No. 00-13 c hk# 1014 FEE 75.00 Plans

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**

ALAN E. WEISS REG #933 REGISTERED SANITARIAN COMMONWEALTH OF MASSACHUSETTS

Location	555 MARKET HILL RD.	Owner's Name	MARK SHERRY
Map/Parcel#		Address	555 MARKET HILL RD
Lot#	Lot 1	Telephone#	549 - 8585
* Installer's Name	Thom Wanner	Designer's Name	Alan Weiss, RS., COLD SPRING INC.
Address		Address	Belchertown, MA 01007
Telephone#		Telephone#	413-323-5957

Type of Building Residence Lot Size 62,612 sq. ft.

Dwelling - No. of Bedrooms 5 Garbage grinder N

Other - Type of Building ______ No. of persons ______ Showers ( ), Cafeteria ( )

Other Fixtures ______

Design Flow (min. required) 550 gpd Calculated design flow 564 Design flow provided 564 gpd

Plan: Date 6/23/00 Number of sheets 4 Revision Date ______

Title SEPTIC SYSTEM REPAIR PLAN FOR MARK SHERRY

Description of Soil(s) CLASS II

Soil Evaluator Form No. ______ Name of Soil Evaluator A. Weiss Date of Evaluation 6/20/00

DESCRIPTION OF REPAIRS OR ALTERATIONS NEW L. FIELD W/ NEW SEPTIC TANK. PUMP + CLEAN OLD SEPTIC TANK + CONVERT TO PUMP CHAMBER.

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 Mark Sherry Date 7/20/00

Inspections ______

Inlets

No. 00-13 FEE 75.00 plans 8/1/00

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, *MA.*

CERTIFICATE OF COMPLIANCE

Description of Work: ❑ **Individual Component(s)** ☑ **Complete System**

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

by: ______

at 555 Market Hill Rd.

has been installed in accordance with the provisions of 310 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. 00-13, dated ______. Approved Design Flow ______(gpd)

Installer Thom Wanner

Designer: [signature] Inspector: Thomas Dion Date: 8/28/00

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

No. 00-13 FEE 75.00 Pd c hk# 1014

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 555 MARKET Hill Road as described in the application for Disposal System Construction Permit No. 00-13, dated ______.

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

Form 1255 Rev. 5/96 A.M. Sulkin Co. Boston, MA

Date 8/3/00 Board of Health [signature]

Need BoH Variance

No. 00-13

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	555 MARKET HILL RD.	Owner's Name	MARK SHERRY
Map/Parcel#		Address	555 MARKET HILL RD
Lot#	LOT 1	Telephone#	549 - 8585
* Installer's Name	RIVER DRIVE EXCAVATING	Designer's Name	Alan Weiss, RS., COLD SPRING, INC
Address		Address	Belchertown, MA 01007
Telephone#		Telephone#	413-323-5957

Type of Building Residence Lot Size 62,612 sq. ft.

Dwelling - No. of Bedrooms 5 Garbage grinder N

Other - Type of Building ______ No. of persons ______ Showers ( ), Cafeteria ( )

Other Fixtures ______

Design Flow (min. required) 550 gpd Calculated design flow 564 Design flow provided 564 gpd

Plan: Date 6/23/00 Number of sheets 4 Revision Date ______

Title SEPTIC SYSTEM REPAIR PLAN FOR MARK SHERRY

Description of Soil(s) CLASS II

Soil Evaluator Form No. ______ Name of Soil Evaluator A. Weiss Date of Evaluation 6/20/00

DESCRIPTION OF REPAIRS OR ALTERATIONS NEW L.FIELD W/ NEW SEPTIC TANK, PUMP + CLEAN OLD SEPTIC TANK + CONVERT TO PUMP CHAMBER.

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 Mark Sherry Date 7/20/00

Inspections ______

No. 00-13

FEE

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, MA.

CERTIFICATE OF COMPLIANCE

BM DID FINAL

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

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

by: ______

at 555 Market Hill Road

has been installed in accordance with the provisions of 310 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. 00-13, dated ______. Approved Design Flow ______(gpd)

Installer ______

Designer: ______ Inspector: [signature] Date: Aug 16, 2000

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

No. 00-13

FEE

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, MA.

DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to; Construct( ) Repair(✓) Upgrade( ) Abandon( ) an individual sewage disposal system at 555 Market Hill Road as described in the application for Disposal System Construction Permit No. 00-13, dated 8-3-00

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

Form 1255 Rev. 5/96 A.M. Sulkin Co. Boston, MA

Date 8-3-00 Board of Health [signatures]

Need B.O.H. Approval

COLD SPRING ENVIRONMENTAL CONSULTANTS, INC.

- 21E Site Investigations
- Subsurface Investigations
- Pollution Remediation
- LSP on Staff

- Percolation Tests and Septic Designs
- Regulatory Compliance
- Recycling and Solid Waste

June 23, 2000

Mr. Dave Zarozinski, Health Inspector
Amherst Board of Health
Town Hall
Amherst, MA. 01002

RE: Septic System Residence Repair and Local Upgrade Approval
Sherry Residence, 555 Market Hill Road, Amherst, MA

Dear Mr. Zarozinski:

With the intent of full compliance with 310 CMR 15.000, (Sanitary Septic Code, Title V), and the understanding that maximum feasible upgrade should be achieved to maximize protection of public health and safety and the environment, a Local Upgrade Approval is requested for the repair of the system at the above mentioned property. It has been determined by the writer that strict enforcement of the code would be manifestly unjust (310 CMR 15.410). The following Local Upgrade Approval is noted:

-lack of 400 feet of minimum Surface Water Supply separation to the proposed SAS, 300 feet is provided (well in excess of minimum of 100' allowed by DEP and 310 CMR 15.405).
(The situation requires this local approval in order to maximize protection of the resource area.

It is understood that the system was sized using an appropriate percolation test and soil identification technique approved by the Massachusetts DEP that utilizes the most conservative/appropriate loading factor for that soil type (II). It is also noted that the site is served by a private drilled well and **(125+ feet away)** The neighbors wells are upgradient of the proposed system and 125+ feet away). This request approval will allow proper surface drainage from the dwelling and the new SAS and minimize the intrusion of fill and raised surface in the backyard and toward the property line and well.

