1670 S.EAST

RECEIVED JUL 1 6 1999

31 Shutesbury Road
Pelham, MA 01002
(413) 256-0647

July 14, 1999

Dave Zarozinski
Health Department
4 Boltwood Avenue
Amherst, MA 01002-2351

Subject: Title 5 Septic System Inspection at 1670 South East Street
( Property of Ruth & Steven Barrett )

Dear Dave:

On July 7 and July 14, 1999 I completed an inspection of the septic system at the subject property in accordance with 310 CMR 15.000 (Title 5) requirements. Two copies of the report are enclosed for your use.

This system is certified as, "Passed" by the criteria in the regulation. Additional comments are included in the report. As you and I spoke about by telephone, the distribution box was replaced as part of this inspection process. I re-nspected on July 14 to confirm this was done and working properly. My notes about the D-Box are on pages 8 and 10 of the report.

If you have questions on any aspect of the inspection or the report please contact me at the address above or by phone evenings.

Sincerely,

Richard Scott

Richard Scott, P.E.

cc:Ruth & Steven Barrett, Owners
Janice Kynard, Realtor
Buyer c/o Janice Kynard

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON MA 02108 (617) 292-5500

TRUDY COXE
Secretary

ARGEO PAUL CELLUCCI
Governor

DAVID B. STRUHS
Commissioner

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART A**
**CERTIFICATION**

**Property Address:** 1670 South East Street, Amherst **Name of Owner** Ruth Barrett
**Address of Owner:** 1670 South East Street

**Date of Inspection:** 7-7-99 & 7-14-99
**Name of Inspector: (Please Print)** Richard Scott
**I am a DEP approved system inspector pursuant to Section 15.340 of Title 5 (310 CMR 15.000)**
**Company Name:** Richard Scott, P.E.
**Mailing Address:** 31 Shutesbury Road Pelham, MA 01002
**Telephone Number:** 413-256-0647

**CERTIFICATION STATEMENT**
I certify that I have personally inspected the sewage disposal system at this address and that the information reported below is true, accurate and complete as of the time of inspection. The inspection was performed based on my training and experience in the proper function and maintenance of on-site sewage disposal systems. The system:

- ✓ Passes
- ___ Conditionally Passes
- ___ Needs Further Evaluation By the Local Approving Authority
- ___ Fails

**Inspector's Signature:** Richard Scott **Date:** 7-14-99

The System Inspector shall submit a copy of this inspection report to the Approving Authority (Board of Health or DEP)within thirty (30) days of completing this inspection. If the system is a shared system or has a design flow of 10,000 gpd or greater, the inspector and the system owner shall submit the report to the appropriate regional office of the Department of Environmental Protection. The original should be sent to the system owner and copies sent to the buyer, if applicable, and the approving authority.

NOTES AND COMMENTS
See Additional Note At Page 8.
As of 7-14-99 Distr. Box Has Been Replaced.

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**C. FURTHER EVALUATION IS REQUIRED BY THE BOARD OF HEALTH:**

_____ Conditions exist which require further evaluation by the Board of Health in order to determine if the system is failing to protect the public health, safety and the environment.

1) **SYSTEM WILL PASS UNLESS BOARD OF HEALTH DETERMINES IN ACCORDANCE WITH 310 CMR 15.303 (1)(b) THAT THE SYSTEM IS NOT FUNCTIONING IN A MANNER WHICH WILL PROTECT THE PUBLIC HEALTH AND SAFETY AND THE ENVIRONMENT:**

__ Cesspool or privy is within 50 feet of surface water
__ Cesspool or privy is within 50 feet of a bordering vegetated wetland or a salt marsh.

2) **SYSTEM WILL FAIL UNLESS THE BOARD OF HEALTH (AND PUBLIC WATER SUPPLIER, IF ANY) DETERMINES THAT THE SYSTEM IS FUNCTIONING IN A MANNER THAT PROTECTS THE PUBLIC HEALTH AND SAFETY AND THE ENVIRONMENT:**

__ The system has a septic tank and soil absorption system (*SAS*) and the SAS is within 100 feet of a surface water supply or tributary to a surface water supply.
__ The system has a septic tank and soil absorption system and the SAS is within a Zone I of a public water supply well.
__ The system has a septic tank and soil absorption system and the SAS is within 50 feet of a private water supply well.
__ The system has a septic tank and soil absorption system and the SAS is less than 100 feet but 50 feet or more from a private water supply well, unless a well water analysis for coliform bacteria and volatile organic compounds indicates that the well is free from pollution from that facility and the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than 5 ppm. Method used to determine distance _____ (approximation not valid).

3) OTHER

__ _____
_____
_____

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

Property Address: 1670 South East St. Amherst
Owner: Ruth Barrett
Date of Inspection: 7-7 & 7-14-99

**INSPECTION SUMMARY:** Check ***A, B, C, or D***:

**A. SYSTEM PASSES:**

✓ I have not found any information which indicates that any of the failure conditions described in 310 CMR 15.303 exist. Any failure criteria not evaluated are indicated below.

**COMMENTS:** _____

_____

**B. SYSTEM CONDITIONALLY PASSES:**

_____ One or more system components as described in the "Conditional Pass" section need to be replaced or repaired. The system, upon completion of the replacement or repair, as approved by the Board of Health, will pass.

Indicate yes, no, or not determined (Y, N, or ND). Describe basis of determination in all instances. If "not determined", explain why not.

— The septic tank is metal, unless the owner or operator has provided the system inspector with a copy of a Certificate of Compliance (attached) indicating that the tank was installed within twenty (20) years prior to the date of the inspection; or the septic tank, whether or not metal, is cracked, structurally unsound, shows substantial infiltration or exfiltration, or tank failure is imminent. The system will pass inspection if the existing septic tank is replaced with a complying septic tank as approved by the Board of Health.

— Sewage backup or breakout or high static water level observed in the distribution box is due to broken or obstructed pipe(s) or due to a broken, settled or uneven distribution box. The system will pass inspection if (with approval of the Board of Health).

_____ broken pipe(s) are replaced
_____ obstruction is removed
_____ distribution box is levelled or replaced

— The system required pumping more than four times a year due to broken or obstructed pipe(s). The system will pass inspection if (with approval of the Board of Health):

_____ broken pipe(s) are replaced
_____ obstruction is removed

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART B
CHECKLIST

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

Check if the following have been done: You must indicate either "Yes" or "No" as to each of the following:

| Yes | No | |
|---|---|---|
| ✓ | | Pumping information was provided by the owner, occupant, or Board of Health. |
| ✓ | | None of the system components have been pumped for at least two weeks and the system has been receiving normal flow rates during that period. Large volumes of water have not been introduced into the system recently or as part of this inspection. |
| ✓ | | As built plans have been obtained and examined. Note if they are not available with N/A. |
| ✓ | | The facility or dwelling was inspected for signs of sewage back-up. |
| ✓ | | The system does not receive non-sanitary or industrial waste flow. |
| ✓ | | The site was inspected for signs of breakout. |
| ✓ | | All system components, excluding the Soil Absorption System, have been located on the site. |
| ✓ | | The septic tank manholes were uncovered, opened, and the interior of the septic tank was inspected for condition of baffles or tees, material of construction, dimensions, depth of liquid, depth of sludge, depth of scum. |
| | | The size and location of the Soil Absorption System on the site has been determined based on: |
| ✓ | | Existing information. For example, Plan at B.O.H. |
| ✓ | | Determined in the field (if any of the failure criteria related to Part C is at issue, approximation of distance is unacceptable) [15.302(3)(b)] |
| ✓ | | The facility owner (and occupants, if different from owner) were provided with information on the proper maintenance of SubSurface Disposal Systems. |

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART A**
**CERTIFICATION (continued)**

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**D. SYSTEM FAILS:**

You must indicate either "Yes" or "No" to each of the following:

_____ I have determined that one or more of the following failure conditions exist as described in 310 CMR 15.303. The basis for this determination is identified below. The Board of Health should be contacted to determine what will be necessary to correct the failure.

| Yes | No | |
|---|---|---|
| __ | __ | Backup of sewage into facility or system component due to an overloaded or clogged SAS or cesspool. |
| __ | __ | Discharge or ponding of effluent to the surface of the ground or surface waters due to an overloaded or clogged SAS or cesspool. |
| __ | __ | Static liquid level in the distribution box above outlet invert due to an overloaded or clogged SAS or cesspool. |
| __ | __ | Liquid depth in cesspool is less than 6" below invert or available volume is less than 1/2 day flow. |
| __ | __ | Required pumping more than 4 times in the last year **NOT** due to clogged or obstructed pipe(s). Number of times pumped ___. |
| __ | __ | Any portion of the Soil Absorption System, cesspool or privy is below the high groundwater elevation. |
| __ | __ | Any portion of a cesspool or privy is within 100 feet of a surface water supply or tributary to a surface water supply. |
| __ | __ | Any portion of a cesspool or privy is within a Zone I of a public well. |
| __ | __ | Any portion of a cesspool or privy is within 50 feet of a private water supply well. |
| __ | __ | Any portion of a cesspool or privy is less than 100 feet but greater than 50 feet from a private water supply well with no acceptable water quality analysis. If the well has been analyzed to be acceptable, attach copy of well water analysis for coliform bacteria, volatile organic compounds, ammonia nitrogen and nitrate nitrogen. |

**E. LARGE SYSTEM FAILS:**

You must indicate either "Yes" or "No" to each of the following:

The following criteria apply to large systems in addition to the criteria above:

_____ The system serves a facility with a design flow of 10,000 gpd or greater (Large System) and the system is a significant threat to public health and safety and the environment because one or more of the following conditions exist:

| Yes | No | |
|---|---|---|
| __ | __ | the system is within 400 feet of a surface drinking water supply |
| __ | __ | the system is within 200 feet of a tributary to a surface drinking water supply |
| __ | __ | the system is located in a nitrogen sensitive area (Interim Wellhead Protection Area - IWPA) or a mapped Zone II of a public water supply well) |

The owner or operator of any such system shall upgrade the system in accordance with 310 CMR 15.304(2). Please consult the local regional office of the Department for further information.

