

LAYOUT 8/22/05 INSP 4 \_\_\_\_\_  
INSP 2 \_\_\_\_\_ INSP 5 \_\_\_\_\_  
INSP 3 \_\_\_\_\_ INSP 6 \_\_\_\_\_

ISSUE DATE: 7/11/05  
APPROVAL DATE: 11/1/05

P 522897  
A 518263

**PERMIT**  
**INDEXED**  
**SANDMOUND SYSTEM**  
**ON-SITE SEWAGE DISPOSAL SYSTEM**  
**HOWARD COUNTY HEALTH DEPARTMENT**  
**BUREAU OF ENVIRONMENTAL HEALTH**  
TAX ID# 05-353580

Hatfields Equipment IS PERMITTED TO INSTALL  ALTER

ADDRESS: 13785 Burntwoods Rd., Glenelg 21737 PHONE NUMBER: 301-854-6172

SUBDIVISION: \_\_\_\_\_ LOT NUMBER: \_\_\_\_\_

ADDRESS: 14101 Howard Road PROPERTY OWNER: Mark & Anna Smith

SEPTIC TANK CAPACITY (GALLONS): 1500 OUTLET BAFFLE FILTER REQUIRED

PUMP CHAMBER CAPACITY (GALLONS): 1500 COMPARTMENTED TANK REQUIRED

NUMBER OF BEDROOMS: 4

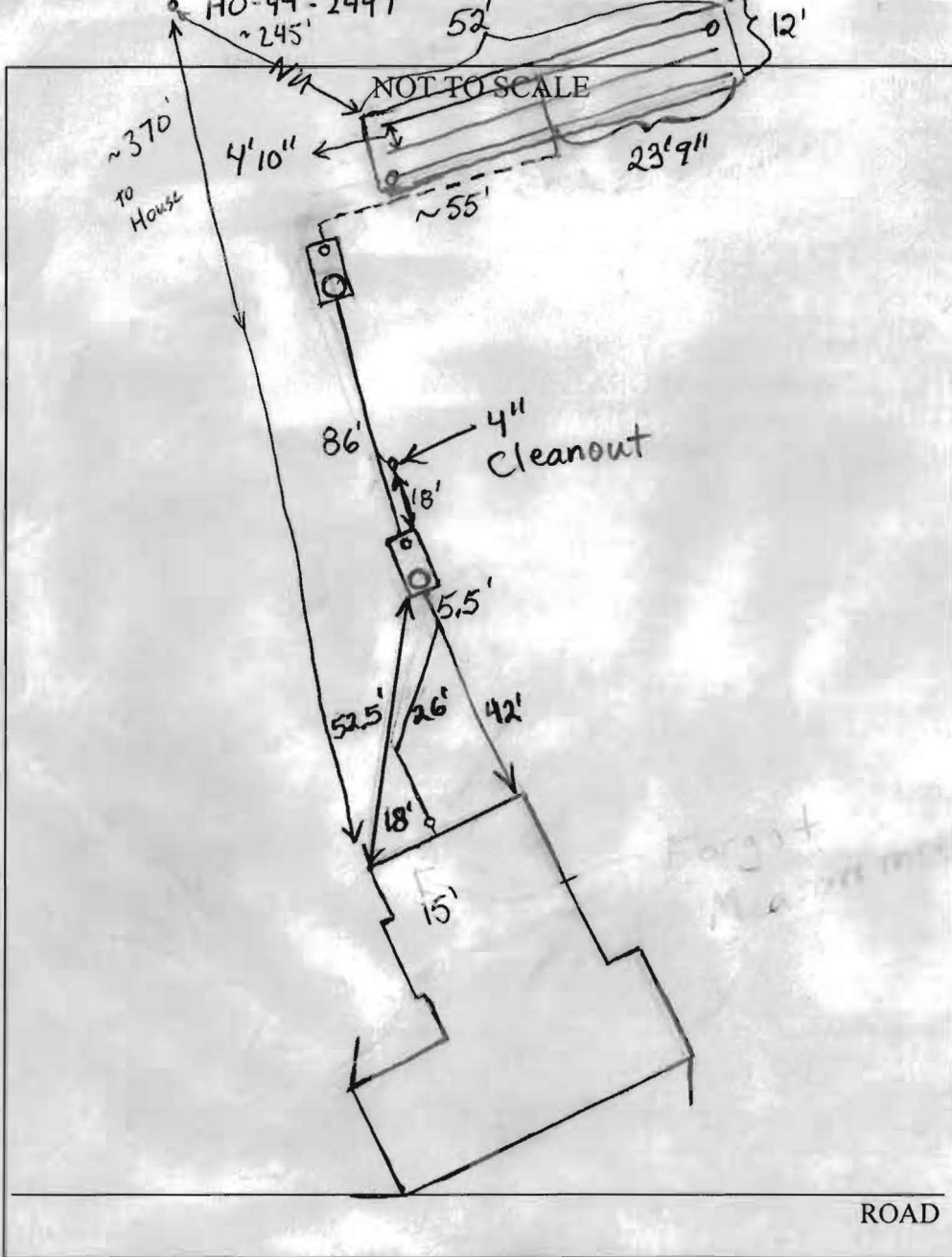
LOCATION:	Sand mound to be installed, see approved plan for location and elevations.
NOTES:	Sand mounds should be staked and keep heavy equipment off location.

