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531 BAY RD.



AMHERST CIVIL ENGINEERING

PO Box 3312, Amherst, MA 01004-3312

(413)256-3400

August 13, 1997

David Zarozinski
Town Hall
4 Boltwood Ave.
Amherst, MA 01002-2351

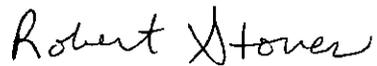
Re: Disposal works repair application for Thomas E. and
Kathryn L. Dougherty at 531 Bay Rd., Amherst, MA.

Dear David:

On behalf of our clients, Thomas and Kathryn Dougherty, we hereby request the the Amherst Board of Health grant a Local Upgrade Approval to allow the separation between the bottom of the proposed leach bed and the high groundwater required by Title 5 be reduced from four feet to three feet.

If any questions arise concerning the attached application for a Local Upgrade Approval and plan please do not hesitate to give us a call. Thank you.

Very truly yours,



Robert Stover
Richard E. Costa, P.E.

FORM 9B - LOCAL UPGRADE APPROVAL

Commonwealth of Massachusetts
Amherst, Massachusetts

LOCAL UPGRADE APPROVAL ISSUED PURSUANT TO 310 CMR 15.404 & 15.405

Facility/system owner: Name: T. + K. Dougherty Address: 531 Bay Rd., Amherst, MA
Address of facility Same 01002

Type of facility: residential institutional commercial school
design flow per 310 CMR 15.203 _____ gpd

System designer: Name Richard Costa, PE Address Box 3312 Phone No. (413) 256-3400
Robt. Stover
Engineering Amherst, MA 01004-3312

Local Upgrade Approval granted for:

____ reduction in setback(s) (specify) _____

____ perc rate of 30-60 min./inch (specify rate) _____

____ reduction in SAS area of up to 25% _____
(specify % reduction & size of SAS)

reduction in separation between from 4 ft. to 3 ft
SAS & high groundwater perc rate = 10 min./inch
(specify reduction & perc rate)

____ relocation of a well (explain) _____

List local variances granted (no DEP approval required per 310 CMR 15.412(4))

List variances granted requiring DEP approval

Board of Health Approval of proposed upgrade

Signature	City/town	Date
_____	_____	_____

THE SYSTEM OWNER OR OPERATOR SHALL PROVIDE A COPY OF THIS LOCAL UPGRADE APPROVAL TO THE APPROPRIATE REGIONAL OFFICE OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF WATER POLLUTION CONTROL UPON ISSUANCE BY THE LOCAL APPROVING AUTHORITY & BEFORE COMMENCEMENT OF CONSTRUCTION.





FORM 9A - APPLICATION FOR LOCAL UPGRADE APPROVAL
PAGE 2 OF 5

4) Type of existing system

privy cesspool(s) conventional system
 Other (describe) _____

Type of soil absorption system (trenches, chambers, pits, etc.)

bed

5) Design flow based on 310 CMR 15.203

a) Design flow of existing system _____ gpd

Approved? yes approval date _____
 no why? _____

b) Design flow of proposed upgraded system 480 gpd

c) Design flow of facility 440 gpd

6) Proposed upgrade of existing system is

a) Voluntary

Required by order, letter, etc. (attach copy)

Required following inspection required by 310 CMR 15.301 (provide date inspection form was submitted to the approving authority) _____ (date)

b) Describe the proposed upgrade to the system

Replace existing 1000 Gal. septic tank with 1500 Gal. septic tank in order to raise building sewer as high as practicable to obtain the maximum feasible separation between the high groundwater elevation and the bottom of the proposed leach bed. Prop. leach bed will be 50' by 16'.

c) Which of the following are applicable to the proposed upgrade?

no Reduction of setback(s) (list setbacks to be reduced with proposed setback distances)

no Percolation rate of 30-60 minutes per inch (state actual perc rate)



Commonwealth of Massachusetts
Amherst, Massachusetts

Application for Local Upgrade Approval
Title 5, 310 CMR 15.000
DEP Approved form required by 310 CMR 15.403(1)

To be submitted to Local Approving Authority/Board of Health: For the upgrade of a failed or nonconforming system with a design flow of < 10,000 gpd, where full compliance, as defined in 310 CMR 15.404(1), is not feasible.

To be submitted to DEP: For the upgrade of a failed or nonconforming system with a design flow of 10,000 up to 15,000 gpd and/or for upgrade of a state or federal facility, where full compliance, as defined in 310 CMR 15.404(1), is not feasible.

NOTE: Local upgrade approval shall not be granted for an upgrade proposal that includes the addition of new design flow to a cesspool or privy or the addition of new design flow above the existing approved capacity of a system constructed in accordance with either the 1978 Code or 310 CMR 15.000.

1) Facility/system owner

Name Thomas E. & Kathryn L. Dougherty
Address 531 Bay Rd., Amherst, MA 01002
Phone # (413) 256-0997
Address of facility Same

2) Applicant (if different from above)

Name Same
Address _____
Phone # _____

3) Type of facility

residential ___ commercial ___ school
___ institutional
(Specify) 4 bedroom house w/o garbage grinder.



8) Notice to Abutters *N/A*

No application for upgrade approval in which the setback from property lines or a private water supply well is reduced shall be complete until the applicant has notified all abutters whose property or well is affected by certified mail at least ten days before the Board of Health meeting at which the upgrade approval will be on the agenda. Such notice shall include the date, time and place where the upgrade approval will be discussed.

If the Department is the approving authority, then such notice to abutters must be completed prior to the date of submission of the application to the Department.

The notices to abutters shall include a copy of the completed application form and shall reference the standards set forth in 310 CMR 15.402 through 15.405.

List of affected Abutters:

Abutter Name _____	Date notified _____
Address _____	
Abutter Name _____	Date notified _____
Address _____	
Abutter Name _____	Date notified _____
Address _____	
Abutter Name _____	Date notified _____
Address _____	

9) Explain why full compliance, as defined in 310 CMR 15.404(1), is not feasible (each section must be completed):

- a) an upgraded system in full compliance with 310 CMR 15.000 is not feasible:
The available space and site topography do not permit the grading necessary for a 4ft. separation from high groundwater.
- b) an alternative system approved pursuant to 310 CMR 15.283-15.288 is not feasible:
Alternative systems are not appropriate for this single family house.