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART C**
**SYSTEM INFORMATION (continued)**

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**BUILDING SEWER:**
(Locate on site plan)

Depth below grade: ✓
Material of construction: __ cast iron ✓ 40 PVC __ other (explain)

Distance from private water supply well or suction line N/A - Water Supply is a Pressure-Line
Diameter 4"
Comments: (condition of joints, venting, evidence of ~~leakage, etc.~~)
Good Condition.

**SEPTIC TANK:** ✓
(locate on site plan)

Depth below grade: 12"
Material of construction: ✓ concrete __ metal __ Fiberglass __ Polyethylene __ other(explain)

If tank is metal, list age ____ Is age confirmed by Certificate of Compliance ____ (Yes/No)

Dimensions: 58" x 102" x 48" Deep
Sludge depth: 6"
Distance from top of sludge to bottom of outlet tee or baffle: 22"
Scum thickness: 8"
Distance from top of scum to top of outlet tee or baffle: 3"
Distance from bottom of scum to bottom of outlet tee or baffle: 15"
How dimensions were determined: Direct Observation At Time of Pumping

Comments:
(recommendation for pumping, condition of inlet and outlet tees or baffles, depth of liquid level in relation to outlet invert, structural integrity, evidence of leakage, etc.) Solids Accumulation was Heavy But There was No Significant Carry-Over To D-Box. Recommend Annual Pumping For 8 Occupants. Tank And Baffles Are in Good Condition

**GREASE TRAP:** N/A
(locate on site plan)

Depth below grade: ____
Material of construction: __ concrete __ metal __ Fiberglass __ Polyethylene __ other(explain)

Dimensions: ____
Scum thickness: ____
Distance from top of scum to top of outlet tee or baffle: ____
Distance from bottom of scum to bottom of outlet tee or baffle: ____
Date of last pumping: ____

Comments:
(recommendation for pumping, condition of inlet and outlet tees or baffles, depth of liquid level in relation to outlet invert, structural integrity, evidence of leakage, etc.) ____

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART C**
**SYSTEM INFORMATION**

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**FLOW CONDITIONS**

**RESIDENTIAL:**
Design flow: 110 g.p.d./bedroom.
Number of bedrooms (design): 4 Number of bedrooms (actual): 4
Total DESIGN flow 440
Number of current residents: 8
Garbage grinder (yes or no): No
Laundry (separate system) (yes or no): No ; If yes, separate inspection required Laundry discharge is to septic tank. As recommended.
Laundry system inspected (yes or no)
Seasonal use (yes or no): No
Water meter readings, if available (last two year's usage (gpd): 2-17-99 to 5-26-99 = 360 GPD Avg.
Sump Pump (yes or no): No
Last date of occupancy: Currently Occupied

**COMMERCIAL/INDUSTRIAL:**
Type of establishment: _____
Design flow: _____ gpd ( Based on 15.203)
Basis of design flow _____
Grease trap present: (yes or no) ___
Industrial Waste Holding Tank present: (yes or no) ___
Non-sanitary waste discharged to the Title 5 system: (yes or no) ___
Water meter readings, if available: _____
Last date of occupancy: _____

**OTHER:** (Describe) _____
Last date of occupancy: _____

**GENERAL INFORMATION**

**PUMPING RECORDS** and source of information:
Pumped last 1997 by Karls. Per Owner
System pumped as part of inspection: (yes or no) Yes
If yes, volume pumped: 1000 gallons
Reason for pumping: Solids Removal & Check Tank

**TYPE OF SYSTEM**
- ✓ Septic tank/distribution box/soil absorption system
- _____ Single cesspool
- _____ Overflow cesspool
- _____ Privy
- _____ Shared system (yes or no) (if yes, attach previous inspection records, if any)
- _____ I/A Technology etc. Attach copy of up to date operation and maintenance contract
- _____ Tight Tank _____ Copy of DEP Approval

Other _____

**APPROXIMATE AGE** of all components, date installed (if known) and source of information: 9 Years Per 1990 Design Plan.

**Sewage odors** detected when arriving at the site: (yes or no) No

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**SOIL ABSORPTION SYSTEM (SAS):** ✓
(locate on site plan, if possible; excavation not required, location may be approximated by non-intrusive methods)

If not located, explain:

Type:
leaching pits, number:___
leaching chambers, number:___
leaching galleries, number:___
leaching trenches, number, length: 2 Each 36" wide, 6" deep, 50 feet long
leaching fields, number, dimensions:___
overflow cesspool, number:___
Alternative system: ___
Name of Technology: ___

Comments:
(note condition of soil, signs of hydraulic failure, level of ponding, damp soil, condition of vegetation, etc.)
Ground Surface Conditions are Good.

**CESSPOOLS:** N/A
(locate on site plan)

Number and configuration:___
Depth-top of liquid to inlet invert:___
Depth of solids layer:___
Depth of scum layer:___
Dimensions of cesspool:___
Materials of construction:___
Indication of groundwater:___
inflow (cesspool must be pumped as part of inspection)___

Comments:
(note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.)

**PRIVY:** N/A
(locate on site plan)

Materials of construction:___ Dimensions:___
Depth of solids:___
Comments:
(note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.)

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART C**
**SYSTEM INFORMATION (continued)**

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**TIGHT OR HOLDING TANK:** N/A (Tank must be pumped prior to, or at time of, inspection)
(locate on site plan)

Depth below grade:____
Material of construction: __concrete __metal __Fiberglass __Polyethylene __other(explain)

Dimensions:_____
Capacity:_____ gallons
Design flow:_____ gallons/day
Alarm present_____
Alarm level:_____ Alarm in working order: Yes ___ No__
Date of previous pumping: _____
Comments:
(condition of inlet tee, condition of alarm and float switches, etc.)

**DISTRIBUTION BOX:** ✓
(locate on site plan)

Depth of liquid level above outlet invert: 0"

Comments:
(note if level and distribution is equal, evidence of solids carryover, evidence of leakage into or out of box, etc.) Initial Inspection Showed Liquid Levels 1/2" and 1" Above Inverts. D-Box was Not Level. There was No Evidence of Any Prior Higher Liquid Levels and No Other Indication that this was Due to a "Clogged or Overloaded SAS." After Tel. Discussion with Health Agent, the Pumper was Authorized to Install a New D-Box Level and Correct Elevation. The 7-14-99 Follow-Up Inspection Showed The Septic Tank Re-Filled, Flow is To D-Box, Distribution out of D-Box is Even. Liquid Level is Now Above the Outlet Inverts. D-Box Now Looks Good.

**PUMP CHAMBER:** N/A
(locate on site plan)

Pumps in working order: (Yes or No)_____
Alarms in working order (Yes or No)_____
Comments:
(note condition of pump chamber, condition of pumps and appurtenances, etc.) _____

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART C**
**SYSTEM INFORMATION (continued)**

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

NRCS Report name_____
Soil Type_____
Typical depth to groundwater_____

USGS Date website visited
Observation Wells checked
Groundwater depth: Shallow_____ Moderate_____ Deep_____

SITE EXAM
- ✓ Slope
- Surface water
- ✓ Check Cellar
- Shallow wells

Estimated Depth to Groundwater 7 Feet

Please indicate all the methods used to determine High Groundwater Elevation:

- ✓ Obtained from Design Plans on record
- ✓ Observed Site (Abutting property, observation hole, basement sump etc.)
- ____ Determined from local conditions
- ____ Checked with local Board of health
- ____ Checked FEMA Maps
- ____ Checked pumping records
- ____ Checked local excavators, installers
- ____ Used USGS Data

Describe how you established the High Groundwater Elevation. (**Must** be completed)

Reviewed 1990 Soil Test Report on File.

