H_2O Engineering Consulting Associates, Inc.

400 MAIN ST. WALTHAM MA 02452

(Tel) 781-209-5800 *(Fax) 781-209-5799* *(E-mail) h2oeng273@aol.com*

Jan 4, 2011

Dec. 10, 2010

Sherrill Gould, Chair
Zoning Board of Appeals
Town of Littleton
P. O. Box 1305
Littleton, MA 01460

RE: Drainage Review for 116 Goldsmith Street

Dear Members of Zoning Board of Appeals:

H2O engineering has received the responds to our comments dated Nov. 9, 2010 from Scott Hayes vs e-mail dated Dec. 6, 2010. In this e-mail, it include soil logs, percolation tests and a letter to dress our comments in our letter dated Nov. 9, 2010. I also made another site visit to locate the soil testing site. The following are our comments related to drainage and ground water issue:

1. Scott Hayes does answer our question about the street runoff may flow to driveway of two of the proposed houses. As long as the roadway be constructed with gutter flow along the travelled way in such a way to prevent runoff flow toward driveway of lots 3 and 4, it is acceptable.
2. The on site soil at the proposed leaching field, based on the percolation tests, has percolation rates varied from 4 to 13 minutes per inch. It is fine for leaching field. There will be some mound effect if all houses were had their peak wastewater discharge at same time. The proposed leaching field would have a finished grade at 312 ft. elevation which is lower than most of the existing home yard ground, except for #120 of Goldsmith Street and possible for the back yard of the Edgar P Romilly, Trust building at Tajlea Street.
3. Based on the soil data, the possible high groundwater level may be only 2 to 3 feet below the existing grades based on the mottles level at test pits. But the ground water flow direction should from Northwest toward Northeast as the ground surface slope is, unless there were some ledges under the ground surface. Based on my observation and my experience, this area should not have ledges near the ground surface. Therefore the "mound effect" would not impact the abutters. For #120 of Goldsmith, it may have some impact depending on where the leaching field of #120 of Goldsmith is located.

The proposed drainage control system is acceptable with the modification that double grates will be used at the catchbasin. Should you have any question, please call us at 781 209 5800. If the Board would like me to come to the meeting, please let me know a day earlier.

Sincerely,

T. T. Chiang

Edward T. T. Chiang, Ph. D., P. E.
President

Scott Hayes

From: Scott Hayes [scott@foresite1.com]
Sent: Monday, December 06, 2010 10:43 AM
To: 'h2oeng275@aol.com'
Subject: FW: The Homes at Kimloch Farm, Littleton
Attachments: 1269_DTH__PT_DATA.pdf; 1269_SOIL_BORING_LOG.pdf; 1269-40B.pdf

From: Scott Hayes [mailto:scott@foresite1.com]
Sent: Monday, December 06, 2010 10:36 AM
To: 'h20eng275@aol.com'
Subject: The Homes at Kimloch Farm, Littleton

Dr. Chang,

It appears I had your email address incorrect. I apologize for the delay in getting these materials to you.

Attached is the information we discussed on the phone last week. Deep test hole and percolation test data, soil boring log (soil boring was done in the middle of the proposed sewage disposal system), and a PDF of the site plan with deep test hole and percolation test locations added.

With respect to the comments on the access road:

The roadway is superelevated east to west and there is a cape cod berm proposed along the pavement edge. A note should be added to the plan that states the cape cod berm should continue across the driveway cuts for Lots 3 & 4 or the driveways should be graded with a lip to maintain the gutter flow along the travelled way.

Also, we concur that a double grate catch basin is appropriate where a single grate catch basin is currently proposed at the end of southwest end of the travelled way in front of Lot 4.

If you have any questions regarding these materials or would like to discuss anything in greater detail please feel free to contact me directly.