FORM 9A - APPLICATION FOR LOCAL UPGRADE APPROVAL
PAGE 3 OF 5

no Up to 25% reduction in subsurface disposal area design requirements (state required & proposed size) _____

no Relocation of water supply well (identify well, describe relocation)

yes Reduction of required separation between bottom of SAS & high groundwater (specify proposed reduction & perc rate) from 4' to 3'; rate = 10 min./inch.

no Other requirements of 310 CMR 15.000 that cannot be met (specify sections of the Code)

System upgrades that cannot be performed in accordance with 310 CMR 15.404 & 15.405, or in full compliance with the requirements of 310 CMR 15.000, require a variance pursuant to 310 CMR 15.410-15.417.

7) If the proposed upgrade involves a reduction in the required separation between the bottom of the soil absorption system and the high groundwater elevation, an Approved Soil-Evaluator must determine the high ground water elevation pursuant to 310 CMR 15.405(1)(i)(1). The evaluator must be a member or agent of the local approving authority:

Distance from soil absorption system to high groundwater
_____ feet

As determined by:

Evaluator's name David Zarozinski
Evaluator's signature _____
Date of evaluation December 31, 1996



FORM 9A - APPLICATION FOR LOCAL UPGRADE APPROVAL

PAGE 5 OF 5

- c) a shared system is not feasible:
adjacent houses served by function systems
 - d) connection to a sewer is not feasible:
this area is not served by the public sewer system.
- 10) An application for a disposal system construction permit, including all required attachments (e.g. plans & specifications, site evaluation forms), must accompany this application. Is the DSCP application attached? yes no

11) Certification

"I, the facility owner, certify under penalty of law that this document and all attachments, to the best of my knowledge and belief, are true, accurate, and complete. I am aware that there may be significant consequences for submitting false information, including, but not limited to, penalties or fine and/or imprisonment for knowing violations."

Facility owner's signature

Date

Print Name

Richard Costa / Robert Stover 8/13/97

Name of preparer

Date

Amherst Civil Engineering, P.O. Box 3312, Amherst, MA
Telephone # & address of preparer 01004-3312
(413) 256-3400

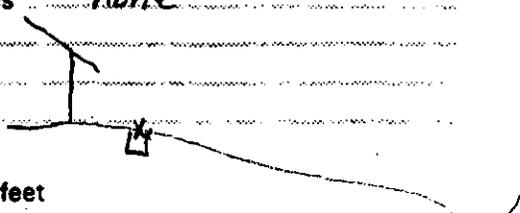
NOTE: Title 5, 310 CMR 15.403(4), requires the system owner or operator to submit to the Department a copy of the local upgrade approval upon issuance by the Board of Health and prior to commencement of construction.





Location Address or Lot No. 531 Bay Rd., Amherst, MA

On-site Review

Deep Hole Number 1 Date: 12/31/96 Time: 9:45 Weather light snow, 25°
 Location (identify on site plan) off SE corner of garage
 Land Use lawn Slope (%) 5% Surface Stones none
 Vegetation grass
 Landform outwash plain
 Position on landscape (sketch on the back) 
 Distances from:
 Open Water Body 70 feet Drainage way 70 feet
 Possible Wet Area 70 feet Property Line 60 feet
 Drinking Water Well 200 feet Other _____

DEEP OBSERVATION HOLE LOG [*]					
MeA					
Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0-7	A	fs1	10YR3/3	none	very friable, 15% gravel
7-18	Bw	gr. lyls.	10YR4/3	none	very friable
18-84	C	gr. ls	10YR6/8	@ 48% 15% 10YR6/2	slightly firm

* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) sandy outwash Depth to Bedrock: > 84"
 Depth to Groundwater: Standing Water in the Hole: 5' Weeping from Pit Face: 48"
 Estimated Seasonal High Ground Water: 48"



No. _____

Date: 12/31/96

Commonwealth of Massachusetts
Massachusetts
Soil Suitability Assessment for On-site Sewage Disposal

Performed By: Robert Stover
Witnessed By: David Zarozinski

Date: 12/31/96

Location Address or Lot # <u>531 Bay Rd Amherst, MA</u>	Owner's Name, Address, and Telephone # <u>Tom & Kittie Dougherty 531 Bay Rd Amherst, MA 01002</u>
New Construction <input type="checkbox"/> Repair <input checked="" type="checkbox"/>	

Office Review

Published Soil Survey Available: No Yes

Year Published 1981 Publication Scale 1:15,840 Soil Map Unit Me A

Drainage Class A Soil Limitations poor filter

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: _____



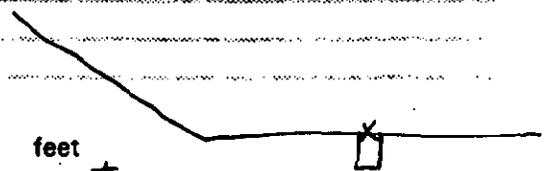
Location Address or Lot No. 531 Bay Rd., Amherst, MA

On-site Review

Deep Hole Number 3 Date: 12/31/96 Time: 9:00 AM Weather light snow - 30°
 Location (identify on site plan) off SW house corner, next to garden
 Land Use Lawn Slope (%) 0 Surface Stones none
 Vegetation grass
 Landform outwash plain
 Position on landscape (sketch on the back)

Distances from:

Open Water Body 100 feet Drainage way 100 feet
 Possible Wet Area 100 feet Property Line 30 feet ±
 Drinking Water Well 200 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)
0-10	Ap	FSL	7.5YR3/2		very friable
10-28	Bw	FSL, gr. ly	10YR4/3	@ 18" 20% 5YR 5/8 15%	friable, 10% gr. + cobbles
28-36"	C	very gr. ly SL	2.5Y6/2	10YR5/2 @ 28" 15% 5YR4/8 5% 2.5YA5/8	

SrB

* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) Outwash Depth to Bedrock: > 36"
 Depth to Groundwater: Standing Water in the Hole: 36" Weeping from Pit Face: 32"
 Estimated Seasonal High Ground Water: 18"

— Abandoned —



Location Address or Lot No. 531 Bay Rd, Amherst, MA

On-site Review

Deep Hole Number 2 Date: 12/31/96 Time: 9:00 AM Weather light snow 30°
 Location (identify on site plan) Front yard
 Land Use lawn Slope (%) 0 Surface Stones none
 Vegetation grass
 Landform outwash plain
 Position on landscape (sketch on the back)

Distances from:

Open Water Body 100 feet + Drainage way 100' feet
 Possible Wet Area 100 feet + Property Line 25 feet ±
 Drinking Water Well 200 feet + Other _____

DEEP OBSERVATION HOLE LOG [*] <u>MEA</u>					
Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
<u>0-10</u>	<u>AP</u>	<u>FSL</u>	<u>7.5YR3/2</u>	<u>—</u>	<u>very friable 15% gravel</u>
<u>10-24</u>	<u>BW</u>	<u>FSL</u>	<u>10YR5/4</u>	<u>—</u>	<u>very friable</u>
<u>24-72"</u>	<u>C</u>	<u>F. to Lo. sand</u>	<u>10YR6/8</u>	<u>@ 48" 15% 10YR6/2</u>	<u>slightly firm</u>

* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) outwash Depth to Bedrock: > 72"
 Depth to Groundwater: Standing Water in the Hole: 60" Weeping from Pit Face: 52"
 Estimated Seasonal High Ground Water: 48"



FORM 12 - PERCOLATION TEST

Location Address or Lot No. 531 Bay Rd, Amherst

COMMONWEALTH OF MASSACHUSETTS

, Massachusetts

Percolation Test*		
Date: <u>12/31/96</u>		Time: <u>9:45 AM</u>
Observation Hole #	<u>1</u>	
Depth of Perc	<u>36"</u>	
Start Pre-soak	<u>9:53</u>	
End Pre-soak	<u>10:11</u>	
Time at 12"	<u>10:11</u>	
Time at 9"	<u>10:36</u>	
Time at 6"	<u>11:06</u>	
Time (9"-6")	<u>30</u>	
Rate Min./Inch	<u>10</u>	

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

Site Passed Site Failed

Performed By: Robert W. Stover

Witnessed By: David Zarozinski

Comments: _____



Location Address or Lot No. 531 Bay Rd, Amherst, MA

Determination for Seasonal High Water Table

Method Used:

- Depth observed standing in observation hole 60" inches
- Depth weeping from side of observation hole 48" inches
- Depth to soil mottles 48" 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 5/1/993 (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. Stover Date 12/31/96



No. _____

Fee _____

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, MA.

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

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

Location <u>531 Bay Road</u>	Owner's Name <u>Thomas E. + Kathryn Dougherty</u>
Map/Parcel#	Address <u>531 Bay Rd., Amherst, MA 01002</u>
Lot#	Telephone# <u>(413) 256-0997</u>
Installer's Name <u>River Drive (Joe W...)</u>	Designer's Name <u>Richard Costa P.E. / Robt. Stover Amherst Civil Engineering</u>
Address <u>146 River Drive</u>	Address <u>P.O. Box 3312, Amherst, MA</u>
Telephone# <u>584 1814</u>	Telephone# <u>(413) 256-3400 01004-3312</u>

Type of Building: SFH Lot Size _____ sq. ft.
 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 480 gpd Design flow provided 480 gpd
 Plan: Date 7/30/97 Number of sheets 1 Revision Date _____
 Title "On-Site Sewage Disposal System Repair"

Description of Soil(s) Attached
 Soil Evaluator Form No. _____ Name of Soil Evaluator Robert Stover Date of Evaluation 12/31/96

DESCRIPTION OF REPAIRS OR ALTERATIONS Replace septic tank & soil absorption system.

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 _____ Date _____

Inspections _____

DEP APPROVED FORM 5/96

FORM 3 - CERTIFICATE OF COMPLIANCE

No. _____

COMMONWEALTH OF MASSACHUSETTS
 Board of Health, Amherst, MA.

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: Thomas E. & Kathryn L. Dougherty 8/5/97

at 531 Bay Road
 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 480 (gpd)

Installer River Drive
 Designer: Robert Stover Inspector David Zarocant Date 10/13/97

The issuance of this permit shall not be construed as a guarantee that the system will function as designed.
Robert Stover Jami Hanna

DEP APPROVED FORM 5/96 FORM 2 - DSCP

No. _____

COMMONWEALTH OF MASSACHUSETTS
 Board of Health, Amherst, MA.

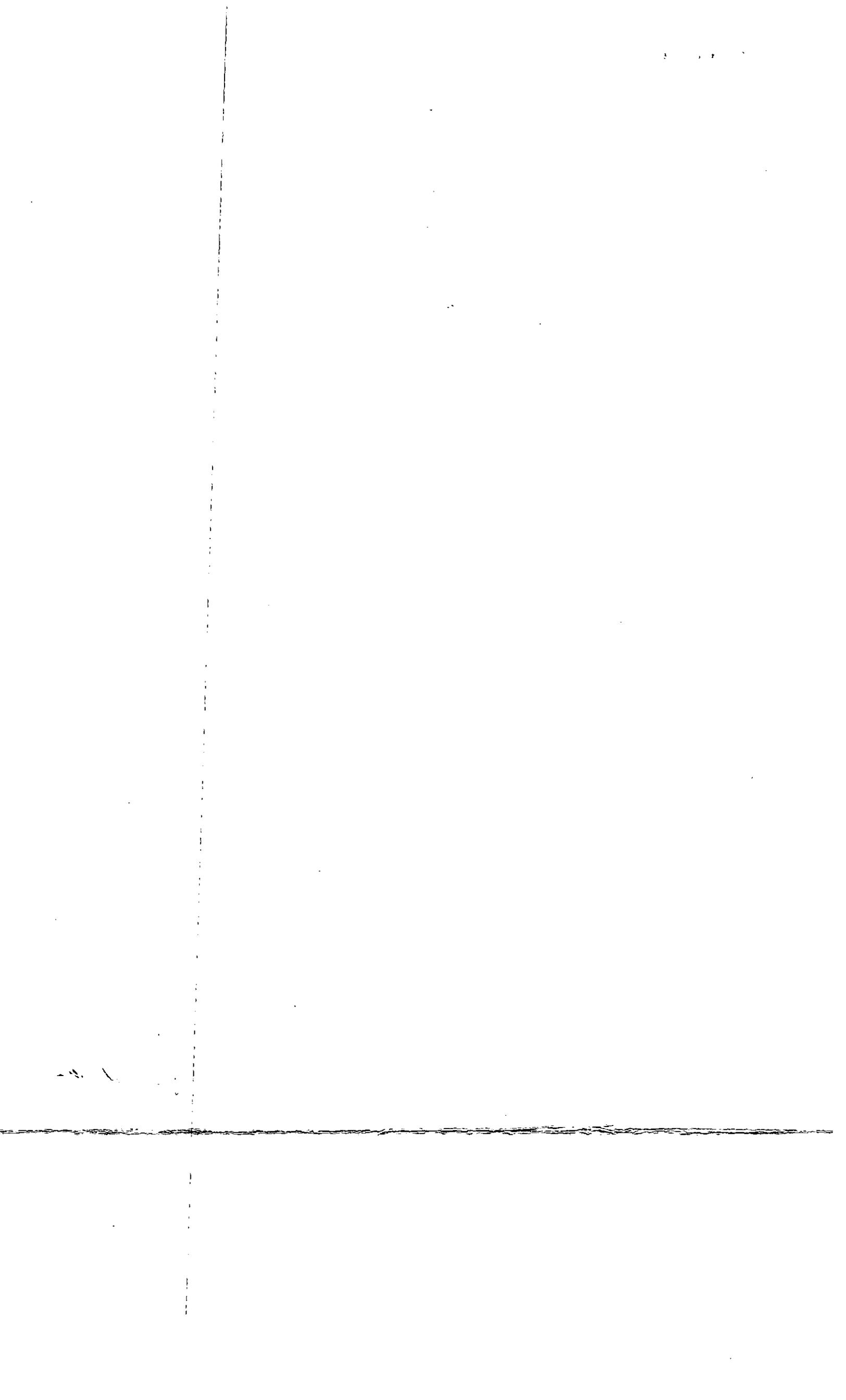
DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to: Construct () Repair (X) Upgrade () Abandon () an individual sewage disposal system at 531 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.

