

William WAY

3 Trillium Way.

Plan: 10.01

Designed by: R.F. Sheehan & Assoc
CHECK LIST FOR SEPTIC PLANS

- Application page attached to plan
- PE or RS stamp, date, signature
- Variances to property line setback distances must have Surveyor Stamp 15220 (3) N/A
- Legal boundaries noted
- Easements noted NONE
- Dwellings and buildings existing or proposed noted
- Location of driveway or parking areas, other impervious areas
- Location and dimensions of reserve area (new) CMR 15.248(1), 15.104(4) (REPAIR)
- System design calculations
- Garbage grinder Y or N
- Benchmark not disturbed during construction, within 75 feet of facility CMR 15.220 (4)(q)
- North arrow CMR 15.200 (4) (g)
- Contours
- Deep hole location and data
- Perc hole location and data
- Elevations
- Names of approving authority and soil evaluator CMR 15.211 p. 49
- Location of every water supply, public and private CMR 15.220(k):
 - Within 400 feet of system in case of surface water and gravel packed public water supply
 - Within 250 feet of system in case of tubular public water supply
 - Within 150 feet of private supply wells 100' septic sys. ; 5' tank
- Well statement if applicable (NA)
- Location of any surface waters, rivers, vegetated wetlands (NA)
- Location of water lines and other subsurface utilities
- Observed and adjusted ground water elevation in the vicinity of system 15.220 (4)(n)
- Profile of system
- Locus plan to show location of facility, including nearest street
- Materials of construction and specs for system
- Gas Baffle 15.227.4
- Pipe in center line of tank 310 CMR 15.227, 15.06(8)
- Double washed stone
- Schedule 40 PVC for trafficked areas, house to tank
- Distances noted from house to tank, etc.
- If dosing is proposed, design and specs of dosing system YES
- When alternative technology is required, complete plan and specs, including hydraulic profile (NA)
- Trenches preferred over beds CMR 15.240 (6)
- Buoyancy calculations for tanks or components partly below H2O table 15.221(8) p. 56 (NA)
- 3 to 1 slope outside of mound, toe ending 5 feet from property line
- Local upgrade requests on the plan (NONE)
- Local upgrade forms attached to application (NA)
- Note on plan listing all variances sought in conjunction with the plan NA

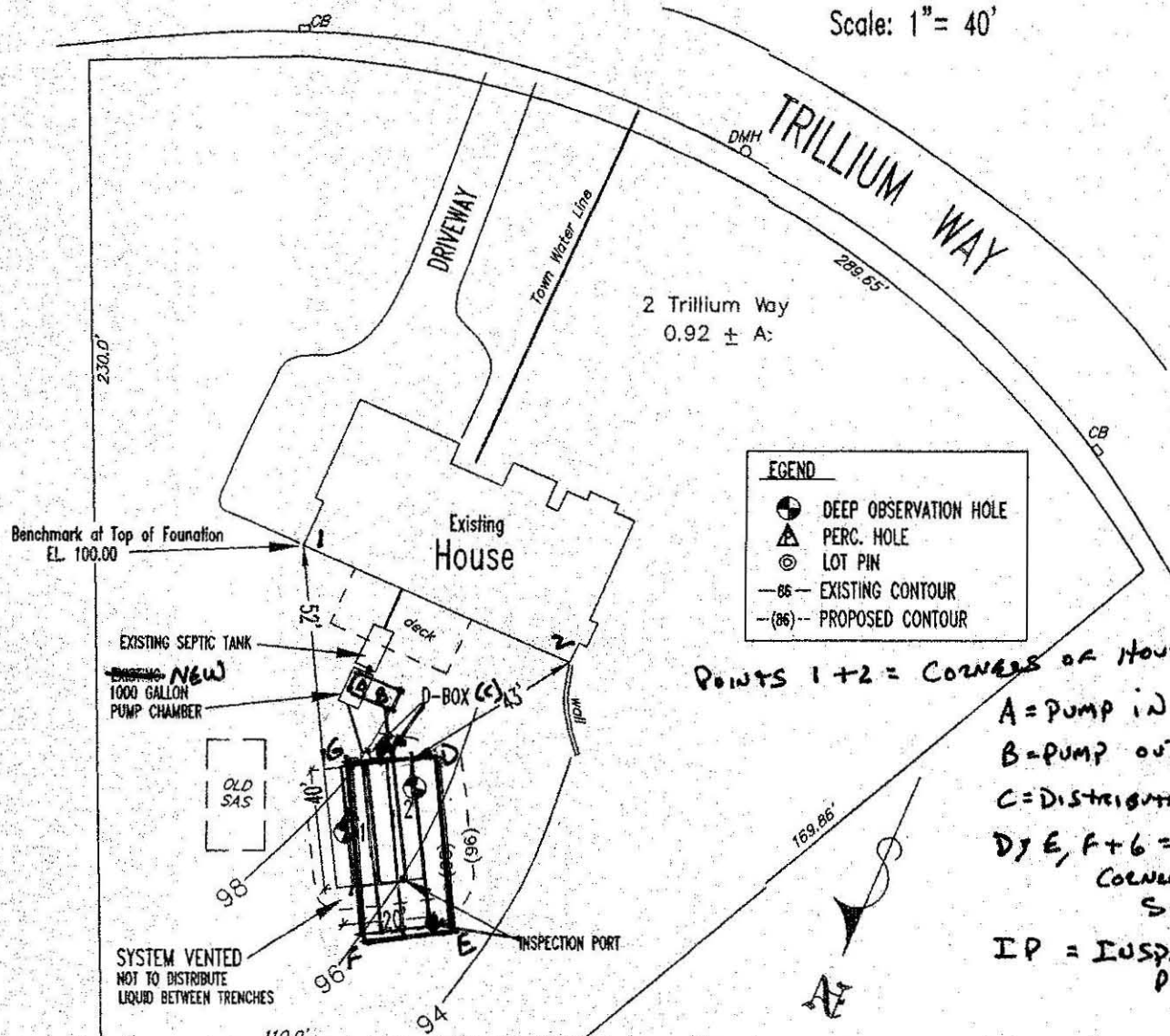
NOTES:

No variances pump system (OK)

"AS BUILT" 4/23/2010

SEPTIC SYSTEM LAYOUT

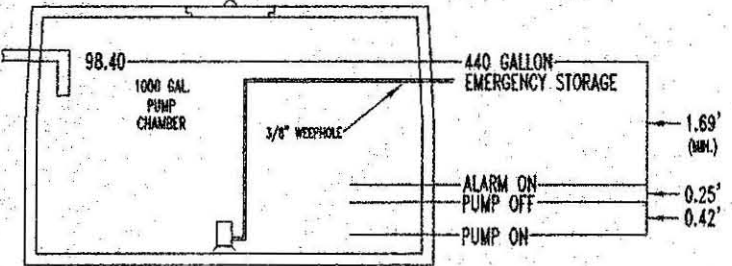
Scale: 1" = 40'



A→1 = 40'	C→1 = 48.8'	E→1 = 93'	B→1 = 48'
A→2 = 41.3'	C→2 = 47.3'	E→2 = 71'	G→2 = 56'
B→1 = 43.8'	D→1 = 56'	F→1 = 88'	I→1 = 89.8'
B→2 = 37.6'	D→2 = 40'	F→2 = 80'	I→2 = 72.6'

PUMP CHAMBER

DO NOT SCALE



PUMP NOTES

- 1) 1000 GAL. PUMP CHAMBER 8' X 4.33' X 0.083'/IN X 7.48 GAL/FT³ = 21.5 GAL/VERTICAL INCH
- 2) CLASS 11 SOIL=1 DOSE/DAY=330 GAL/DOSE PUMPING REQ.= 330 GAL PER CYCLE 330/21.5=15.3" OR 16" LIQUID LEVEL DROP
- 3) 16" OF STORAGE REQUIRED ABOVE ON SWITCH
- 4) GOULDS 3886 PUMP OR EQUIVALENT
- 5) 2" EXIT PIPE TO D-BOX MUST BE SET TO DRAIN TO PREVENT FREEZING