Best Regards,

Scott Hayes, PE
FORESITE Engineering Associates, Inc.
16 Gleasondale Road, Suite 1-1
Stow, Massachusetts 01775

Phone: (978) 461-2350
Fax: (978) 841-4102

Email: scott@foresite1.com
Web: www.foresite1.com

H_2O Engineering Consulting Associates, Inc.

400 MAIN ST. WALTHAM MA 02452

(Tel) 781-209-5800 (Fax) 781-209-5799 (E-mail) h2oeng275@aol.com

Nov. 9, 2010

Sherrill Gould, Chair
Zoning Board of Appeals
Town of Littleton
P.O. Box 1305
Littleton, MA 01460

RE: Drainage Review for 116 Goldsmith Street

Dear Members of Zoning Board of Appeals:

As directed, H2O Engineering Consulting Associates, Inc. has received and reviewed the following documents related the the above referenced project:

1. Letter from Residents on Tajlea Road, Kimloch Street and Goldsmith Street.
2. MESA Project Review Description "The Homes at Kimloch Farm" Littleton, MA; by Carr Research Lab, Inc.; Dated April 2, 2010.
3. Plans, The Homes At Kimloch Farm; Total 7 sheets; Prepared by Foresite Engineering; Dated Dec. 12, 2009.
4. Stormwater Management Report; Prepared by Foresite Engineering; Dated Dec. 12, 2009.
5. Summary of Other Information Booklet, Kimloch Farms LLC, 116 Goldsmith Street, Littleton, MA.

The following are our findings and comments.

1. As for the drainage analysis and the stormwater management report, it is met the requirement and is acceptable.
2. There is no roadway profile and no drain lines profile. Although, the drain lines' slopes and inverts were showing on the Erosion & Sediment Control plan, it is difficult for reviewer to check it due to that the scale of reduced size of plan would not be accurate.
3. Using "Superelevated Roadway Cross Section" for roadway design is fine. Since there is no roadway profile, it is difficulty to tell which side of the roadway is higher. For the current design, if east side of the roadway were higher than the west side, there would be a problem to lots 3 and 4 where the driveway is lower than roadway. If west side of the roadway is higher, then the catchbasin is at wrong location. The designer should clear this issue.
4. One catchbasin is not adequate to collect over 200 feet long roadway plus some land runoff. Double grates may need.
5. There is no on site soil test information in the submittal. Please provide at least four deep holes soil information. Groundwater level is important for the estimate of "mound effect" due to using of common leaching field on Parcel A for all

proposed houses. This is Board of Health issue, but due to that if groundwater is high, this mound effect may have some impact to neighbor's septic system. If groundwater is far below the ground surface, the impact is not an issue any more.

6. Neighbors worry about the subsurface wastewater treatment facility may be failure in the future and the association could not afford to fix it. In general, when an association is formed, legally they will be able to fix this problem. There are other means to put a safety on the leaching system design, but it has to be agreeable by the developer.

Should you have any question or should you like to meet with me to discuss those comments, I will be glad to meet with your board at your convenient. Thanks.

Very truly yours,

T. T. Chiang

Edward T. T. Chiang, Ph.D., P.E.
President

TEST BORING LOG

SHEET 1

Soil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391	**Westchester Company** **Site: 120 Goldsmith Street** **Littleton, MA**	BORING B-1 PROJECT NO. 09-0727 DATE: July 28, 2009

Ground Elevation:
Date Started: July 27, 2009
Date Finished: July 27, 2009
Driller: MC
Soil Engineer/Geologist:

