No. 99-2

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

Town OF Amherst

FEE 60.00 on 2/4/99

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

Application for a Permit to Construct ( ) Repair (X) Upgrade ( ) Abandon ( ) ~~X~~ Complete System ☐ Individual Components

979 Bay Rd — Location	David N. & Phyllis Smith — Owner's Name
Map/Parcel #	979 Bay Rd, Amherst, MA 01002 — Address
Lot #	(413) 256-8953 — Telephone #
Installer's Name	Richard E. Costa, PE Telephone # Robert Stover — Designer's Name
Address	Amherst Civil Engineering
Telephone #	P.O. Box 3312, Amherst, MA 01004-3312 — Address
	(413) 256-3400 — Telephone #

Type of Building: single family house — Lot Size _____ Sq. feet

Dwelling — No. of Bedrooms 4 — Garbage Grinder (no)

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

Other fixtures _____

Design Flow (min. required) 440 gpd Calculated design flow 444 gpd Design flow provided _____ gpd

Plan: Date 10/14/98 Number of sheets 1 Revision Date _____

Title "On-Site Sewage Disposal System"

Description of Soil(s) Attached

Soil Evaluator Form No. _____ Name of Soil Evaluator Robert Stover Date of Evaluation 6/10/98

DESCRIPTION OF REPAIRS OR ALTERATIONS replace and relocate tank with 1500 gal tank; replace existing S.A.S. with 3 leach trenches 40' long by 2' wide by 1.5' below distribution lines

The undersigned agrees to install the above described individual Sewage Disposal System in accordance with the provisions of TITLE 5 and further agrees not to place the system in operation until a Certificate of Compliance has been issued by the Board of Health.

Signed Robert Stover (for David Smith) Date 11/25/98

Inspections _____

FORM 1 - APPLICATION FOR DSCP **DEP APPROVED FORM 5/96**

No. _____

THE COMMONWEALTH OF MASSACHUSETTS

Amherst BOARD OF HEALTH

FEE

CERTIFICATE OF COMPLIANCE

Description of Work: ☐ **Individual Component(s)** ~~X~~ **Complete System**

The undersigned hereby certify that the Sewage Disposal System; Constructed ( ), Repaired (X), Upgraded ( ) Abandoned ( )

by: _____

at 979 Bay Rd.

has been installed in accordance with the provisions of 310 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. _____ dated _____. Approved Design Flow _____ (gpd)

COMMONWEALTH OF MASSACHUSETTS Richard E. Costa Civil No. 37449 REGISTERED PROFESSIONAL ENGINEER

10/14/98

Installer _____

Designer: _____ Inspector _____ Date _____

The issuance of this certificate shall not be construed as a guarantee that the system will function as designed.

FORM 3 - CERTIFICATE OF COMPLIANCE **DEP APPROVED FORM 5/96**

No. 99-2

THE COMMONWEALTH OF MASSACHUSETTS

FEE 160.00

Amherst BOARD OF HEALTH

DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to Construct ( ) Repair (X) Upgrade ( ) Abandon ( ) an individual sewage disposal system at 979 Bay Rd. as described in the application for Disposal System Construction Permit No. _____, dated _____.

Provided: Construction shall be completed within three years of the date of this permit. All local conditions must be met.

Date _____ Board of Health _____

FORM 2 - DSCP **DEP APPROVED FORM 5/96**

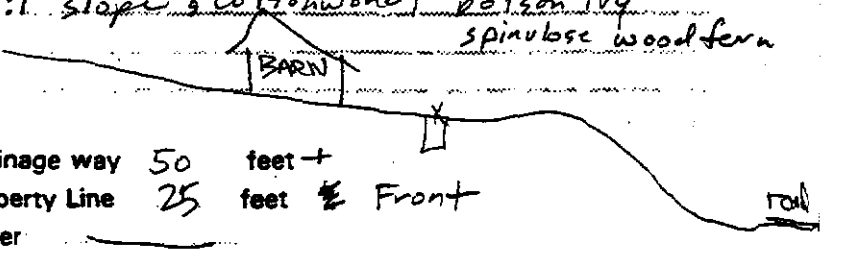
FORM 1255 (REV 5/96) H&W HOBBS & WARREN™ PUBLISHERS - BOSTON

David + Phyllis Smith

Location Address or Lot No. 979 Bay Rd.
Amherst, MA

On-site Review

Deep Hole Number 1 **Date:** 6/10/98 **Time:** 9:00 AM **Weather** clear 70°
Location (identify on site plan) see plan
Land Use light woods **Slope (%)** 0% 15' from **Surface Stones** none
Vegetation sugar maple, 2 gray birch 3:1 slope 3 cottonwood, poison ivy spinulose woodfern
Landform Kame Terrace
Position on landscape (sketch on the back)



