

Susan & Thomas Kaiser
133 Bay Rd.



No. 03-11

THE COMMONWEALTH OF MASSACHUSETTS
BOARD OF HEALTH

FEE 275⁰⁰
04#6328

Town OF Amherst

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

Application for a Permit to Construct () Repair () Upgrade () Abandon () - Complete System Individual Components

<u>133 Bay Road</u> Location	<u>Thomas Kaiser</u> Owner's Name
Map/Parcel #	<u>133 Bay Road Amherst MA 01002</u> Address
Lot #	<u>256-8236</u> Telephone #
<u>D.M.U. CONST. CRICKING MISTAKE</u> Installer's Name	<u>Hilltown Environmental Consulting</u> Designer's Name
<u>213 North East</u> Address	<u>Box 226 North Hatfield MA 01066</u> Address
<u>253-7402</u> Telephone #	<u>247-5464</u> Telephone #

Type of Building: Single Family Dwelling Lot Size 39,744 Sq. feet
Dwelling — No. of Bedrooms 3 Garbage Grinder (No)
Other — Type of Building _____ No. of persons _____ Showers (), Cafeteria ()
Other fixtures _____

Design Flow (min. required) 330 gpd Calculated design flow 378 gpd Design flow provided 378 gpd
Plan: Date July 19, 2003 Number of sheets 2 Revision Date _____
Title Sewage Disposal System Repair

Description of Soil(s) See Soil Eval. Form II
Soil Evaluator Form No. _____ Name of Soil Evaluator M. Thompson Date of Evaluation 6/25/03

DESCRIPTION OF REPAIRS OR ALTERATIONS
Replace entire system. See design for details

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

★ Signed Susan T Kaiser Date 7/24/03

Inspections _____



FORM 1 - APPLICATION FOR DSCP DEP APPROVED FORM 5/96

No. 03-11

THE COMMONWEALTH OF MASSACHUSETTS
Amherst BOARD OF HEALTH
CERTIFICATE OF COMPLIANCE

FEE 275⁰⁰
04#6328

Description of Work: Individual Component(s) Complete System

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

at 133 Bay 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. 03-11 dated _____ Approved Design Flow _____ (gpd)

Installer [Signature]
Designer: Mark Thompson Inspector [Signature] Date 9/26/03

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

FORM 3 - CERTIFICATE OF COMPLIANCE DEP APPROVED FORM 5/96

No. 03-11

THE COMMONWEALTH OF MASSACHUSETTS
Amherst BOARD OF HEALTH

FEE 275⁰⁰
04#6328

DISPOSAL SYSTEM CONSTRUCTION PERMIT

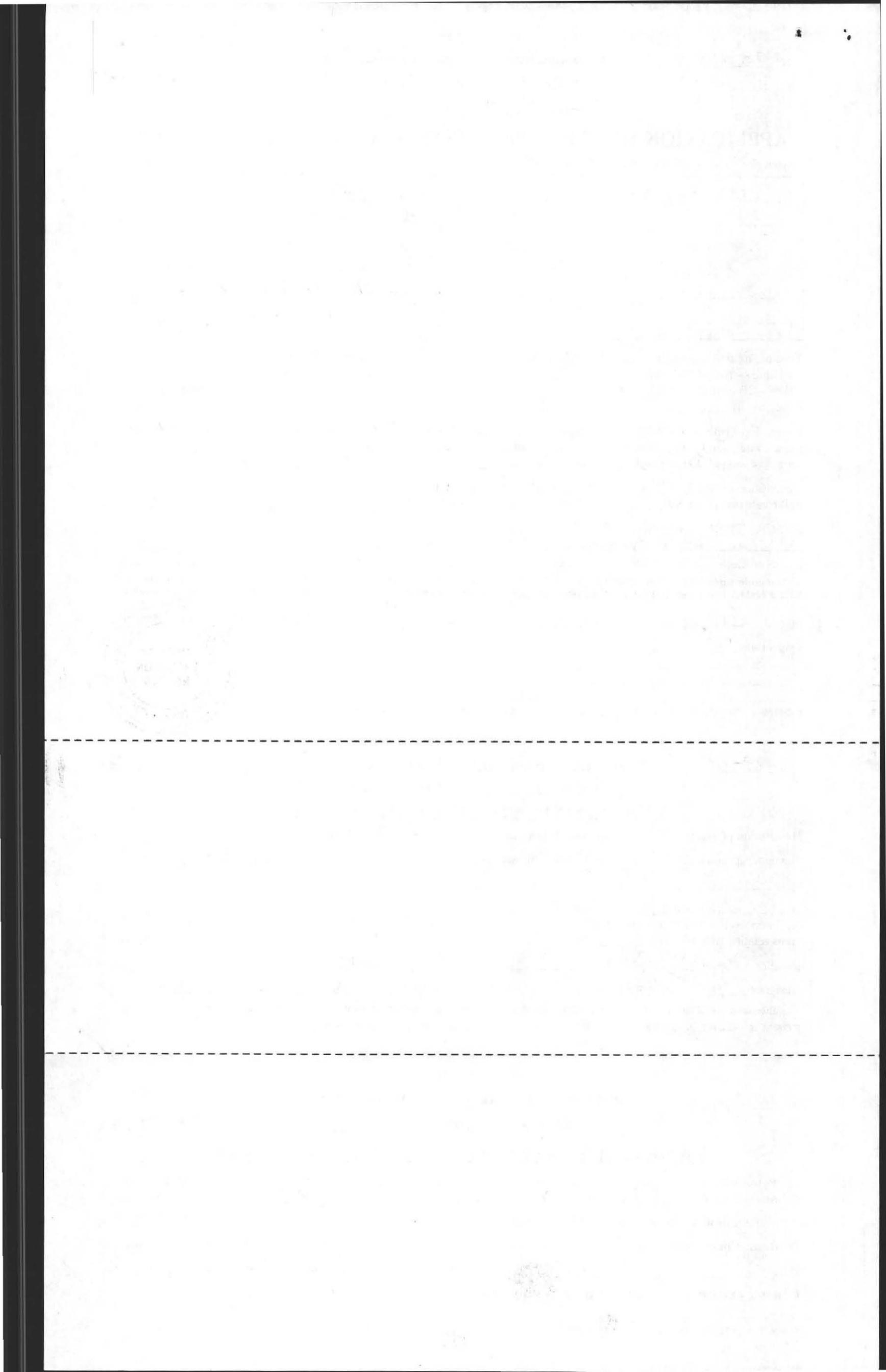
Permission is hereby granted to Construct () Repair () Upgrade () Abandon () an individual sewage disposal system at Thomas Kaiser 133 Bay Rd as described in the application for Disposal System Construction Permit No. _____ dated 7/19/03

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

Date 7, 2003 Board of Health [Signature]

FORM 2 - DSCP DEP APPROVED FORM 5/96

Rec. 7/24/03



TOWN WATER

FORM 11: Soil Evaluation Form

NO: 175⁰⁰ 1ST 2 hours 100⁰⁰ for each additional hour

Commonwealth of Massachusetts
Town of Amherst

Soil Suitability Assessment : On-Site Sewage Disposal

Performed By: MARV THOMPSON Date: 6/25/03
Witnessed By: DAVID ZAROZINSKI

Location Address of: Lot #	Owner's Name: <u>THOMAS KAISER</u> Address of: <u>133 BAY ROAD</u> Telephone:
New Construction <input type="checkbox"/> Repair <input checked="" type="checkbox"/>	

Office Review

Published Soil Survey Available? No Yes
Year Published _____ Publication Scale _____ Soil Map Unit _____
Drainage Class _____ Soil Limitations _____

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

Flood Insurance Rate Map:
Above 500 year flood boundary? No Yes
Within 500 year flood boundary? No Yes
Within 100 year flood boundary? No Yes

Wetland Area:
National Wetland Inventory Map (map unit) _____
Wetlands Conservancy Program Map (map unit) _____

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

Other 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 feet 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 _____

On-Site Review

Deep Hole Number ① Date: 6/25/03 Time _____
 Weather Sunny 90's
 Location (identify on site plan) _____
 Land Use Residential Slope (%) 5-6
 Surface Stone None
 Vegetation: Grass

