

66 Flat Kings

867
N. Pleasant

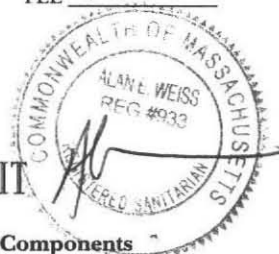
No. 13-7413-253-5105 Wilson
FAX

FEE \$150

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>66 Flat Hills Rd.</u> | Owner's Name <u>William Gerace</u> |
| Map/Parcel# <u>9A/32 + 9A/34</u> | Address <u>401 W. Radiance, PL, Greensboro, NC.</u> |
| Lot# <u>37 + 34.</u> | Telephone# <u>336-256-8572</u> |
| Installer's Name <u>TBD. Pete Wilson</u> | Designer's Name <u>Alan Weiss, PS</u> |
| Address <u>Pelham, MA.</u> | Address <u>Beldersham, MA.</u> |
| Telephone# | Telephone# <u>413-323-5957</u> |

27403

Type of Building Residence Lot Size 33,993 sq. ft.Dwelling - No. of Bedrooms _____ Garbage grinder (☒ must remove)Other - Type of Building 4 Bedroom No. of persons _____ Showers (), Cafeteria ()

Other Fixtures _____

Design Flow (min. required) 110 gpd Calculated design flow 440 Design flow provided 459 gpdPlan: Date 3/3/13 Number of sheets 1 Revision Date _____Title Septic System Repair Plan.Description of Soil(s) fsL: class 2 by sieve.Soil Evaluator Form No. _____ Name of Soil Evaluator Al Weiss Date of Evaluation 2/15/13

E. Smith.

DESCRIPTION OF REPAIRS OR ALTERATIONS Complete new system.

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

☒ Signed _____ Date _____

Inspections _____

No. 13-7

COMMONWEALTH OF MASSACHUSETTS

FEE \$150

Board of Health, Amherst, MA.

CERTIFICATE OF COMPLIANCE

mailed to owner 8/16/13

Description of Work: ☐ Individual Component(s) ☐ Complete SystemThe undersigned hereby certify that the Sewage Disposal System; Constructed (), Repaired (☒) Upgraded (), Abandoned ()by: Pete Gerace c/o HEATH HATCHat 66 FLAT HILLS ROADhas 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. 13-7, dated 3/3/13. Approved Design Flow 459 (gpd)Installer Pete Wilson

Designer: _____

Inspector: Ed. O. GutterDate: 7/17/13

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

No. 13-7

FEE \$150

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 66 FLAT HILLS ROAD as described in the application forDisposal System Construction Permit No. 13-7, dated 3/3/13.

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

221172186
04/10/2013
6935454468

This is a LEGAL COPY of your
check. You can use it the same
way you would use the original
check.

RETURN REASON (A)
NOT SUFFICIENT FUNDS

04/05/2013
0006369746

| | | |
|--|--|--|
| ZANA HATCH 66 FLAT HILLS ROAD AMHERST, MA 01002 Ph. 4134275881 | | 127 53-8027/2118 |
| Pay to the Order of <u>TOWNSON (A) AS AGENT FOR AMHERST</u> | | Date <u>Mar. 14, 2013</u> |
| <u>hundred fifty</u> | | \$ <u>650.00</u> |
| MASSIVE COLLEGE P.O. Box 1060 Hadley, MA 01035-1060 | | <input checked="" type="checkbox"/> Dollars <input type="checkbox"/> Cents |
| For <u>Bill's Septic Permit</u> | | <u>Zana Hatch</u> |
| ⑆ 211880271 ⑆ | | ⑆ 4638110127 ⑆ |

VOIDED CHECK

⑆ 211880271 ⑆ ⑆ 4638110127 ⑆ ⑆ 0000065000 ⑆

This check
was returned.
Need to submit +
cash + \$25 fee.

CUST NAME
4 BOLTWOOD AVENUE
04/23/13
CITY, ST, ZIP

***TOWN OF A TOWN HAL
AMHERST M REFERENCE
DATE/TIME 10:38

130 PE

CUST NAME

0
DEPT

DE HEA058

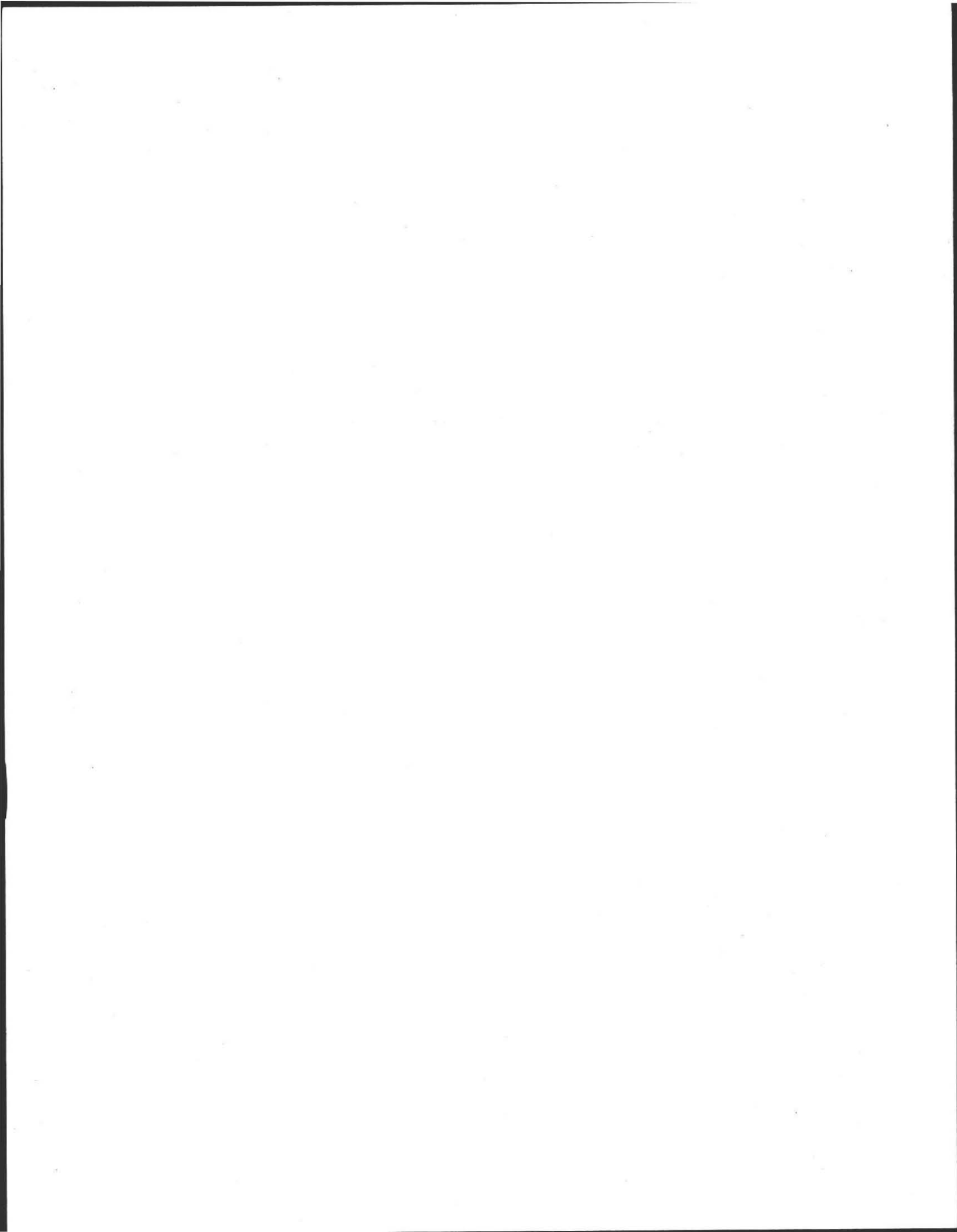
TITLE V WI

200.

RECPT TOTAL

200.00
ZANA HATCH QUA CASH

AMOUNT



CUST NAME
4 BOLTWOOD AVENUE
04/23/13
CITY, ST, ZIP

***TOWN OF A TOWN HAL
AMHERST M REFERENCE
DATE/TIME 10:41

130 PE

CUST NAME

0
DEPT

DE HEA011

PERCOLATIO

300.

RECPT TOTAL

300.00
ZANA HATCH QUA CASH

AMOUNT

130 PE

CUST NAME
4 BOLTWOOD AVENUE
04/23/13
CITY, ST, ZIP

***TOWN OF A TOWN HAL
AMHERST M REFERENCE
DATE/TIME 10:43

CUST NAME

0
DEPT

DE HEA017

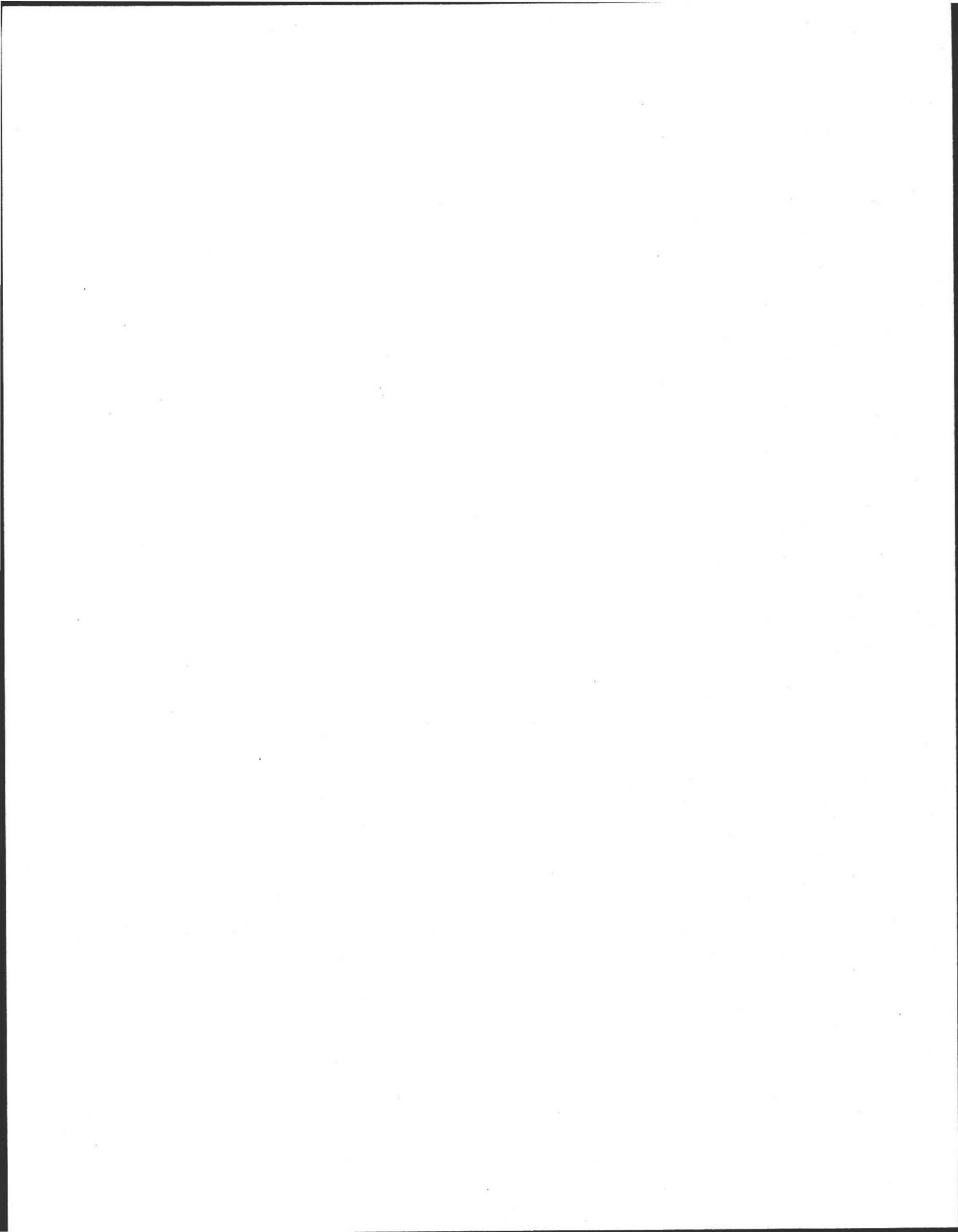
SEPTIC TAN

175.

RECPT TOTAL

175.00
ZANA HATCH QUA CASH

AMOUNT



AMHERST PUBLIC HEALTH DEPARTMENT

DATE: March 14, 2013

RE: Invoice for Title 5 Witness, Soil Evaluation, Plan Review
66 Flat Hills Road, Amherst MA
Services provided by Edmund Smith
PAYMENT TERMS: I Paid in Full 3/14/2013

Batch - 5640
App - 17445 - Receipt - 13091421
17446 - " " - 13091422
17447 " " - 13091423

returned
✓ fee
added
here!

CUST NAME
4 BOLTWOOD AVENUE
04/01/13
CITY, ST, ZIP

***TOWN OF A TOWN HAL
AMHERST M REFERENCE
DATE/TIME 10:37

130 PE

CUST NAME

0
DEPT

DE HEA058

TITLE V WI 200.

RECPT TOTAL

200.00
ZANA HATCH QUA CHECK

127

AMOUNT

130 PE

CUST NAME
4 BOLTWOOD AVENUE
04/01/13
CITY, ST, ZIP

***TOWN OF A TOWN HAL
AMHERST M REFERENCE
DATE/TIME 10:40

CUST NAME

0
DEPT

DE HEA011

PERCOLATIO 300.

RECPT TOTAL

300.00
ZANA HATCH QUA CHECK

127

AMOUNT

CUST NAME
4 BOLTWOOD AVENUE
04/01/13
CITY, ST, ZIP

***TOWN OF A TOWN HAL
AMHERST M REFERENCE
DATE/TIME 10:43

130 PE

CUST NAME

0
DEPT

DE HEA017

SEPTIC TAN

150.

RECPT TOTAL

150.00
ZANA HATCH QUA CHECK

127

AMOUNT



Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

Handwritten: \$200
MUNIS

Owner information is required for every page.

66 Flat Hills Road

Property Address

Bill Gerace (C/O Heath Hatch)

Owner's Name

Amherst

City/Town

MA

State

01002

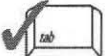
Zip Code

03.20.2012

Date of Inspection

Inspection results must be submitted on this form. Inspection forms may not be altered in any way. Please see completeness checklist at the end of the form.

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. General Information

1. Inspector:

Alan E Weiss, M.S, Hydrogeologist, RS # 933

Name of Inspector

Cold Spring Environmental Consultants Inc.

Company Name

350 Old Enfield Road

Company Address

Belchertown

City/Town

413.323.5957

Telephone Number

MA

State

01007

Zip Code

738

License Number

B. Certification

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

☒ Fails

☐ Needs Further Evaluation by the Local Approving Authority

Inspector's Signature

03.20.2012

Date

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.

****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.



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Date of Inspection

B. Certification (cont.)

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

A) System Passes:

- ☐ 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:

Property has original 1000 Gal S. tank and D. Box with L. field of 36+ yrs, Tank had some corrosion. D. box was full of liquid over pipes & Leach area had ponding and piping in hydraulic failure. Needs perc test and new engineered system with. Well Location to be confirmed. Recommended removal of Garbage grinder from K. Sink and dehumidifier from septic system.

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.

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

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.

- ☐ Y ☐ N ☐ ND (Explain below):



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B. Certification (cont.)

B) System Conditionally Passes (cont.):

- ☐ 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):

- | | |
|--|--|
| <input type="checkbox"/> broken pipe(s) are replaced | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> ND (Explain below): |
| <input type="checkbox"/> obstruction is removed | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> ND (Explain below): |
| <input type="checkbox"/> distribution box is leveled or replaced | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> ND (Explain below): |

- ☐ 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):

- | | |
|--|--|
| <input type="checkbox"/> broken pipe(s) are replaced | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> ND (Explain below): |
| <input type="checkbox"/> obstruction is removed | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> ND (Explain below): |

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 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:

- | |
|---|
| <input type="checkbox"/> Cesspool or privy is within 50 feet of a surface water |
| <input type="checkbox"/> Cesspool or privy is within 50 feet of a bordering vegetated wetland or a salt marsh |



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B. Certification (cont.)

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:

- ☐ 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 SAS and the SAS is within a Zone 1 of a public water supply.
- ☐ The system has a septic tank and SAS and the SAS is within 50 feet of a private water supply well.
- ☐ 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 fecal coliform bacteria indicates absent 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:

D) System Failure Criteria Applicable to All Systems:

You must indicate "Yes" or "No" to each of the following for all inspections:

Yes No

- | | | |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Backup of sewage into facility or system component due to overloaded or clogged SAS or cesspool |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Discharge or ponding of effluent to the surface of the ground or surface waters due to an overloaded or clogged SAS or cesspool |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Static liquid level in the distribution box above outlet invert due to an overloaded or clogged SAS or cesspool |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Liquid depth in cesspool is less than 6" below invert or available volume is less than 1/2 day flow |



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B. Certification (cont.)

Yes No

☐☒

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.