It is my opinion that given all the possible scenarios for a new disposal system, and due to spatial constraints, this plan best meets the intent on the Sanitary Code. It is understood that my client must provide you this letter. In addition, a copy of the Local Upgrade Approval from your board and a Plan copy must be sent to Mass. DEP, 436 Dwight St., Springfield, 01103, upon your approval and prior to the start of construction.
Please feel free to contact me should you have any questions.
Sincerely,

Cold Spring Environmental Consultants, Inc.

Alan E. Weiss, M.S.
President, Principal Hydrogeologist, Registered Sanitarian Lic. #933

350 Old Enfield Road • Belchertown, MA 01007 • (413) 323-5957
Fax: 323-4916

COLD SPRING ENVIRONMENTAL CONSULTANTS, INC.

ALAN E. WEISS, M.S., L.S.P.
Licensed Site Professional
Registered Sanitarian
Hydrogeologist
President

•Subsurface Investigations
•21E Site Investigations
•Pollution Remediation
•Percolation Tests and Septic Designs

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

Date: 6/20/00

Commonwealth of Massachusetts
AMHERST, Massachusetts

Soil Suitability Assessment for On-site Sewage Disposal

Performed By: A. WEISS Date: 6/20/00
Witnessed By: D. ZAROZINSKI

Location Address or Lot # 555 MARKET HILL LOT #1	Owner's Name, Address, and Telephone # MARK SHERRY 555 MARKET HILL RD. 549-8585
New Construction ☐ Repair ☑	

Office Review

Published Soil Survey Available: No ☐ Yes ☑
Year Published 1981 Publication Scale 1:25,000 Soil Map Unit 6xC
Drainage Class RAPID. Soil Limitations
Surficial Geologic Report Available: No ☑ Yes ☐
Year Published Publication Scale
Geologic Material (Map Unit)
Landform
Flood Insurance Rate Map:
Above 500 year flood boundary No ☐ Yes ☑
Within 500 year flood boundary No ☑ Yes ☐
Within 100 year flood boundary No ☑ Yes ☐
Wetland Area:
National Wetland Inventory Map (map unit)
Wetlands Conservancy Program Map (map unit)

Current Water Resource Conditions (USGS): Month
Range: Above Normal ☑ Normal ☐ Below Normal ☐
Other References Reviewed: _____

FORM 12 - PERCOLATION TEST

Location Address or Lot No. 555 MARKET HILL RD

COMMONWEALTH OF MASSACHUSETTS

AMHERST , Massachusetts

Percolation Test*		
Date: 6/20/00	Time:.	
Observation Hole #		
Depth of Perc	SEE 3 PERCS	
Start Pre-soak	in 1989	
End Pre-soak		
Time at 12"		
Time at 9"		
Time at 6"		
Time (9"-6")		
Rate Min./Inch	6 MIN/IN	20 MIN/IN, 27 MIN/IN

(USED 30 FOR DESIGN IN 2,000)

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

Site Passed ☑ Site Failed ☐

Performed By: FRED FILIOS

Witnessed By: DAVID ZAROZINSKI

Comments: TO WET TO PERC ON 6/20/00.

DEP

DEP APPROVED FORM - 12/07/95

Location Address or Lot No. 555 MARKET HILL RD

On-site Review

Deep Hole Number TP-1 Date: 6/20/00 Time: 2:00 Weather SUN 80°F
Location (identify on site plan) _____
Land Use Rural Slope (%) 2 Surface Stones MANY
Vegetation Deciduous, Red maple, Birch, Oak.
Landform Terrace.
Position on landscape (sketch on the back)
Distances from:

Open Water Body	300'+ feet	Drainage way	100'+ feet
Possible Wet Area	100'+ feet	Property Line	40' feet
Drinking Water Well	125'+ feet	Other	

DEEP OBSERVATION HOLE LOG*

TP-1

Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0-10"	A	FSL	2.5Y 3/2		FRIABLE
10"-28"	Bw	FSL	2.5Y 5/6		FRIABLE
28"-108"	C	SL	2.5Y 5/3	@ 38" 5Y 5/2	FINE-MEDIUM SANDY TILL, MASSIVE, MOD. DENSE, 20% COBBLES + BOULDERS

* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) GLACIAL TILL Depth to Bedrock: 108"+
Depth to Groundwater: Standing Water in the Hole: 48" Weeping from Pit Face: 48"
Estimated Seasonal High Ground Water: 38"

Location Address or Lot No. 555 MARKET HILL 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 38" 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? —