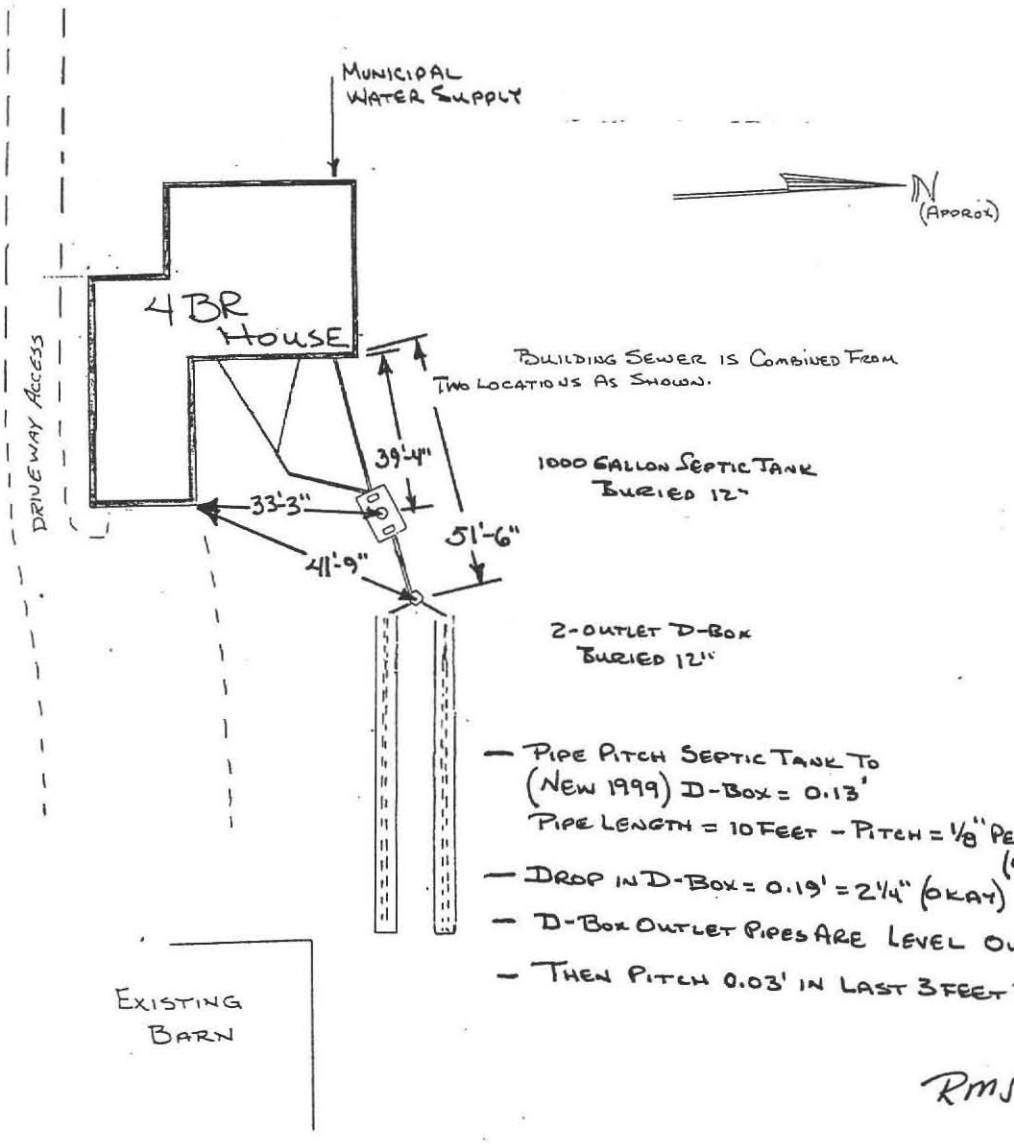
Ground Surface, Cellar and Leach Trench observations are consistent with 7 feet to Groundwater.

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**SKETCH OF SEWAGE DISPOSAL SYSTEM:**
include ties to at least two permanent reference landmarks or benchmarks
locate all wells within 100' (Locate where public water supply comes into house)

South East Street




— Pipe Pitch Septic Tank To (New 1999) D-Box = 0.13'
Pipe Length = 10 Feet – Pitch = 1/8" per Foot (Okay)
— Drop in D-Box = 0.19' = 2 1/4" (Okay)
— D-Box Outlet Pipes are Level Out 2 Feet (Okay)
— Then Pitch 0.03' in Last 3 Feet To Trenches (Okay)

RMS 7-14-99

# OBSERVATION PITS

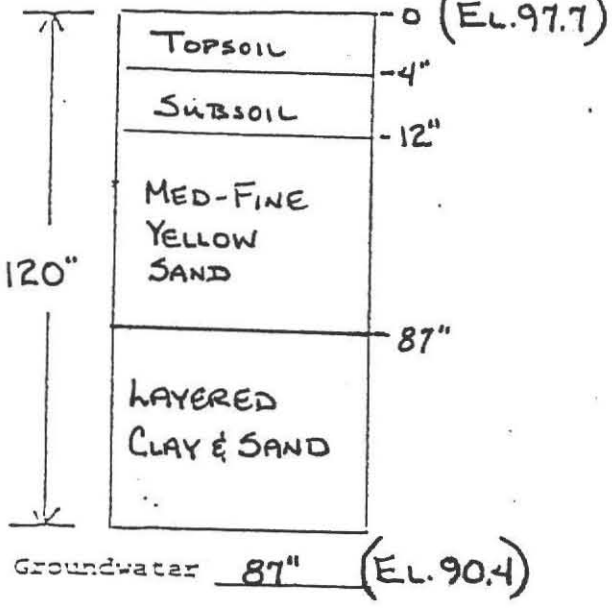
REQUESTED BY: FRANCIS LYMAN

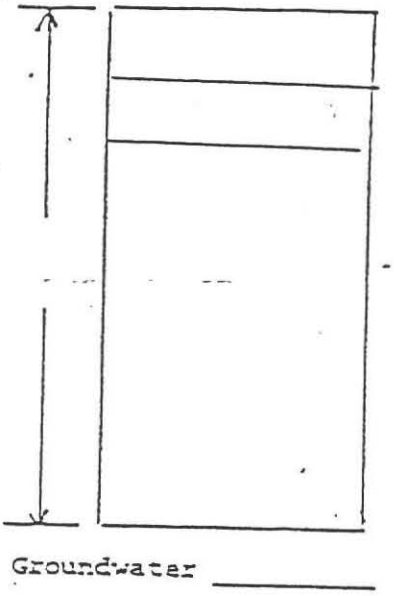
LOCATION: 1670 SOUTH EAST ST.
AMHERST, MA.

MAILING ADDRESS:

DATE: 5-16-90 OBSERVER: R. SCOTT, P.E. WITNESS: D. ZAROZINSKI, BOARD OF H.


5-16-90




PERC BOTTOM DEPTH = 45"

START SOAK @ 12:03

24 GAL TO START @ 12:12:30

12" @ 12:12:30

9" @ 12:14:15

6" @ 12:16:00

PERC RATE = 1:45 / 3 INCHES = 0.6 MIN/INCH

DESIGN RATE = 2 MIN/INCH

No. .....

FEE .....

NOTE: THIS IS A REVISION OF APPLICATION DATED 6-20-90

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

TOWN OF AMHERST

Richard Scott 7-6-90

# Application for Disposal Works Construction Permit

Application is hereby made for a Permit to Construct ( ) or Repair ( ✓ ) an Individual Sewage Disposal System at:

1670 SOUTH EAST ST. (Location - Address) ..... or Lot No.

FRANCIS LYMAN (Owner) ..... 75 MECHANIC ST. AMHERST, MA. 01002 (Address)

KARL'S EXCAVATING (Installer) ..... RIVER DRIVE HADLEY, MA. 01035 (Address)

Type of Building ..... Size Lot ..... Sq. feet

Dwelling ✓ No. of Bedrooms 4 ..... Expansion Attic (NO) ..... Garbage Grinder (NO)

Other — Type of Building ..... No. of persons ..... Showers ( ) — Cafeteria ( )

Other fixtures .....

Design Flow 110 gallons per ~~Person~~ BEDROOM per day. Total daily flow 440 gallons.

Septic Tank ✓ Liquid capacity 1000 gallons EXISTING Length 8' Width 5' Diameter — Depth 4'

Disposal Trench ✓ No. 2 Width 36" Total Length 100' Total leaching area 406 sq. ft.

Seepage Pit No. ..... Diameter ..... Depth below inlet ..... Total leaching area ..... sq. ft.

Other Distribution box (YES) Dosing tank (NO)

Percolation Test Results Performed by R. SCOTT, P.E. WITNESS: D. ZARZESNSKI, BOARD OF H. Date 5-16-90

Test Pit No. 1 2 minutes per inch Depth of Test Pit 120" Depth to ground water 87"

Test Pit No. 2 ..... minutes per inch Depth of Test Pit ..... Depth to ground water .....

Description of Soil TO 4" TOPSOIL; TO 12" SUBSOIL; TO 87" MED-FINE YELLOW SAND; TO 120" DEPTH LAYERED CLAY & SAND

Nature of Repairs or Alterations — Answer when applicable RE-USE EXISTING BUILDING SEWER & SEPTIC TANK; REPLACE PIPE FROM TANK AND LEACH FACILITY

CHECK OR FILL IN WHERE APPLICABLE

Agreement:

The undersigned agrees to install the aforedescribed Individual Sewage Disposal System in accordance with the provisions of TITLE 5 of the State Environmental Code — The undersigned further agrees not to place the system in operation until a Certificate of Compliance has been issued by the board of health.

Signed ..... Date .....

