456 6B-93 Flathills Rd.

Sewage Disposal System for

Joshua Burbank
Flathills Road
North Lot Map 6B-93
Amherst, MA

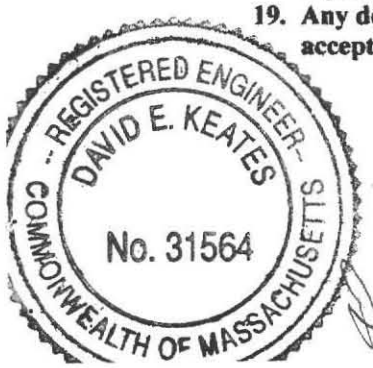
Note: Owner should have tank pumped and effluent filter cleaned every two years or as recommended by septic tank pumper. Board of Health approval of this plan required before a licensed contractor can be retained to install system. Contractor not to start work until approved Disposal Works Permit has been obtained. Contractor is to contact "Dig Safe" to have all existing utilities located and marked prior to any demolition, construction or excavation on the site. It is the responsibility of the contractor to review all the drawings and specifications associated with this project workscope prior to the initiation of construction. Should the contractor find a conflict with the documents relative to the surveyed topography, specifications or applicable codes, it is the contractor's responsibility to notify the engineer of record in writing prior to the start of construction. Failure by the contractor to notify the engineer shall constitute acceptance of full responsibility by the contractor to complete the scope of work as defined by the drawings and in full conformance with local regulations and codes.

David E. Keates 4/28/03

David E. Keates, P.E.
Consulting Civil Engineer
102 Russell Street
Sunderland, MA 01375
Tel: 413-665-7670

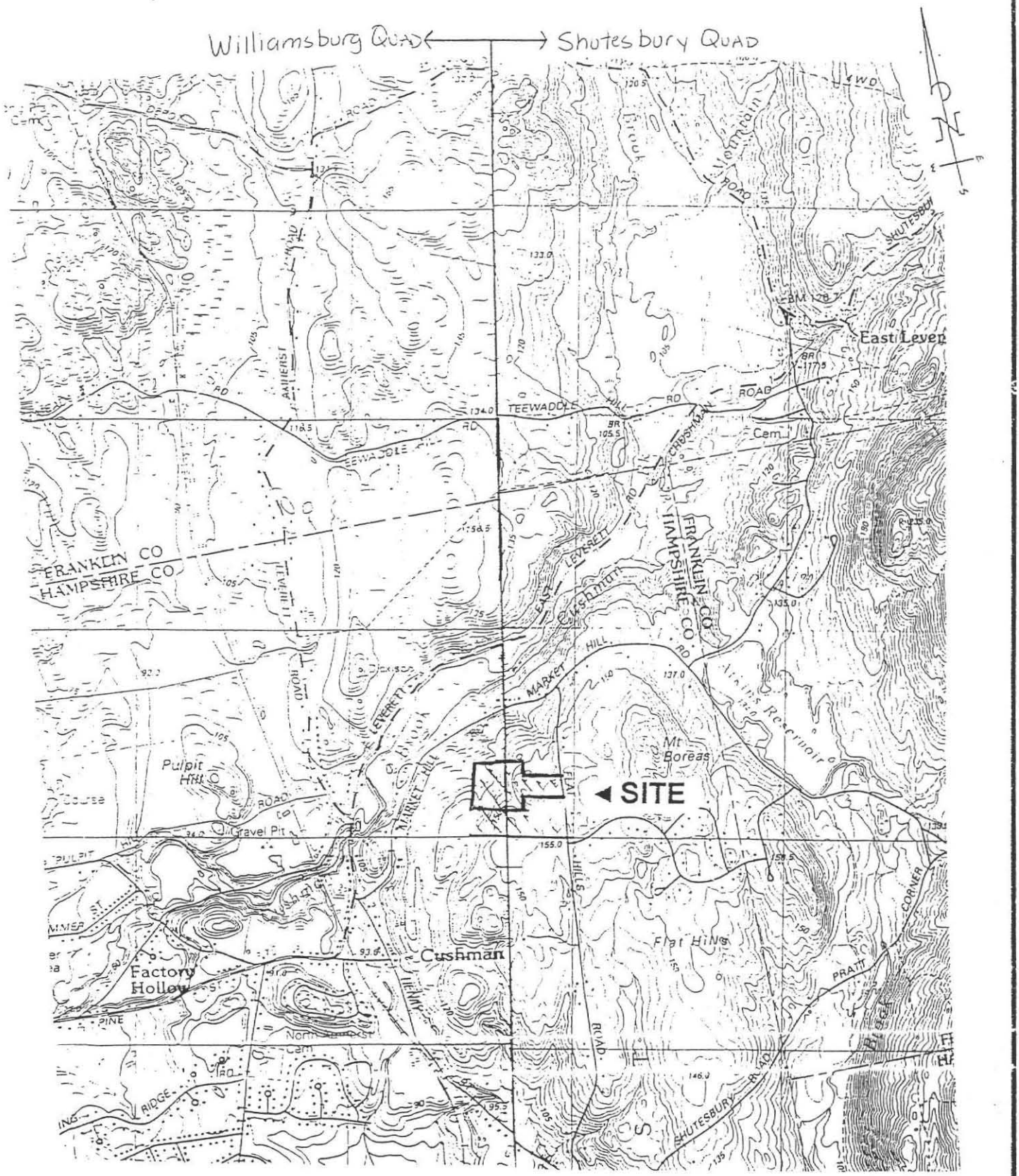
General Notes:

1. **The contractor in the prosecution of this work shall adhere strictly to these plans and the provisions set forth in the State Environmental Code, Title 5, 310 CMR 15.000 and the more current update of this publication. Any deviation from these plans shall require prior approval from the design engineer and the local Board of Health.**
2. **If finish cover over the septic tank or D-box is greater than 6 inches provide access port with cover for future access for maintenance and inspection.**
3. **Should the contractor determine that existing field conditions are other than shown on these plans, contractor shall not commence work but shall immediately notify the owner and designer for direction.**
4. **All vegetation, boulders, organic and other deleterious material shall be removed from the existing ground surface throughout the effluent disposal area including the 15 foot extension and slope embankment prior to placing fill material.**
5. **This system has not been designed for vehicular traffic. System should be protected from any wheel traffic.**
6. **This is not a boundary survey. Property lines are determined by physical evidence in the field as depicted by the owner.**
7. **Seal all joints and openings with hydraulic cement.**
8. **The designer assumes no liability for the operation of design.**
9. **Finish grade to be sloped to drain off top of system at minimum 2 % slope.**
10. **All smeared or compacted surfaces including textural changes shall be raked to a depth of 1 inch or more before placing fill or crushed stone. This is essential in order to protect the natural absorption qualities of the soil by preventing an unrestricted transition between materials.**
11. **Massachusetts law requires that the contractor shall contact "Dig Safe Inc." at 1-800-322-4844 at least three full working days before starting any excavation work in order that all responsible parties can be notified so they can adequately mark out their buried pipe and cable locations.**
12. **Contractor shall have D-box filled with water prior to engineer's final inspection. Water shall be provided to test D-box pipe distribution at time of final inspection.**
13. **Contractor shall have ready for the final inspection the following information:**
    a. **The approved Disposal Works Permit.**
    b. **A dimensioned as-built plan showing two dimensions from permanent points to each of the following: septic tank invert-in and invert-out, all angles points in all piping, D-box, beginning and ends of each leaching trench, cleanouts, ports, the four corners of each leach field and any other items as deemed necessary.**
    c. **As-built elevations of all pipe inverts as shown on profile.**
14. **Property owner is responsible for compliance to local zoning regulations, Conservation Commission and MA Wetlands Protection Act.**
15. **The septic design is not intended to be a site plan.**
16. **The contractor shall notify the Engineer or Land Solutions at 413-665-4777 if the Engineer is not available at least 72 hours in advance for a final inspection.**
17. **If plans specify reuse of existing septic tank, it may be saved if it is officially certified to be structurally sound. Baffles should be replaced with PVC tee baffles and an effluent filter installed on the outlet if they will fit.**
18. **If existing septic tank has not been certified as structurally sound, the installer shall contact the Engineer and/or Land Solutions 72 hours prior to pumping existing septic tank to see what repair work will be involved. Tank shall be replaced if it cannot be adequately repaired.**
19. **Any debris encountered from existing septic system must be disposed of in a manner acceptable to the Board of Health.**