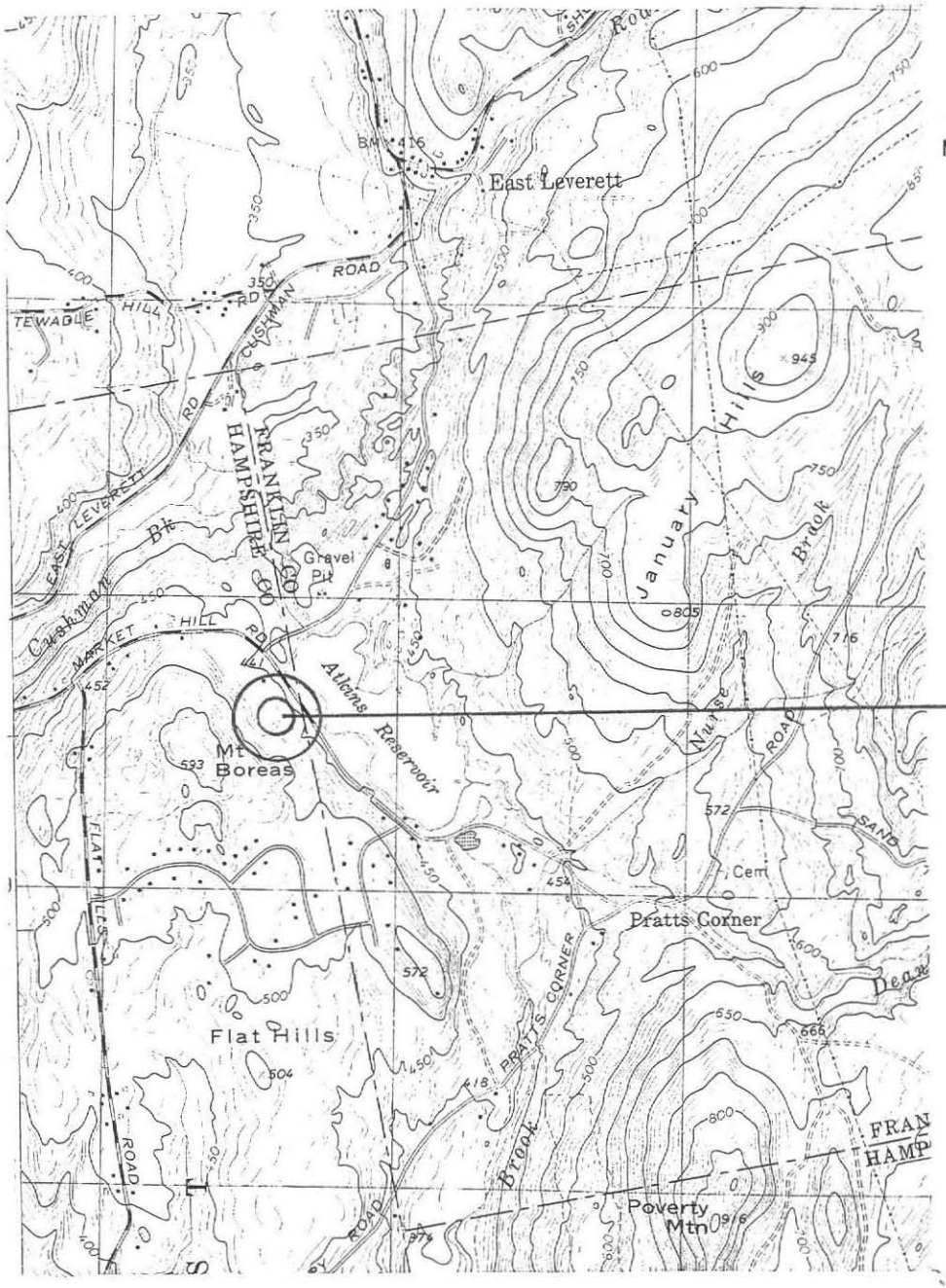
Certification

I certify that on June, 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 _____ Date 6/20/00

COMMONWEALTH OF MASSACHUSETTS
ALAN E. WEISS
REG. #933
REGISTERED SANITARIAN

FIGURE 1: SITE LOCUS



SCALE: 1"=2,083 FT.

USGS 7.5 MIN. QUAD.

0 FEET 2000

COLD SPRING ENVIRONMENTAL INC.

Commonwealth of Massachusetts
AMHERST , Massachusetts

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

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

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

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

1) Facility/system owner
   Name MARK SHERRY
   Address 555 MARKET HILL RD.
   Phone # 548 - 8585
   Address of facility SAME

2) Applicant (if different from above)
   Name SAME
   Address
   Phone #

3) Type of facility
   ✓ residential ___ commercial ___ school
   ___ institutional
   (Specify)

4) Type of existing system

____privy ____cesspool(s) ✓ conventional system
____Other (describe)_____

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

5) Design flow based on 310 CMR 15.203

a) Design flow of existing system ____ gpd
Approved? ✓ yes approval date 1994
____ no why? _____

b) Design flow of proposed upgraded system 499 gpd
c) Design flow of facility____ gpd

6) Proposed upgrade of existing system is

a) ____ Voluntary
____ Required by order, letter, etc. (attach copy)
✓ Required following inspection required by 310 CMR 15.301 (provide date inspection form was submitted to the approving authority) 6/23/00 (date)

b) Describe the proposed upgrade to the system
NEW L. FIELD (RAISED BED)

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

✓ Reduction of setback(s) (list setbacks to be reduced with proposed setback distances)
TO SURFACE WATER SUPPLY, 300' PROVIDED, 400' REQUIRED, (100' MINIMUM ALLOWED).

___ Percolation rate of 30-60 minutes per inch (state actual perc rate)

___ Up to 25% reduction in subsurface disposal area design requirements (state required & proposed size)_____

___ Relocation of water supply well (identify well, describe relocation)

_____

_____

_____

_____

_____

___ Reduction of required separation between bottom of SAS & high groundwater (specify proposed reduction & perc rate)_____

___ Other requirements of 310 CMR 15.000 that cannot be met (specify sections of the Code)

_____

_____

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

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

Distance from soil absorption system to high groundwater
4 feet

As determined by:

Evaluator's name ALAN WEISS, RS.
Evaluator's signature _____
Date of evaluation 6/20/00

8) Notice to Abutters

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

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

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

List of affected Abutters: N/A

Abutter Name_____ Date notified ____
Address_____

Abutter Name_____ Date notified ____
Address_____

Abutter Name_____ Date notified ____
Address_____

Abutter Name_____ Date notified ____
Address_____

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

a) an upgraded system in full compliance with 310 CMR 15.000 is not feasible:
- DUE TO LOCATION OF LOT + CONFIGURATION,

b) an alternative system approved pursuant to 310 CMR 15.283-15.288 is not feasible:
-NOT APPROPRIATE, WOULD NOT CHANGE SET BACK SITUATION

c) a shared system is not feasible:
N/A

d) connection to a sewer is not feasible:
N/A

10) An application for a disposal system construction permit, including all required attachments (e.g. plans & specifications, site evaluation forms), must accompany this application. Is the DSCP application attached? ✓ yes ___ no

11) Certification

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

* _____
Facility owner's signature Date

* _____
Print Name

ALAN E. WEISS 6/23/00
Name of preparer Date
COLD SPRING ENVIRONMENTAL, INC.

