


3711 CHERRYBROOK DR

13935120

5/18/07

duponbj

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

# CERTIFICATE OF COMPLETION/OPERATION PERMIT

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

FILE: 4462A DATE: 7/23/04

TC: 139-351-20 ☒ L ☒ CRT

SERIAL 19599

Name of Owner McCLAM BROTHERS, INC. Juris.: _____

Address of Property 3711 CHERRYBROOK DR.

**Inspection Data:**

Tank Material PCC

Total Length of Drainfield 210'

Number of Lines 3 @ 70'

Cover Depth 8"-10"

Water Supply Source MUNICIPAL

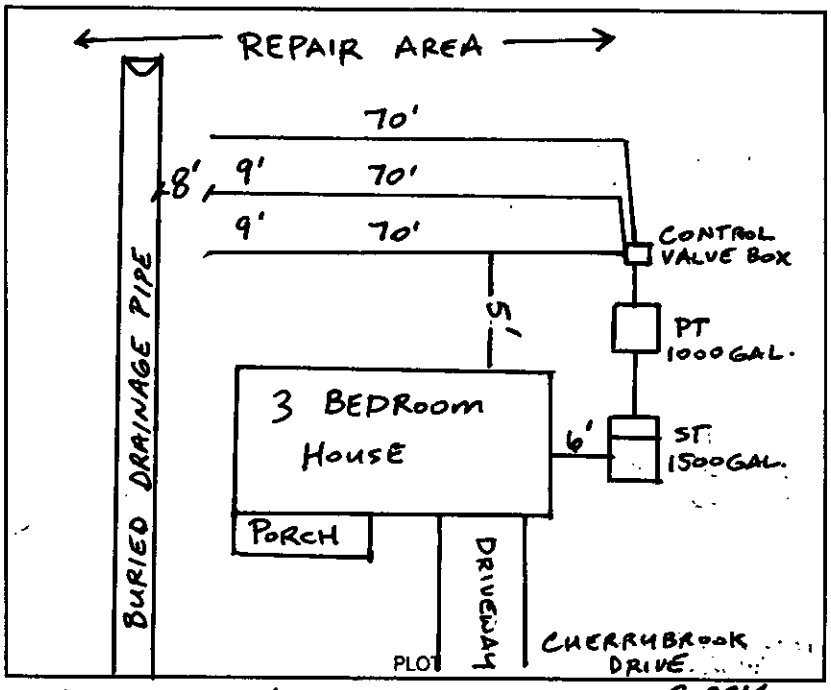
Distance to Water Source > 10'

Excavation Inspected 7/23/04

Tank(s) Inspected 7/22/04

Wash Line Inspected NA

High Water Alarm Inspected 7/23/04




2004-
Design 1500 ST/1000 PT/P1/630 S.F.T./PPBPS/ CTR# BOBBY McCARVER

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: SYSTEM DESIGNED FOR A 3 BEDROOM HOUSE
INSTALLED 3 LINES AT 70' X 3'
TYPE IV a (PANEL BLOCK SYSTEM)
PUMP: GOULDS - EP05IIAC ½ hp.

NOTE: TANKS AND BOTTOM 2 LINES INSPECTED BY DREW WALKER ON 7/22/04.

Tom Thomas, RSI 7/23/04
Environmental Health Specialist

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

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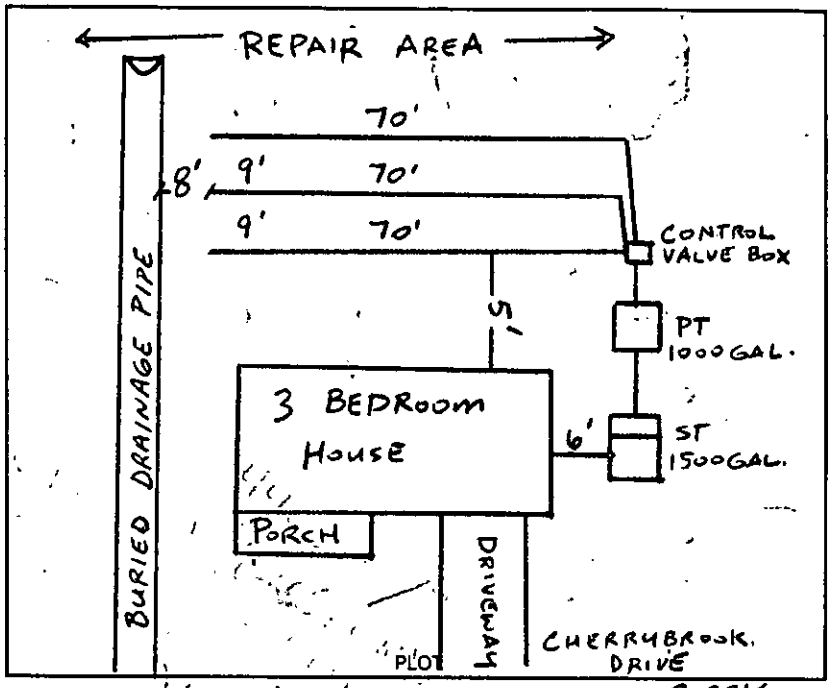
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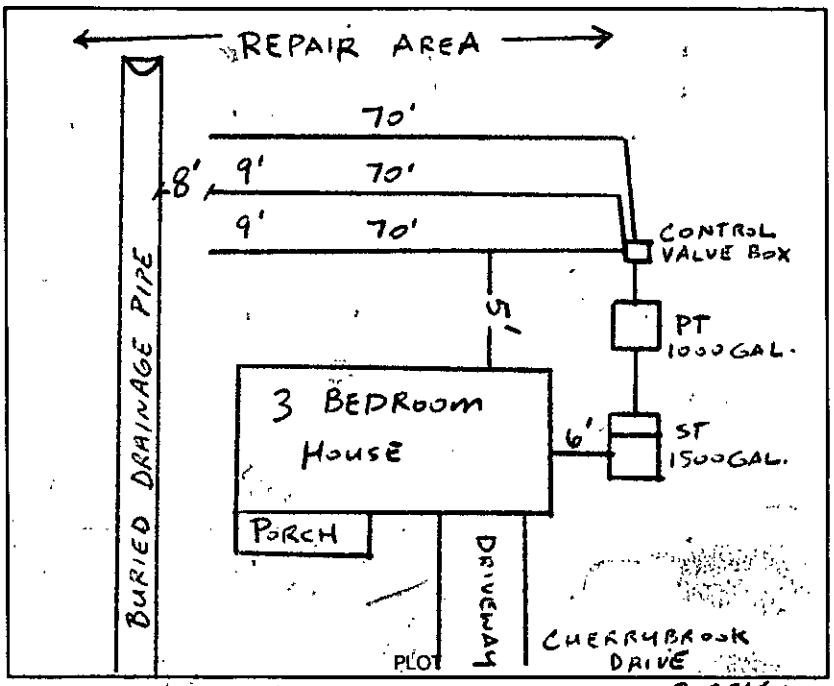
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High Water Alarm Inspected 7/23/04




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COMMENTS: SYSTEM DESIGNED FOR A 3 BEDROOM HOUSE

INSTALLED 3 LINES AT 70' X 3'

TYPE IV a (PANEL BLOCK SYSTEM)

PUMP: GOULDS - EP0511AC 1/2 hp.

NOTE: TANKS AND BOTTOM 2 LINES INSPECTED BY DREW WALKER ON 7/22/04.

Tom Thomas, RSI 7/23/04
Environmental Health Specialist

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# 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: 4462-A DATE: 7-14-04

TC: 134-351-20 ☒ L

SERIAL 19710

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 _____. All work shall be completed on or before _____, after which date this permit shall be null and void. The system shall meet all of the construction requirements of I5A 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 PLAN—

PLOT OF SYSTEM

Liquid Capacity of Septic Tank 1500 gallons

Liquid Capacity of Dosing Tank 1000 gallons

Tank Construction PCC

Trench Depth —

Absorption and/or Nitrification Lines:

Trench Width — feet

Trench Walls Scored and Porous _____

Total Line Length — feet

Number of Lines —

Depth of Stone — inches

Distance from House _____ feet

Distance from Property Line _____ feet

Distance from Well _____ feet

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

NAME OF OWNER McCLAM BUILDERS

LOCATION OF PROPERTY 8711 CHERRYBROOKE DRIVE —

Comments: _____

Environmental Health Specialist

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

# 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: 4462A DATE: 7-14-04

TC: 34-351-20 ☐ L

SERIAL 19710

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PLOT OF SYSTEM

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Liquid Capacity of Dosing Tank 1000 gallons

Tank Construction PCC

Trench Depth —

Absorption and/or Nitrification Lines:

Trench Width — feet

Trench Walls Scored and Porous _____

Total Line Length — feet

Number of Lines —

Depth of Stone — inches

Distance from House _____ feet

Distance from Property Line _____ feet

Distance from Well _____ feet

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

NAME OF OWNER McCUMM BUILDERS

LOCATION OF PROPERTY 8711 CIDER BROOK DRIVE —

Comments: _____

Environmental Health Specialist

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

# 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: 4462A DATE: 7-14-04

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INSTALL ACCORDING TO PLAN-

PLOT OF SYSTEM

Liquid Capacity of Septic Tank 1500 gallons

Liquid Capacity of Dosing Tank 1000 gallons

Tank Construction PCC

Trench Depth —

Absorption and/or Nitrification Lines:

Trench Width — feet

Trench Walls Scored and Porous _____

Total Line Length — feet

Number of Lines —

Depth of Stone — inches

Distance from House _____ feet

Distance from Property Line _____ feet

Distance from Well _____ feet

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

NAME OF OWNER McCUMM BUILDERS

LOCATION OF PROPERTY 8711 CLIFFBROOK DRIVE —

Comments: _____

Environmental Health Specialist

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

check 1006 JKA

AOS

**FEE:** 200.00 **AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION** MD 6/605
**DATE:** 2-24-04 **VOID SIXTY (60) MONTHS FROM DATE OF ISSUANCE**

**DATE:** 2-24-04 **PERMIT NO:** 131- 4462A
**PARCEL NO:** 139-351-20

**JOB LOCATION ADDRESS:** ~~4631~~ 3711 CHERRYBROOK DRIVE
**PROPERTY OWNER:** McCAM BUILDERS, LL
**BUILDING CONTRACTOR:**
**SUBDIVISION NAME:** CHERRY FOREST BROOK, LOT # 19
**AUTHORIZATION ISSUED BY:** [signature] **DATE:** 2/24/04
DEHNR AUTHORIZED AGENT

## AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NO. 4462A, 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: _____

## 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.

[signature], PRES. 2-24-04

SIGNATURE OF OWNER/OWNER'S REPRESENTATIVE DATE

CONDITIONS OF IMPROVEMENT PERMIT

it Number: 4462A

Tax Number: 139-351-20

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 | X No | ___ Partial Basement |
| Type Primary Wastewater System<br>Type (circle one):<br>I II III (IV) V VI | ___ Conventional<br>X Prefabricated, permeable block panel system<br>___ Shallow Placed Conventional | X Low Pressure Pipe<br>___ Large Diameter Pipe<br>___ Fill<br>___ Other | ___ Innovative or Experimental:<br>___ IWWS-93-1<br>___ IWWS-93-2<br>___ IWWS-94-1 |

| | | | |
|---|---|---|---|
| 1.3 Long-term acceptance rate | 360 Max gallons/day wastewater flow | 1200 Absorption Area (sq ft) | 8' Trench spacing (min. on centers) |
| NO Serviced by private well | 1500 Gallon septic tank | 210 Total trench length (ft) | 96" 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 | ___ Depth of stone | |

Any surface waters present: Type: Minimum separation distance:

Site modifications required:

Additional Conditions:

| | | | |
|---|---|---|---|
| Repair Area System Type<br>Type (circle one):<br>I II III (IV) V VI | ___ Conventional<br>___ Prefabricated, permeable block panel system<br>___ Shallow Placed Conventional | X Low Pressure Pipe<br>___ Large Diameter Pipe<br>___ Fill<br>___ Other | ___ Innovative or Experimental:<br>___ IWWS-93-1<br>___ IWWS-93-2<br>___ IWWS-94-1 |

| | | | |
|---|---|---|---|
| 3600 Absorption Area (Sq ft)<br>560 Total Trench Length (Ft) | 8 Depth of Stone Trench | 6' Trench spacing (min. on centers) | 12' 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.