NOTES

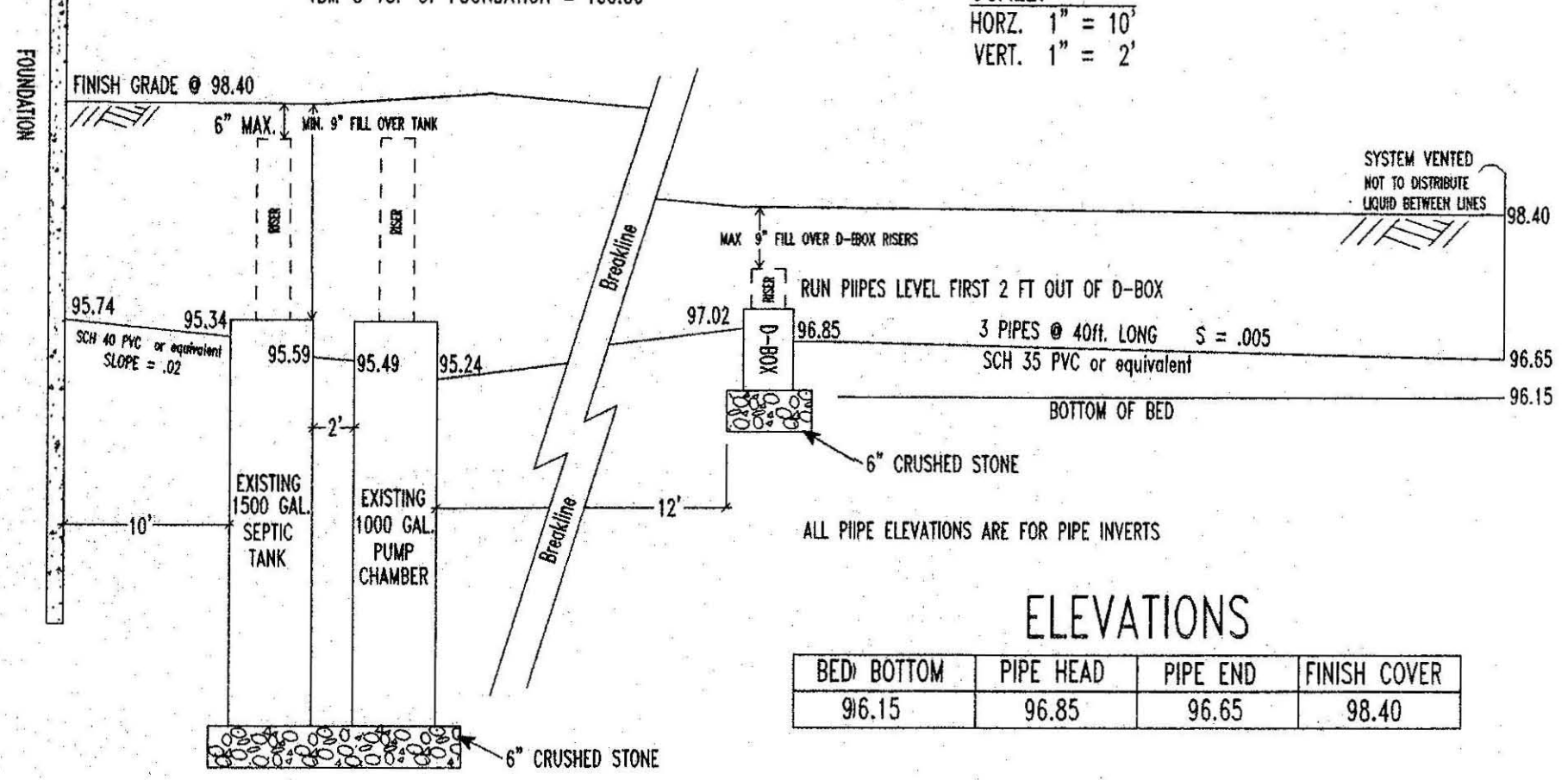
- 1) SEPTIC TANK SHALL HAVE INLET AND OUTLET TEES.
- 2) OUTLET TEE SHALL HAVE A GAS BAFFLE.
- 3) D-BOX SHALL HAVE MINIMUM 12" INSIDE WIDTH AND 6" SUMP BELOW OUTLET INVERT.
- 4) ACCESS MANHOLES TO SEPTIC TANK SHALL BE WITHIN 6" OF FINISHED GRADE.
- 5) D-BOX OUTLET PIPES SHALL BE LEVEL A MINIMUM OF 2 FEET.
- 6) END CAPS ON PIPES.
- 7) ELEVATIONS ARE TO INVERTS UNLESS NOTED.
- 8) NO OTHER WELLS OR WETLANDS OBSERVED WITHIN 200' OF SEPTIC SYSTEM.
- 9) ALL LOAM, SUBSOIL AND OTHER IMPERVIOUS MATERIAL SHALL BE REMOVED WITHIN 5 FEET OF LEACHING FACILITY.
- 10) FILL WITHIN 5 FEET OF LEACHING FACILITY SHALL MEET SPECIFICATIONS OF TITLE V, 15.255(3).
- 11) FINISH GRADE ABOVE AND ADJACENT TO SYSTEM SHALL SLOPE AT LEAST 2% TO PREVENT ACCUMULATION OF SUBSURFACE WATER.
- 12) DISTRIBUTION BOX SHALL HAVE AN INLET TEE OR BAFFLE EXTENDING TO ONE INCH ABOVE THE OUTLET INVERT ELEVATION PROVIDED TO DISSIPATE THE VELOCITY OF THE INFLUENT.
- 13) SEPTIC TANK SHOULD BE INSPECTED ANNUALLY.
- 14) ALL PIPES SHALL BE EITHER ASTM D-3034 (SDR35); ASTM D-2665 (SCHEDULE 40) OR AS NOTED.
- 15) ALL WASTEWATER SHALL FLOW INTO THE SEPTIC TANK WITH THE EXCEPTION OF WATER SOFTENERS/CONDITIONERS.
- 16) LOT LINES PLOTTED FOR SEPTIC LOCATION ONLY. PLOT PLAN IS NOT AN ACTUAL SURVEY.
- 17) NO CONSTRUCTION OF PERMANENT STRUCTURE ALLOWED OVER SEPTIC SYSTEM.
- 18) TOPOGRAPHY SURVEY DATA APPROXIMATE.

SEPTIC SYSTEM PROFILE

TOP OF FOUNDATION = 100.00

TBM @ TOP OF FOUNDATION = 100.00

SCALE:
HORZ. 1" = 10'
VERT. 1" = 2'



ELEVATIONS

BED BOTTOM	PIPE HEAD	PIPE END	FINISH COVER
96.15	96.85	96.65	98.40

SITUATION:

REPAIR OF SAS AT 2 TRILLIUM WAY
4 BEDROOM DWELLING, NO GARBAGE GRINDER,
PERC RATE AT HOLE 1 OF 1 MINUTE PER INCH. DOP = 46" TO BOTTOM
PERC TEST DATE: DECEMBER 4, 2009
BOARD OF HEALTH WITNESS: GARY COURTEMANCHE
SOIL EVALUATOR: NEIL JACKSON, CERTIFIED MAY, 1998

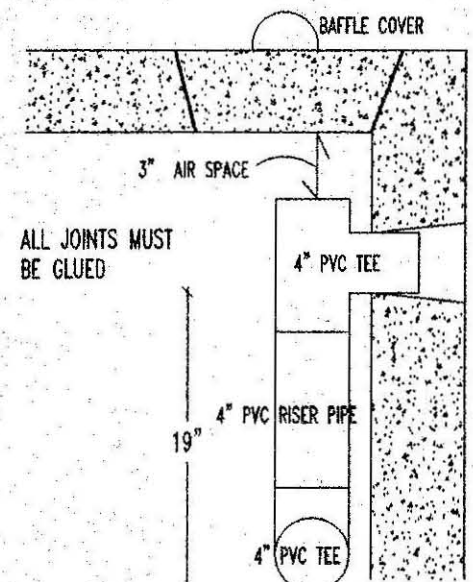
4 BEDROOMS @ 110 GALLONS EACH TOTAL = 440 GAL
ESTIMATED AVERAGE DAILY FLOW BASED ON 1995 TITLE 5 REGULATIONS
LEACHING SYSTEM IS TO CONSIST OF A 20 FT. X 40 FT. LEACHING BED, WITH 3 DISTRIBUTION LINES, WITH A MINIMUM OF 6 INCHES OF STONE THROUGHOUT BED.