413-323-3957, 350 OLD ENFIELD RD., BELCHERTOWN, MA - 01007
Telephone # & address of preparer

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

Town of

AMHERST Massachusetts

TOWN HALL
4 BOLTWOOD AVENUE
AMHERST, MA. 01002-2351

INSPECTION SERVICES DEPARTMENT

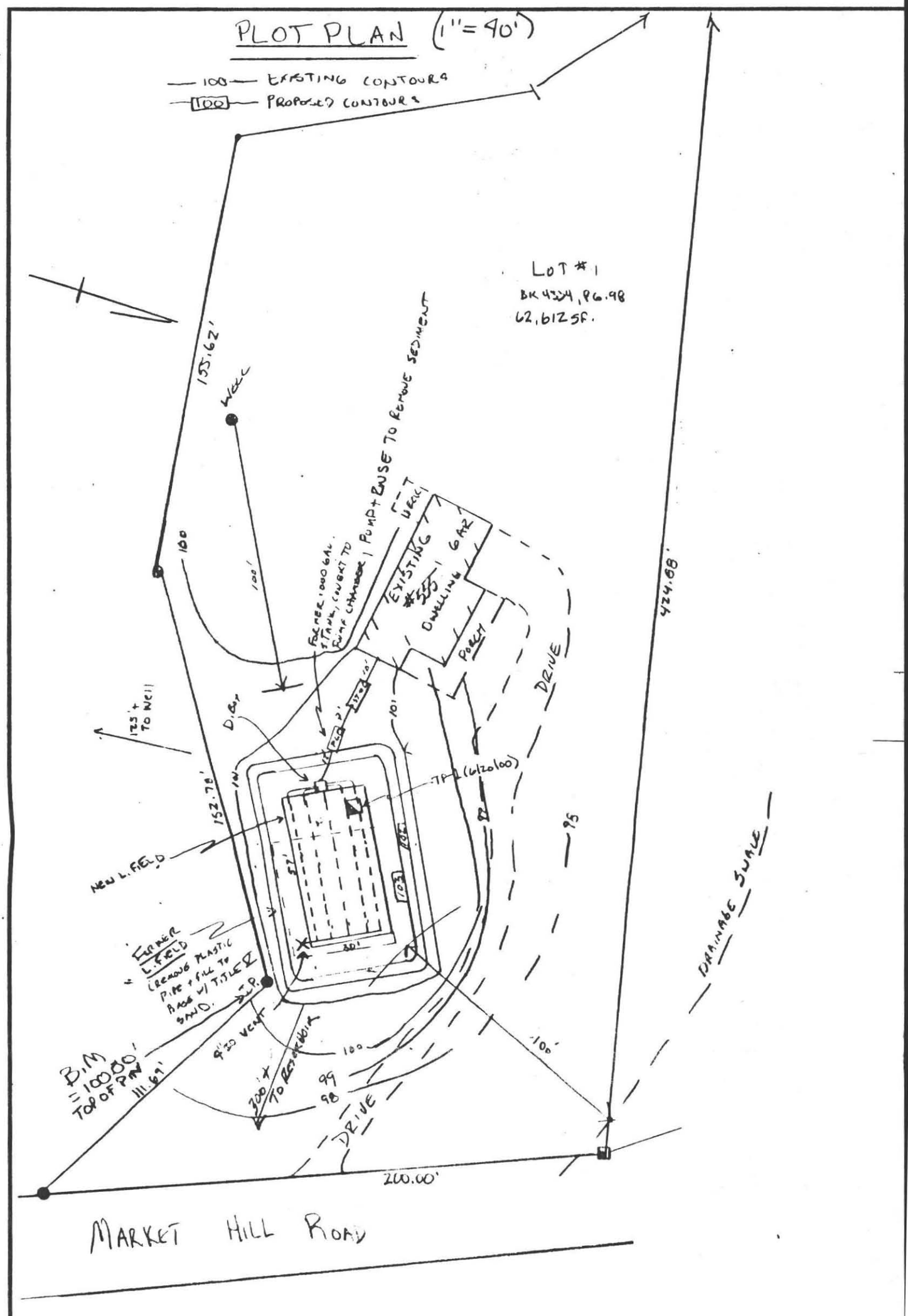
Phone (413) 256-4033
Fax (413) 256-4076

DATE: August 1, 2000
TO: Board of Health
FROM: David Zarozinski, Sanitarian
RE: 555 Market Hill Road variance request reduction of reservoir to leach field (400') setback (300' provided).

Mr. Mark Sherry of 555 Market Hill Road, Amherst, is requesting a variance to regulation 310 CMR 15.211 and 15.405 (1), lack of 400 feet of separation from surface water supply to his soil absorption system. Mr. Sherry's septic system will be 300 feet from the water supply.

The code (copy enclosed) will allow, with local upgrade approval, a septic system to be within 100 feet of the water supply.

With the neighboring wells 125 feet away I would grant this local upgrade because it allows for both the best feasible upgrade within the borders of the lot, and will have the least effect on public health, safety and the environment.


PLOT PLAN (1"=40')
100 EXISTING CONTOURS
100 PROPOSED CONTOURS
LOT #1
BK 4334, PG. 98
62,612 SF.
155.62'
WELL
100'
100
FUTURE 1000 GAL. STAINLESS STEEL TANK, CAULKED TO PUMP CHAMBER
PUMP + BASE TO REMOVE SEDIMENT
EXISTING #555 DWELLING 6 BR
DECK
PORCH
DRIVE
424.08'
123'± TO WELL
D.W.
152.72'
101
102
103
105
95
NEW L. FIELD
FUTURE L. FIELD (REMOVE PLASTIC PIPE + FILL TO BASE W/ TITLER SAND.)
T.P. 2 (6/20/00)
4" SCH 40 VENT
100
99
98
300'± TO RESERVOIR
110'
DRAINAGE SWALE
DRIVE
B.M. = 100.00' TOP OF PIN 111.69'
200.00'
MARKET HILL ROAD

COLD SPRING ENVIRONMENTAL
CONSULTANTS, INC.

- 21E Site Investigations
- Subsurface Investigations
- Pollution Remediation
- LSP on Staff

- Percolation Tests and Septic Designs
- Regulatory Compliance
- Recycling and Solid Waste

June 23, 2000

Mr. Dave Zarozinski, Health Inspector
Amherst Board of Health
Town Hall
Amherst, MA. 01002

RE: Septic System Residence Repair and Local Upgrade Approval
Sherry Residence, 555 Market Hill Road, Amherst, MA

Dear Mr. Zarozinski:

With the intent of full compliance with 310 CMR 15.000, (Sanitary Septic Code, Title V), and the understanding that maximum feasible upgrade should be achieved to maximize protection of public health and safety and the environment, a Local Upgrade Approval is requested for the repair of the system at the above mentioned property. It has been determined by the writer that strict enforcement of the code would be manifestly unjust (310 CMR 15.410). The following Local Upgrade Approval is noted:

-lack of 400 feet of minimum Surface Water Supply separation to the proposed SAS, 300 feet is provided (well in excess of minimum of 100' allowed by DEP and 310 CMR 15.405).
(The situation requires this local approval in order to maximize protection of the resource area.