David E. Keates 4/28/03

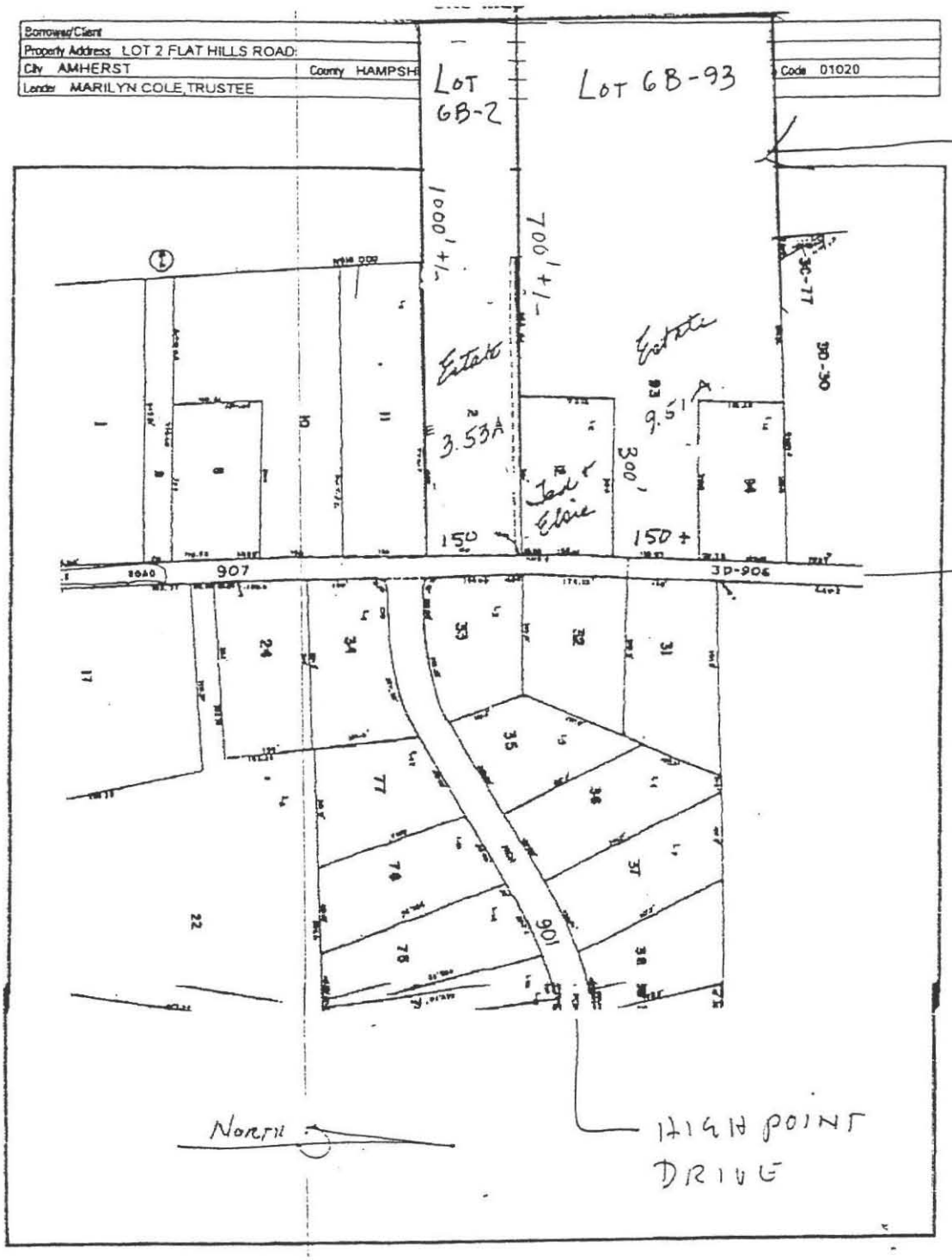
Sewage Disposal System
Joshua Burbank
Flathills Road
North Lot Map 6B-93
Amherst, MA
Sheet 2 of 16



PROJECT # 00-006
USGS MAP: Williamsburg + Shutesbury
SCALE: 1:25,000
DATE: 1990

Sewage Disposal System
Joshua Burbank
Flathills Road
North Lot Map 6B-93
Amherst, MA
Sheet 3 of 16

Land Solutions
2 Amherst Road
Sunderland, MA 01375
Tel: 413 665-4777



PROJECT # 02-009
ASSESSORS MAP: AMHERST
SCALE:
MAP #: 6B
PARCEL #: 93

Sewage Disposal System
Joshua Burbank
Flathills Road
North Lot Map 6B-93
Amherst, MA
Sheet 4 of 16

Land Solutions
2 Amherst Road
Sunderland, MA 01375
Tel: 413 665-4777

LAND SOLUTIONS, TWO AMHERST ROAD, P.O. BOX 121,
SUNDERLAND, MA 01375
VOICE & FAX (413) 665-4777

COMMONWEALTH OF MASSACHUSETTS

Amherst, Massachusetts

Soil Suitability Assessment For On-Site Sewage Disposal

Performed By: **K. Christian Boysen** Certification Date: **Nov. 1994**
Witnessed By: **David Zarozinski, Health Agent & ASE** Performed on: **May 6, 2002**

Location Address:	**Flathills Road**	Owner's Name:	**Joshua Burbank**
Lot #	**North Lot Map 6B-93**	Address:	**P.O. Box 2238 Amherst, MA 01002**
Job #	**02-009**	Telephone:	**(413) 256-5903**

NEW CONSTRUCTION **X** REPAIR Garbage grinder **No**
Number of bedrooms: **4 bedroom design**
Other:

Office Review:
Published Soil Survey Available: **Yes**
Year Published: **1981** Publication Scale: **1:15,840** Soil Map Unit: **Hampshire County Central Part #7**
Drainage class: Soil Limitations:

Surficial geological report Available: **No** **Yes**
Year Published: Publication Scale:
Geological 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) : **Shutesbury**
Wetlands Conservancy Program Map (map unit) **PFOIE**

Current Water Resource Conditions (USGS):
Range Above Normal Normal Below Normal

Other References Reviewed: **USGS**

Sewage Disposal System
Joshua Burbank
Flathills Road
North Lot Map 6B-93
Amherst, MA
Sheet 5 **of** 16

Location Address or Lot No. **North Lot 6B, Amherst, MA 01002**

Name: **Joshua Burbank**
Date: **May 6, 2002**
Job #: **02-009**

ON-SITE REVIEW

Deep Hole No.: **1** Date: **05/06/02** Time **12:00** Weather: **70° Sunny**

Location: *See Site Plan:* **@ center line woods road, ½ way up house knob.**
Land Use: **Woods** Slope **7%** Surface Stones: **Many**

Vegetation **Birches and hemlock and pines**
Landform **Ledge controlled infill**
Position on Landform: **½ way up south side slope**
Distances from:

Open Water Body:	**>100**	feet	Drainage way:	**>100**	feet
Possible Wet Area:	**>100**	feet	Property Line:	**100+/-**	feet (estimated)
Drinking Water Well:	**>200**	feet	Other:		

104.5

DEEP OBSERVATION HOLE LOG

Depth from Surface (inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, stones, Boulders, Consistency, % Gravel)
2-0"	**Oi**	**Fiberous**			
0-6"	**A**	**Fine sandy loam**	**10YR 3/2**	**None**	**Loose, crumb, many fine roots.**
6-16"	**Bw**	**Fine sandy loam**	**10YR 4/6**	**None**	**Massive, friable, 10% subangular gravel.**
16-83"	**C**	**Fine sandy loam**	**2.5Y 5/3**	**•16-32"=<5% 10YR 4/5 • 32-83" = >5% 10YR 4/6**	**Massive, friable, 15% subangular gravel and stones to 24" in diameter.**
83"=	**R**	**Bedrock**			**Wavey boundary**

* MINIMUM TWO HOLES REQUIRED AT EVERY DISPOSAL AREA

Parent Material: **Ablation till** Depth To Bedrock: **83"**

Depth To Groundwater: Standing Water in the hole: **None** Weeping From Face: **None**

Estimated Seasonal High Groundwater: **32"** = 2.7' = @ 101.8

Sewage Disposal System
Joshua Burbank
Flathills Road
North Lot Map 6B-93
Amherst, MA
Sheet 6 of 16

Location Address or Lot No. **North Lot 6B, Amherst, MA 01002**

Name: **Joshua Burbank**
Date: **May 6, 2002**
Job #: **02-009**

ON-SITE REVIEW

Deep Hole No.: **2** Date: **05/06/03** Time: **1:00** Weather: **65° Sunny**

Location: *See Site Plan* **½ way up slope on center line of humps**

Land Use: **Woods** Slope: **7%** Surface Stones: **Many**

Vegetation **Black & white birches, hemlocks and pines**
Landform **Ledge controlled infill**
Position On Landscape (sketch on back) **On South side slope**
Distances from:

Open Water Body:	**>200**	feet	Drainageway:	**100+/-**	feet
Possible Wet Area:	**>75**	feet	Property Line:	**100+/-**	feet estimated
Drinking Water Well:	**>200**	feet	Other:		

DEEP OBSERVATION HOLE LOG

Depth from Surface (inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, stones, Boulders, Consistency, % Gravel)
2-0	**Oi**	**Fiberous root mat**			
0-3"	**A**	**Fine sandy loam**	**10YR 3/2**	**None**	**Loose, crumb, many fine roots.**
3-17"	**Bw**	**Fine sandy loam**	**10YR 4/6**	**None**	**Massive, friable, 10% subangular gravel and stone.**
17-24"	**Bc**	**Fine sandy loam**	**2.5Y 4/4**	**<5% 10YR 4/6**	**Massive, friable, 10% subangular.**
24-80"	**C**	**Fine sandy loam**	**2.5Y 5/3**	**• 17~30" = <5% 10YR 4/6 • 30" += >5% 10YR 4/6**	**Massive, friable, 15% subangular gravel and stones to 24"**
80"=	**R**	**Bedrock**			

103.5

* MINIMUM TWO HOLES REQUIRED AT EVERY DISPOSAL AREA

Parent Material: **Ablation till** Depth To Bedrock: **80"**

Depth To Groundwater: Standing Water in the Hole: **None** Weeping From Face: **None**

Estimated Seasonal High Groundwater: **30"** = 2.5' = 99. 101.0

Sewage Disposal System
Joshua Burbank
Flathills Road
North Lot Map 6B-93
Amherst, MA
Sheet 7 of 16

FORM 12 - PERCOLATION TEST

Location Address or Lot No. **North Lot 6B, Amherst, MA 01002**

Name: **Joshua Burbank**
Date: **May 6, 2002**
Job #: **02-009**

COMMONWEALTH OF MASSACHUSETTS

Amherst, Massachusetts

PERCOLATION TEST		
Date: May 6, 2002	Time:	
Observation hole # :	1	2
Depth of perc:	**48"**	**38"**
Start pre-soak	**1:55**	**2:25**
End pre-soak	**2:10**	**2:40**
Time @ 12"	**2:10**	**2:40**
Time @ 9"	**2:22**	**2:50**
Time @ 6"	**3:06**	**3:17**
Time (9"-6")	**44 Minutes**	**27 minutes**
Rate min/inch	**15 minutes/inch**	**9 minutes/inch**

SITE PASSED X SITE FAILED

Performed By: Christian Boysen

Witnessed By: David Zarozinski, Health Agent & ASE

Comments: Use 20 min/inch for design rate.

Sewage Disposal System
Joshua Burbank
Flathills Road
North Lot Map 6B-93
Amherst, MA
Sheet 8 of 16

Location Address or Lot No. **North Lot 6B, Amherst, MA 01002**

Name: **Joshua Burbank**
Date: **May 6, 2002**
Job #: **02-009**

DETERMINATION FOR SEASONAL HIGH WATER TABLE

METHOD USED:

	Depth observed standing in observation hole						inches
	Depth weeping from side of observation hole						inches
X	Depth to soil mottles	D.H. # 1	**30**	inches	D.H. # 2	**32**	inches
	Ground Water Adjustment						feet

Index well no. 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 in November, 1994 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 May, 02

Sewage Disposal System
Joshua Burbank
Flathills Road
North Lot Map 6B-93
Amherst, MA
Sheet 9 of 16

Gravelless Leaching System Design Using Cultec Recharger 330 or the Infiltrator 3050

Unit to be capable of withstanding H20 loading _____ H10 loading ✓

Structure SINGLE FAMILY HOUSE

Design Flow 110 gal/day/bedroom _____ gallons

Number of bedrooms 4 Other _____

Design flow 440 gallons per day

Garbage grinder to be used _____ yes ✓ no If yes, increase flow by 50%

Revised design flow _____ (1.5) = _____ gallons per day

Increase flow by _____ % per local B.O.H. regulations

Revised design flow _____ X _____ = gallons per day

Percolation rate from percolation tests = 15 & 9 minutes per inch

Design percolation rate chosen = 20 minutes per inch

Effluent loading rate for Class II soils = 0.53 gal/day/sq. ft.