PLANS APPROVED: John A. Boris DATE: 6/15/04

NOTES: PERMIT VOID AFTER 2 YEARS  
CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION FOR ALL INSTALLATIONS  
WATER TIGHT SEPTIC TANKS REQUIRED  
ALL PARTS OF SEPTIC SYSTEM SHALL BE 100 FEET FROM ANY WATER WELL UNLESS SPECIFICALLY AUTHORIZED  
MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS UNLESS SPECIFICALLY AUTHORIZED  
CONTRACTOR RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE REGULATIONS, GUIDELINES AND THE TERMS OF THIS PERMIT

**NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS  
RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM  
PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT  
ALL 410-313-1771 FOR INSPECTION OF SEPTIC SYSTEM**

A518263



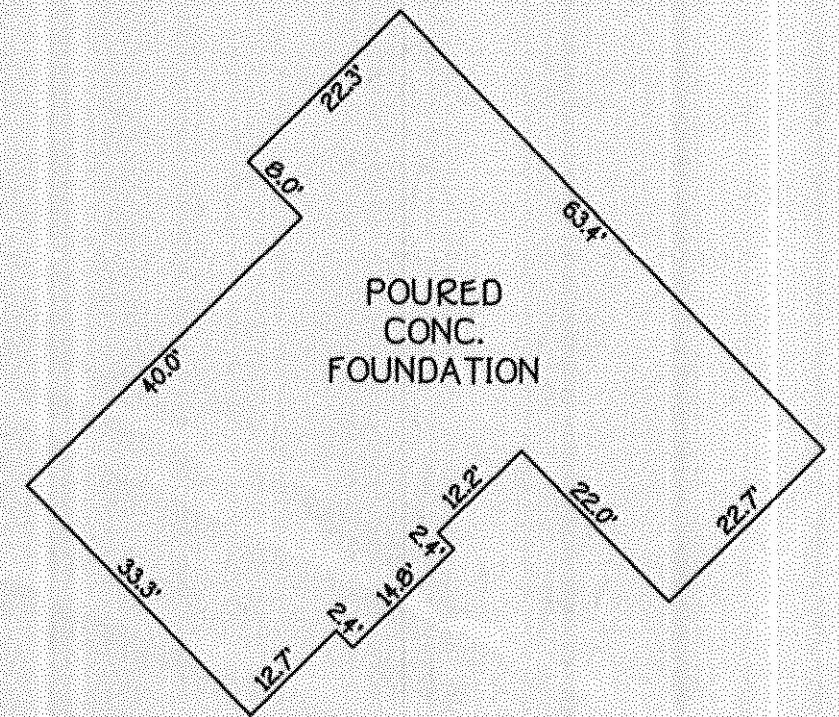
SEPTIC TANK DATA	
SEPTIC TANK 1 LEVEL	Yes
CAPACITY	1500 GAL
SEAM LOC	Babylon Top
TANK LID DEPTH	
2-Comp. BAFFLES	Yes
BAFFLE FILTER	No
MANHOLE LOC	Front
6" PORT LOC	Rear
WATERTIGHT TEST	No
SEPTIC TANK 2 LEVEL	Yes
CAPACITY	1500 GAL
SEAM LOC	Top
TANK LID DEPTH	3'-3.5'
BAFFLES	Front
BAFFLE FILTER	No
MANHOLE LOC	Rear
6" PORT LOC	Front
WATERTIGHT TEST	No

PRE-CONSTRUCTION 8/22/05 Mound installation area will need to be adjusted, Contour not as shown on plans. Will need INSTALLATION to check with transit. Keep septic tanks far enough downhill so that they will have less than 3' of cover. BB 8/25/05 Mound site plowed. Top and bottom of mound is level from one side to the other per Hatfields. They said there was some fill on mound site which they removed. BB 8/29/05 Pump tank set. Hatfields had to fix laterals. Some holes were spaced incorrectly. Bed specs. are close to what is required by plan. Need final pump and alarm test and measurement. BB 11/1/05 Pump & Alarm Test okay. ~ 2 1/2' of pressure in laterals.

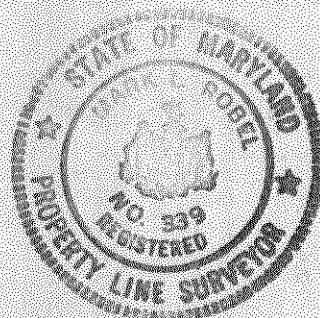
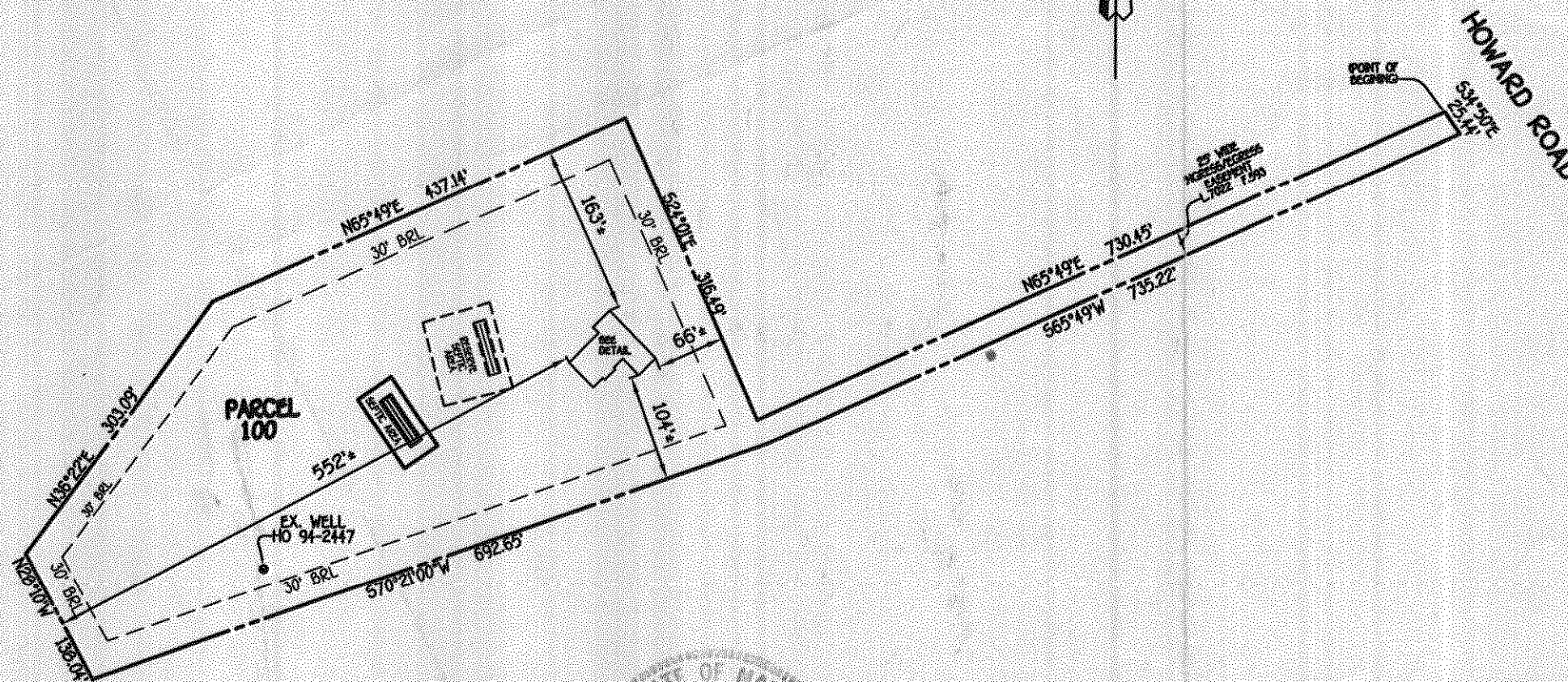
FINAL INSPECTOR Salvador A. Wrighton DATE OF APPROVAL 11/1/05  
 alarm test and measurement. BB 11/1/05 Pump & Alarm Test okay. ~ 2 1/2' of pressure in laterals.