DEP APPROVED FORM 5/96 Date _____ Board of Health _____



No. _____

Fee _____

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, MA.

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

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

Location <u>531 Bay Road</u>	Owner's Name <u>Thomas E. + Kathryn Dougherty</u>
Map/Parcel#	Address <u>531 Bay Rd., Amherst, MA 01002</u>
Lot#	Telephone# <u>(413) 256-0997</u>
Installer's Name <u>River Drive</u>	Designer's Name <u>Richard Costa P.E. / Robt. Stover Amherst Civil Engineering</u>
Address <u>746 River Drive</u>	Address <u>P.O. Box 3312, Amherst, MA</u>
Telephone# <u>584-1814</u>	Telephone# <u>(413) 256-3400</u> <u>01004-3312</u>

Type of Building: SFH Lot Size _____ sq. ft.
 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 480 gpd Design flow provided 480 gpd
 Plan: Date 7/30/97 Number of sheets 1 Revision Date _____
 Title "On-Site Sewage Disposal System Repair"

Description of Soil(s) Attached
 Soil Evaluator Form No. _____ Name of Soil Evaluator Robert Stover Date of Evaluation 12/31/96

DESCRIPTION OF REPAIRS OR ALTERATIONS Replace septic tank & soil absorption system.

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 _____ Date _____

Inspections _____

DEP APPROVED FORM 5/96

FORM 3 - CERTIFICATE OF COMPLIANCE

No. _____

COMMONWEALTH OF MASSACHUSETTS
 Board of Health, Amherst, MA.

CERTIFICATE OF COMPLIANCE

Description of Work: Individual Component(s) Complete System

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

by: Thomas E. & Kathryn L. Dougherty

[Signature] 8/5/97

at 531 Bay Road
 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 480 (gpd)

Installer _____

Designer: _____ Inspector _____ Date _____

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

DEP APPROVED FORM 5/96

Robert W. [Signature]

FORM 2 - DSCP

No. _____

Fee _____

COMMONWEALTH OF MASSACHUSETTS
 Board of Health, Amherst, MA.

DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to: Construct () Repair Upgrade () Abandon () an individual sewage disposal system at 531 Bay Rd. as described in the application for Disposal

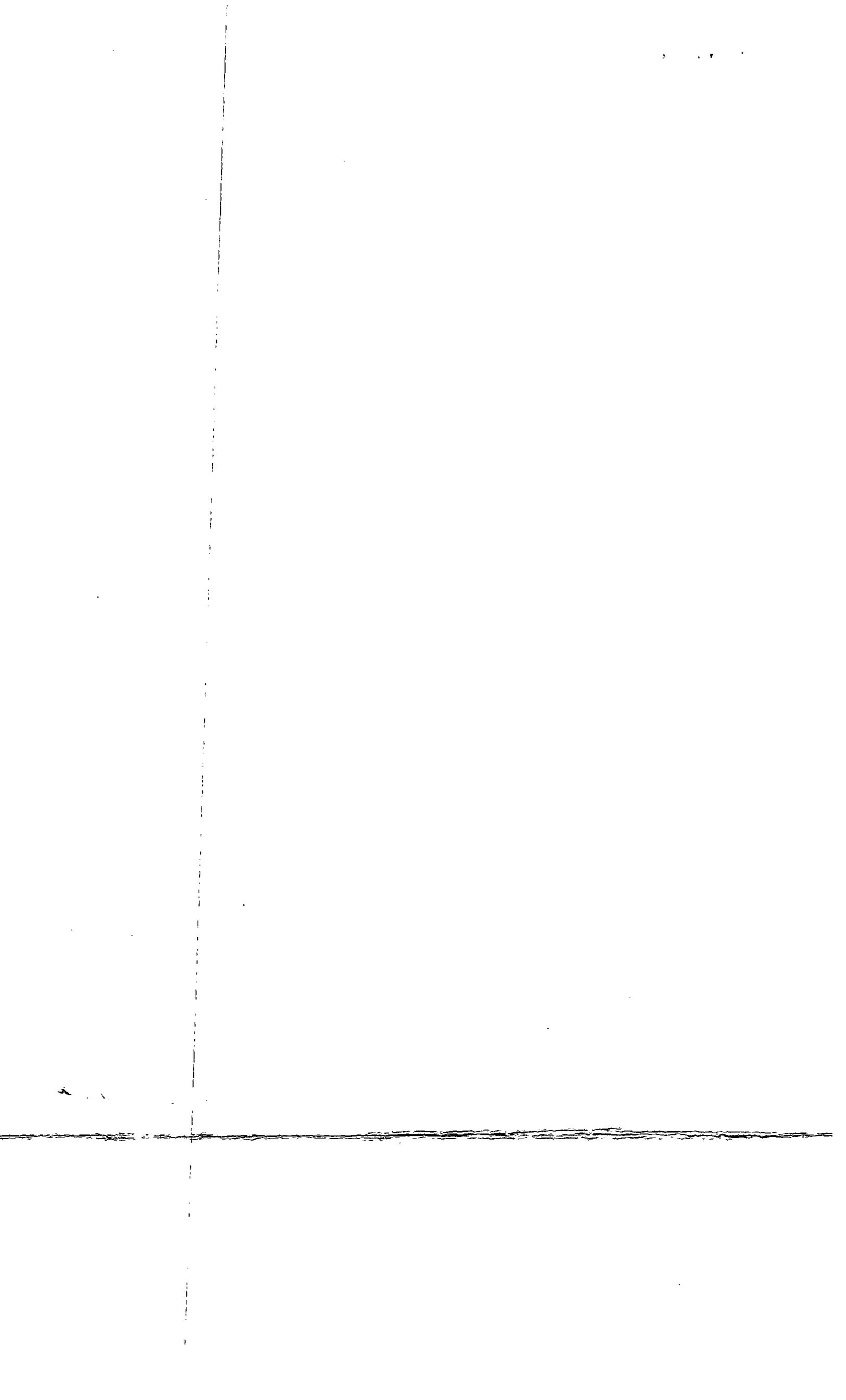
System Construction Permit No. _____, dated _____

