



APPLICATION

FOR PERCOLATION TESTING AND SITE EVALUATION

TEST DATE(S) _____ TEST TIME _____ A/P _____

AGENCY REVIEW: _____ DATE _____

DO NOT WRITE ABOVE THIS LINE

I HEREBY APPLY FOR THE NECESSARY TESTING/EVALUATION PRIOR TO ISSUANCE OF SEWAGE DISPOSAL SYSTEM PERMIT(S) TO:

CHECK AS NEEDED:

- ☐ CONSTRUCT NEW SEPTIC SYSTEM(S)
- ☐ REPAIR/ADD TO AN EXISTING SEPTIC SYSTEM
- ☐ REPLACE AN EXISTING SEPTIC SYSTEM

CHECK AS NEEDED:

- ☐ NEW STRUCTURE(S)
- ☐ ADDITION TO AN EXISTING STRUCTURE
- ☐ REPLACE AN EXISTING STRUCTURE

CHECK ONE:

- ☐ CREATE NEW LOT(S)
- ☐ BUILD ON AN EXISTING LOT IN A SUBDIVISION
- ☐ BUILD ON AN EXISTING PARCEL OF RECORD

IS THE PROPERTY WITHIN 2500' OF ANY RESERVOIR?

- ☐ YES
- ☐ NO

THE TYPE OF STRUCTURE IS:

- ☐ RESIDENTIAL WITH _____ PROPOSED BEDROOMS IN THE COMPLETED STRUCTURE (NOTE **UNKNOWN** IF APPROPRIATE)
- ☐ COMMERCIAL (PROVIDE DETAIL OF NUMBERS AND TYPES OF EMPLOYEES/ CUSTOMERS ON ACCOMPANYING PLAN)
- ☐ INSTITUTIONAL/GOVERNMENT (PROVIDE DETAIL OF NUMBERS AND TYPES OF EMPLOYEES/USERS ON ACCOMPANYING PLAN)

PROPERTY OWNER(S) Sandy Shane

DAYTIME PHONE _____ CELL _____ FAX _____

MAILING ADDRESS _____
STREET CITY/TOWN STATE ZIP

APPLICANT _____

DAYTIME PHONE _____ CELL _____ FAX _____

MAILING ADDRESS _____
STREET CITY/TOWN STATE ZIP

APPLICANT'S ROLE: DEVELOPER BUILDER BUYER RELATIVE/FRIEND REALTOR CONSULTANT

PROPERTY LOCATION
SUBDIVISION/PROPERTY NAME _____ LOT NO. _____

PROPERTY ADDRESS 631 Beetz Road
STREET TOWN/POST OFFICE

TAX MAP PAGE(S) _____ GRID _____ PARCEL(S) _____ PROPOSED LOT SIZE _____

AS APPLICANT, I UNDERSTAND THE FOLLOWING: THE SYSTEM INSTALLED SUBSEQUENT TO THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC SEWERAGE IS AVAILABLE. THIS APPLICATION IS COMPLETE WHEN ALL APPLICABLE FEES AND A SUITABLE SITE PLAN HAVE BEEN RECEIVED. I ACCEPT THE RESPONSIBILITY FOR COMPLIANCE WITH ALL M.O.S.H.A. AND "MISS UTILITY" REQUIREMENTS. APPROVAL IS BASED UPON SATISFACTORY REVIEW OF A PERC CERTIFICATION PLAN.

TEST RESULTS WILL BE MAILED TO APPLICANT. _____
SIGNATURE OF APPLICANT

HOWARD COUNTY HEALTH DEPARTMENT, BUREAU OF ENVIRONMENTAL HEALTH, WELL AND SEPTIC PROGRAM
3525-H ELLICOTT MILLS DRIVE, ELLICOTT CITY, MARYLAND 21043-4544 (410) 313-1771 FAX (410) 313-2648
TDD (410) 313-2323 TOLL FREE 1-877-4MD-DHMH

A/P

Ⓕ

Red Br
Cl Loam
Good Structure
~30% Rock

2'

Red Br
Sa Cl Loam
35-40%
Rock

3-3.5

>50%
Rock

Hard
Bottom

6'