GROUNDWATER OBSERVATIONS			
DATE	DEPTH	CASING	STABILIZATION

Depth Ft.	Casing bl/ft	Sample No.	Pen/Rec	Sample Depth	Blows/6"	Strata	Visual Identification of Soil and / or Rock Sample
						2"	Topsoil
1		1		0"-2'0"	6-6-8-6	2'0"	Dry, medium dense, fine to medium sand, some inorganic silt, trace fine to medium gravel, trace root matter (subsoil).
5		2		5'0"-7'0"	6-6-7-6		Dry to wet, fine to medium sand, some inorganic silt, trace fine to medium gravel, cobbles.
10		3		10'0"-12'0"	6-8-9-8	13'0"	
15		4		15'0"-17'0"	19-31-34-42		Wet, very dense, fine to medium sand, some inorganic silt, trace fine gravel, cobbles and boulders.
20		5		20'0"-22'0"	24-29-37-35	19'0"	
25		6		25'0"-27'0"	18-21-30-30		Dry, very dense, fine to medium sand and fine to coarse gravel, some inorganic silt, trace clay lenses, cobbles and boulders.
30		7		30'0"-32'0"	25-25-40-37	32'0"	
35							End of boring at 32'0". Water encountered at 9'0".
39							

Notes: Hollow Stem Auger Size - 4-1/4"

			CASING	SAMPLE	CORE TYPE
Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose,	Trace	0 to 10%			
10 -30 M Dense, 30 -50 Dense, 50+ V Dense.	Little	10 to 20%	ID SIZE (IN)	SS	
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M Stiff	Some	20 to 35%	HAMMER WGT (LB)	140 lb.	
8 -15 Stiff, 15 -30 V. Stiff, 30 + Hard.	And	35% to 50%	HAMMER FALL (IN)	30"	

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program

120 Goldsmith Street, Littleton
Site Address or Map/Lot Number

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

A. Facility Information

1. Facility Information

On the Rail Farm c/o Westchester Corp.
Owner Name

P.O. Box 672
Street Address

Map/Lot

Acton
City

MA
State

01720
Zip Code

B. Site Information

1. (Check one) New Construction ☒ Upgrade ☐ Repair ☐

2. Published Soil Survey available? Yes ☒ No ☐ If yes: 1995 Year Published; 1:25000 Publication Scale; 267 Soil Map Unit

Paxton Urban
Soil Name

Slow permeability in the substratum, slope and stoniness.
Soil limitations

3. Surficial Geological Report available? Yes ☐ No ☐ If yes: Year Published; Publication Scale; Map Unit

Geologic Material

Landform

4. Flood Rate Insurance Map:

Above the 500 year flood boundary? Yes ☒ No ☐ Within the 100 year flood boundary? Yes ☐ No ☒

Within the 500 year flood boundary? Yes ☐ No ☒ Within a Velocity Zone? Yes ☐ No ☒

5. Wetland Area: National Wetland Inventory Map — U (Map Unit); Upland (Name)

Wetlands Conservancy Program Map — Map Unit; Name

6. Current Water Resource Conditions (USGS) November 2005 (Month/Year) Range: Above Normal ☒ Normal ☐ Below Normal ☐

7. Other references reviewed: USGS Quadrangle

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program

120 Goldsmith Street, Littleton
Site Address or Map/Lot Number

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review

(minimum of two holes required at every proposed disposal area)

Deep Observation Hole A: 12/06/05 (Date) 11:00 (Time) Cloudy 30's (Weather)

1. Deep Observation Hole Logs

   Deep Hole Number 1205-1 Ground Elevation at Surface of Hole -

   Location (Identify on Plan) Old horse corral

2. Land Use: Vacant Lot (e.g. woodland, agricultural field, vacant lot, etc.) None (Surface Stones) 0-2% (Slope (%))

   None (Vegetation) Ground moraine (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body - feet Drainage Way - feet Possible Wet Area - feet

   Property Line >50' feet Drinking Water Well - feet Other -

4. Parent Material: Ablation Till Unsuitable Materials Present: Yes ☒ No ☐

   If Yes: Disturbed Soil ☐ Fill Material ☒ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock ☐

5. Groundwater Observed: Yes ☒ No ☐

   If Yes: Depth Weeping from Pit 48" Depth Standing Water in Hole 98"

   Estimated Depth to High Groundwater: 36" inches _____ elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program