**GENERAL NOTES:**

- 1) THIS LOCATION DRAWING IS PREPARED FOR THE BENEFIT OF THE CLIENT SIGNING THE HOUSE LOCATION SURVEY APPROVAL FORM INsofar AS IT IS REQUIRED BY A LENDER OR TITLE INSURANCE COMPANY OR ITS AGENTS IN CONNECTION WITH THE CONTEMPLATED TRANSFER, FINANCING OR REFINANCING OF THE PROPERTY SHOWN HEREON. UNLESS INDICATED AS BEING A BOUNDARY SURVEY, THIS LOCATION DRAWING IS NOT INTENDED FOR USE IN THE ESTABLISHMENT OF PROPERTY LINES AND IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATIONS OF FENCES, GARAGES, BUILDINGS OR OTHER EXISTING OR FUTURE IMPROVEMENTS. AS A RESULT, THIS LOCATION DRAWING DOES NOT PROVIDE FOR ACCURATE IDENTIFICATION OF PROPERTY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR SECURING FINANCING FOR RE-FINANCING.
- 2) SUBJECT PROPERTY IS SHOWN IN ZONE C ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP OF HOWARD COUNTY, MARYLAND, COMMUNITY PANEL No. 24004400268 EFFECTIVE DEC. 4, 1986.
- 3) THE OFFSETS FROM BUILDING LINE TO PROPERTY LINE AS SHOWN ON THE PLAT HEREON ARE TO AN ACCURACY OF PLUS OR MINUS 1' (±)
- 4) NO TITLE REPORT FURNISHED. SUBJECT TO ALL EASEMENTS, RIGHTS OF WAY AND CONDITIONS OF RECORD.
- 5) THE EXISTING WELL(S) SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO- 94 -2447) HAS BEEN FIELD LOCATED BY FISHER, COLLINS AND CARTER, INC. PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.



DETAIL:  
1"=20'



*Mark J. Bold*  
PROFESSIONAL LAND SURVEYOR DATE 7/07/05  
REG. # 339

B.R.L. = BUILDING RESTRICTION LINE  
TOP OF FOUNDATION ELEV. = 531.3'

**HOUSE LOCATION DRAWING**

FOUNDATION LOCATION: 7/06/05  
FINAL LOCATION: \_\_\_\_\_  
BOUNDARY SURVEY: \_\_\_\_\_

SCALE: 1"=150'  
DATE: 07/07/05  
DRAWN BY: V.L.J.  
CHECKED BY: M.L.R.  
PROJECT No.: 61773

TAX MAP \*27 PARCEL 100  
\*14101 HOWARD ROAD  
FIFTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
DEED REF. LIBER 5078, FOLIO 0597

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
(410) 461 - 2955

WALL CHECK

Lots of Poison Ivy!

TEST DATA

NAME Ed Hinson FILE NO A/8263  
 LOCATION Hw. Howard Rd. COUNTY Howard  
TM29 P100 DATE 5/21/99  
 GRID \_\_\_\_\_ E \_\_\_\_\_  
 RECORDED BY B. Baker / K. Pinkley \_\_\_\_\_ N \_\_\_\_\_

HOLE NO.	TEST NO.	DEPTH	CLOCK TIME	ELAPSED TIME	MEASUREMENT	REMARKS (Method, Moisture, Biopores)
3	a <u>NA</u>	22"	1:20 1:30 stopped	presoak 10 min.	top Nail middle Nail	Water leaking out of side of obs. holes through rocky side 2 1/2' from porch hole (1st test hole top pit - sidewall Bleeding)
3	b	21"	1:34 2:29 4:20	presoak 55 min. <u>111 min.</u>	top nail to middle nail middle to bottom Nail	6 ft. from observation pit
3	c	12"	1:51 2:46 4:24	presoak 55 min. 149 min. or	top nail to middle nail 1 5/8" tall 5/8" in 98 min. <u>Fail</u>	4 ft. from observation pit
3	d	5'	2:08 2:16 2:46	presoak 8 min. 30 min.	top nail to middle nail middle to bottom	Bottom of obs. pit. <u>Pass on per test @ 5'</u> hot too slow @ shallow depths