Ⓖ

Or Br Cl
Loam ~25%
Rock, Good
Structure

2'-2.5'

Red Br
Sa Cl Loam
~40% Rock

Hard
Bottom

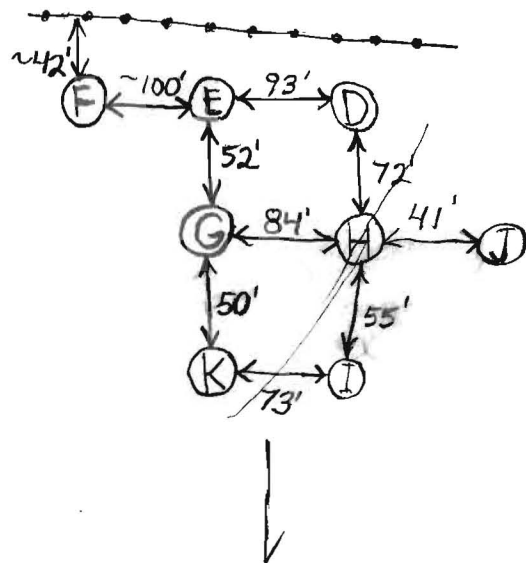
6.5'

Ⓕ

Similar
to Other
Holes

30-40%
Rock
Down to
6.5'

Then >
50% Rock



Ⓕ

Similar
to Other
Holes

Too Much
Rock Below 6'

Hard
Bottom

8'

Ⓕ

Or Br Cl
Loam, Good
Structure
~25% Rock

2'-2.5'

Red Br Sa
Cl Loam

~50% Rock

4.5'

>50%
Rock

Hard
Bottom

6'

Ⓕ

Similar
to Other
Holes

>50%
Rock
Below 6'

7'

DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2nd INCH	P/F/H
5/3/05	F	6' V	2:01	2:05:20			
5/4/05	G	4' / 6.5' V	2:01	2:05:20	2:13	8	
		2'	2:11	2:17	2:29:30	12 1/2	
	H	25' / 7' V	11:35:50	11:41	11:52	11	
	I	8' V					
	J	6' V					
	K	2' 9" / 7' V	10:57:40	11:00:35	11:04:10	3 1/2	
		5' → Rate O.K.					
	H	4' - 40 sec 5' - ~1 min					

REMARKS

SANITARIAN B. Baker BACKHOE R. Heap OTHERS _____

TEST HOLES USED IN SDA _____ AVG. PERC TIME _____ SQ. FT/BR _____

TRENCH WIDTH _____ INLET DEPTH _____ MAX. BOT DEPTH _____ EFFECTIVE SW _____



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APPLICANT _____

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PROPERTY LOCATION
SUBDIVISION/PROPERTY NAME 631 Beetz Road LOT NO. _____

PROPERTY ADDRESS _____
STREET TOWN/POST OFFICE

TAX MAP PAGE(S) _____ GRID _____ PARCEL(S) _____ PROPOSED LOT SIZE _____

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A/P

①
Br Cl Loam
~15% Rock
2'-2.5'

Red Br
Sa Cl Loam
Close to
50% Rock
6.5'-7'

~75%
Rock
Hard
Bottom
9'