DESIGN CALCULATIONS:

SOIL CLASS II -- 1 MIN./IN = 0.74 GAL/FT²
BOTTOM AREA: 20' x 40' = 800 FT²
SIDE AREA: NOT ALLOWED IN BEDS
TOTAL = 800FT² = 480 GALLONS CAPACITY
480 GAL. DESIGN > 440 GAL. REQUIRED

GAS BAFFLE DETAIL

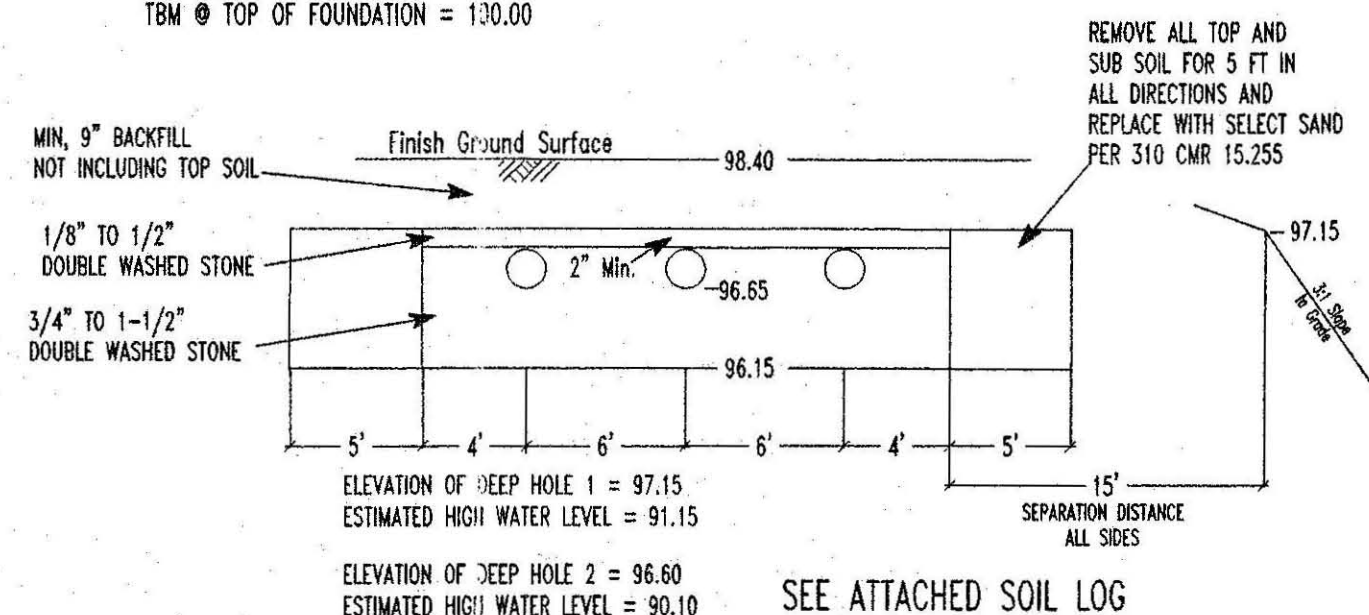
DO NOT SCALE



CROSS SECTION OF LEACHING BED @ PIPE END

DO NOT SCALE

TBM @ TOP OF FOUNDATION = 100.00



SYSTEM TO BE CONSTRUCTED IN COMPLIANCE WITH 310 CMR 15.000

Kofides "AS BUILT" 4/23/10

2 Trillium Way
AMHERST, MA

SCALE: AS NOTED	DRAWING NUMBER: Kofides-Trillium.dwg	DESIGNED BY: NMJ
DATE: 16MAR10		DRAWN BY: HOP

APPROVED BY:
ENGINEER:
ROBERT F. SHEEHAN
146 TAYLOR STREET
GRANBY, MA 01033
413-467-7228



No. 10-01

Fee _____

COMMONWEALTH OF MASSACHUSETTS
Board of Health, AMHERST, MA.

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

Application for a Permit to: Construct () Repair (X) Upgrade () Abandon ()

Complete System Individual Components

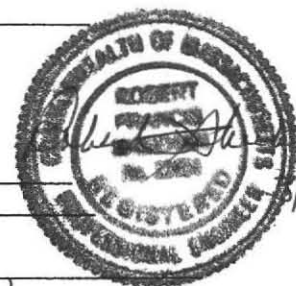
Location <u>2 TRILLIUM WAY</u>	Owner's Name <u>LAZAROS KOFIDES</u>
Map/Parcel# <u>21D-68</u>	Address <u>2 TRILLIUM WAY AMHERST MA 01002</u>
Lot# <u>68</u>	Telephone# <u>(413) 256-8068</u>
Installer's Name <u>STEVEN HULMES</u>	Designer's Name <u>JTP ENGINEERING SERVICES R.F. SHEEHAN + ASSOC., INC.</u>
Address <u>75 ROCKRIMMOW STREET BELCHERTOWN, MA 01007</u>	Address <u>30 MOUNTAINVIEW DR. BELCHERTOWN, MA 01007</u>
Telephone# <u>(413) 221-3488</u>	Telephone# <u>1-413-323-6154</u>

Type of Building: RESIDENTIAL
 Dwelling - No. of Bedrooms 4
 Other - Type of Building _____
 No. of persons _____ Showers _____ Cafeteria _____
 Other Fixtures _____

Lot Size 40,000 sq. ft.
 Garbage grinder NO

Design Flow (min. required) 440 gpc Calculated design flow 480 gpc
 Design flow provided 480 gpc

Plan: Date 3/16/2010 Number of sheets 6 Revision Date _____
 Title KOFIDES - 2 TRILLIUM WAY



Description of Soil(s) SEE ATTACHED
 Soil Evaluator Form No. 11 Name of Soil Evaluator NEIL JACKSON
 Date of Soil Evaluation 12/4/2009

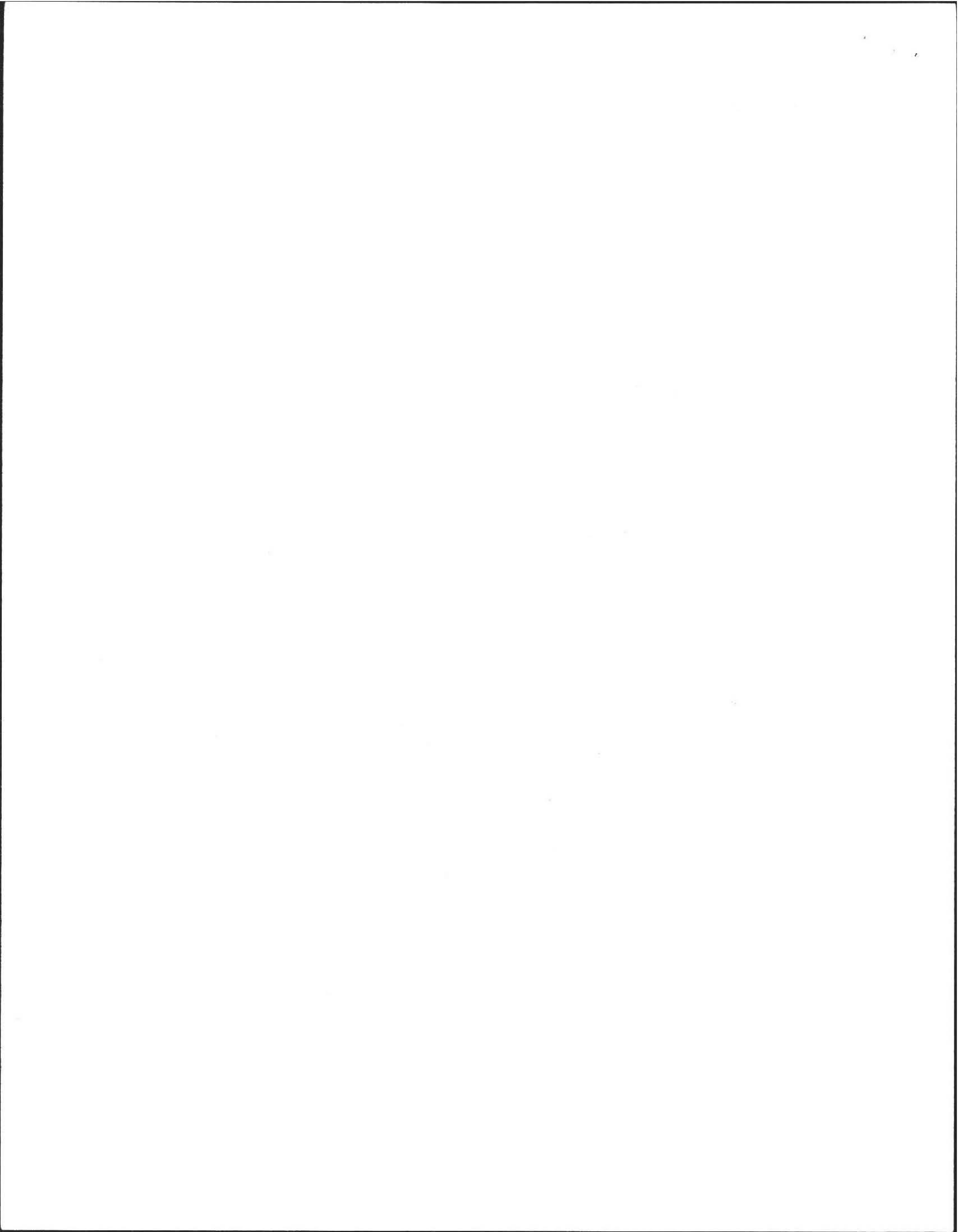
DESCRIPTION OF REPAIRS OR ALTERATIONS INSTALL NEW DISTRIBUTION BOX AND
20' X 40' LEACHING BED WITH 3 LINES

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 [Signature] Date 3/16/2010

Inspections _____





No. _____

Fee _____

COMMONWEALTH OF MASSACHUSETTS
Board of Health, AMHERST, MA.

DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to: Construct() Repair() Upgrade() Abandon() an individual

sewage disposal system at 2 TRILLIUM WAY

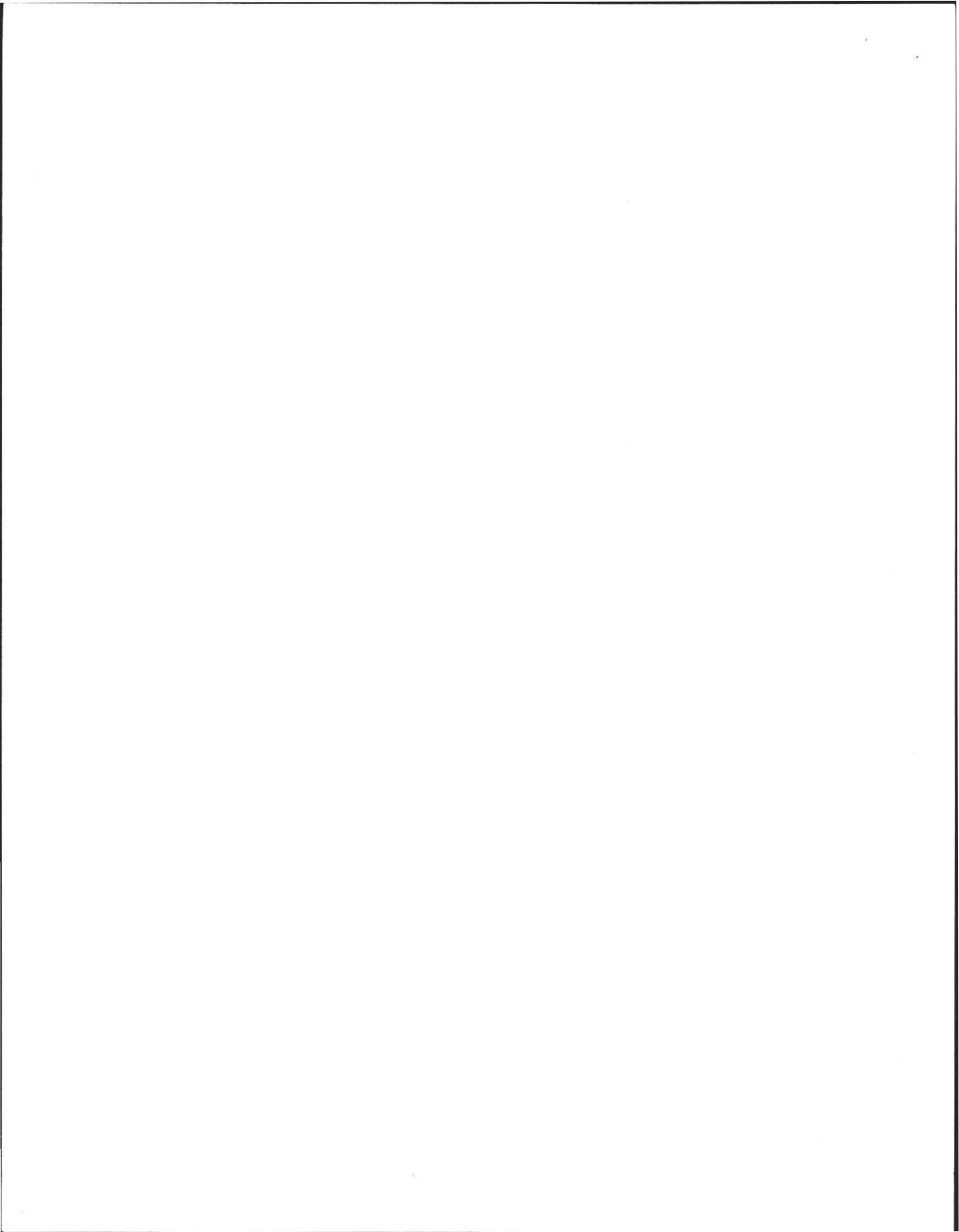
as described in the application for Disposal System Construction Permit No _____

dated _____

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

Date _____ Board of Health _____





FORM 3A - CERTIFICATE OF COMPLIANCE

No. _____

Fee _____

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: STEVEN HULMES

at: 2 TRILLIUM WAY

has been installed in accordance with the provisions of 310 CMR 15.00 (Title 5) and the
approved design plans/as-built plans relating to application No. _____

dated _____ Approved Design Flow _____ (gpd)

