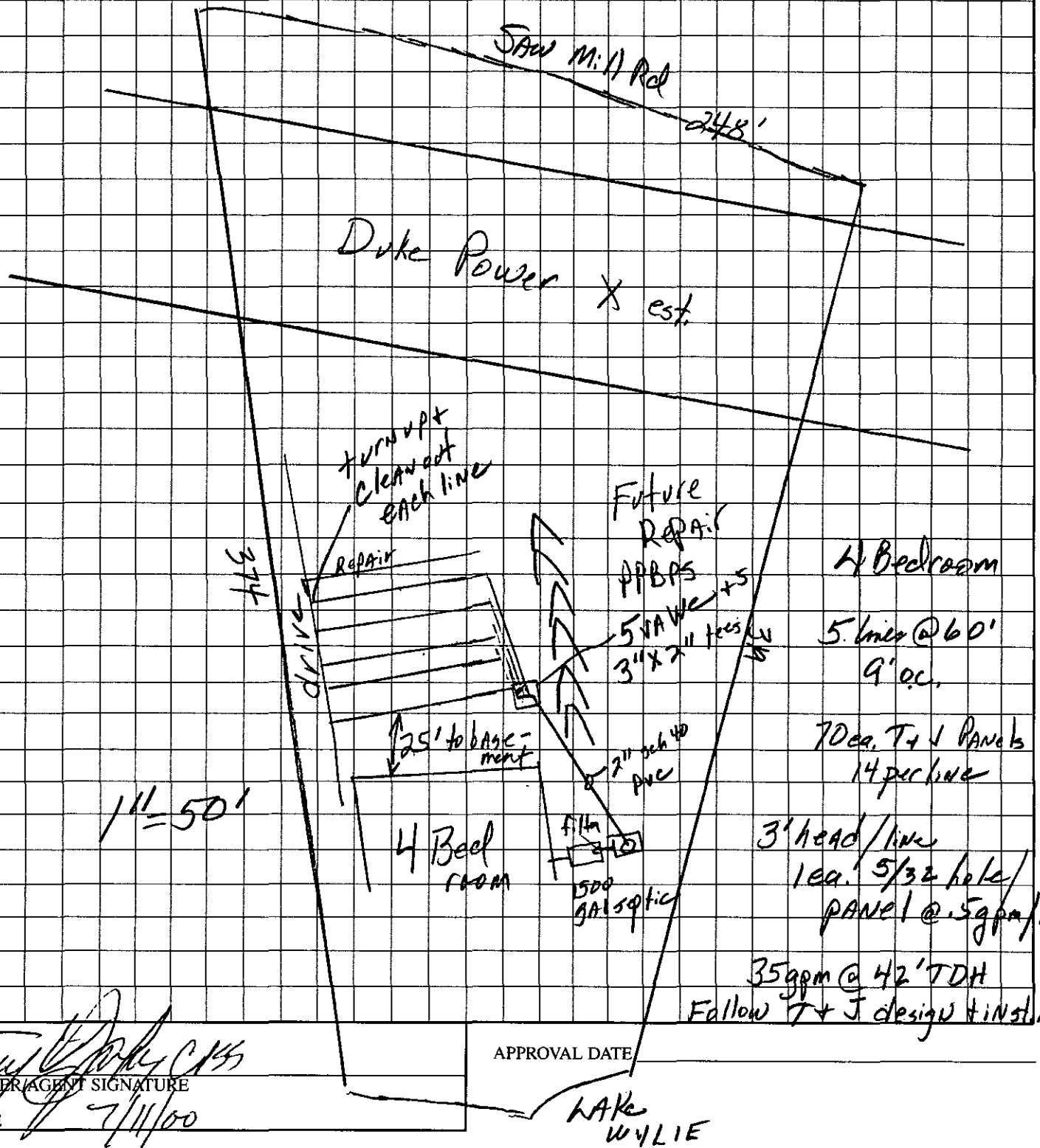
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

9945 SAW MILL RD

FILE: 4325B

TC: 199-401-23

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.



OWNER/AGENT SIGNATURE

DATE 7/11/00

APPROVAL DATE

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

FOR REGISTRATION JUDITH A. GIBSON
REGISTER OF DEEDS
MECKLENBURG COUNTY, NC
2001 JUN 22 03:33 PM
BOOK:12364 PAGE:405-408 FEE:$12.00
INSTRUMENT # 2001101454

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

WASTEWATER TREATMENT AND DISPOSAL SYSTEM DESIGN AGREEMENT: 15A NCAC 18A .1948 AND ANY OF THE FOLLOWING RULES: .1956; .1957(a); .1957(b); or .1957(c); OR .1969

FILE # 4325B
PARCEL # 199-40-401-23

The undersigned, Sandra G. Burke, owner of property located at 9945 Saw Mill Rd. Charlotte, NC, (the "site") and described in an instrument recorded in Book 3146 at Page 165, Mecklenburg Public Registry, hereby acknowledges that the undersigned applied to the Mecklenburg County Health Department (the "Department") for a permit to install a septic tank sewage disposal system on the site; that the Department evaluated the site for suitability for such a system in accordance with the regulations promulgated by the North Carolina Commission for Health Services as 15A NCAC 18A .1900 et seq.; that the Department originally classified the site as "unsuitable" pursuant to the standards set forth in the regulations; that the undersigned requested that the Department reclassify the site as "provisionally suitable" in light of the particular septic tank system proposed by the undersigned; that the Department considered various studies, data, and other information which indicate to the Department that the septic tank system proposed by the undersigned is allowed by the rules; and that the Department therefore reclassified the site as "provisionally suitable" and issued an appropriate permit for such proposed septic tank system.

The undersigned further acknowledges that the proper design, construction, operation and maintenance of such septic tank system is the responsibility of the designer, owner, developer, installer, or user of the system, as applicable, and that neither the Department nor its officials, employees, or agents warrant or guarantee that the said system installed pursuant to the permit issued by the Department will function in a satisfactory manner for any given period of time or that the Department, its officials, employees or agents assume any liability for any damages of any kind which are caused, or which may be caused, by a malfunction of such system.

The undersigned further acknowledges that the following conditions will apply to the site:

- Any changes on the property may make the Improvement Permit Null and void and may make the Improvement Permit subject to revocation.

This instrument was prepared by: Sandra G. Burke
Mail after recording to: 8029 Steele Creek Rd. Charlotte, NC 28217

P.02
JUN-22-01 09:58 AM HEALTH DEPARTMENT

- Do not grade, cut, fill, pave, construct a building or deck, dig a well, install a swimming pool or otherwise cover or disturb the soil (except for planting and maintaining grass or other ground covers) in a manner which will adversely affect the repair area or area where the septic tank system is located.

- When a private certified operator is required, no improvement permit for the designated repair shall be issued unless there is a private certified operator to carry out this management program in the service area where the proposed system is to be located. (Refer to Rule .1961, "Maintenance of Sewage Systems," for further information.)

- Additional fees will be required according to the Mecklenburg County user fee schedule applicable at the time for the issuance of a repair permit for any subsequent repairs to the sewage treatment and disposal system or for installation of a replacement system.

- At the time repairs to the sewage treatment and disposal system are to be made or a replacement system installed, the regulations in effect at that time will govern the repairs or installation of a replacement system.

The undersigned further agrees for himself, his heirs and assigns that he shall indemnify and hold harmless the Department, its employees, and officials, as well as Mecklenburg County and its employees and officials, for any damages or other claims of any person or persons whatsoever arising out of the installation, operation, or failure of said septic tank system.

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

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

IN WITNESS WHEREOF, the undersigned has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, this 22nd day of June, XXXX 2001

RBCW14:24751 1/8 30/95

P.03

JUN-22-01 09:59 AM HEALTH DEPARTMENT

x Sandra S. Burke _____ (SEAL)

XXXXXXXXXXXXXXX Owner

_____ (SEAL)

By: _____ _____ (SEAL)

_____ President _____ (SEAL)

ATTEST:

_____

_____ Secretary

(Corporate Seal)

STATE OF NORTH CAROLINA
COUNTY OF Mecklenburg

I, PERRY ENTREKIN, a Notary Public for said County and State, do hereby certify that SANDRA G. BURKE personally appeared before me this date and acknowledged the due execution of the foregoing instrument.

WITNESS my hand and notarial seal, this 22 day of June, ~~19~~ 2001

Perry Entrekin
Notary Public

My Commission Expires:
2-11-05

PERRY ENTREKIN NOTARY PUBLIC MECKLENBURG COUNTY, N.C.

RBCWM.24751.1/8-30-95

P.04

JUN-22-01 09:59 AM HEALTH DEPARTMENT

JUDITH A. GIBSON
REGISTER OF DEEDS , MECKLENBURG COUNTY
COUNTY & COURTS OFFICE BUILDING
720 EAST FOURTH STREET
CHARLOTTE NC 28202

****

Filed For Registration: 06/22/2001 03:33 PM

Book: RE 12364 Page: 405-408

Document No.: 2001101454

PRMIT 4 PGS $12.00

Recorder: EMEM DREHER

****

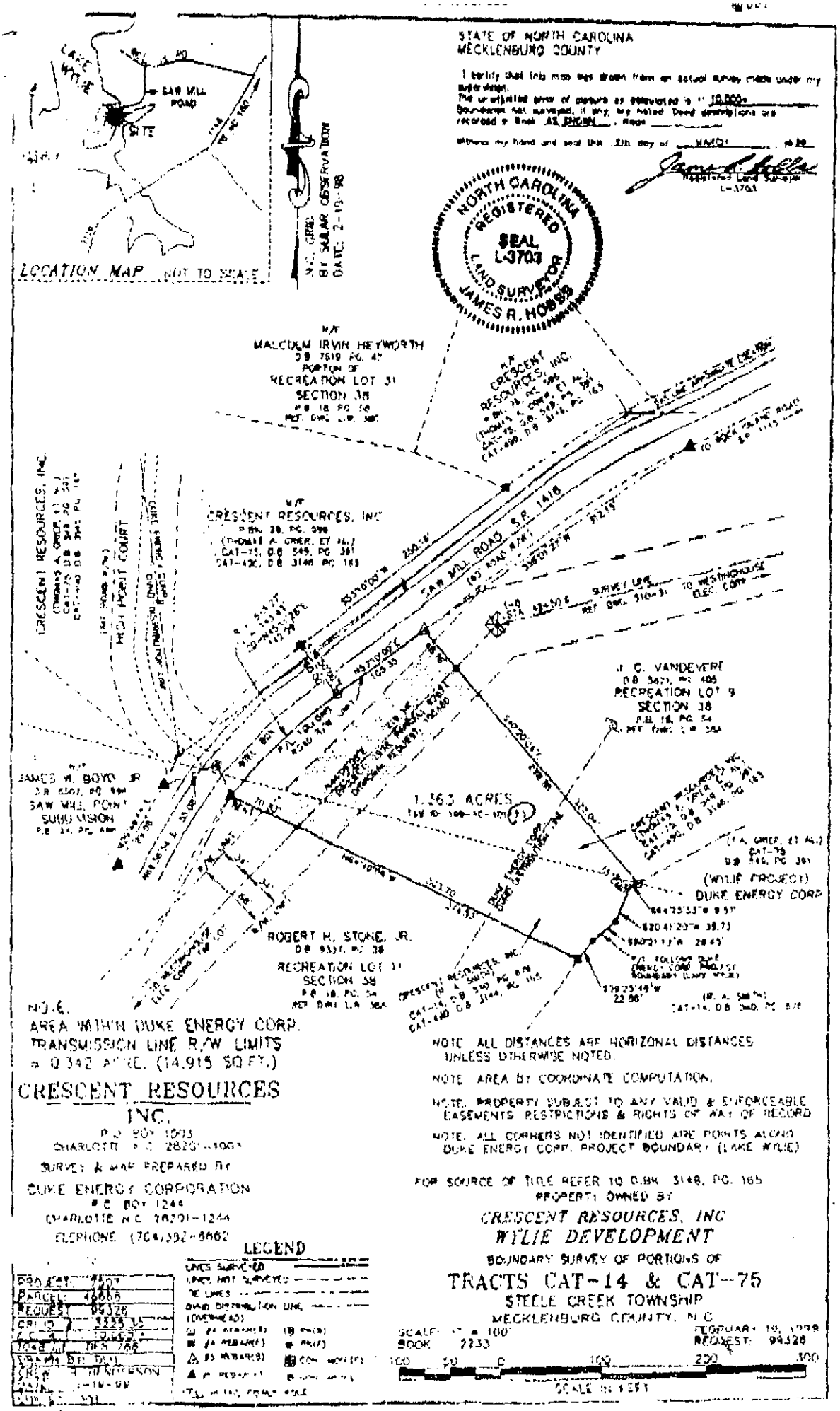
State of North Carolina, County of Mecklenburg

The foregoing certificate of PERRY ENTREKIN Notary is certified to be correct. This 22 ND of June 2001

JUDITH A. GIBSON, REGISTER OF DEEDS By: _____
Deputy/Assistant Register of Deeds

****

2001101454



Short Rd to Rock Island Rd to Shamrock Dr to LOT ADJACENT to 6522 Shamrock Dr

Post-it Fax Note 7671 Date 7/14/00 # of pages ▶ 1
To Diane V. From Bill Cr.
Co./Dept. 317-8507 Co.
Phone # Phone # Bill Cr. Sent
Fax # Fax # 704-382-1850

TONEY C. JACOBS & ASSOCIATES, INC.