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

DEP APPROVED FORM 5/96

Date _____

Board of Health _____



No. _____

Fee _____

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, MA.

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

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

Location <u>531 Bay Road</u>	Owner's Name <u>Thomas E. + Kathryn Dougherty</u>
Map/Parcel#	Address <u>531 Bay Rd., Amherst, MA 01002</u>
Lot#	Telephone# <u>(413) 256-0997</u>
Installer's Name	Designer's Name <u>Richard Costa P.E. / Robt. Stover Amherst Civil Engineering</u>
Address	Address <u>P.O. Box 3312, Amherst, MA</u>
Telephone#	Telephone# <u>(413) 256-3400</u> <u>01004-3312</u>

Type of Building: SFH Lot Size _____ sq. ft.
 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 480 gpd Design flow provided 480 gpd
 Plan: Date 7/30/97 Number of sheets 1 Revision Date _____
 Title "On-Site Sewage Disposal System Repair"

Description of Soil(s) Attached
 Soil Evaluator Form No. _____ Name of Soil Evaluator Robert Stover Date of Evaluation 12/31/96

DESCRIPTION OF REPAIRS OR ALTERATIONS Replace septic tank & soil absorption system.

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 _____ Date _____

Inspections _____

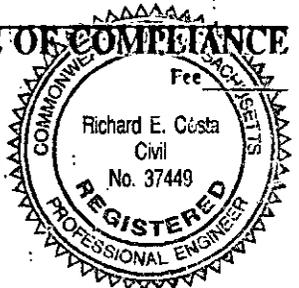
DEP APPROVED FORM 5/96

FORM 3 - CERTIFICATE OF COMPLIANCE

No. _____

COMMONWEALTH OF MASSACHUSETTS
 Board of Health, Amherst, MA.

CERTIFICATE OF COMPLIANCE



Description of Work: Individual Component(s) Complete System

The undersigned hereby certify that the Sewage Disposal System: Constructed (), Repaired , Upgraded () Abandoned ()
 by: Thomas E. & Kathryn L. Dougherty 9/5/97

at 531 Bay Road
 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 480 (gpd)

Installer _____
 Designer: _____ Inspector _____ Date _____

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

DEP APPROVED FORM 5/96

FORM 2 - DSCP

No. _____

Fee _____

COMMONWEALTH OF MASSACHUSETTS
 Board of Health, Amherst, MA.

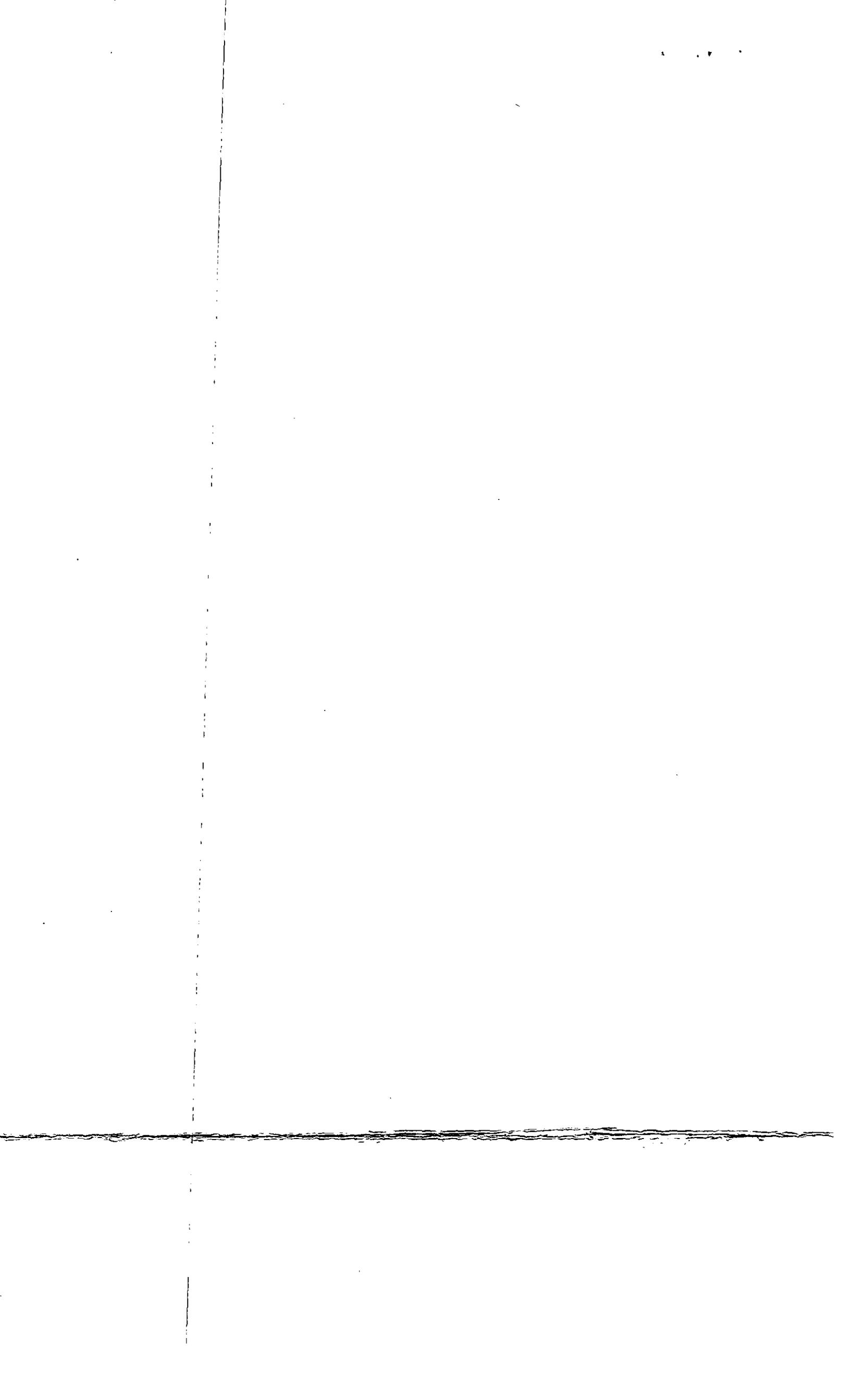
DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to: Construct () Repair Upgrade () Abandon () an individual sewage disposal system at 531 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.