Distances from:

Open Water Body	150	feet ±	Drainage way	50	feet +
Possible Wet Area	150	feet ±	Property Line	25	feet ± Front
Drinking Water Well	town water	feet	Other		

DEEP OBSERVATION HOLE LOG*

Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0-8"	A	VFSL	7.5YR 3/4	none	slightly friable
8-30"	Bw	FSL gravelly	7.5YR 5/6	none	loose to slightly friable Massive
			28-32" 5Y 4/6	one band	at textural break at Bw + C - not a water table
30-144"	C	LS to MS	10YR 6/6 + 5Y 4.5/6	none	single grain some gravel

* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) stratified outwash **Depth to Bedrock:** >144"
Depth to Groundwater: **Standing Water in the Hole:** none **Weeping from Pit Face:** none
Estimated Seasonal High Ground Water: 144"

FORM 12 - PERCOLATION TEST

David + Phyllis Smith

Location Address or Lot No. 979 Bay Rd

COMMONWEALTH OF MASSACHUSETTS

Amherst , Massachusetts

Percolation Test*		
Date: 6/10/98	Time: 8:50 Am	
Observation Hole #	1	
Depth of Perc	50"	
Start Pre-soak	8:53	
End Pre-soak	9:09	
Time at 12"	9:09	
Time at 9"	9:11	
Time at 6"	9:13:30	
Time (9"-6")	2:30	
Rate Min./Inch	50 sec./inch	

* Minimum of 1 percolation test must be performed in both the primary area AND reserve area.

Site Passed ☒ Site Failed ☐

Performed By: Robert Stover

Witnessed By: Mike Lombard

Comments: 5' Water table separation required

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 979 Bay Rd. Amherst
Owner: Smith
Date of Inspection: 4/27/06

SITE EXAM
Slope
Surface water none
Check cellar dry
Shallow wells none

Estimated depth to ground water 144" ~~feet~~

Please indicate (check) all methods used to determine the high ground water elevation:

✓ Obtained from system design plans on record - If checked, date of design plan reviewed: 10/14/98
____ Observed site (abutting property/observation hole within 150 feet of SAS)
____ Checked with local Board of Health-explain: _____
____ Checked with local excavators, installers- (attach documentation)
____ Accessed USGS database-explain: _____

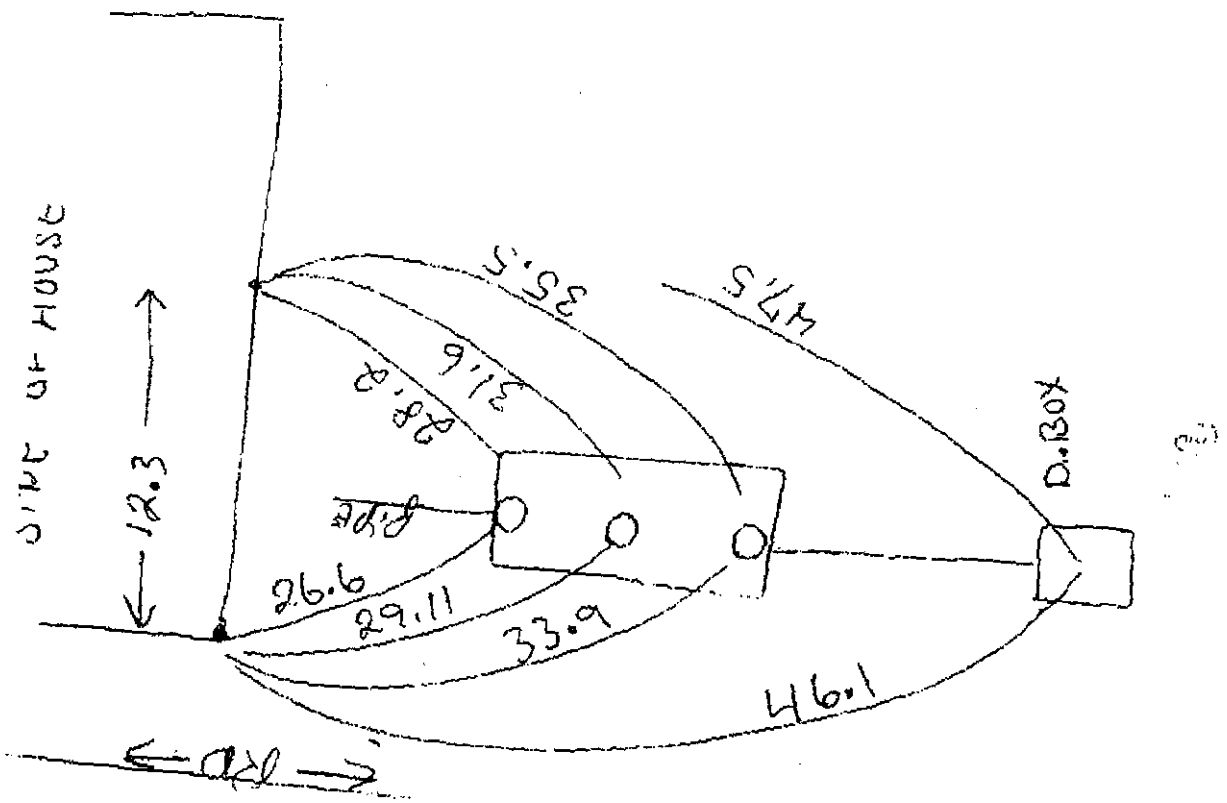
You **must** describe how you established the **high ground water elevation**:
I established the high ground water elevation at a soil evaluation and "perc" test conducted on 10/10/98 and witnessed by Mike Lombard of the Amherst Public Health Dept. The soil log from this evaluation is attached.