Leaching area required = $\frac{440 \text{ gal./day}}{.53 \text{ gal./day/sq. ft.}}$ = 830.2 sq. ft.

Length required = $\frac{830.2 \text{ sq. ft.}}{8.2 \text{ sq. ft./lin. ft.}}$ = 101.2 lin. Ft.

Number of units = $\frac{101.2 \text{ lin. ft.}}{6.25 \text{ lin. ft./unit}}$ = 16.2 units

Use 3 trench/es 6 units long = 18 units > 16.2 units req'd

Single trench length = 6 units X 6.25 lin. ft. per unit = 37.5 lin. ft.

Actual gal./day provided = $\frac{440 \text{ g.p.d } 18}{16.2}$ = 489 g.p.d.

COMMONWEALTH OF MASSACHUSETTS
DAVID E. KEATES
NO. 31564
REGISTERED PROFESSIONAL ENGINEER

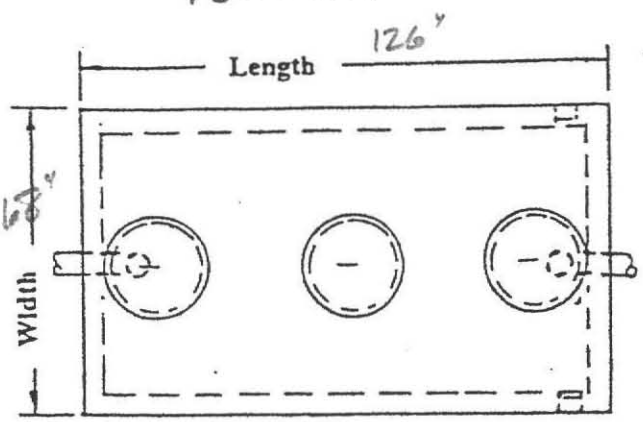
David E. Keates 4/28/03

PROJECT	Sewage Disposal System Joshua Burbank Flathills Road North Lot Map 6B-93 Amherst, MA	Sheet 10 of 16	David E. Keates, P.E. Consulting Civil Engineer 102 Russell Street Sunderland, MA 01375 Tel: 413-665-7670

REGISTERED ENGINEER
DAVID E. KEATES
No. 31564
COMMONWEALTH OF MASSACHUSETTS
David E. Keates
4/28/03

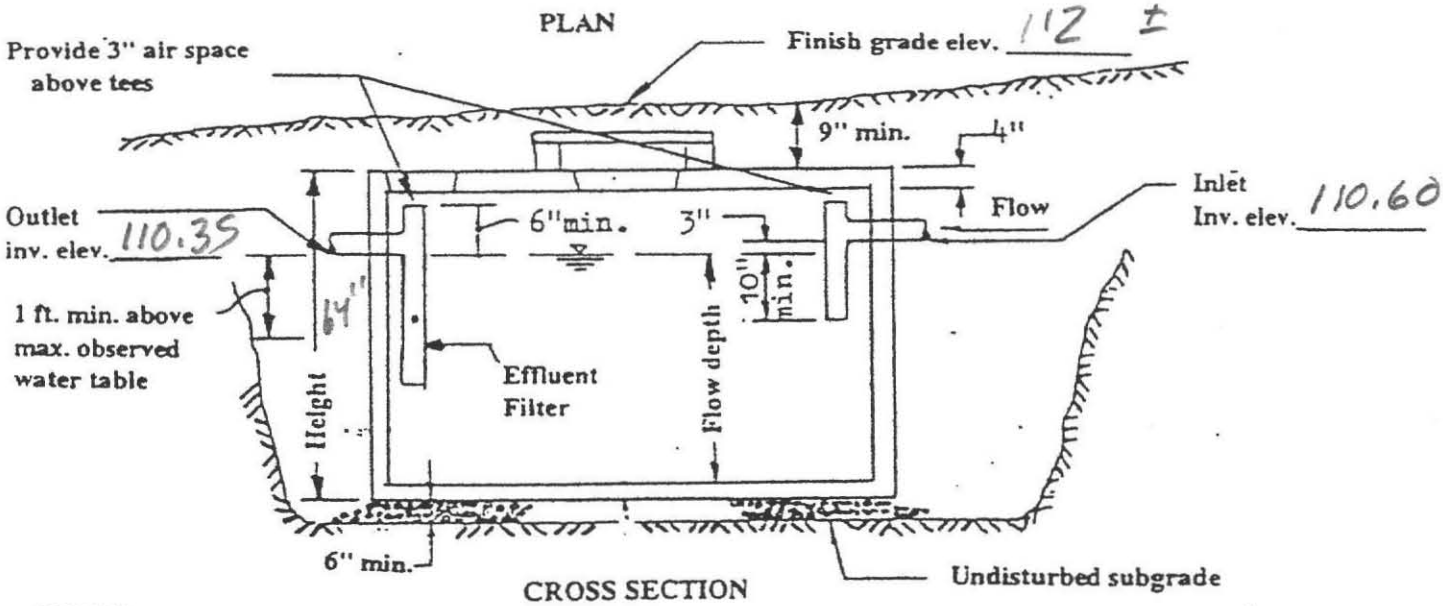
TYPICAL SEPTIC TANK

1500 GAL



PLAN

Liquid depth in septic tank D	Depth of outlet tee below flow line D_1
4'	14"
5'	19"
6'	24"
7'	29"
8'	34"



CROSS SECTION

NOTES:

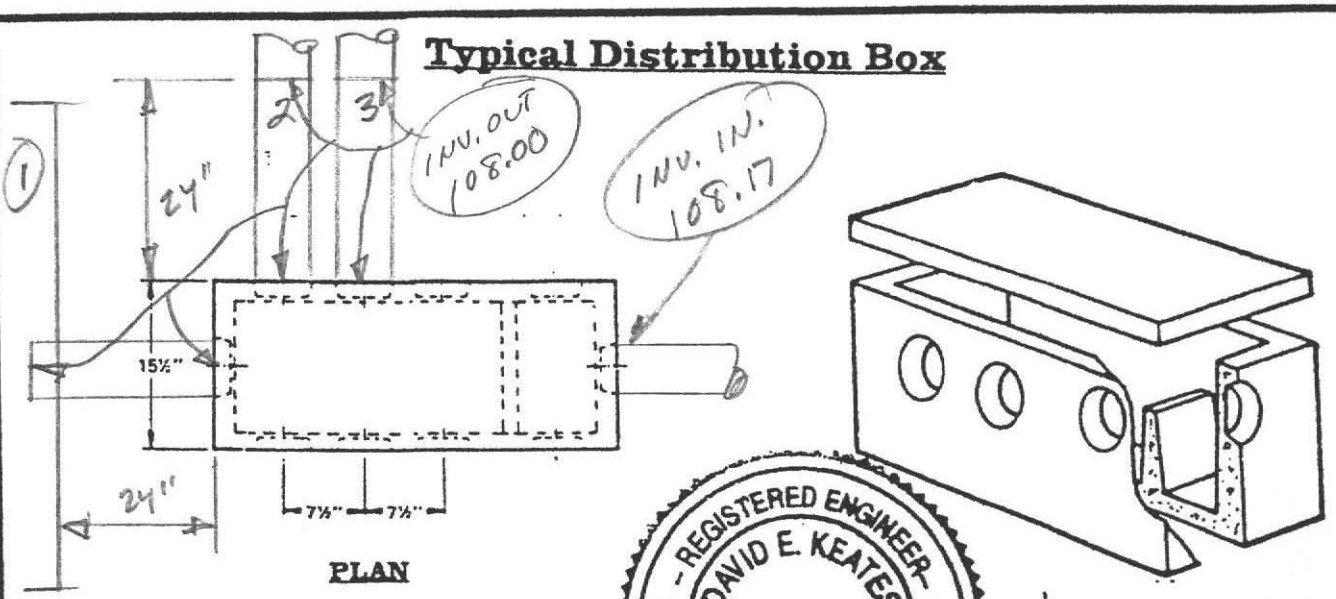
1. Septic tanks should be inspected at least annually and when the total depth of scum and solids exceed 1/3 the depth of the tank, the tank should be pumped.
2. Backfill around the tank shall be placed in even layers on all sides of the tank and in such a manner as to prevent damage to the tank.
3. Tanks shall be installed on a 6 in. min. layer of crushed stone leveled to grade and thoroughly compacted to the satisfaction of the Engineer.
4. Contractor shall provide a written certification that tank conforms to State and Town Board of Health specifications and regulations.
5. Tank and cover shall be capable of withstanding H20 loading. ____ yes ✓ no
   If no, tank shall be capable of withstanding H10 loading.
6. Inlet and outlet tees shall extend to cleanout openings and shall be constructed of cast iron, schedule 40 PVC pipe or cast in place concrete.
7. Rectangular tanks shall have a min. inside length to width ratio of no less than 1.5 to 1.0.
8. At least 3 - 20" dia. manholes with readily removable impermeable covers of durable material shall be provided.
9. Access ports shall be placed at the center and over each inlet and outlet tee and be accessible within 6 inches of final grade.
10. Effluent filter shall be Polylok PL-120, Biotube or approved equal available at Underground Supply, Inc., Hatfield, MA

PROJECT
Sewage Disposal System
Joshua Burbank
Flathills Road
North Lot Map 6B-93
Amherst, MA

Sheet 11 of 16

David E. Keates, P.E.
Consulting Civil Engineer
102 Russell Street
Sunderland, MA 01375

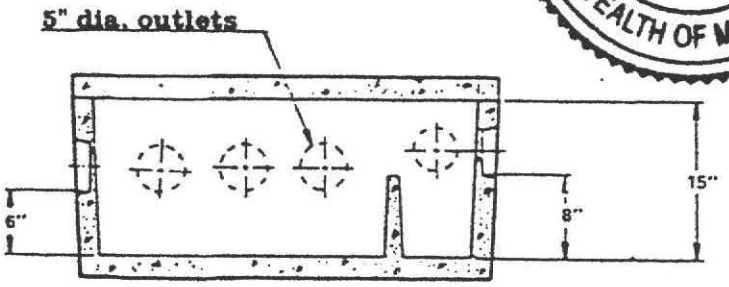
Typical Distribution Box



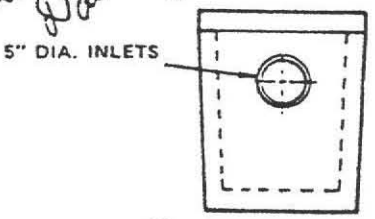
PLAN

REGISTERED ENGINEER - DAVID E. KEATES - No. 31564 - COMMONWEALTH OF MASSACHUSETTS

David E. Keates 4/28/03



SECTION



ELEVATION

Notes:

1. **The minimum wall thickness for reinforced concrete shall be two inches.**
2. **The invert elevations of all outlets shall be equal to each other and located at least two inches below the invert elevation of the inlet.**
3. **Cover of distribution box to be watertight.**
4. **There shall be a minimum sump of six inches as measured below the outlet invert elevation.**
5. **The minimum inside dimension of the distribution box, regardless of material, shall be 12 inches.**
6. **When the soil absorption system is to be dosed or when the slope of the inlet pipe exceeds 0.08 feet per foot, an inlet tee, baffle or splash plate extending to one inch above the outlet invert elevation shall be provided to dissipate the velocity of the influent.**
7. **Distribution box shall be installed on a level stable base that will not settle.**
8. **Distribution box to be placed on a 6 inch layer of compacted 3/4"-1 1/2" stone.**
9. **Distribution box outlets to be laid level for a distance of 2 feet, then sloped to leaching system.**
10. **Distribution box shall be capable of withstanding H-20 loading. ___yes ✓no**
11. **To insure proper distribution, all lines must discharge equally. Testing will be done with water, prior to final inspection and/or at the final inspection in presence of the engineer.**

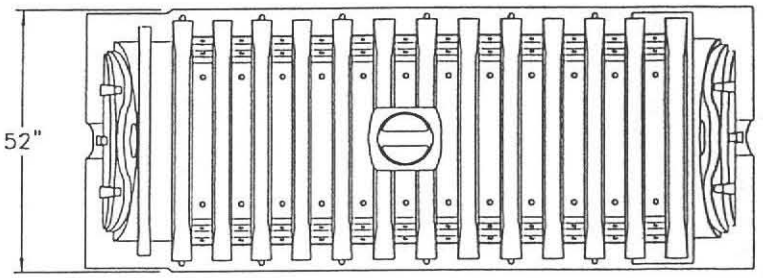
PROJECT	Sewage Disposal System Joshua Burbank Flathills Road North Lot Map 6B-93 Amherst, MA	Sheet 12 of 16	David E. Keates, P.E. Consulting Civil Engineer 102 Russell Street Sunderland, MA 01375