Landform: _____

Position on Landscape (sketch on back) _____

Distances from:

Open Water Body 100 feet Drainageway 1 feet
 Possible Wet Area 100 feet Property Line 75 feet
 Drinking Water Well _____ 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
19	A _p	SE	10Y _r		Loose chum3
28"	B _w	SL	4/3	50"	FRIBL _c
108	C	SAND	2.5Y 5/4	10Y _r 5/4	MASSIVE Single granite loose

Parent Material (geologic) OUTWASH KANGAROO
 Depth to Bedrock 108
 Depth to Groundwater:
 Standing Water in the Hole 54"
 Weeping from Pit Face 50"
 Estimated Seasonal High Water 50"

On-Site Review

Deep Hole Number 2 Date: _____ Time _____
 Weather _____
 Location (identify on site plan) _____
 Land Use _____ Slope (%) _____
 Surface Stone _____
 Vegetation: _____

Landform: _____

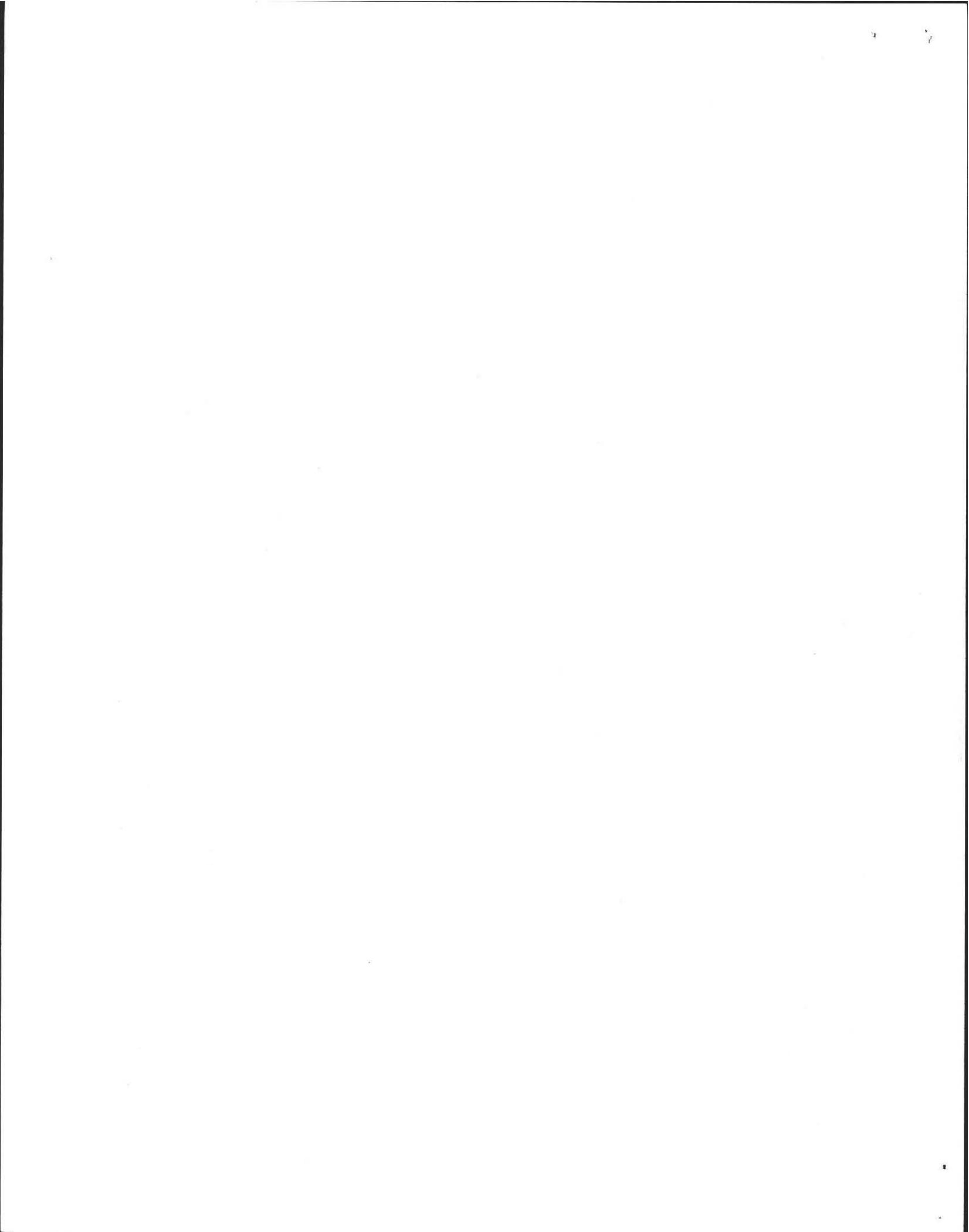
Position on Landscape (sketch on back) _____

Distances from:

Open Water Body _____ feet Drainageway _____ feet
 Possible Wet Area _____ feet Property Line _____ feet
 Drinking Water Well _____ 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
10					
20					
				45"	Same
110"					

Parent Material (geologic) _____
 Depth to Bedrock 110"
 Depth to Groundwater:
 Standing Water in the Hole 48
 Weeping from Pit Face 45"
 Estimated Seasonal High Water _____



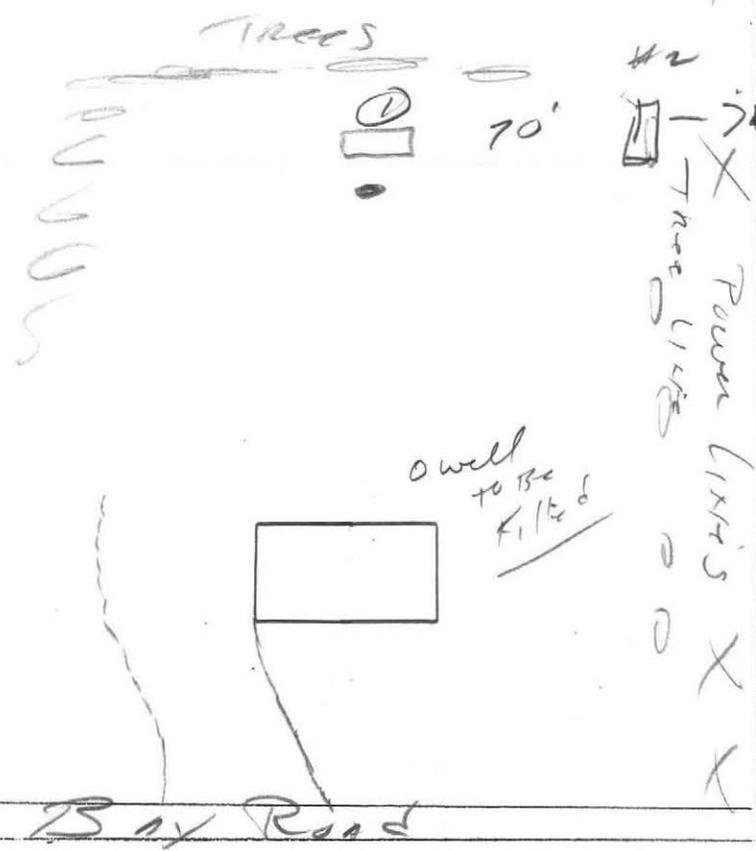
(2) DESIGN FOR
3 Bedrooms

TOWN WATER

FORM 12: Percolation Test
Location Address or Lot # 133 BAY ROAD

Commonwealth of Massachusetts
Town of Amherst

PERCOLATION TEST *		
DATE:	<u>6/25/03</u>	TIME:
Observation Hole #	<u>①</u>	
Depth of Perc	<u>45</u>	
Start Pre-soak	<u>9:35</u>	
End Pre-soak	<u>9:50</u>	
Time at 12"	<u>9:50</u>	
Time at 9"	<u>9:52³⁰</u>	
Time at 6"	<u>9:55</u>	
Time (9"-6")	<u>72</u>	
Rate Min./Inch		