Dave,

There is a riser appoximately 5' off of the base of the large maple tree which will allow viewing of the Distribution box. I strongly advise that you remove the riser cover once a year and inspect the Distribution box to make sure the fine root hairs are not entering the box. If they are they should be removed If this becomes a problem then Maple tree will have to be removed.

Todd Cellura

RE: DAVID SMITH
979 BAY RD.
SO. AMHERST, MA.



OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 979 Bay Rd. Amherst
Owner: Smith
Date of Inspection: 4/27/06

SOIL ABSORPTION SYSTEM (SAS): ✓ **(locate on site plan, excavation not required)**

If SAS not located explain why:

Type
____ leaching pits, number: ___
____ leaching chambers, number: ____
____ leaching galleries, number: ____
✓ leaching trenches, number, length: 3 — 40' Long x 2' wide x 1.5' below dist. pipes, from design plan by R.E. Costa, P.E.
____ leaching fields, number, dimensions: _____
____ overflow cesspool, number: ____
____ innovative/alternative system Type/name of technology: _____
Comments (note condition of soil, signs of hydraulic failure, level of ponding, damp soil, condition of vegetation, etc.):
Soil and vegetation normal. No evidence of hydraulic failure, ponding or damp soil was present.

CESSPOOLS: ____ (cesspool must be pumped as part of inspection)(locate on site plan)

Number and configuration: none
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 (yes or no): ____
Comments (note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.):