☐☒

Any portion of 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 1 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. **[This system passes if the well water analysis, performed at a DEP certified laboratory, for fecal coliform bacteria indicates absent 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 and chain of custody must be attached to this form.]**

☐☒

The system is a cesspool serving a facility with a design flow of 2000gpd-10,000gpd.

☒☐

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: To be considered a large system the system must serve a facility with a design flow of 10,000 gpd to 15,000 gpd.

For large systems, you must indicate either "yes" or "no" to each of the following, in addition to the questions in Section D.

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.



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C. Checklist

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

Yes No

- | | | |
|-------------------------------------|-------------------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Pumping information was provided by the owner, occupant, or Board of Health |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Were any of the system components pumped out in the previous two weeks? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Has the system received normal flows in the previous two week period? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Have large volumes of water been introduced to the system recently or as part of this inspection? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Were as built plans of the system obtained and examined? (If they were not available note as N/A) |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Was the facility or dwelling inspected for signs of sewage back up? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Was the site inspected for signs of break out? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were all system components, excluding the SAS, located on site? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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: |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Existing information. For example, a plan at the Board of Health. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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(5)] |

D. System Information

Residential Flow Conditions:

Number of bedrooms (design):

?

Number of bedrooms (actual):

4

DESIGN flow based on 310 CMR 15.203 (for example: 110 gpd x # of bedrooms):

?



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D. System Information

Description:

1000 gallon S. tank and leach area d box and leach area in hydraulic failure.

Number of current residents:

5

Does residence have a garbage grinder?

☒ Yes ☐ No

Is laundry on a separate sewage system? [if **yes** separate inspection required]

☐ Yes ☒ No

Laundry system inspected?

☐ Yes ☐ No

Seasonal use?

☐ Yes ☒ No

Water meter readings, if available (last 2 years usage (gpd)):

n/a

Detail:

Laundry was connected to main system.

Sump pump?

☐ Yes ☒ No

Last date of occupancy:

Date

Commercial/Industrial Flow Conditions:

Type of Establishment:

Design flow (based on 310 CMR 15.203):

Gallons per day (gpd)

Basis of design flow (seats/persons/sq.ft., etc.):

Grease trap present?

☐ Yes ☐ No

Industrial waste holding tank present?

☐ Yes ☐ No

Non-sanitary waste discharged to the Title 5 system?

☐ Yes ☐ No

Water meter readings, if available:



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Date of Inspection

D. System Information (cont.)

Last date of occupancy/use:

current

Date

Other (describe below):

General Information

Pumping Records:

Source of information:

?+ yrs.

Was system pumped as part of the inspection?

☒ Yes ☐ No

If yes, volume pumped:

1000

gallons

How was quantity pumped determined?

Meas.

Reason for pumping:

Insp.

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) and a copy of latest inspection of the I/A system by system operator under contract
- ☐ Tight tank. Attach a copy of the DEP approval.
- ☐ Other (describe):



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D. System Information (cont.)

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

36+

Were sewage odors detected when arriving at the site?

☐ Yes ☒ No

Building Sewer (locate on site plan):

Depth below grade:

3.0
feet

Material of construction:

☒ cast iron

☐ 40 PVC

☐ other (explain):

Distance from private water supply well or suction line:

feet

Comments (on condition of joints, venting, evidence of leakage, etc.):

Good condition

Septic Tank (locate on site plan):

Depth below grade:

2.5
feet

Material of construction:

☒ concrete

☐ metal

☐ fiberglass

☐ polyethylene

☐ other (explain)

1000 gallon black staining up to lid and over baffle

If tank is metal, list age:

years

Is age confirmed by a Certificate of Compliance? (attach a copy of certificate)

☐ Yes ☐ No

Dimensions:

8 x 4.0' x 4.0'

Sludge depth:

16"



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D. System Information (cont.)

Septic Tank (cont.)

Distance from top of sludge to bottom of outlet tee or baffle

32"

Scum thickness

2"

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?

Obs

Comments (on pumping recommendations, inlet and outlet tee or baffle condition, structural integrity, liquid levels as related to outlet invert, evidence of leakage, etc.):

Tank had corrosion at outlet baffle, with old style concrete baffles.

Grease Trap (locate on site plan):

Depth below grade:

feet

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:

Date



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D. System Information (cont.)

Comments (on pumping recommendations, inlet and outlet tee or baffle condition, structural integrity, liquid levels as related to outlet invert, evidence of leakage, etc.):

Tight or Holding Tank (tank must be pumped 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 per day

Alarm present:

☐ Yes

☐ No

Alarm level: _____

Alarm in working order:

☐ Yes

☐ No

Date of last pumping: _____

Date

Comments (condition of alarm and float switches, etc.):

* Attach copy of current pumping contract (required). Is copy attached?

☐ Yes

☐ No



Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

Owner
information is
required for
every page.

66 Flat Hills Road

Property Address

Bill Gerace (C/O Heath Hatch)

Owner's Name

Amherst

City/Town

MA

State

01002

Zip Code

03.20.2012

Date of Inspection

D. System Information (cont.)

Distribution Box (if present must be opened) (locate on site plan):

Depth of liquid level above outlet invert

liquid level 6" over pipe inverts

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.):

Box, thin and in hydraulic failure.

Pump Chamber (locate on site plan):

Pumps in working order:

☐ Yes

☐ No

Alarms in working order:

☐ Yes

☐ No

Comments (note condition of pump chamber, condition of pumps and appurtenances, etc.):

Soil Absorption System (SAS) (locate on site plan, excavation not required):

If SAS not located, explain why:



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03.20.2012

Date of Inspection

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information is
required for
every page.

D. System Information (cont.)

Type:

- | | | | |
|-------------------------------------|-------------------------------|---------------------|---------------------------|
| <input type="checkbox"/> | leaching pits | number: | _____ |
| <input type="checkbox"/> | leaching chambers | number: | _____ |
| <input type="checkbox"/> | leaching galleries | number: | _____ |
| <input type="checkbox"/> | leaching trenches | number, length: | _____ |
| <input checked="" type="checkbox"/> | leaching fields | number, dimensions: | <u>3 lines in failure</u> |
| <input type="checkbox"/> | overflow cesspool | number: | _____ |
| <input type="checkbox"/> | 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.):

leach field in failure, di box outlet pipes full of liquid.

Cesspools (cesspool must be pumped as part of inspection) (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 ☐ Yes ☐ No



Commonwealth of Massachusetts

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Zip Code

03.20.2012

Date of Inspection

D. System Information (cont.)

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

Privy (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.):



Commonwealth of Massachusetts

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D. System Information (cont.)

Sketch Of Sewage Disposal System: Provide a view 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. Check one of the boxes below:

- ☐ hand-sketch in the area below
☒ drawing attached separately



Commonwealth of Massachusetts

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Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

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66 Flat Hills Road

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03.20.2012

Date of Inspection

D. System Information (cont.)

Site Exam:

☒ Check Slope

☐ Surface water

☒ Check cellar

☐ Shallow wells

Estimated depth to high ground water:

5'+ topo of terrace.
feet

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

☐ Obtained from system design plans on record

If checked, date of design plan reviewed:

Date

☐ Observed site (abutting property/observation hole within 150 feet of SAS)

☒ Checked with local Board of Health - explain:

Work at site & neighborhood.

☐ Checked with local excavators, installers - (attach documentation)

☐ Accessed USGS database - explain:

You **must** describe how you established the high ground water elevation:

topo and on site excavation.

Before filing this Inspection Report, please see Report Completeness Checklist on next page.



Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

66 Flat Hills Road

Property Address

Bill Gerace (C/O Heath Hatch)

Owner's Name

Amherst

MA

01002

03.20.2012

City/Town

State

Zip Code

Date of Inspection

Owner
information is
required for
every page.

E. Report Completeness Checklist

- ☒ Inspection Summary: A, B, C, D, or E checked
- ☒ Inspection Summary D (System Failure Criteria Applicable to All Systems) completed
- ☒ System Information – Estimated depth to high groundwater
- ☒ Sketch of Sewage Disposal System either drawn on page 15 or attached in separate file



- Property Map**
 - Property Line
 - Hydrographic Property
 - Right of Way Line
 - Town Boundary
 - Easements
- Topography**
 - Elevations
 - Elevation Contours
 - Spot Elevation
 - Index
- Base Map**
 - Trails
 - Rail Lines
 - Structures
 - Building
 - Foundation or in concrete
 - Outbuilding or Miscellaneous
 - Mobile Home
 - Mobile Trailer
 - Swimming Pool
 - Building Ruins
 - Water storage tank
 - Rivers and Streams
 - Streams
 - Major Culverts
 - Hydro Connector
 - Headwalls, Floodwalls
 - Water Bodies
 - Canals
 - Rivers, Ponds & Rese
 - Retention pond/Foo
 - Wetland
 - Forested Wetland
- Transportation**
 - Paved street polygons
 - Unpaved street polyg
 - Bridges
 - Bridge decking and str
 - Foot Bridge
 - Rail Bridge
- Streets**
 - Local Roads
 - Minor Roads
 - State Routes
 - Highways
 - Interstate
 - Multi-lane Hwy, not I
 - Other Numbered High
 - Major Road, Collector
 - Minor Road, Arterial

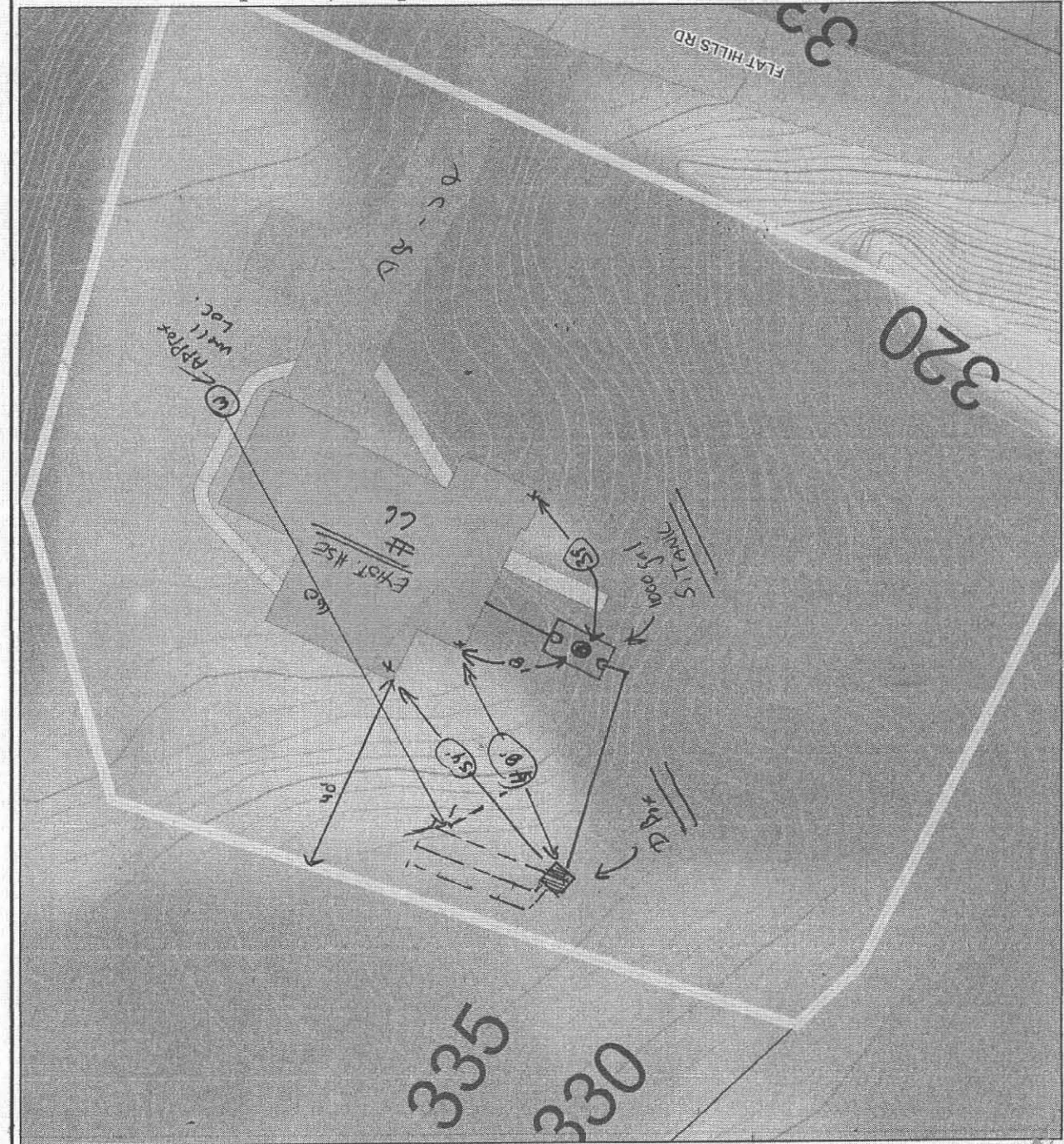
Horizontal Datum: MA Stateplane Coordinate System,
Zone 4151, Datum: NAD83, Feet
Vertical Datum: NAVD83, Feet

Planimetric & topographic base map features compiled
at 1"=40' scale from April, 2008 Aerial Photography.
Parcels compiled to match the base map;
revisions are ongoing.

The information depicted on this map is for planning
purpose only. It may not be adequate for legal boundary
definition, regulatory interpretation, or property conveyance
purposes. Utility structures and underground utility
locations are approximate and require field verification.

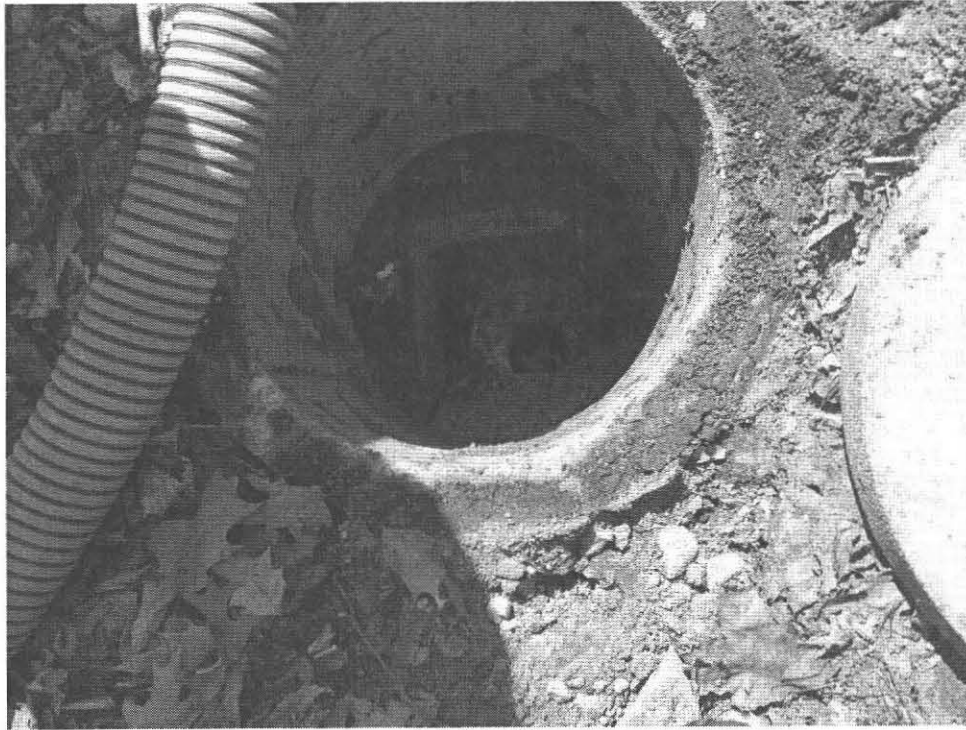
THE TOWN OF AMHERST MAKES NO WARRANTIES,
EXPRESS OR IMPLIED, CONCERNING THE
ACCURACY, RELIABILITY, OR SUITABILITY OF
COMPLETENESS. THE TOWN OF AMHERST DOES NOT
ASSUME ANY LIABILITY ASSOCIATED WITH THE
USE OR MISUSE OF THIS INFORMATION.

