

No. 99-25

Town's Copy #500

THE COMMONWEALTH OF MASSACHUSETTS

FEE \$160.00

BOARD OF HEALTH

Town OF Amherst

ck # 8245
pd 12-13-99
Wm. Hart

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

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

Location <u>500 Middle St.</u>	Owner's Name <u>William E. + Victoria A. Hart</u>
Map/Parcel # <u>125/68</u>	Address <u>500 Middle St., Amherst, MA 01002</u>
Lot # <u>1</u>	Telephone # <u>(413) 253-5191</u>
Installer's Name	Designer's Name <u>Robert Stover</u>
Address	Address <u>P.O. Box 3312, Amherst, MA 01004-3312</u>
Telephone #	Address <u>Amherst Civil Engineering</u>
	Telephone # <u>(413) 256-3400</u>

Type of Building: single family house Lot Size 61,904 Sq. feet
Dwelling — No. of Bedrooms 4 Garbage Grinder ()
Other — Type of Building _____ No. of persons _____ Showers (), Cafeteria ()
Other fixtures _____

Design Flow (min. required) 440 gpd Calculated design flow 440 gpd Design flow provided _____ gpd
Plan: Date 11/29/99 Number of sheets 1 Revision Date _____
Title Repair of Sewage Disposal System

Description of Soil(s) Attached
Soil Evaluator Form No. _____ Name of Soil Evaluator Robert Stover Date of Evaluation 5/6/99

DESCRIPTION OF REPAIRS OR ALTERATIONS _____

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 William E. Hart) Date 12/1/99

Inspections _____

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

No. 99-25

THE COMMONWEALTH OF MASSACHUSETTS

FEE _____

Amherst BOARD OF HEALTH

CERTIFICATE OF COMPLIANCE

Description of Work: Individual Component(s) Complete System

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

by: William E. & Victoria A. Hart

at 500 Middle St.

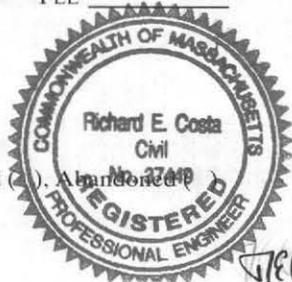
has been installed in accordance with the provisions of 310 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. _____ dated _____ Approved Design Flow _____ (gpd)

Installer William W. Clark

Designer: Robert W. Stover Inspector David J. ... Date 4/11/00

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. 99-25

THE COMMONWEALTH OF MASSACHUSETTS

FEE _____

Amherst BOARD OF HEALTH

DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to Construct () Repair (X) Upgrade () Abandon () an individual sewage disposal system at 500 Middle St. as described

in the application for Disposal System Construction Permit No. 99-25, dated 12-2-99.

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

Date 12-2-99 Board of Health David J. ...

FORM 2 - DSCP DEP APPROVED FORM 5/96

2000

250

1000

1500

2000

2500

3000

3500

4000

4500

5000

5500

6000

6500

7000

7500

8000

8500

9000

9500

10000

10500

11000

No. 99-25

12-2-99 BOB TO RE-DRAW PLANS
NOT PAID

Date: 5-6-99

Commonwealth of Massachusetts
, Massachusetts

Soil Suitability Assessment for On-site Sewage Disposal

Performed By: Robert Stover

Date: 5/6/99

Witnessed By: David Zarozinski

Location Address or Lot # <u>500 Middle St.</u>	Owner's Name, Address, and Telephone # <u>Bill Hart</u> <u>500 Middle St.</u> <u>256-8125-W</u> <u>253-5191-H</u>
New Construction <input type="checkbox"/> Repair <input checked="" type="checkbox"/>	

Office Review

Published Soil Survey Available: No Yes

Year Published _____ Publication Scale _____ Soil Map Unit _____

Drainage Class _____ Soil Limitations _____

Surficial Geologic Report Available: No Yes

Year Published _____ Publication Scale _____

Geologic Material (Map Unit) _____

Landform _____

Flood Insurance Rate Map:

Above 500 year flood boundary No Yes

Within 500 year flood boundary No Yes

Within 100 year flood boundary No Yes

Wetland Area:

National Wetland Inventory Map (map unit) _____

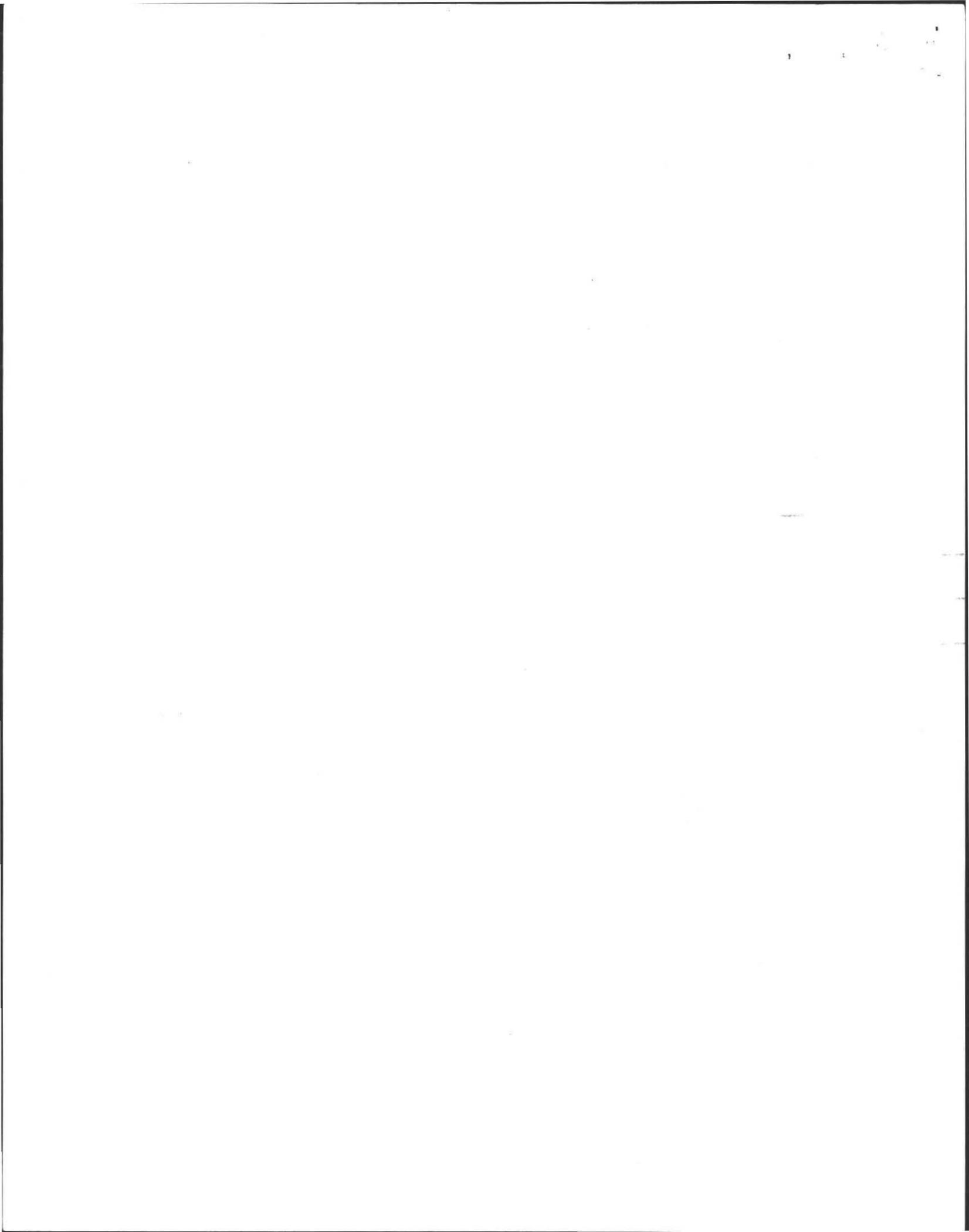
Wetlands Conservancy Program Map (map unit) _____