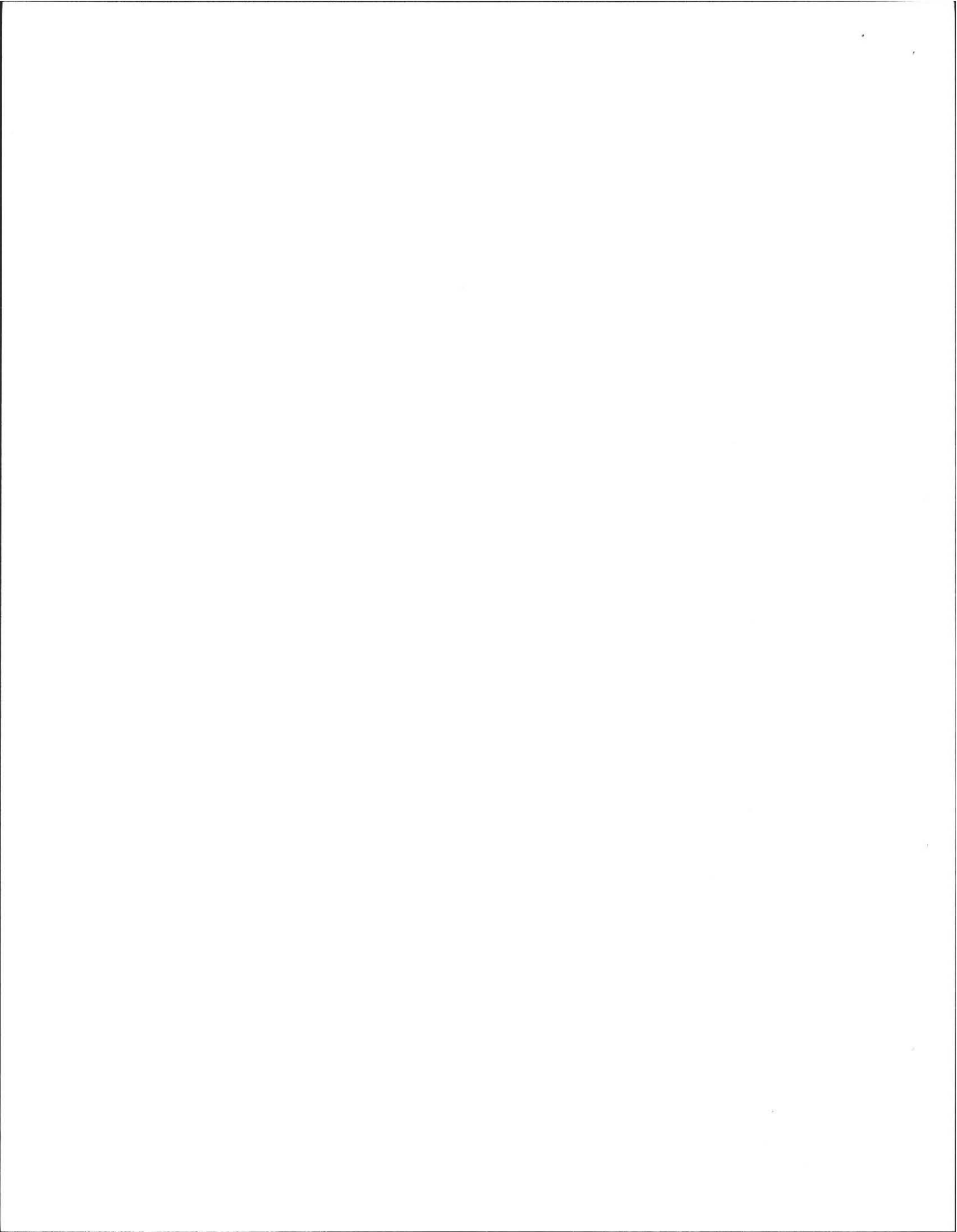
Installer: _____

Designer: _____ Inspector: _____

Date _____

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





Commonwealth of Massachusetts

Town of AMHERST**Soil Suitability Assessment : On-Site Sewage Disposal**

Performed By: NEIL JACKSON Date: 12/4/09
 Witnessed By: GARY COSETMAUCITE

Location Address of: Lot # <u>2 TRILLIUM WAY</u>	Owner's Name: Address of: <u>LAZAROS KOFIDES</u> Telephone: <u>2 TRILLIUM WAY</u> <u>AMHERST MA</u> <u>(413) 256-8068</u>
New Construction <input type="checkbox"/> Repair <input checked="" type="checkbox"/>	

Office Review

Published Soil Survey Available? No Yes
 Year Published 1989 Publication Scale 1:25000 Soil Map Unit _____
 Drainage Class D Soil Limitations EXCESSIVELY DRAINED

Surficial Geologic Report Available? No Yes
 Year Published _____ Publication Scale _____
 Geologic Material (map unit) OUTWASH
 Landform PLAIN

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 84 inches
 Depth weeping from side of observation hole 72 inches
 Depth to soil mottles 72 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

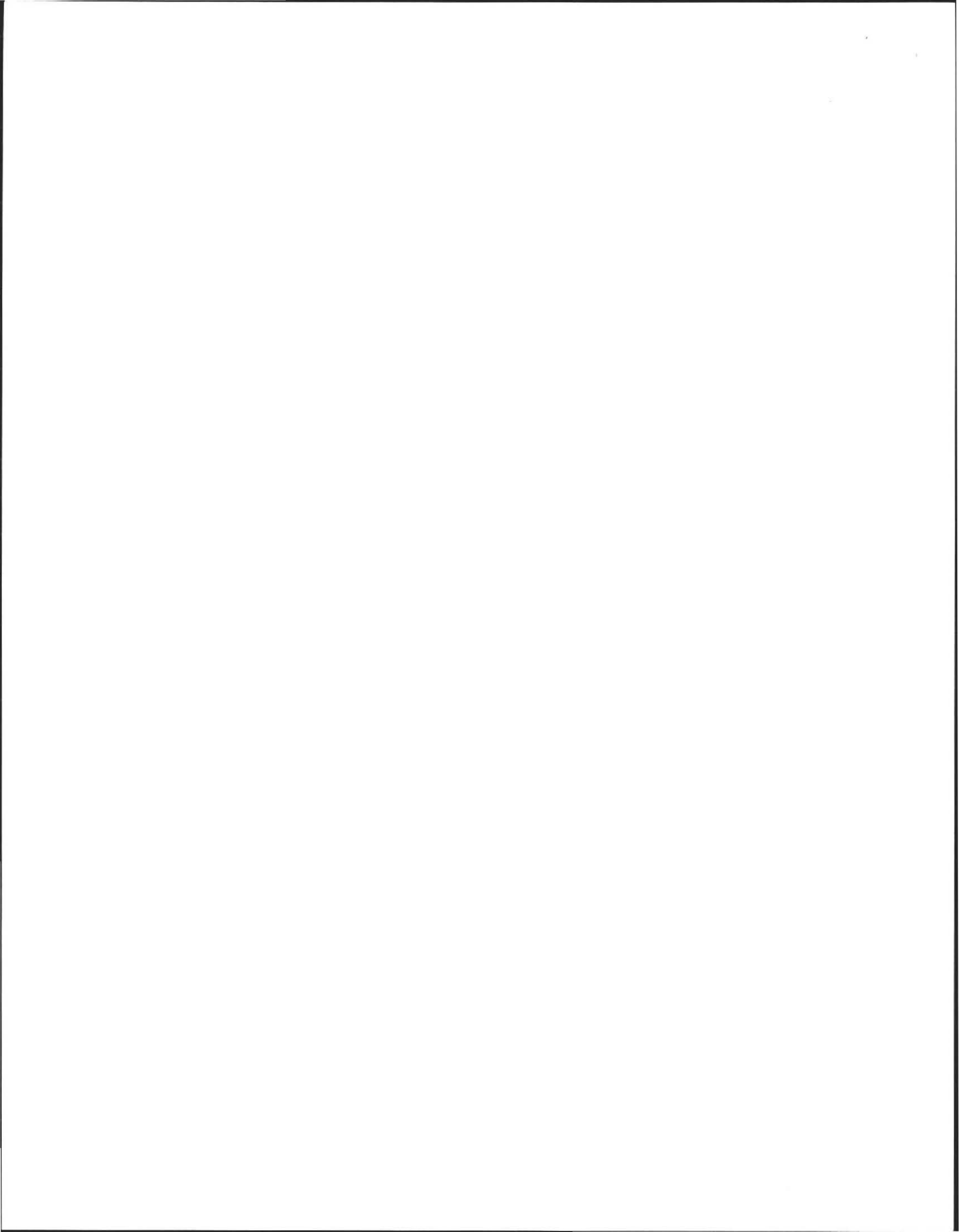
Does at least four feet of naturally occurring previous materials exist in all areas observed throughout the area proposed for this soil absorption system? YES

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

Certification

I certify that on MAY 1998 (date) I have passed the soil evaluator examination approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise, and experience described in 310 CMR 15.017.

Signature [Signature]
 Date 12/4/2009



2 TRILLIUM WAY, AMHERST

On-Site Review

Deep Hole Number 1 Date: 12/4/09 Time 8:45 AM
 Weather Sunny
 Location (identify on site plan) _____
 Land Use RESIDENTIAL Slope (%) 1-3%
 Surface Stone NONE
 Vegetation: GRASS, WHITE PINE

Landform: PLAIN

Position on Landscape (sketch on back) _____
 Distances from:
 Open Water Body >150 feet Drainageway >150 feet
 Possible Wet Area >150 feet Property Line >30 feet
 Drinking Water Well PUBLIC feet Other _____

DEEP OBSERVATION HOLE LOG					
depth from surface (inches)	soil horizon	soil texture (USDA)	soil color (Munsell)	soil mottling	other (structure, stones, boulders) Consistency, % gravel
0-5"	A	FSL	10YR2/3		FRAGILE; FEW STONES
5-30"	A/B mix	SL	10YR2 1/6	@ 72"	FRAGILE, MIXED ATB FEW STONES
30-				7.5YR2 5/8	COARSE SAND + GRAVEL WELL ROUNDED DEEP ROOT ZONE
96"	C	LS	7.5YR2 5/4		

Parent Material (geologic) OUTWASH
 Depth to Bedrock >96"
 Depth to Groundwater:
 Standing Water in the Hole 84"
 Weeping from Pit Face 72"
 Estimated Seasonal High Water 72"