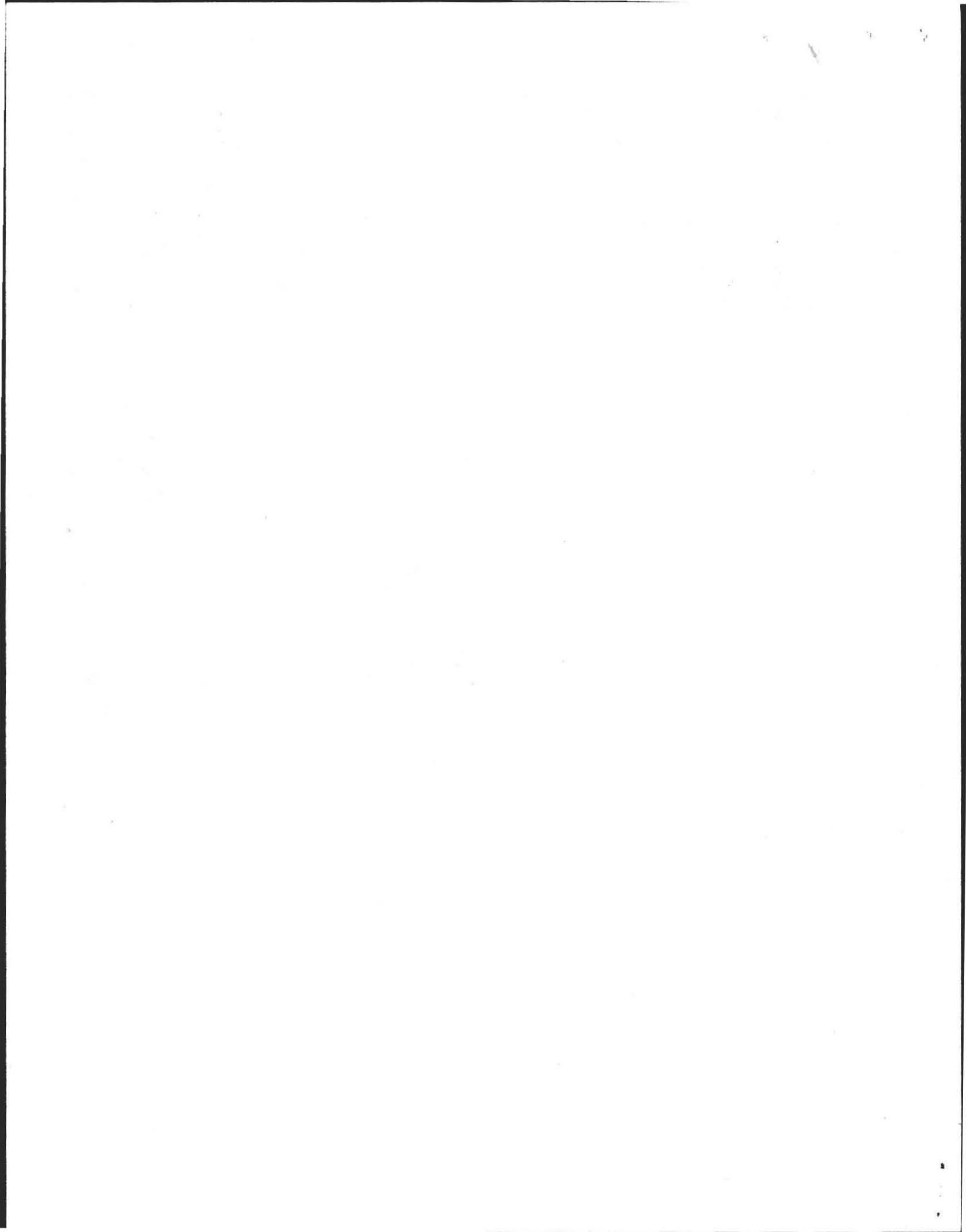
*Minimum of one percolation test must be performed in both the primary area and reserve area.

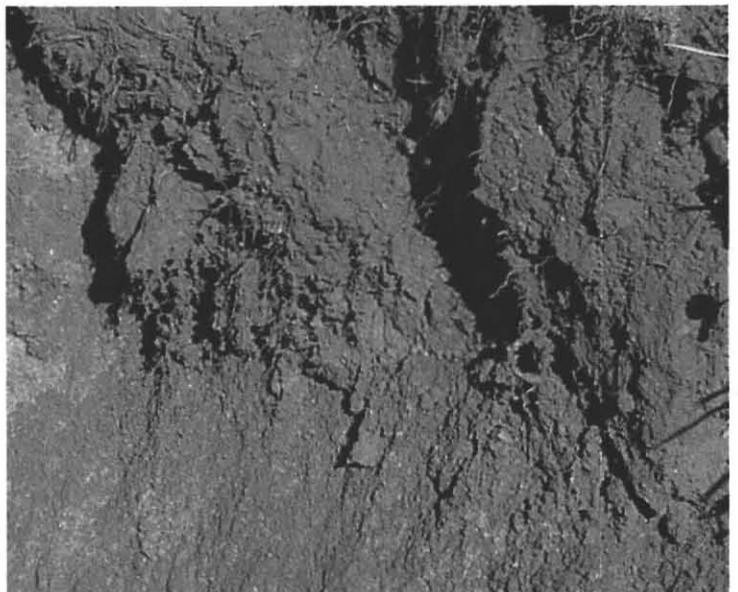
Site Passed Site failed

Performed by MARIE THOMPSON

Witnessed by DAVID ZAROZINSKI

Comments:

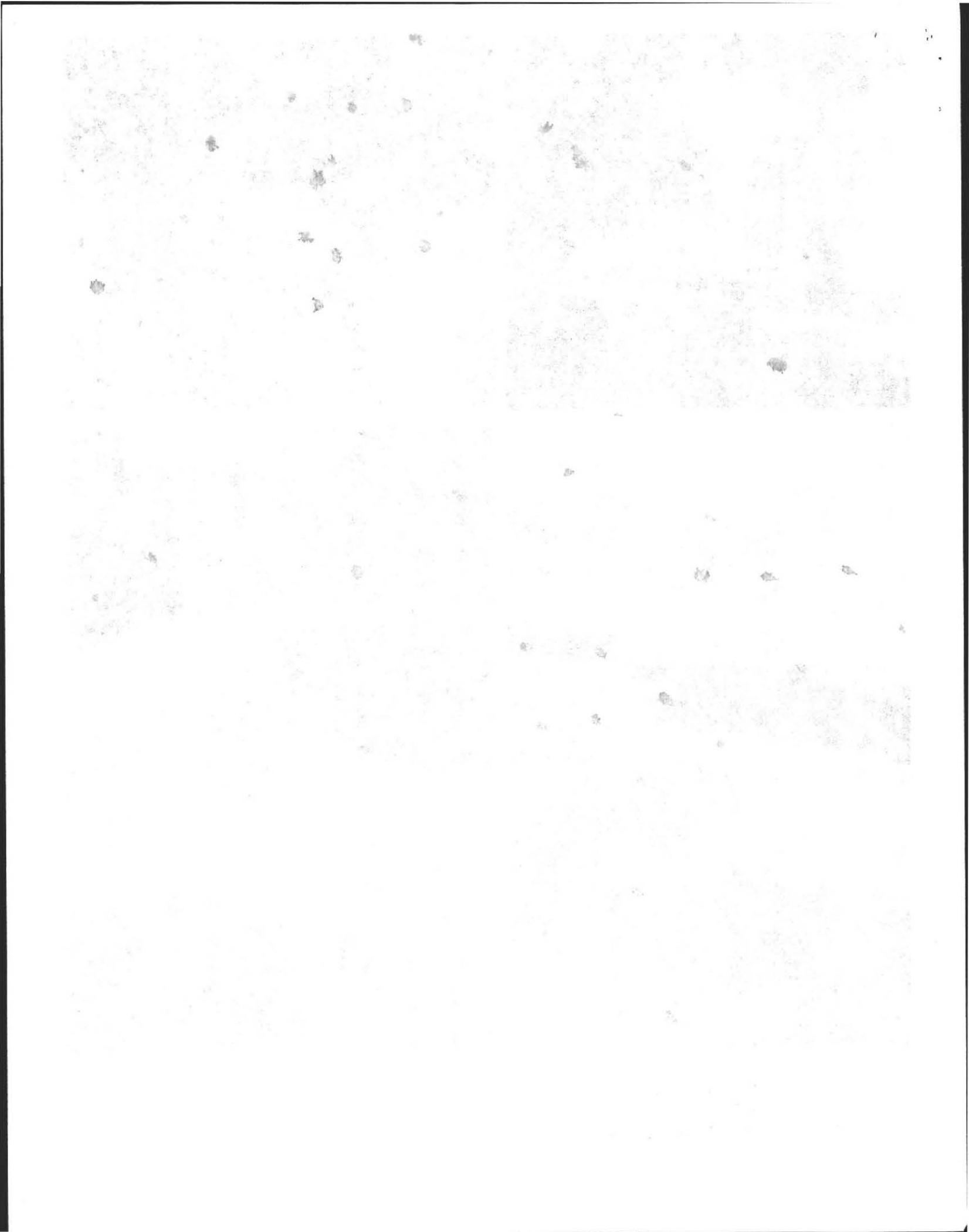




133 Bay Road Perc Test
6/25/03
Engineer: Mark Thompson
Owner: Susan & Thomas Kaiser

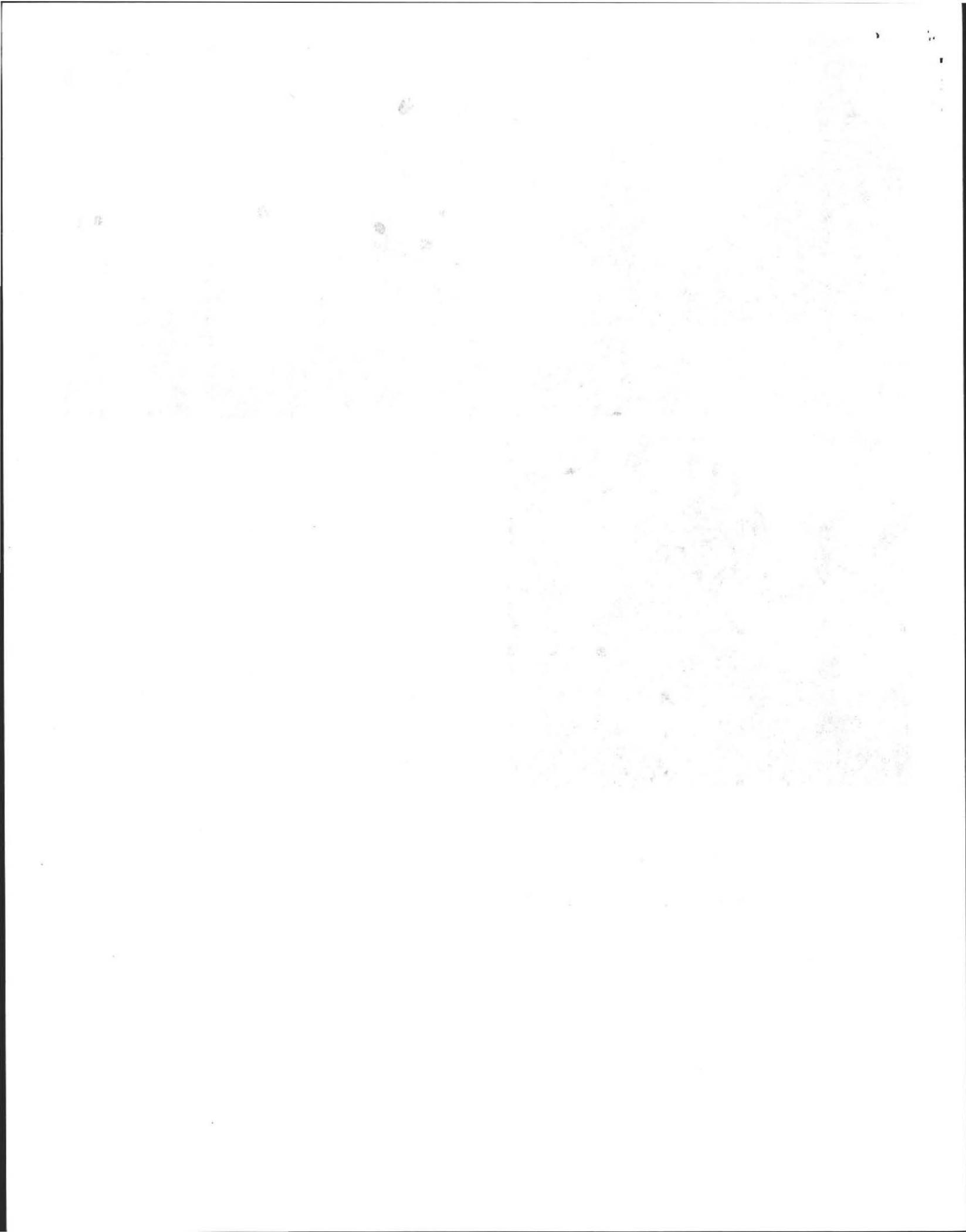


133 Bay Road 6/25/03
Deep Hole
Engineer: ~~Mark Thompson~~
MARK THOMPSON





133 Bay Road Perc Test
6/25/03
Engineer: Mark Thompson



SUSAN KAISER
THOMAS KAISER
133 BAY RD. 413-256-8236
AMHERST, MA 01002-3530

53-7054/2113
45133807

6328

DATE June 25, 2003

NO DUPLICATIONS ALLOWED SAFETY PAPER

PAY TO THE ORDER OF Town of Amherst

\$ 275.00

Two hundred seventy-five and 00/100 — DOLLARS

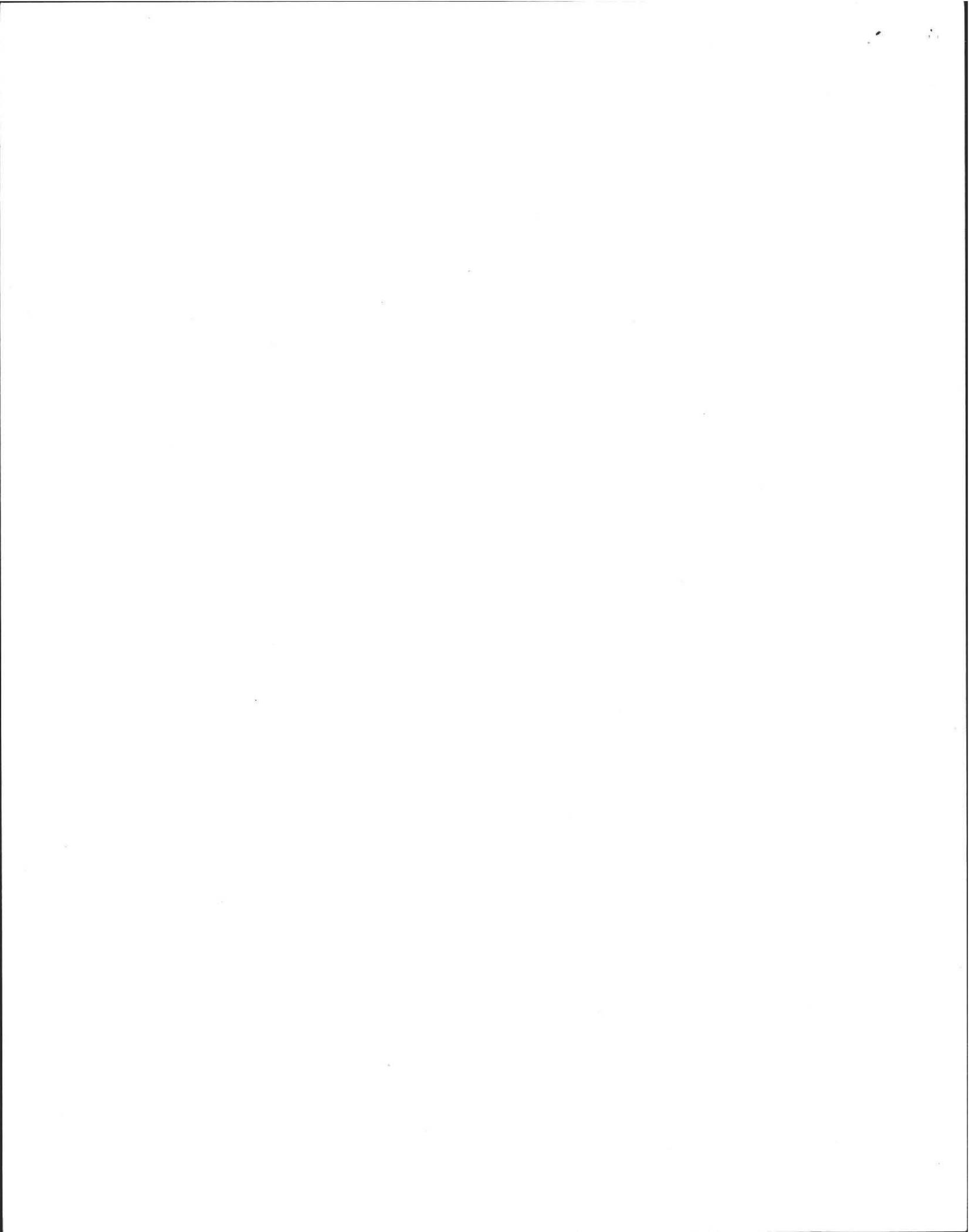
 Security Features Included. Details on Back.