It is understood that the system was sized using an appropriate percolation test and soil identification technique approved by the Massachusetts DEP that utilizes the most conservative/appropriate loading factor for that soil type (II). It is also noted that the site is served by a private drilled well and **(125+ feet away)** The neighbors wells are upgradient of the proposed system and 125+ feet away). This request approval will allow proper surface drainage from the dwelling and the new SAS and minimize the intrusion of fill and raised surface in the backyard and toward the property line and well.

It is my opinion that given all the possible scenarios for a new disposal system, and due to spatial constraints, this plan best meets the intent on the Sanitary Code. It is understood that my client must provide you this letter. In addition, a copy of the Local Upgrade Approval from your board and a Plan copy must be sent to Mass. DEP, 436 Dwight St., Springfield, 01103, upon your approval and prior to the start of construction.
Please feel free to contact me should you have any questions.
Sincerely,

Cold Spring Environmental Consultants, Inc.

Alan E. Weiss, M.S.
President, Principal Hydrogeologist, Registered Sanitarian Lic. #933

350 Old Enfield Road • Belchertown, MA 01007 • (413) 323-5957
Fax: 323-4916

The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
State Publications and Regulations

REGULATION FILING AND PUBLICATION

1. Regulation Chapter, Number and Heading: 310 CMR 11.00 - 17.00

2. Name of Agency: DEPT. ENVIRONMENTAL PROTECTION

3. This document is reprinted from the Code of Massachusetts Regulations and contains the following:

310 CMR	11.00	Environmental Code Title I: General Application and Administration.
	12.00	RESERVED
	13.00	RESERVED
	14.00	Financial Assistance to Municipalities for Correcting Failed On-Site Disposal Systems.
	15.00	The State Environmental Code Title V: Minimum Requirements for the Subsurface Disposal of Sanitary Sewage.
	16.00	Site Assignment for Solid Waste Facilities.
	17.00	RESERVED.

Under the provisions of Massachusetts General Laws, Chapter 30A, Section 6 and Chapter 233, Section 75, this document may be used as evidence of the original documents on file with the Secretary of the Commonwealth.

Compiled as in full force and effect: 11/03/95

A true copy attest:

William Francis Galvin

WILLIAM FRANCIS GALVIN
Secretary of the Commonwealth

$9.65

310CR11.00-17.00

15.404: continued

Where failure of the system is solely due to failure of the septic tank, distribution box, soil absorption system, piping, and/or building sewer, upgrade of that component(s) in full compliance with 310 CMR 15.000 shall be deemed to meet the goal of full compliance; provided that the upgraded component functions properly with the other system components, the system functions properly hydraulically, and the owner obtains a certificate of compliance from the approving authority. If other system failures are discovered during upgrade of that component(s), such other system failures shall be upgraded in accordance with 310 CMR 15.405.

(2) When full compliance pursuant to 310 CMR 15.404(1) is not feasible, the approving authority shall issue a local upgrade approval authorizing upgrade of the system with the goal of maximizing protection of public health and safety and the environment to the maximum extent feasible. The following requirements shall not be varied by the local approving authority except as explicitly set forth in 310 CMR 15.404(2)(b) and (d):

(a) A septic tank with an effective liquid capacity providing no less than 24 hours of retention time or 1000 gallons, whichever is greater, shall be provided unless the septic tank is an elevated tank constructed in accordance with 310 CMR 15.213 (construction in V-zones) in which case the effective liquid capacity may consist of a 500-gallon tank.

(b) A minimum of four feet of separation between the bottom of the soil absorption system and the high groundwater elevation shall be provided, using fill if necessary. The local approving authority may allow a three foot separation only in full compliance with 310 CMR 15.405(1)(i).

(c) A minimum of four feet of naturally occurring pervious soil below the entire area of the soil absorption area and reserve area shall be provided.

(d) The soil absorption system shall be designed to provide as much of the required area as possible on the facility served or, if proposed by the owner or operator, on an abutting facility pursuant to a valid recorded easement. The local approving authority may reduce the required soil absorption system area no more than 25%, as provided in 310 CMR 15.405(1). Reductions in the required subsurface disposal area in excess of 25% may only be varied by the Department, and may require the installation of a Department-approved septic tank effluent tee filter, dosing of portions of the soil absorption system on an alternating basis, and/or other measures to protect the integrity of the soil absorption system; and

(e) the soil absorption system shall not be located within 100 feet of a surface water supply or tributary to a surface water supply, within 50 feet of a private water supply well, or within the Zone I of a public water supply well.

15.405: Contents of Local Upgrade Approval

(1) In granting local upgrade approvals pursuant to 310 CMR 15.404(2) where full compliance as defined in 310 CMR 15.404(1) is not feasible, the local approving authority shall consider the impact of the proposed system and shall vary to the least degree necessary the requirements of 310 CMR 15.100 through 15.293 so as to allow for both the best feasible upgrade within the borders of the lot, and have the least effect on public health, safety and the environment. The local approving authority is allowed to diverge from the goal of full compliance only to the extent necessary to achieve a feasible upgrade. In determining whether full compliance is feasible, the approving authority should appropriately consider not only physical possibility as dictated by the conditions of the site, but also the economic feasibility of the upgrade costs. The approving authority should emphasize protection of water resources and treatment of the sanitary sewage. Absent conditions which would result in a different outcome based on best professional judgment, the options set forth below should be considered in the order in which they appear with 310 CMR 15.405(1)(a) being the first option to be considered and rejected or adopted and 310 CMR 15.405(1)(i) being the last option to be considered and rejected or adopted:

(a) Reduction of system location setbacks otherwise established in 310 CMR 15.211 for property lines provided that a survey of the property line shall be required if a component is to be placed within five feet of the property line, and no such reduction shall result in the soil absorption system being located less than ten feet from a soil absorption system on an abutting property;

(b) Reductions of system location setbacks from cellar wall, swimming pool, or slab foundations;