Consulting Soil Scientists

Licensed by the North Carolina Board for Licensing of Soil Scientists

Certified by the American Registry of Certified Professionals in Agronomy, Crops and Soils

168 Broadbill Drive
Mooresville, NC 28117
Phone (704) 663-6905
Fax (704) 662-9845 E-mail jacobs@i-america.net

July 24, 2000

To: Ms. Judy Kiser, R.S.
Mr. Jeremy Michelone, R.S.
MCHD-IWWS
700 N. Tryon Street
Charlotte, NC 28202

Mr. Bill Holland
Key Realty, Inc.
P.O. Box 37288
Charlotte, NC 28237-7288

From: Toney C. Jacobs, CPSS

Ref: Points of understanding about 9945 Saw Mill Road - MCHD file#4325B

- Addition of the well area near Saw Mill Road
- Clarify that the initial system and repair could be interchanged after submittal of a revised site plan with new line layout. Soil in the area was evaluated and approved by Bill Marlin. Plan must be submitted and approved by MCHD.
- House footprint can be multiple levels and expand toward lake and side-to-side if space is designated for septic and pump tank. These may move to the 50' setback line.
- There must be a 25' setback from basement to upslope drainfield.

PROPOSED PLOT PLAN

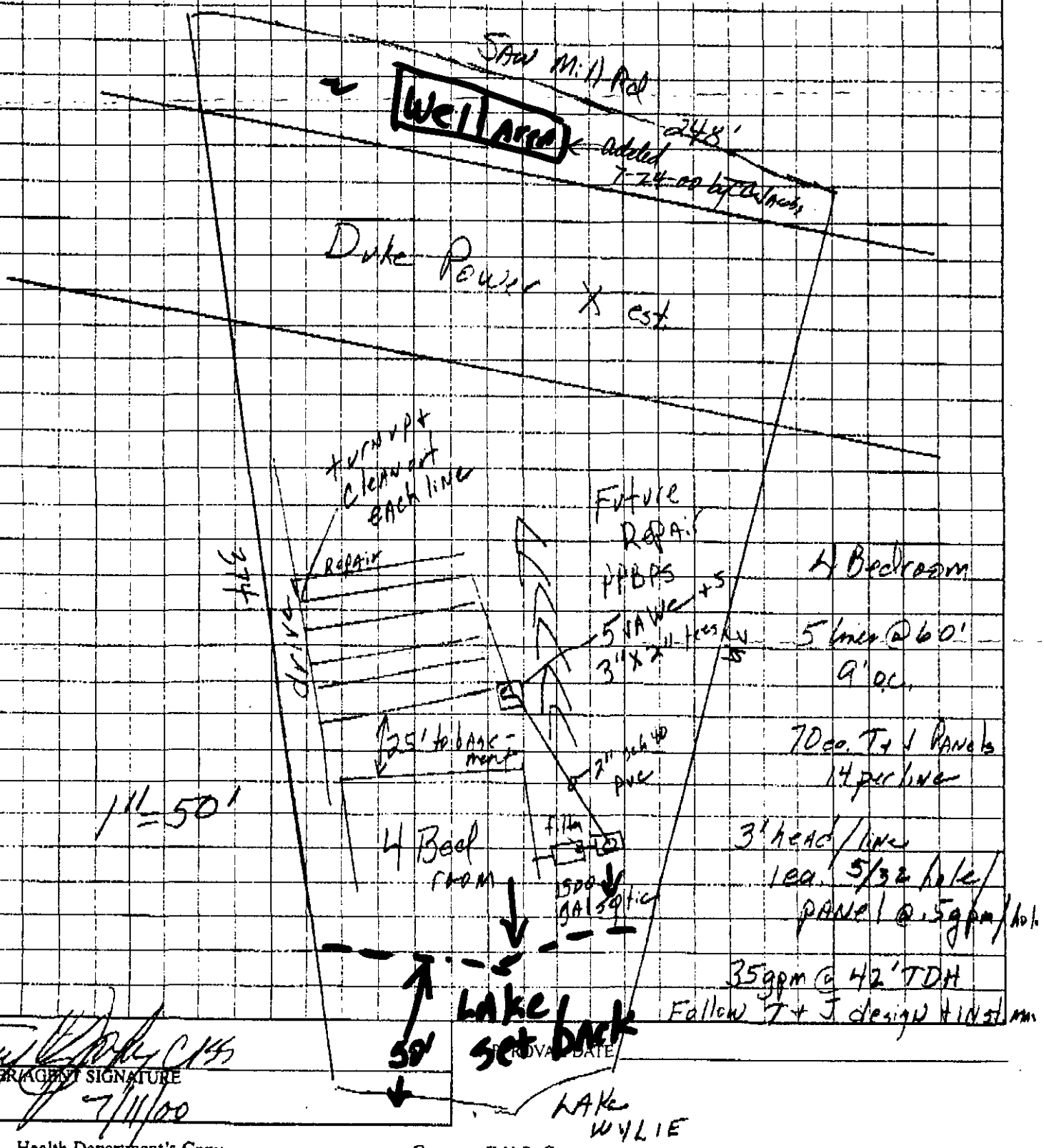
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

0945 SAW MILL Rd

FILE: 4325B

TC: 199-401-23

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.



OWNER/AGENT SIGNATURE

DATE 7/11/00

APPROVAL DATE

White - Health Department's Copy

Canary - E.H.S. Copy

Pink - Owner's Copy

Mecklenburg County
Health Department

TELECOPIER TRANSMITTAL COVER SHEET

*** NOTICE ***

THE INFORMATION CONTAINED IN THIS TELECOPY MAY BE PRIVILEGED AND/OR CONFIDENTIAL AND IS INTENDED ONLY FOR THE USE OF THE PERSON TO WHOM IT IS ADDRESSED. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT (OR SUCH RECIPIENT'S EMPLOYEE OR AGENT), YOU ARE HEREBY NOTIFIED NOT TO READ, DISTRIBUTE OR COPY THE MATERIALS ATTACHED HERETO WITHOUT THE PRIOR WRITTEN CONSENT OF THE SENDER. IF YOU HAVE RECEIVED THIS TELECOPY IN ERROR, PLEASE NOTIFY THE SENDER BY TELEPHONE CALL AND RETURN THE ORIGINAL TELECOPY TO US BY MAIL AND WE WILL REIMBURSE YOU FOR THE REQUIRED POSTAGE. THANK YOU.

TO: Tony Jacobs TELECOPIER # 6629845

FROM: Judy Kiser DATE 7/17/00

NUMBER OF PAGES TRANSMITTED: 3 (including cover sheet)

COMMENTS:

If you do not receive all pages, please call us as soon as possible at the following number: (704)336-5102.

[X] Original will not follow [ ] Original will follow via:

[ ] U.S. Mail [ ] Hand Delivery [ ] ____

Environmental Health Division
700 North Tryon Street • Suite 211 • Charlotte, North Carolina 28202-2236

PROPOSED PLOT PLAN

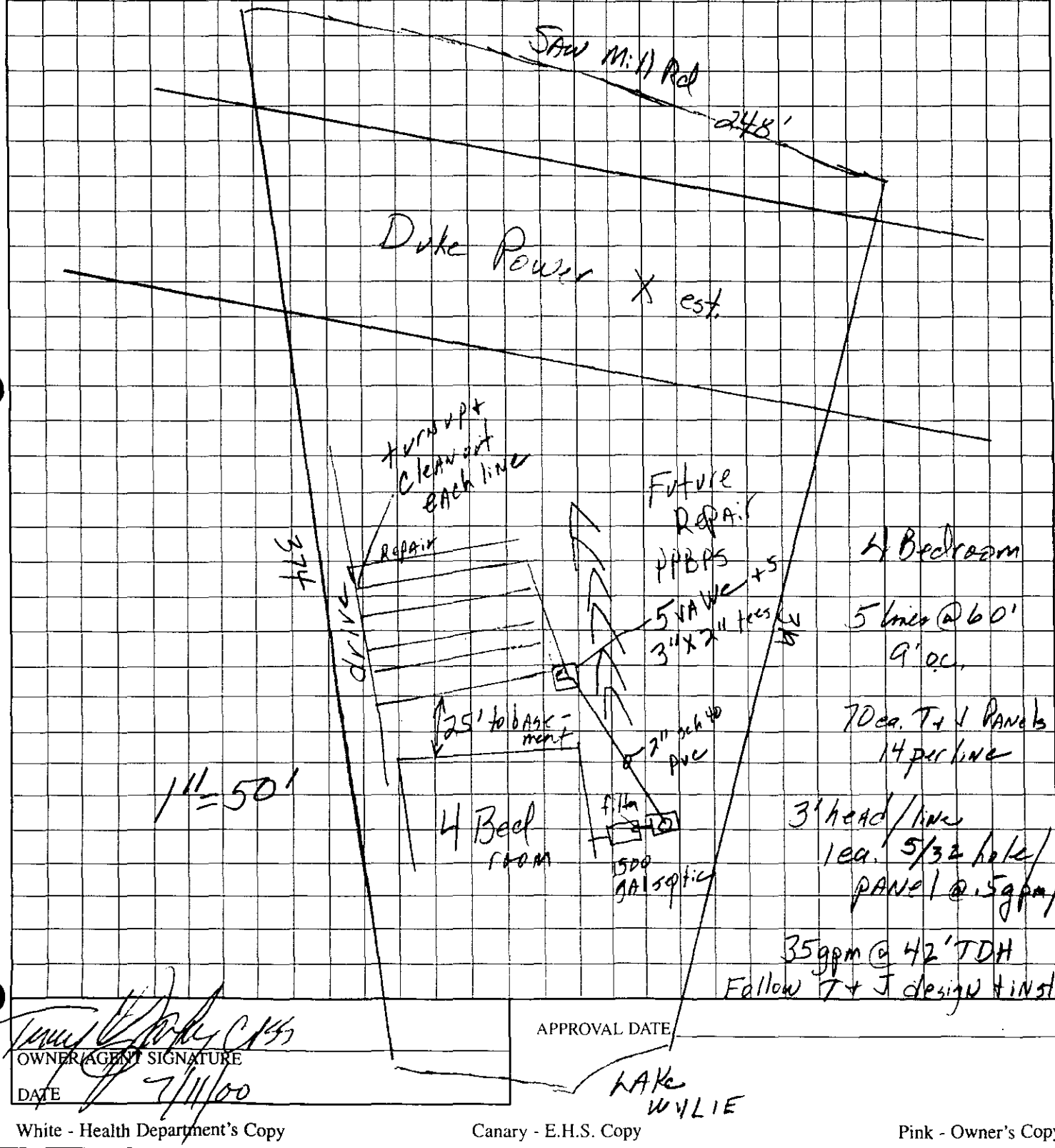
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

9945 Saw Mill Rd

FILE: 4325B

TC: 199-401-23

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.