120 Goldsmith Street, Littleton
Site Address or Map/Lot Number

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole A: Deep Hole Number: 1205-1

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-36"	Fill	-	———	———	———	-	———	———	———	-	———
36-38"	Ab	10YR3/2	———	———	———	SL	———	———	———	Weak, sub angular blocky	Friable
38-50"	Bb	10YR5/8	36"	10YR5/8; 2.5Y5/1	>5%	SL	———	———	———	None, massive	Friable
50-120"	C	2.5Y5/4	———	———	———	LS	10	5	———	None, massive	Very friable

Additional Notes Weeping @48', standing water @ 98", no refusal

ESHW @ 36"

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Cont.)

Deep Observation Hole B: 12/06/05 (Date) 11:00 a.m. (Time) Cloudy 30's (Weather)

1. Deep Observation Hole Logs

   Deep Hole Number 1205-2 Ground Elevation at Surface of Hole -

   Location (Identify on Plan) Old horse coral

2. Land Use: Vacant Lot (e.g. woodland, agricultural field, vacant lot, etc.) None (Surface Stones) 0-2% (Slope (%))

   None (Vegetation) Ground moraine (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body -___ feet Drainage Way -___ feet Possible Wet Area -___ feet

   Property Line >50' feet Drinking Water Well -___ feet Other -___

4. Parent Material: Ablation till Unsuitable Materials Present: Yes ☒ No ☐

   If Yes: Disturbed Soil ☐ Fill Material ☒ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock ☐

5. Groundwater Observed: Yes ☒ No ☐

   If Yes: Depth Weeping from Pit 60" Depth Standing Water in Hole _____

   Estimated Depth to High Groundwater: 21" inches _____ elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program

120 Goldsmith Street, Littleton
Site Address or Map/Lot Number

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole B: Deep Hole Number: 1205-2

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-12"	Fill	____	____	____	____	____	____	____	____	____	____
12-16"	Ab	10YR3/2	____	____	____	SL	____	____	____	Weak, sub angular blocky	Friable
16-28"	B	10YR5/8	21"	10YR5/8; 2.5Y5/1	>5%	SL	____	____	____	None, massive	Friable
28-120"	C	2.5Y5/4	____	____	____	LS	10	5	____	None, massive	Very friable

Additional Notes Weeping @ 60", no standing, no refusal

ESHW @ 21"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program

120 Goldsmith Street, Littleton
Site Address or Map/Lot Number

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method used:

☐	Depth observed standing water in observation hole	A. _____ inches	B. _____ inches
☐	Depth weeping from side of observation hole	A. _____ inches	B. _____ inches
☒	Depth to soil redoximorphic features (mottles)	A. 36" inches	B. 21" inches
☐	Groundwater adjustment (USGS methodology)	A. _____ inches	B. _____ inches

2. Index Well Number _____ Reading Date _____ Index Well Level _____

Adjustment Factor _____ Adjusted Groundwater Level _____

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

   a. 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 ☒ No ☐

   b. If yes, at what depth was it observed? Upper boundary: 50" inches Lower boundary: 120" inches

F. Certification

I certify that 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.

_____ 12/07/05
Signature of Soil Evaluator Date

Jonathan Markey July 1995
Typed or Printed Name of Soil Evaluator *Date of Soil Evaluator Exam

Ira Grossman Nashoba Board of Health
Name of Board of Health Witness Board of Health

Note: This form must be submitted to the approving authority with Percolation Test Form 12

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program

120 Goldsmith Street, Littleton
Site Address or Map/Lot Number

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review

(minimum of two holes required at every proposed disposal area)

Deep Observation Hole A: 12/06/05 (Date) 11:00 (Time) Cloudy 30's (Weather)