DELINK Authorized Agent Date 2/24/04

PRES 2-24-04

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

Attention: Drew Walker

McCarver Construction Company
14450 Cabarrus Station Road
Midland, NC 28107
Ph. 704-573-2805

# Operational Agreement for LPP System

This agreement is made and entered into this 26th day of Aug 2004 by and between McCLAM BUILDERS, INC "owner" and McCarver Construction Company, "contractor".

The contractors obligations:

The contractor shall perform the following services on the Owners system located at:

McCLAM BUILDERS, INC
3711 CHERRY BROOK DR
MINT HILL, NC

1. Check pump
   Float Switch
   Alarm System
   Visual ground inspection

2. Give written reports to the Owner and Health Department within 48 hours if there is a malfunction.

3. Check system twice per year. Submit written reports to Health Department once per year.

4. Any and all requirements by Health Department.

Owner _____

Contractor McCarver Const Co
(McCarver Construction Company)

# *Forest Brook Subdivision, Lot 19*
# *3711 CherryBrook Drive*
# *Mecklenburg, North Carolina*

***Prepared For Mr. Mike McClam***

***Prepared By Kenneth Owens***
***North Carolina Licensed Soil Scientist***

***January 7, 2004***
***(Revised February 5, 2004)***

APPROVED
2-13-04

January 7, 2004
**(Revised February 5, 2004)**

Mr. Mike McClam
McClam Builders, Inc.
4631 Shannamara Drive
Matthews, North Carolina 28104

Subject:

**SUMMARY LETTER**
**ON-SITE WASTEWATER TREATMENT**
**AND DISPERSION (SEPTIC) SYSTEM**
**LOT 19**
**FOREST BROOK SUBDIVISION**
**CHERRYBROOK DRIVE**
**MATTHEWS, NORTH CAROLINA**

Dear Mr. McClam:

*Introduction*

This report summarizes the activities, observations, data collection and recommendations for an alternative wastewater disposal and treatment system for lot 19 approximately 0.47 acres in size located along Cheery Brook Drive in Forest Brook Subdivision inn Mecklenburg County, North Carolina. On December 20, 2003 a preliminary site walkover was conducted on a limited portion of lot 19. The objective of the walkover was to evaluate the potential for the individual lot to be used for multiple family use for an on-site wastewater treatment and dispersion (septic) system or if applicable a pretreatment alternative system.

In summary, we recommend a low-pressure pipe (LPP) to T&J Panel septic system for the initial treatment area and a LPP septic system for the repair area that would accommodate a design waste flow of 360 gallons per day (gpd) for a 3-bedroom residence. This report summarizes our findings and recommended wastewater treatment and dispersion (septic) system.

*Background Information*

The scope of the limited soil investigation was to provide a soil and site evaluation on lot 19 of the subject site as requested by Mr. Mike McClam the owner and as required by the Mecklenburg County Health Department. It is my understanding that the property was evaluated by Mr. Drew Walker an Environmental Health Specialist with Mecklenburg County Environmental Health Department on November 14, 2003 and by Mr. Bill Marlin a North Carolina Licensed Soil

Scientist (NCLSS) with the Mecklenburg County Environmental Health Department on November 18,2003. These evaluations were to determine if there was adequate soils and area for a wastewater treatment and dispersion system for a future 3-bedroom residential home with a design flow of 360-gpd.

Based on the field observation conducted by Mr. Walker and by Mr. Marlin and as previously discussed with Mr. McClam it appears that the lot had a limited area for a conventional or any other alternative septic system from which the county can design and approve. Based on the application design flow of 360-gpd and the field investigation findings by both Environmental Health Specialists it appears that the lot was considered unsuitable. Their investigation and findings are summarized in a letter dated November 14 and November 18, 2003 (See Attachement A). Mr. Walker informed Mr. McClam that he would need to submit a proposal design from a North Carolina Licensed Soil Scientist for an alternative system that would be most suitable for the lot.

To properly design the drainfield for the on-site septic system, several factors are considered, including but limited to topography, soil characteristics, soil wetness conditions, soil depths, restrictive horizons, available space with required setbacks, impact of water table and surface waters and a permanent vegetative cover management plan.

*Site Location*

The lot encompasses 0.50 acres in size at the end of a Cul-de-sac of Cheery Brook Drive in Forest Brook Subdivision in Matthews, North Carolina as shown on the attached Site Location Map (Figure 1). Approximately 100 foot of road frontage is located along Cherry Brook Drive at the end of a Cul-de-sac. The property is bounded to the west by wooded undeveloped property, to the north undeveloped property (pasture land), to the east by residential property and to the south by Cherry Brook Drive (Photograph 1, 2 and 3). A property boundary survey of the property is presented as Figure 2.

*Soil Survey Map Description*

The U.S. Natural Resources Conservation Services (NRCS), previously known as the Soil Conversation Service, of Mecklenburg County Soil Survey map indicates one soil type (unit) to

be present on the site (Figure 3). Based on the Mecklenburg County Soil Survey Map, the site is mapped as Cecil sandy clay loam (CeB2) with 2 to 8 percent slopes.

The CeB2 sandy clay loam map unit consists of well-drained on broad smooth ridges on the uplands. Typically, the surface layer is yellowish red sandy clay loam about 6 inches thick. The subsoil is 47 inches thick. In the upper part, it is red clay, and the lower part is red clay loam. The underlying material to a depth of 65 inches is red and yellow loam. Depth to bedrock is more than 60 inches.

Permeability is moderate, and the available water holding capacity is medium. The shrink-swell potential is moderate and the runoff is medium. The subsoil is typically described as strongly to very strongly acid.

*On-Site Soil Investigation*

On December 20 and February 4, 2004, a total of 10 hand-auger borings were advanced on the subject lot within the proposed treatment areas. The topography of the site is nearly level with topographic gradient 0 to 2 percent (Photograph 4 and 5). Each of these soil borings was advanced to a maximum depth of forty-eight inches or until unsuitable characteristics were encountered such as a shallow water table, bedrock or restrictive soil horizons. These soil borings were used to characterize soils properties such as texture; structure, consistency, soil horizon thickness, depth to seasonal high water table or weathered bedrock and the presence of restrictive horizons were evaluated. Field observations and the approximate location for the soil borings recorded at the site area summarized in Table 1 and are located on Figure 4. Typical suitable soil depths ranged from 26 to 40 inches with surface a texture of yellowish red to red sandy clay loam to clay (Photograph 6 and 7). Soil structure, texture and soil horizon thickness (soil layer thickness) were determined and estimated by field observation from soil borings. Field observations and terminating boring depths were recorded at the site and are summarized in Table 1.

Typical soil description based on the soil borings located on the subject site generally consisted of 12-inch thick yellowish red sandy clay loam A horizon (topsoil). The red clay Bt horizon was typically greater than 30-inches thick. Total soil depth to bedrock in the soil borings was typically more than 48 inches. The Bt horizon is strongly acidic.

*In Situ Hydraulic Conductivity*

On July 7, 2002, two saturated hydraulic conductivity (Ksat) measurements were taken in the field. The advanced field instrument, the Compact Constant Head Permeameter (CCHP), was used to measure *in-situ* hydraulic conductivity of the soil on the proposed site (Photograph 8 and 9). These measurements were continuously taken in dry soil conditions until three consecutive reading were read. Recommended hydraulic loading rates were determined from the soil and field data. All Ksat results are in Table 1. The Ksat of the Bt soil horizon ranged from 0.05 in/hr to 0.067 in/hr. According to the Mecklenburg County Soil Survey, the permeability of the lower soil horizon (Bt) is 0.6 to 2.0 in/hr. The Ksat field data indicates a much lower Ksat for this soil type. The moist soil conditions could have contributed to the lower Ksat readings. Based on the field data from the soil borings, an application rate range of 0.25 to 0.15 gallons per day per square foot ($gpd/ft^2$) is recommended for the initial and repair respectively.

*Summary of Site Recommendations*

All calculations are conservatively designed with sufficient area for the proposed treatment system. Two important factors of concern within the proposed treatment systems are, available space and the existing drainage swale located along the back property boundary line. *It should be noted that a pre-construction meeting should be held with the Licensed Soil Scientist/Designer before any construction begins. In addition please note the drainage tile located along the right property line.* We propose to use a low-pressure pipe (LPP) to T&J Panel septic system for the initial treatment area and a LPP treatment system for the repair area that would accommodate a waste flow of 360 gallons per day (gpd) for a 3-bedroom residence (See Attachments B).

There should be no construction while the soil is in the wet state and the Licensed Soil Scientist has the right to suspend work until soil moisture conditions are favorable to optimal conditions. Any field preparations should be stabilized as quickly as possible to reduce erosion. The installer shall be knowledge of the type of system to be installed, and shall have prior instruction on the installation of the various components of the system, and shall have prior approval of the component manufactures (T&J Panel System) and the approval of the local sanitarian. T&J Panel Treatment System field representative and designer shall provide written acceptance of the system installation prior to issuance of operation permit.

This opinion report may be relied upon by you only in connection with and for the purposes set forth herein and may not be used or relied upon by any other person, firm, or entity for any purpose whatsoever than in connection with regulatory requirements or in response to a court order without, in each instance, the written consent of the undersigned. Independent conclusions, opinions and recommendations made by others based on the field data are not the responsibility of the undersigned. The parcel was covered in a diligent manner in order to assess its on-site septic potential, and guarantee that the work was performed to professional standards. However, this report represents our professional opinions, and does not guarantee government approval or denial.