Application Approved By ..... Date .....

Application Disapproved *for the following reasons:* .....

..... Date .....

Permit No. ..... Issued ..... Date

---

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

..... OF .....

# Certificate of Compliance

*THIS IS TO CERTIFY,* That the Individual Sewage Disposal System constructed ( ) or Repaired ( )

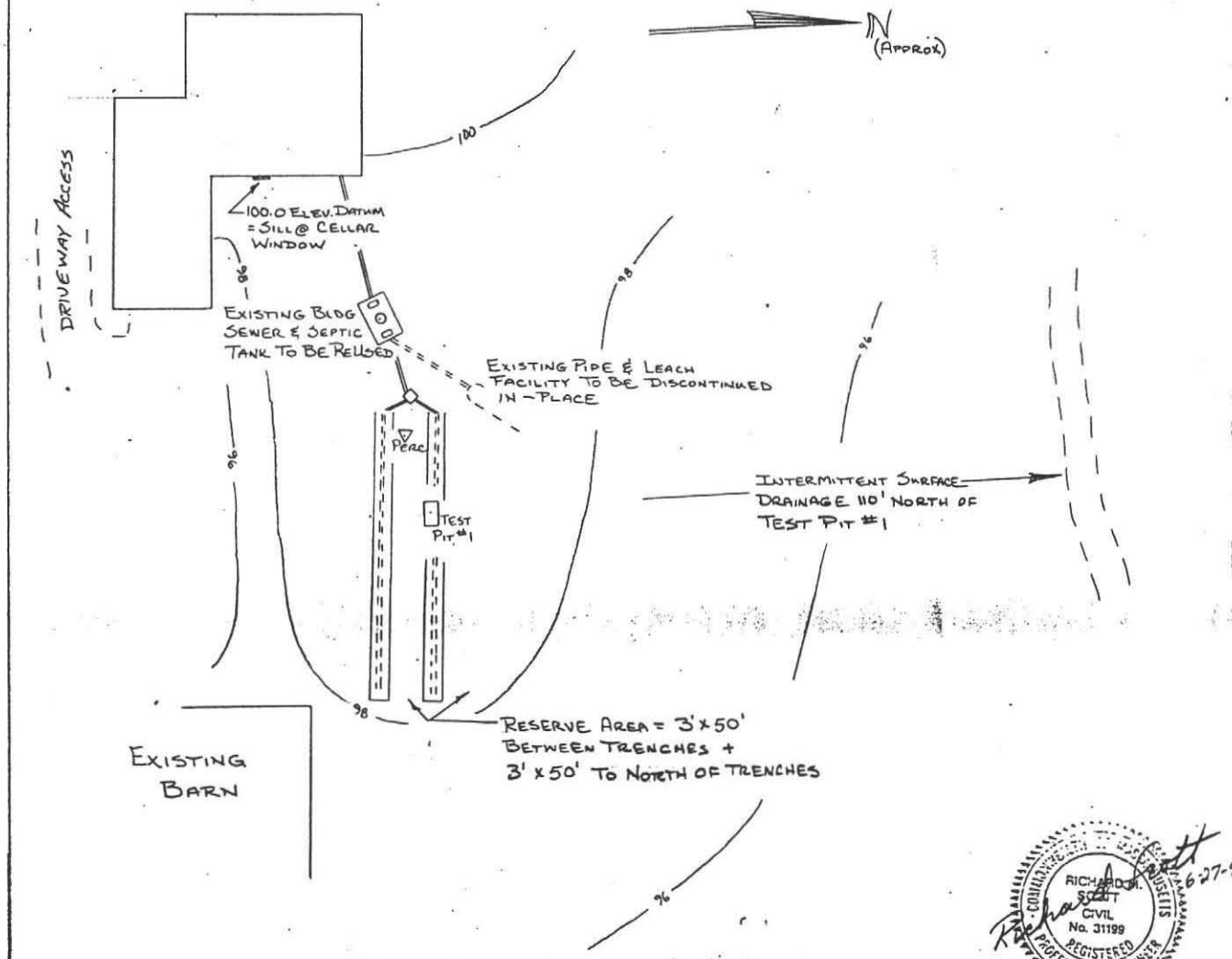
by ..... Installer

at .....

has been installed in accordance with the provisions of TITLE 5 of The State Environmental Code as described in the application for Disposal Works Construction Permit No. ..... dated .....

**THE ISSUANCE OF THIS CERTIFICATE SHALL NOT BE CONSTRUED AS A GUARANTEE THAT THE SYSTEM WILL FUNCTION SATISFACTORY.**

DATE ..... Inspector .....




## NOTES

Town Water Supply - No Wells in Area of Leach Trenches

Finish Contours Approximate Existing

Richard M. Scott
Civil
No. 31199
Registered
Professional Engineer
Commonwealth of Massachusetts

6-27-90

Septic System Design
At 1670 South East St. Amherst, Ma.

| | | |
|---|---|---|
| Scale: 1" = 20' | Approved by: | Drawn by RMS |
| Date: 6-27-90 | | Revised 7-6-90 |

Trenches were 40' Long

For: Francis Lyman
By: Richard Scott, P.E.

Drawing Number

11 x 17 Printed on No. 1000H Clearprint

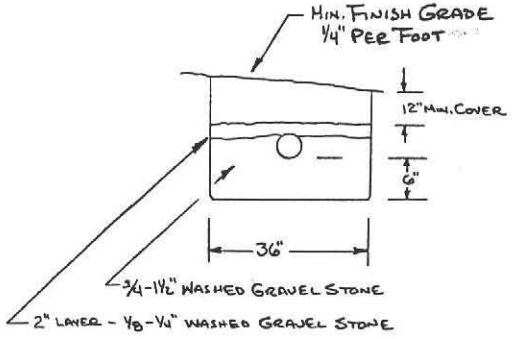
## System Design Calculations

4 Bedroom x 110 gal. per BR per day =
440 gal. per day Design Flow.
Minimum Effective Septic Tank Volume = 1.5 x 440 = 660 gal
Specified Tank Volume for this Installation = 1000 gal. (Existing)
Percolation Rate = 2 minutes per inch →
Design Loading = 2.50 gpd per sq. ft. of Effective Sidewall & 1.00 gpd per sq. ft of Bottom Area.

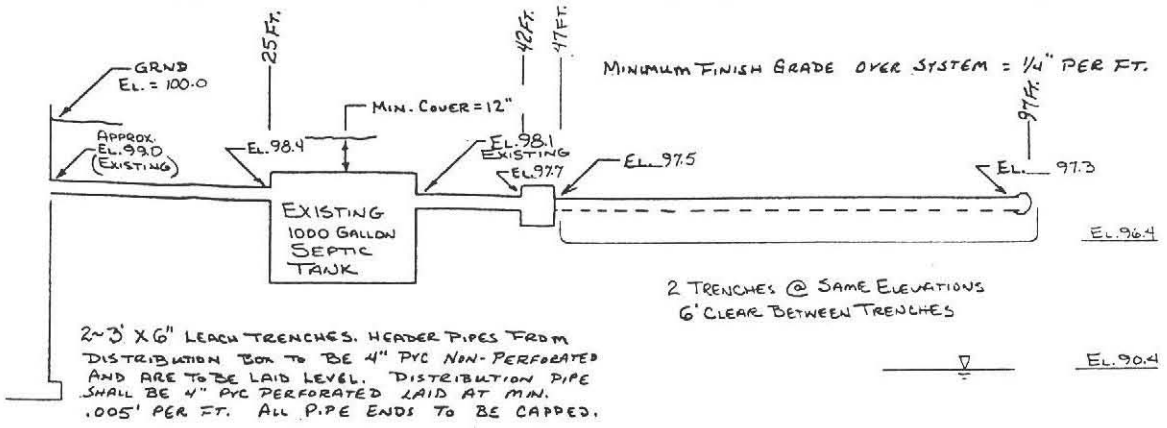
Specified leach trenches are 3.0 ft. wide x 0.5 ft. effective depth. Allowable loading per ft. of trench = 1.0 x 3.0 x 1.00 + 2 x 1.0 x 0.5 x 2.5 = 5.50 gpd/ft.
Required Trench Length = 440 ÷ 5.5 = 80 feet
(Without consideration of trench ends)

- Specified Trenches = 2 @ 40 Ft. Long
- Allowable Volume = 80 x 5.50 + 4 x 3 x 0.5 x 2.5 = 455 gpd (Per Mass. Title 5)
(With consideration of trench ends)
- Amherst Supplemental Regulation Requires 1.25 x Title 5 = 2 @ 50' long

Title 5 Capacity = 100' x 5.50 gpd/ft. + 4 ends x 3 ft x 0.5 ft x 2.50 gpd/ft2 = 565 gpd




Typical Trench Construction




System Profile - Section Parallel to Flow
(Not to Scale)

Richard Scott 6-27-90

Septic System Design
At 1670 South East St. Amherst

| | | |
|---|---|---|
| Scale: As Shown | Approved by: | Drawn by RMS |
| Date: 6-27-90 | | Revised 7-6-90 |
| For: Francis Lyman | | Added 1.25 Factor |
| By: Richard Scott, P.E. | | Drawing Number |

31 Shutesbury Road
Pelham, MA 01002
(413) 256-0647

July 14, 1999

Dave Zarozinski
Health Department
4 Boltwood Avenue
Amherst, MA 01002-2351

Subject: Title 5 Septic System Inspection at 1670 South East Street
( Property of Ruth & Steven Barrett )

Dear Dave:

On July 7 and July 14, 1999 I completed an inspection of the septic system at the subject property in accordance with 310 CMR 15.000 (Title 5) requirements. Two copies of the report are enclosed for your use.