 **Banknorth** 370 Main Street
Massachusetts Worcester, MA 01608

MEMO put test

Susan T Kaiser MP

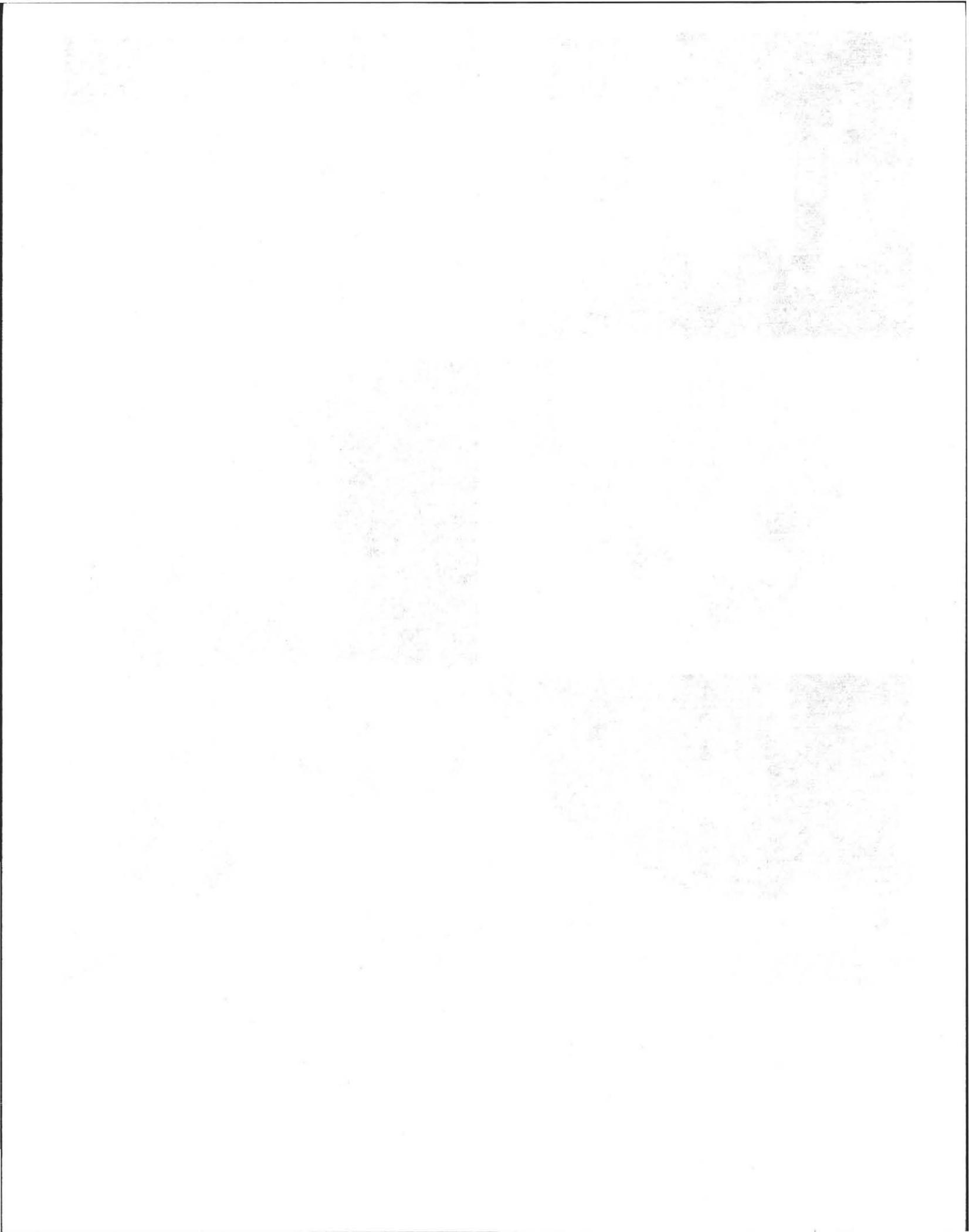
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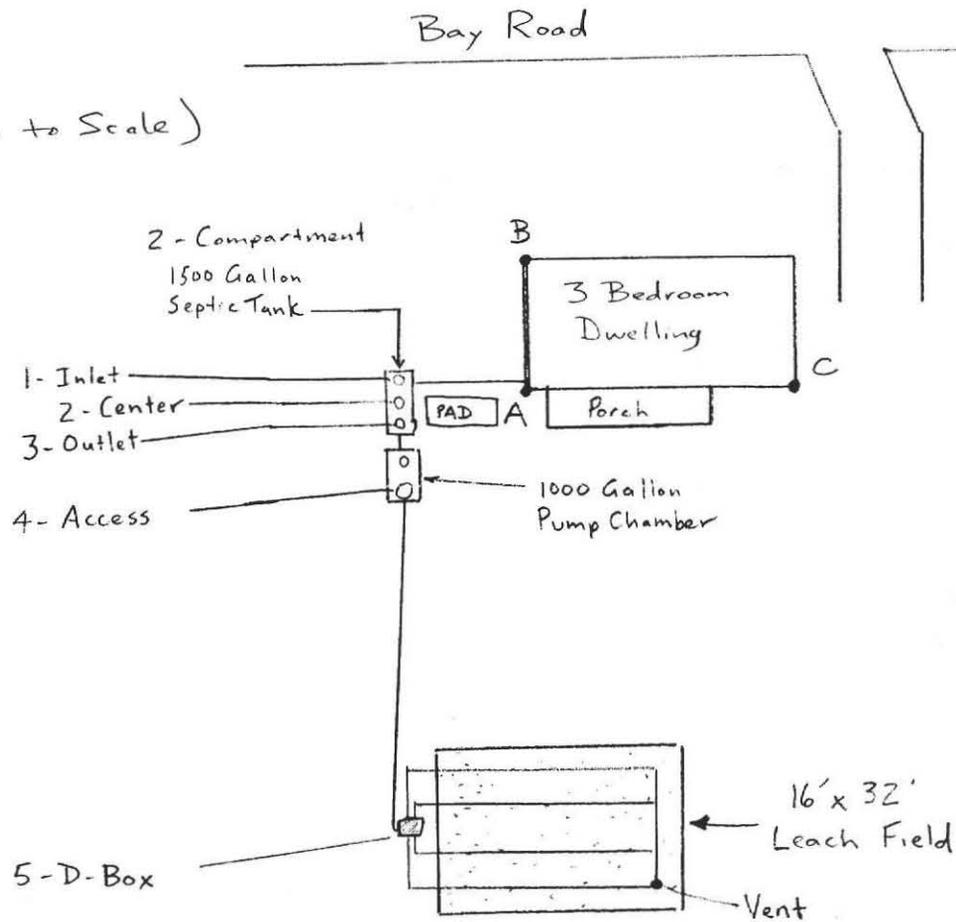
133 BAY RD(1)