OWNER/AGENT SIGNATURE

DATE 7/11/00

APPROVAL DATE

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

Well Location / Septic Location / Leach Back from Top of house

- On The Plan
- Either On
- Re-distance? Not shown on Plan

Can They Switch Site For Septic System To Repair Area Without Changing System Plan?

TRANSFER OF OWNERSHIP

Permit #: 4325B
Job Location Information:
Tax Parcel #: 199-401-23
Street Address: 9945 Sam Mill Rd

An IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change or if information submitted in this application is falsified or changed.

Property Owner Improvement Permit Originally Issued to:

Name: VANDEVERE DIANE H. (last) (first) (mi) Date Issued: 5/12/99

Address: 2101 Providence Rd.
City: Charlotte State: NC Zip: 28211
Daytime Phone: (704) 377-2488
W- 366-7239

IMPROVEMENT PERMIT TRANSFERRED TO:

Name: Burke, Jr. Clinton (last) (first) (mi)

Address: 8029 Steele Creek Rd
City: Charlotte State: NC Zip: 28217
Daytime Phone: (704) 377-2488

The undersigned, owner or legal agent for the owner, of the property described as the "job location" in the original application dated _____ has read the foregoing application and Improvement Permit, 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: Jean J. Cobb Date: 6-19-01

IMPROVEMENT PERMIT TRANSFERRED TO:

Name: _____ (last) (first) (mi)

Address: _____
City: _____ State: _____ Zip: _____
Daytime Phone: ( ) ___-_____

The undersigned, owner or legal agent for the owner, of the property described as the "job location" in the original application dated _____ has read the foregoing application and Improvement Permit, 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: _____ Date: _____

JUN-06-01 11:47 PM 6/19 ADDITIONAL SITE VISIT $100.00 RP. P.01

E: _____

TE: 6-15-01

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

[ ] CRT

PE 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 #: 4/3256

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 199-40-401-23

STREET ADDRESS: 9945 Saw Mill Rd.

SUBDIVISION OR MOBILE HOME PARK NAME: Saw Mill Point

LOT NUMBER: 10

TOWNSHIP (CHECK ONE):

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

CLOSING DATE _____

PE OF BUILDING (CHECK ONE):

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

ATED SQUARE FOOTAGE: 2425

MBER OF BEDROOMS: 4 NUMBER OF OCCUPANTS: 2

UNDATION FOR RESIDENCE:

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

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

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

ATER SUPPLY (CHECK ONE): __ COMMUNITY (C) __ MUNICIPAL (M) ✓ PRIVATE WELL (P)
__ SHARED WELL (S) __ OTHER 'SPRINGS' (O)

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

URIED CABLES, LANDFILLS, STUMPHOLES _ YES _ NO
ISTING WASTEWATER SYSTEMS _ YES _ NO
STMENTS OR RIGHT-OF-WAYS ✓ YES _ NO
WELL, SPRINGS OR WATERLINES __ YES __ NO
DESIGNATED WETLANDS __ YES __ NO

ROPERTY OWNER:

AME: Burke JR. Clinton I
(LAST) (FIRST) (MI)

DDRESS: 8029 Steele Creek Rd.

TY Charlotte STATE: NC ZIP: 28217

AYTIME PHONE: 704 377 - 2488

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME:
(LAST) (FIRST) (MI)

DAYTIME PHONE: ( ) —

HAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 5-10-01

n Improvement Permit is subject to suspension or revocation if site plans or the intended use change or if information submitted in is 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.

IGNED: Sandra S. Burke DATE: 6/15/2001

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

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH FEES

Jean Correll		6/19/01	
Requestor (please print):	Phone #:	Date Requested:	Date Filled:
Citadel Homes Inc. 1105A Church ST. Char. 28206		Cash Charge	Account No.: P87570
Account Name:			

I certify that I am authorized to charge this account for this service:

Signature: Printed Name: Date:

T.C.	Qty	Description	Unit Cost	Total Cost
0710		Additional Trips	$ 65.00	
0715		Admin. Fee - Field Activity Letter	$ 25.00	
0734		Authorization for Wastewater System Construction	$ 150.00	
0704		Change in Plot Plan	$ 100.00	
0741		Contractor's Annual Fee	$ 50.00	
0735		Improvement Permit Application - Commercial	$ 400.00	
0701		Improvement Permit Application - Residential	$ 200.00	
0703		Installation and Final Approval	$ 150.00	
0743		Maintenance Inspections to Homeowners w/ Type IIIB Systems (every 5 yrs)	$ 85.00	
0706		MH Exc/Add/Repl with System Modification	$ 300.00	
0705		MH Exc/Add/Repl without System Modification	$ 100.00	
0742		Operator's Annual Fee	$ 30.00	
0702	1	Optional Site Evaluations	$ 100.00	100 —
0708		Realty Closing - Conventional	$ 85.00	
0709		Realty Closing - FHA with water	$ 135.00	
0718		Residential Pool Permit	$ 50.00	
0707		Site Consultation Visit	$ 100.00	
0711		Well Water Analysis-Bacteriological with regular parameters	$ 50.00	
0712		Well Water Analysis -Nitrates and Nitrites	$ 15.00	
0714		Well Water Analysis - Organic Analysis	$ 200.00	
0738		Tatoo Parlor Permits - Mecklenburg Co. resident	$ 125.00	
0739		Tatoo Parlor Permits - non resident	$ 87.50	
0723		Eval and Report Non-Permit Facility	$ 50.00	
0722		Home Day Care Evaluation and Annual Fee	$ 40.00	
0721		Home Day Care Evaluation and Permit	$ 70.00	
0733		Pool - Permit to Construct a Public Pool	$ 200.00	
0724		Pool - Private Testing	$ 15.00	
0740		Pool - Public Permit Prorated ____ mos. X $30.00		
0719		Pool - Public Operating Permit	$ 240.00	
0720		Pool - Seasonal Operating Permit	$ 120.00	
0736		Pool - Late Fee	$ 120.00	
0725		Document Copies	$ 0.05	
Payment received by: Kelly Hall		Date: 6/19/01	Total:	100 —

9945 Saw Mill Rd. File# 4325B

Kelly,

FYI

- Tony Submitted 3 bedrm PLAN. Jeremy App'd
- MS. VANdevere Came TO Sign for I-p
- She + Fiance' want 4 bedroom & may MAKE Changes to driveway (Circular Drive)
- I requested they Contact Tony
- I Contacted Tony later (He had requested a copy of our APPROVAL Letter) I Told Tony Their requests & That they have a Call in to him regarding Changes.

~~*~~ I Think we Should File And Await a new plan from Tony

Also,

- They want to ~~Have~~ The option to flip-flop Original to repair System.
- They want to move System Closer to Power line -

J.H.Dy

Mecklenburg County
Health Department
Conditions of Improvement Permit

File Number: 4325B
Site Address: 9945 Sawmill Road

1. The permitted system is a Type IVa low-pressure pipe (LPP) wastewater treatment and disposal system and requires ongoing maintenance. A maintenance contract must be executed between the system owner and a private certified operator before an Operation Permit can be issued. It is a condition of the Operation Permit that a maintenance contract shall be in effect for as long as the system is in use. It is also a requirement that subsequent owners of the system shall execute such a contract.
2. The system will require a single phase, simplex control panel with alarm. The control panel must have a Nema 4x weather proof rating.
3. Septic and pump tanks must be installed in an area that is not subject to vehicular traffic. Final cover over both tanks must be less than 3 feet to prevent the need for State approved reinforced tanks.
4. Drain lines must be installed on contour. Trench bottoms shall be constructed as level as possible but in no case shall the fall in a single trench bottom exceed one-fourth inch in 10 feet.
5. Any changes in the site must be pre-approved by the Mecklenburg County Environmental Health Department.
6. The wastewater treatment and disposal drain field area, including the designated repair areas, shall not be used for any of the following:

   - Grading or filling
   - Parking or driving heavy equipment in the area or subjecting the site to possible soil compaction
   - Construction staging area
   - Installation of lawn irrigation components
   - Installation of underground utilities or cables of any type
   - Burial of any debris or material
   - Utilizing the area for gravesites
   - Diversion of storm water runoff into this area

7. Septic system installer must be registered with Mecklenburg County prior to meeting for the required pre-construction conference.
8. System installer will be required to operate the system at the time of the final inspection. Arrangements must be made to have the pump tank filled with water prior to the requested final inspection. The required pressure heads will be adjusted at the time of the final inspection.
9. The system owner shall have the contents of the septic tank checked, and the contents of the tank removed, periodically from all compartments, to ensure proper operation of the system. The contents of the septic tank shall be pumped whenever the solids level is found to be more than 1/3 of the liquid depth in any compartment.
10. All septic tank riser and effluent filter rules will apply to this system. It is strongly recommended that access risers be added to both ends of the septic tank, extending to at least finish grade. This will allow periodic inspection of the solids level in the tank as well as help facilitate the periodic cleaning of the effluent bio-filter.
11. The local Health Department is required, by the State, to perform system reviews of Type IVa systems at a minimum of once every 3 years. The owner of the system is responsible for paying any inspection fees, as determined by the Board of County Commissioners, at the time of the required inspection.

Owner/Agent Signature Diane H. Vadeen **Date** 7-16-00

FEE: _____

P.I.N. _____

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

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 #:

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 199-401-27

STREET ADDRESS: 9945 SAM BILL RD.

SUBDIVISION OR MOBILE HOME PARK NAME:

LOT NUMBER: 23

TOWNSHIP (CHECK ONE):

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

TYPE OF BUILDING (CHECK ONE):

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

HEATED SQUARE FOOTAGE:

NUMBER OF BEDROOMS:

NUMBER OF OCCUPANTS:

FOUNDATION FOR RESIDENCE:

__ WITHOUT BASEMENT
__ ON SLAB
__ CRAWL SPACE
__ WITH BASEMENT PLUMBING
__ WITH BASEMENT (NO PLUMBING

CLOSING DATE

7/14/00 Received by Fax From Tony JACOBS Private Consultant
Original Application received in office on 5/12/00 (Fire established)

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:

__ LANDFILLS, STUMPHOLES __ YES __ NO
EXISTING WATER SYSTEMS __ YES __ NO
EASEMENTS OR RIGHT-OF-WAYS __ YES __ NO
WELL, SPRINGS OR WATERLINE __ YES __ NO
DESIGNATED WETLANDS __ YES __ NO

PROPERTY OWNER:

NAME: LANDRETH DIANE H
(LAST) (FIRST) (MI)

ADDRESS: 9945 Sam Bill Rd.

CITY: Mint Hill STATE: N.C. ZIP: 28227

DAYTIME PHONE: 704-573-2405

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE

NAME:
(LAST) (FIRST) (MI)

DAYTIME PHONE: --

WHAT IS THE PROPERTY ORIGINALLY DEEDED AND RECORDED?

An improvement permit is subject to suspension or revocation if site plan is not followed or intended use changes or if information submitted in the application is not followed or changed. The undersigned, owner or legal agent, certifies that the information given above as the owner or agent and the foregoing application, acknowledges that the authorized representatives of the Mecklenburg County Health Department may enter onto the property for the purpose of processing this application.