TEST DATA

NAME <u>Hinson</u>	FILE NO <u>A/8263</u>
LOCATION <u>Howard Rd</u>	COUNTY <u>Howard</u>
	DATE <u>5/21/99</u>
	GRID _____ E
RECORDED BY <u>B. Baber</u>	N

HOLE NO.	TEST NO.	DEPTH	CLOCK TIME	ELAPSED TIME	MEASUREMENT	REMARKS (Method, Moisture, Biopores)
2	a	22"	3:20 3:22 3:27	presoak 2 min. <u>5 min.</u>	top to middle nail middle to bottom nail	PASS Time
2	b	40"	3:46 3:53 4:08 4:17 4:17	presoak 7 min. <u>15 min.</u> 31 min.	top to middle nail middle to bottom nail 3 1/2"	PASS Time



**MARYLAND DEPT. OF THE ENVIRONMENT**  
**ONSITE SEWAGE DISPOSAL SYSTEM**  
**SITE EVALUATION REPORT**  
 SOIL PROFILE DESCRIPTION

FILE NO. *A 1P263*  
 MD. GRID:  
 TAX MAP/B/P: *Tax Map 27 Parcel 100*  
 SUBDIVISION: *Hinson Property*  
 DATE: *5/21/99*  
 BY: *RJ Pinkley*

LOT	SECTION	DEPTH	TEXTURE	MATRIX COLOR	MOTTLES DESCRIPTION	STRUCTURE	CONSISTENCE	%ROCK BY VOL.	REMARKS (Caving, moisture, etc.)
HOLE <i>1a</i>									
		<i>0-1'</i>	<i>grL</i>	<i>mid Brn</i>					<i>vertical strikes of shaly schist bed at 6" + deeper, no refusal shell at 1 1/2 ft</i>
		<i>1'-3'</i>	<i>gr</i>	<i>yel Brn @ samey/14</i>		<i>refusal @ 3'</i>			<i>Too rocky Fail</i>
HOLE <i>1b</i> <i>red-yel red cl rocks start @ 3 1/2 ft (&gt; 60%) refusal @ 4 1/2 ft.</i>									
Slope%-		EL.(ft)-		Chroma 2-		Least Permeable Layers-			
Landscape Position-			Water BLS-			Limiting Zones-			
Additional Remarks- <i>Abundant stones &amp; boulders on surface and throughout perc field.</i>									

D-3





## SAND MOUND DESIGN

Design for: **Hinson Property**  
**Howard Road, Howard County, Md.**  
**Tax Map 27, Parcel 100**

HCHD FILE: #A-18263

*5% slope*

### SAND MOUND CALCULATIONS:

**ABSORPTION BED: 750 Gal/1.2 gpd per ft<sup>2</sup> = 625 ft<sup>2</sup> (9.0 ft x 69.4 ft)**

**BED WIDTH (A) = 625/B = 9.0 feet      BED LENGTH (B) = 69.4 feet**

**UPSLOPE FILL (D) = 12 inches MINIMUM**

**DOWNSLOPE FILL (E) = 17.24 inches** *-12" = 5.24" drop @ 1/ft*

**CAP + TOPSOIL FILL (at Bed Center) (H) = 18 inches**

**CAP + TOPSOIL FILL (at Bed Edge) (G) = 12 inches**

**TOTAL BED DEPTH (F) = 10 inches      MOUND HEIGHT = 30 inches**

**SIDE SLOPE SETBACK (K) = 127.86 inches (10.6 feet)**

**UPSLOPE SETBACK (J) = 87.72 inches (7.3 feet)**

**DOWNSLOPE SETBACK (I) = 117.10 (9.76 feet)**

**TOTAL WIDTH (W) = 313.2 inches      TOTAL LENGTH (L) = 1088.5 inches**  
**Or      (W) = 26.1 feet x      (L) = 90.71 feet**

Hinson Property  
 Howard Rd, Howard County  
 Calc by J. Phibbs 7/16/99

**TABLE 3.1**

**EQUATIONS FOR CALCULATING SAND MOUND DIMENSIONS**

Absorption bed ft.<sup>2</sup> (A × B) =  $\frac{\text{Design flow}}{1.2 \text{ gpd/ft.}^2} = \frac{750}{1.2} \text{ ft.}^2 = 625$

*The assumed 5% slope  
 I have to use 6% slope  
 (Holes in cover only)*

Bed length (B) = 69.4 ft. (21 ft. to 101 ft. dependent on site)

Bed width (A) =  $\frac{\text{Bed}}{B} = \frac{625 \text{ ft.}^2}{69.4 \text{ ft.}} = 9'$  ft. (15 ft. or less)

Upslope sand fill depth (D) = 48 in. - Z in. = 24 in. (12 in. min.)

Downslope sand fill depth (E) =  $[12 A \times \% \text{ slope}] + D \text{ in.} = 108'' = 6.48' + 24 = 30.48''$  in.

Cap + topsoil at bed center (H) = 18 in.

Cap + topsoil at bed edge (G) = 12 in.

Total Bed Depth (F) = 10 in.