1" = 30 ft
Amherst GIS Viewer March 20, 2012

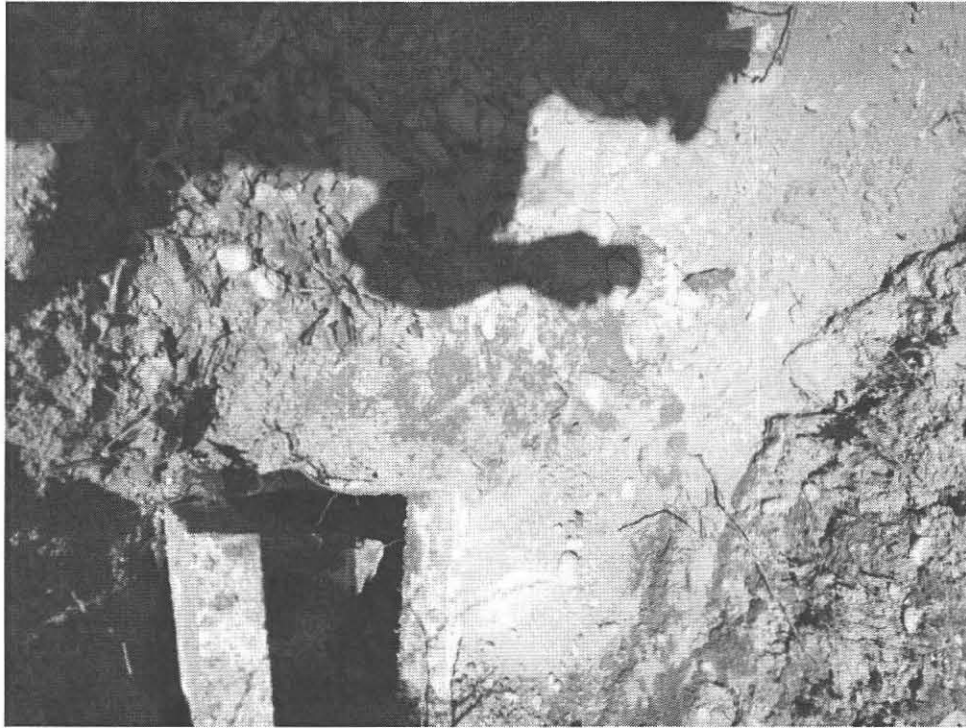




Septic Area
66 Flat Hills Road
Amherst, MA
03.20.2012



Inlet baffle.
66 Flat Hills Road
Amherst, MA
03.20.2012



Corroded Outlet Baffle
66 Flat Hills Road
Amherst, MA
03.20.2012



Failed Dist. Box
66 Flat Hills Road
Amherst, MA
03.20.2012

2/15/2013

66 FLAT HILLS ROAD

- REPAIR PERC.

- 2 DEEP HOLES WEST OF REAR OF HOUSE

46' from SW
CORNER

- NEAR PROPERTY LINE

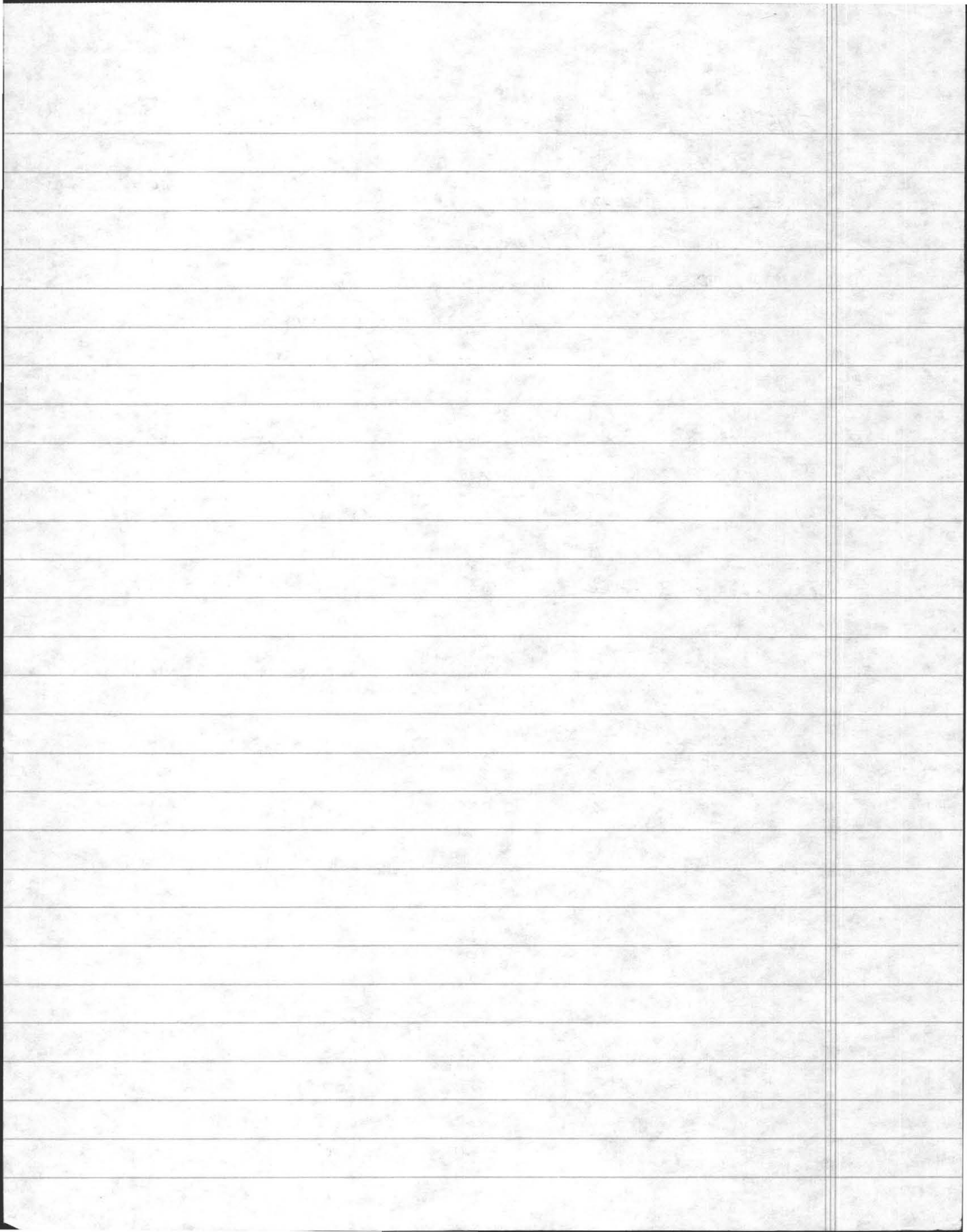
- 2' TO SEEPS

- SAMPLE GATHERED FOR SIEVE ANALYSIS

2.5 y 4/3 @ ~~2.5~~ C Layer

| | | | | |
|--------|-----------------|----|------------------------|------------------------------|
| 0-10 | A | FS | 10 y R ^{3/2} | friable & moist |
| 10-20 | B ₁₀ | LS | 10 y R ^{5/6} | " " " |
| 20-109 | C | LS | 2.5 y R ^{4/3} | fine to med sand 20% cobbles |

Stream outwash



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>66 Flat Hills Rd.</u> | Owner's Name <u>William Gervase</u> |
| Map/Parcel# <u>9A/37 + 9A/34</u> | Address <u>401 W. Radiance, Rt. 6, Greenham, NC.</u> |
| Lot# <u>37 + 34.</u> | Telephone# <u>336-256-8572</u> |
| Installer's Name <u>TBD. Pete Wilson</u> | Designer's Name <u>Alan Weiss, PS</u> |
| Address <u>Pelham, MA.</u> | Address <u>Baldertown, MA.</u> |
| Telephone# _____ | Telephone# <u>413-323-5957</u> |

27403

Type of Building Residence Lc. Size 33993 sq. ft.
 Dwelling - No. of Bedrooms _____
 Other - Type of Building 4 Bedrooms No. of persons _____
 Other Fixtures _____
 Design Flow (min. required) 110 gpd Calculated design flow 440 Design flow provided 459 gpd
 Plan: Date 2/3/13 Number of sheets 1 Revision Date _____
 Title Septic System Repair Plan.
 Description of Soil(s) fsu: class 2 by sieve
 Soil Evaluator Form No. _____ Name of Soil Evaluator Alan Weiss Date of Evaluation 2/15/13
E. Smith.
 DESCRIPTION OF REPAIRS OR ALTERATIONS Complete new system.

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

X Signed _____ Date _____
 Inspections _____

No. _____

FEE _____

COMMONWEALTH OF MASSACHUSETTS

Board of Health, _____, 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: _____

at _____

has been installed in accordance with the provisions of §10 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. _____, dated _____, Approved Design Flow _____ (gpd)

Installer _____

Designer: _____ Inspector: _____ Date: _____

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

No. _____

FEE _____

COMMONWEALTH OF MASSACHUSETTS

Board of Health, _____, MA.

DISPOSAL SYSTEM CONSTRUCTION PERMIT

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



ALAN E. WEISS, M.S., R.S., L.S.P.

Licensed Site Professional
Registered Sanitarian
Hydrogeologist
President

•Wetland Consults
•Soil and Water Testing
•21E Site Investigations
•Percolation Tests and
•Septic Designs
•Title 5 Inspections

350 Old Enfield Rd.
Belchertown, MA 01007
(413) 323-5957 & 323-4916 (FAX)

aweiss@charter.net

Date: 2/15/13

Commonwealth of Massachusetts

Amherst, Massachusetts

Soil Suitability Assessment for On-site Sewage Disposal

Performed By: A. Weiss
Witnessed By: E. Smith

Date: 2/15/13

| | |
|---|---|
| Location Address or Lot # <u>Dr. William Grace -</u> <u>66 Flat Hills Rd.</u> <u>Amherst, MA 01002</u> | Owner's Name, Address, and Telephone # <u>William</u> <u>Dr. Grace</u> <u>401 W. Radiance Dr.</u> <u>Greensboro, NC 27403</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: _____



DEP APPROVED FORM 11 - 12/07/95

Heath Hatch

heath_hatch@hotmail.com

Zana Hatch

zana_hatch@hotmail.com

Location Address or Lot No. 66 Flat Hills Rd.

COMMONWEALTH OF MASSACHUSETTS

Ashurst, Massachusetts

| Percolation Test* | | |
|--------------------|-----------------------|---------------------|
| Date: | <u>2/15/13</u> | Time: <u>1:00pm</u> |
| Observation Hole # | <u>P.</u> | |
| Depth of Perc | <u>38"</u> | |
| Start Pre-soak | <u>To</u> | |
| End Pre-soak | <u>wet</u> | |
| Time at 12" | <u>to</u> | |
| Time at 9" | <u>per</u> | |
| Time at 6" | <u>* Sieve Sample</u> | |
| Time (9"-6") | <u>11</u> | |
| Rate Min./Inch | <u>11</u> | |

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

Site Passed ☒ Site Failed ☐ ← See LUA for use of sieve test Attached.

Performed By: Alan Weiss, RS

Witnessed By: Ed Smith,

Comments: _____



Location Address or Lot No. 66 Flat HillsOn-site ReviewDeep Hole Number 1-2 Date: 2/15/13 Time: 2/15 Weather S.W. 40.8

Location (identify on site plan) _____

Land Use Resid. rural Slope (%) 2-4 Surface Stones yesVegetation deciduousLandform 1.5 m. d.

Position on landscape (sketch on the back) _____

Distances from:

Open Water Body 100' feetDrainage way 20' feetPossible Wet Area 100' feetProperty Line See photo feet → two lots owned in commonDrinking Water Well 100' feetOther ph. change planned

DEEP OBSERVATION HOLE LOG*

| Depth from Surface (inches) | Soil Horizon | Soil Texture (USDA) | Soil Color (Munsell) | Soil Moisture | Other (Structure, Stones, Boulders, Consistency, % Gravel) |
|-----------------------------|----------------|---------------------|----------------------|-----------------|--|
| #1 0-10" | A | FS | 10YR 3/2 | | Friable, moist |
| 10-20" | B ₁ | LS | 10YR 5/6 | 24" | Friable, moist |
| 20"-109" | C ₁ | LS | 2.5Y 4/3 | 54YR 6/6 | F Sand - M Sand, 20% cobbles. |
| #2 0-10" | A | FS | 10YR 3/2 | | |
| 10-20" | B ₁ | LS | 10YR 5/6 | | Same |
| 20"-110" | C ₁ | LS | 2.5Y 4/3 | 24" 54YR 6/6 | as #1 |

* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) Shale OutwashDepth to Bedrock: 110'Depth to Groundwater: Standing Water in the Hole: 68"Weeping from Pit Face: 24"Estimated Seasonal High Ground Water: 24"

UMass Extension

CENTER FOR AGRICULTURE

02/27/13

Agriculture and Landscape Program
Soil and Plant Nutrient Testing Laboratory

West Experiment Station
682 North Pleasant Street
University of Massachusetts
Amherst, MA 01003-9302
Phone: 413.545.2311
Fax: 413.545.1931
www.umass.edu/soiltest/

TEXTURAL ANALYSIS RESULTS

Customer Name: Cold Spring Environmental - A Weiss
350 Old Enfield Rd
Belchertown, MA 01007

Sample ID: 113639

Customer Designation: Gerace

USDA SIZE FRACTIONS

| Main Fractions | Size (mm) | Percent |
|----------------|------------|---------|
| Sand | 0.05-2.0 | 54.7 |
| Silt | 0.002-0.05 | 38.0 |
| Clay | < 0.002 | 7.3 |
| Total | < 2.0 | 100.0 |

| Sand Fractions | Size (mm) | Percent |
|----------------|-----------|---------|
| Very Coarse | 1.0-2.0 | 3.5 |
| Coarse | 0.5-1.0 | 6.2 |
| Medium | 0.25-0.5 | 13.1 |
| Fine | 0.10-0.25 | 20.3 |
| Very Fine | 0.05-0.10 | 11.6 |
| | | 54.7 |

| Silt Fractions | Size (mm) | Percent |
|----------------|-------------|---------|
| Coarse | 0.02-0.05 | 15.0 |
| Medium | 0.005-0.02 | 17.6 |
| Fine | 0.002-0.005 | 5.4 |
| | | 38.0 |

PERCENT OF WHOLE SAMPLE PASSING

| Size (mm) | Sieve # | % |
|-----------|---------|------|
| 2.00 | #10 | 92.5 |
| 1.00 | #18 | 89.3 |
| 0.50 | #35 | 83.5 |
| 0.25 | #60 | 71.4 |
| 0.10 | #140 | 52.6 |
| 0.05 | #270 | 41.9 |
| 0.02 | 20 um | 28.0 |
| 0.005 | 5 um | 11.7 |
| 0.002 | 2 um | 6.8 |

USDA Textural Class = fine sandy loam

Gravel Content = 7.5%

COMMENTS: aeweiss@charter.net

Location Address or Lot No. 66 Flat Hills Rd

Determination for Seasonal High Water Table

Method Used:

- ☐ Depth observed standing in observation hole inches
☐ Depth weeping from side of observation hole inches
☒ Depth to soil mottles 24" 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

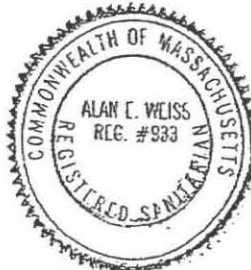
I certify that on 6/95 (date) I have passed the soil evaluator examination approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017.

Signature AL

Date 2/15/13



DEP APPROVED FORM - 12/07/95





Commonwealth of Massachusetts

City/Town of Amherst

Form 9A – Application for Local Upgrade Approval

DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with your local Board of Health to determine the form they use.

Form 9A is to be submitted to the Local Board of Health for the upgrade of a failed or nonconforming septic system with a design flow of less than 10,000 gpd, where full compliance, as defined in 310 CMR 15.404(1), is not feasible.

System upgrades that cannot be performed in accordance with 310 CMR 15.404 and 15.405, or in full compliance with the requirements of 310 CMR 15.000, require a variance pursuant to 310 CMR 15.410 through 15.415.

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

A. Facility Information

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Facility Name and Address:

William Gerace

Name

66 Flat Hills Road

Street Address

Amherst

MA

State

01002

Zip Code

2. Owner Name and Address (if different from above):

William Gerace

Name

Greensboro

City/Town

27403

Zip Code

401 W. Radiance Dr

Street Address

NC

State

413-253-3792

Telephone Number

3. Type of Facility (check all that apply):



Residential



Institutional



Commercial



School

4. Describe Facility:

4 BR Single Family Res.

5. Type of Existing System:



Privy



Cesspool(s)



Conventional



Other (describe below):

6. Type of soil absorption system (trenches, chambers, leach field, pits, etc):

L field.



Commonwealth of Massachusetts

City/Town of Amherst

Form 9A – Application for Local Upgrade Approval

DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with your local Board of Health to determine the form they use.

A. Facility Information (continued)

7. Design Flow per 310 CMR 15.203:

| | |
|---|-----|
| Design flow of existing system: | 440 |
| | gpd |
| Design flow of proposed upgraded system | 440 |
| | gpd |
| Design flow of facility: | 459 |
| | gpd |

B. Proposed Upgrade of System

1. Proposed upgrade is (check one):

☒ Voluntary ☐ Required by order, letter, etc. (attach copy)

☐ Required following inspection pursuant to 310 CMR 15.301:

date of inspection

2. Describe the proposed upgrade to the system:

New system with new I. Field. & Tank (Old system backing up into D. box & in ESHGW).

3. Local Upgrade Approval is requested for (check all that apply):

☐ Reduction in setback(s) – describe reductions:

☐ Reduction in SAS area of up to 25%:

SAS size, sq. ft.

% reduction

☐ Reduction in separation between the SAS and high groundwater:

Separation reduction

ft.

Percolation rate

min./inch

Depth to groundwater

ft.

Handwritten text, likely bleed-through from the reverse side of the page. The text is extremely faint and illegible due to the quality of the scan. It appears to be a multi-paragraph document, possibly a letter or a report, with some lines of text being more prominent than others. The overall structure suggests a formal or semi-formal communication.



Commonwealth of Massachusetts

City/Town of Amherst

Form 9A – Application for Local Upgrade Approval

DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with your local Board of Health to determine the form they use.