SIGNED: Diane H Landreth DATE: 4/13/2000

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 N. TRADE HALL CTR., SUITE 211, CHARLOTTE, N.C. 28202 (704) 336-5102

FILE: $200 CK # 1431

DATE: 5/12/99 SC

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

[ ] 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 #: 43258

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 199-401-23

STREET ADDRESS: 9945 Saw Mill Rd

SUBDIVISION OR MOBILE HOME PARK NAME: NA MC CAI

LOT NUMBER: 10 M23

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: 3000

NUMBER OF BEDROOMS: 4 NUMBER OF OCCUPANTS: 8

CLOSING DATE mid may

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

PROPERTY OWNER:

NAME: Crescent Resources Inc.
(LAST) (FIRST) (MI)

ADDRESS: PO Box 1300

CITY: Charlotte STATE: NC ZIP: 28201-1003

DAYTIME PHONE: ( ) 663-6905

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME: Jacobs Tracy C
(LAST) (FIRST) (MI)

DAYTIME PHONE: ( ) 663 6905

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 7 100/2

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: Tracy C Jacobs agent DATE: 5/12/00

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

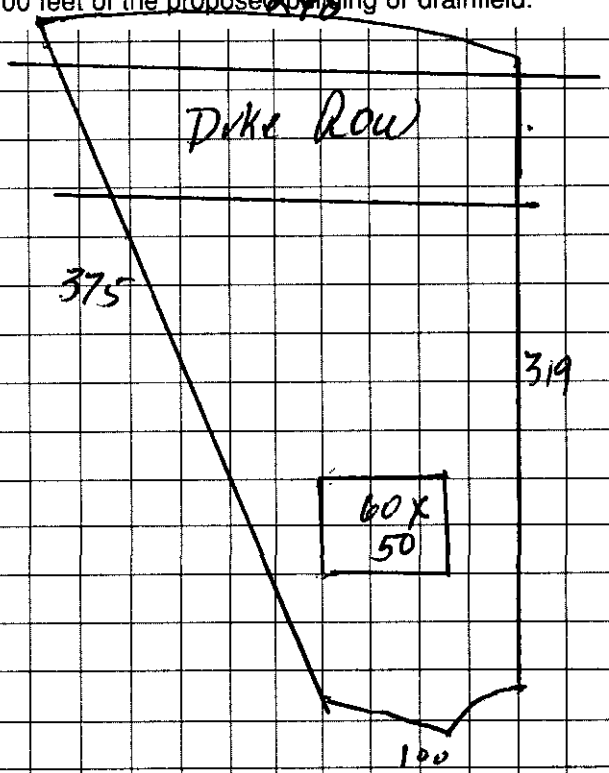
PROPOSED PLOT PLAN

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

FILE: 4325B

TC: 199-401-23

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.



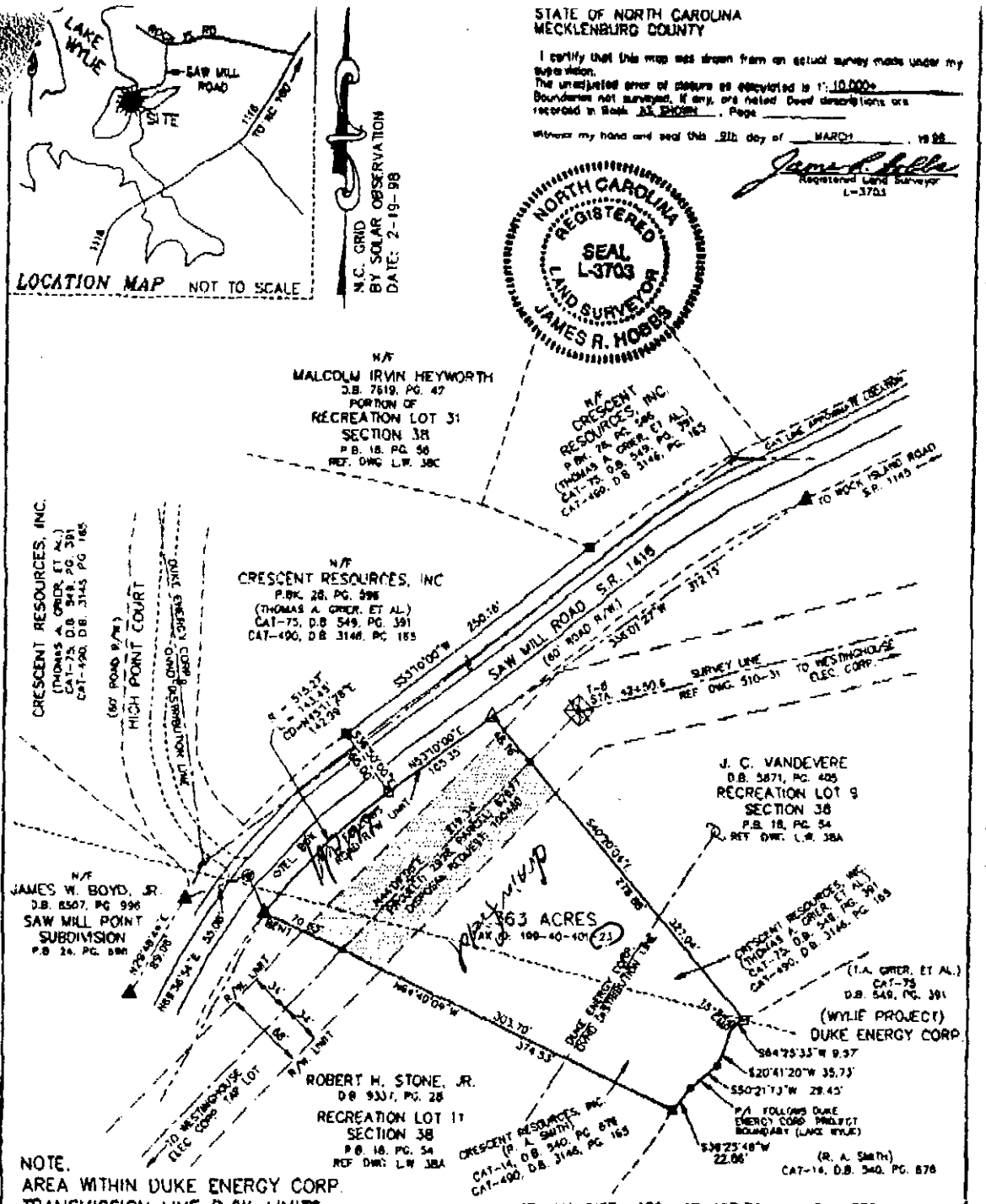
Terry C. Parker, OPS

OWNER/AGENT SIGNATURE

DATE 5/1/02

APPROVAL DATE _____

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



Post-it® Fax Note 7671 | Date 5/24/00 | # of pages ▶ 1
To Dana V. | From Belinda
Co./Dept. 327-5507 | Co.
Phone # Hard copy will be sent | Phone #
Fax # via US mail 9/30 | Fax #

Shopton Rd to Rock Island Rd To Saunders to LOT ADJACENT to 5223 Shannon Rd

DATE: 5-12-00

TO: CHARLOTTE-MECKLENBURG BUILDING STANDARDS
PERMIT ISSUING SECTION

FROM: MECKLENBURG COUNTY ENGINEERING

JURISDICTION Meck

199-401-23
PARCEL NUMBER

9945 Saw Mill Rd
ASSIGNED STREET ADDRESS (ADDRESS OF RECORD)

Lot # 10
EXISTING STREET ADDRESS (IF DIFFERENT FROM ASSIGNED)

N/A
PROJECT NAME (IF APPLICABLE)

THE ABOVE DESCRIBED LOCATION HAS BEEN CHECKED CONCERNING:

1. SUBDIVISION REGULATIONS	____ APPROVED	____ NOT APPROVED
2. FLOODWAY REGULATIONS	____ APPROVED	____ NOT APPROVED
3. WATERSHED PROTECTION	____ APPROVED	____ NOT APPROVED
4. COMERCIAL DRAINAGE PLAN	____ APPROVED	____ NOT APPROVED
5. PUBLIC UTILITY EASEMENT	____ PRESENT	____ NOT PRESENT
6. PROPERTY FRONTS ON THOROUGHFARE	____ YES	____ NO
7. DRIVEWAY PERMIT REQUIRED	____ YES	____ NO
8. DOES PROJECT CONFLICT WITH ROAD PROJECT?	____ YES	____ NO

REMARKS: Septic System

NOTE: THIS FORM MUST BE TURNED IN AT THE CASHIERS OFFICE WHEN PAYING PERMIT FEE. CERTIFICATE OF OCCUPANCY WILL NOT BE GRANTED UNTIL TRANSPORTATION DIVISION GRANTS FINAL APPROVAL ON DRIVEWAY(S).

ALL OTHER FORMS OBSOLETE

X NEW ADDRESS
REVISED 1/91

SIGNED: Dary A. Hem

WARNING!!

Unless this plan or permit indicates that grading was considered, it **cannot** take place, either in or adjoining the septic system (up to 25'). If there are any questions call the designer or the local health department. Graded soils **cannot** be "replaced" and then be considered suitable for a septic system. *Ask first ! !*

Many county permits have some fine print stating for example: "*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*".

Regardless of what you may have done in the past, you must follow the conditions of the permit.

THE T.&J. PANEL
WASTEWATER TREATMENT SYSTEM

PATENT NUMBER 4013559

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

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

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

* *

Limited Warranty

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

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

THE T&J PANEL
WASTEWATER TREATMENT SYSTEM
PATENT NUMBER 4013559

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

Distributed by

Serving people with a better quality system

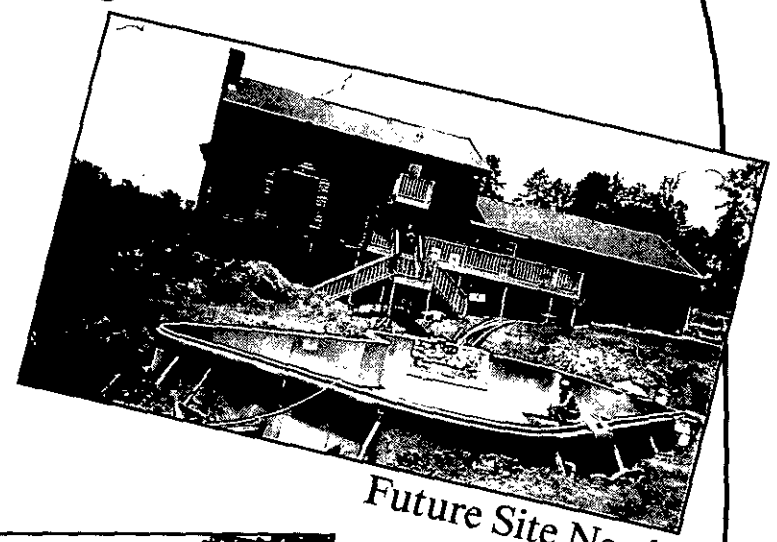
When Your Problem in On-site Waste Is:



Topography and Vegetation



Special Landscaping Needs



Future Site Needs



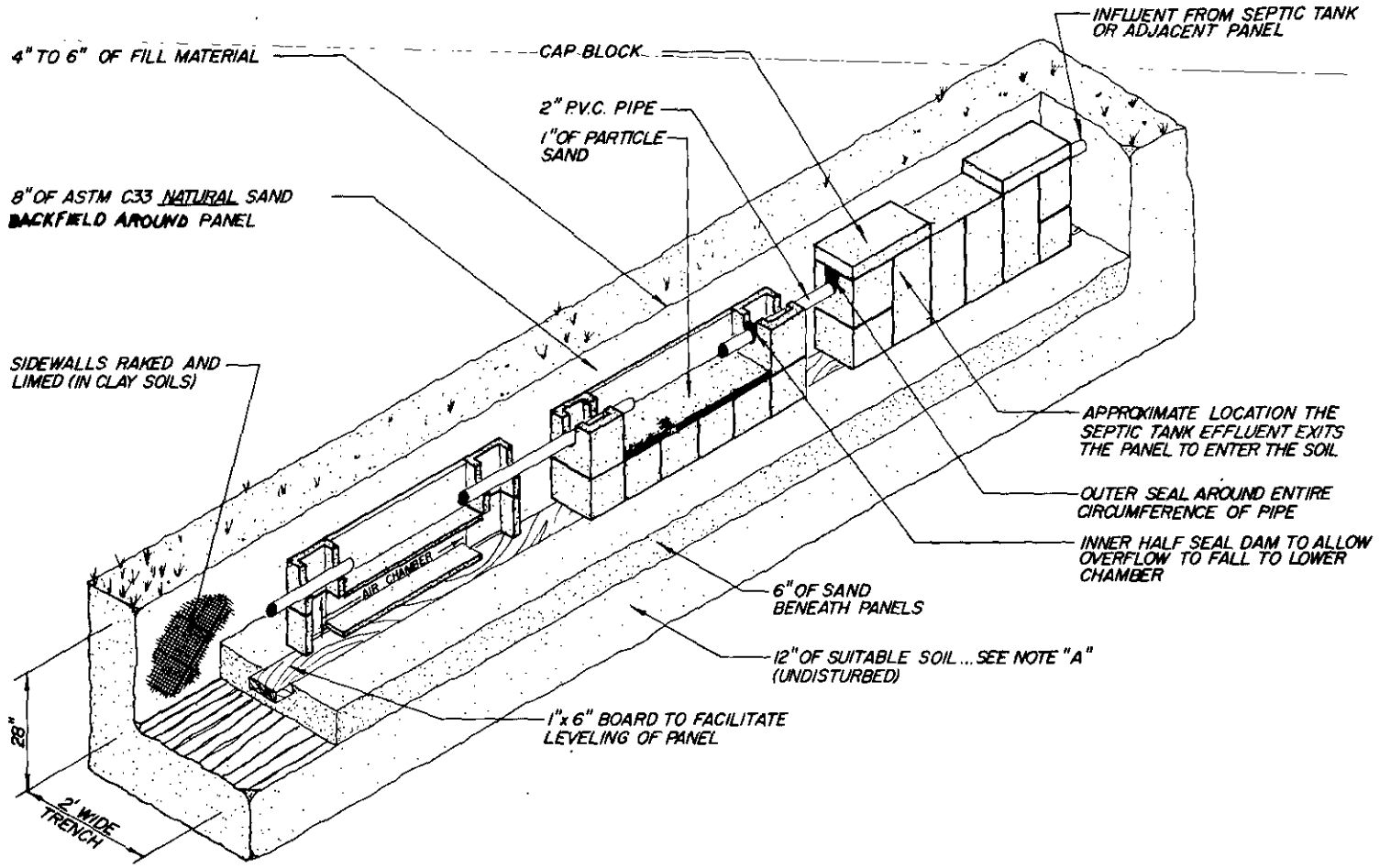
Limited Suitable Area

Then consider the

T&J Panel Wastewater Treatment System

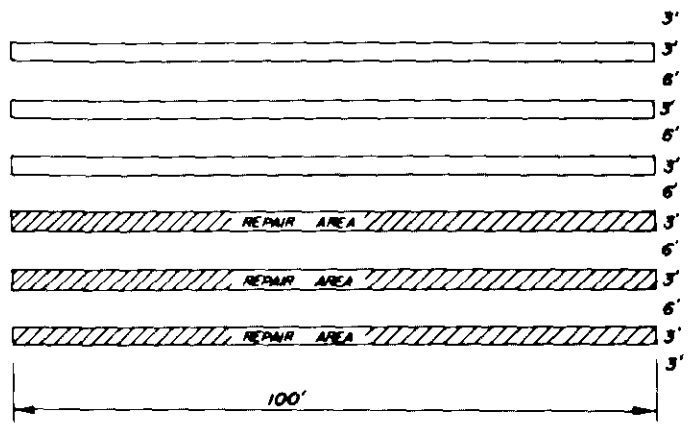
A Better Quality Effluent Than With Conventional Systems

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



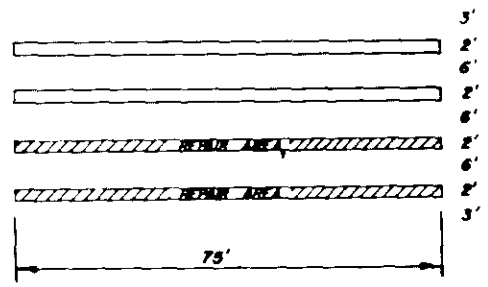
See the difference in a real space needed with the T&J Panel System Wastewater Treatment System when compared to a conventional tile/stone nitrification system.

Conventional System



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

T & J Panel System



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

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

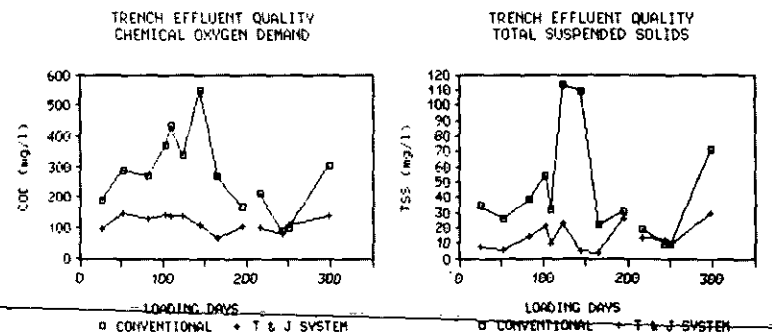
**The T & J Panel Wastewater Treatment System is included in the North Carolina Sewage regulations as a PPBPS as of August 1, 1988. This allows for a 50% reduction in lineal footage of trench with the 16 inch panel as illustrated above. (See note "A")
Note A - This reflects North Carolina Codes. Please check local codes and practices for your area.

Advantages of the T&J Panel System

- Effluent discharged closer to the ground surface
- Each panel works as individual unit
- Panel may be grouped where best soils are found
- Less soil distributed during installation
- Less catch basin effect
- Lines only 24" wide — more landscape flexibility
- Aerobic bacterial activity
- Easily installed — similar to conventional system
- Can be installed as modified mound system
- Lines can be inspected or serviced through lids
- Prefabricated panels delivered to job site

Environmentally Superior Effluent With The T&J Panel System

In a side by side test, both total suspended solids and chemical oxygen demand was reduced with the Panel System. The panels were loaded at 3.4 times that of the conventional system.

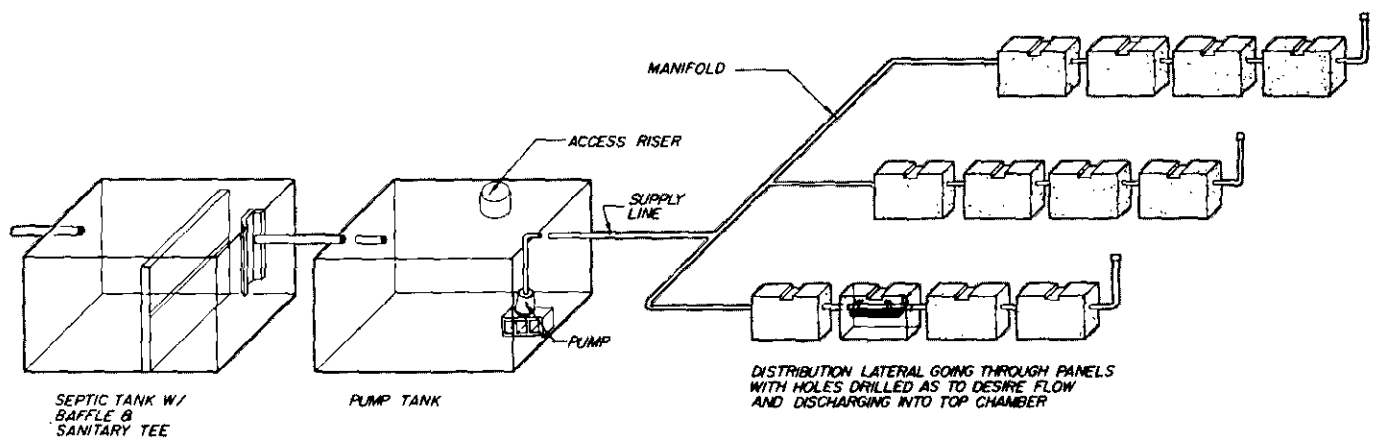


Total Suspended Solids Concentration for Effluent from Simulated Conventional and *T&J System Trenches.* (*Note:* Hydraulic Loading Rate for Conventional = 1.53 ca/day, for *T&J* = 5.27 ca/day.)

Chemical Oxygen Demand Concentration for Effluent from Simulated Conventional and *T&J System Trenches.* (*Note:* Hydraulic Loading Rate for Conventional = 1.53 ca/day, for *T&J* = 5.27 ca/day.)

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

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



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

Design, Installation and Maintenance

of the

T & J Panel Wastewater Treatment System

For

Environmental Health Specialist

And

Septic Tank Installers

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

System Design

In the early days of the T & J Panel system when it was still Considered an experimental system the primary reason for permitting the Panel System was because of insufficient space for a conventional system. Now with inclusion in the Sewage Regulations [10NCAC 10A .1956 (3) (a) (ii)] , the Panel System should be considered when a quality effluent may be needed, space is limited, usable soil is limited, or there are indications that at some future time space may be needed for other development. When there is a trend for added development such as additions to homes, pools, or other special landscaping development the T & J Panel System may prevent insufficient space later. As the environmental health specialist who is designing a system, and you can foresee such a trend of continued development, the Panel System may be an option the home owner would like to utilize.

As noted in the regulations a PPBPS is only permitted where soils are suitable, provisionability suitable, or reclassified provisionability suitable, however only one half of the area needed for a conventional system is required. This is one reason that the Panel System can help you use the best soils available on the lot. The system can be gravity fed, pumped to pressure manifold and gravity fed into the lines, or pumped to Low Pressure Panel lines. Most of the concepts for a Panel System layout are the same as for a conventional system. The biggest difference being the areal area needed and the quality of effluent being introduced into the ground.

The T & J Panel system can be installed as either gravity, pump to gravity, pump to pressure manifold, or low pressure pipe distribution system. When designing a pressure system the principles of low pressure distribution are as described in the LPP manual. There is futher discussion on pressure systems in the installer section of this manual.

Conversion

A three bedroom house with a 0.4 gpd application rate. (The first three steps are the same as for the conventional system.)

1) 120 gallons per bedroom x 3 bedrooms = 360 gallons per day design flow rate.

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

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

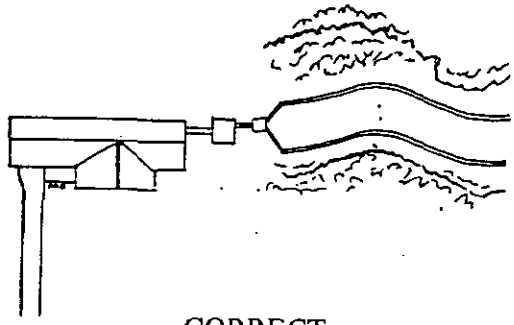
This conventional layout requires 2700 sq. ft. of area on the lot with another equal area of repair space for a total of 5400 sq. ft. of suitable usable area. To calculate the size of the T & J Panel system , the above calculations must be made with an additional fourth step as described in 10NCAC 10A .1956 (3) (a) (ii) (B) for a PPBPS, (the T & J panel system).

4) 300 lineal feet of conventional system x 0.5 for a 16 inch high Pane System = 150 lineal feet of T & J Panel System.

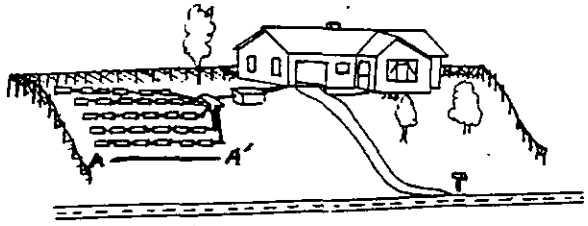
A Panel System requires only a 1200 sq. ft. area on the lot for the system with an equal area for repair, for a total of 2400 sq. ft. . With the panel system the installation and repair can go into the same area as the initial area required for a conventional gravel trench system.

Window Effect

To prevent hydraulic overload in the soil areal space should always be a consideration for any system, however, it is especially notable with the Panel System as with any system that reduces the size of the areal area drainfield. The following is a simplistic example of this concept.