$\frac{30.48}{24} = 1.27$   
 $\approx 54.5$

Sideslope setback (K) =  $\frac{29.25 + 24 = 53.25}{2} \times 3 = 159.75 \text{ in.} = 13.8 \text{ ft}$

Upslope setback (J) =  $(22 \text{ in.} + D) \times 3 \times \text{upslope corr. factor} = 46 \cdot 138 \times 0.86 = 118.68 \text{ in.} = 9.89'$

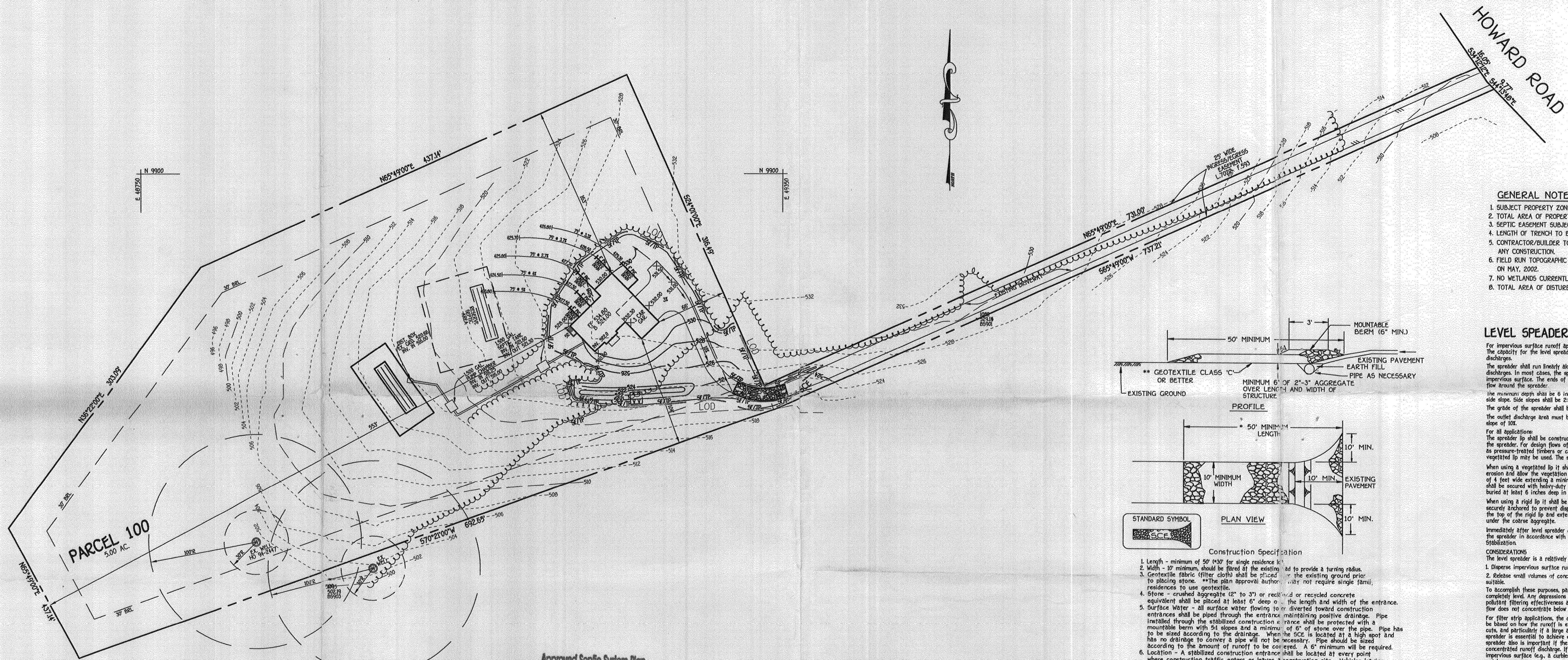
Downslope setback (I) =  $(22 \text{ in.} + E) \times 3 \times \text{downslope corr. factor} = 52.5 \cdot 157.5 \cdot 1.22 = 192.15 \text{ in.} = 16.01'$

Total Width of Mound (W) =  $12A + J + I = 9' + 9.9' + 16.01' = 34.91'$

*Bed w = 9' + 9.9' + 16.01' @ 0.25 gpd/50ft<sup>2</sup> Soil Load Rate, Basal Area = 3000 sq ft  
 $3000 \div 69.4' = 43.5$  Basal Area width  
 - 9' bed  
 $34.5'$  @ .25 soil load rate*

Total Length of Mound (L) =  $12B + K + K = 69.4' + 2(13.8) = 97'$

$9 + 9.9 + 16 = 34.9'$  @ .25 soil loading rate (i.e. 30-60 gpd per rate)