OWNER: THOMAS
KAISER



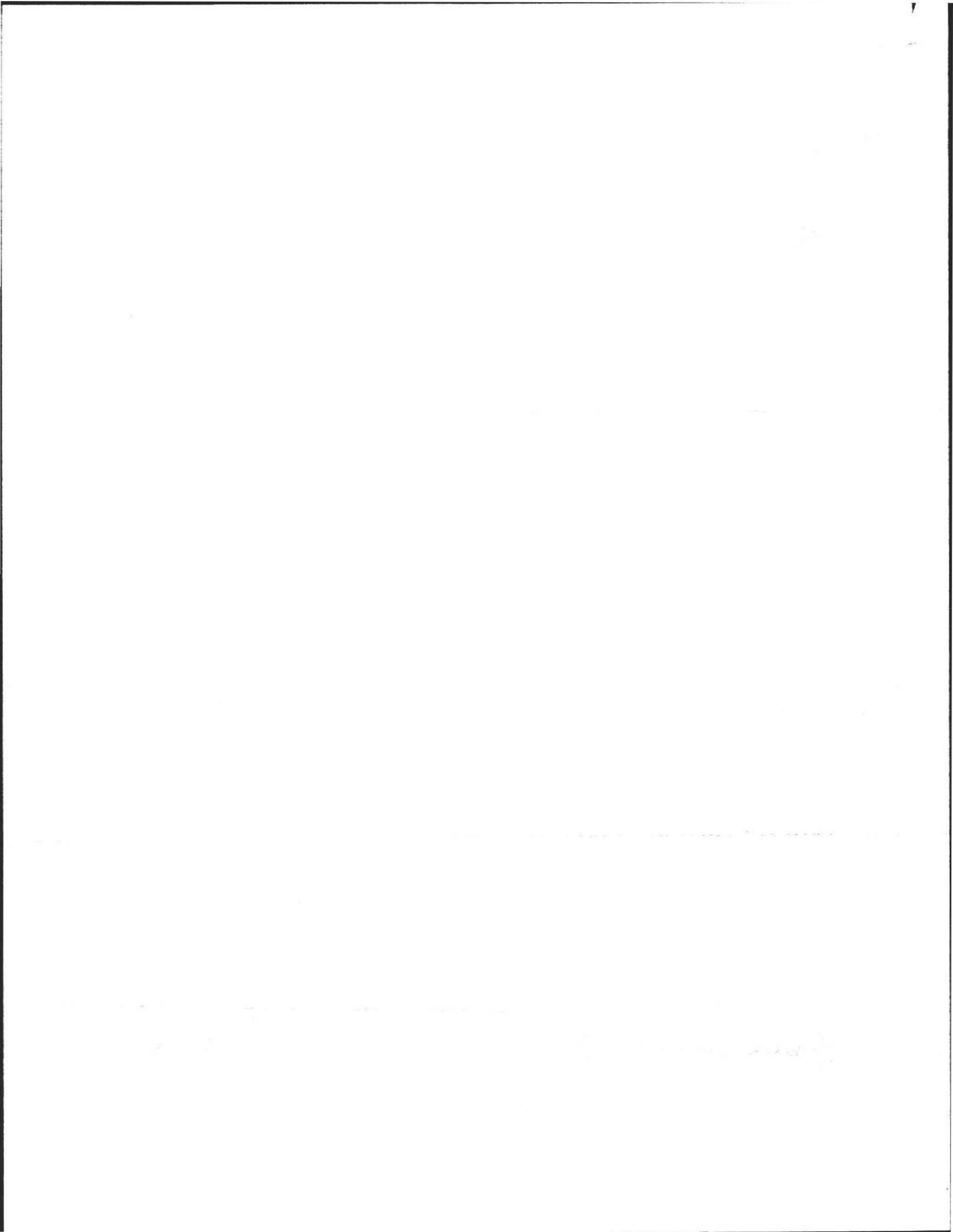
Septic System as Installed by DMO Construction
at 133 Bay Road, Amherst - Sept. 2003

(Sketch Not to Scale)



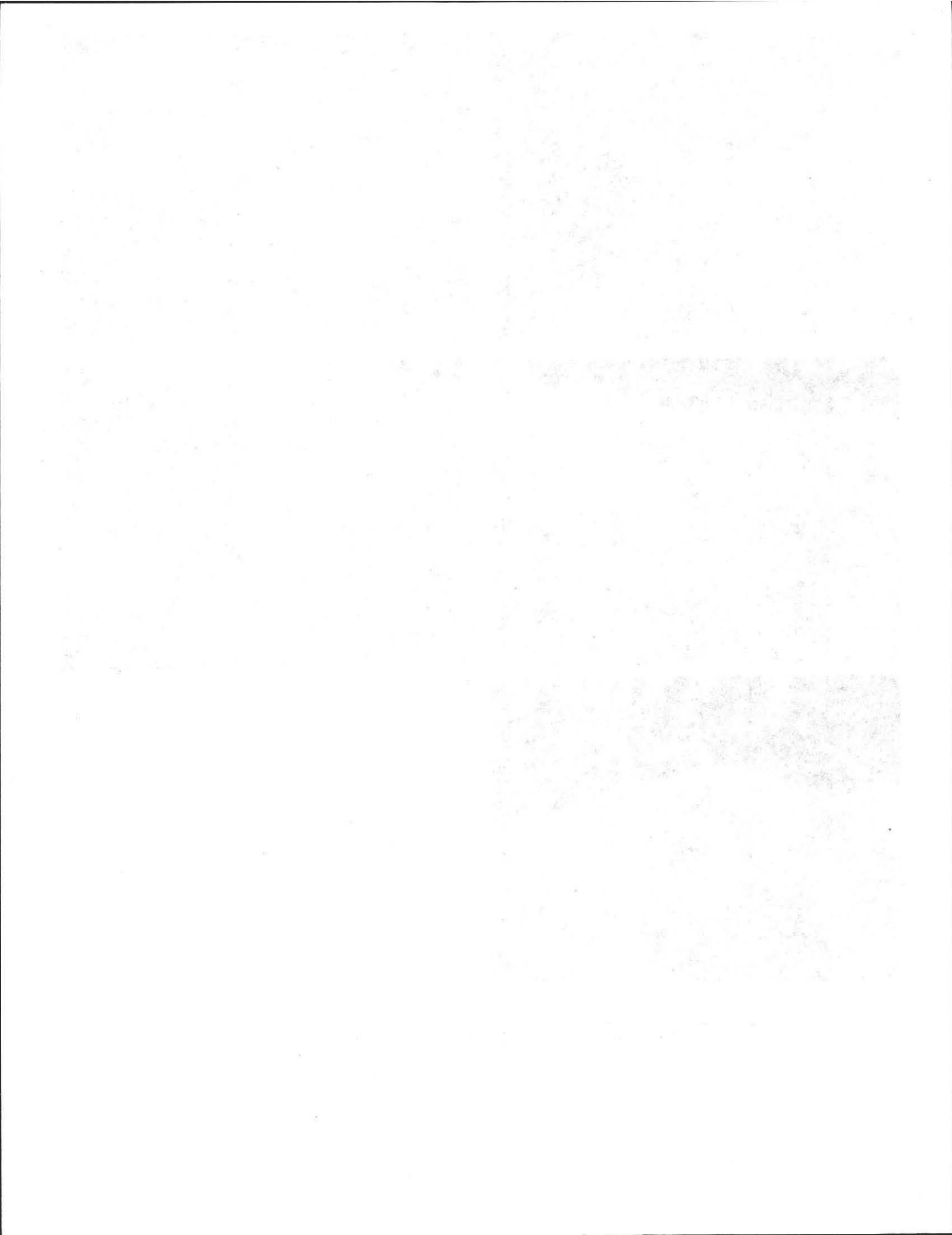
As Built Distances

Septic Tank	Inlet	A-1	39'
		B-1	46"
Center	A-2	39'	
	B-2	48'6"	
Outlet	A-3	38'6"	
	B-3	49'6"	
Pump Chamber Access	A-4	42'	
	B-4	58'	
D-Box	A-5	94'	
	C-5	112'	