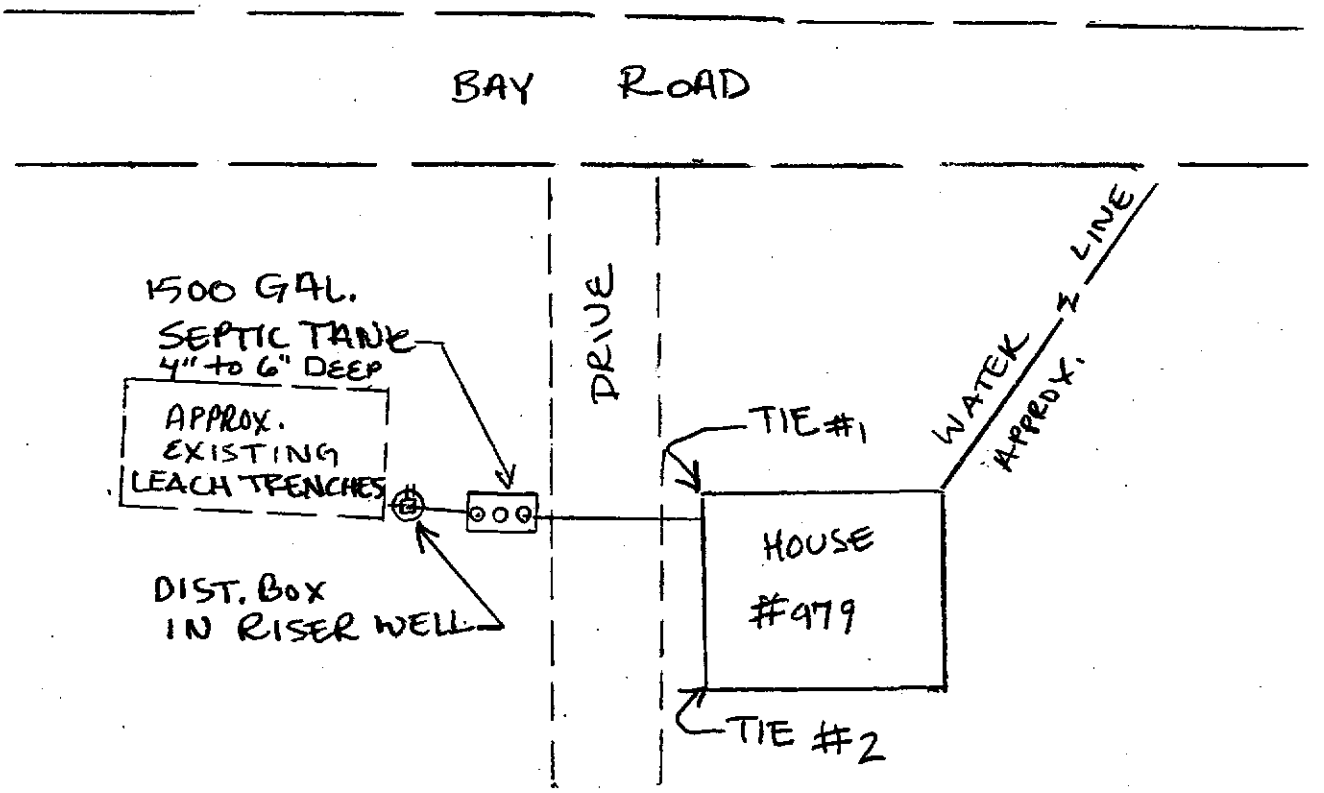
PRIVY: ____ (locate on site plan) none

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

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 979 Bay Rd. Amherst
Owner: Smith
Date of Inspection: 4/27/06

SKETCH OF SEWAGE DISPOSAL SYSTEM
Provide a sketch of the sewage disposal system including ties to at least two permanent reference landmarks or benchmarks. Locate all wells within 100 feet. Locate where public water supply enters the building.



TIES TO PERMANENT LANDMARKS		
SYSTEM COMPONENT	TIE #1	TIE #2
TANK INLET	27.0'	38.5'
TANK CENTER	30.0'	41.0'
TANK OUTLET	34.0'	44.5'
DISTRIBUTION BOX	46.0'	54.0'

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 979 Bay Rd. Amherst
Owner: Smith
Date of Inspection: 4/27/06

BUILDING SEWER (locate on site plan) 29"

Depth below grade: 15"
Materials of construction: ___cast iron ✓40 PVC ___other (explain): _____
Distance from private water supply well or suction line: none
Comments (on condition of joints, venting, evidence of leakage, etc.):
joints in good condition, No leakage

SEPTIC TANK: ✓ (locate on site plan)

Depth below grade: 4" to 6"
Material of construction: ✓concrete ___metal ___fiberglass ___polyethylene
___other(explain)_____
If tank is metal list age: ___ Is age confirmed by a Certificate of Compliance (yes or no): ___ (attach a copy of certificate)
Dimensions: 10.5' L x 5.5' W x 4.0 Liquid depth
Sludge depth: 1"±
Distance from top of sludge to bottom of outlet tee or baffle: 33"±
Scum thickness: 3" at inlet end
Distance from top of scum to top of outlet tee or baffle: 6"±
Distance from bottom of scum to bottom of outlet tee or baffle: 12"
How were dimensions determined: measured & typical
Comments (on pumping recommendations, inlet and outlet tee or baffle condition, structural integrity, liquid levels as related to outlet invert, evidence of leakage, etc.):
inlet + outlet tees are SCH 40 PVC in good condition. Structural integrity of tank good. Liquid level was right at outlet invert. No evidence of leakage

GREASE TRAP: ___(locate on site plan)

Depth below grade: none
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 (on pumping recommendations, inlet and outlet tee or baffle condition, structural integrity, liquid levels as related to outlet invert, evidence of leakage, etc.):

_____
_____

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 979 Bay Rd. Amherst
Owner: Smith
Date of Inspection: 4/27/06

TIGHT or HOLDING TANK: ____ (tank must be pumped at time of inspection)(locate on site plan)

Depth below grade: none
Material of construction: ____concrete ____metal ____fiberglass ____polyethylene ____other(explain):

Dimensions: _____
Capacity: _____gallons
Design Flow: _____gallons/day
Alarm present (yes or no): _____
Alarm level: _____ Alarm in working order (yes or no): ____
Date of last pumping: _____
Comments (condition of alarm and float switches, etc.):

DISTRIBUTION BOX: ✓ (if present must be opened)(locate on site plan)

Depth of liquid level above outlet invert: 26" below grade 0"
Comments (note if box is level and distribution to outlets equal, any evidence of solids carryover, any evidence of leakage into or out of box, etc.):
Levelers on outlets. Box level + distribution equal. Thin layer of fine soap scum on liquid. No leakage. Box in good condition and relatively clean from middle of outlets up. D. Box has a concrete riser to surface for easy inspection and maintenance.