B. Proposed Upgrade of System (continued)

☐ Relocation of water supply well (explain):

☐ Reduction of 12-inch separation between inlet and outlet tees and high groundwater

☐ Use of only one deep hole in proposed disposal area

☒ Use of a sieve analysis as a substitute for a perc test

☐ Other requirements of 310 CMR 15.000 that cannot be met – describe and specify sections of the Code:

Used Class 2, Fine Sandy Loam Loading factor 0.33 GPD/SF (310 CMR 15.542)

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 groundwater elevation pursuant to 310 CMR 15.405(1)(h)(1). **The soil evaluator must be a member or agent of the local approving authority.**

High groundwater evaluation determined by:

Evaluator's Name (type or print)

Signature

Date of evaluation

C. Explanation

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

1. An upgraded system in full compliance with 310 CMR 15.000 is not feasible:

Due to recent winter and saturation.

2. An alternative system approved pursuant to 310 CMR 15.283 to 15.288 is not feasible:

Would not change request.

1900

1901

1902

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Commonwealth of Massachusetts

City/Town of Amherst

Form 9A – Application for Local Upgrade Approval

DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with your local Board of Health to determine the form they use.

C. Explanation (continued)

3. A shared system is not feasible:

No applicable

4. Connection to a public sewer is not feasible:

Not available

5. The Application for Local Upgrade Approval must be accompanied by all of the following (check the appropriate boxes):

☒ Application for Disposal System Construction Permit

☒ Complete plans and specifications

☒ Site evaluation forms

☐ A list of abutters affected by reduced setbacks to private water supply wells or property lines. Provide proof that affected abutters have been notified pursuant to 310 CMR 15.405(2).

☒ Other (List):

D. 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 deliberate violations."

Facility Owner's Signature

William Gerace

Print Name

Alan Weiss, RS

Name of Preparer

350 Old Enfield Road,

Preparer's address

MA 01007

State/ZIP Code

Date

03.05.2013

Date

Belchertown

City/Town

413.323.5957

Telephone



Commonwealth of Massachusetts

City/Town of Amherst

Form 9A – Application for Local Upgrade Approval

DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with your local Board of Health to determine the form they use.

C. Explanation (continued)

3. A shared system is not feasible:

No applicable

4. Connection to a public sewer is not feasible:

Not available

5. The Application for Local Upgrade Approval must be accompanied by all of the following (check the appropriate boxes):

☒ Application for Disposal System Construction Permit

☒ Complete plans and specifications

☒ Site evaluation forms

☐ A list of abutters affected by reduced setbacks to private water supply wells or property lines. Provide proof that affected abutters have been notified pursuant to 310 CMR 15.405(2).

☒ Other (List):

D. 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 deliberate violations."

William J. Gerace
Facility Owner's Signature

3/9/13
Date

William Gerace
Print Name

Alan Weiss, RS
Name of Preparer

03.05.2013
Date

350 Old Enfield Road,
Preparer's address

Belchertown
City/Town

MA 01007
State/ZIP Code

413.323.5957
Telephone

| | | | | |
|----------------------------------|---------------|---------------|-------------------|----|
| PROJECT NO.: | 13-7 | | | |
| CITY/TOWN: | AMHERST | | | |
| APPLICANT: | WM. GERACE | | | |
| ADDRESS: | 66 FLAT HILLS | PARCEL I.D. # | 9A-37 + LOT 9A-34 | |
| DESIGN FLOW: | 459 | gpd | | |
| REVIEWED BY: | EDMUND SMITH | DATE: | 3/14/2013 | |
| Approved: <i>Edmund R. Smith</i> | | N/A | OK | NO |

LVA ✓

| GENERAL | | | | |
|---|--|-------------------------------|--|--|
| Legal boundaries denoted [310 CMR 15.220(4)(a)] | | ✓ | | |
| Street, Lot, tax parcel number and lot number noted on plan [310 CMR 15.220(4)(u)] | | ✓ | | |
| Locus Provided [310 CMR 15.220(4)(t)] | | ✓ | | |
| Plan proper scale? (1"=40' for plot plans, 1"= 20' or fewer for components) [310 CMR 15.220(4)] | | ✓ | | |
| Easements shown [310 CMR 15.220(4)(b)] | | ✓ | | |
| System located totally on lot served [310 CMR 15.405(1)(a) for upgrades]- if not, a variance is required [310 CMR 15.412 (4)] | | ? | | |
| Location of impervious surfaces (driveways, parking areas etc.) [310 CMR 15.220(4)(d)] | | ✓ | | |
| Location all buildings existing and proposed 310 CMR 15.220 (4)(c)] | | ✓ | | |
| Location and dimensions of system components and reserve areas. [310 CMR 15.220(4)(e)] | | REPAIR - NO RESERVE NECESSARY | | |
| System Calculations [310 CMR 15.220(4)(f)] | | ✓ | | |
| daily flow | | ✓ | | |
| septic tank capacity (required and provided) | | ✓ | | |
| soil absorption system (required and provided) | | ✓ | | |
| whether system designed for garbage grinder | | NO GRINDER SPECULATED | | |
| North arrow [310 CMR 15.220(4)(g)] | | ✓ | | |
| Existing and proposed contours [310 CMR 15.220(4)(g)] | | ✓ | | |
| Location and log of deep observation holes (existing grade el. on each test) [310 CMR 15.220(4)(h)] | | ✓ | | |
| Names of soil evaluator and BOH representative [310 CMR 15.220(4)(h) and (i)] | | ✓ | | |
| Location and date of percolation tests (performed at proper elevation?) [310 CMR 15.220(4)(i)] | | ✓ | | |
| Percolation test results match loading rate? [310 CMR 15.242] | | ? | | |
| Certification statement by Soil Evaluator [310 CMR 15.220(4)(j)] | | ✓ | | |
| Observed and Adjusted groundwater (method for adjustment given or indicated) [310 CMR 15.103(3) and 310 CMR 15.220(4)(n)] | | ✓ | | |
| | | | | |

EMAIL - 3/15 to ALAN

EMAIL TO ALAN 3/15

| GENERAL cont. | N/A | OK | NO |
|--|-----|----|----|
| Location of every water supply, public and private, [310 CMR 15.220(4)(k)] | | ✓ | |
| within 400 feet of the proposed system location in the case of surface water supplies and gravel packed public water supply wells | ✓ | - | |
| within 250 feet of the proposed system location in the case of tubular public water supply wells | ✓ | ✓ | |
| within 150 feet of the proposed system location in the case of private water supply wells | | ✓ | |
| Location of all surface waters and wetlands located up to 100 ft. beyond setbacks listed in 310 CMR 15.211 and any catch basins located within 50 ft. [310 CMR 15.220(4)(l)] | | ✓ | |
| Water lines and other subsurface utilities located [310 CMR 15.220(4)(m)] (if water line cross see 310 CMR 15.211(1)[1]) | | ✓ | |
| Profile of system showing invert elevations of all system components and the bottom of the SAS [310 CMR 15.220(4)(o)] | | ✓ | |
| Stamp of designer [310 CMR 15.220(1) and 310 CMR 15.220(2)] | | ✓ | |
| Stamp of Registered Land Surveyor (required if construction activities within 5 ft. of lot line) [310 CMR 15.220(3)] | ✓ | | |
| Test Holes adequate (two in each of the primary and reserve unless trenches as permitted in 310 CMR 15.102(2) or as approved for an upgrade under LUA at 310 CMR 15.405(1)(k)] | | ✓ | |
| Test hole adequate to demonstrate four feet of suitable material? [310 CMR 15.103(4)] | | ✓ | |
| Test Holes adequate to confirm adequate groundwater separation? [310 CMR 15.103(3)] | | ✓ | |
| Benchmark within 50-75' of system [310 CMR 15.220(4)(q)] | | ✓ | |
| Materials specifications noted? [various sections of 310 CMR 15.000] | | ✓ | |
| System components not > 36" deep (unless Local Upgrade Approval or LUA requested) [310 CMR 15.405(1)(b)] | | ✓ | |
| All system components marked with magnetic tape 15.221 (12) | | ✓ | |
| | | | |
| SEPTIC TANK | N/A | OK | No |
| Size OK? [310 CMR 15.223(1)] | | ✓ | |
| Inlet tee located ten inches below flow line [310 CMR 15.227 (6)] | | ✓ | |
| Outlet tee 14" or 14" + 5" per foot for increase ft depth [310 CMR 15.227(6)] | | ✓ | |
| Outlet tee with gas baffle or approved filter [310 CMR 15.227 (4)] | | ✓ | |
| Note regarding installation on stable compacted base [310 CMR 15.228(1)] | | ✓ | |

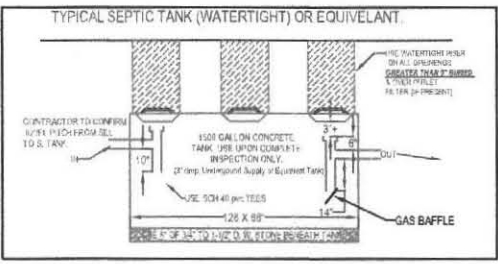
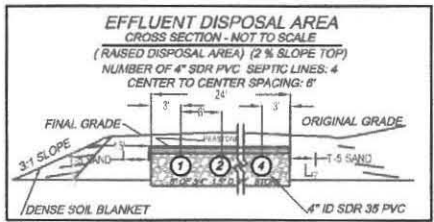
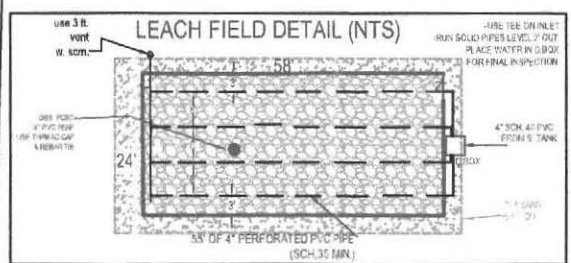
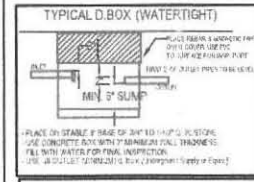
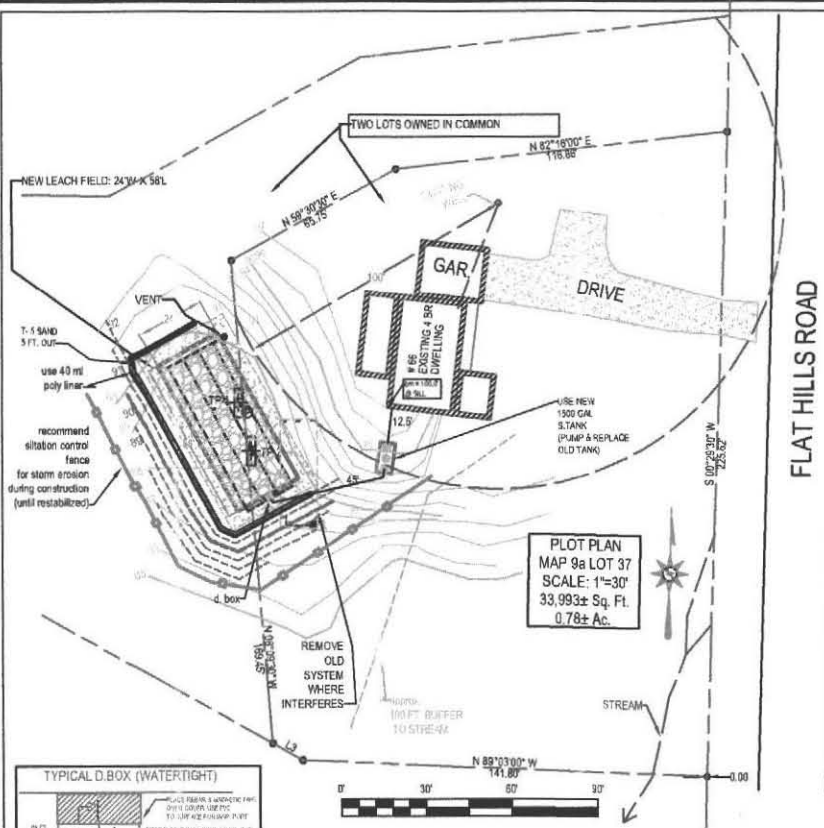
| | | | | |
|--|-----|----|----|--|
| Separation between inlet and outlet tees (no less than liquid depth) [310 CMR 15.227(2)] | | ✓ | | |
| Inlet/Outlet elevations at least 12" above high groundwater (except as described 310 CMR 15.227(5)) or permitted for upgrades under LUA [310 CMR 15.405(1)(k)] | | ✓ | | |
| Minimum cover 9" (Tanks buried more than 9" must have risers on all openings and on the d-box) [310 CMR 15.2228(1) and 310 CMR 15.232(3)(f)] | | ✓ | | |
| Three access covers (inlet and outlet must be 20" or greater) - middle access at least 8" (by 7/07) [310 CMR 15.228(2)] | | ✓ | | |
| Access to within 6" of grade - one port for systems <1000gpd, two for systems >1000 gpd [310 CMR 15.228(2)] | | ✓ | | |
| All at-grade covers secured to unauthorized access? [310 CMR 15.228(2)] | | ✓ | | |
| > 10 ft from building foundation [310 CMR 15.211(1)] | | ✓ | | |
| Buoyancy calculation Required/Done [310 CMR 15.221(8)] | ✓ | | | |
| H-20 Where appropriate? [310 CMR 15.226(3)] | ✓ | | | |
| Setbacks from resources [310 CMR 15.211] | ✓ | | | |
| Multi-Compartment Tanks | | | | |
| Required when other than single-family dwelling or flow >1000 gpd [310 CMR 15.223(1)(b)] | ✓ | | | |
| First compartment 200% daily flow; Second compartment 100% daily flow [310 CMR 15.224(2) and (3)] | ✓ | | | |
| "U" pipe through or over baffle, outlet of each compartment with gas baffle or approved filter [310 CMR 15.224(4)] | ✓ | | | |
| BUILDING SEWER AND OTHER PIPING | | | | |
| | N/A | OK | No | |
| Located at least ten feet from any water line? [310 CMR 15.222(2)] | ✓ | ✓ | | |
| Disposal piping at least 18" below water line (when water and sewer cross, see 310 CMR 15.211(1)[1]) | ✓ | | | |
| Cleanouts required/provided? [310 CMR 15.222(8)] | ✓ | | | |
| Thrust blocks specified in force mains? 310 CMR 15.221(6)(c)] | ✓ | | | |
| Slope of sewer line not less than 0.01 (1/8"/ft) 0.02 preferable [310 CMR 15.222(6)] | ✓ | | | |
| Proper pitch on all runs? (.005 within gravity-distributed trenches and beds) [310 CMR 15.251(9) and 310 CMR 15.252(2)(c)] | ✓ | ✓ | | |
| Siphon problem/ (leachfield below pump chamber) | ✓ | | | |
| Endcaps or vent manifold specified? | | ✓ | | |
| Size and orientation of discharge holes specified? (not smaller than 3/8" not larger than 5/8") [310 CMR 15.251(8) and 310 CMR 15.252(2)(h)] | | ? | | |
| Materials specified (310 CMR 15.251(5) specifies various pipe types allowed) | | ✓ | | |
| DISTRIBUTION BOX | | | | |