CORRECT

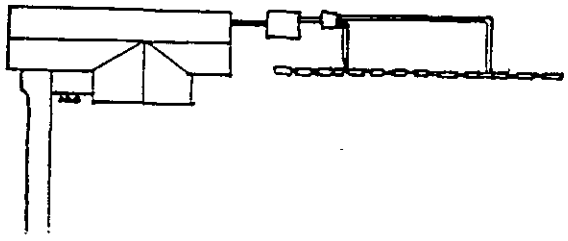


INCORRECT

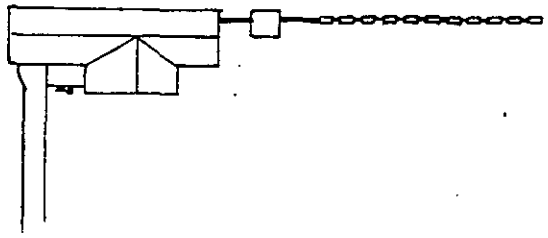
While both systems have the same lineal footage of trench the incorrect diagram is not a desirable design. The effluent must pass through the area A-A' which can cause a strain on that area and even a failure because of hydraulic overloading.

Distribution

Another extreme would be the use of a long single trench fed from only one end. In the first example, below the areal space is good and the chance of hydraulic over loading is greatly reduced. However, downline distribution in the panel line will not give optimum treatment.



CORRECT



INCORRECT

In the lower example we see that the trench has been fed from multiple points. Because the Panel lines are put in as level as possible, never exceeding 1/4 inch of rainfall in 10 feet of run, they feed both ways equally. T & J recommends that no gravity line exceed 50 feet, unless it is fed from multiple points. In both of these examples, we are specifying the Panel System, but the logic applies to the conventional system as well.

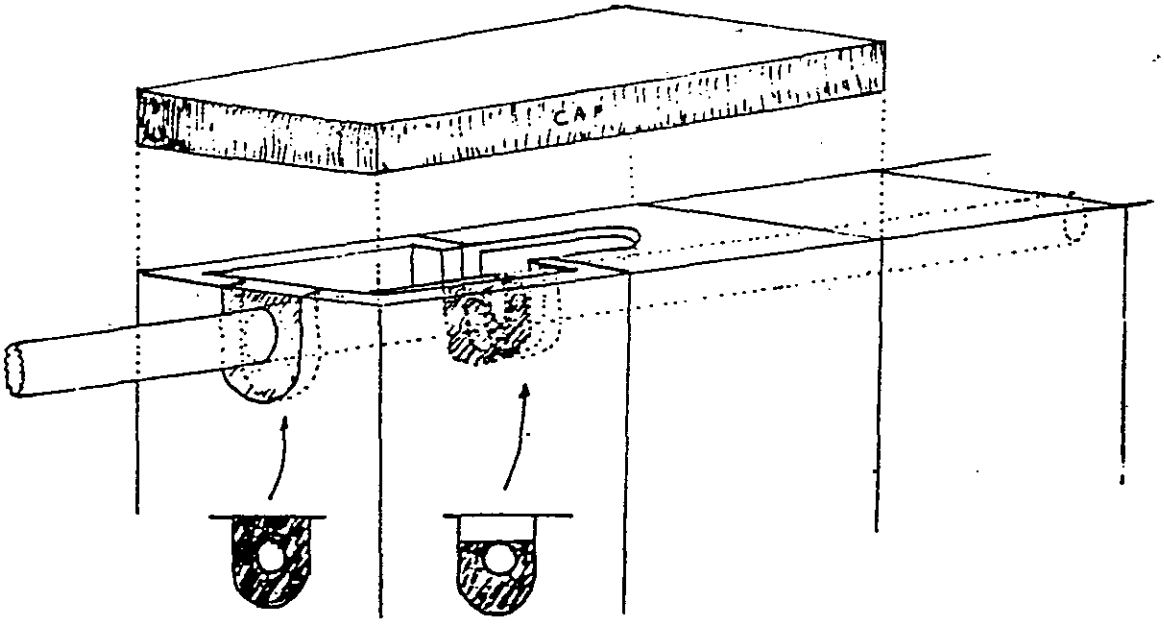
To calculate the number of 16 inch high panels needed for a 150 foot line, multiply 150' x 12" = 1800" then divide by 52" which is 46 inches for the panel and 6 inches for the space between the panels in the trench. 1800" /52" = 34.6 panels, so you would call for 34 panels. (A material order chart is included in the installer section of this manual.) If there is to be more than one trench, the sizing of the lines should be as equal as possible with as close to the same number of panels in each trench as is practical. Environmental Health Specialists should show the panel as small blocks on the line of the trench.

Backfill

Backfill sand shall be a clean, washed, medium sand that is naturally occurring and falls within the gradation of ASTM C-33 specification. This specification is one that is used in the ready mix industry and is readily available in all areas. The second type of sand that you will need is a clean particle sand to coat the bottom of each panel's top chamber with a bed of sand one inch thick. This sand is a medium grade of sand blasting sand. Each one hundred pound bag should cover eight panels. Backfill sand calculations should be taken from the material sheet.

Tar Seals

The two drawings below illustrate the inner and outer seal. Note that while the outer seal is a complete seal, the inner seal is only up to the top of the connecting pipe. This is to allow for over flow of the effluent at peak use periods into the lower air chambers. At this point the air chamber become additional storage chambers for the effluent. These seals can be inspected by lifting the caps at the ends of the panels while inspecting the system installation



INNER and OUTER SEALS

Trench Preparation

Trench grade should be established so that backfill cover will be four to six inches over the tops of the panels. (Note on several slopes system depth should be adjusted to protect against brakeout of effluent) In clay type soils the trench side walls should be raked to bring slicked over areas back as near to original structure as possible. A light dusting of lime on the side walls will help the system to continue the brake down of solids.

Final Inspection

The following list of points are things that an inspector should look for when issuing a completion permit.

1) Is depth of the panels within guidelines?

2) Are drain lines level or less than 1/4 inch fall in ten feet?

3) Have seals been properly constructed?

4) Was the proper sand used in the trench backfill?

5) If in clay type soils were the side walls raked and limed?

(For Pumped Systems)

6) Have pump size, head pressure, and dose cycle been properly sized and set?

7) Record field data on operations permit.

(Set dose cycle for 3.6 gallons per 16 inch high panel.).

Installer

The Panel Block System

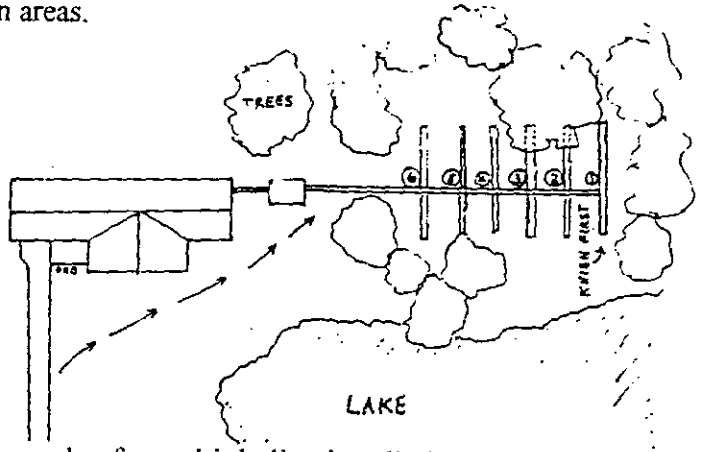
Generally, on level open land, a Panel System can be installed in about the same time as a conventional system; however traditionally, Panel Systems have been installed where space and topography have restricted use of a conventional system. For this reason Panel System installations have required more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

Ordering Materials

Inclosed on following two pages you will find an order sheet for the T & J Panel System and a materials chart for 16 inch high Panel System. The distributor in your area will lead you through these sheets when ordering or pricing the system. For information on the distributor located closest to you call 1-800-222-2577 (inside N.C.) or 704-872-9566. After ordering, your panels will be shipped to the job site banded together on pallets.

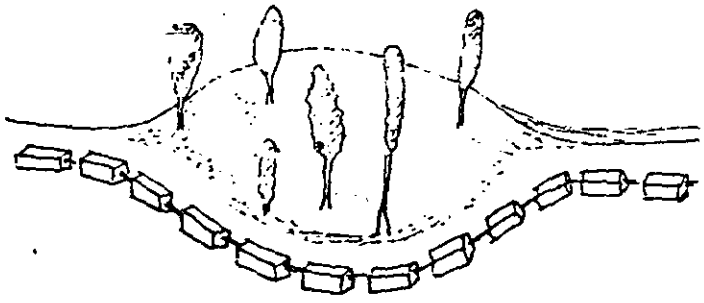
Installation Tips

Installation for multiple line systems should begin in the most confiding area and be worked to the more open areas.

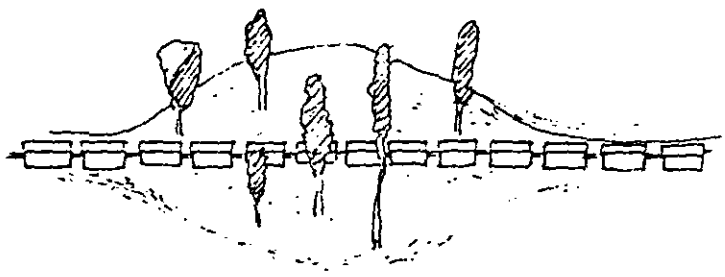


Above is an example of a multiple line installation. As you can see the installation should begin with the line marked 1 and proceed to 2, 3, then 4. This procedure will greatly ease material handling and backfilling. (Note sections of the drainlines should be left uncovered to allow for inspection of lines when area is confined and return access to lines is limited.)

On the following page are two examples of drain lines on sloping lots. The first drawing shows the drainline going through a slope making the center of the line deeper in the ground. This is not a desirable situation. The second drawing shows the drainline going around the slope keeping around the slope keeping the trench depth and cover uniform for the entire length o the line. On slopes, care should be given to avoid cutting away valuable top soil in an effort to make straight lines. The Panel line should be installed on grade with the contour of the natural slope. Panel lines can be curved to almost any degree.



CORRECT



INCORRECT

Digging The Trench

Start by shooting the grade and marking the contour. Then for a 16 inch panel add 28 inches to the shallowest or lowest grade that the trench must cross to obtain the trench bottom grade. Now dig the trench at the elevation derived, checking the grade frequently. The trench should be a minimum of two feet wide. With the trench open all side walls shall be raked to bring smeared areas back to their original structure before a light dusting of lime is applied. Now place a 6 inch layer of backfill sand in the trench and level to grade, then place a 1 x 4 or 6 inch board flat on its side on top of the 6 inch layer of sand. Once more check the grade of the trench by shooting the top of the board. Once the grade boards have been set, the panels may be set into the ditch by hand or using the backhoe. Each panel weighs about 155 pounds and placement by hand goes quickly. The panels should be place about 6 inches apart in the trench to obtain equal spacing. Now place 10 to 12 pounds of clean particle sand (medium sand blasting sand) in the top chamber of each panel to form a bed of sand about one inch thick. Tar seal rope should be placed in the U outs to form seals as shown in earlier drawings. Once the tar rope is in place, a 24 inch section of two inch PR160 pipe is cut to span from the upper middle top chamber of the first panel to the upper middle chamber of the next panel. The tar seal rope that is used should be of tar or butyl that is soft and pliable to obtain a water tight seal. Now that the connection and sealing is complete a block cap is placed on each end of the panel covering all openings. (These will be delivered with the panels.) The cap block may well serve as an inspection port at some future date. The trench is ready to be backfilled to the top so the panel with the same backfill sand used in the trench bottom. With the sand to the top of the panel, trenches should be left for the sanitarian to inspect. Soil cover should be added after the final inspection.

Most Panel Systems are currently used due to space considerations and caution should be taken to preserve suitable soil structure and site conditions.

Materials Chart For 16 Inch Panels

Materials needed per panel:

- Three feet of half inch tar seal rope per panel

- Two feet of two inch PR160 pipe per panel or same linear feet as line layout of pressure system of one and a quarter inch pipe. Add pipe for tie in of lines to tank and house.