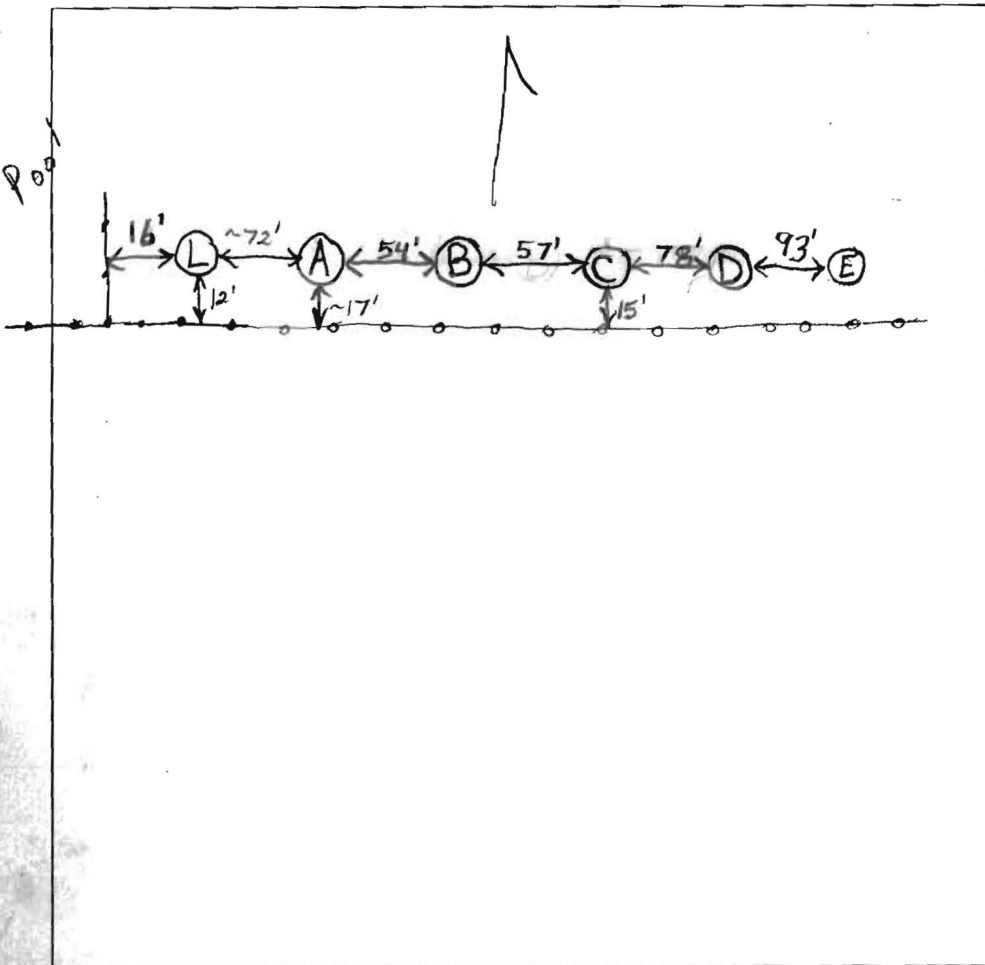
②
Red Br
Sa Cl
Loam
~50% Rock
3'

>50%
Rock
Hard
Bottom
4.5'

③
Or Br
Cl Loam
Good Structure
20-25% Rock
2'-2.5'

Red Br
Sa Cl
Loam
~40% Rock
4.5'-5'

>50%
Rock
7'



④
Red Br Cl
Loam, Good
Structure
~25% Rock
2'-2.5'

Red Br
Sa Cl
Loam
~50%
Rock
5.5'

>50% Rock
Hard
Bottom
6'

⑤
>50%
Rock Below 5'
7'

DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2nd INCH	P/F/H
5/3/05	A	3' / 9' V	11:55:15	12:01:45	12:11:15	9 1/2	
		7'	12:19:40	12:20:20	12:21:10	< 1	F
		1'	12:36:45	12:39:15	Missed 2nd Inch		O.K.
	B	3' V	Hard Bottom				
	C	7' V					
	E	6' V	1:37:15	1:38	1:39:15	75 sec	
	L	4.5' / 7' V	> 2 min. per inch on shaft				
			< 2 min. per inch at 6'				

REMARKS Rate in Bottom of ④ around 1 minute per inch

SANITARIAN B. Baker BACKHOE R. Heap OTHERS _____

TEST HOLES USED IN SDA _____ AVG. PERC TIME _____ SQ. FT/BR _____

TRENCH WIDTH _____ INLET DEPTH _____ MAX. BOT DEPTH _____ EFFECTIVE SW _____



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TDD (410) 313-2323 TOLL FREE 1-877-4MD-DHMH

AP (M)