enail

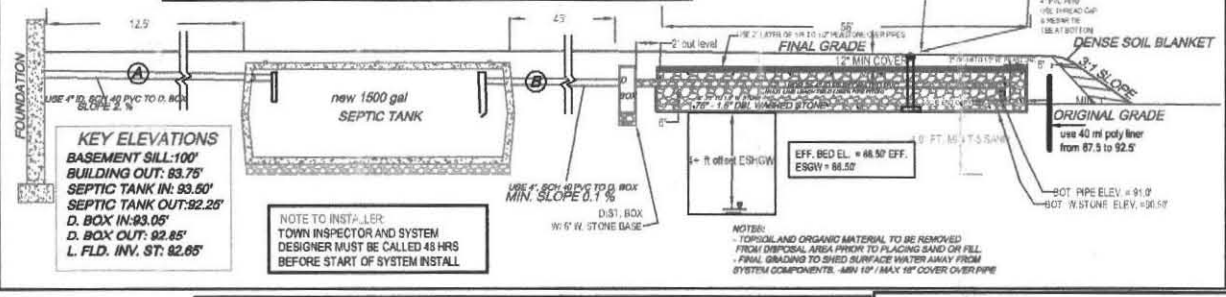
| | | | | |
|--|-----|----|----|--|
| Stable compacted base [310 CMR 15.221(2) and 310 CMR 15.232(2)(a)] | | ✓ | | |
| Splash plate or baffle tee required on inlet/ provided? (when pressure sewer to d-box or steep pitch of gravity sewer) [310 CMR 15.323(3)(a)] | ✓ | | | |
| Riser if deeper than 9" [310 CMR 15.232(3)(f)] | | ✓ | | |
| Inside minimum dimension 12" [310 CMR 15.232(2)(b)] | | ✓ | | |
| Minimum sump 6" [310 CMR 15.232(3)(e)] | | ✓ | | |
| Watertight cover if <2000gpd; waterproof manhole if >2000gpd [310 CMR 15.232(3)(d)] | | ✓ | | |
| PUMP CHAMBERS | | | | |
| Capacity (emergency storage above working=design flow)? [310 CMR 231(2)] | ✓ | | | |
| Proper setbacks [310 CMR 15.211 (same as septic tanks)] | | | | |
| Watertight 20-in minium access manhole at least 20" MUST BE TO GRADE [310 CMR 15.231(5)] | | | | |
| Service components accessible (not too deep with piping, disconnects accessible) | | | | |
| Alarm floats - alarm on circuit separate from pumps specified? | | | | |
| Exceeds two units must have two pumps operating in lead-lag mode. [310 CMR 15.231(6) and (8)] | | | | |
| Stable Compacted Base [310 CMR 15.221(2)] | | | | |
| Buoyancy calculations needed ? Provided? [310 CMR 15.221 (8)] | | | | |
| Dosing chamber capacity (required and provided), pump curves and specifications, number of dosing cycles and depth per cycle? [310 CMR 15.220(4)(r)] | | | | |
| Effluent tee filter provided? [310 CMR 15.231(10)] | | | | |
| SOIL ABSORPTION SYSTEMS (SAS) GENERAL | N/A | OK | No | |
| Calculations correct? | | ✓ | | |
| 4 feet of naturally occurring material demonstrated? [310 CMR 15.240(1)] | | ✓ | | |
| Required separation to groundwater? [310 CMR 15.212]] | | ✓ | | |
| Aggregate specified as double washed [310 CMR 15.247(2)] | | ✓ | | |
| System Venting required/provided? (system under driveway or >36" deep) [310 CMR 15.241] | | ✓ | | |
| Inspection ports specified and within 3" final grade? [310 CMR 15.240(13)] | | ✓ | | |
| Breakout requirements met? (No violation of breakout elevation within 15 ft of SAS unless barrier) [310 CMR 15.211(1)[4] and Guidance Document] | | ✓ | | |
| GALLERIES, PITS, CHAMBERS 310 CMR 15.253 | | | | |
| Chambers and Gal. in trench configuration supplied with inlet every 20 ft. [310 CMR 15.253(6)] | ✓ | | | |
| Each structure with one inspection manhole (if >2000 gpd must be to grade) [310 CMR 15.253(2)] | ✓ | | | |

| | | | | |
|--|-----|----|----|--|
| Aggregate 1' minimum- 4' maximum. [310 CMR 15.253(1)(b)] | 1 | | | |
| 2' sidewall credit maximum [310 CMR 15.253(1)(a)] | | | | |
| In bed configuration, inlet every 40 sq. ft. [310 CMR 15.253(6)] | 1 | | | |
| TRENCHES 310 CMR 15.251 | | | | |
| Width 2' minimum 3' maximum [310 CMR 15.251(1)(b)] | ✓ | | | |
| 100 feet - maximum length [310 CMR 15.251(1)(a)] | | | | |
| Minimum separation 2x effective depth or width whichever greater (3x if reserve between trenches) [310 CMR 251(1)(d)] | 1 | | | |
| Situated along contours [310 CMR 15.251(2)] | | | | |
| Breakout OK? [310 CMR 15.211(1)[4] and Guidance Document] | | | | |
| BED SAS (Maximum size of bed or field 5000 gpd) | | | | |
| minimum 2 distribution lines [310 CMR 15.252(2)(a)] | | ✓ | | |
| Maximum separation between lines 6' [310 CM R15.252(2)(d)] | | ✓ | | |
| Maximum separation between lines and outside of bed 4' [310 CMR 15.252(2)(e)] | | ✓ | | |
| Aggregate depth below discharge pipes 6" minimum, 12" maximum. [310 CMR 15.252(2)(g)] | | ✓ | | |
| Separation between beds 10' minimum. [310 CMR 15.252(2)(f)] | ✓ | ✓ | | |
| Bottom area used in calculations only [310 CMR 15.252(2)(i)] | | ✓ | | |
| DID THE PLAN INVOLVE | | | | |
| | N/A | OK | No | |
| <i>Pressure Dosed System ? Provided pump and piping calculations as required [310 CMR 15.220(4)(r)]</i> | ✓ | | | |
| <i>Groundwater Separation Per 310 CMR 15.240(12) does the groundwater separation take into account mounding.</i> | ✓ | | | |
| Pressure dosing required on all systems >2000gpd or alternative systems under remedial approval [310 CMR 15.254(2) and I/A Remedial Use Approvals] | ✓ | | | |
| If used in gravelless system - make sure jet is directed as not to scour soil interface [Guidance Document] | ✓ | | | |
| Inspections once per year (systems < 2000 gpd) or quarterly (>2000gpd) good to note on plan [310 CMR 15.254(2)(d)] | ✓ | | | |
| <i>Construction in fill - Did the plan specify that the fill shall meet the specification of 310 CMR 15.255(3)?</i> | ✓ | | | |
| Impervious barrier and/or retaining wall ? [Guidance Document] | ✓ | | | |
| Impervious barrier installation must be supervised by designer [310 CMR 15.255(2)(b)] | ✓ | | | |
| Retaining wall must be designed by Registered Professional Engineer [310 CMR 15.255(2)(a)] | ✓ | | | |
| Side slope not exceed 3:1 ? [310 CMR 15.255(2)] | | ✓ | | |
| Breakout requirements met? [310 CMR 15.252(2) and Guidance Document] | | ✓ | | |
| At least 5 ft. from impervious barrier to edge of SAS (10 ft. recommended) [310 CMR 15.255 (2)(e)] | ✓ | | | |

| | | | | |
|--|-----|----|----|--|
| Gravelless System [I/A Approval Letters] | | | | |
| Check DEP Approval letters for credits and design conditions | | | | |
| If used with pressure dosing do not allow pressure discharge to scour soil interface | ✓ | | | |
| Alternative Septic System [I/A Approval Letters] | | | | |
| Was DEP Approval Letter provided and/or have you reviewed the letter for conditions? | ✓ | | | |
| Is the technology being properly applied and does it meet all DEP Approval Conditions? | | | | |
| Is there a note on the plan regarding the requirement for perpetual maintenance agreement? | | | | |
| Any alarms involved on separate circuits | | | | |
| Did the applicant submit an operation and maintenance manual? | | | | |
| Has applicant submitted a copy of a maintenance agreement? | | | | |
| Variances | | | | |
| Are the variances listed on the plan ? [310 CMR 15.220 (4) (p)] | | | | |
| RLS Stamp necessary on plan if a component is within five feet of property line [310 CMR 15.412(4)] | | | | |
| New construction or increased flow proposed - [Refer to 310 CMR 15.414] | | | | |
| Nitrogen Sensitive Areas | N/A | OK | No | |
| Is the system in a Designated Nitrogen Sensitive Area (Zone II for a public supply well)? [310 CMR 15.214, 310 CMR 15.215 and 310 CMR 15.216 - also refer to Policy regarding upgrades of such existing systems] | ✓ | | | |
| Is the system proposed on the same lot as served by private well ? [310 CMR 15.214(2)] | ✓ | | | |
| Are the nitrogen loads proposed in compliance? [310 CMR 15.216(1)] | ✓ | | | |
| Miscellaneous | | | | |
| Pumping to septic tank ? [310 CMR 15.229] | ✓ | | | |
| Shared System [310 CMR 15.290] | ✓ | | | |



EFFLUENT DISPOSAL SYSTEM (CROSS SECTION - NOT TO SCALE)



SUBJECT
SITE
LOCATION



DESIGN NOTES AND CALCULATIONS:

- 1.) 4 (BEDROOM HOME) = 440 GPD MIN REQUIRED.
- **USE LEACHING FIELD 24' WIDE X 58' LONG WITH 6" OF 1/2" TO 3/4" DBL WASHED STONE BELOW INVERT:**
 - BOTTOM AREA L. FIELD 24' X 58' L = 1392 SF.
 - TOTAL AREA: 1392 SF X .33 GAL/SF = 459 GPD PROVIDED.
3. GARBAGE DISPOSAL NOT PERMITTED (A/C AND FURNACE CONDENSATE TUBES NOT ALLOWED)
4. NO OTHER PRIVATE WELLS WITHIN 150 FEET OF SAS.
5. NO OTHER WETLANDS/RESOURCE AREAS WITHIN 100 FEET OF SAS.
6. USE NEW S. TANK AS NOTED & MAINTAIN 0.02 PITCH FROM SILL TO S. TANK
- INSTALL & INSPECT SCH. 40 TEES / BAFFLES (10" INLET, 14" OUTLET).
- NOTE:**
 - ALL COMPONENTS OF NEW SYSTEM MUST BE MARKED WITH MAGNETIC TAPE. BE SURE TO MAINTAIN 3" CLEARANCE FROM TOP OF TEES TO BOTTOM OF TANK COVERS & BOXES.
7. USE LARGE STYLE (8 OUTLET) D.B. BOX ONLY.
- 7A. ALL D. BOX OUTLET PIPES LEVEL FOR FIRST 2' BOXES MUST HAVE 2" CONC. WALLS
- NOTE:**
 - D. BOXES WITH MORE THAN 3' OF COVER SOIL MUST HAVE RISERS TO 6" OF SURFACE.
- 7B. ANY (ALL PLASTIC RISERS MUST BE SECURED WITH STAINLESS STEEL SCREWS.
8. -USE (.75"-1.125") STONE UNDER TANK & D. BOX FOR 6" FOR STABLE BASE
- USE ONLY DBL. WASHED APPROVED (.75"-1.5") FOR PLACEMENT IN LEACH AREA.
9. USE PROPER SCH. 40 PVC TEES AS SHOWN.
10. PRE & POST CONTOURS NOTED AS NECESSARY, RESERVE AS NOTED (not required for repairs).
11. SLOPE CALC. (SEE CONTOURS), SUBGRADE INSP. REQ'D.
13. USE FIELD DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE & ESHGW (310 CDR 15.240)
14. USE 2% MIN. SLOPE OVER SAS
- CLEAR TOP AND SUB TO BASE OF RESTRICTIVE LAYER (20" MIN. AS NEEDED (INSPECTION REQUIRED)).
- UNDER BED & 5 FT. OUT. PRIOR TO TITLE V SAND/STONE PLACEMENT
- EXCAVATE EXISTING LOAM, SUB AND ANY EXISTING DEBRIS, DIRTY FILL OR PRIOR SYSTEM IF PRESENT.
15. SOIL EVALUATION BY A. WEISS, RS. (E. SMITH, BOH AGENT)
- BOH AGENT:
 - DEPTH OF PERC. "SIEVE TEST" IN (LUA for use of sieve in lieu of measured perc rate, due to wetness)
 - PERC RATE = -- MIN / IN.
 - CLASS 2, F. SANDY LOAM SOIL RATING
16. NO TREES WITHIN 10 FT. OF NEW LEACH AREA.
17. ENGINEER TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL.
18. S.M. = 100.00 @ (SILL... as noted), CONFIRM PROPER PIPE SLOPES
- USE/INSPECT SCH. 40 PIPE FOR PIPE FROM HOUSE TO NEW OR EXISTING TANK
19. GRADE MULCH AND SEED OVER SAS AS NOTED.
20. INSTALLATION IN LOW GROUNDWATER SEASON RECOMMENDED.
21. USE OBSERVATION PORT NEAR CENTER OF STONE BED HAVE 4" PERFORATED, PVC INSPECTION PORTALS TO BOTTOM OF STONE BED, WITH RISER TO 3" OF SURFACE & THREADED CAP & MARK WITH RE-BAR.

TEST PIT LOG:

| TP 1 | | TP 2 | |
|---------------------|--|---------------------|--|
| DEPTH | DEPTH | DEPTH | DEPTH |
| 0-10" A | FB 10 YR 3.2 FRAGILE, MUD | 0-10" A | FSB 10 YR 3.2 FRAGILE, MUD |
| 10-20" B | LS 10 YR 5.8 FRAGILE | 10-20" B | LS 10 YR 5.8 FRAGILE |
| 20-30" C | FSB 10 YR 5.3 F.C. sand, heterosporous | 20-30" C | S & G 10 YR 5.3 F.C. sand, heterosporous |
| ROCKS: 24" 5 YR 5.6 | | ROCKS: 24" 5 YR 5.6 | |
| SHALT: 24" | | SHALT: 24" | |
| STANDING H2O: 68" | | STANDING H2O: 68" | |
| WEEPING: 24" | | WEEPING: 24" | |
| BEDROCK: 108" | | BEDROCK: - | |

SEPTIC DESIGN REPAIR PLAN FOR WILLIAM GERACE

66 FLAT HILLS
AMHERST, MA

9A-37

Cold Spring Environmental Consultants Inc.
350 Old Enfield Road
Belchertown, MA 01007

| | | |
|------------------|----------------------|-------------------------------|
| DATE: 03.05.2013 | DRAWN BY: ALAN WEISS | REVISED: |
| SCALE: 1"=30' | | DRAWING NUMBER: 113-0403-0305 |

ATTENTION INSTALLER!

CALL DIG SAFE BEFORE YOU DIG! MASSACHUSETTS STATE LAW CHAPTER 92 SECTIONS 48 - 48E REQUIRE THAT REMARKING OF GAS, ELECTRIC, WATER, TELEPHONE AND CABLE T.V. UTILITY LINES BE MADE A MINIMUM OF 72 HOURS PRIOR TO GROUND BREAK FOR ANY EXCAVATION.

NOTE: INSTALLER MUST CONTACT ENGINEER/BOH OF HEALTH 48 HOURS PRIOR TO SUBGRADE INSPECTION. INSTALLER MUST HAVE ALL BREAK OUT FILL ON SITE AND IN PLACE PRIOR TO SIGN OFF BY ENGINEER AT TIME OF FINAL INSPECTION OR APPROVAL WILL NOT BE GIVEN TO BACKFILL.

NOTE TO HOMEOWNER AND CONTRACTOR:
CONNECTIONS FROM HEATING SYSTEM, AIR CONDITIONERS, SUMP PUMPS, WATER WELL FILTRATION UNITS AND HEAT PUMPS ARE NOT ALLOWED. SANITARY WATER CONNECTIONS ONLY PERMITTED.



ALAN E. WEISS, M.S., R.S., L.S.P.

Licensed Site Professional
Registered Sanitarian
Hydrogeologist
President•Wetland Consults
•Soil and Water Testing
•21E Site Investigations
•Percolation Tests and
•Septic Designs
•Title 5 Inspections350 Old Enfield Rd.
Belchertown, MA 01007
(413) 323-5957 & 323-4916 (FAX)

aweiss@charter.net

Date: 2/15/13

Commonwealth of Massachusetts

Amherst, Massachusetts

Soil Suitability Assessment for On-site Sewage Disposal

Performed By: A. Weiss

Witnessed By: E. Smith

Date: 2/15/13

| | | | |
|--|---|--|---|
| Location Address or Lot # | Dr. William Grace - 66 Flat Hills Rd. Amherst, MA 01002 | Owner's Name, Address, and Telephone # | W. than Dr. Grace - 401 W. Radiance. Dr. Greensboro, NC. 27403 |
| New Construction <input type="checkbox"/> Repair <input checked="" type="checkbox"/> | | | |

Office ReviewPublished 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 ☐

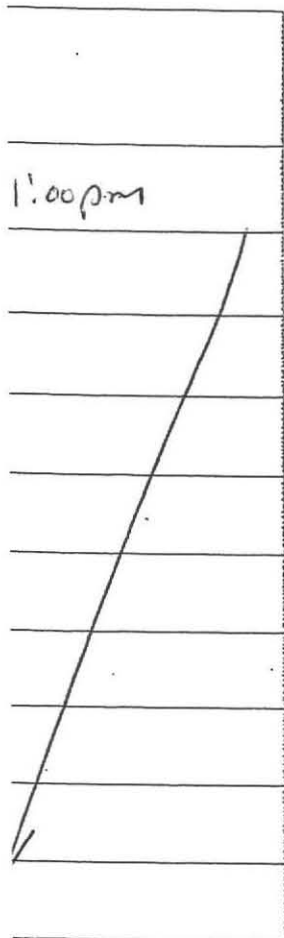
Other References Reviewed:



FORM 12 - PERCOLATION TEST

id.