This system is certified as, "Passed" by the criteria in the regulation. Additional comments are included in the report. As you and I spoke about by telephone, the distribution box was replaced as part of this inspection process. I re-nspected on July 14 to confirm this was done and working properly. My notes about the D-Box are on pages 8 and 10 of the report.

If you have questions on any aspect of the inspection or the report please contact me at the address above or by phone evenings.

Sincerely,

Richard Scott

Richard Scott, P.E.

cc:Ruth & Steven Barrett, Owners
Janice Kynard, Realtor
Buyer c/o Janice Kynard

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON MA 02108 (617) 292-5500

ARGEO PAUL CELLUCCI
Governor

TRUDY COXE
Secretary

DAVID B. STRUHS
Commissioner

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART A**
**CERTIFICATION**

**Property Address:** 1670 South East Street, Amherst **Name of Owner** Ruth Barrett
**Address of Owner:** 1670 South East Street

**Date of Inspection:** 7-7-99 & 7-14-99
**Name of Inspector: (Please Print)** Richard Scott
**I am a DEP approved system inspector pursuant to Section 15.340 of Title 5 (310 CMR 15.000)**
**Company Name:** Richard Scott, P.E.
**Mailing Address:** 31 Shutesbury Road Pelham, MA 01002
**Telephone Number:** 413-256-0647

**CERTIFICATION STATEMENT**

I certify that I have personally inspected the sewage disposal system at this address and that the information reported below is true, accurate and complete as of the time of inspection. The inspection was performed based on my training and experience in the proper function and maintenance of on-site sewage disposal systems. The system:

- ✓ Passes
- ___ Conditionally Passes
- ___ Needs Further Evaluation By the Local Approving Authority
- ___ Fails

**Inspector's Signature:** Richard Scott **Date:** 7-14-99

The System Inspector shall submit a copy of this inspection report to the Approving Authority (Board of Health or DEP)within thirty (30) days of completing this inspection. If the system is a shared system or has a design flow of 10,000 gpd or greater, the inspector and the system owner shall submit the report to the appropriate regional office of the Department of Environmental Protection. The original should be sent to the system owner and copies sent to the buyer, if applicable, and the approving authority.

NOTES AND COMMENTS

See Additional Note At Page 8.
As of 7-14-99 Distr. Box Has Been Replaced.

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**C. FURTHER EVALUATION IS REQUIRED BY THE BOARD OF HEALTH:**

_____ Conditions exist which require further evaluation by the Board of Health in order to determine if the system is failing to protect the public health, safety and the environment.

**1) SYSTEM WILL PASS UNLESS BOARD OF HEALTH DETERMINES IN ACCORDANCE WITH 310 CMR 15.303 (1)(b) THAT THE SYSTEM IS NOT FUNCTIONING IN A MANNER WHICH WILL PROTECT THE PUBLIC HEALTH AND SAFETY AND THE ENVIRONMENT:**

__ Cesspool or privy is within 50 feet of surface water
__ Cesspool or privy is within 50 feet of a bordering vegetated wetland or a salt marsh.

**2) SYSTEM WILL FAIL UNLESS THE BOARD OF HEALTH (AND PUBLIC WATER SUPPLIER, IF ANY) DETERMINES THAT THE SYSTEM IS FUNCTIONING IN A MANNER THAT PROTECTS THE PUBLIC HEALTH AND SAFETY AND THE ENVIRONMENT:**

__ The system has a septic tank and soil absorption system (*SAS*) and the SAS is within 100 feet of a surface water supply or tributary to a surface water supply.
__ The system has a septic tank and soil absorption system and the SAS is within a Zone I of a public water supply well.
__ The system has a septic tank and soil absorption system and the SAS is within 50 feet of a private water supply well.
__ The system has a septic tank and soil absorption system and the SAS is less than 100 feet but 50 feet or more from a private water supply well, unless a well water analysis for coliform bacteria and volatile organic compounds indicates that the well is free from pollution from that facility and the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than 5 ppm. Method used to determine distance _____ (approximation not valid).

3) OTHER

__ _____
_____
_____

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

Property Address: 1670 South East St. Amherst
Owner: Ruth Barrett
Date of Inspection: 7-7 & 7-14-99

**INSPECTION SUMMARY:** Check *A, B, C, or D*:

**A. SYSTEM PASSES:**

✓ I have not found any information which indicates that any of the failure conditions described in 310 CMR 15.303 exist. Any failure criteria not evaluated are indicated below.

**COMMENTS:** _____

**B. SYSTEM CONDITIONALLY PASSES:**

_____ One or more system components as described in the "Conditional Pass" section need to be replaced or repaired. The system, upon completion of the replacement or repair, as approved by the Board of Health, will pass.

Indicate yes, no, or not determined (Y, N, or ND). Describe basis of determination in all instances. If "not determined", explain why not.

— The septic tank is metal, unless the owner or operator has provided the system inspector with a copy of a Certificate of Compliance (attached) indicating that the tank was installed within twenty (20) years prior to the date of the inspection; or the septic tank, whether or not metal, is cracked, structurally unsound, shows substantial infiltration or exfiltration, or tank failure is imminent. The system will pass inspection if the existing septic tank is replaced with a complying septic tank as approved by the Board of Health.

— Sewage backup or breakout or high static water level observed in the distribution box is due to broken or obstructed pipe(s) or due to a broken, settled or uneven distribution box. The system will pass inspection if (with approval of the Board of Health).

_____ broken pipe(s) are replaced
_____ obstruction is removed
_____ distribution box is levelled or replaced

— The system required pumping more than four times a year due to broken or obstructed pipe(s). The system will pass inspection if (with approval of the Board of Health):

_____ broken pipe(s) are replaced
_____ obstruction is removed

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART B**
**CHECKLIST**

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

Check if the following have been done: You must indicate either "Yes" or "No" as to each of the following:

| Yes | No | |
|---|---|---|
| ✓ | | Pumping information was provided by the owner, occupant, or Board of Health. |
| ✓ | | None of the system components have been pumped for at least two weeks and the system has been receiving normal flow rates during that period. Large volumes of water have not been introduced into the system recently or as part of this inspection. |
| ✓ | | As built plans have been obtained and examined. Note if they are not available with N/A. |
| ✓ | | The facility or dwelling was inspected for signs of sewage back-up. |
| ✓ | | The system does not receive non-sanitary or industrial waste flow. |
| ✓ | | The site was inspected for signs of breakout. |
| ✓ | | All system components, excluding the Soil Absorption System, have been located on the site. |
| ✓ | | The septic tank manholes were uncovered, opened, and the interior of the septic tank was inspected for condition of baffles or tees, material of construction, dimensions, depth of liquid, depth of sludge, depth of scum. |
| | | The size and location of the Soil Absorption System on the site has been determined based on: |
| ✓ | | Existing information. For example, Plan at B.O.H. |
| ✓ | | Determined in the field (if any of the failure criteria related to Part C is at issue, approximation of distance is unacceptable) [15.302(3)(b)] |
| ✓ | | The facility owner (and occupants, if different from owner) were provided with information on the proper maintenance of SubSurface Disposal Systems. |

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**D. SYSTEM FAILS:**

You must indicate either "Yes" or "No" to each of the following:

_____ I have determined that one or more of the following failure conditions exist as described in 310 CMR 15.303. The basis for this determination is identified below. The Board of Health should be contacted to determine what will be necessary to correct the failure.

| Yes | No | |
|---|---|---|
| ___ | ___ | Backup of sewage into facility or system component due to an overloaded or clogged SAS or cesspool. |
| ___ | ___ | Discharge or ponding of effluent to the surface of the ground or surface waters due to an overloaded or clogged SAS or cesspool. |
| ___ | ___ | Static liquid level in the distribution box above outlet invert due to an overloaded or clogged SAS or cesspool. |
| ___ | ___ | Liquid depth in cesspool is less than 6" below invert or available volume is less than 1/2 day flow. |
| ___ | ___ | Required pumping more than 4 times in the last year **NOT** due to clogged or obstructed pipe(s). Number of times pumped ___. |
| ___ | ___ | Any portion of the Soil Absorption System, cesspool or privy is below the high groundwater elevation. |
| ___ | ___ | Any portion of a cesspool or privy is within 100 feet of a surface water supply or tributary to a surface water supply. |
| ___ | ___ | Any portion of a cesspool or privy is within a Zone I of a public well. |
| ___ | ___ | Any portion of a cesspool or privy is within 50 feet of a private water supply well. |
| ___ | ___ | Any portion of a cesspool or privy is less than 100 feet but greater than 50 feet from a private water supply well with no acceptable water quality analysis. If the well has been analyzed to be acceptable, attach copy of well water analysis for coliform bacteria, volatile organic compounds, ammonia nitrogen and nitrate nitrogen. |

**E. LARGE SYSTEM FAILS:**

You must indicate either "Yes" or "No" to each of the following:

The following criteria apply to large systems in addition to the criteria above:

_____ The system serves a facility with a design flow of 10,000 gpd or greater (Large System) and the system is a significant threat to public health and safety and the environment because one or more of the following conditions exist:

| Yes | No | |
|---|---|---|
| ___ | ___ | the system is within 400 feet of a surface drinking water supply |
| ___ | ___ | the system is within 200 feet of a tributary to a surface drinking water supply |
| ___ | ___ | the system is located in a nitrogen sensitive area (Interim Wellhead Protection Area - IWPA) or a mapped Zone II of a public water supply well) |

The owner or operator of any such system shall upgrade the system in accordance with 310 CMR 15.304(2). Please consult the local regional office of the Department for further information.