1. Deep Observation Hole Logs

   Deep Hole Number 1205-3 Ground Elevation at Surface of Hole -

   Location (Identify on Plan) Old horse corral

2. Land Use: Vacant Lot (e.g. woodland, agricultural field, vacant lot, etc.) None (Surface Stones) 0-2% (Slope (%))

   None (Vegetation) Ground moraine (Landform) (Position on landscape (attach sheet))

3. Distances from: Open Water Body - feet Drainage Way - feet Possible Wet Area - feet

   Property Line >50' feet Drinking Water Well - feet Other -

4. Parent Material: Ablation Till Unsuitable Materials Present: Yes ☒ No ☐

   If Yes: Disturbed Soil ☐ Fill Material ☒ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock ☐

5. Groundwater Observed: Yes ☒ No ☐

   If Yes: Depth Weeping from Pit 72" Depth Standing Water in Hole 98"

   Estimated Depth to High Groundwater: 36" inches ____ elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program

120 Goldsmith Street, Littleton
Site Address or Map/Lot Number

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole A: Deep Hole Number: 1205-3

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-6"	Ap	10YR3/2	____	____	____	SL	____	____	Weak, sub angular blocky	Friable	____
6-12"	Bw	10YR5/8	____	____	____	SL	____	____	None, massive	Friable	____
12-120"	C	2.5Y5/4	36"	10YR5/8; 2.5Y5/1	>5%	LS	10	5	None, massive	Very friable	____

Additional Notes Weeping @ 72", no standing water, no refusal

ESHW @ 36"

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Cont.)

Deep Observation Hole B: 12/06/05 (Date) 11:00 a.m. (Time) Cloudy 30's (Weather)

1. Deep Observation Hole Logs

   Deep Hole Number 1205-4 Ground Elevation at Surface of Hole -

   Location (Identify on Plan) Old horse coral

2. Land Use: Vacant Lot (e.g. woodland, agricultural field, vacant lot, etc.) None (Surface Stones) 0-2% (Slope (%))

   None (Vegetation) Ground moraine (Landform) (Position on landscape (attach sheet))

3. Distances from: Open Water Body - feet Drainage Way - feet Possible Wet Area - feet

   Property Line >50' feet Drinking Water Well - feet Other -

4. Parent Material: Ablation till Unsuitable Materials Present: Yes ☒ No ☐

   If Yes: Disturbed Soil ☐ Fill Material ☒ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock ☐

5. Groundwater Observed: Yes ☒ No ☐

   If Yes: Depth Weeping from Pit 43" Depth Standing Water in Hole

   Estimated Depth to High Groundwater: 28" inches elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program

120 Goldsmith Street, Littleton
Site Address or Map/Lot Number

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole B: Deep Hole Number: 1205-4

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-12"	Fill	____	____	____	____	____	____	____	____	____	____
12-120"	C	10YR3/2	28"	10YR5/8 2.5Y5/1	>5%	SL	10	5	None, massive	Very friable	____

Additional Notes Weeping @ 43", no standing, no refusal

ESHW @ 28"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program

120 Goldsmith Street, Littleton
Site Address or Map/Lot Number

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method used:

☐	Depth observed standing water in observation hole	A. _____ inches	B. _____ inches
☐	Depth weeping from side of observation hole	A. _____ inches	B. _____ inches
☒	Depth to soil redoximorphic features (mottles)	A. 36" inches	B. 28" inches
☐	Groundwater adjustment (USGS methodology)	A. _____ inches	B. _____ inches

2. Index Well Number _____ Reading Date _____ Index Well Level _____

Adjustment Factor _____ Adjusted Groundwater Level _____

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

a. 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 ☒ No ☐

b. If yes, at what depth was it observed? Upper boundary: 12" inches Lower boundary: 120" inches

F. Certification

I certify that 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 of Soil Evaluator — 12/07/05 Date

Jonathan Markey
Typed or Printed Name of Soil Evaluator — July 1995 *Date of Soil Evaluator Exam

Ira Grossman
Name of Board of Health Witness — Nashoba Board of Health Board of Health