PUMP CHAMBER: ____ (locate on site plan) none
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.):

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART B
CHECKLIST

Property Address: 979 Bay Rd Amherst
Owner: Smith
Date of Inspection: 4/27/06

Check if the following have been done. You must indicate "yes" or "no" as to each of the following:

Yes No

✓ ___ Pumping information was provided by the owner, occupant, or Board of Health

___ ✓ Were any of the system components pumped out in the previous two weeks ?

✓ ___ Has the system received normal flows in the previous two week period ?

___ ✓ Have large volumes of water been introduced to the system recently or as part of this inspection ?

✓ ___ Were as built plans of the system obtained and examined? (If they were not available note as N/A)

✓ ___ Was the facility or dwelling inspected for signs of sewage back up ?

✓ ___ Was the site inspected for signs of break out ?

✓ ___ Were all system components, excluding the SAS, located on site ?

✓ ___ Were the septic tank manholes uncovered, opened, and the interior of the tank inspected for the condition of the baffles or tees, material of construction, dimensions, depth of liquid, depth of sludge and depth of scum ?

✓ ___ Was the facility owner (and occupants if different from owner) provided with information on the proper maintenance of subsurface sewage disposal systems ?

The **size and location of the Soil Absorption System (SAS)** on the site has been determined based on:

Yes no

✓ ___ Existing information. For example, a plan at the Board of Health.

✓ ___ Determined in the field (if any of the failure criteria related to Part C is at issue approximation of distance is unacceptable) [310 CMR 15.302(3)(b)]

D. Box was opened, inspected and pumped.

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION

Property Address: 999 Bay Rd. Amherst
Owner: Smith
Date of Inspection: 4/27/06

FLOW CONDITIONS

RESIDENTIAL
Number of bedrooms (design): 4 Number of bedrooms (actual): 4
DESIGN flow based on 310 CMR 15.203 (for example: 110 gpd x # of bedrooms): 440
Number of current residents: 2
Does residence have a garbage grinder (yes or no): no
Is laundry on a separate sewage system (yes or no): no [if yes separate inspection required]
Laundry system inspected (yes or no): NA
Seasonal use: (yes or no): no
Water meter readings, if available (last 2 years usage (gpd)): 935 gals = average 1.13 gal. per day / 830 days
Sump pump (yes or no): NO
Last date of occupancy: occupied at time inspection

COMMERCIAL/INDUSTRIAL
Type of establishment: not apply
Design flow (based on 310 CMR 15.203): _____ gpd
Basis of design flow (seats/persons/sqft,etc.): _____
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/use: _____

OTHER (describe): _____

GENERAL INFORMATION

Pumping Records
Source of information: owner – new system, this was the first time it was pumped.
Was system pumped as part of the inspection (yes or no): ___
If yes, volume pumped: 1500 gallons – How was quantity pumped determined? tank dimensions.
Reason for pumping: inspection and routine maintenance.

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)
___ Innovative/Alternative technology. Attach a copy of the current operation and maintenance contract (to be obtained from system owner)
___ Tight tank ___ Attach a copy of the DEP approval

___ Other (describe): _____

Approximate age of all components, date installed (if known) and source of information:
August 1999

Were sewage odors detected when arriving at the site (yes or no): no

OFFICIAL INSPECTION FORM - NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

Property Address: 979 Bay Rd. Amherst
Owner: Smith
Date of Inspection: 4/27/06

C. Further Evaluation is Required by the Board of Health:

NO Conditions exist which require further evaluation by the Board of Health in order to determine if the system is failing to protect public health, safety or 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 public health, safety and the environment:**

NA Cesspool or privy is within 50 feet of a surface water
NA 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, safety and environment:**

NO 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.

NO The system has a septic tank and SAS and the SAS is within a Zone 1 of a public water supply.

NO The system has a septic tank and SAS and the SAS is within 50 feet of a private water supply well.

NO The system has a septic tank and SAS and the SAS is less than 100 feet but 50 feet or more from a private water supply well**. Method used to determine distance _____

**This system passes if the well water analysis, performed at a DEP certified laboratory, 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, provided that no other failure criteria are triggered. A copy of the analysis must be attached to this form.