Or Br
Cl Loam
~20% Rock

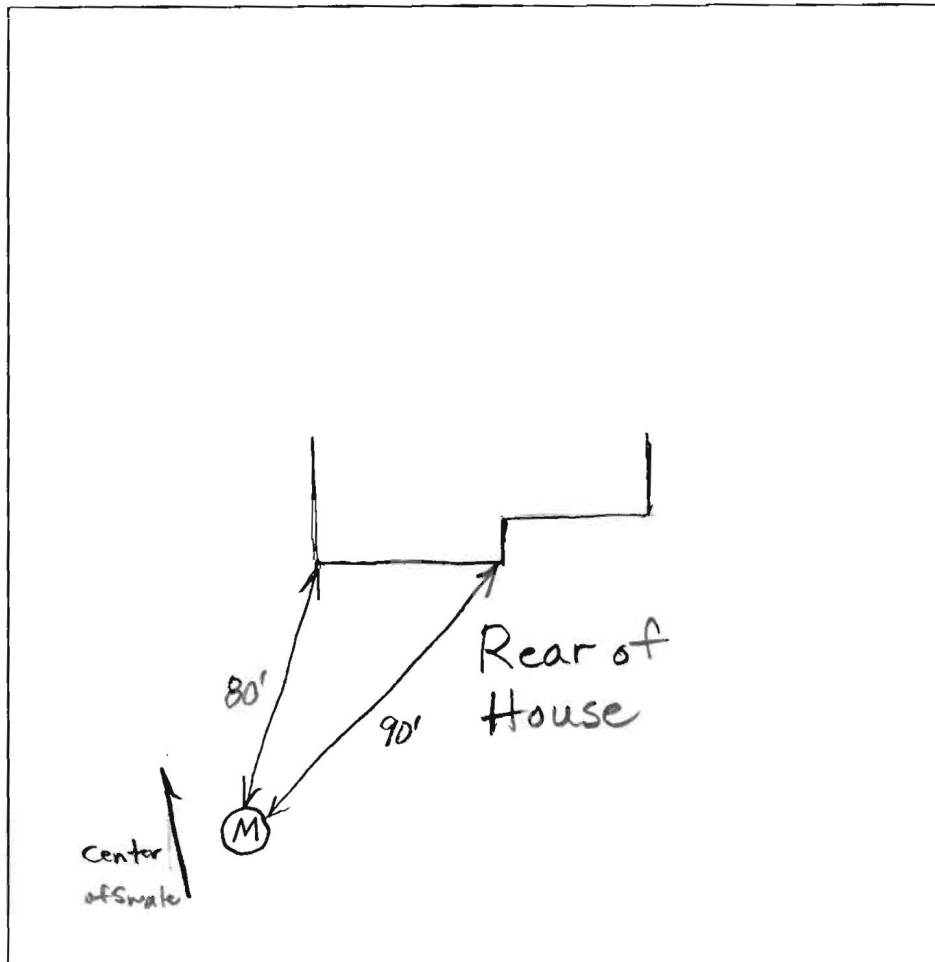
35'4.5'

Red Br

SaCl Loam
~35%
Rock

7.5'

Hard
Bottom



DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2nd INCH	P/F/H
5/4/05	M	4.5' / 7.5'		1:53	2:00:30	7 1/2	

REMARKS

SANITARIAN B. Baker BACKHOE R. Heap OTHERS

TEST HOLES USED IN SDA AVG. PERC TIME SQ. FT/BR

TRENCH WIDTH INLET DEPTH MAX. BOT DEPTH EFFECTIVE S/W



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

410-537-3000 • 1-800-633-6101

Robert L. Ehrlich, Jr.
Governor

Kendl P. Philbrick
Secretary

Michael S. Steele
Lt. Governor

Jonas A. Jacobson
Deputy Secretary

May 18, 2005

Mr. Robert Weber, Director
Bureau of Environmental Health
Howard County Health Department
7178 Columbia Gateway Drive
Columbia, Maryland 21046

RE: Sandra Shane Property
631 Beetz Rd.