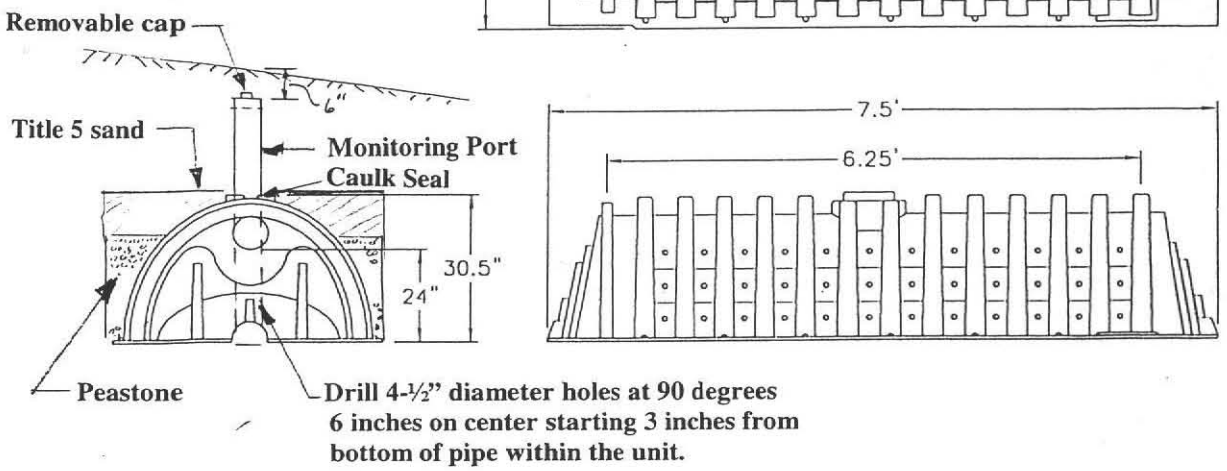
Cultec Recharger 330 or Infiltrator 3050

H10 Loading ✓ H20 Loading ____

COMMONWEALTH OF MASSACHUSETTS
DAVID E. KEATES
NO. 31564
REGISTERED PROFESSIONAL ENGINEER

David E. Keates
4/28/03

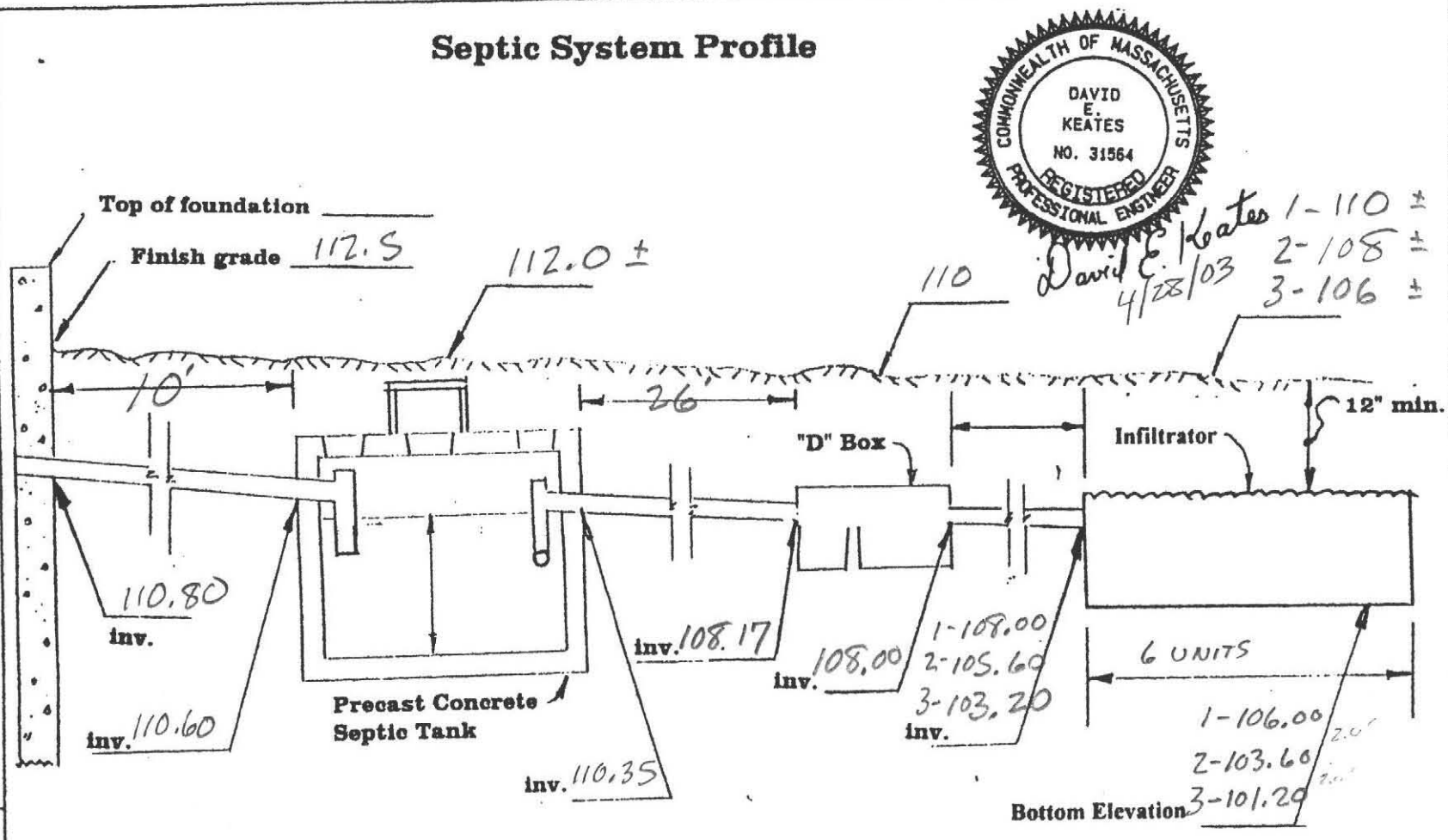




Note: 1. Use filter cloth around units as recommended by manufacturer and backfill to top of units with Title 5 sand or backfill to 3 inches above top row of holes with peastone and remainder to top of units with Title 5 sand.
2. Install monitoring port in last unit in each row.

PROJECT	Sewage Disposal System Joshua Burbank Flathills Road North Lot Map 6B-93 Amherst, MA	Sheet 13 of 16	David E. Keates, P.E. Consulting Civil Engineer 102 Russell Street Sunderland, MA 01375 Tel: 413-665-7670

Septic System Profile



COMMONWEALTH OF MASSACHUSETTS
DAVID E. KEATES
NO. 31564
REGISTERED PROFESSIONAL ENGINEER

David E. Keates 4/28/03

NOTES:

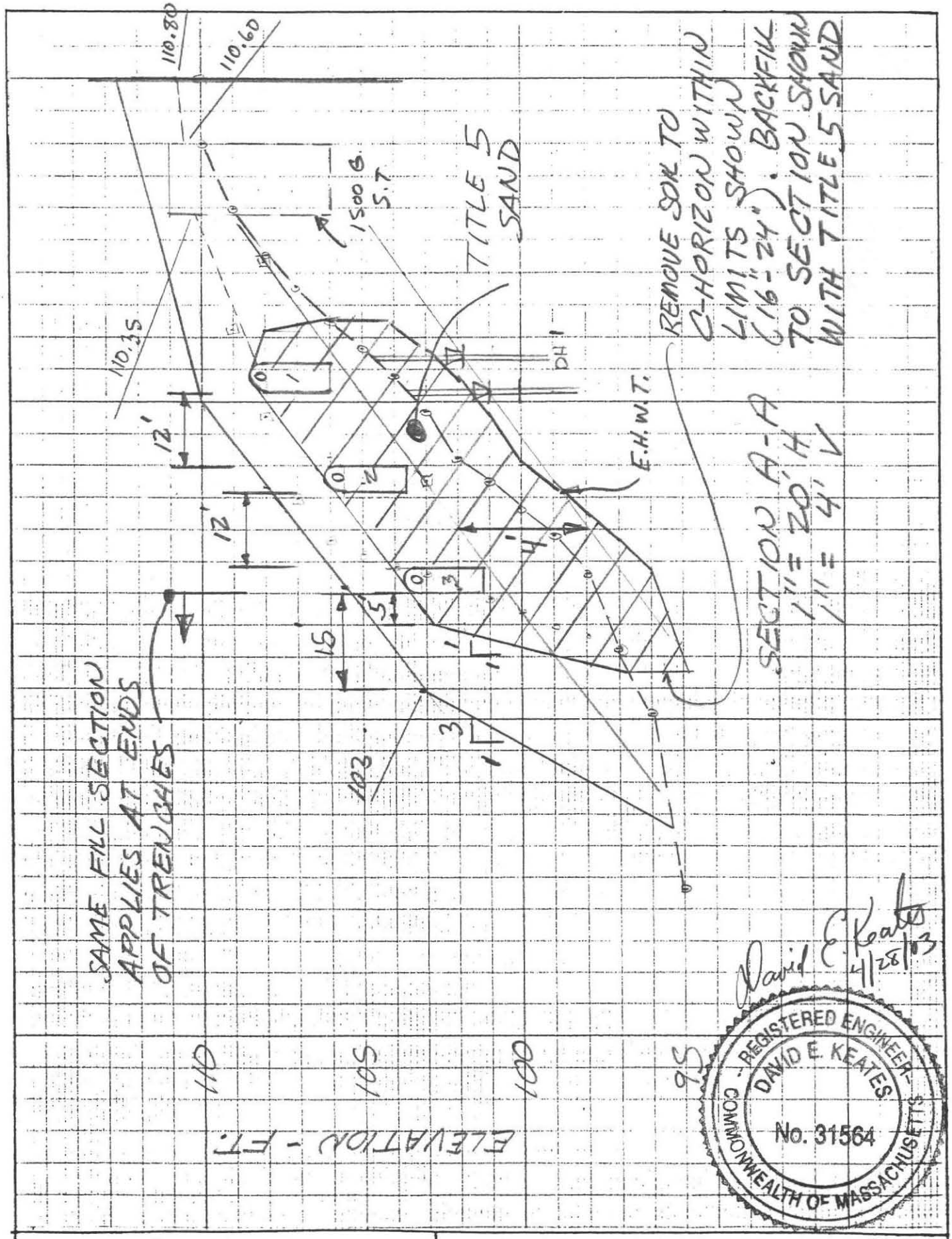
1. The grade above and adjacent to leaching trench shall slope at least 2.0% to prevent accumulation of surface water.
2. The bottom of each leaching trench shall be level at the elevation specified.
3. Pipe from foundation wall to septic tank shall be schedule 40 PVC or equivalent and have a minimum grade of 1/4" per foot.
4. Pipe from septic tank to "D" box shall be schedule 40 PVC or equivalent and have a minimum grade of 1/8" per foot.
5. All piping shall be 4" diameter.

PROJECT

Sewage Disposal System
Joshua Burbank
Flathills Road
North Lot Map 6B-93
Amherst, MA

Sheet 14 of 16

David E. Keates, P.E.
Consulting Civil Engineer
102 Russell Street
Sunderland, MA 01375
Tel: 413-665-7670



PROJECT	**Sewage Disposal System** **Joshua Burbank** **Flathills Road** **North Lot Map 6B-93** **Amherst, MA** **Sheet 15 of 16**

DAVID E. KEATES, P.E.
CONSULTING CIVIL ENGINEER
102 RUSSELL STREET
SUNDERLAND, MASSACHUSETTS 01375
Tel. 413-665-7670

NOTE: REMOVE ALL MATERIAL PLACED OVER LEACHING AREA IN ORDER TO SET HOUSE. REMOVE SOIL IN LEACHING AREA PER SECTION A-A

TBM AA
TOP OF NAIL IN 18" WHITE PINE
ELEV. = 107.73'

OLD PROPOSED HOUSE LOCATION

EXISTING FOUNDATION

INV. @ WALL 110.80

1500 GAL S.T

D-BOX

RES. 1
RES. 2
RES. 3

DH 1

DH 2

100' JURISDICTION BUFFER ZONE

35' MIN NO DISTURB ZONE

DRIVE

WELL

T.B.M # 7
TOP OF NAIL IN 20" PINE
EL = 106.28'

TBM BB
TOP OF NAIL IN 8" BIRCH
ELEV. = 96.27'

TBM CC
TOP OF NAIL IN 18" WHITE PINE
ELEV. = 102.79'

FINISH GRADE CONTOUR

ORIGINAL GROUND CONTOUR

SCALE: 1"=20'

REGISTERED ENGINEER
DAVID E. KEATES
No. 31564
COMMONWEALTH OF MASSACHUSETTS

David E. Keates
4/28/03

LAND SOLUTIONS
TWO AMHERST ROAD
SUNDERLAND MA. 01375
413-665-4777

Sheet 16 of 16

SEPTIC PLAN DESIGN
FOR:
JOSHUA BURBANK
AT:
FLATHILLS ROAD, AMHERST, MA 01002

JOB #	02-009
DATE	04/01/03
SCALE	1" = 20'
DRAWN BY	PKH & WDA
REVISION	

175-66
P&- 5017

FORM 11: Soil Evaluation Form NO: _____ 6 B Parcel T2 ?

Commonwealth of Massachusetts
Town of Amherst

Soil Suitability Assessment : On-Site Sewage Disposal

Performed By: Charmyn Boyson Date: 4/4/02
Witnessed By: _____

Location Address of:
Lot #

Owner's Name: Josh Burbank
Address of: PO Box 2238 Amherst 01002
Telephone:

New Construction ☑ Repair ☐

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 Reference Reviewed:

Determination: Seasonal High Water Table

Methods Used:

☐ Depth observed standing in observation hole _____ inches
☐ Depth weeping from side of observation hole _____ inches
☐ Depth to soil mottles _____ inches
☐ Ground water adjustment _____ feet

Index Well No. _____ Reading Date _____ Index Well Level _____
Adjustment factor _____ Adjusted ground water level _____

Depth of Naturally Occurring Previous Material

Does at least four feed of naturally occurring previous materials exist in all areas observed throughout the area proposed for this soil absorption system? _____

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

Certification

I certify that on _____ *(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 _____

MAP 6B Parcel 93

On-Site Review

Deep Hole Number 1 Date: 4/6/02 Time 3:00
Weather Sunny
Location (identify on site plan) 1/2 South Side Slope
Land Use Woods Slope (%) 7
Surface Stone many
Vegetation: Hemlocks / Pines / Birches