133 BAY RD (2) OWNER: THOMAS KAISER



HOLE: TP-1 ELEVATION: 102.90'

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLES
0"-19"	Ap	SL	10YR 4/3	NONE
19"-28"	Bw	SL	2.5Y 5/4	NONE
28"-108"	C	S	10YR 6/4	10YR 5/6 @ 50"

ESTIMATED SEASONAL HIGH WATER TABLE @ 50" (ELEVATION = 98.73)

PERCOLATION RATE: < 2 MIN/INCH

HOLE: TP-2 ELEVATION: 101.69'

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLES
0"-10"	Ap	SL	10YR 4/3	NONE
10"-20"	Bw	SL	2.5Y 5/4	NONE
20"-110"	C	S	10YR 6/4	10YR 5/6 @ 45"

ESTIMATED SEASONAL HIGH WATER TABLE @ 45" (ELEVATION = 97.94)

SOIL EVALUATOR: MARK THOMPSON

WITNESS: DAVID ZAROZINSKI

DATE: JUNE 25, 2003

Need Bottom Inspection - BY ENGR

CONSTRUCTION NOTES

- CONTACT THE SYSTEM DESIGNER PRIOR TO STARTING THE INSTALLATION SO THAT FINAL INSPECTION ARRANGEMENTS MAY BE MADE.
- LOT IS SERVED BY TOWN WATER. EXISTING WELL IS CURRENTLY NOT IN USE AND SHOULD BE ABANDONED.
- BUILDING EXIT PIPE TO BE SCH. 40 PVC WITH A MINIMUM SLOPE OF 2%.
- EXISTING SEPTIC TANK TO BE PUMPED, CRUSHED AND BACKFILLED.
- SEPTIC TANK, PUMP CHAMBER AND D-BOX ARE TO BE PLACED ON A SIX-INCH BED OF STONE TO PREVENT SETTLING AND ARE TO INCLUDE APPROPRIATE SCH. 40 INLET AND OUTLET TEES AS SHOWN IN PROFILE DETAIL.
- REMOVE ALL TOPSOIL AND SUBSOIL (APPROX. 28") FROM DIRECTLY BENEATH LEACH FIELD AND FOR A DISTANCE OF FIVE FEET IN ALL DIRECTIONS AND REPLACE WITH CERTIFIED TITLE 5 FILL (AREA OF CUT AND FILL = 26' x 42').
- TO PREVENT SHORT CIRCUITING OF EFFLUENT THROUGH THE D-BOX A 2" TEE IS TO BE CEMENTED TO THE INLET AND THE FIRST TWO FEET OF EACH OUTLET PIPE IS TO BE LEVEL.
- SET LEACH FIELD AT ELEVATIONS NOTED IN PROFILE, BACKFILL TO PROVIDE A MINIMUM 12" OF COVER AND MOUND SLIGHTLY TO DIVERT SURFACE RUNOFF.
- ALL DISTURBED AREAS INCLUDING THE SOIL ABSORPTION SYSTEM TO BE LOAMED AND SEEDED (HAY MULCH MAY BE NEEDED ON SLOPES AND DURING WET TIMES OF YEAR).
- SYSTEM IS NOT DESIGNED TO ACCOMMODATE A GARBAGE DISPOSAL. EXISTING GARBAGE DISPOSAL MUST BE REMOVED.
- AVOID DRIVING OVER THE SOIL ABSORPTION SYSTEM.
- FIELD VERIFY DISTANCES TO PROPERTY LINES PRIOR TO ALL CONSTRUCTION AND OBSERVE LOCAL SETBACK REQUIREMENTS (SEE ACCOMPANYING PLOT PLAN FOR DIMENSIONS OF ENTIRE LOT).
- NOTIFY SYSTEM DESIGNER IMMEDIATELY OF ANY SITE CONDITIONS THAT ARE NOT NOTED OR INCONSISTENT WITH THOSE SHOWN ON PLAN.
- CONTRACTOR IS RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROL.
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH TITLE 5 OF THE STATE ENVIRONMENTAL CODE.

PUMP CHAMBER CONSTRUCTION NOTES

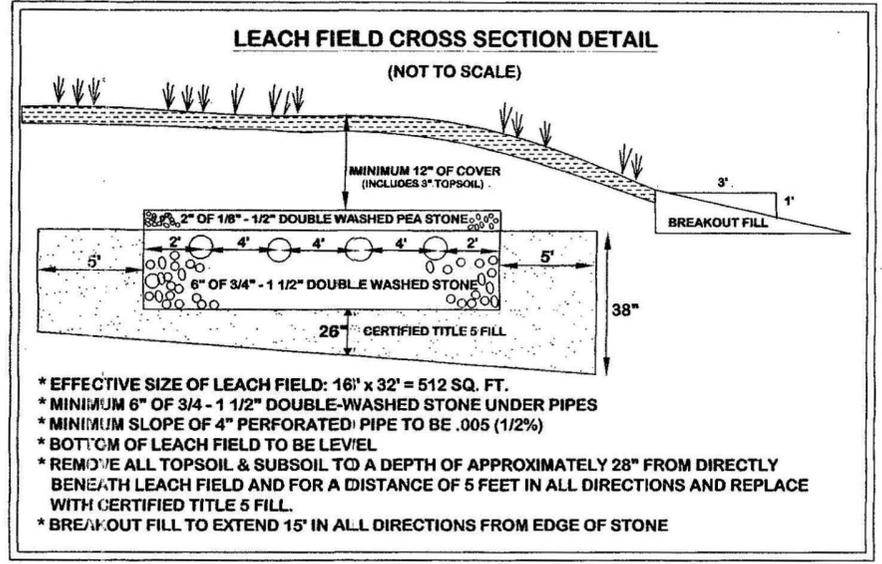
- PUMP CHAMBER TO BE A 1000 GALLON SEPTIC TANK (DIMENSIONS = 102" x 58" x 64").
- THE PUMP CHAMBER AND SEPTIC TANK SHALL BE MADE WATERPROOF AT SEAMS AND AROUND RISERS USING HYDRAULIC CEMENT.
- PUMP CHAMBER TO BE EQUIPPED WITH AN ALARM POWERED BY AN ELECTRICAL CIRCUIT SEPARATE FROM THAT OF THE PUMP.
- DAILY DCSING CYCLE = 3 DOSES/DAY @ 110 GALLONS/DOSE SET PUMP FLOATS AS FOLLOWS FOR A SINGLE DOSE OF 110 GALLONS:

LOWER LIMIT: 10" ABOVE TANK FLOOR
UPPER LIMIT: 18" ABOVE TANK FLOOR
ALARM: 24" ABOVE TANK FLOOR

NOTE: FLOAT LEVELS ARE FOR ABOVE SPECIFIED TANK ONLY, ADJUST ACCORDINGLY FOR TANKS OF DIFFERENT DIMENSIONS.
- THE 2" PRESSURE LINE MUST EITHER BE INSULATED, BURIED BENEATH THE FROST LINE OR LAID SUCH THAT ALL LIQUID DRAINS OUT OF THE PIPE WHEN THE PUMP SHUTS OFF.