As discussed in our recent telephone conversation, the Mecklenburg County Health Department must approve all proposed wastewater treatment and disposal systems and their locations. It is *highly* recommend that you obtain an authorization (permit) to construct septic systems prior to proceeding with property transfer negotiations. If you should have any questions concerning this report, or need further assistance, please call (704) 502-5588

Sincerely,

Kenneth L. Owens, L.S.S.

Licensed Soil Scientist

Mike McClam.doc




Attachments:

# INITIAL SEPTIC SYSTEM
# LOT 19
# FOREST BROOK SUBDIVISION
# CHEERY BROOK DRIVE
# MATTHEWS, NORTH CAROLINA

*LPP/T&J Panel Treatment System*

## SITE CONDITION

- One 3-Bedroom dwelling (360 gallons per day (gpd) design flow each)
- **Group IV soil (Clay)**
- < 2 % slope at proposed system location

**Note:** Based on the overall data collected for this site a proposed hydraulic rate of 0.25 ($gpd/ft^2$) will be used.

## SYSTEM DESIGN:

1. *Sized Treatment System*

   No pre-treatment system required for this particular site.

2. *Sized Disposal System*

   The LTAR of 0.25 $gpd/ft^2$

   Therefore, 360 gpd at an LTAR of 0.25 $gpd/ft^2$ = 1440 $ft^2$ of bottom trench area, which requires approximately 480 linear foot of LPP/Panel treatment system line for the initial. With the panel system a 50% reduction of drainline can be applied, therefore only needing approximately 240 linear foot.

3. *Disposal System Layout /Configuration*

   *Note:* (See Figure 4 for location of drainfield for the initial treatment system.)

4. Module and Manifold Configuration

   *No treatment system required for this particular site.*

5. *Installation Depth*

   It is proposed to place the LPP/Panel drain-lines immediately below the lowest elevation on-site at depths no greater than 38 inches deep. Note: System installation will require a soil cap of approximately 6 to 8 inches and shall not be installed during wet conditions.

# REPAIR SEPTIC SYSTEM
# LOT 19
# FOREST BROOK SUBDIVISION
# CHEERY BROOK DRIVE
# MATTHEWS, NORTH CAROLINA

*LPP Treatment System*

## SITE CONDITION

- One 3-Bedroom dwelling (360 gallons per day (gpd) design flow each)
- **Group IV soil (Clay)**
- < 2 % slope at proposed system location

**Note:** Based on the overall data collected for this site a proposed hydraulic rate of 0.15 ($gpd/ft^2$) will be used.

## SYSTEM DESIGN:

1. *Sized Treatment System*

   No pre-treatment system required for this particular site.

2. *Sized Disposal System*

   The LTAR of 0.15 $gpd/ft^2$

   Therefore, 360 gpd at an LTAR of 0.15 $gpd/ft^2$ = 2400 $ft^2$ of bottom trench area, which requires approximately 480 linear foot of LPP line for the repair.

3. *Disposal System Layout /Configuration*

   *Note:* (See Figure 4 for location of drainfield for the repair system.)

4. Module and Manifold Configuration

   *No treatment system required for this particular site.*

5. *Installation Depth*

   It is proposed to place the LPP lines immediately below the lowest elevation on-site at depths no greater than 12 inches. Note: System installation shall not be installed during wet conditions.

**FOREST BROOK SUBDIVISION-LOT 19**
MODIFIED SHALLOW LPP SEPTIC SYSTEM DESIGN CRITERIA

Name: *McClam Property* Permit #: *Pending*
Location *3711 CherryBrook Drive*

1. **SEPTIC/PUMP TANK**:
   a. One Septic and one pump tank with minimum capacity of ___*1500*___ gallons (See Figure 4).
   b. Pump tank shall have access manhole extending at least 6 inches above finished grade.
   c. Effluent pump capable of delivering a minimum of _45_ gallons per minute at ___ feet total dynamic head (tdh). *(Shall be determined in the field)*
   d. Controls to consist of high water alarm, dual, buoyant, weighted floats or mercury float switches. High water alarm to be on separate electrical circuit.
   e. Pump tank shall have a check valve. Check valve shall be installed in a horizontal position.
   f. Float for high water alarm shall be set no more than 3 inches above high water level of pump cycle.
   g. All electrical connections alarm and pump controls, to be outside of the pump chamber and shall be installed in a NEMA-4X enclosure (or equivalent). Connections from controls to tank shall be in watertight design.
   h. Tank shall be of watertight design.
   i. Drill small hole, 3/16 inch, in pipe between pump and check valve.

2. **DISTRIBUTION SYSTEM**
   a. *Absolutely* no construction of system shall take place while soil is in a wet condition.
   b. Heavy vehicle traffic is prohibited over the system area prior to installation, during installation and after installation.
   c. A total of __8__ laterals off of distribution manifold. *Five 70- ft distribution laterals to be arranged in 1 group with 5 laterals in each group and three (1) 60-ft, (1) 50-ft and (1) 40-ft distribution lateral see Figure 4.*
   d. Each group of laterals to be proceeded with a gate valve.
   e. Laterals to be ___*1 1/4*___ inches diameter PVC, 160 PSI.
   f. Each lateral to be capped at the end with a ___*3*___ foot standpipe. Standpipe can be cut and capped at 2 inches after pressure has been set. Use threaded cap. Standpipes shall be protected with section of Schedule 40 PVC capped for protection and access.
   g. Laterals shall be installed level on contour of slope on 6 foot centers.
   h. Laterals sleeved in 4-inch diameter corrugated pipe shall be installed in trenches ___*24*___ inches wide and __12_ inches deep from the *lowest grade elevation* with ___6___ inches of stone under and ___*2*___ inches over lateral's that's been sleeved. *A soil cap of approximately 6 to 8-inches will be required on the entire drainfield.* Total trench depth including the 4-inch corrugated pipe shall be ___*12*___ inches.
   i. Earthen dam shall be at the head of each lateral to prevent backflow into other lines.
   j. Supply manifold shall be slightly ___*Higher*___ than distribution manifold. Supply manifold shall have cleanouts at each end.
   k. Supply manifold to be ___2___ inch diameter Schedule 40 PVC.
   l. Distribution manifold to be ___*1 1/12*___ inch diameter Schedule 40 PVC.
   m. Depending on the lateral length, each lateral should have between ___6-12___ holes, with ___*5/32*___ inch diameter. Holes to be spaced __72__ inches apart. *First hole*

*spacing for the 70-ft line shall be 4.5-ft from the ends, first hole spacing for the 60-ft line shall be 6-ft from the ends, first hole spacing for the 50-ft line shall be 4-ft from the ends and for the 40-ft line the first hole spacing shall be 5-ft from ends of the line.*

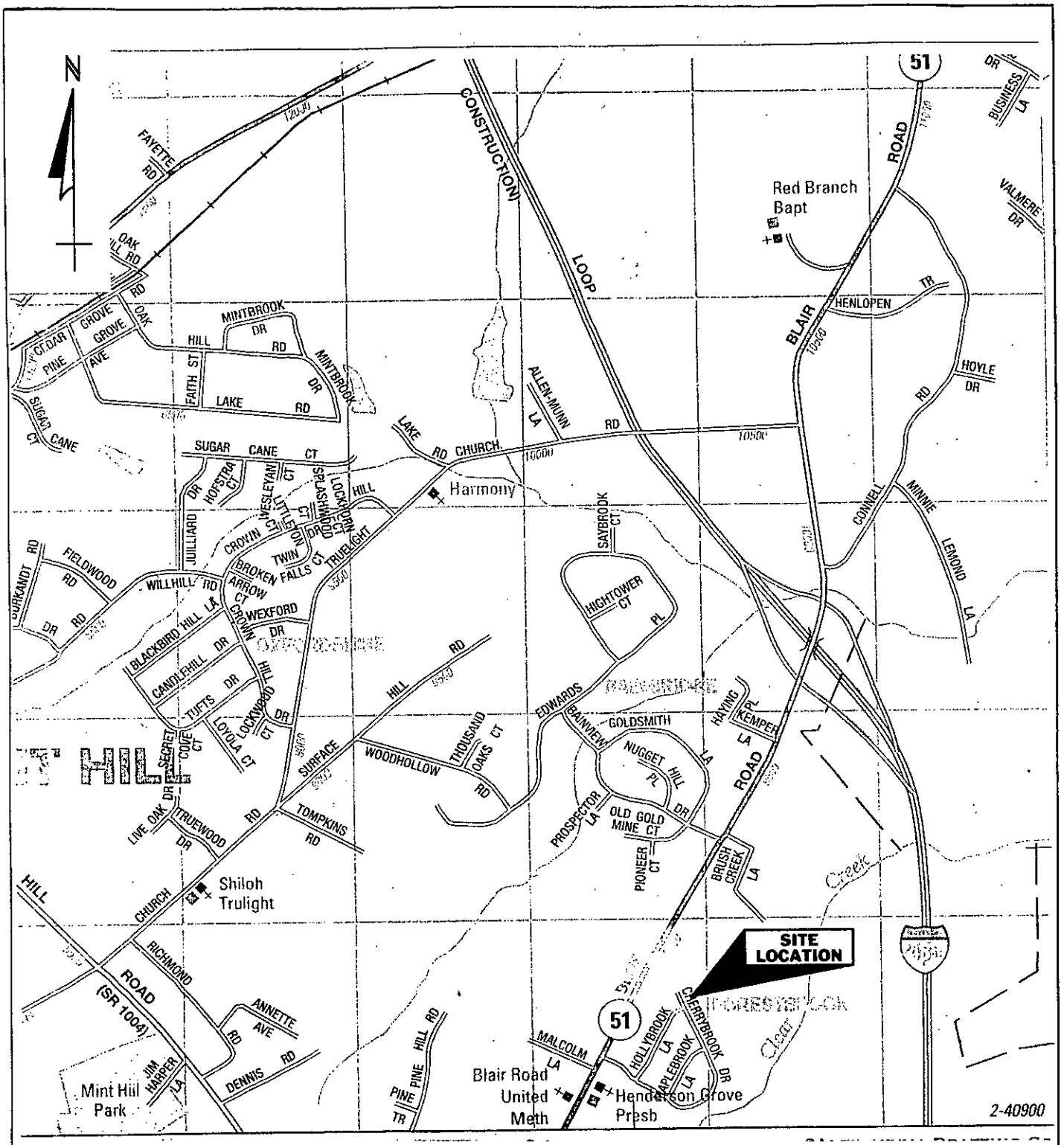
n. Pressure to be set at *3* feet of head using gate valves. Pressure to be reset six weeks after initial use. Gate valves shall be protected in valve boxes.
o. Stabilize areas with grass as soon as possible after completion of system.
p. Drainage improvements shall be made as necessary to divert surface and subsurface water around or away from entire system area.
q. Backfilling of trenches shall be done by hand or by light equipment in order to minimize compaction of the soil in the disposal area.
r. Copy of permit shall be on job site during all phases of construction.
It is required that a drainage tile be installed along the right property boundary line prior to the construction of the proposed septic system see Figure 4. It is also required that the drainage swale located along the back property boundary be filled in and slightly compacted to original grade.