Dear Mr. Weber:

I have reviewed the site evaluation data from your file and visited the site with Brian Baker of your office on May 10. The results of our site evaluation at the referenced property indicate the site is suitable for the installation of an innovative elevated bed system with advanced pretreatment. Because of limitations of the site due to slope and size of area where a four-foot soil treatment zone is available, advanced pretreatment of effluent prior to discharge to the bed is required. This will allow a loading rate to be used that will decrease the size of the system thereby mitigating the negative effect of the slope, while also requiring less materials to build the system. Pretreatment unit(s) may overflow to a pump chamber for direct distribution to the gravel bed or the pumping station may utilize a smaller capacity pump and discharge to a siphon located above the proposed elevated bed. A good comparison of some pretreatment units can be found at <http://www.epa.gov/region1/assistance/ceitts/wastewater/techs.html>. The property owner may wish to contact private consultants if they feel that other options for this property can be proposed, eg. an advanced pretreatment unit followed by drip tubing installed on a sand bed or sand mounds. The following sections summarize requirements necessary for proceeding with the project.

Pretreatment

Employing advanced pretreatment on septic tank effluent is beneficial from the standpoint of enhancing the soil absorption component of the system's performance and extending its life. There are a variety of devices and methods for providing advanced pretreatment, including constructed wetlands, aerobic wastewater treatment plants, fabric biofilters, single pass and recirculating sand filters, peat filters, composting toilets, and greywater re-use systems. Aerobic pretreatment units require maintenance of a blower unit and periodic removal of sludge from the treatment tank, as well as maintenance of one pumping station. The property owner's consultant

Letter to: Mr. Robert Weber, Director
Re: Sandra Shane Property
Page: 2

may have preferences for a pretreatment unit to complement the soil absorption system selected. I am available to provide further guidance as to how pretreatment options could be incorporated into a system design if requested by you, the property owner, or their consultant.

Soil Absorption Component

The soil loading rate and linear loading rates are based on a soil description approach since coarse fragment content of the soil made infiltrometer testing impractical. According to the attached Tyler reference, a 0.7 gpd/sq.ft. loading rate for pretreated effluent can be used. Linear loading rates of less than 9 gpd/ linear foot are required. Gravel may be replaced with chambers in the elevated bed to alleviate some of the problems that may occur in bringing materials for the system's construction onto the site. Based on the area available on the property it appears that the site may only be capable of accommodating a design flow of approximately 750 gallons per day in elevated beds allowing for an initial installation and one replacement system. This flow is in the range that could be expected to be generated from a 5 bedroom home.

Septic Tank

The existing septic tank may be utilized in the treatment train. Additional tankage to accommodate pretreatment components and/or pumping chamber will depend on the pretreatment method selected.

Plans and Specifications

A private consultant should be retained by the property owner to provide final plans and specifications for the system utilizing the design parameters contained here-in and the enclosed Wisconsin at-grade design information. Pressure distribution is required. The consultant should contact Brian Baker, of the Howard County Health Department or me to assist in the location of the test pits G, H, K, and I where the system is to be located. Once plans are complete, two sets of plans must be submitted to the On-Site Systems Division of the Wastewater Permits Program and to the local Approving Authority for review before final approval to construct the system can be given.

Agreement and Easement

An Agreement and Easement must be signed by all parties, recorded in the land records and returned to the local Approving Authority before permits to construct can be issued. The Agreement and Easement establishes the regulatory conditions associated with the experimental project and provides monitoring access for State and County personnel.


Letter to: Mr. Robert Weber, Director
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Page: 3

Linked Deposit

Financial assistance may be available for this project through the Department of the Environment's Linked Deposit Program. Information concerning this loan program can be found by entering linked deposit in the search box on the MDE website at www.mde.state.md.us.

A copy of the site evaluation data is enclosed. Please forward a copy of this letter and the attachments to the property owner. If you have questions regarding this matter please call me at (410) 537-4156.