N 9920  
E 49720

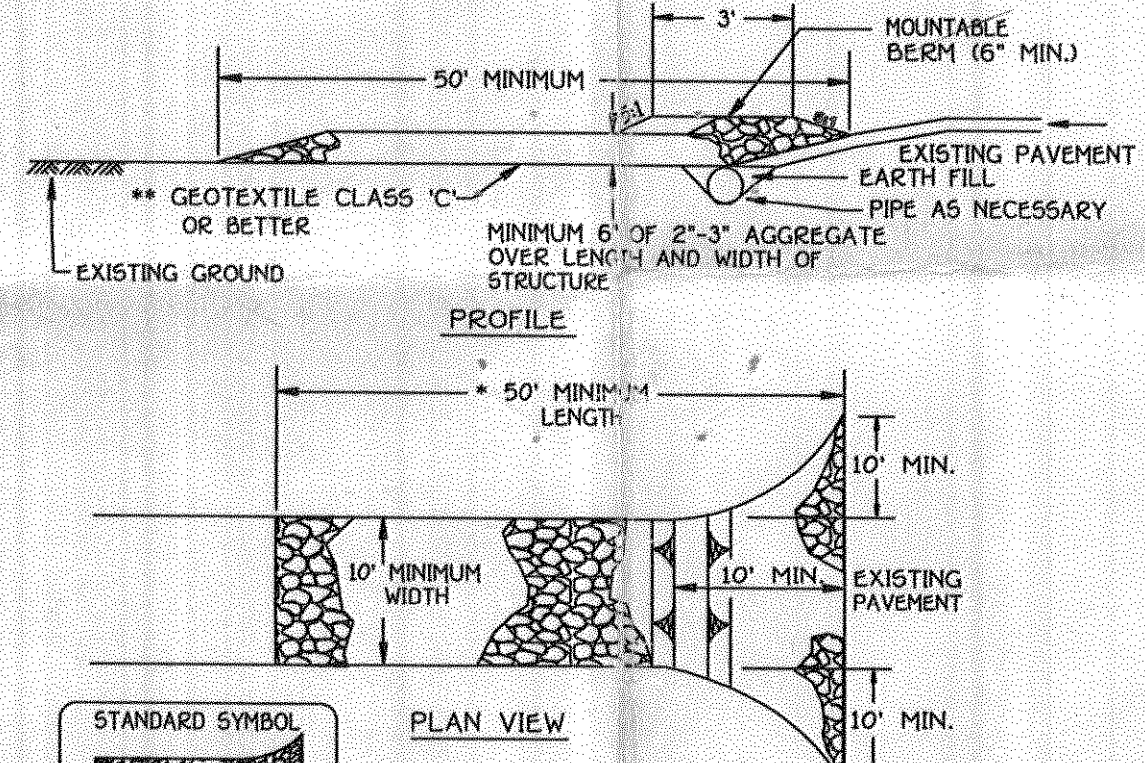
N 9920  
E 49720

N 9600  
E 49720

**NOTE**  
THE EXISTING WELL SHOWN ON THIS PLAN, TAG NO. HO 94-2447 HAS BEEN FIELD LOCATED BY FISHER, COLLINS & CARTER, INC., PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.

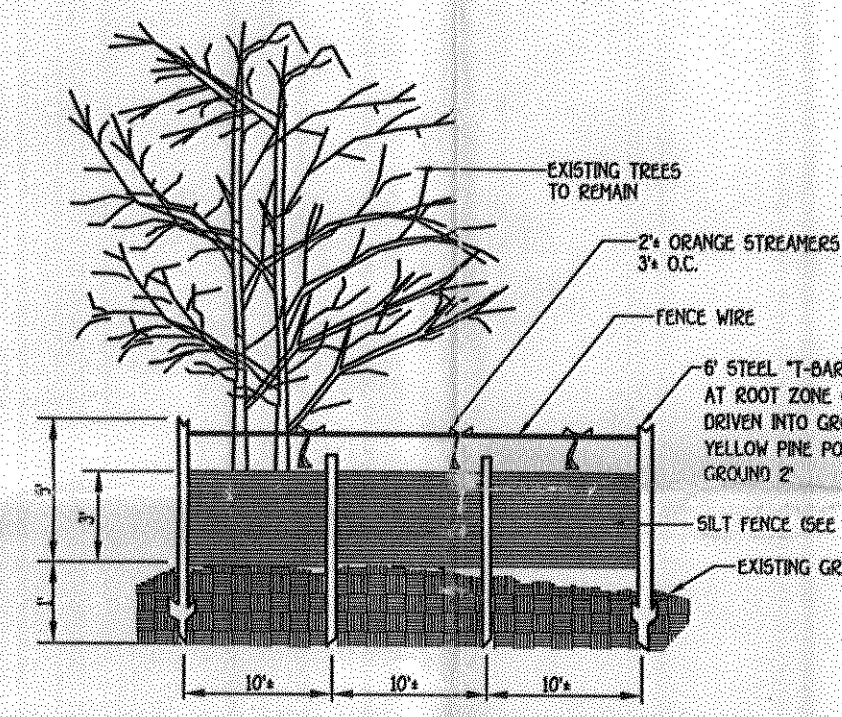
Approved Septic System Plan  
Howard County Health Department  
Signature: [Signature] Date: 5/27/05

- GENERAL NOTES**
- SUBJECT PROPERTY ZONED: RC-DEO
  - TOTAL AREA OF PROPERTY: 5.00 ACRES
  - SEPTIC EASEMENT SUBJECT TO HOWARD COUNTY HEALTH DEPARTMENT REVIEW.
  - LENGTH OF TRENCH TO BE DETERMINED AT TIME OF SEPTIC PERMIT ISSUANCE.
  - CONTRACTOR/BUILDER TO VERIFY ELEVATION IN THE FIELD BEFORE BEGINNING ANY CONSTRUCTION.
  - FIELD RUN TOPOGRAPHIC SURVEY DONE BY FISHER, COLLINS & CARTER, INC. ON MAY, 2002.
  - NO WETLANDS CURRENTLY EXIST ON THE PROPERTY.
  - TOTAL AREA OF DISTURBANCE IS 7,875 SQ. FT. OR 1,800B ACRES.



