

LAYOUT 8/25/05 INSP 4 _____
 INSP 2 _____ INSP 5 _____
 INSP 3 _____ INSP 6 _____

ISSUE DATE: 7/21/05

P 522983

APPROVAL DATE: 12/6/05

A 513138

PERMIT

INDEXED

SANDMOUND SYSTEM ON-SITE SEWAGE DISPOSAL SYSTEM HOWARD COUNTY HEALTH DEPARTMENT BUREAU OF ENVIRONMENTAL HEALTH

03-290123

Fogles Septic Clean, Inc IS PERMITTED TO INSTALL ALTER

ADDRESS: 580 Obrecht Road PHONE NUMBER: 410-795-5670

SUBDIVISION: Light Property 4

ADDRESS: 501 479 Gaither Road PROPERTY OWNER: Terry Savard

SEPTIC TANK CAPACITY (GALLONS): 2000 OUTLET BAFFLE FILTER REQUIRED

PUMP CHAMBER CAPACITY (GALLONS): 2000 COMPARTMENTED TANK REQUIRED

NUMBER OF BEDROOMS: 4

**BUILDING PERMIT SIGNED
 AND RETURNED
 10/14/06 B00156427-LPTANK**

LOCATION:	Sand mound to be installed. Install as per plan. Mound site should be staked.
NOTES:	Both sand mound sites are to be staked. Mound is to be installed from both ends. Limit traffic on upslope and down slope mound areas. Stay off of reserve mound site.

PLANS APPROVED: John Boris / KN 7/28/05 DATE: 3/11/04

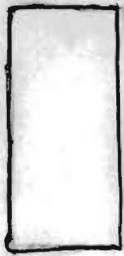
NOTES: PERMIT VOID AFTER 2 YEARS
 CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION FOR ALL INSTALLATIONS
 WATERTIGHT SEPTIC TANKS REQUIRED
 ALL PARTS OF SEPTIC SYSTEM SHALL BE 100 FEET FROM ANY WATER WELL UNLESS SPECIFICALLY AUTHORIZED
 MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS 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 410-313-2640 FOR INSPECTION OF SEPTIC SYSTEM

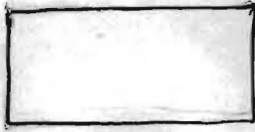
Flow check - pipe elevations into each S.M. MUST be taking in equal volumes, check & see pipe inserts same @ time of construction are equal. (KN)

**BUILDING PERMIT SIGNED
 AND RETURNED**
 10/14/06 B00156427 1000 GAL LPTANK
 P522983

NOT TO SCALE



①

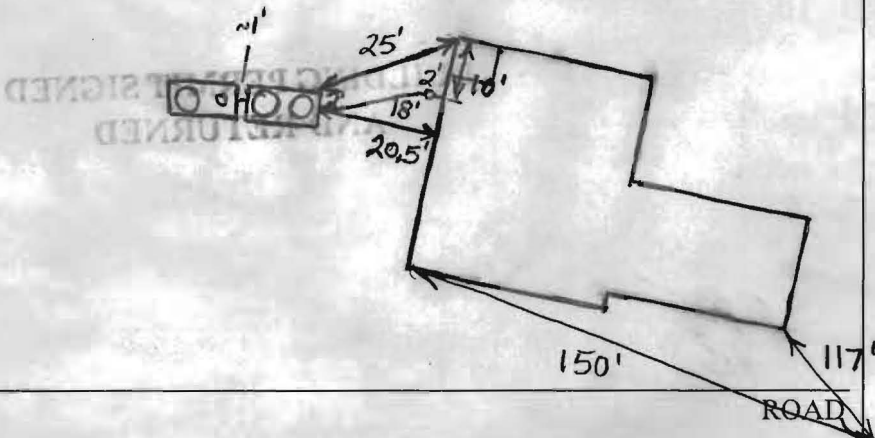


②

HO-94-3077

TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
SEE	MOUND	
NUMBER OF TRENCHES <u>DESIGN</u>		
TOTAL LENGTH _____		
ABSORPTION AREA _____		
DISTRIBUTION BOX LEVEL _____		
DISTRIBUTION BOX BAFFLE _____		
DISTRIBUTION BOX PORT _____		

SEPTIC TANK DATA		
SEPTIC TANK 1 LEVEL	<u>Yes</u>	
CAPACITY	<u>2000</u>	GAL
SEAM LOC	<u>Top</u>	
TANK LID DEPTH	<u>1'-2.5'</u>	
BAFFLES	<u>Yes</u>	
BAFFLE FILTER	<u>Yes</u>	
MANHOLE LOC	<u>Both</u>	
6" PORT LOC	<u>N/A</u>	
WATERTIGHT TEST	<u>No</u>	
SEPTIC TANK 2 LEVEL	<u>✓</u>	
Pump		
CAPACITY	<u>2000</u>	GAL
SEAM LOC	<u>Top</u>	
TANK LID DEPTH	<u>1.5'-2.5'</u>	
BAFFLES	<u>Inlet</u>	
BAFFLE FILTER	<u>N/A</u>	
MANHOLE LOC	<u>Outlet</u>	
6" PORT LOC	<u>Inlet</u>	
WATERTIGHT TEST	<u>No</u>	



HO-94-3894

PRE-CONSTRUCTION 8/25/05 Layed out both top mound sites on contour as best possible. Need to get sand analyzed.