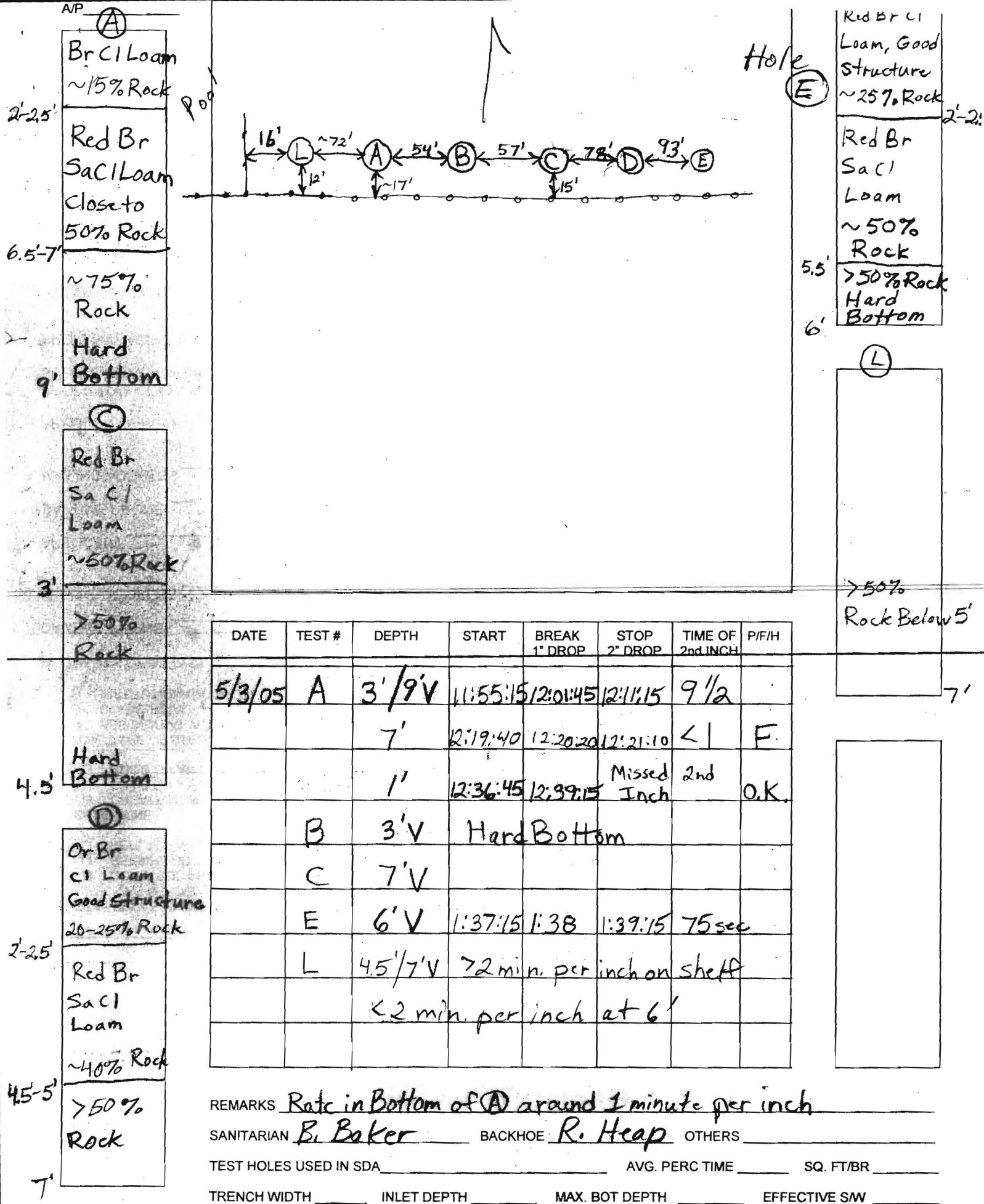
Sincerely,


Barry Gloffelty, R.S., Regional Consultant
On-Site Systems Division
Wastewater Permits Program

Attachments

BG:je

cc: Mr. Jay Prager



AP

(M)