On-Site Review

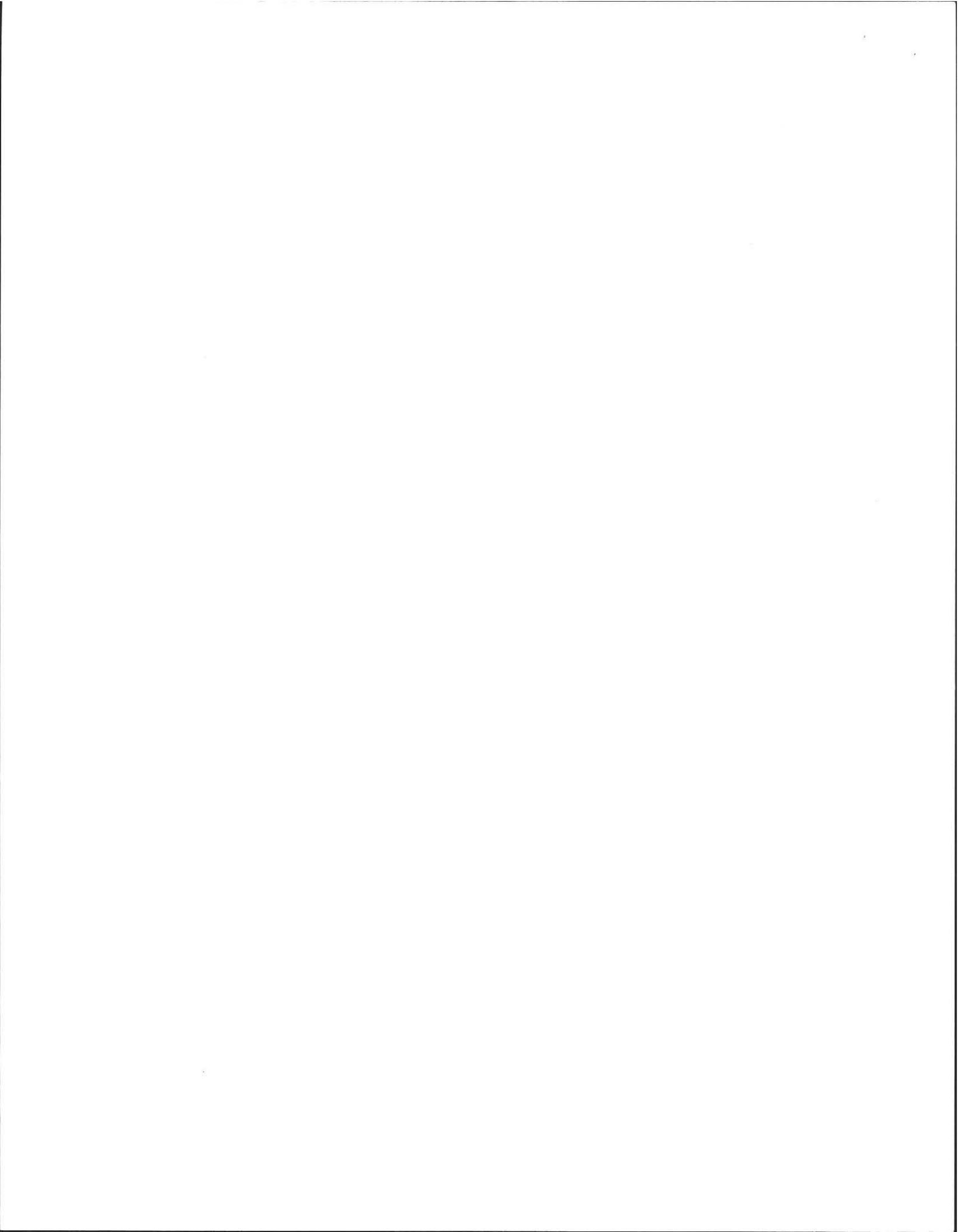
Deep Hole Number 2 Date: 12/4/09 Time 9:00 AM
 Weather Sunny
 Location (identify on site plan) _____
 Land Use RESIDENTIAL Slope (%) 1-3%
 Surface Stone _____
 Vegetation: GRASS, WHITE PINE

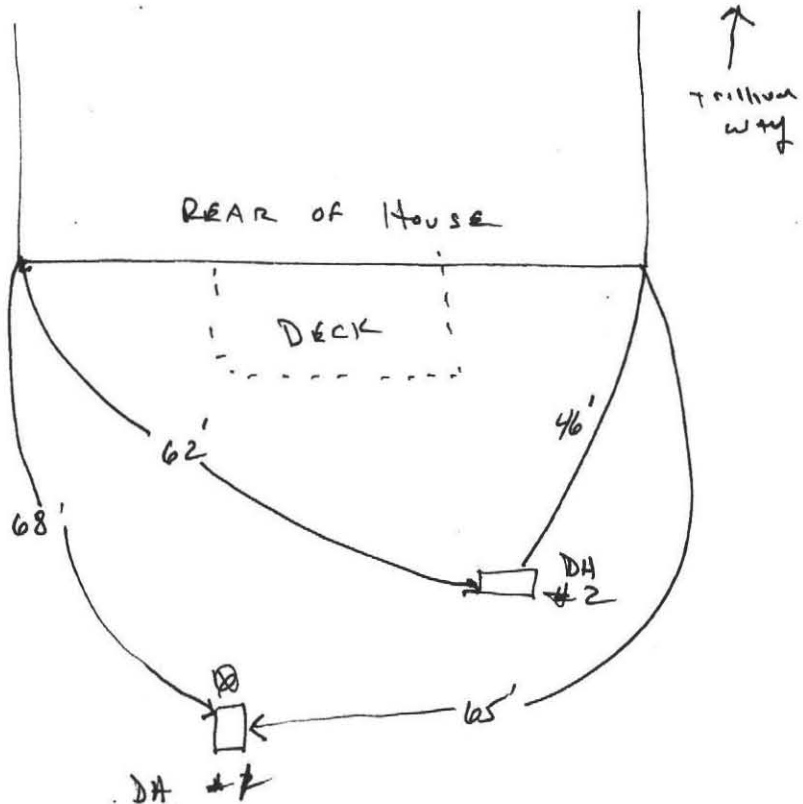
Landform: PLAIN

Position on Landscape (sketch on back) _____
 Distances from:
 Open Water Body >150 feet Drainageway >150 feet
 Possible Wet Area >150 feet Property Line >50 feet
 Drinking Water Well PUBLIC feet Other _____

DEEP OBSERVATION HOLE LOG					
depth from surface (inches)	soil horizon	soil texture (USDA)	soil color (Munsell)	soil mottling	other (structure, stones, boulders) Consistency, % gravel
0-6"	A	FSL	10YR2/3		FRAGILE FEW STONES
6-38"	A/B mix	SL	10YR2 1/6	@ 78"	FRAGILE MIXED ATB FEW STONES
38-				7.5YR2 5/8	COARSE GRAVEL + SAND WELL ROUNDED DEEP ROOT ZONE
108"	C	LS	7.5YR2 5/4		

Parent Material (geologic) OUTWASH
 Depth to Bedrock >108"
 Depth to Groundwater:
 Standing Water in the Hole NONE
 Weeping from Pit Face NONE
 Estimated Seasonal High Water 78"





FORM 12: Percolation Test

Location Address or Lot # 22 TRILLION WAY

Commonwealth of Massachusetts

Town of AMHERST

PERCOLATION TEST *		
DATE:	<u>12/4/09</u>	TIME: <u>9:00 A.M.</u>
Observation Hole #	<u>1</u>	
Depth of Perc	<u>46" TO BOTTOM</u>	
Start Pre-soak	<u>9:14</u>	<u>20</u>
End Pre-soak	<u>9:30</u>	<u>GALLONS</u>
Time at 12"	<u>9:30</u>	
Time at 9"	<u>9:32</u>	
Time at 6"	<u>9:35</u>	
Time (9"-6")	<u>3 MINUTES</u>	
Rate Min./Inch	<u>1 MIN/INCH</u>	