Current Water Resource Conditions (USGS): Month _____

Range :Above Normal Normal Below Normal

Other References Reviewed: _____





FORM 12 - PERCOLATION TEST

Location Address or Lot No. 500 Middle St

COMMONWEALTH OF MASSACHUSETTS

Massachusetts

4 Bedroom
Removal
of
9.9.

Percolation Test*		
Date: <u>5-6-99</u>		Time: _____
Observation Hole #	<u>(1)</u>	
Depth of Perc	<u>66"</u>	
Start Pre-soak		
End Pre-soak		
Time at 12"		
Time at 9"		
Time at 6"		
Time (9"-6")		
Rate Min./Inch	<u>(2)</u>	

~~CAN'T HOLD~~

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

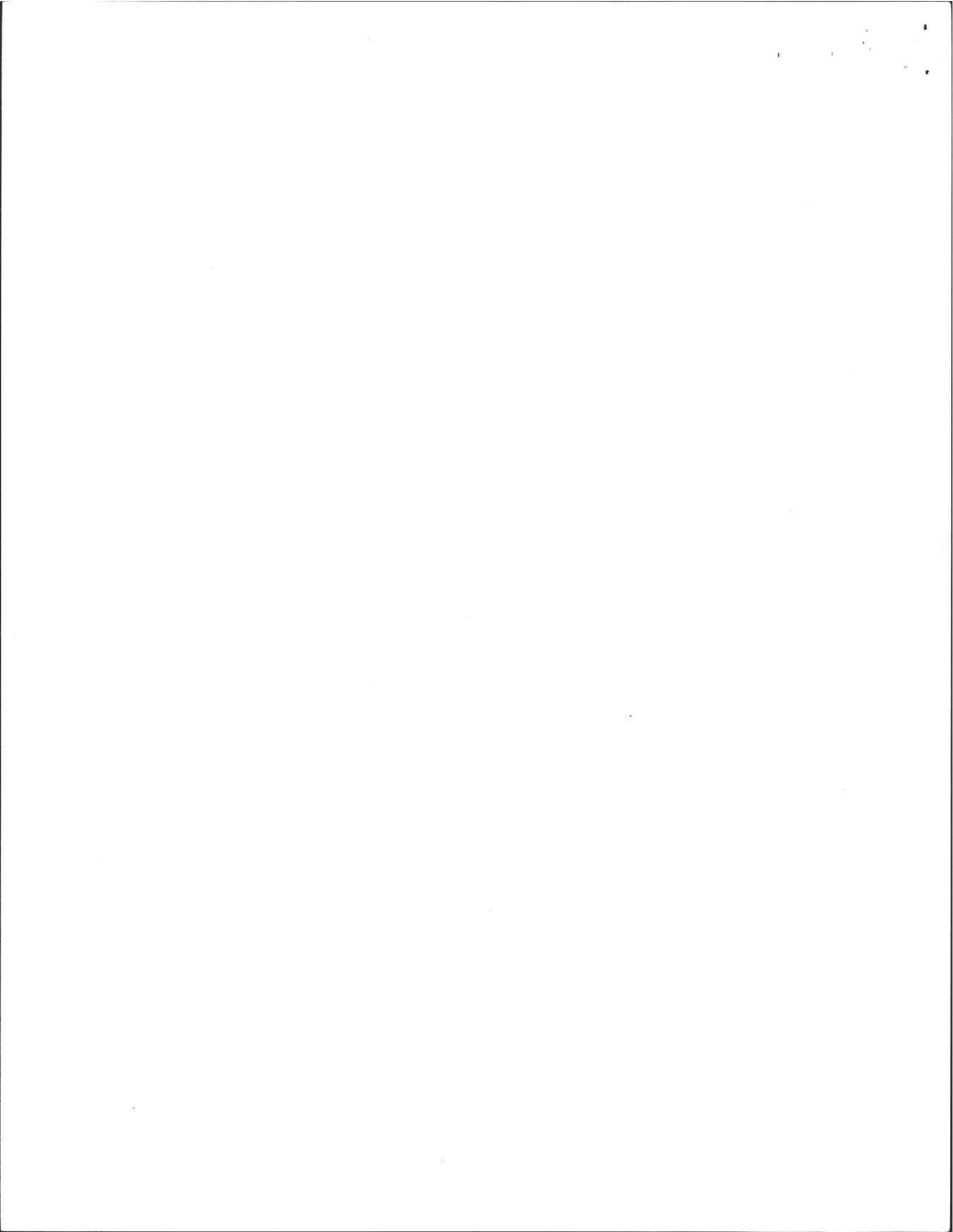
Site Passed Site Failed

Performed By: Robert Stever

Witnessed By: Dino Zrawinski

Comments: _____





Location Address or Lot No. 500 Middle St

On-site Review

Deep Hole Number 1 Date: 5/6/99 Time: 9:30 Weather Overcast CS9

Location (identify on site plan) _____

Land Use _____ Slope (%) _____ Surface Stones _____

Vegetation _____

Landform _____

Position on landscape (sketch on the back) _____

Distances from:

Open Water Body 177 feet Drainage way _____ feet
 Possible Wet Area 150 feet Property Line 30 feet ±
 Drinking Water Well 200 feet Other _____
Public water supply

DEEP OBSERVATION HOLE LOG*

Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
<u>3"</u>	<u>Loam</u>	<u>FSL</u>	<u>10YR 3/3</u>	<u>None</u>	<u>Fill</u>
<u>18"</u>	<u>Fill</u>		<u>10YR 4/6</u>		<u>Fill</u>
<u>20"</u>	<u>A_b</u>		<u>10YR 4/4</u>		<u>Remnant</u>
<u>36"</u>	<u>B_b</u>	<u>FSL</u>	<u>10YR 4/6</u>		<u>Loose single grains</u>
<u>108"</u>	<u>C</u>	<u>CS</u>	<u>7.5YR 4/6</u>		

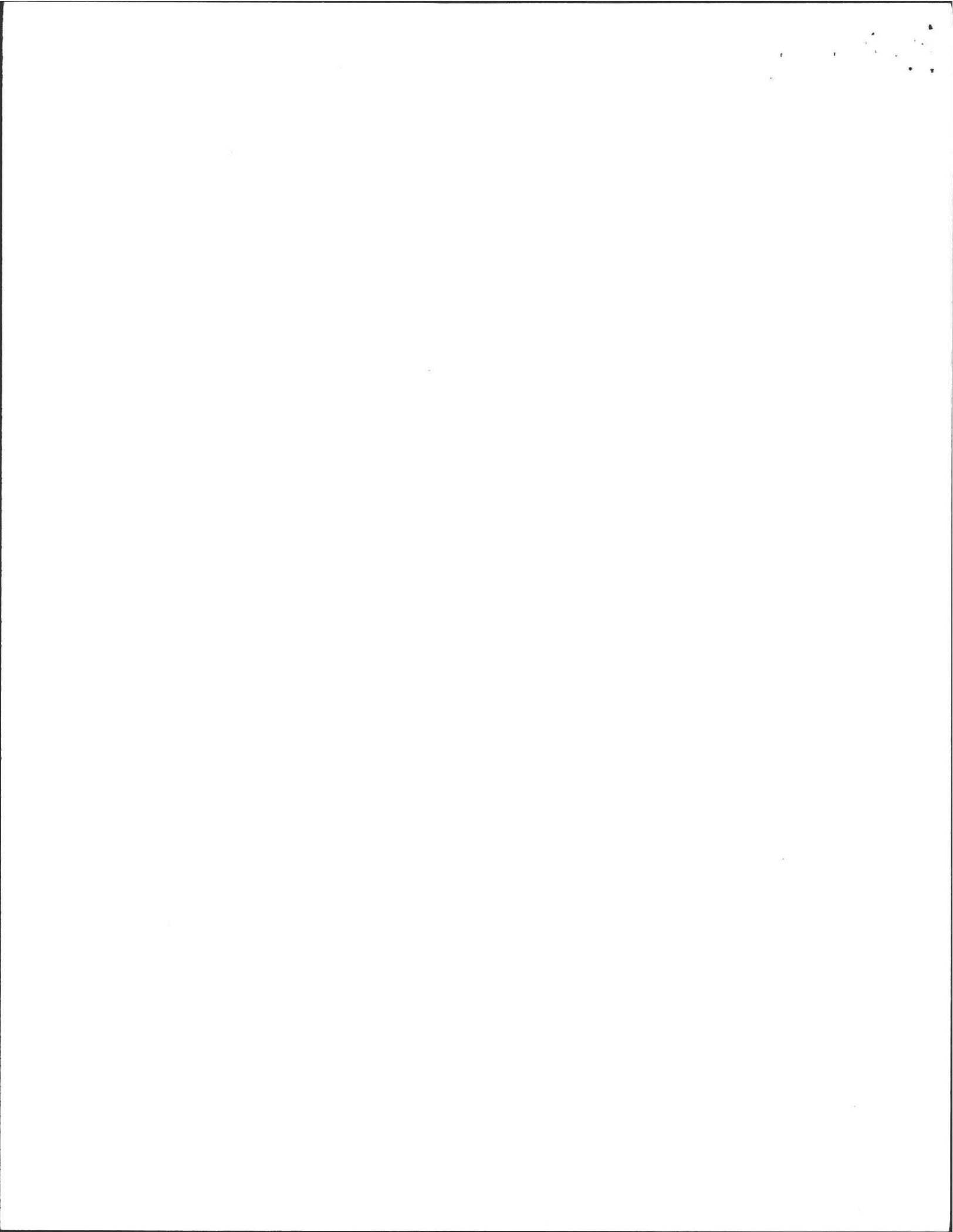
* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) OUTWASH Depth to Bedrock: 108"

Depth to Groundwater: Standing Water in the Hole: NO Weeping from Pit Face: NO

Estimated Seasonal High Ground Water: 108"





4 hdrm
No EGM

No. _____

Date: 5/6/99

Commonwealth of Massachusetts
Massachusetts

Soil Suitability Assessment for On-site Sewage Disposal

Performed By: Robert + Stover Date: 5/6/99
Witnessed By: David Zarozinski / Michael Lombard

Location Address or Lot # <u>500 Middle St Amherst, MA</u>	Owner's Name, Address, and Telephone # <u>Bill + Vickie Hart 500 Middle St Amherst, MA 01002 (413) 253 5191</u>
New Construction <input type="checkbox"/> Repair <input checked="" type="checkbox"/>	

Office Review

Published Soil Survey Available: No Yes

Year Published _____ Publication Scale _____ Soil Map Unit _____

Drainage Class _____ Soil Limitations _____

Surficial Geologic Report Available: No Yes

Year Published _____ Publication Scale _____

Geologic Material (Map Unit) _____

Landform _____

Flood Insurance Rate Map:

Above 500 year flood boundary No Yes

Within 500 year flood boundary No Yes

Within 100 year flood boundary No Yes

Wetland Area:

National Wetland Inventory Map (map unit) _____

Wetlands Conservancy Program Map (map unit) _____

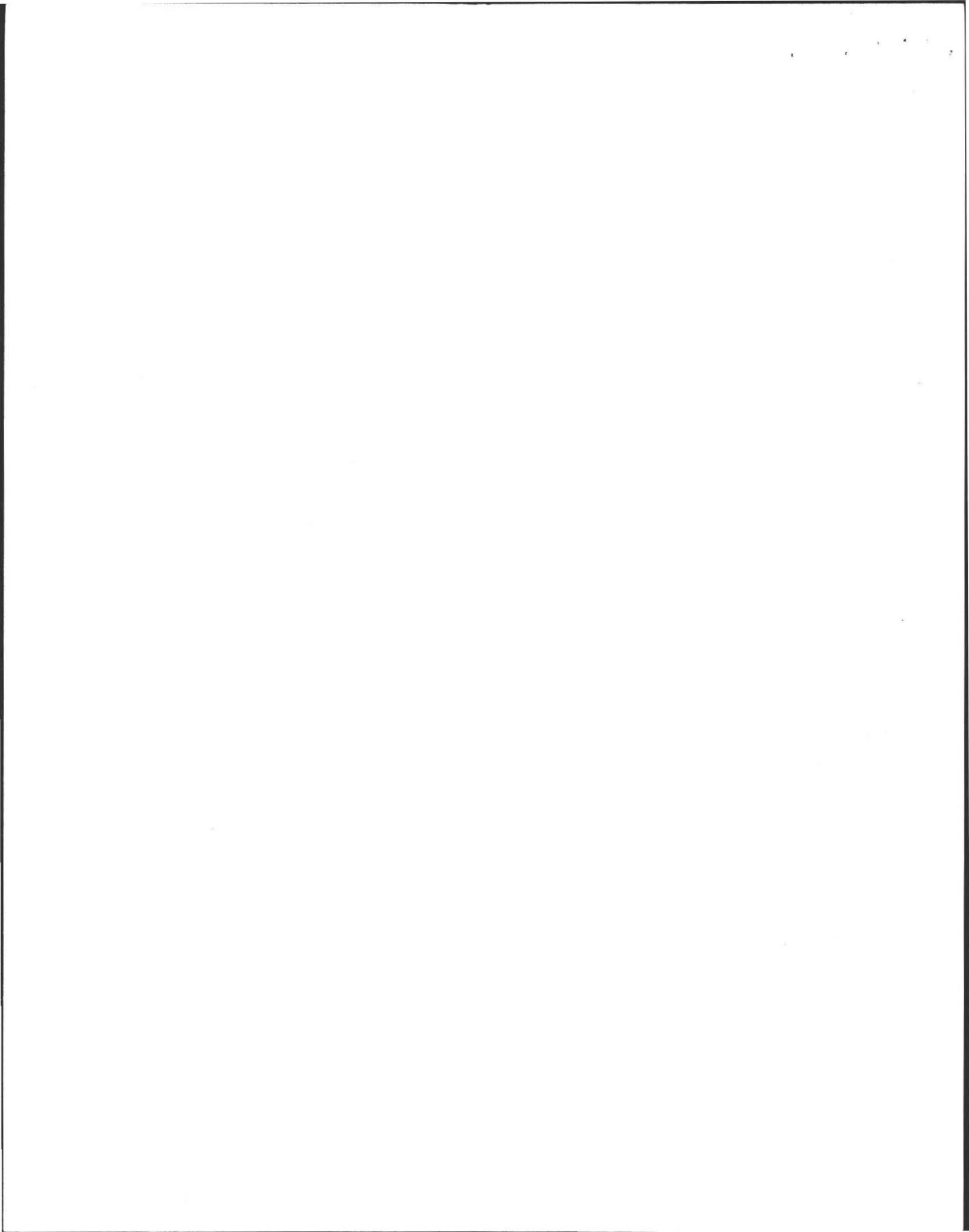
Current Water Resource Conditions (USGS): Month

April

Range :Above Normal Normal Below Normal

Other References Reviewed: _____





Location Address or Lot No. 500 Middle St.

Amherst, MA

On-site Review

Deep Hole Number 1 Date: 5/6/99 Time: 9:30 Weather overcast

Location (identify on site plan) _____ 650

Land Use lawn Slope (%) 1-2 Surface Stones none

Vegetation grasses

Landform same terrace

Position on landscape (sketch on the back)

Distances from:

Open Water Body 177 feet ± Drainage way _____ feet
 Possible Wet Area 150 feet ± Property Line 30 feet ±
 Drinking Water Well 200 feet ± Other _____
Public water supply

DEEP OBSERVATION HOLE LOG*

Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0-3	Loam	FSL	10YR3/3	none	Fill
3-18	Fill	FLS	10YR4/6	none	Fill
18-20	Ab	FSL	10YR4/4	none	remnant
20-36	Bb	FLS	10YR4/6	none	
36-108	C	CS	7.5YR 4/6	none	Loose - single grain