MASSACHUSETTS



id in both the primary area AND

LUA for use of Sieve test Attached,

Address or Lot No. 66 Flat HillsOn-site ReviewNumber 1-2 Date: 2/15/13 Time: 2/15 Weather SW 40.2

Identify on site plan) _____

id. rural _____ Slope (%) 2-4 Surface Stones yes

deciduous _____

terraced _____

Landscape (sketch on the back) _____

Water Body 100' feet Drainage way 20' feetWet Area 100' feet Property Line see plat feet → two lots owned in commonWater Well 100' feet Other pl. change planned

DEEP OBSERVATION HOLE LOG

| Soil Horizon | Soil Texture (USDA) | Soil Color (Munsell) | Soil Moisture | Other (Structure, Stones, Boulders, Consistency, % Gravel) |
|----------------|---------------------|----------------------|---------------|--|
| A | FS | 10YR 3/2 | | Frable, moist |
| B _w | LS | 10YR 5/6 | 24" | Frable, moist |
| C ₁ | LS | 2.5Y 4/3 | 34" 5YR 4/6 | F Sand - M sand, 20% cobbles. |
| A | FS | 10YR 3/2 | | |
| B _w | LS | 10YR 5/6 | | Same |
| C ₁ | LS | 2.5Y 4/3 | 24" 5YR 4/6 | 9S #1 ↓ |

1 OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Logic) Green OutwashDepth to Bedrock: 110"Standing Water in the Hole: 68"Weeping from Pit Face: 24"High Ground Water: 24"

1

2

3

4

5

6

UMass Extension

CENTER FOR AGRICULTURE

02/27/13

Agriculture and Landscape Program
Soil and Plant Nutrient Testing Laboratory

West Experiment Station
682 North Pleasant Street
University of Massachusetts
Amherst, MA 01003-9302
Phone: 413.545.2311
Fax: 413.545.1931
www.umass.edu/soiltest/

TEXTURAL ANALYSIS RESULTS

Customer Name: Cold Spring Environmental - A Weiss
350 Old Enfield Rd
Belchertown, MA 01007

Sample ID: 113639

Customer Designation: Gerace

USDA SIZE FRACTIONS

| Main Fractions | Size (mm) | Percent |
|----------------|------------|---------|
| Sand | 0.05-2.0 | 54.7 |
| Silt | 0.002-0.05 | 38.0 |
| Clay | < 0.002 | 7.3 |
| Total | < 2.0 | 100.0 |

| Sand Fractions | Size (mm) | Percent |
|----------------|-----------|---------|
| Very Coarse | 1.0-2.0 | 3.5 |
| Coarse | 0.5-1.0 | 6.2 |
| Medium | 0.25-0.5 | 13.1 |
| Fine | 0.10-0.25 | 20.3 |
| Very Fine | 0.05-0.10 | 11.6 |
| | | 54.7 |

| Silt Fractions | Size (mm) | Percent |
|----------------|-------------|---------|
| Coarse | 0.02-0.05 | 15.0 |
| Medium | 0.005-0.02 | 17.6 |
| Fine | 0.002-0.005 | 5.4 |
| | | 38.0 |

PERCENT OF WHOLE SAMPLE PASSING

| Size (mm) | Sieve # | % |
|-----------|---------|------|
| 2.00 | #10 | 92.5 |
| 1.00 | #18 | 89.3 |
| 0.50 | #35 | 83.5 |
| 0.25 | #60 | 71.4 |
| 0.10 | #140 | 52.6 |
| 0.05 | #270 | 41.9 |
| 0.02 | 20 um | 28.0 |
| 0.005 | 5 um | 11.7 |
| 0.002 | 2 um | 6.8 |

USDA Textural Class = fine sandy loam

Gravel Content = 7.5%

COMMENTS: aweiss@charter.net

Location Address or Lot No. 66 Flat Hills Rd

Determination for Seasonal High Water Table

Method Used:

- ☐ Depth observed standing in observation hole inches
☐ Depth weeping from side of observation hole inches
☒ Depth to soil mottles 24" 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

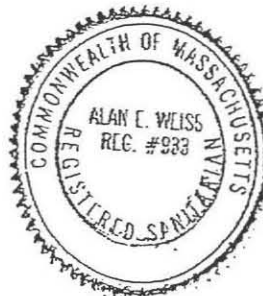
I certify that on 6/15 (date) I have passed the soil evaluator examination approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017.

Signature AL

Date 2/15/13



DEP APPROVED FORM 1 - 12/07/95



[illegible]

Y LOCATED ON THE WESTERLY SIDE OF
AMHERST MASSACHUSETTS BELONGING
LUMBER CORPORATION. THIS PLAN SHOWS
ISION OF THIS PROPERTY
EFERRED TO MAGNETIC NORTH AS OF

ALAN E. WEISS, M.S., R.S., L.S.P.

Licensed Site Professional
Registered Sanitarian
Hydrogeologist
President• Wetland Consults
• Soil and Water Testing
• 21E Site Investigations
• Percolation Tests and
• Septic Designs
• Title 5 Inspections350 Old Enfield Rd.
Belchertown, MA 01007
(413) 323-5957 & 323-4916 (FAX)

aeweiss@charter.net

Date: 2/15/13

Commonwealth of Massachusetts

Amherst, Massachusetts

Soil Suitability Assessment for On-site Sewage DisposalPerformed By: A. Weiss
Witnessed By: E. SmithDate: 2/15/13

| | |
|---|--|
| Location Address or Lot # <u>Dr. William Grace</u> <u>66 Flat Hills Rd.</u> <u>Amherst, MA 01022</u> | Owner's Name, Address, and Telephone # <u>W. Han</u> <u>Dr. Grace</u> <u>401 W. Radiance Dr.</u> <u>Greensboro, NC 27403</u> |
| New Construction <input type="checkbox"/> Repair <input checked="" type="checkbox"/> | |

Office ReviewPublished 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

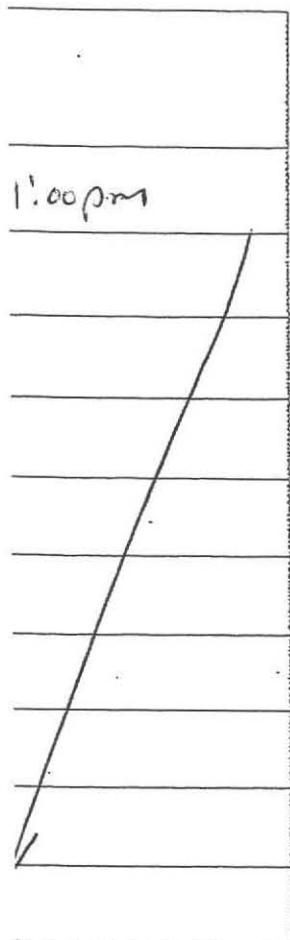
Range: Above Normal ☒ Normal ☐ Below Normal ☐

Other References Reviewed: _____



2.

MASSACHUSETTS



ed in both the primary area AND

LUA for use of sieve test Attached.

Address or Lot No: 66 Flat HillsOn-site ReviewNumber 1-2 Date: 2/15/13 Time: 2:15 Weather SW 40°F

Identify on site plan)

Soil id. rural Slope (%) 2-4 Surface Stones yesdeciduousterrace

Landscape (sketch on the back)

Notes:

Water Body 100' + feetDrainage way 20' + feetWet Area 100' + feetProperty Line See photo feet → two lots owned in commonDig Water Well 100' + feetOther ph. change planned

DEEP OBSERVATION HOLE LOG*

| Soil Horizon | Soil Texture (USDA) | Soil Color (Munsell) | Soil Moisture | Other (Structure, Stones, Boulders, Consistency, % Gravel) |
|----------------|---------------------|----------------------|---------------|--|
| A | FS | 10YR 3/2 | | Frable, moist |
| Bw | LS | 10YR 5/6 | 24" | Frable, Moist |
| C ₁ | LS | 2.5Y 4/3 | 34" 4/6 | F Sand - M Sand, 20% cobbles. |
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* 2 OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

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UMass Extension

CENTER FOR AGRICULTURE

02/27/13

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COMMENTS: aeweiss@charter.net

Location Address or Lot No. 66 Flat Hills Rd

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Adjustment factor Adjusted ground water level

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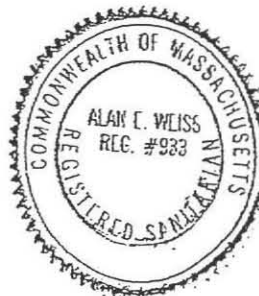
Certification

I certify that on 6/95 (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.

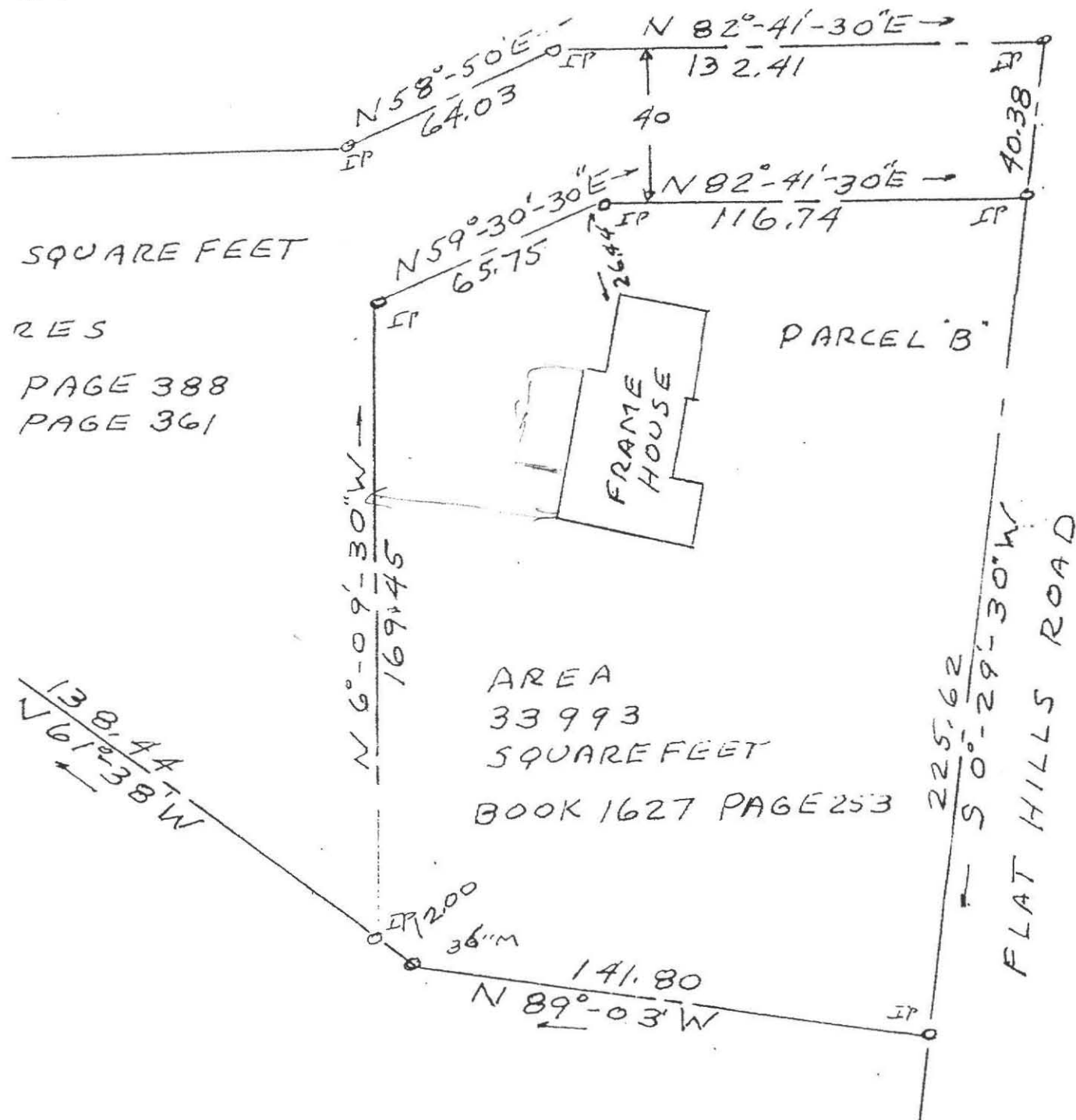
Signature [Signature] Date 2/15/13



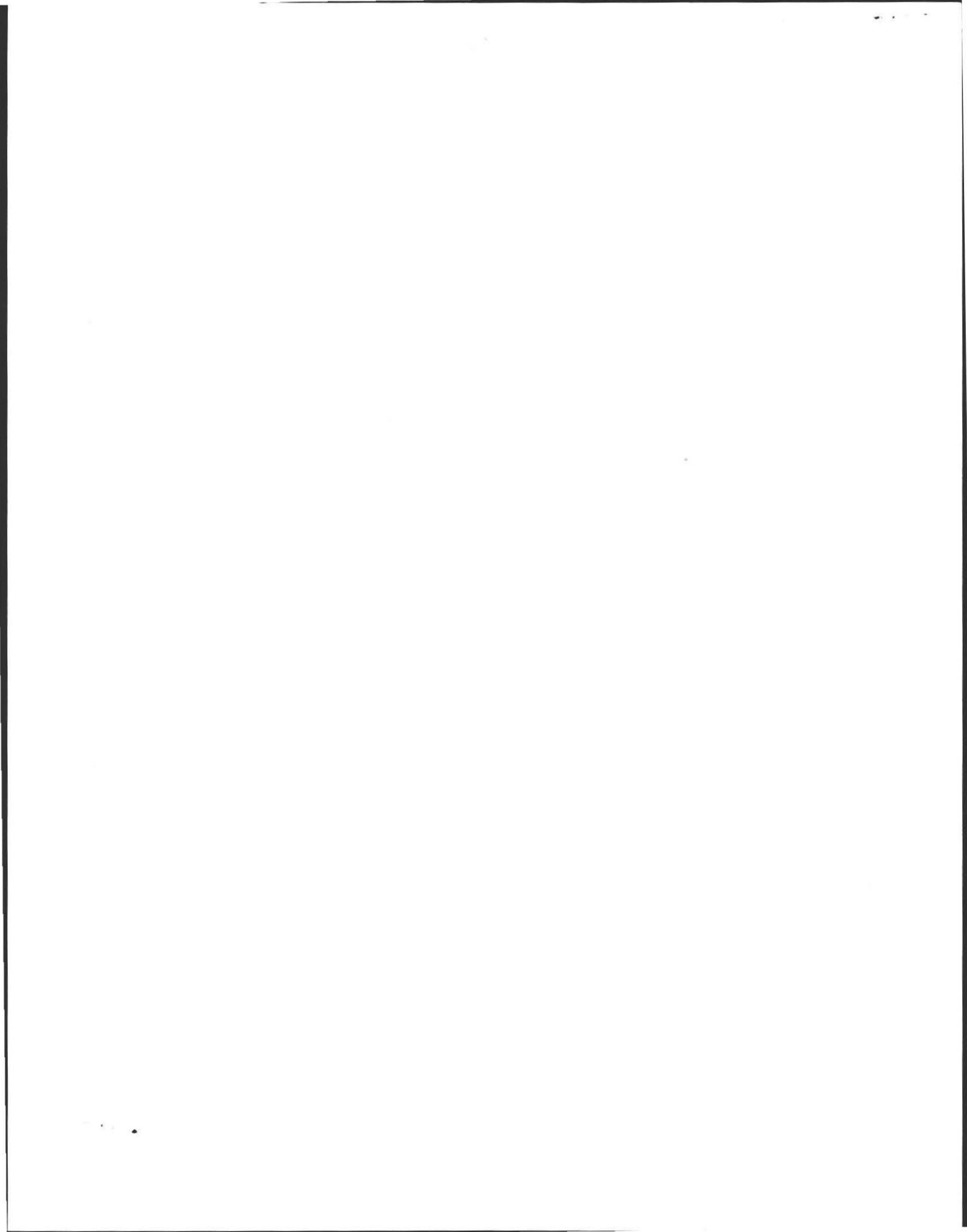
DEP APPROVED FORM - 12/07/95



'SON



TY LOCATED ON THE WESTERLY SIDE OF
AMHERST MASSACHUSETTS BELONGING
LUMBER CORPORATION. THIS PLAN SHOWS
ISION OF THIS PROPERTY
EFERRED TO MAGNETIC NORTH AS OF



No. _____

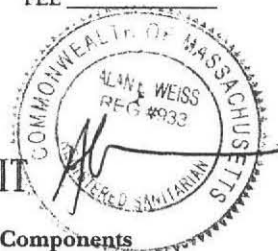
FEE _____

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>66 Flat Hills Rd.</u> | Owner's Name <u>William Gerace.</u> |
| Map/Parcel# <u>9A/37 + 9A 34</u> | Address <u>401 W. Radiance, DC, Greensboro, NC.</u> |
| Lot# <u>37 + 34.</u> | Telephone# <u>336-256-8572</u> |
| Installer's Name <u>TBD. Pete Wilson.</u> | Designer's Name <u>Alan Weiss, PS</u> |
| Address <u>Pelham, MA.</u> | Address <u>Beldertown, MA.</u> |
| Telephone# | Telephone# <u>413-323-5957</u> |

Type of Building Residence Lot Size 33,993 sq. ft.

Dwelling - No. of Bedrooms _____ Garbage grinder No

Other - Type of Building 4 Bedroom No. of persons _____ Showers (), Cafeteria ()

Other Fixtures _____

Design Flow (min. required) 110 gpd Calculated design flow 440 Design flow provided 459 gpd

Plan: Date 3/3/13 Number of sheets 1 Revision Date _____

Title Septic System Repair Plan.

Description of Soil(s) fsL: class 2 by sieve.

Soil Evaluator Form No. _____ Name of Soil Evaluator Al Weiss Date of Evaluation 2/15/13

E. Smith.

DESCRIPTION OF REPAIRS OR ALTERATIONS Complete new system.

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

☒ Signed _____ Date _____

Inspections _____

No. _____

FEE _____

COMMONWEALTH OF MASSACHUSETTS

Board of Health, _____, 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: _____

at _____

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 _____

Designer: _____ Inspector: _____ Date: _____

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

No. _____

FEE _____

COMMONWEALTH OF MASSACHUSETTS

Board of Health, _____, MA.

DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to; Construct() Repair() Upgrade() Abandon() an individual sewage disposal system

at _____ 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.

No. 13-7

FEE \$150

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>66 Flat Hills Rd.</u> | Owner's Name: <u>William G. Gagne</u> |
| Map: <u>9A/32 & 9A/34</u> | Address: <u>461 W. Rockaway, W. Greenham, NC</u> |
| Lot: <u>32 & 34</u> | Telephone: <u>336-256-8572</u> |
| Installer's Name: <u>Pete Walker</u> | Designer's Name: <u>Alan Weiss, PS</u> |
| Address: <u>Pelham, NH</u> | Address: <u>Belliston, NH</u> |
| Telephone: _____ | Telephone: <u>413-363-5957</u> |

Type of Building: Residence Lx. Size: 33.983 sq. ft.
 Dwelling: No. of Bedrooms: _____
 Other: Type of Building: 4 Portables No. of persons: _____
 Other Features: _____
 Design Flow (min. required): 110 gpd Calculated design flow: 440 Design flow provided: 459 gpd
 Plan Date: 3/2/13 Number of sheets: 1 Revision Date: _____
 Title: Septic System Repair Plan
 Description of Soil(s): found to be by view
 Soil Evaluator Form No. _____ Name of Soil Evaluator: August Date of Evaluation: 11/5/13
E. Smith

DESCRIPTION OF REPAIRS OR ALTERATIONS: Complete new system

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

X Signed: William G. Gagne Date: 3/5/13

Inspector: _____

No. 13-7

FEE \$150

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, MA

CERTIFICATE OF COMPLIANCE

Description of Work: ☐ Individual Component(s) ☒ Complete SystemThe undersigned hereby certify that the Sewage Disposal System, Constructed: ☐ Repaired ☐ Upgraded ☐ Abandoned

has been installed in accordance with the provisions of 819 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. _____ dated _____ Approved Design Flow: _____ (gpd)

Inspector: _____ Date: _____

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

No. 13-7

FEE \$150

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 66 Flat Hills as described in the application for Disposal System Construction Permit No. 13-7 dated 3/3/13

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

Per: 1288 Rev. 108 AM Town & County of

Date: 3-15-13 Board of Health

Edward J. Fitch
Asst. Sanitarian

Diagram of a 1500 Gallon Concrete Tank. The tank is 126 X 66 inches. It features a 10" diameter inlet on the left and a 6" diameter outlet on the right. The tank is 3' high. A gas baffle is located at the bottom right. The tank is supported by 6" of 14" to 1-1/2" D.W. stone beneath the tank. The tank is labeled "1500 GALLON CONCRETE TANK. USE UPON COMPLETE INSPECTION ONLY." and "USE SCH 40 per TEES". A note indicates "USE WATER-TIGHT RISER ON ALL OPENINGS GREATER THAN 3" BORED & COVER OFF SET FILTER (IF PRESENT)".

Diagram illustrating a cross-section of a landfill liner system. The diagram shows a dense soil blanket (6' thick) and a 3:1 slope. Below the soil blanket is a 40 mil poly liner. The original grade is indicated. The diagram also shows a 4" PVC pipe with a 1/2" threaded cap and a tee at the bottom. The bottom of the pipe is at an elevation of 91.0', and the bottom of the stone is at an elevation of 90.5'.

Labels in the diagram include:

- DENSE SOIL BLANKET
- 3:1 SLOPE
- ORIGINAL GRADE
- use 40 mil poly liner from 87.5' to 92.5'
- 4" PVC PIPE
- 1/2" THREADED CAP
- TEE AT BOTTOM
- 6'
- BOT PIPE ELEV. = 91.0'
- BOT W/ STONE ELEV. = 90.5'

1.) 4 (BEDROOM HOME) = 440 GPD MIN. REQUIRED.

-USE LEACHING FIELD 24' WIDE X 58' LONG WITH 6" OF $\frac{1}{2}$ " TO $\frac{1}{2}$ " DBL WASHED STONE BELOW INVERT:

- BOTTOM AREA: L. FIELD(24' W X 58' L) = 1392 SF.

- TOTAL AREA: 1392 SF X .33 GAL/SF = 459 GPD PROVIDED.

3. GARBAGE DISPOSAL NOT PERMITTED (A/C AND FURNACE CONDENSATE TUBES NOT ALLOWED)

4. NO OTHER PRIVATE WELLS WITHIN 150 FEET OF SAS.

5. NO OTHER WETLANDS/RESOURCE AREAS WITHIN 100 FEET OF SAS,

6. USE NEW S. TANK AS NOTED & MAINTAIN 0.02 PITCH FROM SILL TO S. TANK

- INSTALL & INSPECT SCH. 40 TEES / BAFFLES (10" INLET, 14" OUTLET),

NOTE:

- ALL COMPONENTS OF NEW SYSTEM MUST BE MARKED WITH MAGNETIC TAPE. BE SURE TO MAINTAIN 3" CLEARANCE FROM TOP OF TEES TO BOTTOM OF TANK COVERS & BOXES.

7. USE LARGE STYLE (6 OUTLET) D.BOX ONLY.

7A ALL D. BOX OUTLET PIPES LEVEL FOR FIRST 2'. BOXES MUST HAVE 2"+ CONC. WALLS

NOTE:

- D. BOXES WITH MORE THAN 9" OF COVER SOIL MUST HAVE RISERS TO 6" OF SURFACE.

7B ANY /ALL PLASTIC RISERS MUST BE SECURED WITH STAINLESS STEEL SCREWS.

8. -USE (.75"-1 1/2") STONE UNDER TANK & D. BOX FOR 6" FOR STABLE BASE.

-USE ONLY DBL. WASHED APPROVED(.75"-1.5") FOR PLACEMENT IN LEACH AREA.

9. USE PROPER SCH. 40 PVC TEES AS SHOWN.

10. PRE & POST CONTOURS NOTED AS NECESSARY, RESERVE AS NOTED (not required for repairs).

11. SLOPE CALCS (SEE CONTOURS). SUBGRADE INSP. REQ'D.

13. USE FIELD DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE & ESHGW (310 CMR 15.240)

14. USE 2% MIN. SLOPE OVER SAS

- CLEAR TOP AND SUB TO BASE OF RESTRICTIVE LAYER 20" MIN. AS NEEDED (INSPECTION REQUIRED).

- UNDER BED & 5 FT OUT, PRIOR TO TITLE V SAND/STONE PLACEMENT.

- EXCAVATE EXISTING LOAM, SUB AND ANY EXISTING DEBRIS, DIRTY FILL OR PRIOR SYSTEM IF PRESENT.

15. SOIL EVALUATION BY A. WEISS, RS. (E. SMITH, BOH AGENT)

BOH AGENT).

- DEPTH OF PERC. ** SIEVE TEST** fsl (LUA for use of sieve in lieu of measured perc rate, due to wetness)

- PERC RATE = -- MIN / IN.

- CLASS 2 F. SANDY LOAM SOIL RATING

16. NO TREES WITHIN 10 FT. OF NEW LEACH AREA.

17. ENGINEER TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL.

18. BM=100.00 @ (SILL..., as noted), CONFIRM PROPER PIPE SLOPES

- USE/INSPECT SCH. 40 PIPE FOR PIPE FROM HOUSE TO NEW OR EXISTING TANK

19. GRADE MULCH AND SEED OVER SAS AS NOTED.

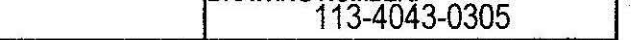
20. INSTALLATION IN LOW GROUNDWATER SEASON RECOMMENDED.

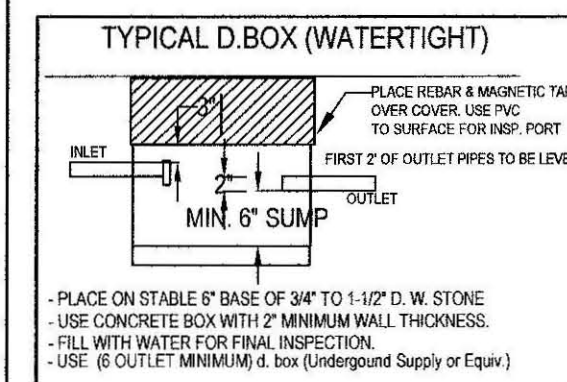
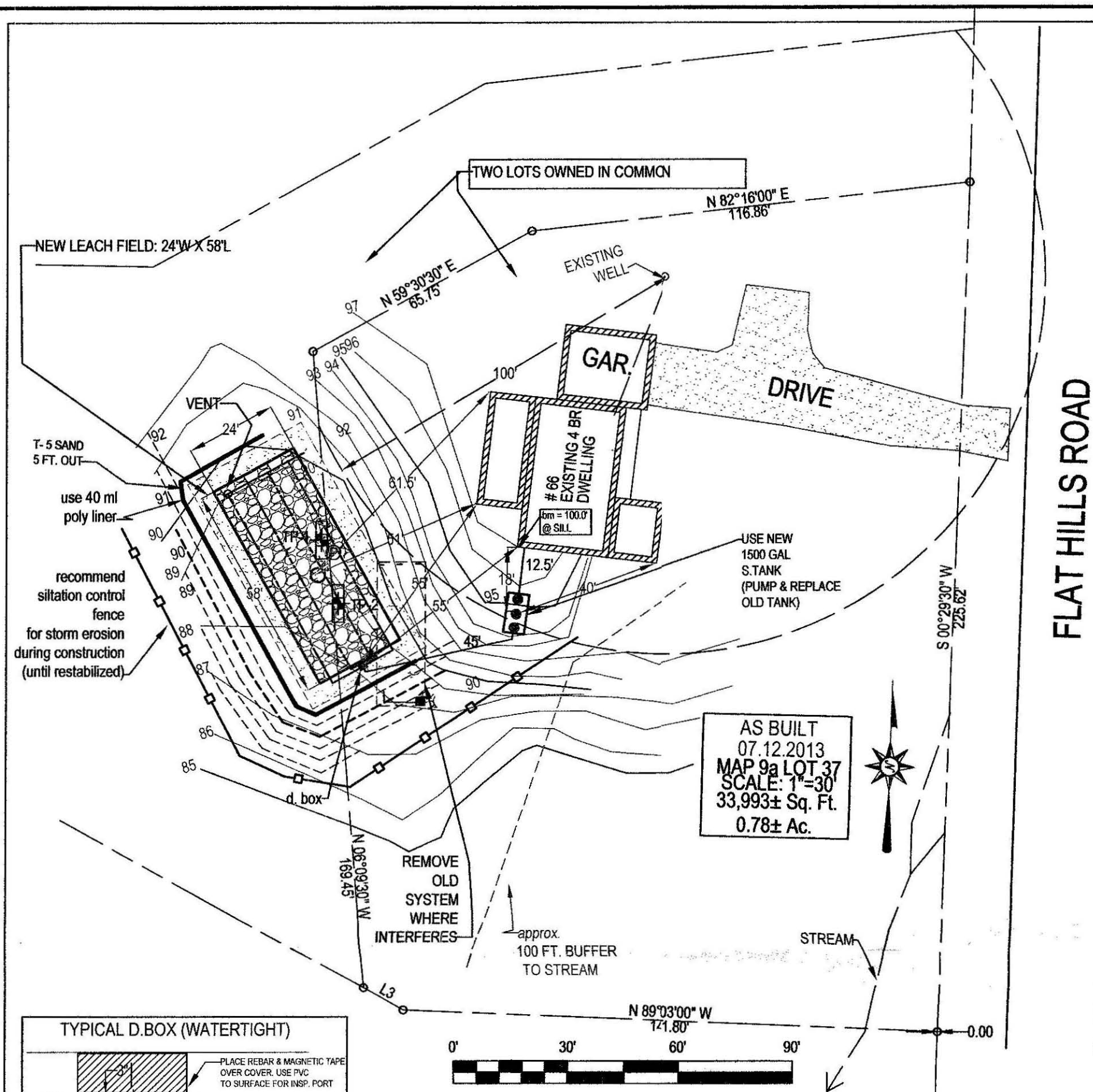
21. USE OBSERVATION PORT NEAR CENTER OF STONE BED HAVE 4" PERFORATED, PVC INSPECTION PORTALS TO BOTTOM OF STONE BED, WITH RISER TO 3" OF SURFACE & THREADED CAP & MARK WITH RE-BAR.

| TP 1 | | | | | TP 2. ELEV: | | | | |
|---------------|-------|---------|------------------|----------------------------|---------------|-------|---------|------------------|----------------------------|
| DEPTH | HORZ: | TEXTURE | COCK MIN/CELL | MATERIAL | DEPTH | HORZ: | TEXTURE | COCK MIN/CELL | MATERIAL |
| 0-10" | A | FSL | 10 YR 3.2 | FRIABLE, Moist | 0-10" | A | FSL | 10 YR 3.2 | FRIABLE, Moist |
| 10-20" | Bw | LS | 10 YR 5.5 | FRIABLE | 10-20" | Bw | LS | 10 YR 5.8 | Friable |
| 20-109" | C1 | FSL | 10 YR 5.3 | F. & G sand, heterogeneous | 20-110" | C1 | S & G | 10 YR 5.3 | F. & G sand, heterogeneous |
| | | | | 20% BOULDERS AND COBBLES | | | | | 21% BOULDERS AND COBBLES |
| | | | | | | | | | |
| OXIDES: | | 24" | | 5 yr 5.6 | OXIDES: | | 24" | | 5 yr 5.6 |
| EHWT: | | 24" | | | EHWT: | | 24" | | |
| STANDING H2O: | | 68" | | | STANDING H2O: | | 68" | | |
| WEEPING: | | 24" | | | WEEPING: | | 24" | | |
| BEDROCK: | | 109"+ | | | BEDROCK: | | - | | |