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

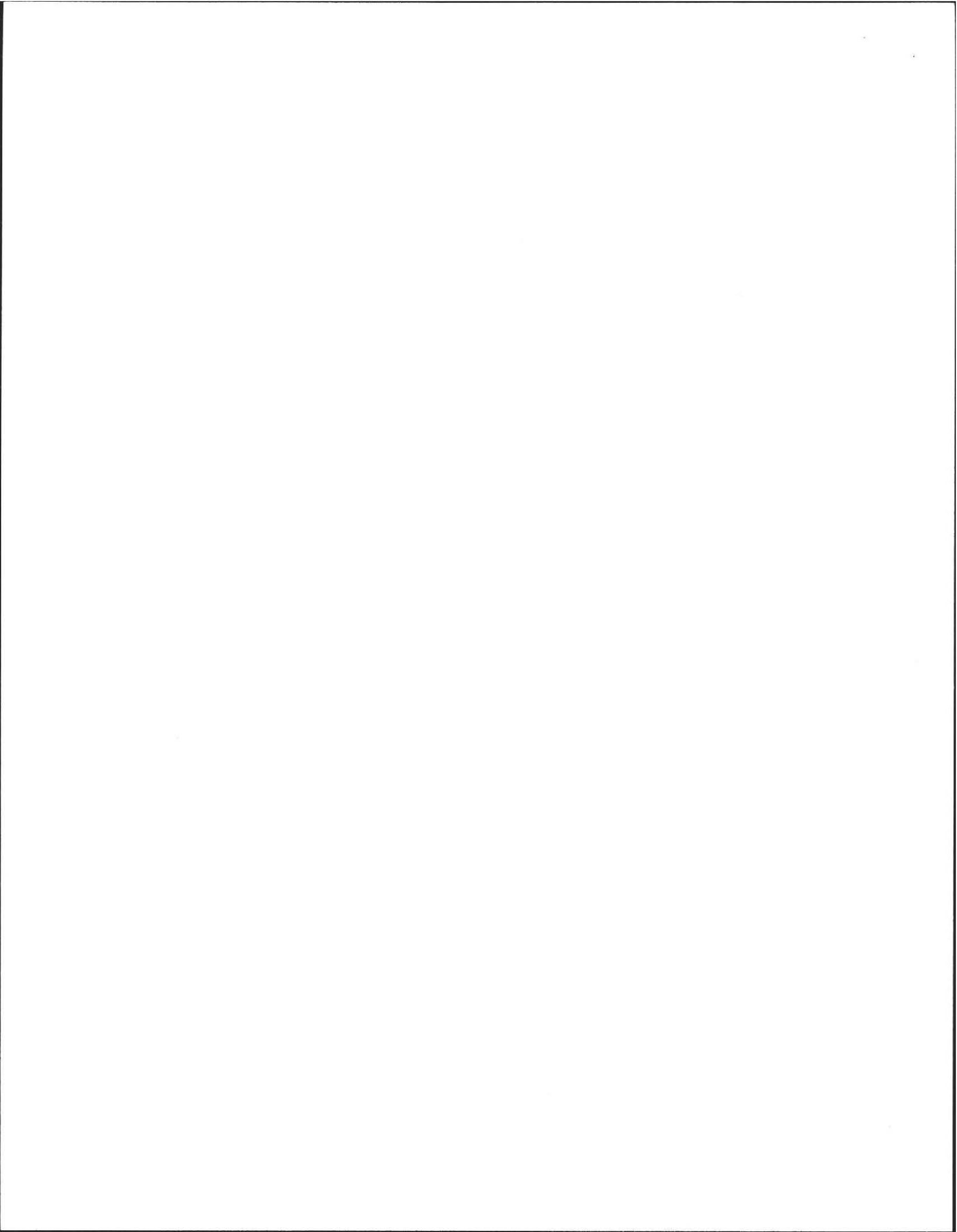
Site Passed

Site failed

Performed by NEIL JACKSON

Witnessed by GARY COURTEMANCHE

Comments:



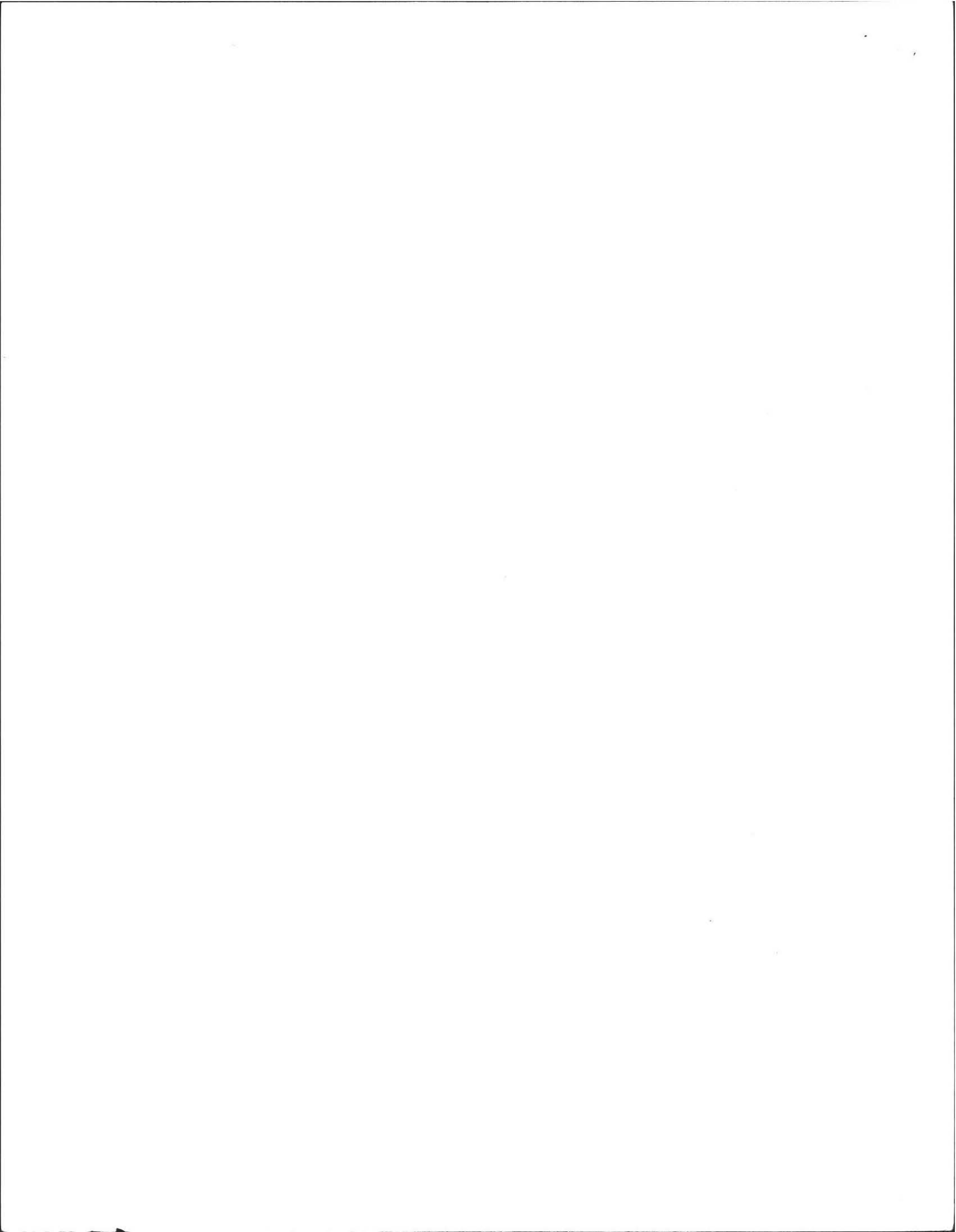
PUMP CALCULATIONS

1000 GALLON PUMP CHAMBER (USE 1000 GALLON SEPTIC TANK)
DIMENSIONS 8.0 FEET X 4.33 FEET
 $8.0' \times 4.33' \times 0.083'/\text{IN} \times 7.48 \text{ GAL./ FT}^3 = 21.5 \text{ GAL. / VERTICAL INCH}$

CLASS II SOIL = 1 DOSE/DAY = 330 GAL./ DOSE
PUMPING REQUIRED: 330 GAL. PER CYCLE
 $330 / 21.5 = 15.3'' \text{ OR } 16'' \text{ LIQUID LEVEL DROP IN PUMP CHAMBER}$

16 " OF STORAGE REQUIRED ABOVE THE ON SWITCH

- PUMP REQUIRED: GOULDS 3886 OR EQUIVALENT
- 2" PIPE FROM PUMP CHAMBER TO DISTRIBUTION BOX MUST BE SET TO DRAIN TO PREVENT FREEZING.