**SUMMARY TABLE**
**LOT 19**
**FOREST BROOK SUBDIVISION**
**CHEERY BROOK DRIVE**
**MATTHEWS, NORTH CAROLINA**

| Soil Boring I.D. | Depth to Useable Material (inches) | Actual LTAR G/SF/DY |
|---|---|---|
| 1 | 48 | --- |
| 2 | 36 | --- |
| 3 | 48 | --- |
| 4 (H-1) Repair | 48 | 1.0 |
| 5 | 35 | --- |
| 6 (H-2) Initial | 36 | 0.75 |
| 7 | 34 | --- |
| 8 | 30 | --- |
| 9 | 28 | --- |
| 10 | 27 | --- |

Note: H-1 and H-2 were taken at approximately 26 inches below original grade.

*FIGURES*

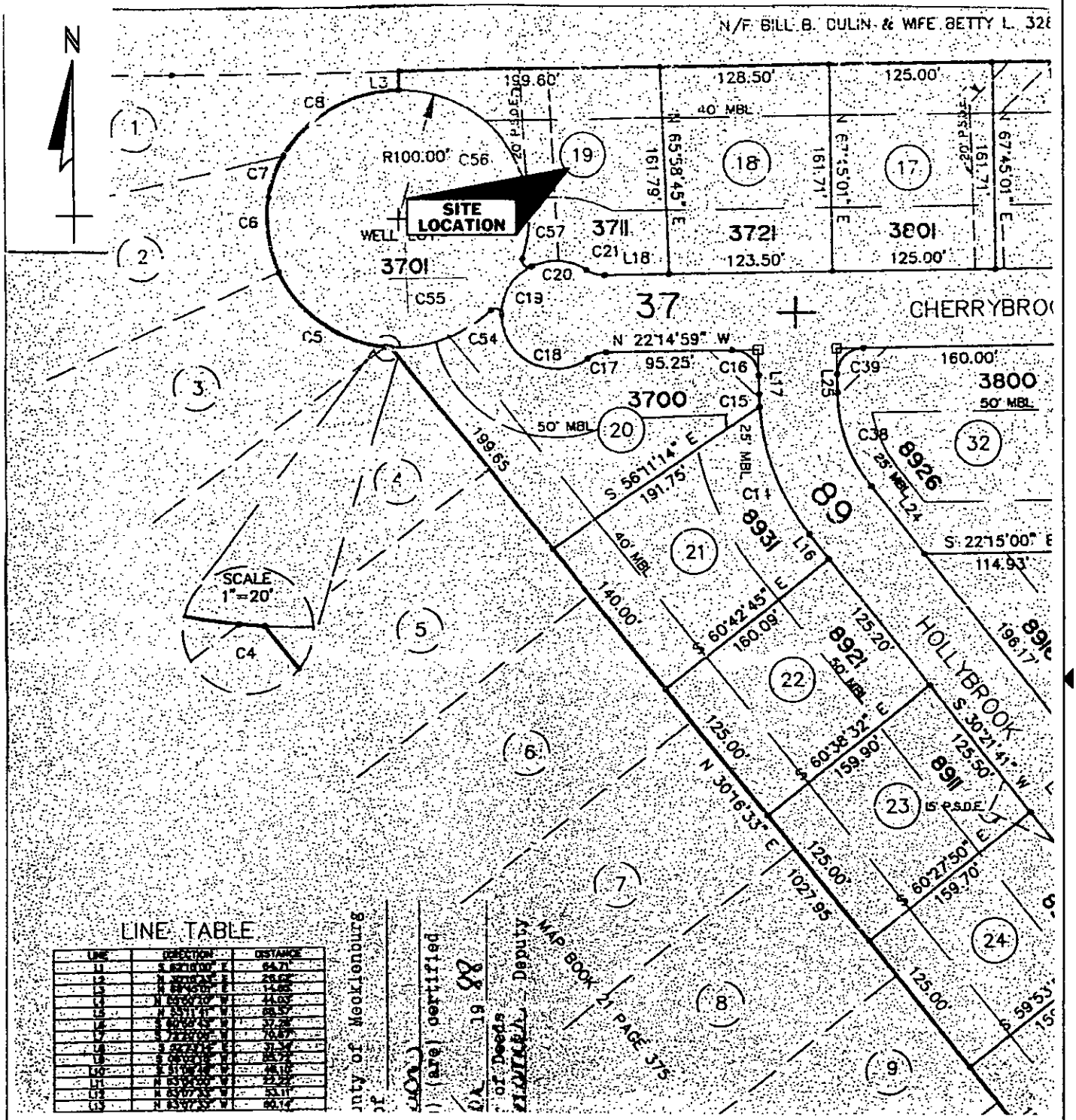



Source: Quality Maps, Inc 2000
North Carolina – Union County

# FIGURE 1. Site Location Map

McClam Property
Lot 19, Forest Brook Subdivision
Mecklenburg County, North Carolina

| | | |
|---|---|---|
| Dwg Date: January 7, 2004<br>DWG BY: KLO | DWG NO. 1 | REVISED: NA |
| SCALE: | SHEET: 1/3 | |



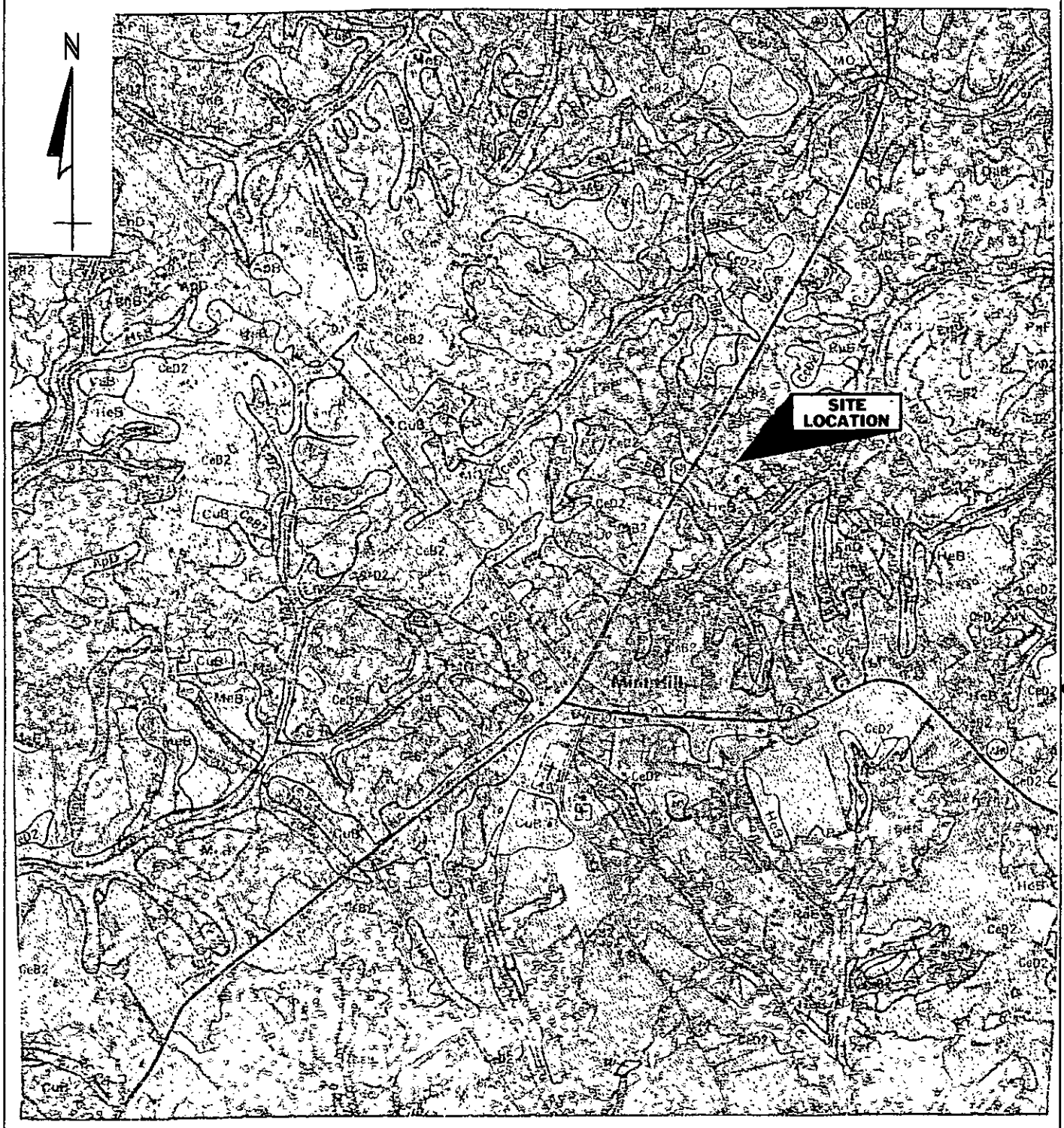

LINE TABLE

| LINE | DIRECTION | DISTANCE |
|---|---|---|
| L1 | S 62°08'00" E | 64.71' |
| L2 | N 89°00'00" E | 29.82' |
| L3 | N 89°00'00" E | 14.88' |
| L4 | N 89°00'00" W | 44.00' |
| L5 | N 53°11'41" W | 88.50' |
| L6 | S 89°00'00" W | 37.26' |
| L7 | S 89°00'00" W | 70.67' |
| L8 | N 89°00'00" E | 30.00' |
| L9 | N 89°00'00" E | 88.50' |
| L10 | S 89°00'00" W | 44.00' |
| L11 | S 89°00'00" W | 22.22' |
| L12 | N 63°07'33" W | 53.11' |
| L13 | N 63°07'33" W | 90.14' |

**FIGURE 2. Boundary Survey Map With**

McClam Property
Lot 19, Forest Brook Subdivision
Mecklenburg County, North Carolina

| | | |
|---|---|---|
| DWG DATE: January 7, 2004<br>DWG BY: KLO | DWG NO. 2 | REVISED: NA |
| SCALE:See Dwg. | SHEET: 2/3 | |