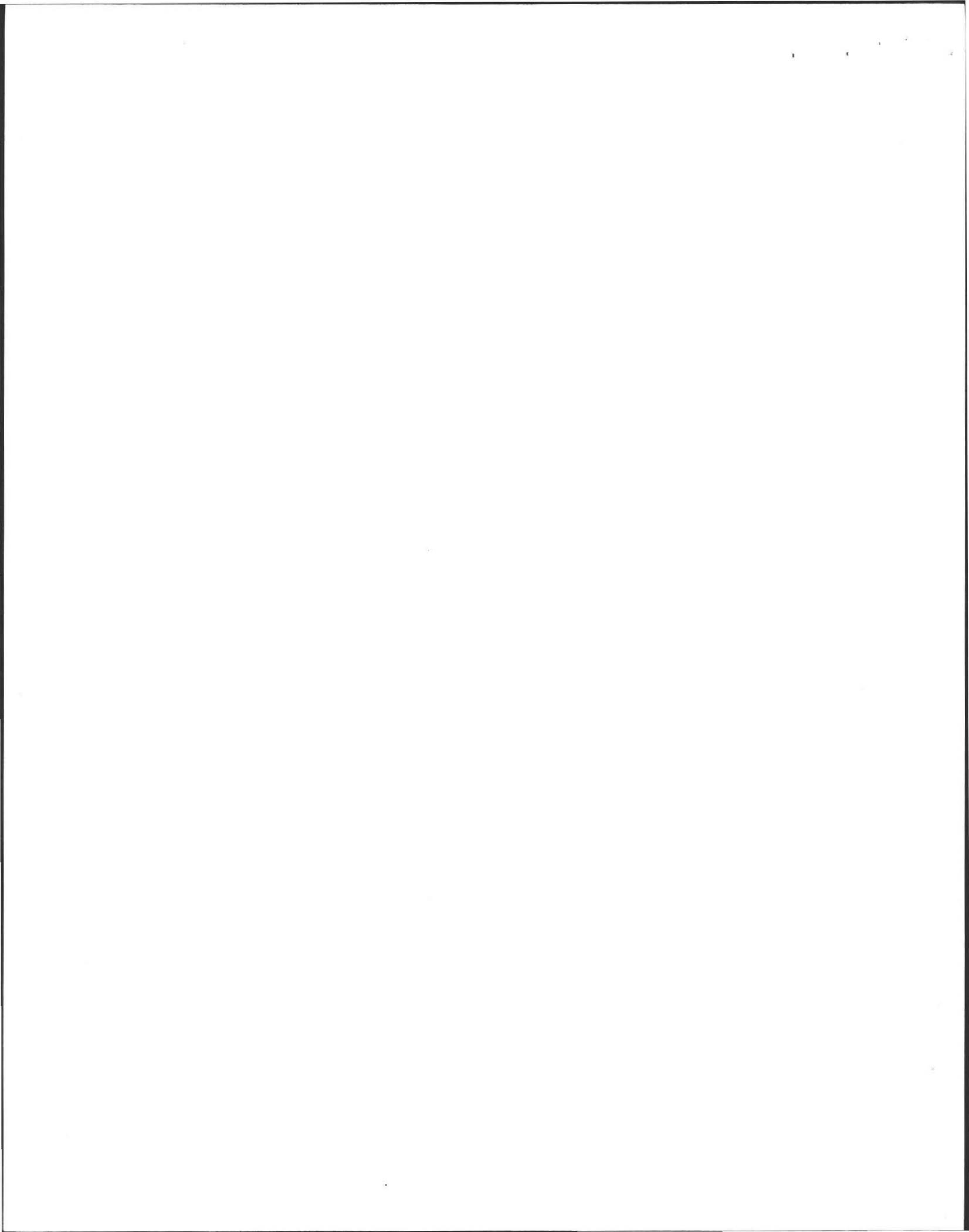
* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) outwash Depth to Bedrock: >108

Depth to Groundwater: Standing Water in the Hole: none Weeping from Pit Face: none

Estimated Seasonal High Ground Water: 108"





FORM 12 - PERCOLATION TEST

Location Address or Lot No. 500 Middle St

COMMONWEALTH OF MASSACHUSETTS

Amherst, Massachusetts

Percolation Test*		
Date:	<u>5/6/99</u>	Time: <u>9:54</u>
Observation Hole #	<u>1</u>	
Depth of Perc	<u>54"</u>	
Start Pre-soak	<u>9:54</u>	
End Pre-soak	<u>could not maintain a water</u>	
Time at 12"	<u>level due to</u>	<u>porous sand.</u>
Time at 9"		
Time at 6"		
Time (9"-6")		
Rate Min./Inch		

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

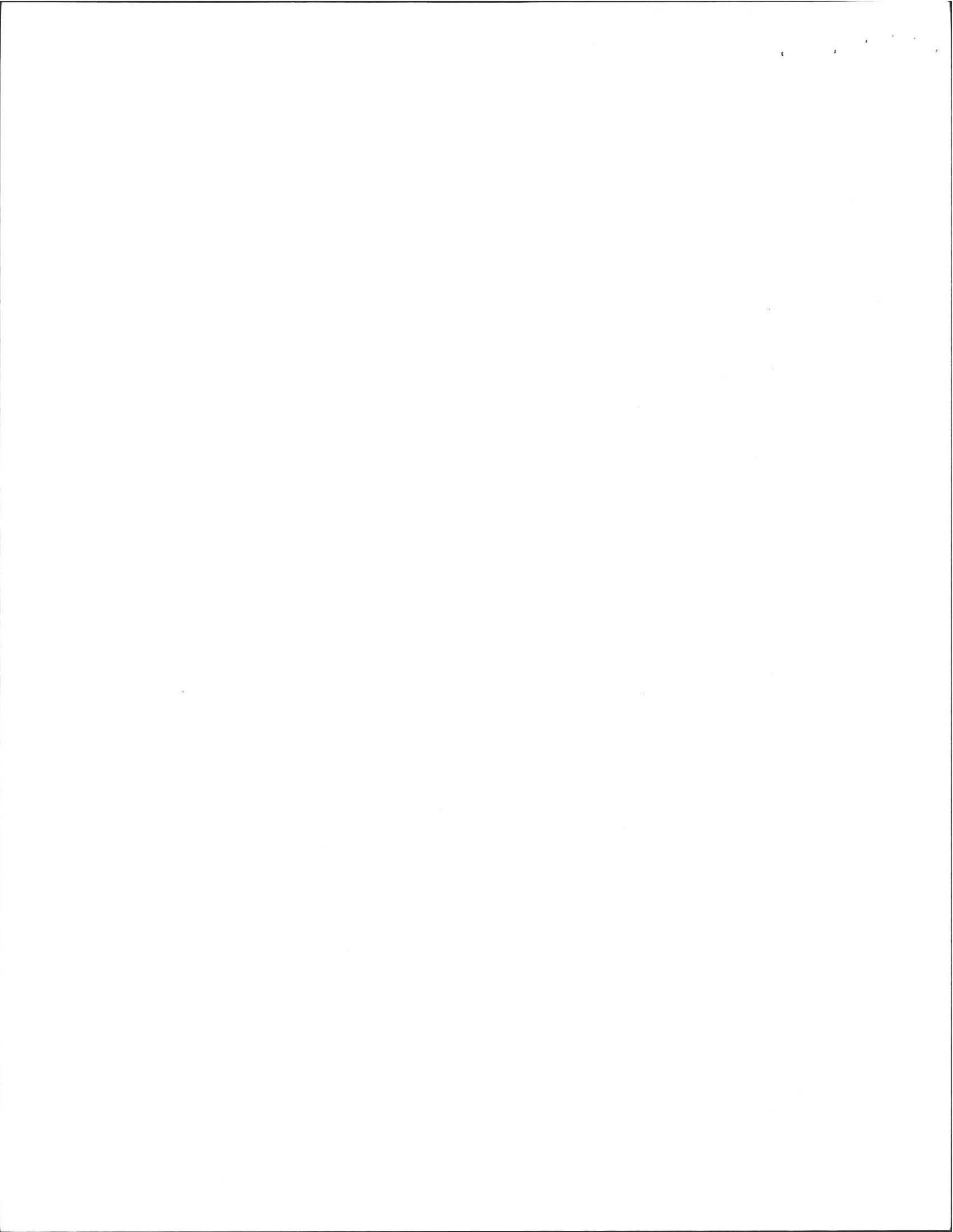
Site Passed Site Failed

Performed By: Robert Stover

Witnessed By: David Zarozinski / Michael Lombard

Comments: 5' water separation required





Location Address or Lot No. 500 Middle St.
Amherst, MA

Determination for Seasonal High Water Table

Method Used:

- Depth observed standing in observation hole >108 inches
- Depth weeping from side of observation hole >108 inches
- Depth to soil mottles >108 inches
- Ground water adjustment feet

Index Well Number Reading Date Index well level

Adjustment factor Adjusted ground water level

Depth of Naturally Occurring Pervious Material

Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system? Yes

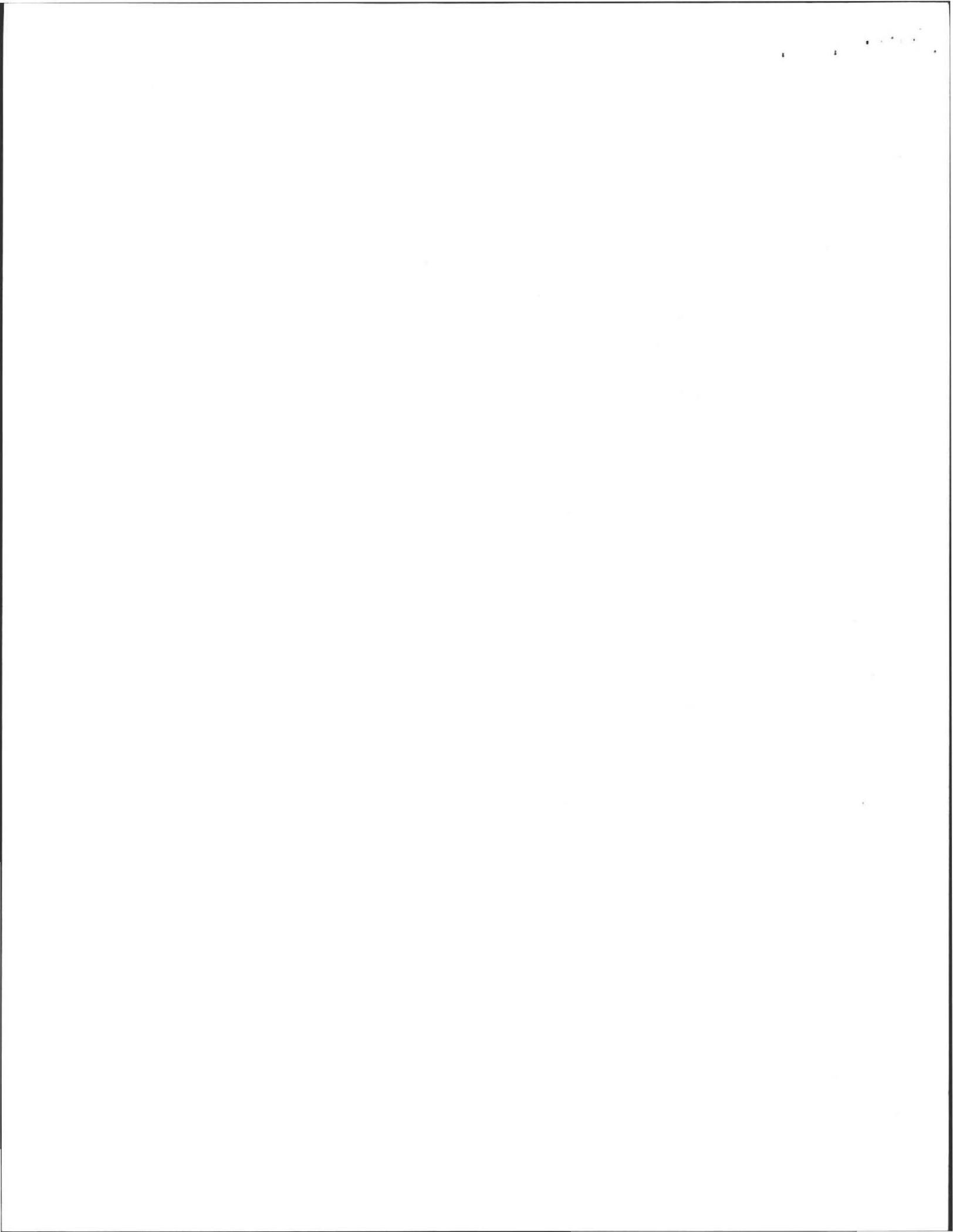
If not, what is the depth of naturally occurring pervious material? _____

Certification

I certify that on 6/19/93 (date) I have passed the soil evaluator examination approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017.