15.405 continued

(c) Placement of the leaching structure within an area where percolation rate is between 30 and 60 minutes per inch, in accordance with 310 CMR 15.242;
(d) Up to a 25% reduction in the required subsurface disposal area design requirements;
(e) Where upgrade is required pursuant to 310 CMR 15.303(1) because it is within Zone I of public well or within 100 feet of private well, relocation of the well. Any relocation of a public well shall be performed pursuant to 310 CMR 22.00 (water supply source approval);
(f) Reduction of system location setbacks from bordering vegetated wetlands;
(g) Reduction of system location setbacks from surface waters, salt marshes, inland and coastal banks, certified vernal pools in accordance with 310 CMR 15.211(1)[2], leaching catch basins, dry wells, or surface or subsurface drains other than those which discharge to surface water supplies or tributaries thereto;
(h) Reduction of system location setbacks from water supply lines, private water supply wells (but not within 50 feet of the well), tributaries to surface water supplies, surface water supplies, but not within 100 feet of the surface water supply or tributary thereto or open, surface or subsurface drains which discharge to surface water supplies or tributaries thereto.
(i) the local approving authority may reduce the required four foot separation (in soils with a recorded percolation rate of more than two minutes per inch) or the required five foot separation (in soils with a recorded percolation rate of two minutes or less per inch) between the bottom of the soil absorption system and the high groundwater elevation only if all of the following conditions are met:

1. An approved Soil Evaluator who is a member or agent of the local approving authority determines the high groundwater elevation.
2. A minimum three foot separation (in soils with a recorded percolation rate of more than two minutes per inch) or a minimum four foot separation (in soils with a recorded percolation rate of two minutes or less per inch) between the bottom of the soil absorption system and the high groundwater elevation is maintained.
3. The system is a failed or non-conforming system serving an existing building with a design flow of less than 2,000 gpd
4. No increase in design flow or square footage of the building is allowed.
5. No reduction in required leaching field size or setbacks from public or private wells, bordering vegetated wetlands, surface waters, salt marshes, coastal banks, certified vernal pools, water supply lines, surface water supplies or tributaries to surface water supplies, or drains which discharge to surface water supplies or their tributaries, is allowed.

(2) No application for an upgrade approval in which the setback from property lines or a private water supply well is reduced shall be complete until the applicant has notified all abutters whose property or well is affected by certified mail at his/her own expense at least ten days before the Board of Health meeting at which the upgrade approval will be on the agenda. The notification shall reference the standards set forth in 310 CMR 15.402 through 15.405 and indicate the date, time and place where the upgrade approval will be discussed.

(3) If the nonconforming system cannot be upgraded in accordance with 310 CMR 15.404 and 15.405(1) the owner shall:

(a) obtain a groundwater discharge permit pursuant to 314 CMR 5.00 and 6.00,
(b) apply to the Department to use a tight tank or modified tight tank in accordance with the provisions of 310 CMR 15.260 through 15.262,
(c) apply for a variance pursuant to 310 CMR 15.410 through 15.415, or
(d) abandon the system in compliance with 310 CMR 15.354.

(4) Nothing in 310 CMR 15.405 shall authorize violation of M.G.L. c. 131, § 40 and 310 CMR 10.00, or any other applicable provision of law.

15.203: continued

(6) System design flows for facilities other than those listed above shall be established, with approval of the Department, in relation to actual meter readings of established flows from known or similar installations. In those instances, design flows shall be based on 200% of average water meter readings in order to assimilate maximum daily flows.

(7) In schools, flows generated from sinks or other drains receiving wastes from science laboratories, graphics arts classrooms, or vocational school activities, including, but not limited to, automotive repair painting, or metal fabrication are classified industrial wastes and shall be directed pursuant to an appropriate permit, to a sewer, if a sewer connection is feasible and, if not, then to an industrial waste holding tank approved by the Department or an approved hazardous waste collection receptacle.

15.210: Setback Requirements and Loading Limitations for Locating and Designing Systems

15.211: Minimum Setback Distances

(1) All systems must conform to the minimum setback distance for septic tanks and soil absorption systems, including reserve area, measured in feet and as set forth below. Where more than one setback applies, all setback requirements shall be satisfied.

	Septic Tank	Soil Absorption System
Property Line	10	10
Cellar Wall or Swimming Pool (inground)	10	20
Slab Foundation	10	10
Water Supply Line (pressure)	10[1]	10[1]
Surface Waters (except wetlands)	25	50
Bordering Vegetated Wetland (BVW), Salt Marshes, Inland and Coastal Banks	25	50
Surface Water Supply - Reservoirs and Impoundments	400	400
Tributaries to Surface Water Supplies	200	200
Wetlands bordering Surface Water Supply or Tributary thereto	100	100
Certified Vernal Pools	50	100[2]
Private Water Supply Well or Suction Line	50	100
Public Water Supply Well	(2)	(2)
Irrigation Well	10	25
Open, Surface or Subsurface Drains which discharge to Surface Water Supplies or tributaries thereto	50	100
Other Open, Surface or Subsurface Drains (excluding foundation drains) which intercept seasonal high groundwater table [3]	25	50
Other Open, Surface or Subsurface Drains (excluding foundation drains)	5	10
Leaching Catch Basins & Dry Wells	10	25
Downhill Slope	not applicable	15[4]

[1] Disposal facilities shall also be at least 18 inches below water supply lines. Wherever sewer lines must cross water supply lines, both pipes shall be constructed of class 150 pressure pipe and shall be pressure tested to assure watertightness.

15.211: continued

[2] The required setback shall be 50 feet where the applicant has provided hydrogeologic data acceptable to the approving authority demonstrating that the location of the soil absorption system is hydraulically downgradient of the vernal pool. Surface topography alone is not determinative.

[3] Surface or subsurface drains which will regularly or periodically intercept the seasonal high groundwater table and carry that groundwater away from an area must meet the specified setbacks.

[4] The setback distance shall be measured from a naturally-occurring downhill slope which is not steeper than 3:1 (horizontal:vertical). A minimum 15 foot horizontal separation distance shall be provided between the top of the peastone in the soil absorption system and the adjacent downhill slope. For a system located in an area with any adjacent naturally occurring downhill slope steeper than 3:1, slope stabilization shall be provided in accordance with best engineering practice which may include construction of a concrete retaining wall constructed in accordance with 310 CMR 15.255(2).