2 Trillium Way



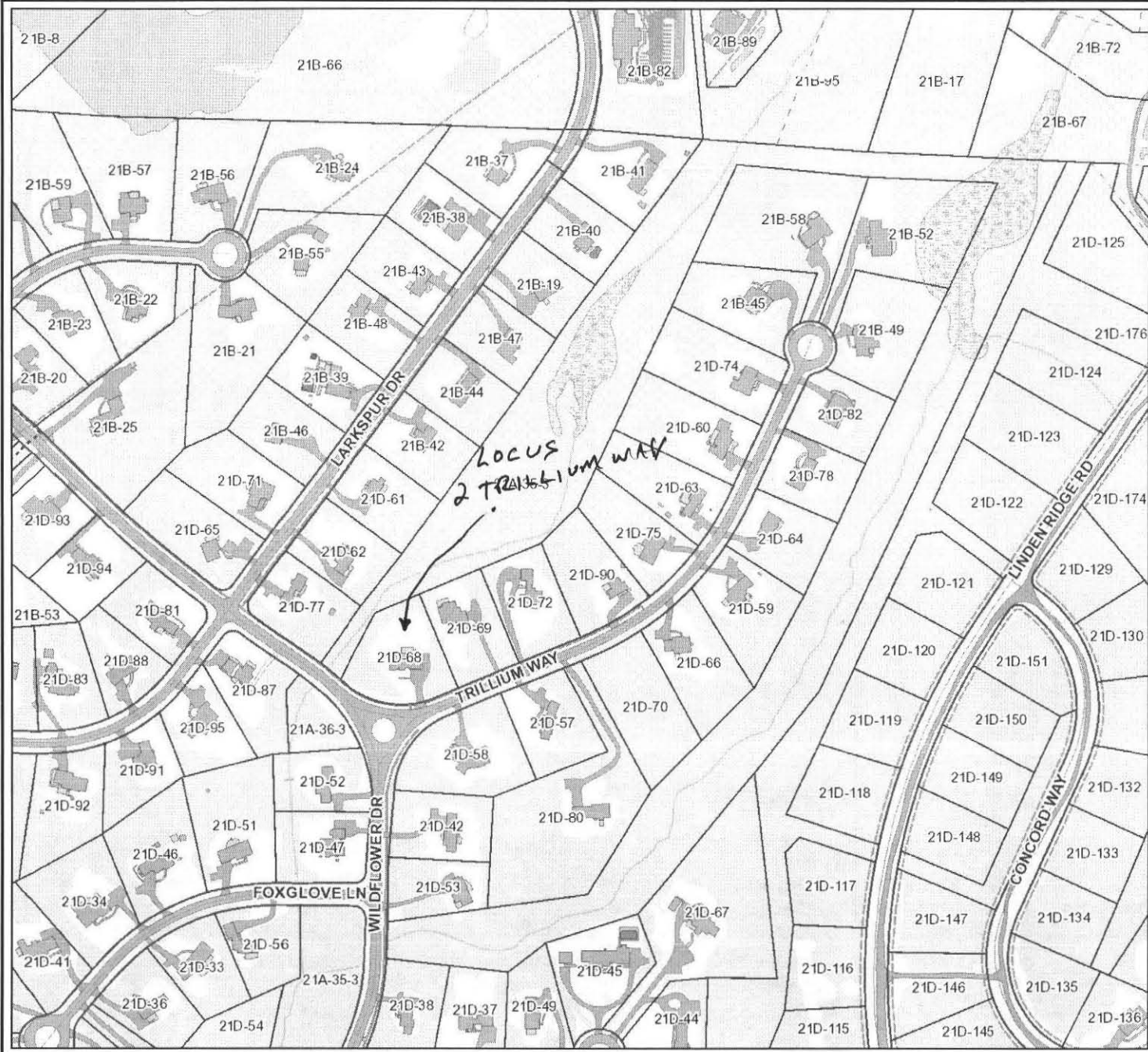
- Property Map**
- Property Lines
 - Property Line
 - Hydrographic Property
 - Right of Way Line
 - Town Boundary
 - Other Property Lines
 - Former Property Line
 - Subdivision Lot Line
 - Easements
 - Sidewalks
 - Transportation
 - Paved street polygons
 - Unpaved street poly
 - Bridges
 - Bridge decking and str
 - Foot Bridge
 - Rail Bridge
- Basemap**
- Trails
 - Rail Lines
- Structures**
- Building
 - Foundation or in const
 - Outbuilding or Miscell
 - Deck, Porch, Stairs or
 - Mobile home, Trailer
 - Swimming Pool
 - Building Ruins
 - Water storage tank
- Rivers and Streams**
- Streams
 - Major Culverts
 - Hydro Connector
 - Headwalls, Floodwalls
- Landcover**
- Brush and scrub vege
 - Tree and forest vege
 - Cultivated field
 - Gravel pile
 - Quarry
 - Misc Impervious Surfs
- Parking**
- Parking Paved
 - Parking Unpaved
- Driveways**
- Driveway Paved
 - Driveway Unpaved

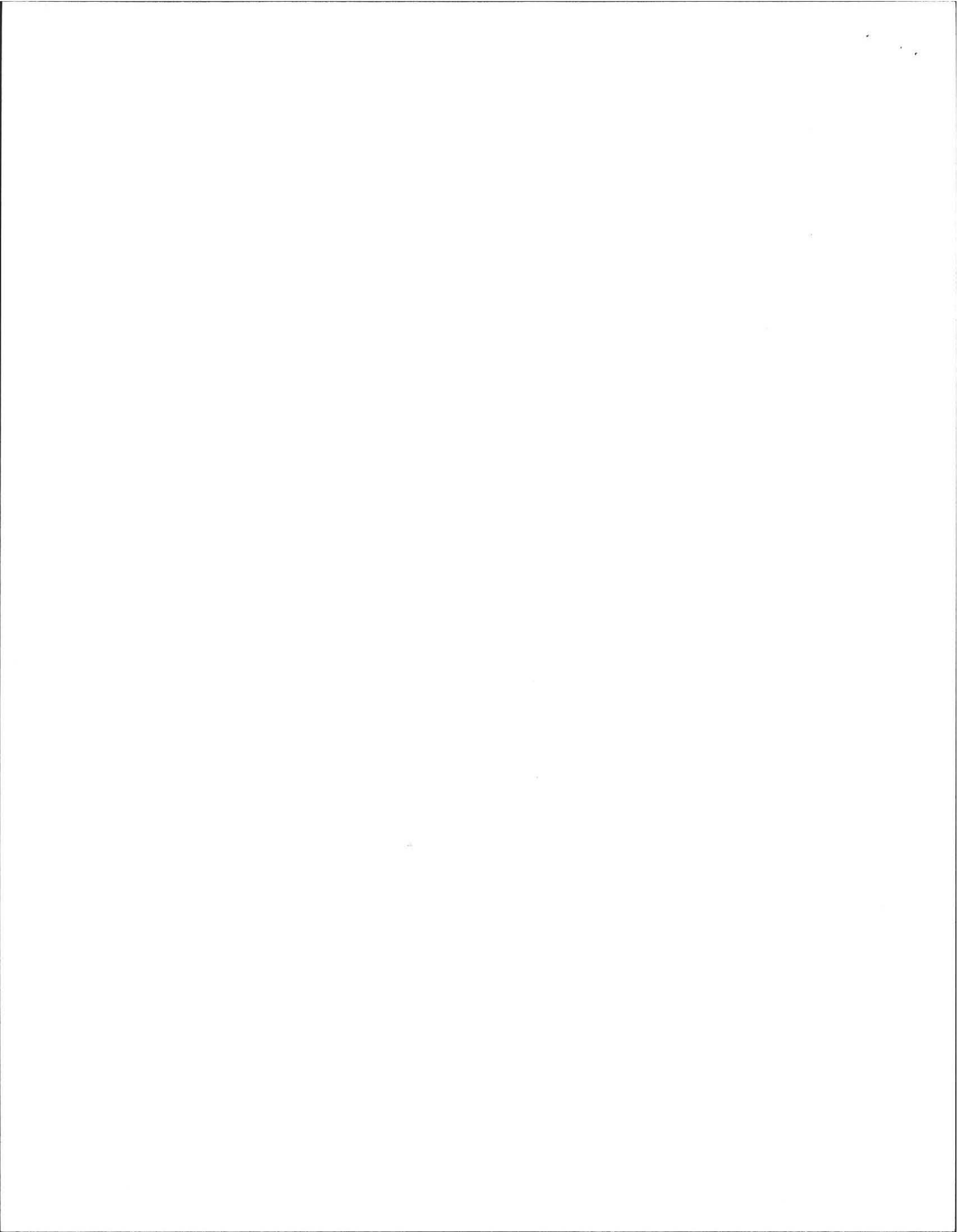
Horizontal Datum: MA Stateplane Coordinate System, Zone 4151, Datum NAD83, Feet
 Vertical Datum: NAVD88, Feet
 Planimetric & topographic basemap features compiled at 1"=40' scale from April, 2009 Aerial Photography. Parcels compiled to match the basemap; revisions are ongoing.

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

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

1" = 318 ft
 Amherst GIS Viewer March 24, 2010





4893

4892

4891

4890

20'

4888

38 / SE (OLYOKE)