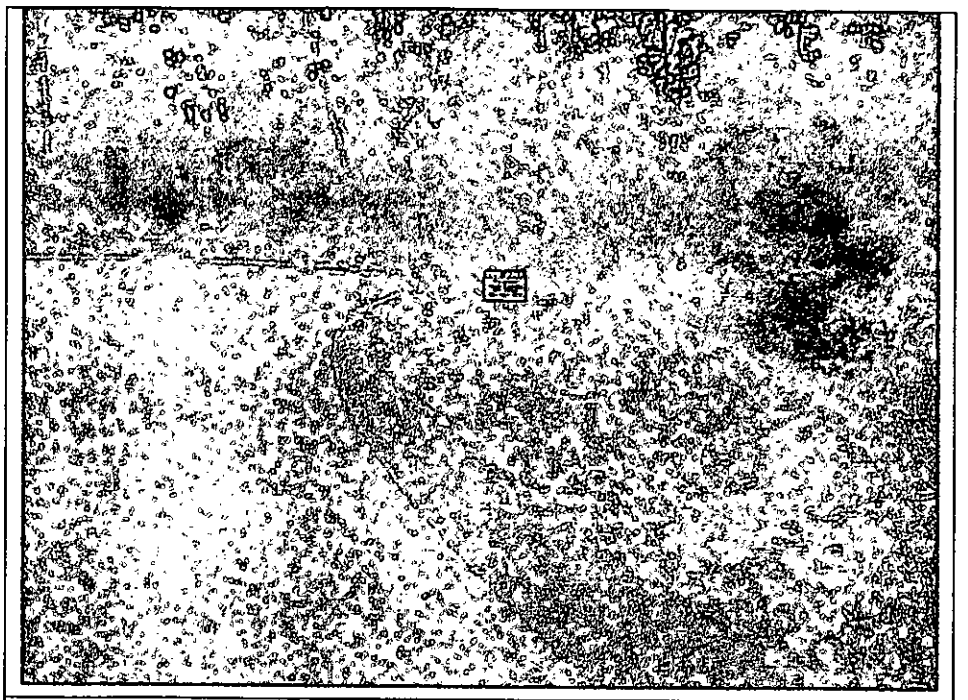

Source: Mecklenburg County Survey Report, 1980

# FIGURE 3. SOIL SURVEY MAP

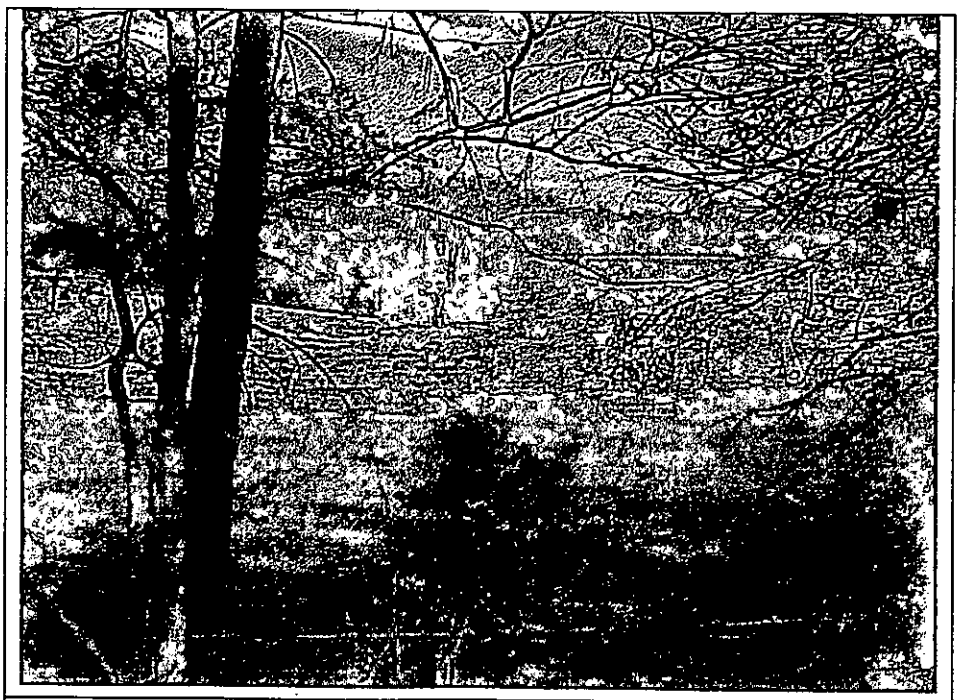
McClam Property
Lot 19, Forest Brook Subdivision
Mecklenburg County, North Carolina

| | | |
|---|---|---|
| DWG DATE: January 7, 2004<br>DWG BY: KLO | DWG NO. 3 | REVISED: NA |
| SCALE 1" = 2000' | SHEET: 3/3 | |

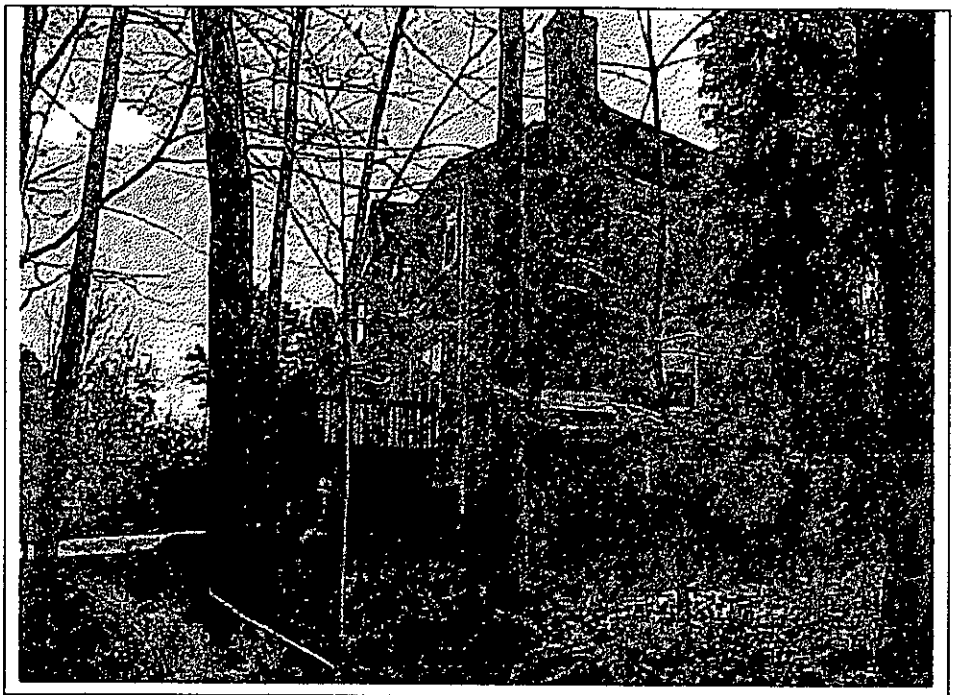
***PHOTOGRAPHS***



**Photograph 1:** View to the west of the front property line along Cherry Brook Drive.



**Photograph 2:** View to the north of the adjacent property located along the north property line.



**Photograph 3:** View east of the adjacent property located along the east property line.



**Photograph 4:** View to the east of the typical landscape located on-site.



**Photograph 5:** View of a ditch located along the back property line near the repair treatment area located on-site.



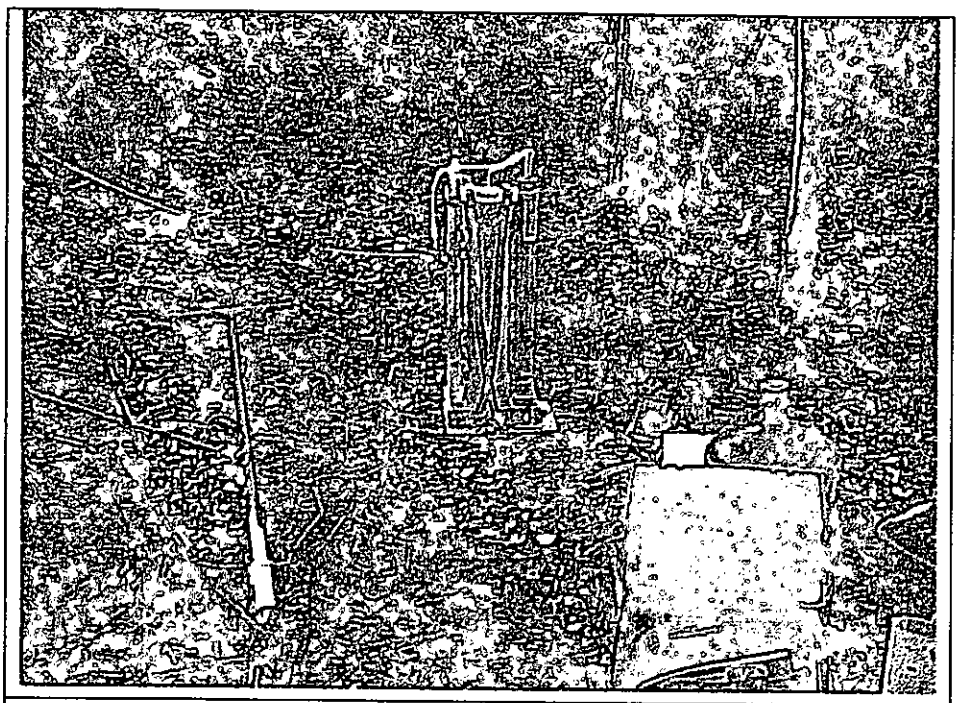
**Photograph 6:** View of the red silty clay A to sandy clay loam and dark red clay Bt soil horizons (layers) located within the initial treatment area. Note: This soil type was determined to be suitable for the initial treatment system.



**Photograph 7:** View of the dark red sandy clay Bt2 soil horizon (layer) located within the initial treatment area. Note: This soil type was determined to be suitable for the initial treatment system.



**Photograph 8:** View of the Constant Head Permeameter Field Instrument for in-situ measurement of saturated hydraulic conductivity ($K_{sat}$) within the proposed *initial* treatment area.



**Photograph 9:** View of the Constant Head Permeameter Field instrument for in-situ measurement of saturated hydraulic conductivity ($K_{sat}$) within the proposed *repair* treatment area.