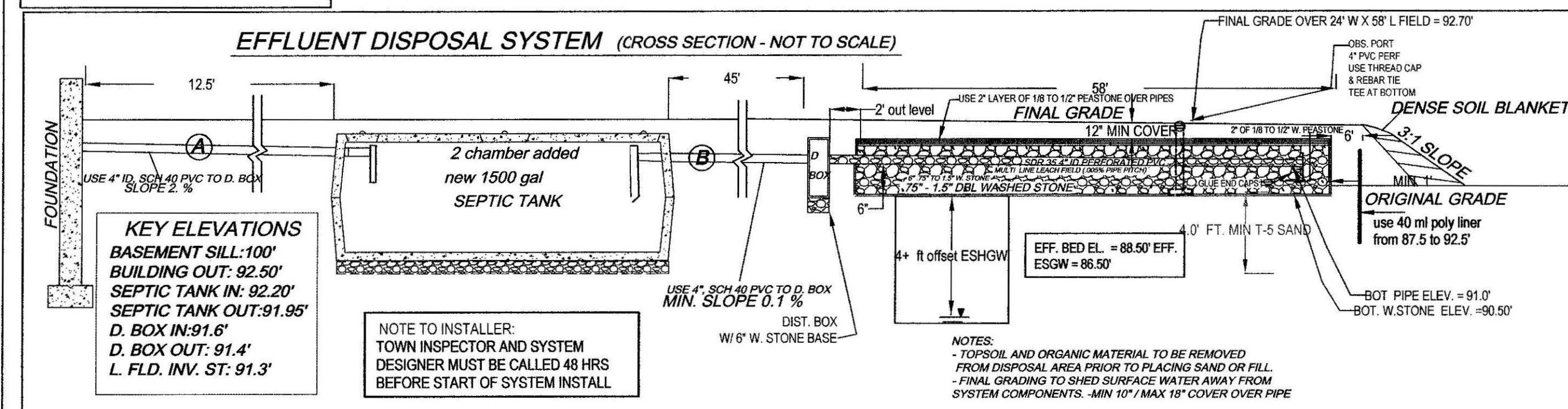
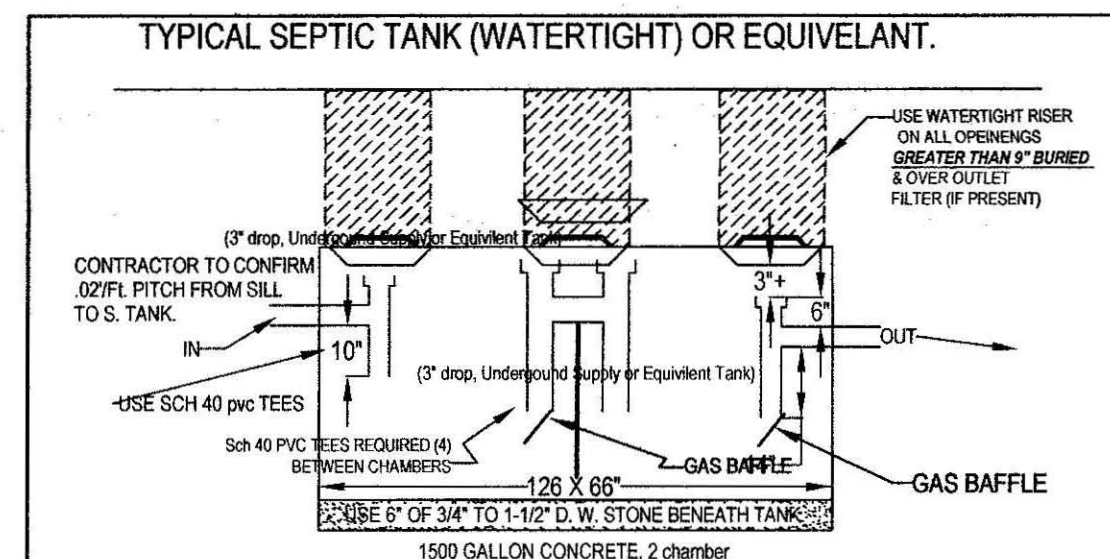
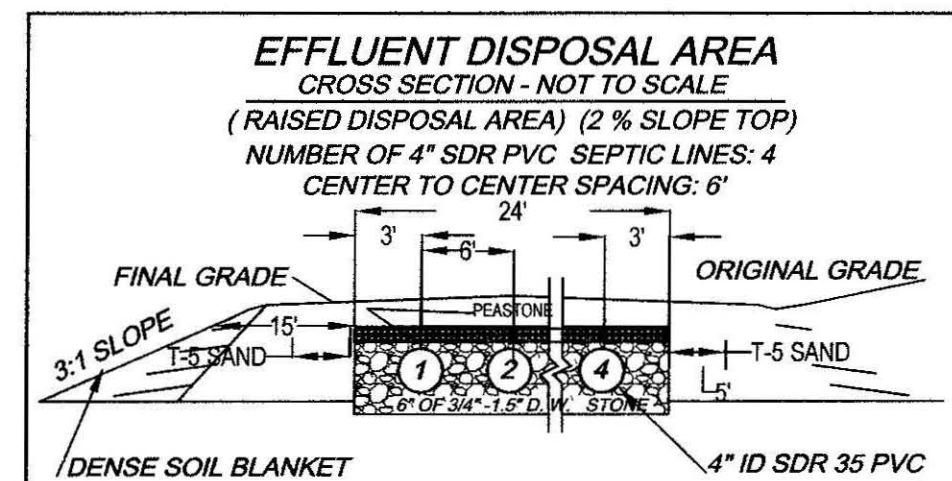
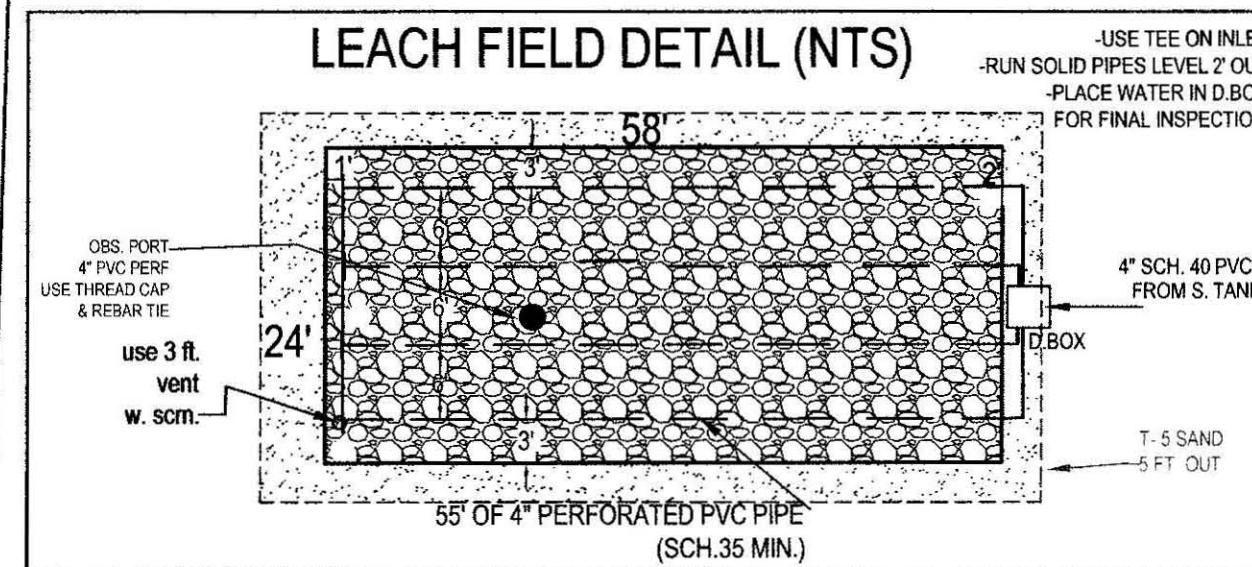
9A-37

PHONE: (413) 323-5957
FAX: (413) 323-4916
e-Mail: ALWCS@charter.net





NOT AN ACTUAL SURVEY!!
LINES DRAWN FOR SEPTIC LOCATION PURPOSES ONLY!



KEY ELEVATIONS
BASEMENT SILL: 100'
BUILDING OUT: 92.50'
SEPTIC TANK IN: 92.20'
SEPTIC TANK OUT: 91.95'
D. BOX IN: 91.6'
D. BOX OUT: 91.4'
L. FLD. INV. ST: 91.3'

GRAVITY SLOPE SEPTIC SYSTEM OPERATION AND MAINTENANCE NOTES FOR HOMEOWNER.

- 1.) HAVE TANK PUMPED EVERY 2 YEARS. 2.) MAINTAIN AREA OVER SEPTIC SYSTEM AS GRASSY OR SIMILAR GROUND COVER.
- 3.) DO NOT PLANT ANY TREES OR DEEP ROOTING SHRUBS WITHIN 10 FEET OF SYSTEM. 4.) USE ONLY LIQUID DETERGENTS & LOW FLOW WASHERS.

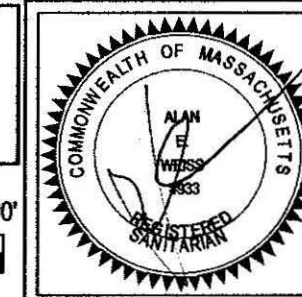
NOTE TO HOMEOWNER AND CONTRACTOR:

CONNECTIONS FROM HEATING SYSTEM, AIRCONDITIONERS, SUMP PUMPS, WATER WELL FILTRATION UNITS AND HEAT PUMPS ARE NOT ALLOWED, SANITARY WATER CONNECTIONS ONLY PERMITTED.

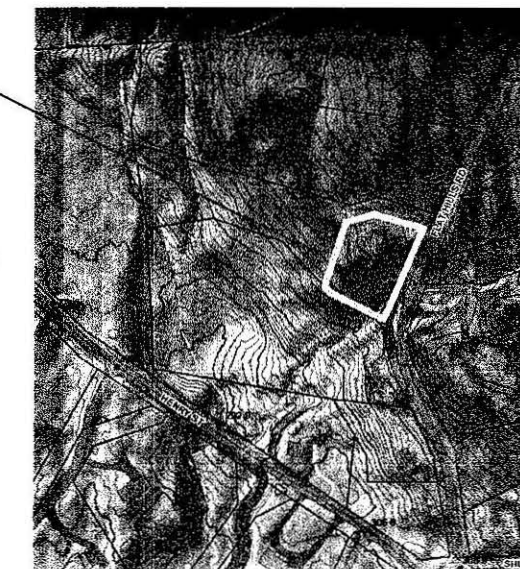
ATTENTION INSTALLER!!

CALL DIG SAFE BEFORE YOU DIG!! MASSACHUSETTS STATE LAW CHAPTER 82 SECTIONS 40 - 40E REQUIRE THAT PREMARKING OF GAS, ELECTRIC, WATER, TELEPHONE AND CABLE T.V. UTILITY LINES BE MADE A MINIMUM OF 72 HOURS PRIOR TO GROUND BREAK FOR ANY EXCAVATION.

NOTE: INSTALLER MUST CONTACT ENGINEER/BD OF HEALTH 48 HOURS PRIOR TO SUBGRADE INSPECTION. INSTALLER MUST HAVE ALL BREAK OUT FILL ON SITE AND IN PLACE PRIOR TO SIGN OFF BY ENGINEER AT TIME OF FINAL INSPECTION OR APPROVAL WILL NOT BE GIVEN TO BACKFILL.



SUBJECT
SITE
LOCATION



DESIGN NOTES AND CALCULATIONS:

- 1.) 4 (BEDROOM HOME) = 440 GPD MIN. REQUIRED,
- Use LEACHING FIELD 24' WIDE X 58' LONG WITH 6" OF 3/4" TO 1-1/2" DBL WASHED STONE BELOW INVERT:
- BOTTOM AREA: L. FIELD (24' W X 58' L) = 1392 SF.
- TOTAL AREA: 1392 SF X .33 GAL/SF = 459 GPD PROVIDED.
3. GARBAGE DISPOSAL NOT PERMITTED. (A/C AND FURNACE CONDENSATE TUBES NOT ALLOWED)
4. NO OTHER PRIVATE WELLS WITHIN 150 FEET OF SAS.
5. NO OTHER WETLANDS/RESOURCE AREAS WITHIN 100 FEET OF SAS.
6. USE NEW S. TANK AS NOTED & MAINTAIN 0.02 PITCH FROM SILL TO S. TANK
- INSTALL & INSPECT SCH. 40 TEES / BAFFLES (10" INLET, 14" OUTLET),
NOTE:
- ALL COMPONENTS OF NEW SYSTEM MUST BE MARKED WITH MAGNETIC TAPE. BE SURE TO MAINTAIN 3" CLEARANCE FROM TOP OF TEES TO BOTTOM OF TANK COVERS & BOXES.
7. USE LARGE STYLE (6 OUTLET) D. BOX ONLY.
- 7A ALL D. BOX OUTLET PIPES LEVEL FOR FIRST 2'. BOXES MUST HAVE 2" CONC. WALLS
NOTE:
- D. BOXES WITH MORE THAN 9" OF COVER SOIL MUST HAVE RISERS TO 6" OF SURFACE.
- 7B ANY /ALL PLASTIC RISERS MUST BE SECURED WITH STAINLESS STEEL SCREWS.
8. -USE (.75" 1 1/2") STONE UNDER TANK & D. BOX FOR 6" FOR STABLE BASE.
-USE ONLY DBL. WASHED APPROVED (.75" 1.5") FOR PLACEMENT IN LEACH AREA.
9. USE PROPER SCH. 40 PVC TEES AS SHOWN.
10. PRE & POST CONTOURS NOTED AS NECESSARY, RESERVE AS NOTED (not required for repairs).
11. SLOPE CALCS (SEE CONTOURS). SUBGRADE INSP. REQD.
13. USE FIELD DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE & ESHGW (310 CMR 15.240)
14. USE 2% MIN. SLOPE OVER SAS
- CLEAR TOP AND SUB TO BASE OF RESTRICTIVE LAYER (20") MIN. AS NEEDED (INSPECTION REQUIRED).
- UNDER BED & 5 FT. OUT, PRIOR TO TITLE V SAND/STONE PLACEMENT.
- EXCAVATE EXISTING LOAM, SUB AND ANY EXISTING DEBRIS, DIRTY FILL OR PRIOR SYSTEM IF PRESENT.
15. SOIL EVALUATION BY A. WEISS, RS. (E. SMITH, BOH AGENT)
BOH AGENT:
- DEPTH OF PERC. ** SIEVE TEST** (LUA for use of sieve in lieu of measured perc rate, due to wetness)
- PERC RATE = - MIN / IN.
- CLASS 2, F. SANDY LOAM SOIL RATING
16. NO TREES WITHIN 10 FT. OF NEW LEACH AREA.
17. ENGINEER TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL.
18. BM=100.00 @ (SILL, as noted), CONFIRM PROPER PIPE SLOPES
- USE/INSPECT SCH. 40 PIPE FOR PIPE FROM HOUSE TO NEW OR EXISTING TANK
19. GRADE MULCH AND SEED OVER SAS AS NOTED.
20. INSTALLATION IN LOW GROUNDWATER SEASON RECOMMENDED.
21. USE OBSERVATION PORT NEAR CENTER OF STONE BED HAVE 4" PERFORATED, PVC INSPECTION PORTALS TO BOTTOM OF STONE BED, WITH RISER TO 3" OF SURFACE & THREADED CAP & MARK WITH RE-BAR.

TEST PIT LOG:

| TP 1 | | | | | TP 2. ELEV. | | | | |
|-------------------|--------|----------|------------------|---------------------------|-------------------|--------|----------|------------------|---------------------------|
| DEPTH: | HORIZ: | TEXTURE: | COLOR (MUNSELL): | MATERIAL: | DEPTH: | HORIZ: | TEXTURE: | COLOR (MUNSELL): | MATERIAL: |
| 0-10" | A | FS | 10 YR 3.2 | FRIABLE, Moist | 0-10" | A | FSL | 10 YR 3.2 | FRIABLE, Moist |
| 10-20" | Bw | LS | 10 YR 5.8 | FRIABLE | 10-20" | Bw | LS | 10 YR 5.8 | Friable |
| 20-109" | C1 | FSL | 10 YR 5.3 | F. c. sand, heterogeneous | 20-110" | C1 | S & G | 10 YR 5.3 | F. c. sand, heterogeneous |
| | | | | 20% BOULDERS AND COBBLES | | | | | 20% BOULDERS AND COBBLES |
| OXIDES: 24" | | | | | OXIDES: 24" | | | | |
| EHWT: 24" | | | | | EHWT: 24" | | | | |
| STANDING H2O: 68" | | | | | STANDING H2O: 68" | | | | |
| WEEPING: 24" | | | | | WEEPING: 24" | | | | |
| BEDROCK: 109'± | | | | | BEDROCK: - | | | | |

SEPTIC DESIGN REPAIR PLAN FOR WILLIAM GERACE

66 FLAT HILLS
AMHERST, MA

Cold Spring Environmental Consultants Inc.
350 Old Enfield Road
Belchertown, MA 01007

PHONE: (413) 323-5957

FAX: (413) 323-4916

DATE:

03.05.2013

SCALE:

1"=30'

DRAWN BY:

ALAN WEISS

REVISED:

07.12.2013

DRAWING NUMBER:

113-4043-0305

e-Mail: ALAN@CSES-charter.net

BOARD OF HEALTH, AMHERST, MASSACHUSETTS
APPLICATION FOR DISPOSAL WORKS CONSTRUCTION PERMIT

No. 70-12 Date June 23, 1970 Fee \$3.00 Date Rec'd. 6/23/70 By DGF

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

Location—Address Flat Hills Road or Lot No. _____

Owner Gerald R. Hill Tel. 549-3618 Address East Leverett Road, Leverett

Contractor Same Address _____

Type of Building Dwelling Dimensions 40 x 36' 8" Size Lot ?

Dwelling—No. of Bedrooms 4 Expansion Attic (No) Garbage Grinder (yes)

Other _____ No. of persons _____ Showers ()

Other fixtures _____

Town Water? No Type of Well Artesian

Design Flow 75 gallons per person per day. Total daily flow 600 gallons

Septic Tank—Liquid capacity 1200 gallons Dimensions: L _____ W _____ D _____

Disposal Trench—No. 1 Width 15 Total Length 30 Total leaching area 4500 sq. ft.

Disposal Bed—No. _____ Diameter _____ Depth below inlet _____ Total leaching area _____ sq. ft.

Dry Well—No. _____ Diameter _____ Depth below inlet _____ Dimensions: _____ x _____ x _____

Other: Distribution box () No. _____ Dosing tank ()

(Depth of Soil Line Below finished grade at foundation)

Percolation Test Results Performed by CC Drake Date June 30 1970

Test Pit No. 1 5 minutes per inch Depth of Test Pit 30"

Test Pit No. 2 _____ minutes per inch Depth of Test Pit _____

Description of Soil _____ Depth to Ground Water _____

Will disposal area be filled? _____ Cut down? _____

(On reverse side or separate sheet, show plot plan with building. Include dimensions, distances from all boundaries. Show location of wells, streams, ledge, large trees, etc.)

AGREEMENT: The undersigned agrees to construct the aforescribed individual sewage disposal system in accordance with the provisions of Article XI of the Sanitary Code and regulations of the Amherst Board of Health. The undersigned further agrees not to place the system in operation until a Certificate of Compliance has been issued by this board of health.

Application Approved by CC Drake

X Charles J. Hill
Owner or builder

date June 30 1970
date

Application Disapproved for the following reasons:

BOARD OF HEALTH, AMHERST, MASSACHUSETTS
CERTIFICATE OF COMPLIANCE

THIS IS TO CERTIFY, That the individual Sewage Disposal System installed () or repaired () by _____ at _____ has been constructed in accordance with the provisions of

INSTALLER

Article XI of the State Sanitary 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 satisfactorily.

DATE _____ Inspector _____

BOARD OF HEALTH, AMHERST, MASSACHUSETTS
DISPOSAL WORKS CONSTRUCTION PERMIT

No. _____ Permission is hereby granted _____ to construct () or repair () an Individual Sewage Disposal System at _____

as shown on the application for Disposal Works Construction Permit No. _____

This permit is issued with the understanding that future alterations or additions will be made if necessary. This permit shall not be construed as permission to create or maintain any sewage nuisance and in the issuance of this permit the Board of Health assumes no responsibility for the future operation or maintenance of the system.

DATE _____

Board of Health