- One hundred pounds of particle sand (sand blasting sand fine texture) per eight panels.

- Same linear feet of one by six boards as line length.

- Bag powder lime when in clay soils.

Panel and C-33 Sand fill

50 LF - 11 panels
8 1/4 tons sand

60 LF - 14 panels
10 tons sand

70 LF - 16 panels
11 1/2 tons sand

80 LF - 18 panels
13 1/4 tons sand

90 LF - 21 panels
15 tons sand

100 LF - 23 panels
16 1/2 tons sand

110 LF - 25 panels
18 1/4 tons sand

120 LF - 27 panels
20 tons sand

130 LF - 30 panels
21 1/2 tons sand

140 LF - 32 panels
23 tons sand

150 LF - 34 panels
25 tons sand

160 LF - 37 panels
26 1/2 tons sand

170 LF - 39 panels
28 tons sand

180 LF - 41 panels
30 tons sand

190 LF - 43 panels
31 1/2 tons sand

200 LF - 46 panels
33 tons sand

T & J Panel Material Worksheet

Homeowner _____ County _____

Address _____

_____

Description of System _____

_____

_____

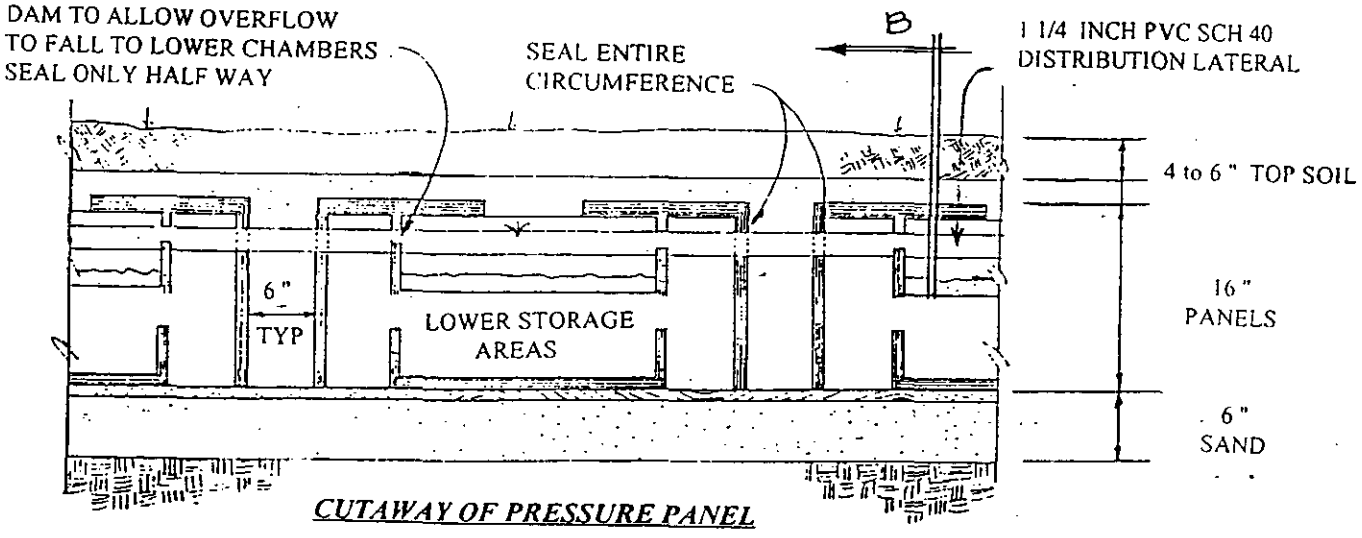
_____	T & J Panels _____ Inch (caps N/C)	_____
_____	2" Pipe	_____
_____	1 1/4" Pipe	_____
_____	Fittings for Pipe	_____
_____	Tar Seal Rope (3' per Panel)	_____
_____	Bag Partial Sand (100 lbs per 8 panels)	_____
_____	Pallets (Returnable)	_____
_____	Screened Creek Sand (FM 2.3 to 3.0)	_____
_____	1x4 or 1x6 Boards	_____
_____	Power Lime	_____
_____	Sep. Tank _____ Gallon	_____
_____	Tar Seal for Tank	_____
_____	4" PVC Pipe Schedule 40	_____
_____	Distribution Box	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
	Sub-total	_____
	Delivery Charge	_____
	tax	_____
	Total	_____

Panels With Pressure Distribution

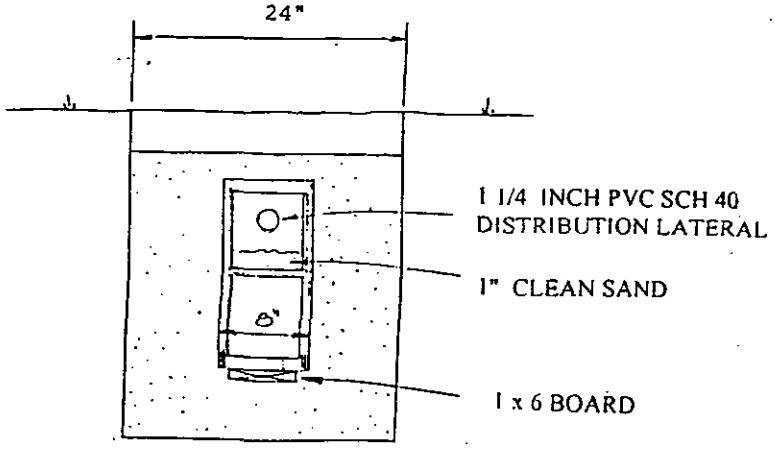
The LP Panel uses Technology similar to that of Low Pressure Pipe (LPP) System. The tables and distribution design described in the LPP manual is applicable to the pressure Panel System. The system should be used with two to four feet of head. In many respects a LP Panel is similar to a LPP with the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

The dosing cycle for the Panel System is designed to pump enough effluent to fill the top chambers of all the panels in the system. The top chamber of a 16 inch panel hold 3.6 gallons. When the system has 34 panels and all holes are the same size, then you would multiply 34 x 3.6 to get 122 gallon per dose cycle. The holes are drilled in the distribution pipe at the 10 and the 2 o'clock position. These are then placed so that the effluent is pumped into the top chamber of the panel. If the hole sizing changes in the system the pump cycle is set by the hole that is discharging the fastest.

All valves and turnups should be neatly capped, covered and labeled for future service. Pump tanks should be constructed as shown in the drawing as to allow for service and repairs.



CUTAWAY OF PRESSURE PANEL



Pressure Panels Continued

Below you will find a pressure head table to help in flow design of your LP Panel. These numbers are a guide to help in selecting the right flow in your system. We have found that in most systems the 5/32" and 3/16" hole at 2 to 4 feet of head work the best in giving a pump cycle of more than five minutes and keep the same maximum top chamber flow load as sited on the prior page.

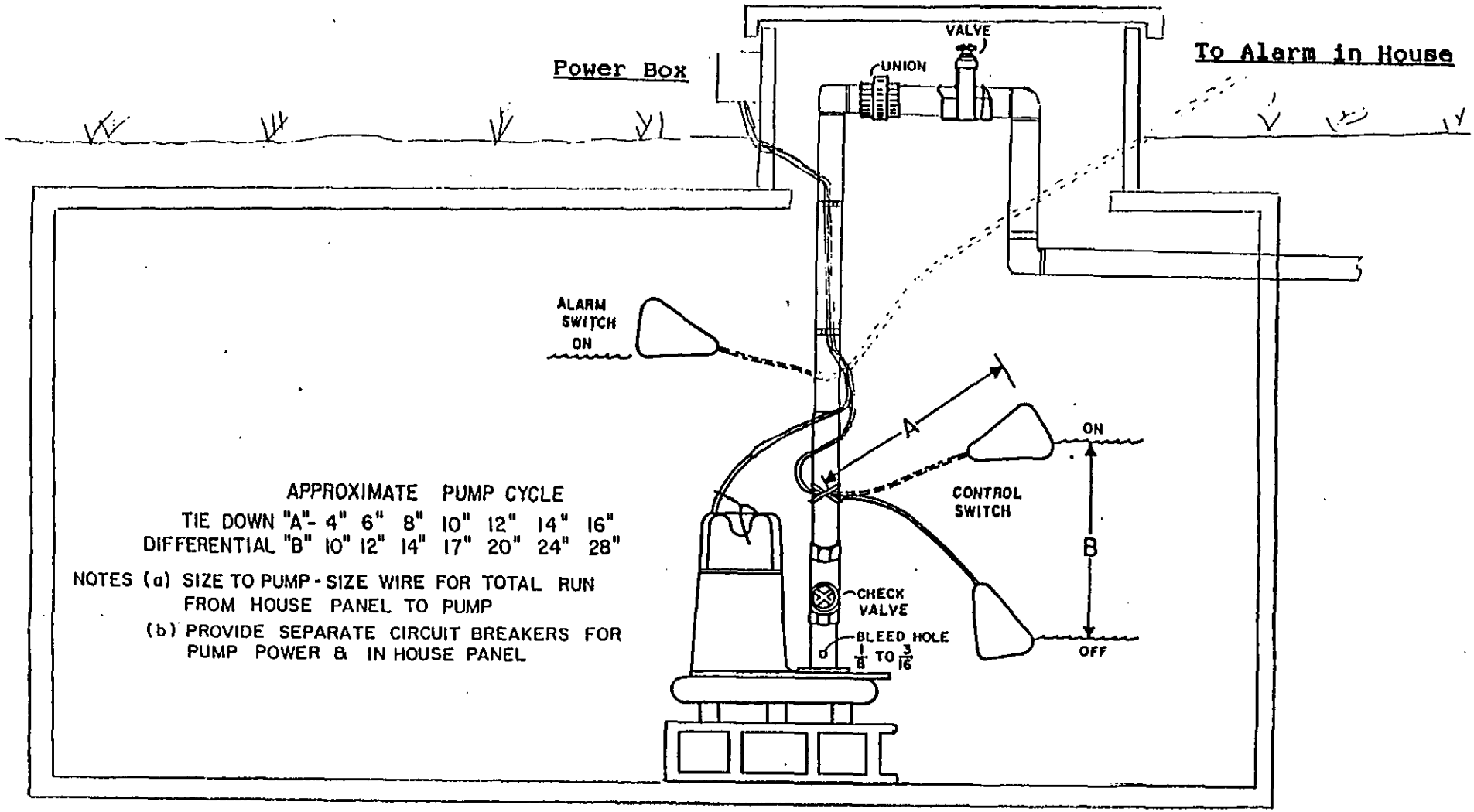
Flow Chart of Various Orifices and Pressure Heads