Note: This form must be submitted to the approving authority with Percolation Test Form 12

FORESITE ENGINEERING
16 Gleasondale Road Suite 1-1
STOW, MA 01775
(978) 461-2350
Fax (978) 461-2352

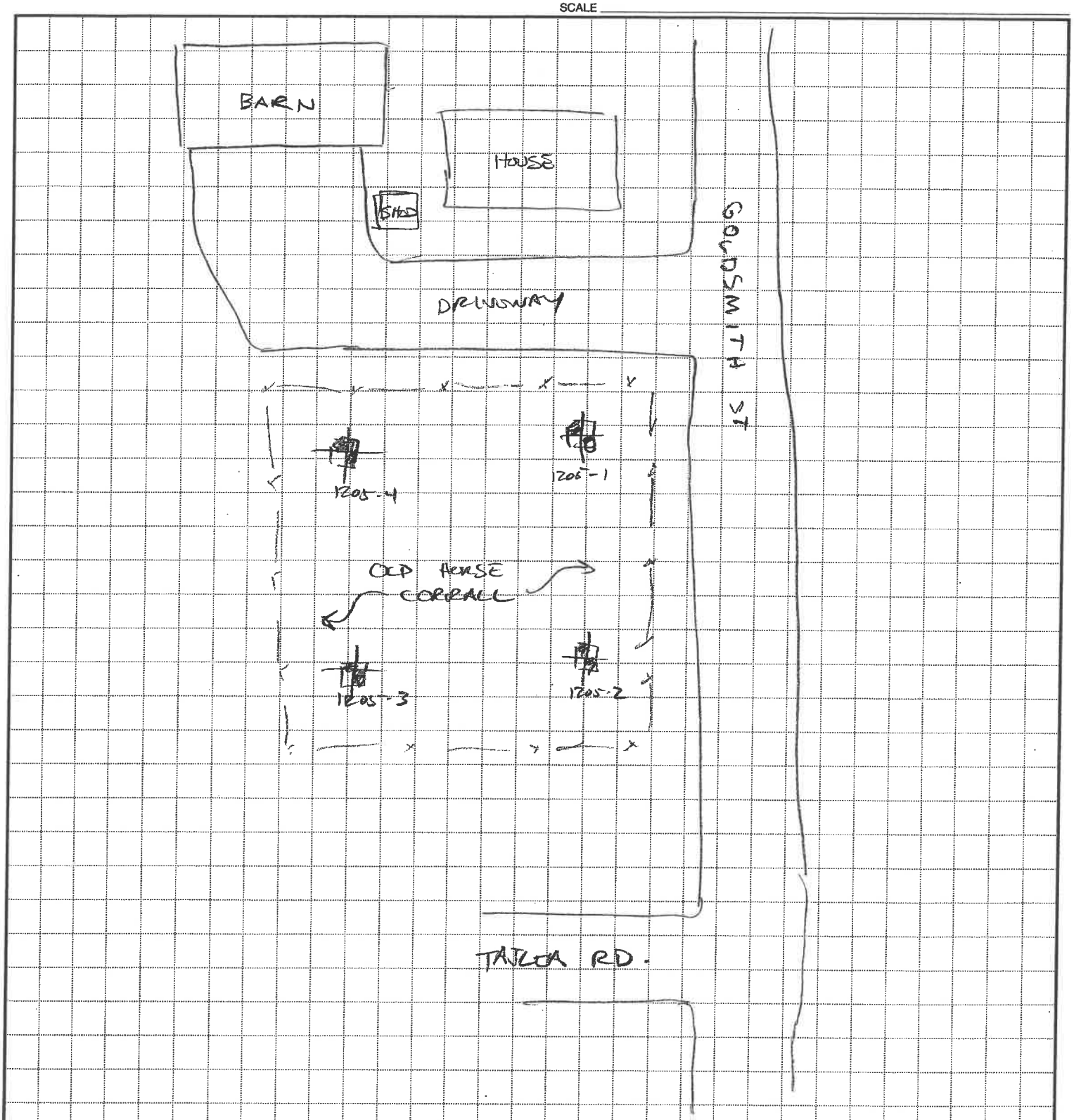
JOB 120 GOLDSMITH ST

SHEET NO. 1 OF 1

CALCULATED BY JJM DATE 12/6/05

CHECKED BY _____ DATE _____

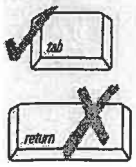
SCALE _____



Commonwealth of Massachusetts
City/Town of
Percolation Test
Form 12

Percolation test results must be submitted with the Soil Suitability Assessment for On-site Sewage Disposal. 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 the local Board of Health to determine the form they use.

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



A. Site Information

On the Rail Farm c/o Westchester Corp.
Owner Name

P.O. Box 672
Street Address or Lot #

Acton	MA	01720
City/Town	State	Zip Code

Steve Marsh	(978) 263-0428
Contact Person (if different from Owner)	Telephone Number

B. Test Results

	09/29/06 (Date)	11:26 (Time)	09/29/06 (Date)	11:28 (Time)
Observation Hole #	PT-A		PT-B	
Depth of Perc	50"		74"	
Start Pre-Soak	11:26		11:28	
End Pre-Soak				
Time at 12"	11:41		11:43	
Time at 9"	11:49		11:59	
Time at 6"	11:59		12:21	
Time (9"-6")				
Rate (Min./Inch)	4 MPI		8 MPI	
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☒ Test Failed: ☐	

Scott P. Hayes, P.E.
Test Performed By:

Ira Grossman, B.O.H
Witnessed By:

Comments:

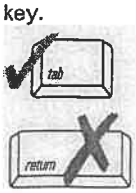
Commonwealth of Massachusetts
City/Town of

Percolation Test

Form 12