**Photograph 10:** View of the drainage ditch located along the west property line.

***ATTACHMENT A***
***MECKLENBURG COUNTY***
***SITE EVALUATION***

***ATTACHMENT A***
***MECKLENBURG COUNTY***
***SITE EVALUATION***

FEE: 20.00
DATE: 11/14/03

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

I J 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

Draft

FILE #: 4-44-24

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 13935120

STREET ADDRESS: 3711 CHERRYBROOK DR

SUBDIVISION OR MOBILE HOME PARK NAME: FOREST BROOK

LOT NUMBER: 19

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: 2050

NUMBER OF BEDROOMS: 3

NUMBER OF OCCUPANTS: 6

CLOSING DATE NO SALE PENDING
Called 11-14

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: Eval for Home USA

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

WATER SUPPLY (CHECK ONE):

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

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

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

PROPERTY OWNER:

NAME: McCLAM BUILDERS, INC
(LAST) (FIRST) (MI)

ADDRESS: 4631 SHAMARA DR

CITY: MATTHEWS STATE: NC ZIP: 28104

DAYTIME PHONE: (704) 361 - 7798

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME: McCLAM, MICHAEL F.
(LAST) (FIRST) (MI)

DAYTIME PHONE: (704) 361 - 7798

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 1988, OCT 11

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: [signature] DATE: 11-14-03

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

# PROPOSED PLOT PLAN

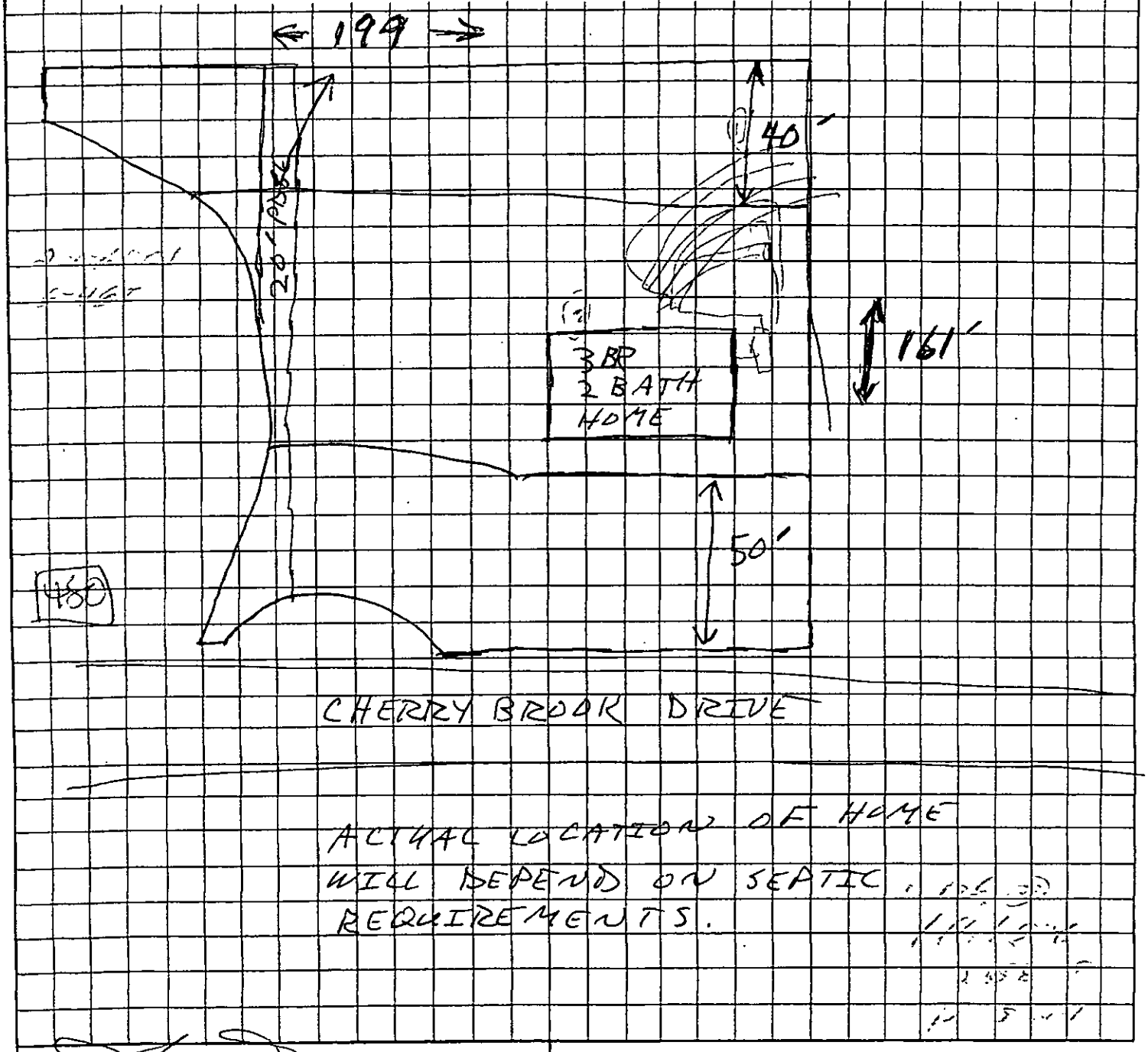
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

COPY

FILE: 4462A

TC: 139 -351- 20

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 11-14-03

APPROVAL DATE _____

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

...ENVIRONMENTAL HEALTH File: 4402A Action 1

**SITE EVALUATION REPORT**
**SERIAL NUMBER 15148**

Parcel: 13902112 PO

Location: Cherrybrook Drive

Subdivision:

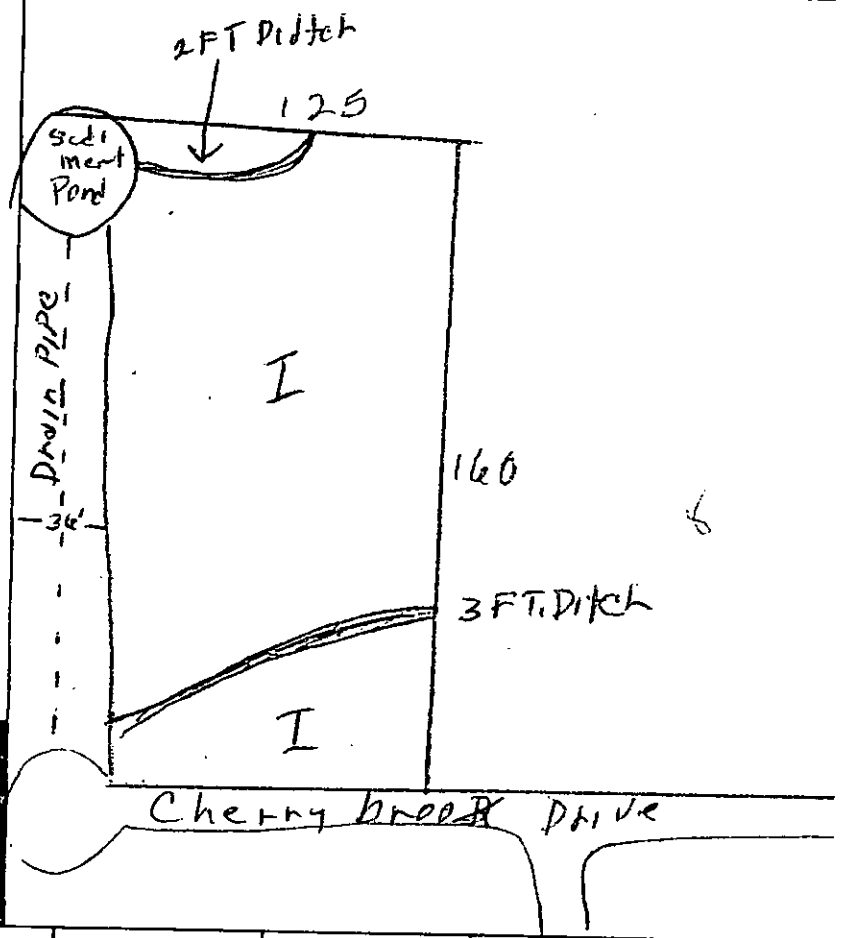
Lot: 19 Block: Acres: .47

Owner: Interstate Development Corp.
Address: 5936 Monroe Road
Charlotte, NC 28212

Comments: Limited Area

Described by: W. B. Ramsey

Date: 6-16-88




*** EVALUATION KEY ***

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

| FACTORS | AREA 1 | AREA 2 | AREA 3 | AREA 4 | AREA 5 | AREA 6 |
|---|---|---|---|---|---|---|
| Topography | S (PS) U 2-8 | S PS U | S PS U | S PS U | S PS U | S PS U |
| Texture | S (PS) U | S PS U | S PS U | S PS U | S PS U | S PS U |
| Structure | S (PS) U | S PS U | S PS U | S PS U | S PS U | S PS U |
| Drainage | S (PS) U | S PS U | S PS U | S PS U | S PS U | S PS U |
| Depth | S (PS) U 46-48 | S PS U | S PS U | S PS U | S PS U | S PS U |
| Restrictive Horizons | S (PS) U | S PS U | S PS U | S PS U | S PS U | S PS U |
| Available Space | S (PS) U * | S PS U | S PS U | S PS U | S PS U | S PS U |
| Other (specify) | S PS U | S PS U | S PS U | S PS U | S PS U | S PS U |
| Soil Group/Series | IIe Cecil | | | | | |
| Area Classification | S (PS) U | S PS U | S PS U | S PS U | S PS U | S PS U |

Division of Environmental Health
On-site Wastewater Section

Property ID: 139-351-20
Lot #: 19
File #: 4462A
Code: 2

# SOIL/SITE EVALUATION
## for ON-SITE WASTEWATER SYSTEM

Owner: McClam Builders, Inc.
Applicant:
Address: 4631 Shannamara Drive, Matthews, N. C. 28104
Date Evaluated: 11/18/2003
Proposed Facility: Residence
Design Flow (.1949): 360gpd
Property Size: .5a
Location of Site: 3711 Cherrybrook Drive
Property Recorded:
Water Supply: [ x ] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [ x ] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [ x ] Sewage [ ] Industrial Process [ ] Mixed

| PROFILE # | 1940 Landscape Position/ Slope% | Horizon Depth (IN.) | SOIL MORPHOLOGY 1941 1941 Structure/ Texture | 1941 Consistence Mineralogy | OTHER PROFILE FACTORS 1942 Soil Wetness/ Color | 1943 Soil Depth (IN.) | 1956 Sapro Class | 1944 Restr Horiz | Profile Class & LTAR |
|---|---|---|---|---|---|---|---|---|---|
| 1 | LS, 8 | 0-5 | GR/CL | FR/SEXP/SS/SP | 2.5Y7/1@34" | 38 | N/A | NONE | US, IV .2GPD/FT$^2$ |
| | | 5-38 | SBK/C | FI/DEXP/S/P | | | | | |
| 2 | " | 0-6 | GR/CL | FR/SEXP/SS/SP | >48" TO SOIL WETNESS | 48 | " | " | PS, IV .3GPD/FT$^2$ |
| | | 6-48 | SBK/C | FI/SEXP/S/P | | | | | |

| Description | Initial System | Repair System |
|---|---|---|
| Available Space (.1945) | US | US |
| System Type(s) | | |
| Site LTAR | .25GPD/FT$^2$ | .25GPD/FT$^2$ |