Signature Robert W. Stone Date 5/6/99





RECEIVED DEC 13 1999

5-20110 8245

VICTORIA A. MCKAY-HART
 WILLIAM E. HART
 TEL. 413-253-5191
 600 MIDDLE STREET
 AMHERST, MA 01002

DATE 12/8/99

PAY TO THE ORDER OF *Town of Amherst* \$ 160.00

one hundred sixty and no/100 DOLLARS

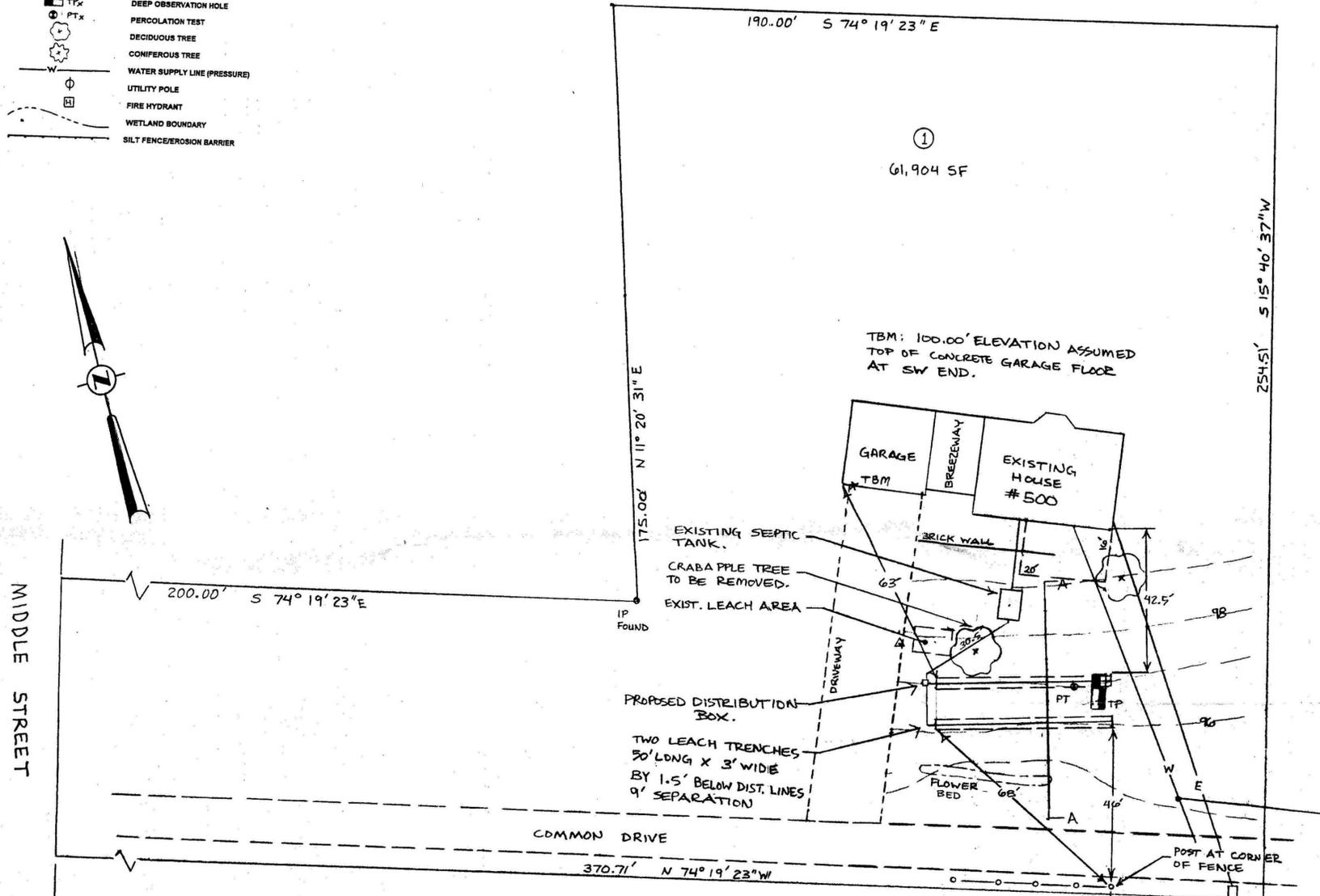
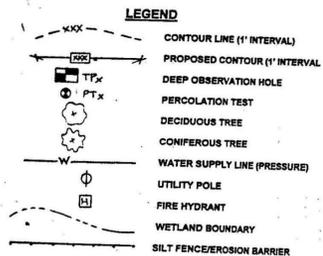
FLEET BANK
 BOSTON, MASSACHUSETTS

FOR *Septic permit* *William E. Hart*

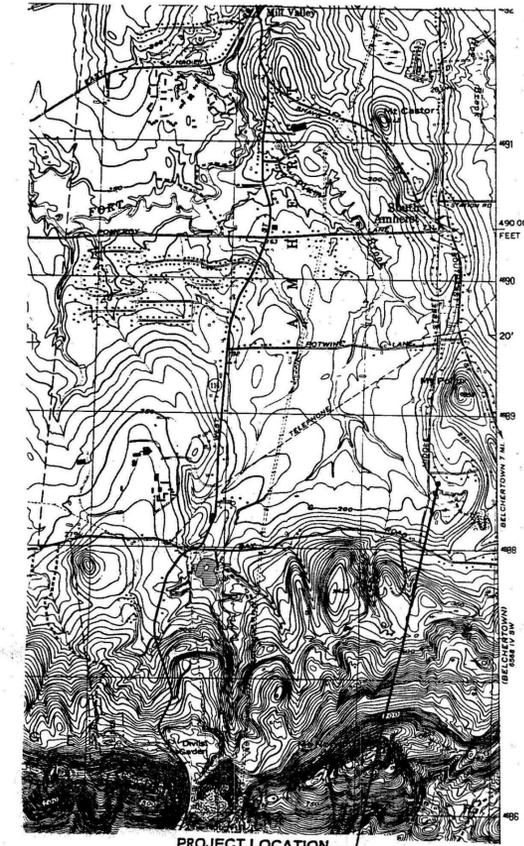
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R # 1068