(2) No system shall be constructed within a Zone I of a public water supply well or wellfield. No system shall be upgraded or expanded within a Zone I of a public water supply well or wellfield unless a variance is granted pursuant to 310 CMR 15.410 through 15.415.

(3) All setback distances from water bodies shall be measured from the bank of the water body. All setback distances from wetlands shall be measured in accordance with the criteria of the wetlands protection act and 310 CMR 10.00, from the most landward edge of the following features: bordering vegetated wetland as defined in 310 CMR 10.55(2); salt marsh as defined in 310 CMR 10.32(2); top of inland bank as defined in 310 CMR 10.54(2); or top of coastal bank as defined in 310 CMR 10.30(2). In the event of disputes concerning landward boundary of resources subject to the Wetlands Protection Act, the boundary shall be as delineated by the municipal Conservation Commission or the Department in accordance with 310 CMR 10.00, as amended, and relevant interpretive guidance documents.

15.212: Depth to Groundwater

The minimum vertical separation distance of the bottom of the stone underlying the soil absorption system above the high ground-water elevation shall be

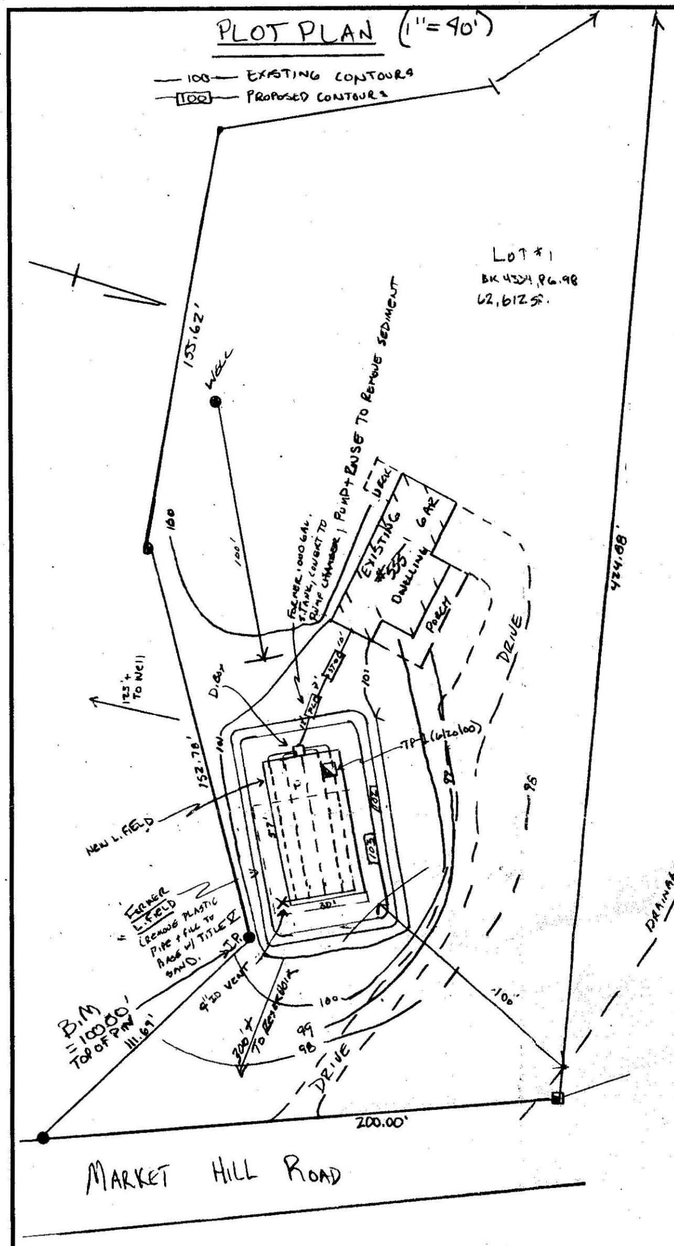
(a) four feet in soils with a recorded percolation rate of more than two minutes per inch;
(b) five feet in soils with a recorded percolation rate of two minutes or less per inch.

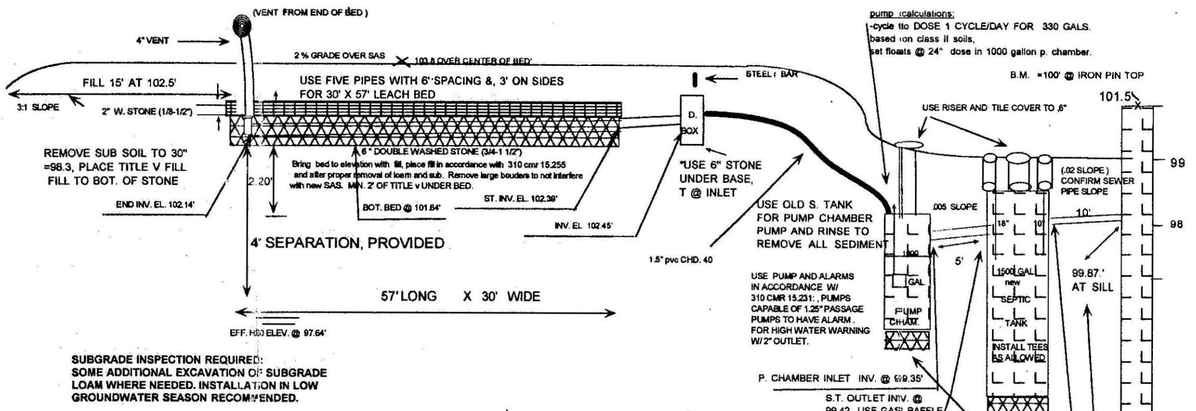
15.213: Construction in Velocity Zones and Floodways

(1) No septic tank or humus/composting toilet shall be constructed in a velocity zone on a coastal beach, barrier beach, or dune, or in a regulatory floodway, except a septic tank that replaces a tank in existence on the site as of March 31, 1995 that has been damaged, removed or destroyed, where placement of the tank outside of the velocity zone or regulatory floodway, either horizontally or vertically, is not feasible. Where reconstruction of a system in existence on March 31, 1995 occurs or reconstruction of a building or buildings is allowed in accordance with the wetlands protection act and 310 CMR 10.00, it shall be presumed to be feasible to elevate the tank if the building is elevated above the velocity zone or regulatory floodway.