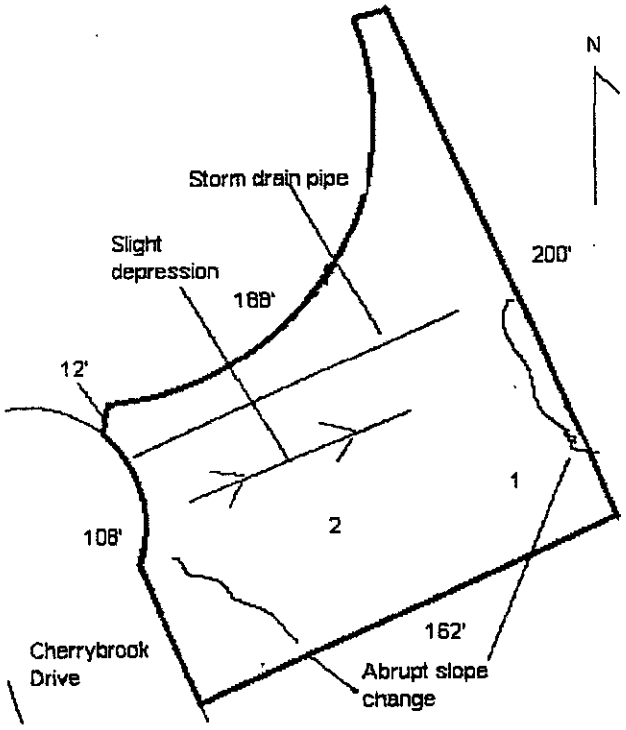
Other Factors (.1946): _____
Site Classification (.1948): UNSUITABLE
Evaluated By: W. R. Marlin, LSS, 11/19/2003. W. R. Marlin
Others Present:

FILE # 4462A

## COMMENTS: 100% repair, may need additional borings along proposed drainlines

| LANDSCAPE POSITIONS | GROUP | TEXTURES | .1955 LTAR | CONSISTENCE MOIST | 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-SLIGHTLY STICKY |
| 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-SLIGHTLY STICKY |
| CV-CONVEX SLOPE | | SIL-SILT LOAM | | | P-PLASTIC |
| T-TERRACE | | CL-CLAY LOAM | | | VP-VERY PLASTIC |
| FP-FLOOD PLAN | | SCL-SANDY CLAY LOAM | | | |
| | | SICL-SILTY CLAY LOAM | | | |
| | IV | SIC-SILTY CLAY | 0.4 – 0.1 | | |
| | | C-CLAY | | | |
| | | SC-SANDY CLAY | | | |

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



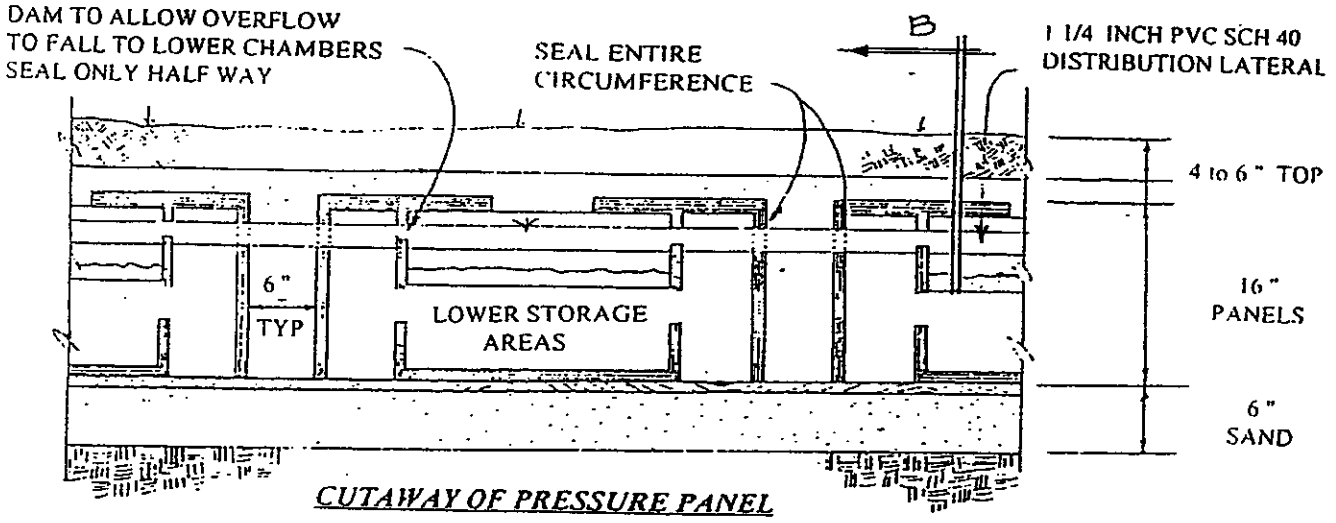
***ATTACHMENT B***
***T&J PANEL SEPTIC SYSTEM***
***DESIGN CRITERIA***

## *Panels With Pressure Distribution*

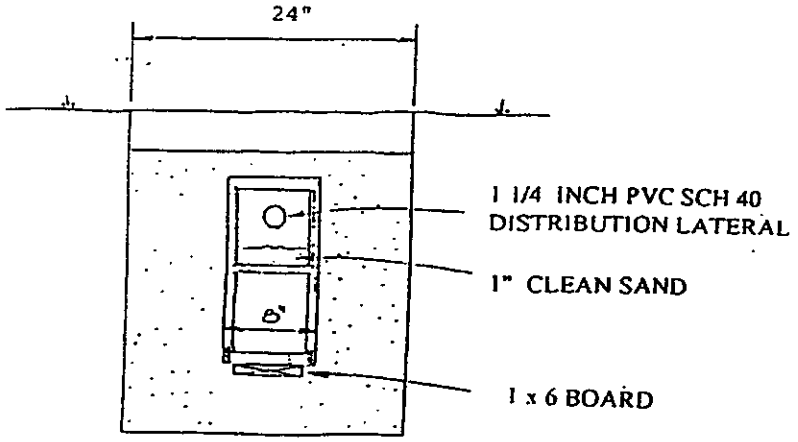
The LP Panel uses Technology similar to that of Low Pressure Pipe (LPP) System. The tables and distribution design described in the LPP manual is applicable to the pressure Panel System. The system should be used with two to four feet of head. In many respects a LP Panel is similar to a LPP with the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



# *Mecklenburg County*

**This page is left in the original file as a placeholder. The following item(s) were removed from the original file prior to scanning and returned post scanning:**

↘ **Large-format Drawings**

**Original File Number:** 4462A/3711 Cherrybrook Drive

**Box Number:** 3

**Number of pages associated with file:** 1

**General Comments:** _____

_____

_____

_____

Imaging Solutions and Services, Inc.

FOR REGISTRATION JUDITH A. GIBSON
REGISTER OF DEEDS
MECKLENBURG COUNTY, NC
2004 AUG 25 03:59 PM
BK:17665 PG:580-583 FEE:$20.00

INSTRUMENT # 2004185708

2004185708

**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 # 4462A
PARCEL # 139-351-20

The undersigned, McCLAM BUILDERS, INC, owner of property located at 3711 CHERRYBROOK DR, MINT HILL, NC, (the "site") and described in an instrument recorded in Book 16448 at Page 982, 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:

This instrument was prepared by: MICHAEL F. McCLAM, PRES.
Mail after recording to: McCLAM BUILDERS, INC
4631 SHANNAMARA DR., MATTHEWS, NC 28104

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

-- 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 theDepartment, 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 25th day of AUGUST, 2004.

McCLAM BUILDERS, INC
(Corporate Name)

By: _____, PRES.

_____ President

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)

McCLAM BUILDERS, INC. CORPORATE SEAL NORTH CAROLINA

ATTEST:

Yvette Stokes

_____ Secretary

(Corporate Seal)

STATE OF NORTH CAROLINA
COUNTY OF Mecklenburg

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

WITNESS my hand and notarial seal, this _____ day of _____, 20____.

_____
Notary Public

My Commission Expires:

_____

STATE OF NORTH CAROLINA
COUNTY OF Mecklenburg

I, Crystal McKittrick, a Notary Public for said County and State, do hereby certify that Yvette Stokes personally came before me this day and acknowledged that She is _____ Secretary of McClam Builders, Inc., a North Carolina corporation, and that by authority duly given and as the act and deed of said corporation, the foregoing instrument was signed in its name by its _____ President, sealed with its corporate seal, and attested by Yvette Stokes as its _____ Secretary.

WITNESS my hand and notarial seal, this 25 day of August, 2004

Crystal McKittrick
Notary Public

My Commission Expires:

3/19/05

REVISED 8-13-02

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

Sheet: 1
Property ID: 139-351-20
Lot #: 19
File #: 4462A
Code: 2

ACS

# SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: McClam Builders, Inc.
Applicant:
Address: 4631 Shannamara Drive, Matthews, N. C. 28104
Date Evaluated: 11/18/2003
Proposed Facility: Residence
Design Flow (.1949): 360gpd
Property Size: .5a
Location of Site: 3711 Cherrybrook Drive
Property Recorded:
Water Supply: [x] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

| PROFILE # | .1940 Landscape Position/ Slope% | Horizon Depth (IN.) | SOIL MORPHOLOGY .1941 .1941 Structure/ Texture | .1941 Consistence Mineralogy | OTHER PROFILE FACTORS .1942 Soil Wetness/ Color | .1943 Soil Depth (IN.) | .1956 Sapro Class | .1944 Restr Horiz | Profile Class & LTAR |
|---|---|---|---|---|---|---|---|---|---|
| 1 | LS, 8 | 0-5 | GR/CL | FR/SEXP/SS/SP | 2.5Y7/1@34" | 38 | N/A | NONE | US, IV |
| | | 5-38 | SBK/C | FI/DEXP/S/P | | | | | .2GPD/FT$^2$ |
| 2 | " | 0-6 | GR/CL | FR/SEXP/SS/SP | >48" TO SOIL WETNESS | 48 | " | " | PS, IV |
| | | 6-48 | SBK/C | FI/SEXP/S/P | | | | | .3GPD/FT$^2$ |

| Description | Initial System | Repair System |
|---|---|---|
| Available Space (.1945) | US | US |
| System Type(s) | | |
| Site LTAR | .25GPD/FT$^2$ | .25GPD/FT$^2$ |

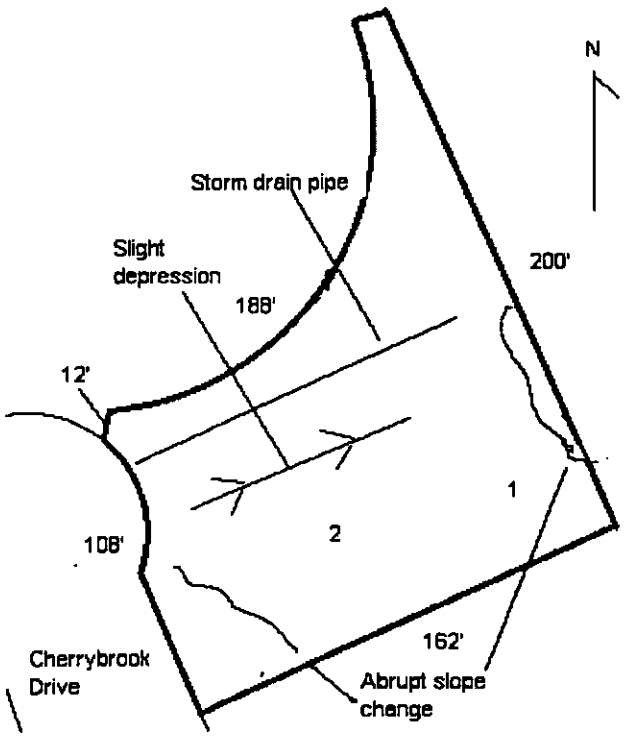
Other Factors (.1946): _____
Site Classification (.1948): UNSUITABLE
Evaluated By: W. R., Marlin, LSS, 11/19/2003, W. R. Marlin
Others Present:

FILE # 4462A

## COMMENTS: 100% repair, may need additional borings along proposed drainlines

| LANDSCAPE POSITIONS | GROUP | TEXTURES | .1955 LTAR | CONSISTENCE MOIST | 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-SLIGHTLY STICKY |
| 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-SLIGHTLY STICKY |
| CV-CONVEX SLOPE | | SIL-SILT LOAM | | | P-PLASTIC |
| T-TERRACE | | CL-CLAY LOAM | | | VP-VERY PLASTIC |
| FP-FLOOD PLAN | | SCL-SANDY CLAY LOAM | | | |
| | | SICL-SILTY CLAY LOAM | | | |
| | IV | SIC-SILTY CLAY | 0.4 – 0.1 | | |
| | | C-CLAY | | | |
| | | SC-SANDY CLAY | | | |

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



FEE: 200.00
DATE: 11/19/03

**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

DREW...