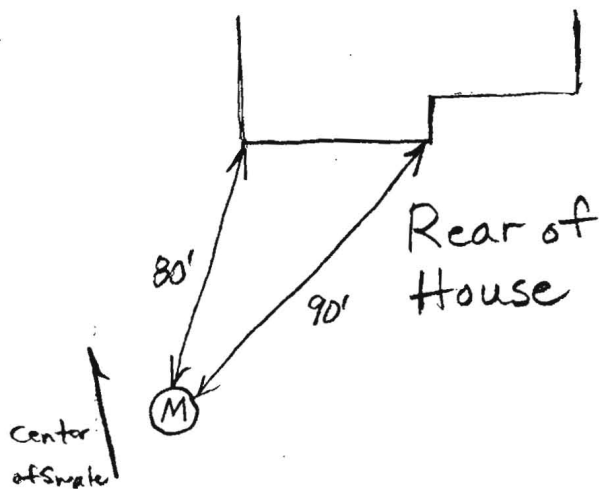
Or Br
Cl Loam
~20% Rock

35'4.5'

Red Br

SaCl Loam
~35%
Rock

7.5'

Hard
Bottom

DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2nd INCH	P/F/H
5/4/05	M	4.5' / 7.5'		1:53	2:00:30	7 1/2	

REMARKS

SANITARIAN B. Baker BACKHOE R. Heap OTHERS _____

TEST HOLES USED IN SDA _____ AVG. PERC TIME _____ SQ. FT/BR _____

TRENCH WIDTH _____ INLET DEPTH _____ MAX. BOT DEPTH _____ EFFECTIVE SAW _____

Red Br
Cl Loam
Good Structure
~30% Rock

2'

Red Br
Sa Cl Loam
35-40%
Rock

3-3.5'

>50%
Rock

6'

Hard
Bottom

Or Br Cl
Loam ~25%
Rock, Good
Structure

2'-2.5'

Red Br
Sa Cl Loam
~40% Rock

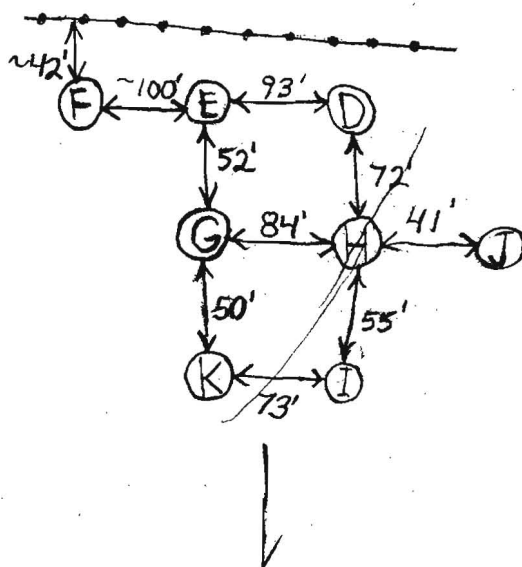
Hard
Bottom

Similar
to other
Holes

30-40%
Rock

Down to
6.5'

Then >
50% Rock



Hole
I

Similar
to other
Holes

Too Much
Rock Below 6'

Hard
Bottom

Or Br Cl
Loam, Good
Structure
~25% Rock

2'-2.5'

Red Br Sa
Cl Loam
~50% Rock

4.5'

>50%
Rock

Hard
Bottom

Similar
to other
Holes

>50%
Rock
Below 6'

DATE	TEST #.	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2nd INCH	P/F/H
5/3/05	F	6'V	2:01	2:05:20			
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		2'	2:11	2:17	2:29:30	12 1/2	
	H	25'/7'V	11:35:50	11:41	11:52	11	
	I	8'V					
	J	6'V					
	K	2'9"/7'V	10:57:40	11:00:35	11:04:10	3 1/2	
		5' → Rate O.K.					
	H	4' - 40 sec 5' - ~1 min					