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART C**
**SYSTEM INFORMATION (continued)**

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**BUILDING SEWER:**
(Locate on site plan)

Depth below grade: ✓
Material of construction: __ cast iron ✓ 40 PVC __ other (explain)

Distance from private water supply well or suction line N/A - Water Supply is a Pressure-Line
Diameter 4"
Comments: (condition of joints, venting, evidence of ~~leakage, etc.~~)
Good Condition.

**SEPTIC TANK:** ✓
(locate on site plan)

Depth below grade: 12"
Material of construction: ✓ concrete __ metal __ Fiberglass __ Polyethylene __ other(explain)

If tank is metal, list age ____ Is age confirmed by Certificate of Compliance ____ (Yes/No)

Dimensions: 58" x 102" x 48" Deep
Sludge depth: 6"
Distance from top of sludge to bottom of outlet tee or ~~baffle~~: 22"
Scum thickness: 8"
Distance from top of scum to top of outlet tee or baffle: 3"
Distance from bottom of scum to bottom of outlet tee or baffle: 15"
How dimensions were determined: Direct Observation At Time of Pumping

Comments:
(recommendation for pumping, condition of inlet and outlet tees or baffles, depth of liquid level in relation to outlet invert, structural integrity, evidence of leakage, etc.) Solids Accumulation was Heavy But There was No Significant Carry-Over To D-Box. Recommend Annual Pumping For 8 Occupants. Tank And Baffles Are in Good Condition

**GREASE TRAP:** N/A
(locate on site plan)

Depth below grade: ____
Material of construction: __ concrete __ metal __ Fiberglass __ Polyethylene __ other(explain)

Dimensions: _____
Scum thickness: _____
Distance from top of scum to top of outlet tee or baffle: _____
Distance from bottom of scum to bottom of outlet tee or baffle: _____
Date of last pumping: _____

Comments:
(recommendation for pumping, condition of inlet and outlet tees or baffles, depth of liquid level in relation to outlet invert, structural integrity, evidence of leakage, etc.) _____

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART C**
**SYSTEM INFORMATION**

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**FLOW CONDITIONS**

**RESIDENTIAL:**
Design flow: 110 g.p.d./bedroom.
Number of bedrooms (design): 4 Number of bedrooms (actual): 4
Total DESIGN flow 440
Number of current residents: 8
Garbage grinder (yes or no): No
Laundry (separate system) (yes or no): No ; If yes, separate inspection required Laundry discharge is to septic tank. As recommended.
Laundry system inspected (yes or no)
Seasonal use (yes or no): No
Water meter readings, if available (last two year's usage (gpd): 2-17-99 to 5-26-99 = 360 GPD Avg.
Sump Pump (yes or no): No
Last date of occupancy: Currently Occupied

**COMMERCIAL/INDUSTRIAL:**
Type of establishment: _____
Design flow: _____ gpd ( Based on 15.203)
Basis of design flow _____
Grease trap present: (yes or no)___
Industrial Waste Holding Tank present: (yes or no)___
Non-sanitary waste discharged to the Title 5 system: (yes or no)___
Water meter readings, if available: _____
Last date of occupancy: _____

**OTHER:** (Describe) _____
Last date of occupancy: _____

**GENERAL INFORMATION**

**PUMPING RECORDS** and source of information:
Pumped last 1997 by Karls. Per Owner
System pumped as part of inspection: (yes or no) Yes
If yes, volume pumped: 1000 gallons
Reason for pumping: Solids Removal & Check Tank

**TYPE OF SYSTEM**
✓ Septic tank/distribution box/soil absorption system
_____ Single cesspool
_____ Overflow cesspool
_____ Privy
_____ Shared system (yes or no) (if yes, attach previous inspection records, if any)
_____ I/A Technology etc. Attach copy of up to date operation and maintenance contract
_____ Tight Tank _____ Copy of DEP Approval

Other _____

**APPROXIMATE AGE** of all components, date installed (if known) and source of information: 9 Years Per 1990 Design Plan.

**Sewage odors** detected when arriving at the site: (yes or no) No

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART C**
**SYSTEM INFORMATION (continued)**

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**SOIL ABSORPTION SYSTEM (SAS):** ✓
(locate on site plan, if possible; excavation not required, location may be approximated by non-intrusive methods)

If not located, explain:

Type:
leaching pits, number:___
leaching chambers, number:___
leaching galleries, number:___
leaching trenches, number, length: 2 Each 36" wide, 6" deep, 50 feet long
leaching fields, number, dimensions:___
overflow cesspool, number:___
Alternative system: ___
Name of Technology: ___

Comments:
(note condition of soil, signs of hydraulic failure, level of ponding, damp soil, condition of vegetation, etc.)
Ground Surface Conditions Are Good.

**CESSPOOLS:** N/A
(locate on site plan)

Number and configuration:___
Depth-top of liquid to inlet invert:___
Depth of solids layer:___
Depth of scum layer:___
Dimensions of cesspool:___
Materials of construction:___
Indication of groundwater:___
inflow (cesspool must be pumped as part of inspection)___

Comments:
(note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.)

**PRIVY:** N/A
(locate on site plan)

Materials of construction:___ Dimensions:___
Depth of solids:___
Comments:
(note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.)

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART C**
**SYSTEM INFORMATION (continued)**

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**TIGHT OR HOLDING TANK:** N/A (Tank must be pumped prior to, or at time of, inspection)
(locate on site plan)

Depth below grade:____
Material of construction: __concrete __metal __Fiberglass __Polyethylene __other(explain)

Dimensions:_____
Capacity:_____ gallons
Design flow:_____ gallons/day
Alarm present_____
Alarm level:_____ Alarm in working order: Yes ___ No__
Date of previous pumping: _____
Comments:
(condition of inlet tee, condition of alarm and float switches, etc.)

**DISTRIBUTION BOX:** ✓
(locate on site plan)

Depth of liquid level above outlet invert: 0"

Comments:
(note if level and distribution is equal, evidence of solids carryover, evidence of leakage into or out of box, etc.) Initial Inspection Showed Liquid Levels 1/2" and 1" Above Inverts. D-Box was Not Level. There was No Evidence of Any Prior Higher Liquid Levels and No Other Indication that this was Due to a "Clogged or Overloaded SAS." After Tel. Discussion with Health Agent, the Pumper was Authorized to Install a New D-Box Level and Correct Elevation. The 7-14-99 Follow-Up Inspection Showed the Septic Tank Re-Filled, Flow is To D-Box, Distribution out of D-Box is Even. Liquid Level is Not Above the Outlet Inverts. D-Box Now Looks Good.

**PUMP CHAMBER:** N/A
(locate on site plan)

Pumps in working order: (Yes or No)_____
Alarms in working order (Yes or No)_____
Comments:
(note condition of pump chamber, condition of pumps and appurtenances, etc.) _____

**SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM**
**PART C**
**SYSTEM INFORMATION (continued)**

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

NRCS Report name_____
Soil Type_____
Typical depth to groundwater_____

USGS Date website visited
Observation Wells checked
Groundwater depth: Shallow_____ Moderate_____ Deep_____

SITE EXAM
- ✓ Slope
- Surface water
- ✓ Check Cellar
- Shallow wells

Estimated Depth to Groundwater 7 Feet

Please indicate all the methods used to determine High Groundwater Elevation:

- ✓ Obtained from Design Plans on record
- ✓ Observed Site (Abutting property, observation hole, basement sump etc.)
- ____ Determined from local conditions
- ____ Checked with local Board of health
- ____ Checked FEMA Maps
- ____ Checked pumping records
- ____ Checked local excavators, installers
- ____ Used USGS Data

Describe how you established the High Groundwater Elevation. (**Must** be completed)

Reviewed 1990 Soil Test Report on File.