Percolation test results must be submitted with the Soil Suitability Assessment for On-site Sewage Disposal. 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 the local Board of Health to determine the form they use.

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



A. Site Information

On the Rail Farm c/o Westchester Corp.
Owner Name

P.O. Box 672
Street Address or Lot #

Acton	MA	01720
City/Town	State	Zip Code

Steve Marsh	(978) 263-0428
Contact Person (if different from Owner)	Telephone Number

B. Test Results

	09/29/06 Date	11:31 Time	09/29/06 Date	11:21 Time
Observation Hole #	PT-C		PT-D	
Depth of Perc	72"		62"	
Start Pre-Soak	11:31		11:21	
End Pre-Soak				
Time at 12"	11:47		11:36	
Time at 9"	12:13		12:07	
Time at 6"	12:47		12:46	
Time (9"-6")				
Rate (Min./Inch)	12 MPI		13 MPI	
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☒ Test Failed: ☐	

Scott P. Hayes, P.E.
Test Performed By:

Ira Grossman, B.O.H
Witnessed By:

Comments:

FORESITE ENGINEERING
16 Gleasondale Road Suite 1-1
STOW, MA 01775
(978) 461-2350
Fax (978) 461-2352

JOB _____

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____

PT-A @ 58" | PT-B @ 74" | PT-C @ 72" | PT-D @ 62"

Soak @ 11:04 | Soak @ 11:28 | Soak @ 11:34 | Soak @ 11:21

@ 12" 11:41 | 12" 11:43 | (12" 11:47 | 13" @ 11:36

9" 11:49 | 9" 11:59 | 8" 12:13 | 9" @ 12:07

6" 11:59 | 6" @ 12:21 | 6" 12:47 | 6" @ 12:46

Rate 4 mpi | Rate 8 mpi | Rate 12 mpi | 13 mpi

269-120 GOODSMITH ST. LITTLETON

9/29/06 CLOUDY 40's

SEH - FORESITE

IRA GROSSMAN - NASOH

PERC TESTS