3. **Other:** ~~—————~~

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

Property Address: 979 Bay Rd. Amherst
Owner: Smith
Date of Inspection: 4/27/06

D. System Failure Criteria applicable to all systems:
You **must** indicate "yes" or "no" to each of the following for **all** inspections:

Yes	No	
___	✓	Backup of sewage into facility or system component due to 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
N.A.	___	Liquid depth in cesspool is less than 6" below invert or available volume is less than ½ 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 SAS, cesspool or privy is below high ground water elevation.
N.A.	___	Any portion of cesspool or privy is within 100 feet of a surface water supply or tributary to a surface water supply.
N.A	___	Any portion of a cesspool or privy is within a Zone 1 of a public well.
N. A	___	Any portion of a cesspool or privy is within 50 feet of a private water supply well.
N. A	___	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. **[This system passes if the well water analysis, performed at a DEP certified laboratory, 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, provided that no other failure criteria are triggered. A copy of the analysis must be attached to this form.]**

NO (Yes/No) **The system fails.** I have determined that one or more of the above failure criteria exist as described in 310 CMR 15.303, therefore the system fails. The system owner should contact the Board of Health to determine what will be necessary to correct the failure.

E. Large Systems: not apply
To be considered a large system the system must serve a facility with a design flow of 10,000 gpd to 15,000 gpd.
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)

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

If you have answered "yes" to any question in Section E the system is considered a significant threat, or answered "yes" in Section D above the large system has failed. The owner or operator of any large system considered a significant threat under Section E or failed under Section D shall upgrade the system in accordance with 310 CMR 15.304. The system owner should contact the appropriate regional office of the Department.

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

TITLE 5
OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM FORM
PART A
CERTIFICATION

Property Address: 979 Bay Rd.
Amherst, MA 01002
Owner's Name: David N. & Phyllis H. Smith
Owner's Address: Same

Date of Inspection: 4/27/06

Name of Inspector: (please print) Robert Stover
Company Name: Amherst Civil Engineering
Mailing Address: P.O. Box 3312
Amherst, MA 01004-3312
Telephone Number: (413) 256-3400

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 the inspection. The inspection was performed based on my training and experience in the proper function and maintenance of on site sewage disposal systems. **I am a DEP approved system inspector pursuant to Section 15.340 of Title 5 (310 CMR 15.000).** The system:

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

Inspector's Signature: Robert W. Stover **Date:** 4/27/06

The system inspector shall submit a copy of this inspection report to the Approving Authority (Board of Health or DEP) within 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 DEP. The original should be sent to the system owner and copies sent to the buyer, if applicable, and the approving authority.

Notes and Comments This is a relatively new system (installed Aug., 1999) That has received relatively light use (2 persons). Everything I saw was in good condition.

******This report only describes conditions at the time of inspection and under the conditions of use at that time. This inspection does not address how the system will perform in the future under the same or different conditions of use.**

OFFICIAL INSPECTION FORM – NOT FOR VOLUNTARY ASSESSMENTS
SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

Property Address: 979 Bay Rd Amherst
Owner: Smith
Date of Inspection: 4/27/06

Inspection Summary: Check A,B,C,D or E / ALWAYS complete all of Section D

A. System Passes:

Yes I have not found any information which indicates that any of the failure criteria described in 310 CMR 15.303 or in 310 CMR 15.304 exist. Any failure criteria not evaluated are indicated below.

Comments: See page one

B. System Conditionally Passes:

NO 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.

Answer yes, no or not determined (Y,N,ND) in the ____ for the following statements. If "not determined" please explain.

NO The septic tank is metal and over 20 years old* **or** the septic tank (whether metal or not) is structurally unsound, exhibits substantial infiltration or exfiltration or tank failure is imminent. System will pass inspection if the existing tank is replaced with a complying septic tank as approved by the Board of Health.
*A metal septic tank will pass inspection if it is structurally sound, not leaking and if a Certificate of Compliance indicating that the tank is less than 20 years old is available.

ND explain:

NO Observation of sewage backup or break out or high static water level in the distribution box due to broken or obstructed pipe(s) or due to a broken, settled or uneven distribution box. System will pass inspection if (with approval of Board of Health):