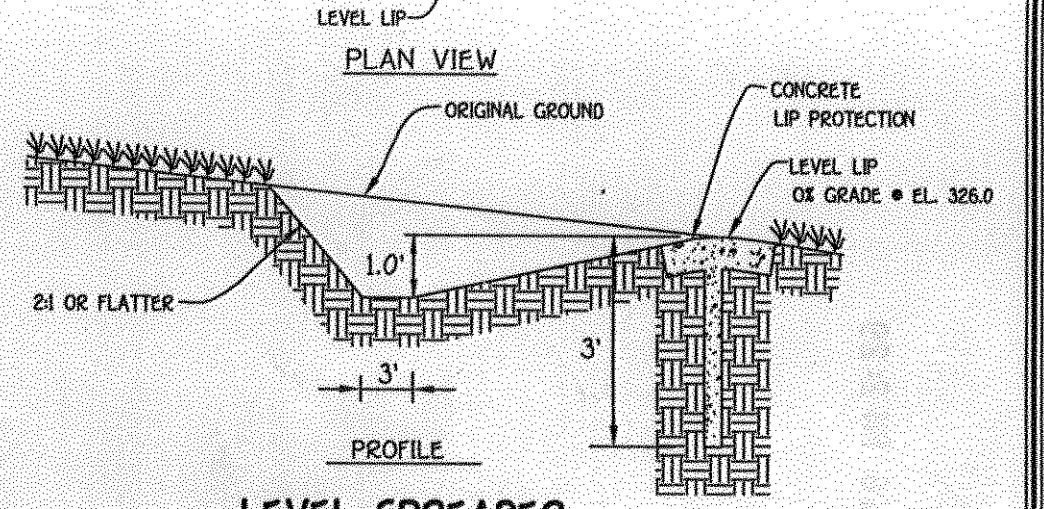
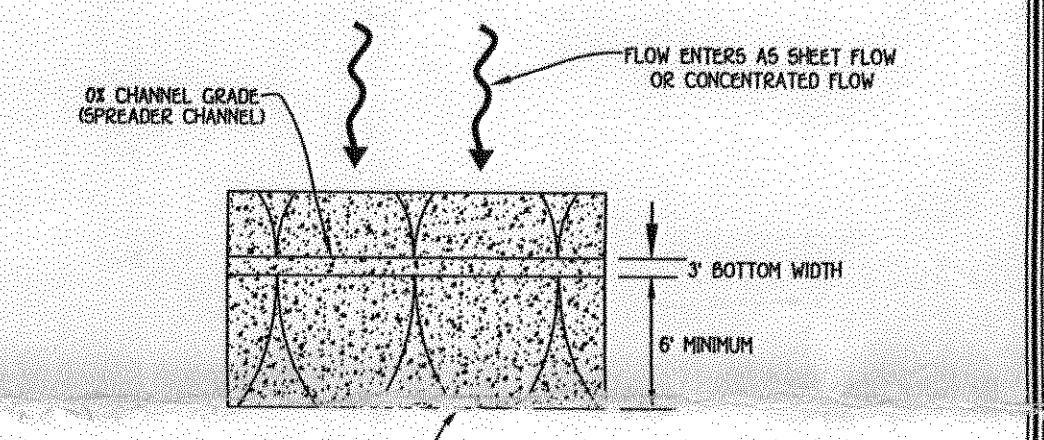
- Construction Specification**
- Length - minimum of 50' (30' for single residence)
  - Width - 10' minimum, should be flared at the existing rd to provide a turning radius.
  - Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. \*The plan approval authority may not require single family residences to use geotextile.
  - Stone - crushed aggregate 1/2" to 3/4" or recycled or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
  - Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the s.c.e. is located at a high spot and has no drainage to corner a pipe will not be necessary. Pipes should be sized according to the amount of runoff to be covered. A 6" minimum will be required.
  - Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