PLATE 10

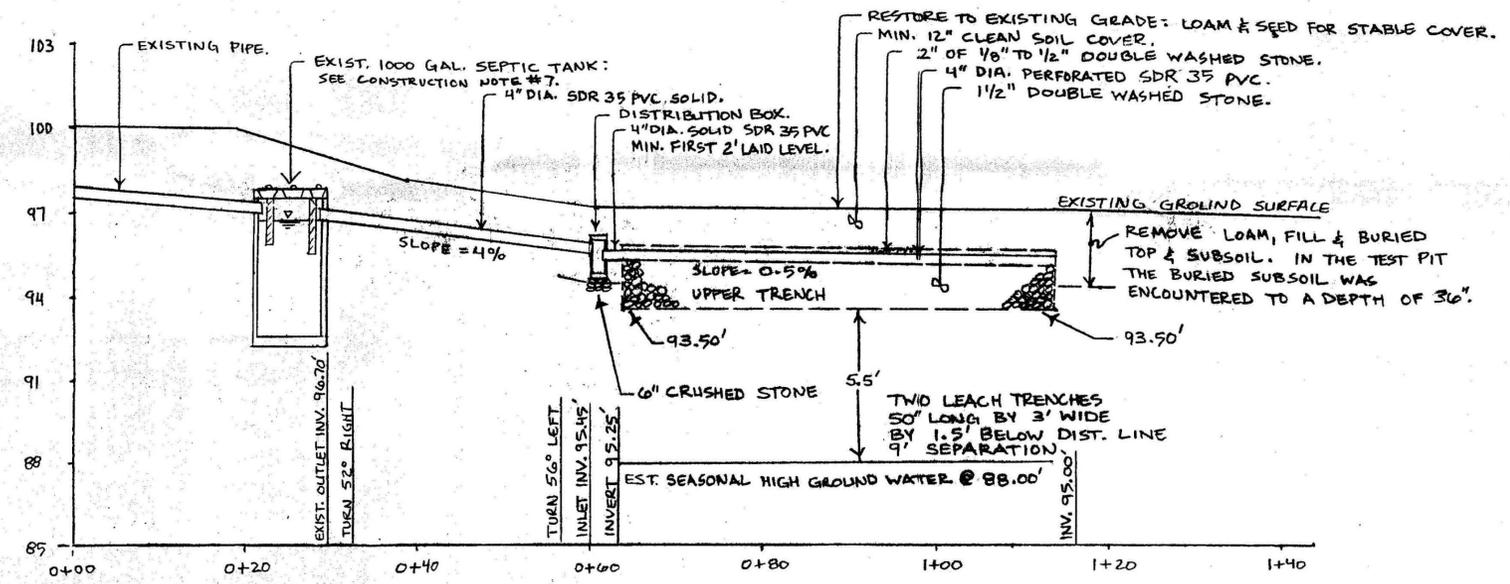


PLANVIEW
SCALE: 1" = 20'

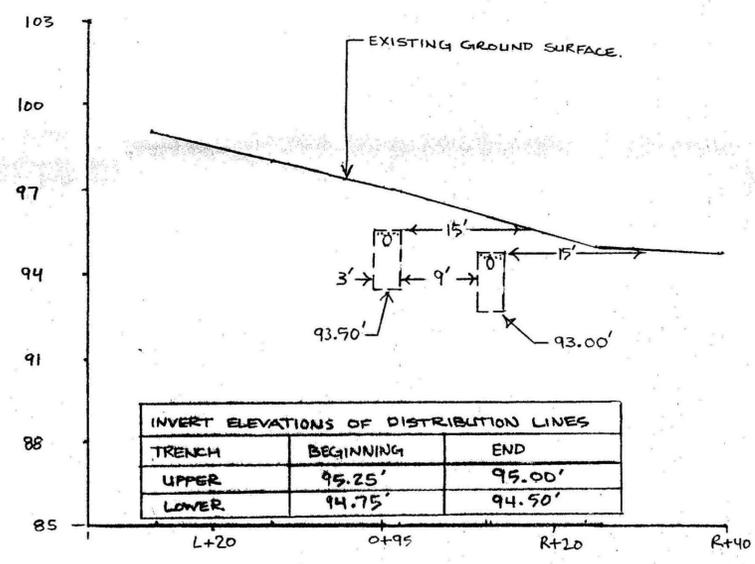


LOCUS PLAN
USGS MT. HOLYOKE, MASS. QUAD
SCALE = 1: 25,000

ESTIMATED WATER LINE LOCATION:
RELOCATE AS NECESSARY TO ACHIEVE
10' SEPARATION.



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



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

SOIL INVESTIGATION
Test Pit EL. 97.00'
Estimated Seasonal High Ground Water EL. 88.00'
Bedrock EL. 88.00'
Class I soils.
Water supply wells within 200 feet and wetland resource areas within 100 feet of the proposed soil absorption system are as shown on the planview. Deep observation hole log and percolation test results are in attached Soil Suitability Report. Soil Investigation and percolation testing by Robert Stover, Soil Evaluator, and witnessed for the Board of Health by David Zarzynski on May 6, 1999.

DESIGN CRITERIA
Design flow is for a 4 bedroom house without a garbage grinder.
Proposed septic tank = 1500 gallons.
Retain existing 1000 gal. septic tank. RWS

DESIGN CALCULATION
Required Flow: 110 gpd per bedroom.
Total required flow = 440 gpd.
Effluent Loading Rate: Percolation Rate = <2 minutes per inch.
Class I soils.
Effluent Loading Rate = 0.74 gpd/sf.
Proposed soil absorption system: 2 leach trenches
50' long x 3' wide
1.5' below dist. lines
Bottom Area: (50' x 3') 2 trenches = 300 sf
Sidewall Area: (50' x 1.5') 4 sides = 300 sf
Total Leaching Area = 600 sf
600 sf x 0.74 gpd/sf = 444 gpd
Total Required Capacity = 440 gpd (o'k)

- GENERAL CONDITIONS**
- This system repair plan is prepared in accordance with Title 5, 310 CMR 15.00. Construction shall conform to these regulations.
 - The installer shall notify the designer of any unusual conditions and shall modify the plan without the written consent of the designer.
 - All debris in the site area shall be removed and disposed of in accordance with the law.
 - There is no guarantee expressed or implied to any user of a system installed pursuant to this plan.
 - The installer shall notify the designer when the system excavation is ready for inspection and the designer and the 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.
 - The on-site sewage disposal system shall be pumped and inspected as necessary and at least once every 3 years.

- CONSTRUCTION NOTES**
- Any topsoil, subsoil, stumps, stones, debris or other impervious materials encountered during excavation shall be removed from the area of the leaching trenches, from five feet around the trenches and from wherever fill is to be placed. Any fill placed in or adjacent to the trenches shall be a clean granular sand & conform to the specifications of Title 5, 310 CMR 15.255(3).
 - The finished grade above the soil absorption system shall have a minimum two percent slope to shed surface runoff away from the system.
 - Disturbed areas shall be loamed, seeded and mulched until stable vegetation is established.
 - The pipes exiting the distribution box shall have the same invert elevation and shall be level for a minimum of the first two feet.
 - Any part of existing soil absorption system encountered during excavation shall be disposed of in accordance with the requirements of the Board of Health.
 - Any part of the system that shall be located in an area subject to vehicular traffic shall be capable of withstanding H-20 wheel loads.
 - Existing septic tank and its tees/baffles shall be inspected to ensure that they are structurally sound and functional.



REPAIR OF SEWAGE DISPOSAL SYSTEM
500 MIDDLE STREET, AMHERST, MASS.

WILLIAM E. & VICTORIA A. HART
500 MIDDLE ST., AMHERST, MA 01002

SCALE: AS SHOWN APPROVED BY: DRAWN BY:
DATE: 11/29/99 REVISED 12/8/99.
AMHERST CIVIL ENGINEERING
RICHARD COSTA, P.E. / ROBERT STOVER
P.O. BOX 3312, AMHERST, MA 01004-3312 DRAWING NUMBER
(413)256-3400