Orifice Size	3/32" 0.094	1/8" 0.125	5/32" 0.156	3/16" 0.188	7/32" 0.219	1/4" 0.250	9/32" 0.281	5/16" 0.313	11/32" 0.344	3/8" 0.375
Press. Head										
2.0	0.15	0.26	0.41	0.59	0.80	1.04	1.32	1.63	1.97	2.34
2.1	0.15	0.27	0.42	0.60	0.82	1.07	1.35	1.67	2.02	2.40
2.2	0.15	0.27	0.43	0.61	0.84	1.09	1.38	1.71	2.07	2.46
2.3	0.16	0.28	0.44	0.63	0.86	1.12	1.41	1.75	2.11	2.51
2.4	0.16	0.29	0.45	0.64	0.87	1.14	1.44	1.78	2.16	2.57
2.5	0.16	0.29	0.46	0.66	0.89	1.17	1.47	1.82	2.20	2.62
2.6	0.17	0.30	0.46	0.67	0.91	1.19	1.50	1.86	2.25	2.67
2.7	0.17	0.30	0.47	0.68	0.93	1.21	1.53	1.89	2.29	2.72
2.8	0.17	0.31	0.48	0.69	0.94	1.23	1.56	1.93	2.33	2.77
2.9	0.18	0.31	0.49	0.71	0.96	1.25	1.59	1.96	2.37	2.82
3.0	0.18	0.32	0.50	0.72	0.98	1.28	1.62	1.99	2.41	2.87
3.1	0.18	0.32	0.51	0.73	0.99	1.30	1.64	2.03	2.45	2.92
3.2	0.19	0.33	0.51	0.74	1.01	1.32	1.67	2.06	2.49	2.97
3.3	0.19	0.33	0.52	0.75	1.02	1.34	1.69	2.09	2.53	3.01
3.4	0.19	0.34	0.53	0.76	1.04	1.36	1.72	2.12	2.57	3.06
3.5	0.19	0.34	0.54	0.78	1.06	1.38	1.74	2.15	2.61	3.10
3.6	0.20	0.35	0.55	0.79	1.07	1.40	1.77	2.18	2.64	3.15
3.7	0.20	0.35	0.55	0.80	1.09	1.42	1.79	2.21	2.68	3.19
3.8	0.20	0.36	0.56	0.81	1.10	1.44	1.82	2.24	2.72	3.23
3.9	0.20	0.36	0.57	0.82	1.11	1.46	1.84	2.27	2.75	3.27
4.0	0.21	0.37	0.58	0.83	1.13	1.47	1.87	2.30	2.79	3.32
4.1	0.21	0.37	0.58	0.84	1.14	1.49	1.89	2.33	2.82	3.36
4.2	0.21	0.38	0.59	0.85	1.16	1.51	1.91	2.36	2.86	3.40
4.3	0.21	0.38	0.60	0.86	1.17	1.53	1.93	2.39	2.89	3.44
4.4	0.22	0.39	0.60	0.87	1.18	1.55	1.96	2.42	2.92	3.48
4.5	0.22	0.39	0.61	0.88	1.20	1.56	1.98	2.44	2.96	3.52
4.6	0.22	0.40	0.62	0.89	1.21	1.58	2.00	2.47	2.99	3.56
4.7	0.22	0.40	0.62	0.90	1.22	1.60	2.02	2.50	3.02	3.59
4.8	0.23	0.40	0.63	0.91	1.24	1.61	2.04	2.52	3.05	3.63
4.9	0.23	0.41	0.64	0.92	1.25	1.63	2.06	2.55	3.08	3.67
5.0	0.23	0.41	0.64	0.93	1.26	1.65	2.09	2.57	3.12	3.71

Pump Sizing

Below is a chart to aid in head selection due to friction loss in PVC pipe. In calculating friction be sure to add 20% for loss in fittings. In the chart below friction loss is per 100 feet of pipe. The head created by friction loss is added to the elevation head of lift form bottem of the pump tank to the top of the highest turnup.

Flow	Pipe diameter (in.)					
	1	1¼	1½	2	3	4
gpm	*Friction loss (ft)*					
1	0.07					
2	0.28	0.07				
3	0.60	0.16	0.07			
4	1.01	0.25	0.12			
5	1.52	0.39	0.18			
6	2.14	0.55	0.25	0.07		
7	2.89	0.76	0.36	0.10		
8	3.63	0.97	0.46	0.14		
9	4.57	1.21	0.58	0.17		
10	5.50	1.46	0.70	0.21		
11		1.77	0.84	0.25		
12		2.09	1.01	0.30		
13		2.42	1.17	0.35		
14		2.74	1.33	0.39		
15		3.06	1.45	0.44	0.07	
16		3.49	1.65	0.50	0.08	
17		3.93	1.86	0.56	0.09	
18		4.37	2.07	0.62	0.10	
19		4.81	2.28	0.68	0.11	
20		5.23	2.46	0.74	0.12	
25			3.75	1.10	0.16	
30			5.22	1.54	0.23	
35				2.05	0.30	0.07
40				2.62	0.39	0.09
45				3.27	0.48	0.12
50				3.98	0.58	0.16
60					0.81	0.21
70					1.08	0.28
80					1.38	0.37
90					1.73	0.46
100					2.09	0.55



APPROXIMATE PUMP CYCLE

TIE DOWN "A"- 4" 6" 8" 10" 12" 14" 16"
DIFFERENTIAL "B" 10" 12" 14" 17" 20" 24" 28"

NOTES (a) SIZE TO PUMP - SIZE WIRE FOR TOTAL RUN FROM HOUSE PANEL TO PUMP

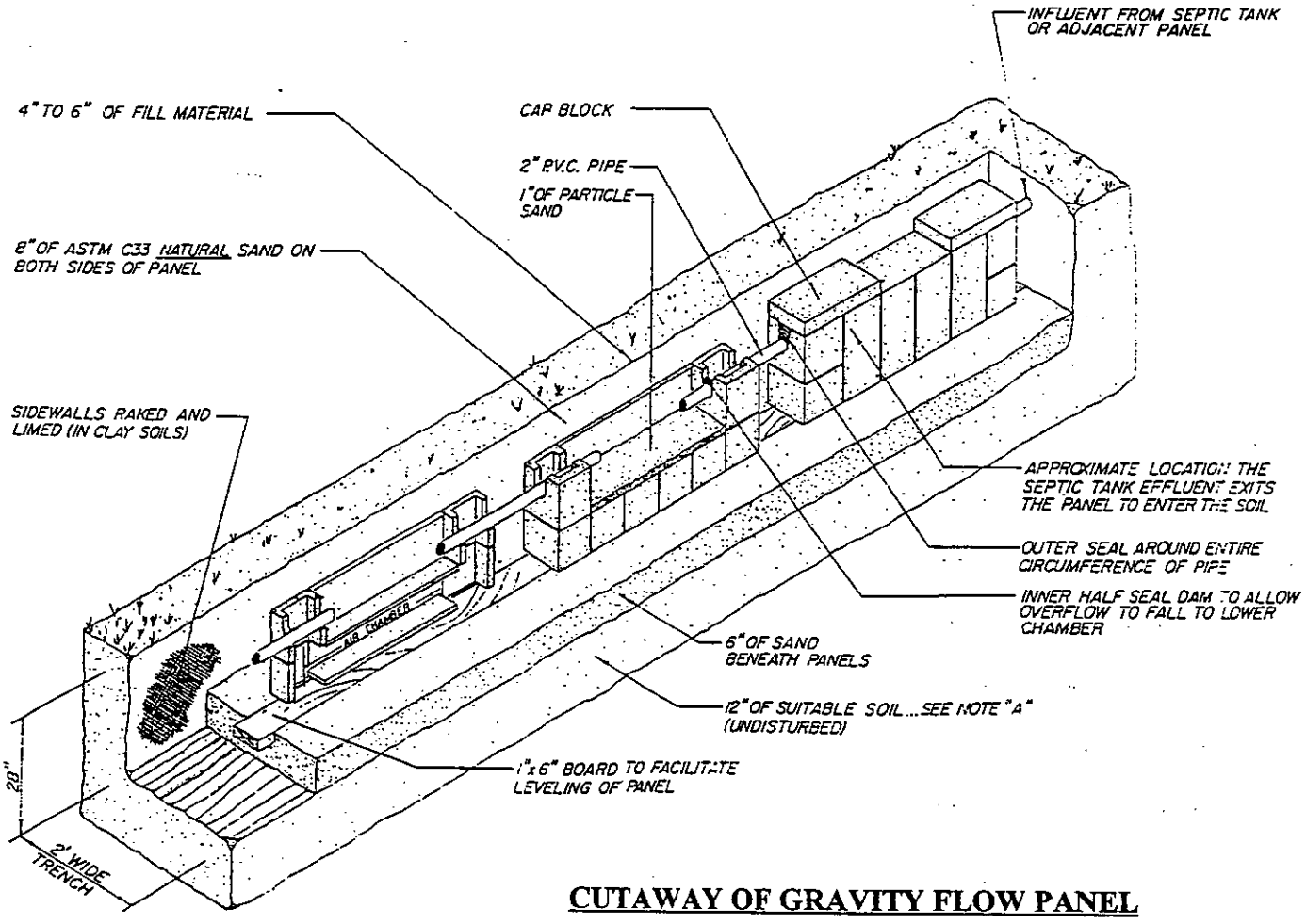
(b) PROVIDE SEPARATE CIRCUIT BREAKERS FOR PUMP POWER & IN HOUSE PANEL

The T & J Panel
Wastewater Treatment System

Patent # 4013559

752 Scotts Creek Road
Statesville, N.C. 28625
704-924-8600

ISOMETRIC DRAWING OF A SEGMENT OF 16" T & J PANEL SYSTEM DRAINFIELD



CUTAWAY OF GRAVITY FLOW PANEL

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

Sheet: _____

Property ID: 194-401-23

Lot #: _____

File #: 43250

AC #2

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Crescent Resources, Inc. APPLICANT: T. Jacobs

ADDRESS: Box 1309, Charlotte, N.C. DATE EVALUATED: _____

PROPOSED FACILITY: residence PROPOSED DESIGN FLOW (.1949) 480gpd PROPERTY SIZE: 1.4

LOCATION OF SITE: 7945 Saw Mill Road PROPERTY RECORDED: _____

WATER SUPPLY: ☑Private ☐Public ☐Well ☐Spring ☐Other _____

EVALUATION METHOD: ☑Augur Boring ☐Pit ☐Cut

TYPE OF WASTEWATER: ☑Sewage ☐Industrial Process ☐Mixed

PROFILE #	Slopes 6-15% .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	.1956 SAPRO CLASS	.1944 RESTR. HORIZ	PROFILE CLASS &LTAR
1	LS	0-4"	gr/cl	Fr/SExPl SS/SP	>45" TO soil wetness	45"	N/A	None	PS .275 SI/F2 IV
		4-40"	sBk/c	Fi/SExPl S/P					
		40-45"	sBk/cl	Fr/SExPl SS/SP					
2	LS	0-21"	gr/cl	Fr/SExPl SS/SP	>48" TO soil wetness	46"	N/A	None	PS .275 SI/F2 IV
		21-48"	sBk/c	Fi/SExPl S/P					
3	LS	0-4"	gr/cl	Fr/SExPl SS/SP	>48" TO soil wetness	48"	N/A	None	PS .275 SI/F2 IV
		4-48"	sBk/c	Fi/SExPl S/P					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	US	
System Type(s)		
Site LTAR	.275	

OTHER FACTORS (.1946): _____

SITE CLASSIFICATION (.1948): Unsuitable

EVALUATED BY: W.A. Marlin LSS 6-1-00

OTHER(S) PRESENT: _____

FILE # 43259

COMMENTS Probably not 100% Repair

LANDSCAPE POSITION	GROUP	TEXTURE	.1955 LTAR	CONSISTENCE MOIST	CONSISTENCE WET
R-RIDGE	I	S-SAND	1.2-0.8		
S-SHOULDER SLOPE		LS-LOAMY SAND		VFR-VERY FRIABLE	NS-NON-STICKY
L-LINEAR SLOPE				FR-FRIABLE	SS-SLIGHTLYSTICKY
FS-FOOT SLOPE	II	SL-SANDY LOAM	0.8-0.6	FI-FIRM	S-STICKY
N-NOSE SLOPE		L-LOAM		VFI-VERY FIRM	VS-VERY STICKY
H-HEAD SLOPE				EFI-EXTREMELY FIRM	NP-NON-PLASTIC
CC-CONCLAVE SLOPE	III	SI-SILT	0.6-0.3		SP-SLIGHTLYSTICKY
CV-CONVEX SLOPE		SICL-SILTY CLAY LOAM			P-PLASTIC
T-TERRACE		CL-CLAY LOAM			VP-VERY PLASTIC
FP-FLOOD PLAIN		SCL-SANDY CLAY LOAM			
	IV	SC-SANDY CLAY	0.4-0.1		
		SIC-SILTY CLAY			
		O-ORGANIC			

STRUCTURE	MINERALOGY
SG-SINGLE GRAIN	SLIGHTLY EXPANSIVE
M-MASSIVE	
CR-CRUMB	EXPANSIVE
GR-GRANULAR	
SBK-SUBANGULAR BLOCKY	
ABK-ANGULAR BLOCKY	
PL-PLATY	
PR-PRISMATIC	