**STABILIZED CONSTRUCTION ENTRANCE**  
NOT TO SCALE

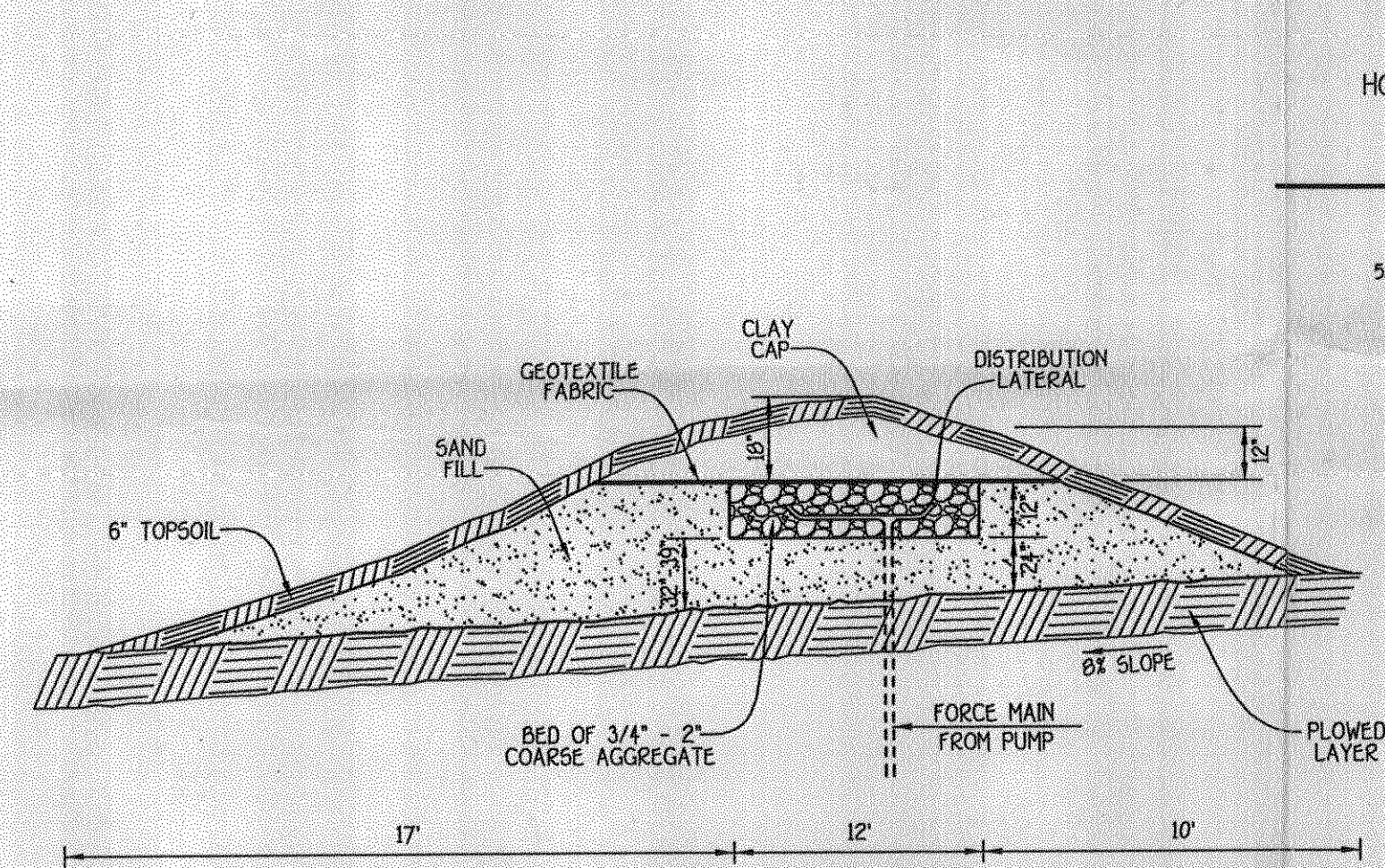


- SILT FENCE & TREE PROTECTION**  
NOT TO SCALE
- Silt Fence to be heeled into the soil.
  - Wire, snow fence, etc. for tree protection only.
  - Boundaries of Retention Area will be established as part of the forest conservation plan review process.
  - Boundaries of Retention Area should be staked and flagged prior to installing device.
  - Avoid root damage when placing anchor posts.
  - Device should be properly maintained throughout construction.
  - Protection signs are also required, see Figure C-4.
  - Locate fence outside the Critical Root Zone.

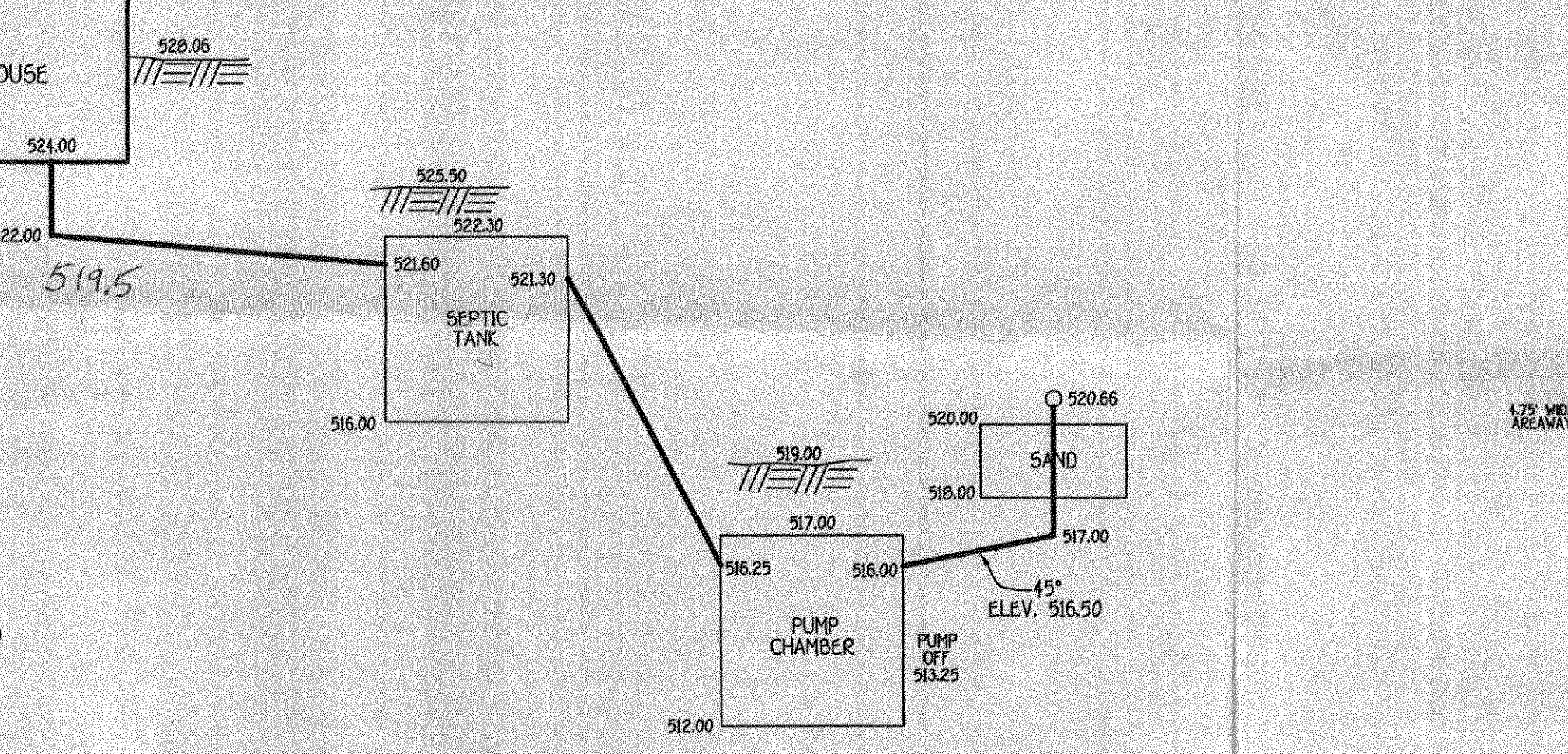
**BUILDER/DEVELOPER**  
CROSEN HOMES, INC.  
3785 SHADY LANE  
GLENWOOD, MARYLAND 21738  
410-489-5242



**LEVEL SPREADER**  
NOT TO SCALE



**MOUND DESIGN**  
NOT TO SCALE



**HYDRAULIC PROFILE**  
NOT TO SCALE

**SITE DEVELOPMENT,  
SEDIMENT/EROSION CONTROL PLAN, NOTES & DETAILS**  
**HOWARD ROAD  
PARCEL 100**  
ZONED: RC-DEO LIBER 612 FOLIO 232  
TAX MAP NO. 27 PARCEL NO. 100 GRID NO. 1B  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1"=50' DATE: MARCH, 2005

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 18273 BALTIMORE NATIONAL PkE  
ELICOTT CITY, MARYLAND 21042  
410-486-2855

Approved Septic Plan