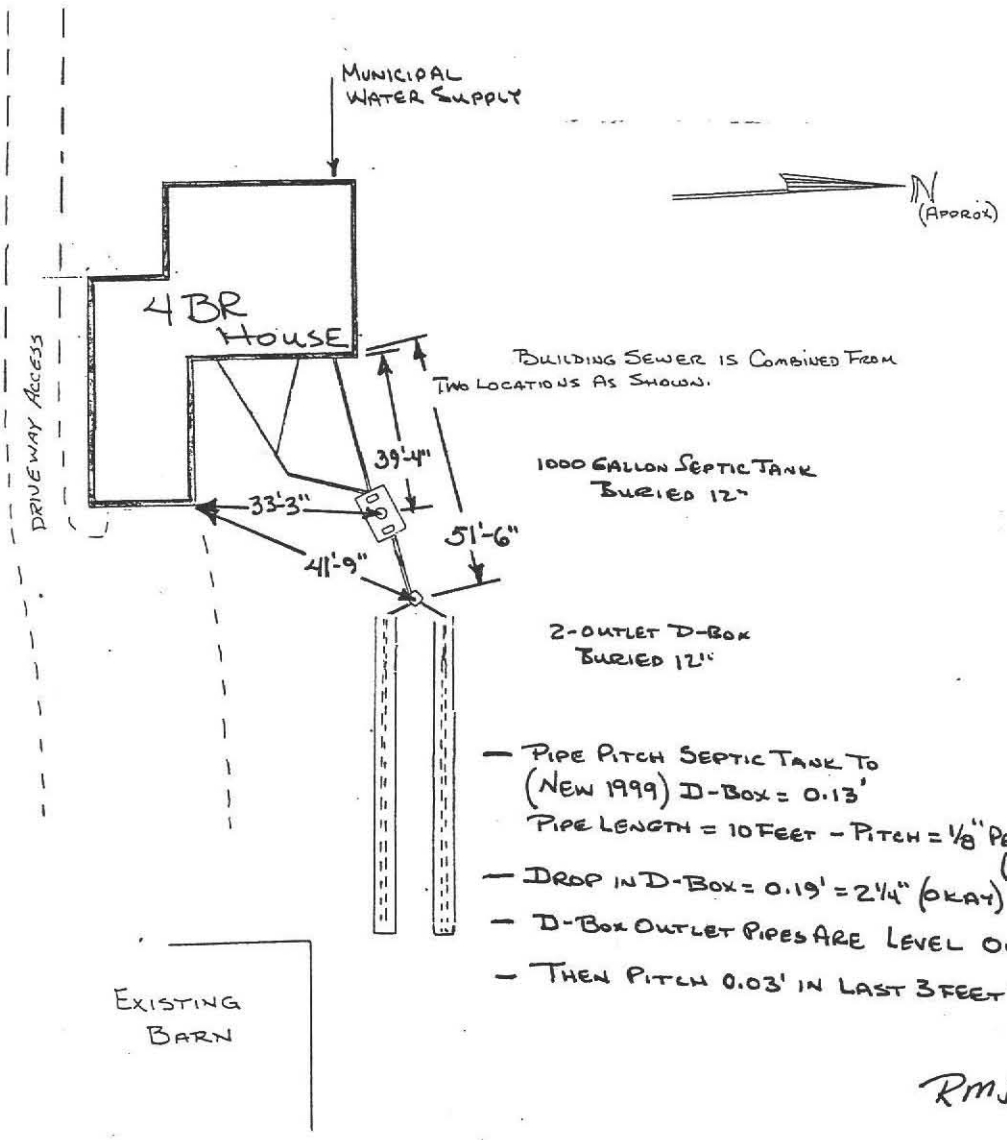
Ground Surface, Cellar and Leach Trench observations are consistent with 7 feet to groundwater.

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

**Property Address:** 1670 South East St. Amherst
**Owner:** Ruth Barrett
**Date of Inspection:** 7-7 & 7-14-99

**SKETCH OF SEWAGE DISPOSAL SYSTEM:**
include ties to at least two permanent reference landmarks or benchmarks
locate all wells within 100' (Locate where public water supply comes into house)

South East Street




— Pipe Pitch Septic Tank To (New 1999) D-Box = 0.13'
Pipe Length = 10 Feet – Pitch = 1/8" per Foot (Okay)
— Drop in D-Box = 0.19' = 2¼" (Okay)
— D-Box Outlet Pipes are Level Out 2 Feet (Okay)
— Then Pitch 0.03' in Last 3 Feet To Trenches (Okay)

RMS 7-14-99

# OBSERVATION PITS

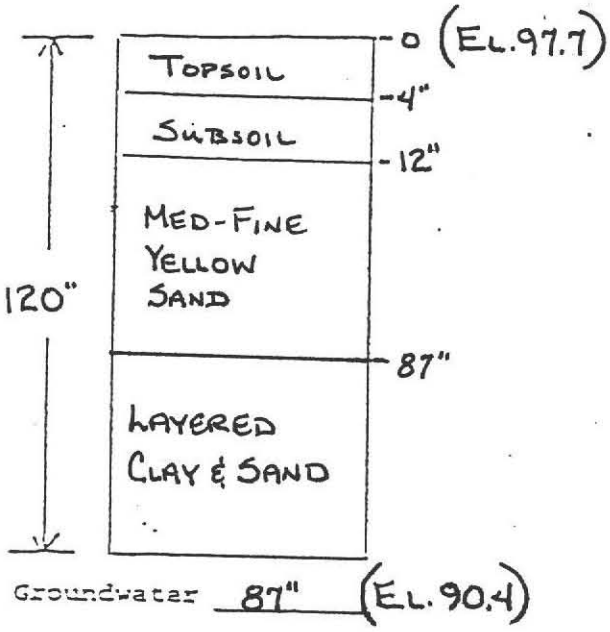
REQUESTED BY: FRANCIS LYMAN

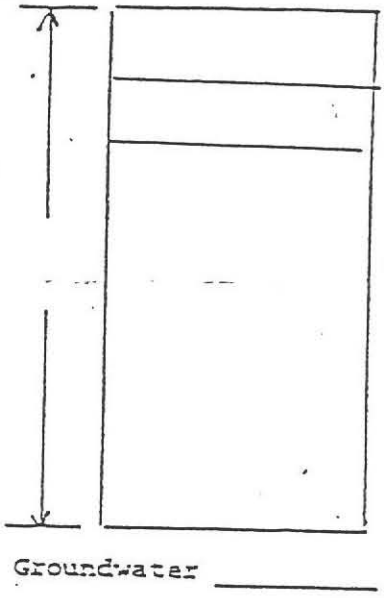
LOCATION: 1670 SOUTH EAST ST.
AMHERST, MA.

MAILING ADDRESS:

DATE: 5-16-90 OBSERVER: R. SCOTT, P.E. WITNESS: D. ZAROZINSKI, BOFH.

5-16-90




PERC BOTTOM DEPTH = 45"

START SOAK @ 12:03

24 GAL TO START @ 12:12:30

12" @ 12:12:30

9" @ 12:14:15

6" @ 12:16:00

PERC RATE = 1:45 / 3 INCHES = 0.6 MIN/INCH

DESIGN RATE = 2 MIN/INCH

No. .....

FEE .....

NOTE: THIS IS A REVISION OF APPLICATION DATED 6-20-90

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

TOWN OF AMHERST

Richard Scott 7-6-90

# Application for Disposal Works Construction Permit

Application is hereby made for a Permit to Construct ( ) or Repair ( ✓ ) an Individual Sewage Disposal System at:

1670 SOUTH EAST ST. (Location - Address) ..... or Lot No.

FRANCIS LYMAN (Owner) ..... 75 MECHANIC ST. AMHERST, MA. 01002 (Address)

KARL'S EXCAVATING (Installer) ..... RIVER DRIVE HADLEY, MA. 01035 (Address)

Type of Building ..... Size Lot ..... Sq. feet

Dwelling ✓ No. of Bedrooms 4 ..... Expansion Attic (NO) ..... Garbage Grinder (NO)

Other — Type of Building ..... No. of persons ..... Showers ( ) — Cafeteria ( )

Other fixtures .....

Design Flow 110 gallons per ~~person~~ BEDROOM per day. Total daily flow 440 gallons.

Septic Tank ✓ Liquid capacity 1000 gallons EXISTING Length 8' Width 5' Diameter — Depth 4'

Disposal Trench ✓ No. 2 Width 36" Total Length 100' Total leaching area 406 sq. ft.

Seepage Pit No. ..... Diameter ..... Depth below inlet ..... Total leaching area ..... sq. ft.

Other Distribution box (YES) Dosing tank (NO)

Percolation Test Results Performed by R. SCOTT, P.E.; WITNESS: D. ZARZESNSKI, BOARD OF H. Date 5-16-90

Test Pit No. 1 2 minutes per inch Depth of Test Pit 120" Depth to ground water 87"

Test Pit No. 2 ..... minutes per inch Depth of Test Pit ..... Depth to ground water .....

Description of Soil TO 4" TOPSOIL; TO 12" SUBSOIL; TO 87" MED-FINE YELLOW SAND; TO 120" DEPTH LAYERED CLAY & SAND

Nature of Repairs or Alterations — Answer when applicable RE-USE EXISTING BUILDING SEWER & SEPTIC TANK; REPLACE PIPE FROM TANK AND LEACH FACILITY

CHECK OR FILL IN WHERE APPLICABLE

Agreement:

The undersigned agrees to install the aforedescribed Individual Sewage Disposal System in accordance with the provisions of TITLE 5 of the State Environmental Code — The undersigned further agrees not to place the system in operation until a Certificate of Compliance has been issued by the board of health.

Signed ..... Date .....