(2) No soil absorption system shall be constructed in a velocity zone on a coastal beach, barrier beach, or dune, or in a regulatory floodway, unless

(a) the system is to serve a building or buildings that were in existence on March 31, 1995 or reconstruction of such building or buildings where allowed in accordance with the wetlands protection act and 310 CMR 10.00;
(b) there is no increase in design flow from such building or buildings;
(c) no connection to a public sewer or shared system is available;
(d) the owner or applicant cannot site the system elsewhere;
(e) the septic tank or humus/composting toilet is sited outside of the velocity zone or regulatory floodway, either horizontally or vertically;
(f) the system achieves required separation from high groundwater elevation required by 310 CMR 15.212; and

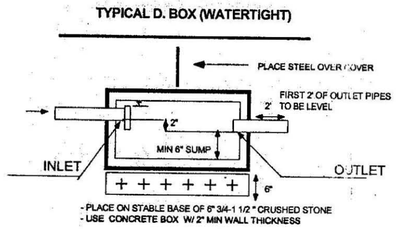




SUBGRADE INSPECTION REQUIRED:
SOME ADDITIONAL EXCAVATION OF SUBGRADE LOAM WHERE NEEDED. INSTALLATION IN LOW GROUNDWATER SEASON RECOMMENDED.

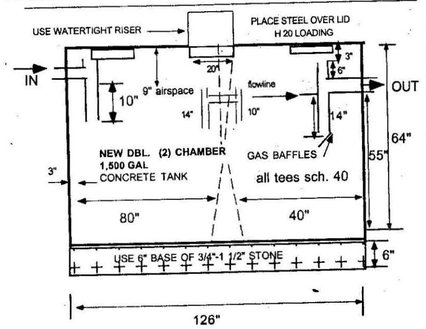
SEPTIC SYSTEM CROSS-SECTION
For 555 MARKET HILL ROAD AMHERST, MA.

TYPICAL D. BOX (WATERTIGHT)

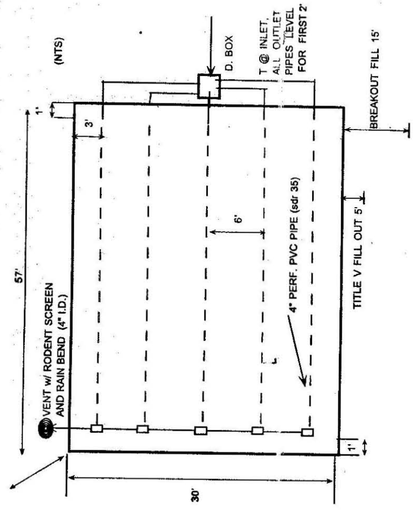


- PLACE ON STABLE BASE OF 6" 3/4-1 1/2 " CRUSHED STONE
- USE CONCRETE BOX W/ 2" MIN WALL THICKNESS

TYPICAL NEW DBL. CHAMBER 1,500 GAL. S. TANK OR EQUIV. (WATERTIGHT)



LEACH FIELD DIAGRAM



DESIGN NOTES:

1. 5BR. x 110 gal/day = 550 gal./day,
2. Use one Leach FIELD 30' wide x 57' LONG W/6" stone below invert.
   Bot. Area: 30' wide x 57" llong = 1710 sf.
   Side Area: NA.
   Tot. Area: 1,710 sf x 0.33 gal.sf. = 564 gal./day.
3. NO GARBAGE DISPOSAL ALLOWED.
4. ALL D. BOX OUTLET PIPES LIEVEL FOR 2', ALL PERF./PIPE MIN. SDR . 35.
5. NO WELLS NOTED WITHIN 100 FEET OF SAS SYSTEM
6. NO WETLANDS NOTED WITHIN 100 FEET OF SAS,
7. PRE & POST CONTOURS NOTED AS NECESSARY.
8. RESERVE AREA: NOT REQUIRED
9. SLOPE CALCS NOT APPLIC .(SEE CONTOURS) 3:1 SLOPE MET.
10. 2% MIN. SLOPE OVER SAS., SLOPE FINAL GRADE AWAY FROM SILL AND L. FIELD FOR RUNOFF
11. USE NEW 1,500 GAL. S. TANK AND OLD S. TANK AS 1000 + GAL PUMP CHAMBERS W/ PROPER FLOATS AND ALARMS PER 310 CMR. 15.231. USE ONE 500 GAL. DOSE/DAY
12. INSTALL TEES IN S. TANK , 10" AT INLET, 14" AT OUTLET AND CHAMBER BAFFLE
13. PERC TEST ATTEMPTEDBY ALWEISS.., ON 6/20/00,
    PERC RATE OF 6,20,27 MIN/IN BY R. FILIOS IN 1989
    -CLASS II SOILS IDENTIFIED. (SiANDY LOAM) FOR LOADING FACTOR
    -CLASS II SOIL, @ 0.33 GAL/SF., BM=100 @ TOP OF IRON PIN.
14. (REMOVE PLASTIC PIPE OF OLD SYSTEM ONLY WHERE INTERFERES WITH NEW SAS) AND REMOVE SUBGRADE TO 30"
15. FOUR FOOT SEPARATION PROVIDED TO ESHGW.
16. USE APPROVED DOUBLE WASHED 3/4 TO 1 1/2 IN. STONE UNDER BED, D. BOX S. TANK AND P.CHAMBER (MIN. 6"). CONTRACTOR TO CONFIRM STONE PROPERLY WASHED WITH BUCKET/SILT H2O TEST.
17. **REDUCTION OF RESERVOIR TO L. FIELD (400') SETBACK, (300' PROVIDED) (310 CMR 15.211 & 15.405 (1) H. REQUIRING LOCAL UPGRADE APPROVAL.**

SEPTIC SYSTEM REPAIR PLAN FOR MARK SHERRY 555 MARKET HILL ROAD AMHERST, MA		
SCALE: NOTED	APPROVED BY: AW	DRAWN BY AW
DATE: 6/23/00		REVISED
COLD SPRING ENVIRONMENTAL, INC.		DRAWING NUMBER 93-293-0719

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