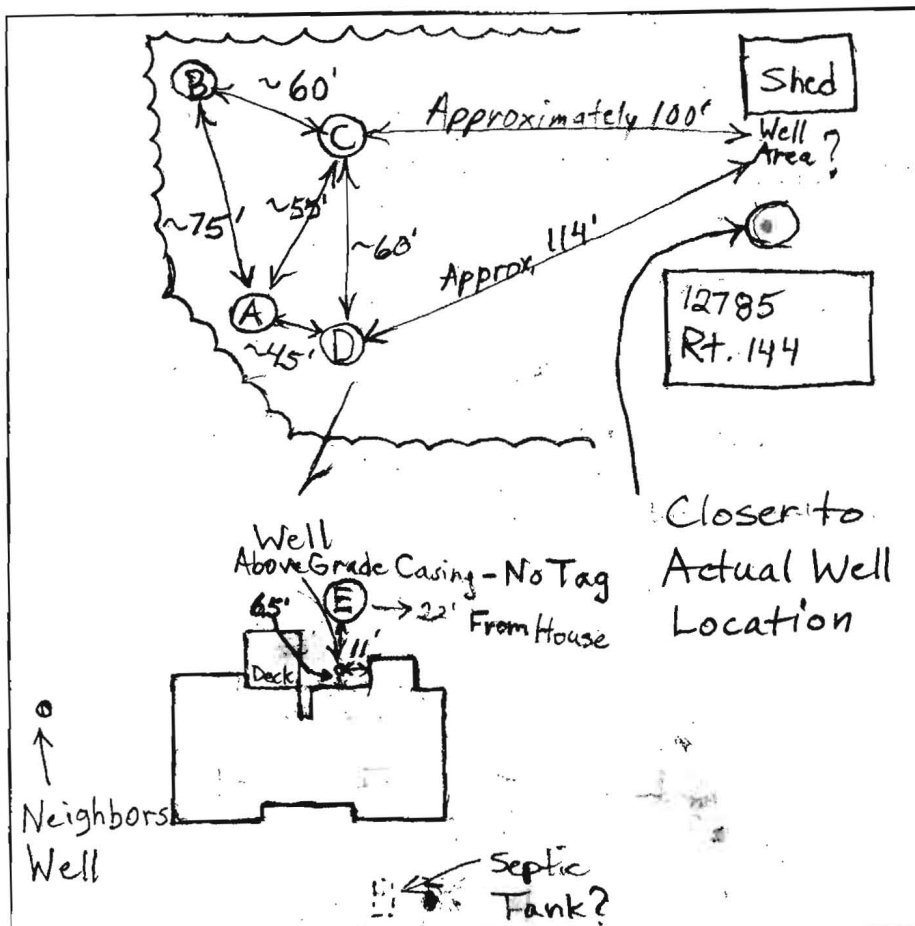
REMARKS

SANITARIAN B. Baker BACKHOE R. Heap OTHERS _____

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TRENCH WIDTH _____ INLET DEPTH _____ MAX. BOT DEPTH _____ EFFECTIVE S/W _____

A/P (A)
 Or Br Sa
 Loam
 30-35% Rock
 1.5'
 Beige Sand
 30-35% Rock
 5'
 ~50% Rock
 Hard Bottom
 6.5'
 (B)
 Or Br Sa
 Loam
 ~35% Rock
 1'
 Beige Sand
 ~35% Rock
 6.5'
 ~50% Rock
 Hard Bottom
 8'
 (C)
 Hard Bottom
 1.5-2.5'



(D)
 Or Br Sa
 Loam
 30-35% Rock
 1.5'
 Beige Sand
 30-35% Rock
 4'
 ~50% Rock
 Hard Bottom
 7.5'
 (E)
 Or Br
 SiCl Loam
 ~10% Rock
 4'
 Br Sa
 Loam
 35-40% Rock
 5.5'
 Caving Water at 7' and Rising
 8'

Rt. 144

DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2nd INCH	P/F/H
9/9/05	A	2' / 6.5'		2nd inch	→ 30 seconds	(F)	
	B	8' V				(F)	
	C	15' 2.5' V				(F)	
	D	7.5' V				(F)	
	E	4' / 8' V				(F)	
Tested at Various Locations with a perc stick in top 1 1/2' of Soil - Slowest Rate was 11 minutes							

REMARKS Water Moved on Shelf at 4' in E

SANITARIAN B. Baker BACKHOE Fyock OTHERS

TEST HOLES USED IN SDA AVG. PERC TIME SQ. FT/BR

TRENCH WIDTH INLET DEPTH MAX. BOT DEPTH EFFECTIVE SW