DEP APPROVED FORM 5/96 Date _____ Board of Health _____



FORM 1 - APPLICATION FOR DSCP

No. _____

Fee _____

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, MA.

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

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

Location <u>531 Bay Road</u>	Owner's Name <u>Thomas E. + Kathryn Dougherty</u>
Map/Parcel#	Address <u>531 Bay Rd., Amherst, MA 01002</u>
Lot#	Telephone# <u>(413) 256-0997</u>
Installer's Name	Designer's Name <u>Richard Costa P.E. / Robt. Stover</u> <u>Amherst Civil Engineering</u>
Address	Address <u>P.O. Box 3312, Amherst, MA</u>
Telephone#	Telephone# <u>(413) 256-3400</u> <u>01004-3312</u>

Type of Building: SFH Lot Size _____ sq. ft.
 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 480 gpd Design flow provided 480 gpd
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 Soil Evaluator Form No. _____ Name of Soil Evaluator Robert Stover Date of Evaluation 12/31/96

DESCRIPTION OF REPAIRS OR ALTERATIONS Replace septic tank & soil absorption system.

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 _____ Date _____

Inspections _____

DEP APPROVED FORM 5/96

FORM 3 - CERTIFICATE OF COMPLIANCE

No. _____

COMMONWEALTH OF MASSACHUSETTS
 Board of Health, Amherst, MA.

CERTIFICATE OF COMPLIANCE

Description of Work: Individual Component(s) Complete System

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

by: Thomas E. & Kathryn L. Dougherty

at 531 Bay Road

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 480 (gpd)

Installer _____

Designer: _____ Inspector _____ Date _____

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

DEP APPROVED FORM 5/96

FORM 2 - DSCP

No. _____

Fee _____

COMMONWEALTH OF MASSACHUSETTS
 Board of Health, Amherst, MA.

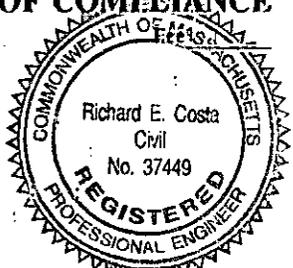
DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to: Construct () Repair Upgrade () Abandon () an individual sewage disposal system at 531 Bay Rd. as described in the application for Disposal

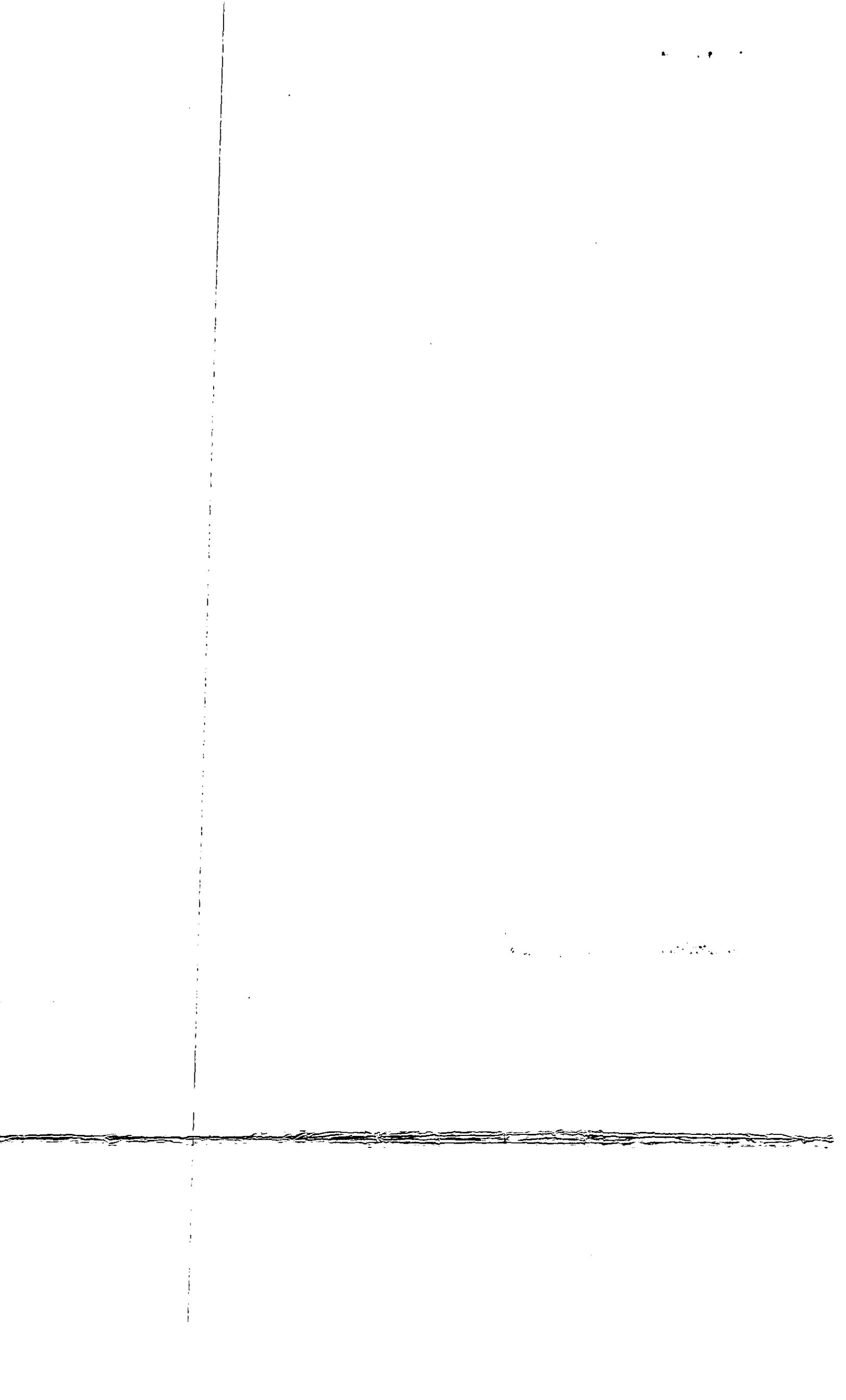
System Construction Permit No. _____ dated _____