Application Approved By ..... Date .....

Application Disapproved *for the following reasons:* .....

..... Date .....

Permit No. ..... Issued ..... Date

---

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

..... OF .....

# Certificate of Compliance

*THIS IS TO CERTIFY,* That the Individual Sewage Disposal System constructed ( ) or Repaired ( )

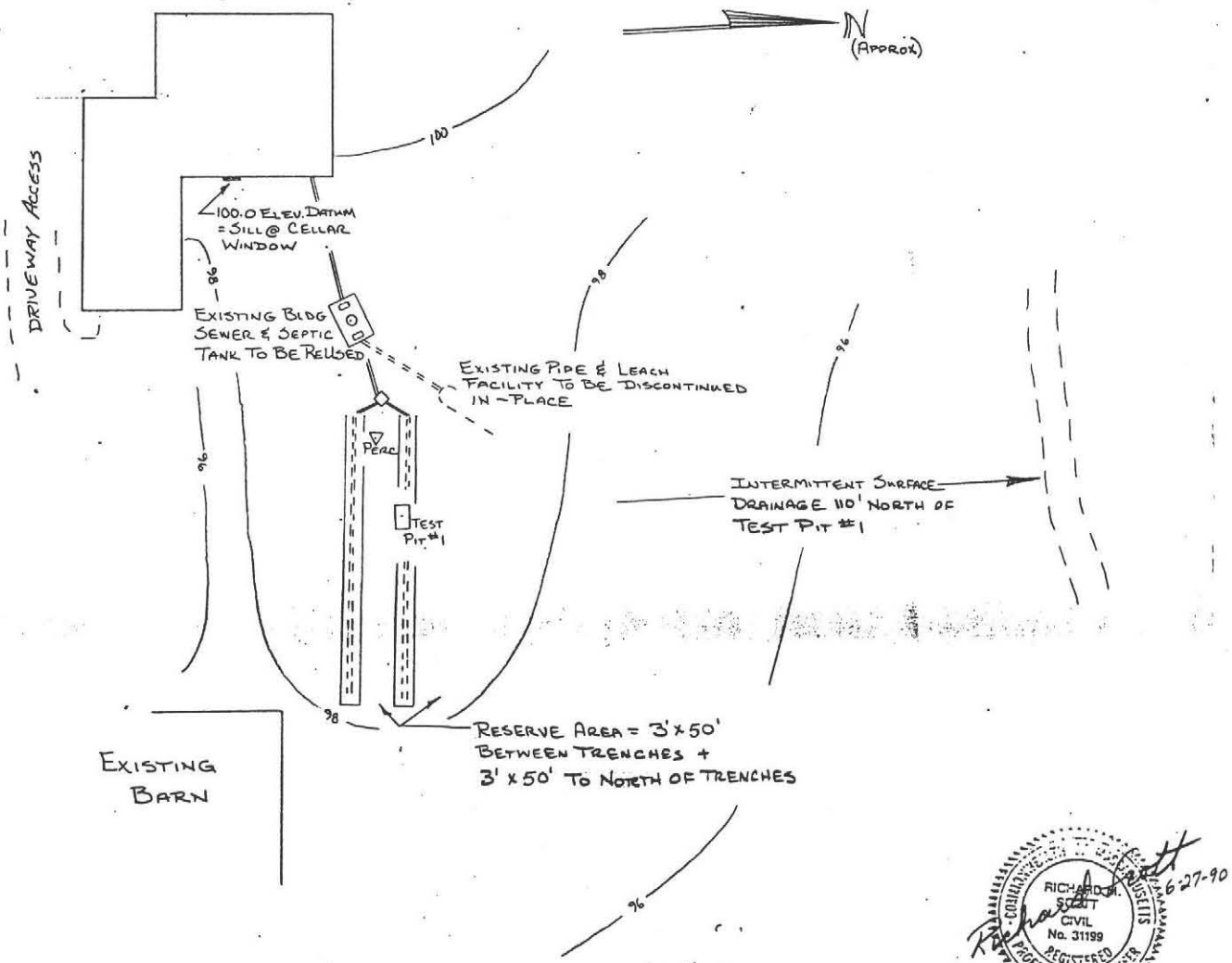
by ..... Installer

at .....

has been installed in accordance with the provisions of TITLE 5 of The State Environmental Code as described in the application for Disposal Works Construction Permit No. ..... dated .....

**THE ISSUANCE OF THIS CERTIFICATE SHALL NOT BE CONSTRUED AS A GUARANTEE THAT THE SYSTEM WILL FUNCTION SATISFACTORY.**

DATE ..... Inspector .....




## NOTES

Town Water Supply - No Wells in Area of Leach Trenches

Finish Contours Approximate Existing

Richard Scott 6-27-90

RICHARD M. SCOTT
CIVIL
No. 31199
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS

# Septic System Design

At 1670 South East St. Amherst, MA.

| | | |
|---|---|---|
| SCALE: 1" = 20' | APPROVED BY: | DRAWN BY RMS |
| DATE: 6-27-90 | | REVISED 7-6-90 |

Trenches were 40' Long

FOR: Francis Lyman
BY: Richard Scott, P.E.

DRAWING NUMBER

11 X 17 PRINTED ON NO. 1000H CLEARPRINT ●

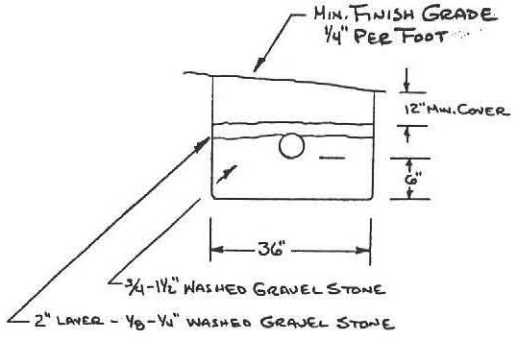
## System Design Calculations

4 Bedroom x 110 gal. per BR per day =
440 gal. per day design flow.
Minimum effective septic tank volume = 1.5 x 440 = 660 gal.
Specified tank volume for this installation = 1000 gal. (Existing)
Percolation rate = 2 minutes per inch →
Design loading = 2.50 GPD per sq. ft. of effective sidewall & 1.00 GPD per sq. ft of bottom area.

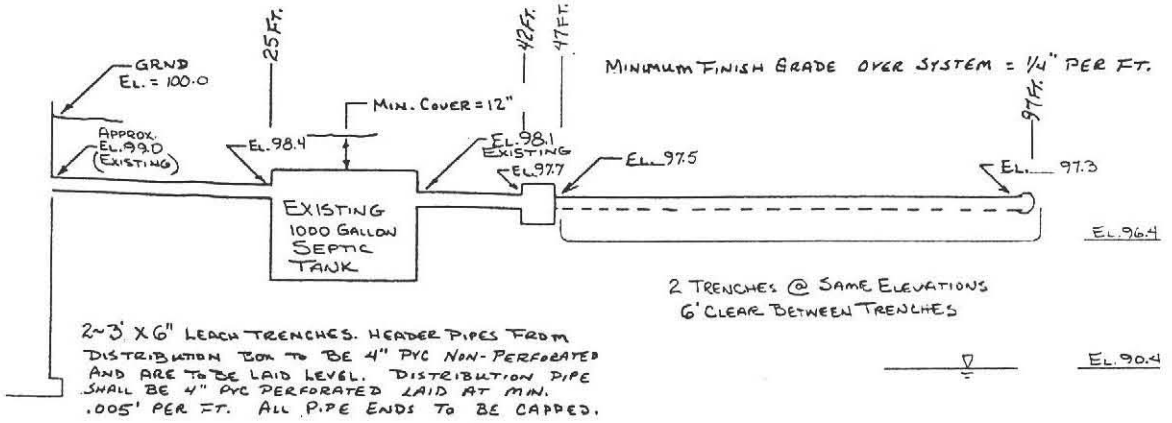
Specified leach trenches are 3.0 ft. wide x 0.5 ft. effective depth. Allowable loading per ft. of trench = 1.0 x 3.0 x 1.00 + 2 x 1.0 x 0.5 x 2.5 = 5.50 GPD/ft.
Required trench length = 440 ÷ 5.5 = 80 feet
(Without consideration of trench ends)

- Specified trenches = 2 @ 40 Ft. Long
- Allowable volume = 80 x 5.50 + 4 x 3 x 0.5 x 2.5 = 455 GPD (Per Mass. Title 5)
(With consideration of trench ends)
- Amherst Supplemental Regulation requires 1.25 x Title 5 = 2 @ 50' long

Title 5 capacity = 100' x 5.50 GPD/ft. + 4 ends x 3 ft x 0.5 ft x 2.50 GPD/ft² = 565 GPD




Typical Trench Construction




System Profile - Section Parallel to Flow
(Not to Scale)

Richard Scott 6-27-90

Septic System Design
At 1670 South East St. Amherst

| | | |
|---|---|---|
| Scale: As Shown | Approved by: | Drawn by RMS |
| Date: 6-27-90 | | Revised 7-6-90 |
| For: Francis Lyman | | Added 1.25 Factor |
| By: Richard Scott, P.E. | | |
| | | Drawing Number |