Landform: Ledge Control

Position on Landscape (sketch on back)
Distances from:
Open Water Body 200+ feet
Possible Wet Ares 200 feet
Drinking Water Well 200 feet
Drainageway 100' feet
Property Line 100 feet
Other

DEEP OBSERVATION HOLE LOG

depth from surface (inches)	soil horizon	soil texture (USDA)	soil color (Munsel)	soil mottling	other (structure, stones, boulders) Consistency, % gravel
2	OI	Fibers			
0					
6	A	FSL	10YR 5/2	—	Loose Crumb many fine Roots
16	Bw	FSL	10YR 4/6	32"	
83	C	FSL	2.5Y 5/3	less than 10% 4/5 32	massive 10% Subangle Gravel
R				83 Gravelly 10YR 5/1	massive Ledge 10% Subangle Gravel

Parent Material (geologic) AB Till
Depth to Bedrock 83
Depth to Groundwater :
Standing Water in the Hole —
Weeping from Pit Face —
Estimated Seasonal High Water 32"

On-Site Review

Deep Hole Number 2 Date: 4/6/02 Time 3:00
Weather Sunny
Location (identify on site plan) 1/2 up Slope Cattails
Land Use Woods Slope (%) 7%
Surface Stone many
Vegetation: Hemlock Pines / Birch

Landform: Ledge Control

Position on Landscape (sketch on back) South Side - Slope
Distances from:
Open Water Body 200 feet
Possible Wet Ares 75 feet
Drinking Water Well 300 feet
Drainageway 400' feet
Property Line 200' feet
Other

DEEP OBSERVATION HOLE LOG

depth from surface (inches)	soil horizon	soil texture (USDA)	soil color (Munsel)	soil mottling	other (structure, stones, boulders) Consistency, % gravel
2	OI	Fibers	—	—	
0					Loose Crumb many fine Roots
3	A	FSL	10YR 3/2	—	
17	Bw	FSL	10YR 4/6	30"	massive Firm 10% gravel
24	Bc	FSL	2.5Y 4/4	less than 5%	
80	C	FSL	2.5Y 5/3	10YR 4/6 Gravelly 5%	massive 10% Subangle Gravel 5% Cobbles 15% gravel

Parent Material (geologic) AB Till
Depth to Bedrock 80
Depth to Groundwater :
Standing Water in the Hole —
Weeping from Pit Face —
Estimated Seasonal High Water 30"

Location to be Sited by Chairman

400 ± Off Road

Flat Hills Road

FORM 12: Percolation Test
Location Adrress or Lot # Flat Hills Rd

Commonwealth of Massachusetts
Town of

PERCOLATION TEST *		
DATE: 4/6/02		TIME:
Observation Hole #	~~#1~~	(2)
Depth of Perc	48	38"
Start Pre-soak	1:55	2:23
End Pre-soak	2:10	2:40
Time at 12"	2:10	2:40
Time at 9"	2:22	2:50
Time at 6"	3:06	3:17
Time (9"-6")	~~48~~	27
Rate Min./Inch	15	9

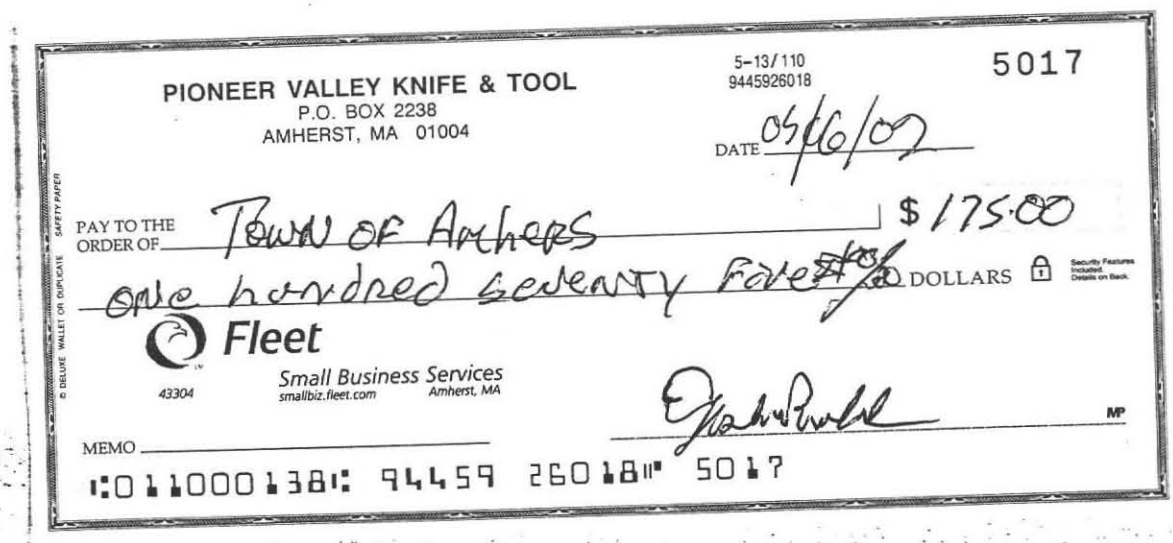
**Minimum of one percolation test must be performed in both the primary area and reserve area.*

Site Passed ☑ Site failed ☐

Performed by Charles Boysen

Witnessed by David Segrave

Comments: Dec 8-9 20



PIONEER VALLEY KNIFE & TOOL
P.O. BOX 2238
AMHERST, MA 01004

5-13/110
9445926018

5017

DATE 05/16/07

PAY TO THE ORDER OF Town of Amhers $175.00

one hundred seventy five 00/100 DOLLARS

Security Features Included. Details on Back.

Fleet

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MEMO

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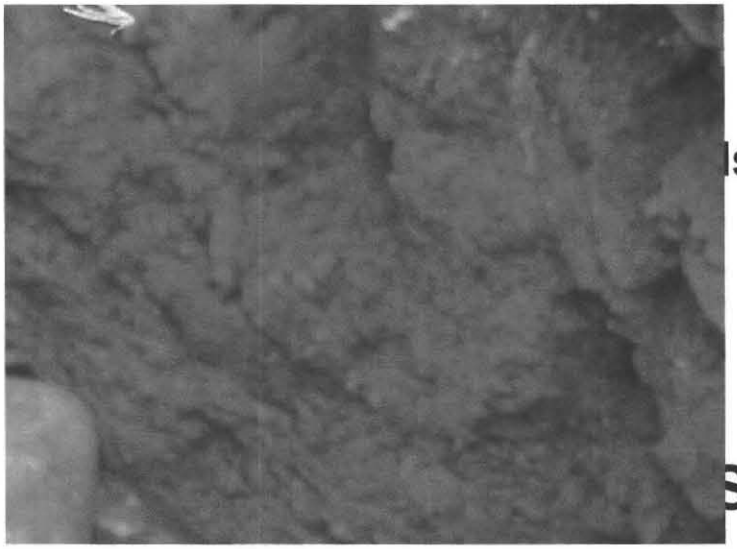

Flat Hills Rd. # 1






Flat Hills Rd #2