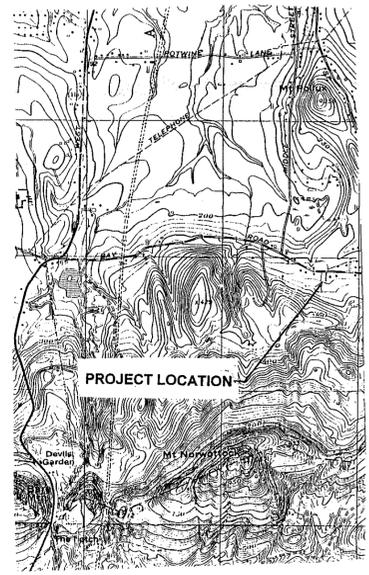
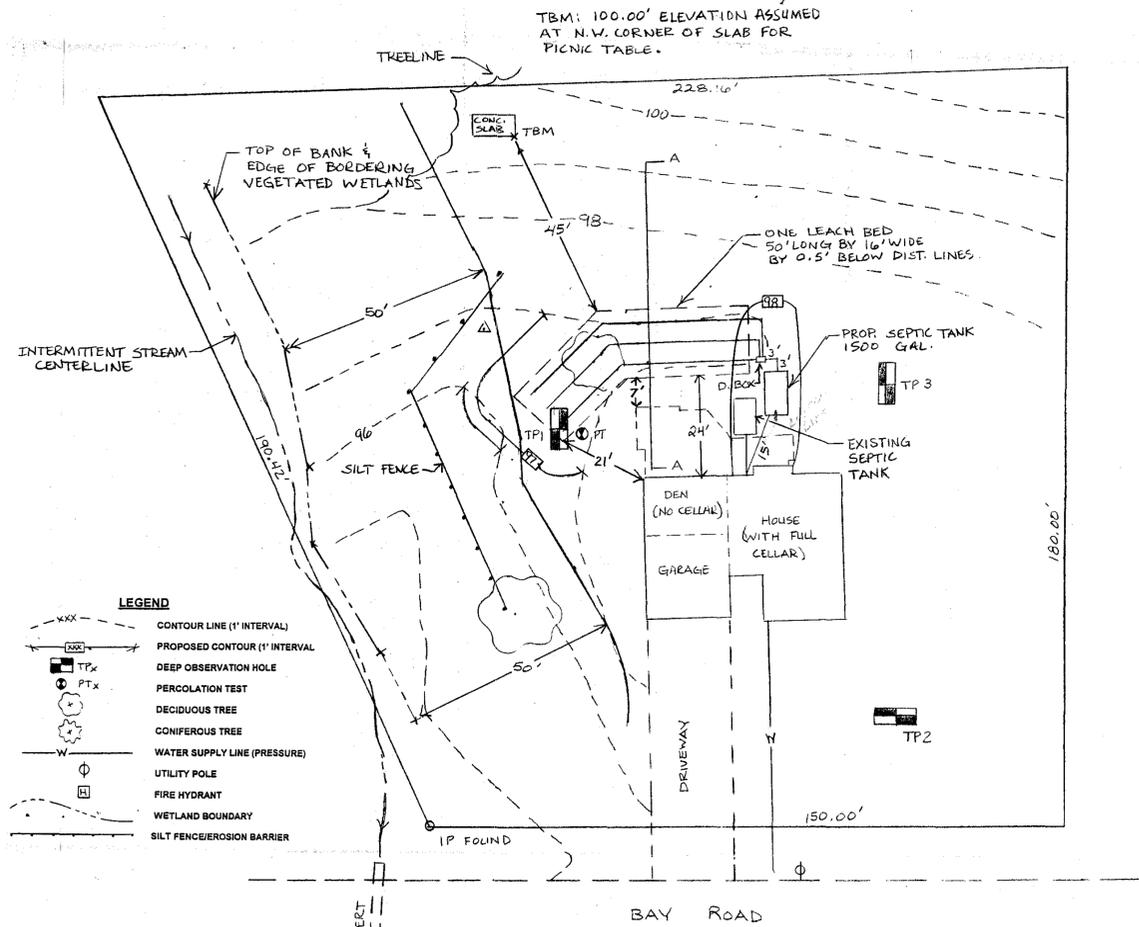
Provided: Construction shall be completed within three years of the date of this permit. All local conditions must be met.