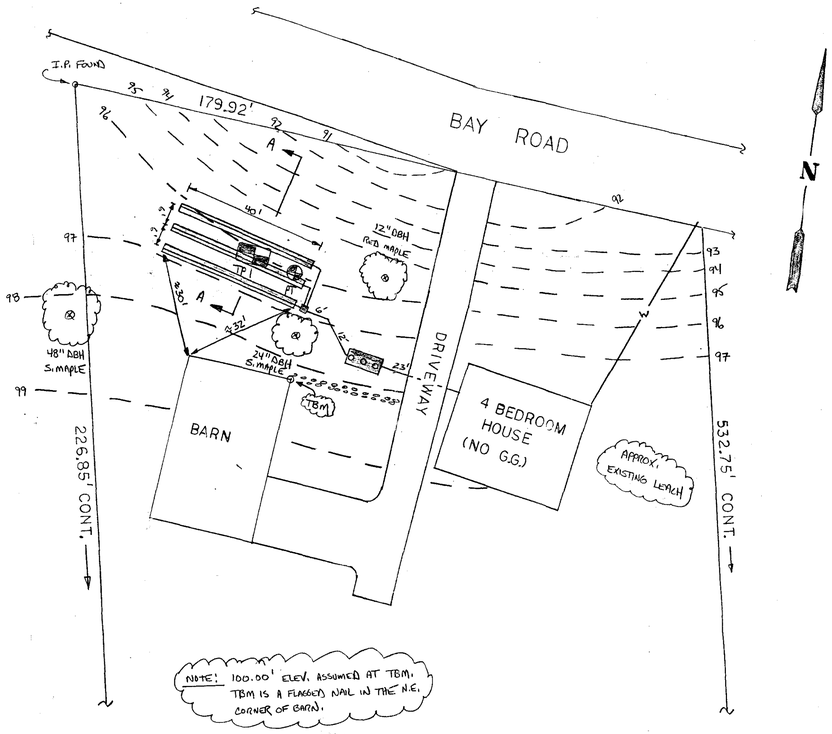
____ broken pipe(s) are replaced
____ obstruction is removed
____ distribution box is leveled or replaced

ND explain:

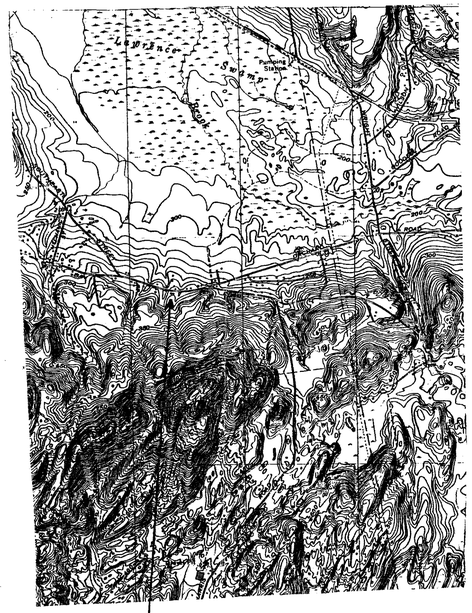
NO The system required pumping more than 4 times a year due to broken or obstructed pipe(s). The system will pass inspection if (with approval of the Board of Health):

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

ND explain:



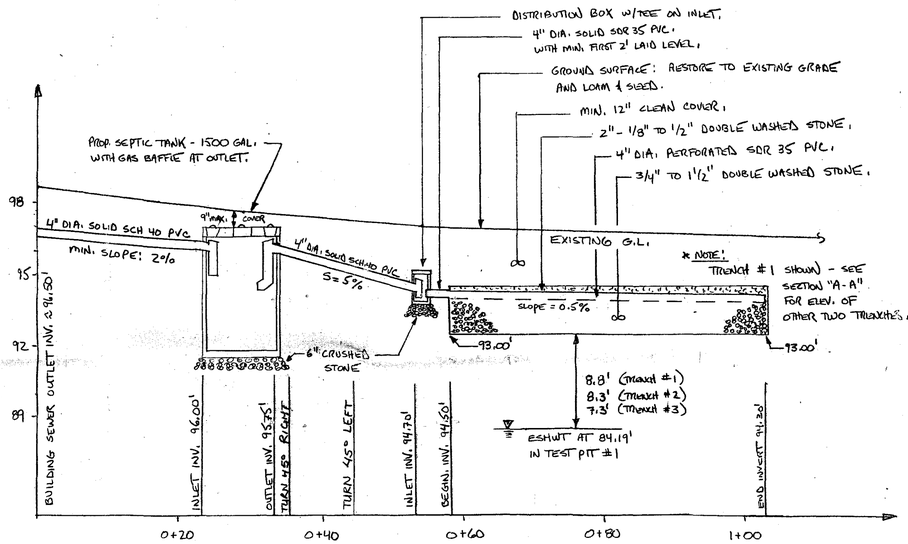
PLAN VIEW
SCALE: 1 inch = 20 feet



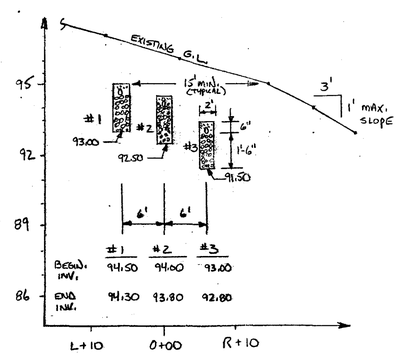
LOCUS PLAN
SCALE: 1:25000

LEGEND

- CONTOUR LINE (1' INTERVAL)
- PROPOSED CONTOUR (1' INTERVAL
- TPx DEEP OBSERVATION HOLE
- PTx PERCOLATION TEST
- DECIDUOUS TREE
- CONIFEROUS TREE
- W WATER SUPPLY LINE (PRESSURE)
- UTILITY POLE