FILE #: 44 of 2A

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 13935120

STREET ADDRESS: 3711 CHERRYBROOK DR

SUBDIVISION OR MOBILE HOME PARK NAME: FOREST BROOK

LOT NUMBER: 19

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: 2050

NUMBER OF BEDROOMS: 3

NUMBER OF OCCUPANTS: 6

CLOSING DATE NO SALE PENDING

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)
___ SHARED WELL (S)
✓ MUNICIPAL (M)
___ OTHER 'SPRINGS' (O)
___ PRIVATE WELL (P)

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

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

PROPERTY OWNER:

NAME: McCLAM BUILDERS, INC
(LAST) (FIRST) (MI)

ADDRESS: 4631 SHAWMARA DR

CITY: MATTHEWS STATE: NC ZIP: 28104

DAYTIME PHONE: (704) 361 - 7798

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME: McCLAM, MICHAEL F.
(LAST) (FIRST) (MI)

DAYTIME PHONE: (704) 361 - 7798

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 1988, OCT 11

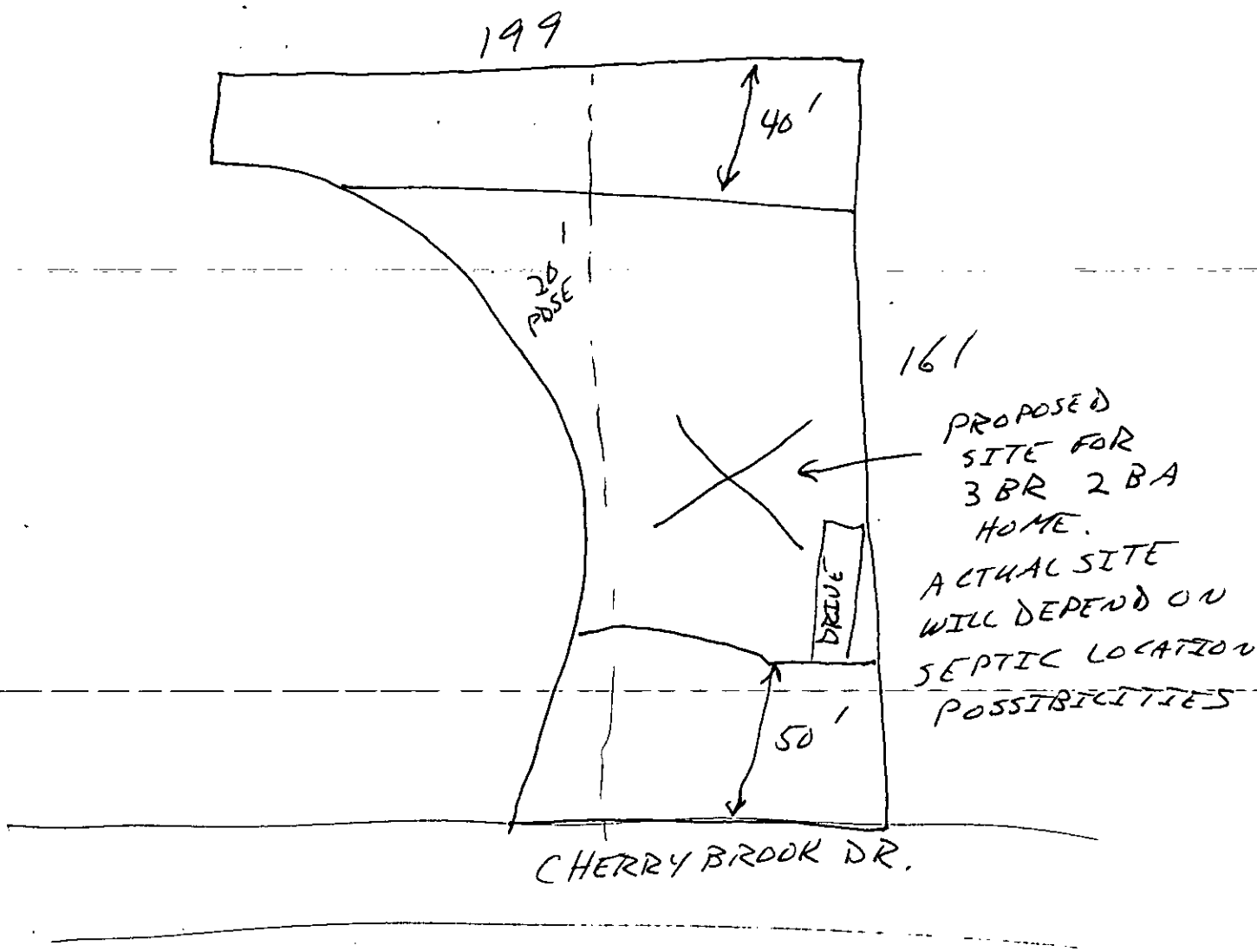
An Improvement Permit is subject to suspension or revocation if site plans or the intended use change or if information submitted in this application is falsified or changed. The undersigned, owner, or legal agent for the owner, of the property described above as the "Job Location" has read the foregoing 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.

DATE: 11-14-03

SIGNED: [signature]

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

LOT 19
FOREST BROOK



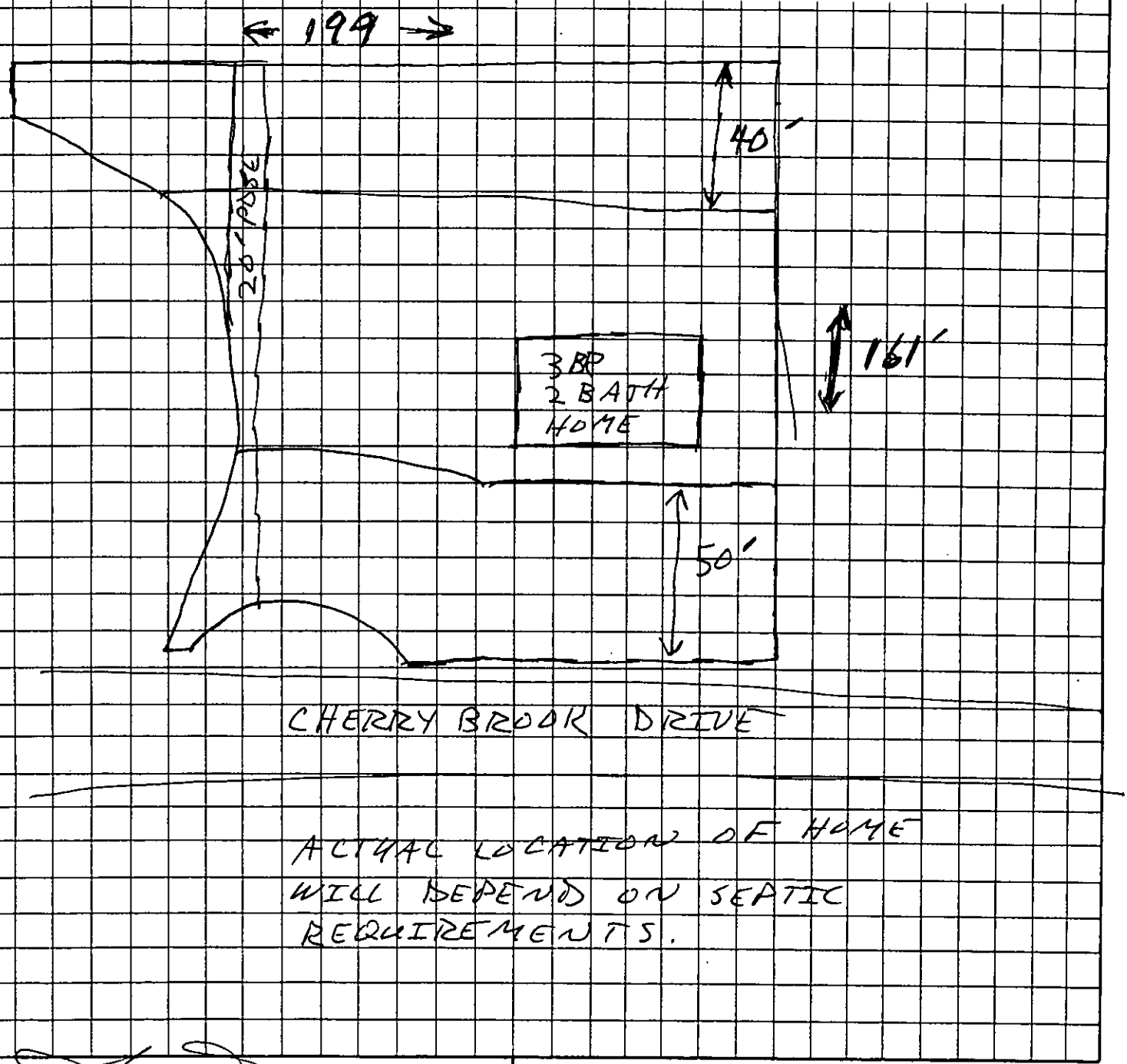
# PROPOSED PLOT PLAN

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

FILE: 4462A

TC: 139 - 351 - 20

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.




ACTUAL LOCATION OF HOME WILL DEPEND ON SEPTIC REQUIREMENTS.

OWNER/AGENT SIGNATURE

DATE 11-14-03

APPROVAL DATE _____

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