DEP APPROVED FORM 5/96 Date _____ Board of Health _____

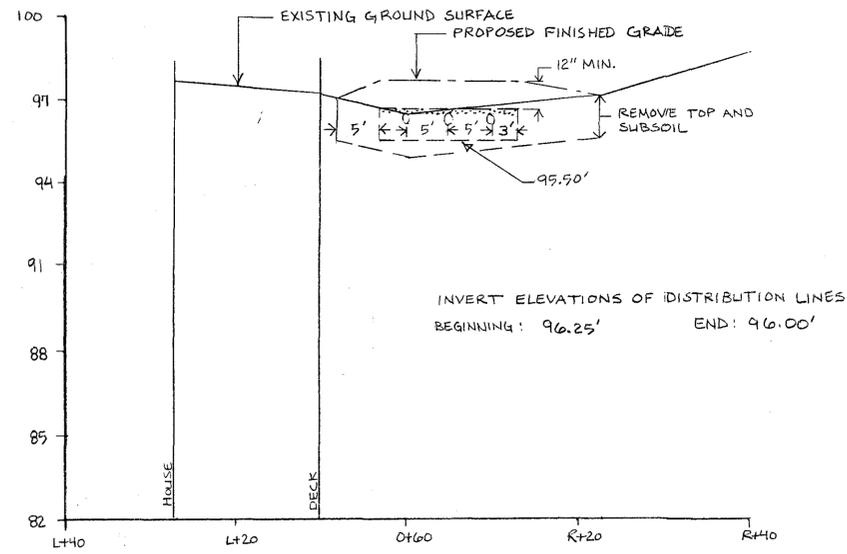
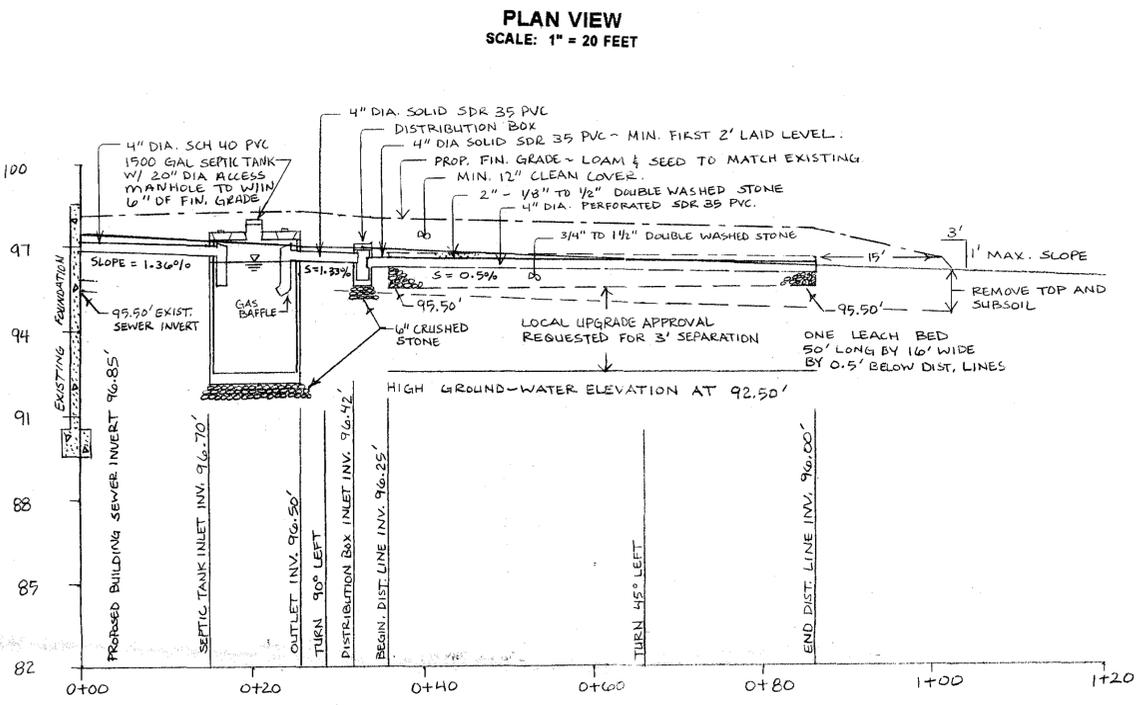


Richard E. Costa
8/5/97





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



SOIL INVESTIGATION

Test Pit No. 1 El. 96.50'.
Estimated Seasonal High Ground Water El. 92.50'.
Bedrock is deeper than El. 89.50'.
Class 2 soils.

Test Pit No. 2 El. 96.50'.
Estimated Seasonal High Ground Water El. 92.50'.
Bedrock deeper than El. 90.50'.
Class 2 soils.

This area is served by public water supply, no wells within 200 feet of the proposed on-site sewage disposal system. Wetland resources areas within 100 feet of the proposed on-site sewage disposal system are as shown on the plan view. Deep observation hole logs and percolation test results in the attached Soil Suitability Assessment Report. Soil Investigation and percolation testing by Robert Stover, Certified Soil Evaluator, on December 31, 1996 and witnessed by David Zarozinski, Certified Soil Evaluator, for the Amherst Board of Health.

DESIGN CRITERIA

Four bedroom house without a garbage grinder.
Proposed septic tank: 1500 Gal.

DESIGN CALCULATION

Design Flow: Design for 440 GPD
Effluent loading rate: perc rate = 10 minutes per inch, Class 2 soils, effluent loading rate = 0.60 gpd/sq.ft.

Proposed soil absorption system: 1 leach bed 50 ft. long by 16 ft. wide by 0.5 ft. below the distribution lines.
Bottom area: 50' X 16' = 800 sq.ft. X 0.60 gpd/sq.ft. = 480 gpd
Side wall area: Not Allowed.

Required design flow: = 440 gpd
Calculated design flow: = 480.0 gpd OK

- GENERAL CONDITIONS**
- The applicant requests the Amherst Board of Health grant a Local Upgrade Approval to allow a 3' separation between the bottom of the leach bed and the high ground-water elevation. This system repair plan is prepared in accordance with Title 5, 310 CMR 15.00. Construction shall conform to same.
 - The installer shall notify the designer of any unusual conditions and shall not 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.
 - Inspections: the installer shall notify the designer when the excavation for the leach trenches is ready for inspection and the installer shall notify 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, roots and stones shall be removed from the area of the soil absorption system, for five feet around the soil absorption system and wherever fill is to be placed. Any fill placed in or adjacent to the soil absorption system shall be a clean granular sand and shall conform to the specifications of Title 5, 310 CMR 15.25(3).
 - 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.
 - 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 vegetative cover is established.
 - The existing septic tank and any part of the existing leach facility encountered during installation shall be disposed of in accordance with the requirements of the Board of Health.



ON-SITE SEWAGE DISPOSAL SYSTEM REPAIR 531 BAY ROAD, AMHERST, MA		
THOMAS E. & KATHRYN L. DOUGHERTY 531 BAY RD., AMHERST, MA 01002		
SCALE:	APPROVED BY:	DRAWN BY:
DATE:		
AMHERST CIVIL ENGINEERING RICHARD COSTA, P.E. / ROBERT STOVER		
P.O. BOX 3312, AMHERST, MA 01004-3312 (413)258-3400		DRAWING NUMBER