SYSTEM PROFILE
SCALE: H: 1" = 10' V: 1" = 3'



LEACH FIELD
SECTION AT "A - A"
SCALE: H: 1" = 10' V: 1" = 3'

DESIGN CRITERIA

Design flow is for a 4 bedroom house with no garbage grinder.
Proposed septic tank: 1500 gallons.

DESIGN CALCULATION

Design Flow: Title V: 4 bedrooms x 110 gpd/bedroom = 440 gpd

Soil Loading Factor: Percolation Rate: <1 min./inch
Class I Soils
Soil Loading Rate: 0.74 gpd/sf

Proposed soil absorption system: 3 leach trenches 40 ft. long by 2 ft. wide by 1.5 ft. below invert of distribution lines.

Sidewall Area: (1.5ft.)(40ft.)(2sides)(3 trenches)	= 360.0 sf
Bottom Area: (2ft.)(40ft.)(3 trenches)	= 240.0 sf
Total Leaching Area:	= 600.0 sf
(600.0 sf)(0.74 gpd/sf)	= 444 gpd
Total Required Capacity	= 440 gpd (o'k)

SOIL INVESTIGATION

TEST PIT NO. 1 Elevation = 96.2'
Est. Seasonal High Water Table @ elev. = 84.2'
Bedrock deeper than elev. = 84.2'
Class I soils.

Water supply wells within 200 feet and wetland resource areas within 100 feet of the proposed soil absorption system are shown on the planview. Deep observation hole logs and percolation test results are in attached Soil Suitability Report. Soil Investigation and percolation testing by Robert Stover, Certified Soil Evaluator, and witnessed for the Board of Health by Mike Lombard, Certified Soil Evaluator on June 10, 1998.

GENERAL CONDITIONS

1. This system repair plan is prepared in accordance with Title V, 310 CMR 15.00. Construction shall conform to these regulations.
2. The installer shall notify the designer of any unusual conditions and shall not modify the plan without the written consent of the designer.
3. All debris in the site area shall be removed and disposed of by the installer in accordance with the law.
4. The installer shall notify the designer and the Amherst Board of Health when the system installation is complete and prior to placement of the cover material for final inspection. Notification shall be 48 hours prior to the time of inspection.
5. There is no guarantee expressed or implied to any user of a system installed persuant to this plan.
6. The on-site sewage disposal system shall be pumped and inspected as necessary and at least once every three years.

CONSTRUCTION NOTES

1. The pipes exiting the distribution box shall have the same invert elevation and shall be level for at least the first two feet of length.
2. Any topsoil, subsoil, stumps, roots and stones shall be removed from the area of the leaching trenches, from five feet around the leaching area and from wherever fill is to be placed. Any fill placed in or adjacent to the leaching area shall be clean granular sand and conform to the specifications of Title V, 310 CMR 15.255(3).
3. The finished grade above the soil absorption system shall have a minimum two percent slope to shed surface runoff away from the system.
4. Disturbed areas shall be loamed, seeded and mulched until permanent vegetative cover is established.
5. The existing septic tank shall be pumped, crushed, and filled with sand.
6. Any part of the existing soil absorption system encountered during exavation shall be disposed of in accordance with the requirements of the Amherst Board of Health.
7. Any part of the system that shall be located in an area subject to vehicular traffic shall be capable of withstanding H-20 wheel loading.

COMMONWEALTH OF MASSACHUSETTS
Richard E. Costa
Civil
No. 27449
REGISTERED PROFESSIONAL ENGINEER

10/15/98
12/15/98 (as revised)

ON-SITE SEWAGE DISPOSAL SYSTEM
979 BAY ROAD, AMHERST, MA 01002

DAVID N. & PHYLLIS H. SMITH
979 BAY ROAD, AMHERST, MA 01002

SCALE: As Shown	APPROVED BY	DRAWN BY REC
DATE: 10-14-98		

AMHERST CIVIL ENGINEERING
RICHARD COSTA, P.E. / ROBERT STOVER
P.O. BOX 3312, AMHERST, MA 01004-3312
413-256-3400

DRAWING NUMBER

Land 2 of 2