DESIGN CALCULATIONS

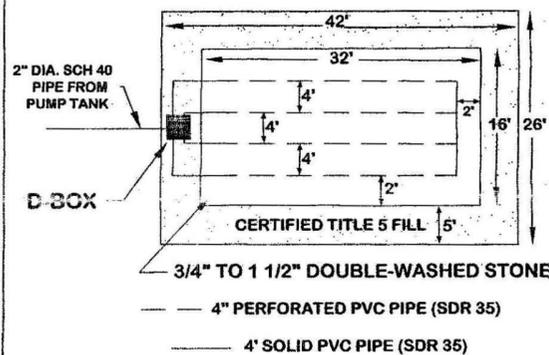
DESIGN DAILY FLOW RATE: 110 GPD/BEDROOM x 3 BEDROOMS = 330 GPD
 DESIGN PERC RATE: 5 MIN/INCH (TESTED @ < 2 MIN/INCH)
 SYSTEM LEACHING AREA: 16' x 32' = 512 SQ. FT.
 L.T.A.R. (CLASS 1 SOIL): 512 SQ. FT. x 0.74 GPD/SQ. FT. = 378 GPD



- * EFFECTIVE SIZE OF LEACH FIELD: 16' x 32' = 512 SQ. FT.
- * MINIMUM 6" OF 3/4" - 1 1/2" DOUBLE-WASHED STONE UNDER PIPES
- * MINIMUM SLOPE OF 4" PERFORATED PIPE TO BE .005 (1/2%)
- * BOTTOM OF LEACH FIELD TO BE LEVEL
- * REMOVE ALL TOPSOIL & SUBSOIL TO A DEPTH OF APPROXIMATELY 28" FROM DIRECTLY BENEATH LEACH FIELD AND FOR A DISTANCE OF 5 FEET IN ALL DIRECTIONS AND REPLACE WITH CERTIFIED TITLE 5 FILL.
- * BREAK-OUT FILL TO EXTEND 15' IN ALL DIRECTIONS FROM EDGE OF STONE

LEACH FIELD PLAN VIEW

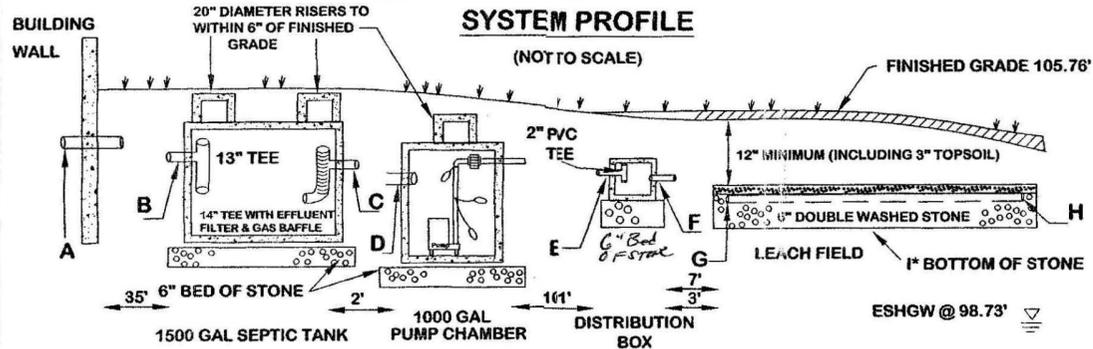
(NOT TO SCALE)



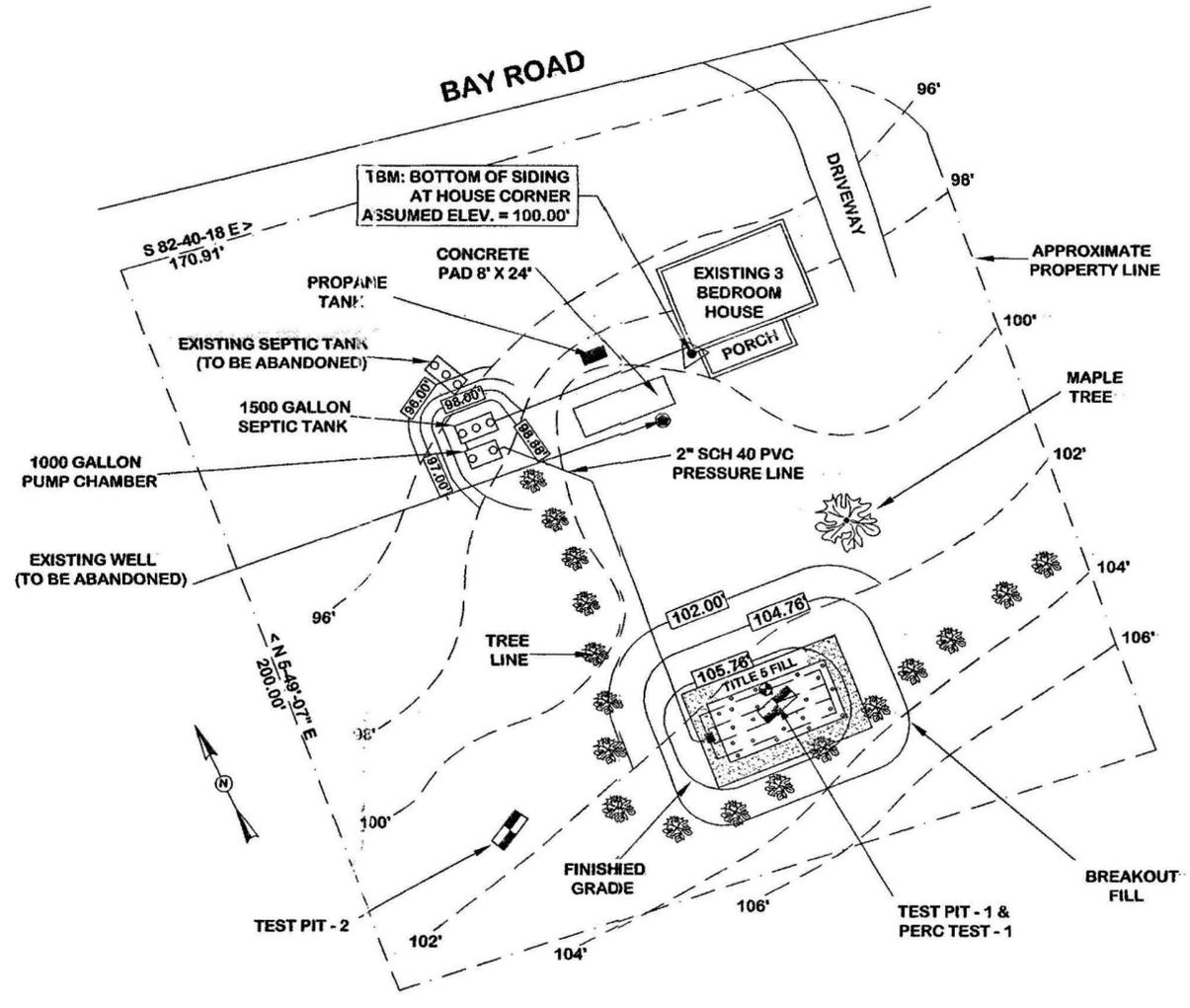
- * NUMBER OF DISTRIBUTION LINES: FOUR
- * DISTRIBUTION LINES TO BE SET 4 FEET APART ON CENTER AND 2 FEET FROM EDGE OF FIELD
- * ENDS OF DISTRIBUTION LINES TO BE CONNECTED USING 4" SOLID SDR 35 PIPE

SYSTEM PROFILE

(NOT TO SCALE)



INVERT ELEVATIONS	
A	97.50'
B	96.80'
C	96.55'
D	96.40'
E	104.67'
F	104.50'
G	104.43'
H	104.23'
I	103.73'



HILLTOWN ENVIRONMENTAL CONSULTING

P.O. BOX 226
 NORTH HATFIELD, MA 01066
 (413) 247-5464



LEGEND

- SCALE 1" = 30'
- BENCHMARK (TBM) BOTTOM OF SIDING @ HOUSE CORNER ASSUMED ELEVATION 100.00'
- EXISTING CONTOUR
- PROPOSED CONTOUR
- TEST PIT
- PERC HOLE

SURVEY: JUNE 25, 2003
 DRAWN: JULY 19, 2003
 REVISED:

TITLE:

SEWAGE DISPOSAL
 SYSTEM REPAIR
 133 BAY ROAD
 AMHERST, MA

CLIENT:

THOMAS KAISER
 133 BAY ROAD
 AMHERST, MA 01002
 (413) 256-8236