INSTALLATION Kurt to provide sieve information. (BB)

8/26/05 Mound sites plowed. Started putting sand on plowed areas. Pump line installed from tank area up to mound area. Still putting sand on mound areas. Told Kurt to make sure plowed areas covered with sand. Rain expected before Monday. (BB)

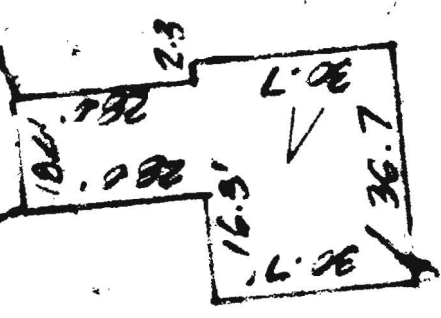
9/1/05 Mounds almost finished. Hole spacing near end of laterals in mound 2 is wrong.

Installer to fix. Sand analysis O.K. (BB)

FINAL INSPECTOR Edmel A. Creighton DATE OF APPROVAL 12/6/05

9/6/05 Turb tank set. House connection made. Told Kurt and installer that water level in turn-ups of both mounds need to be close during pump test. (BB) 9/7/04 2nd Tank Set (GAC) 12/6/05 Pump & Abcm test passed. (GAC)

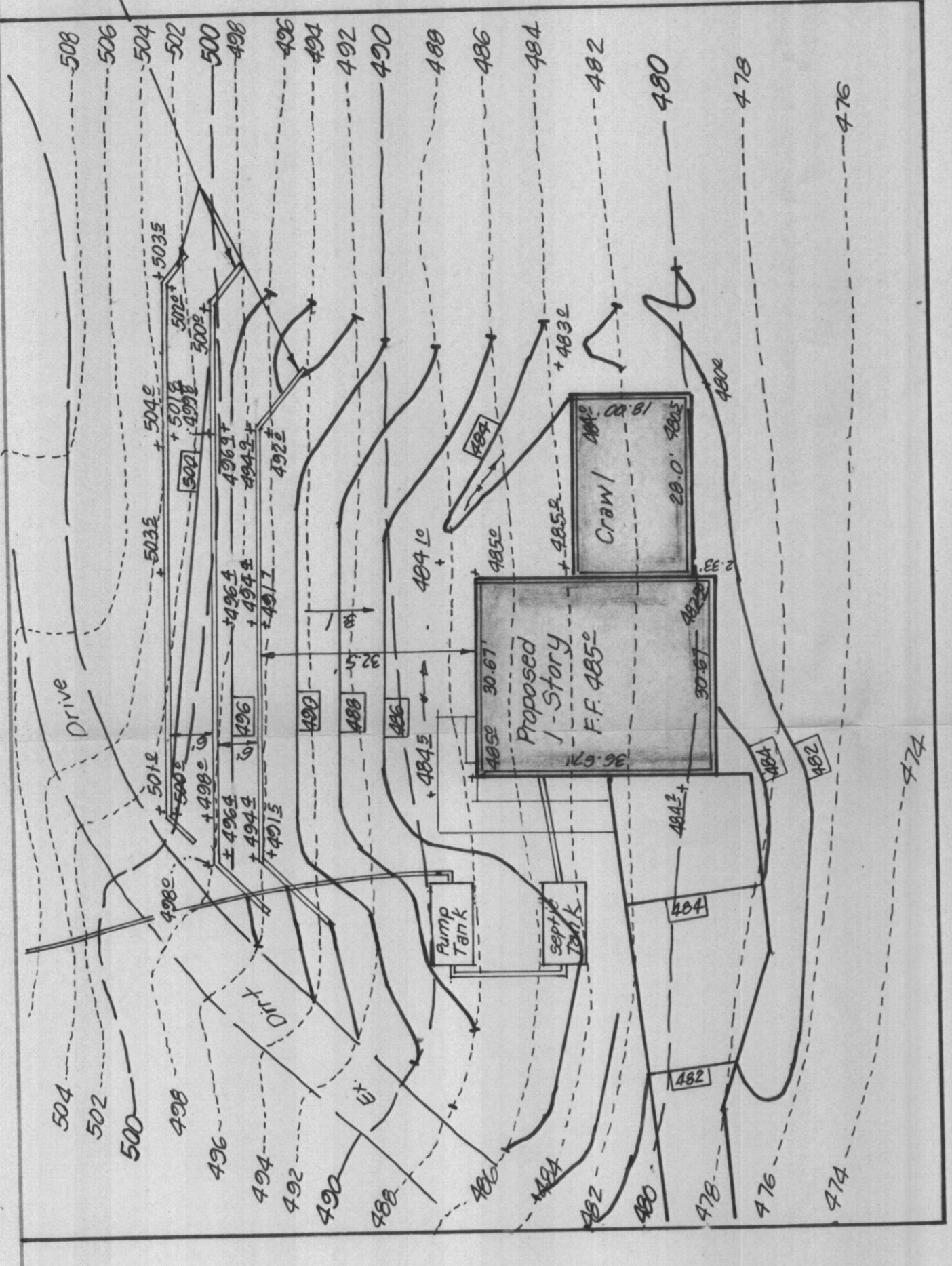
5214



Concrete Foundation

MAP A - GRID 14
69
CELL
WMC

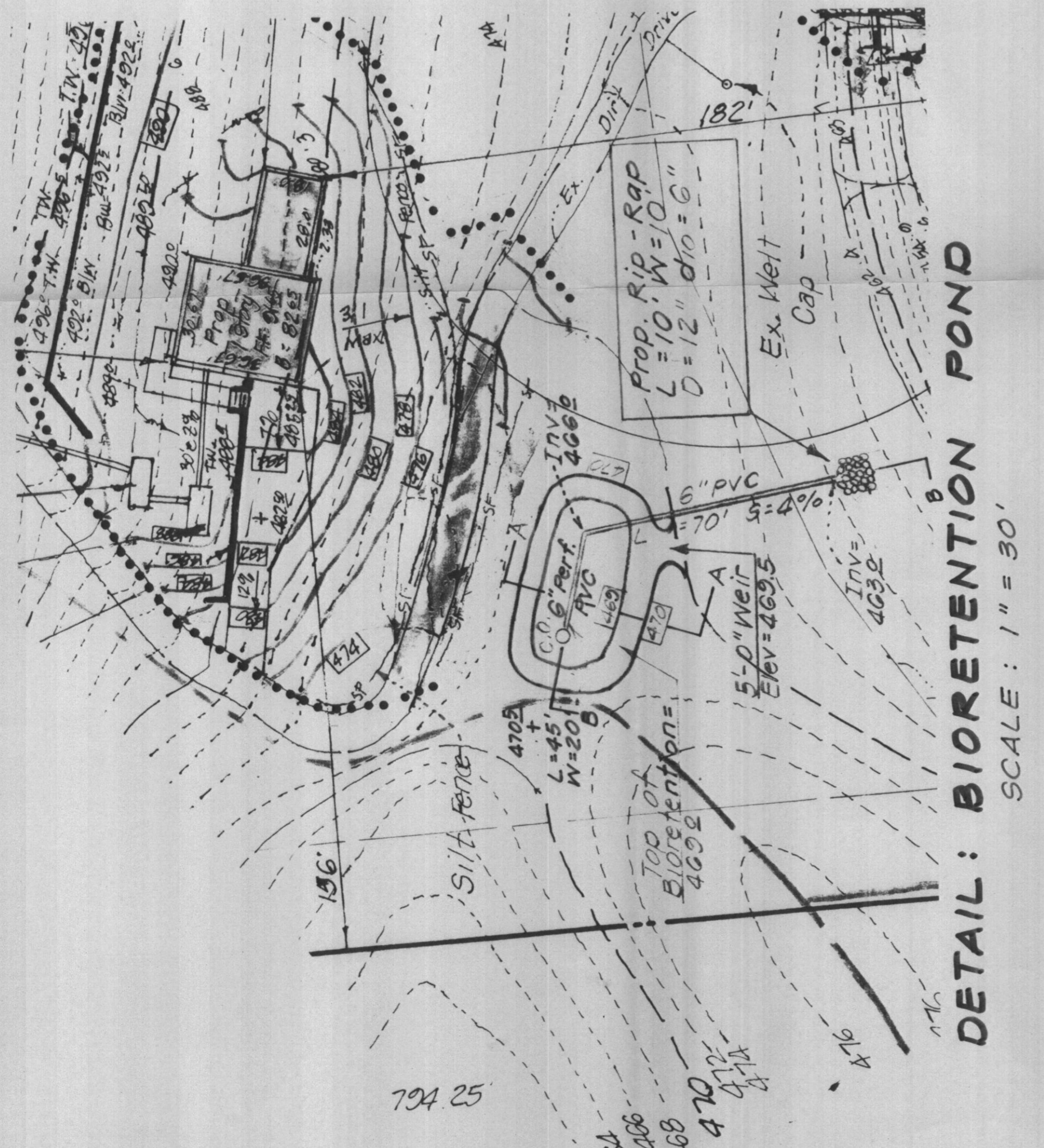
Proposed Landscape Timber Walls 2.0' and under



LANDSCAPE TIMBER WALL DETAIL
Scale: 1" = 20'



SOILS MAP (#3)
Soils Types: G1B2 (Glenside Loam, 3 to 8% slopes moderately graded)
M1E (Manor Loam, 25 to 45% slopes)

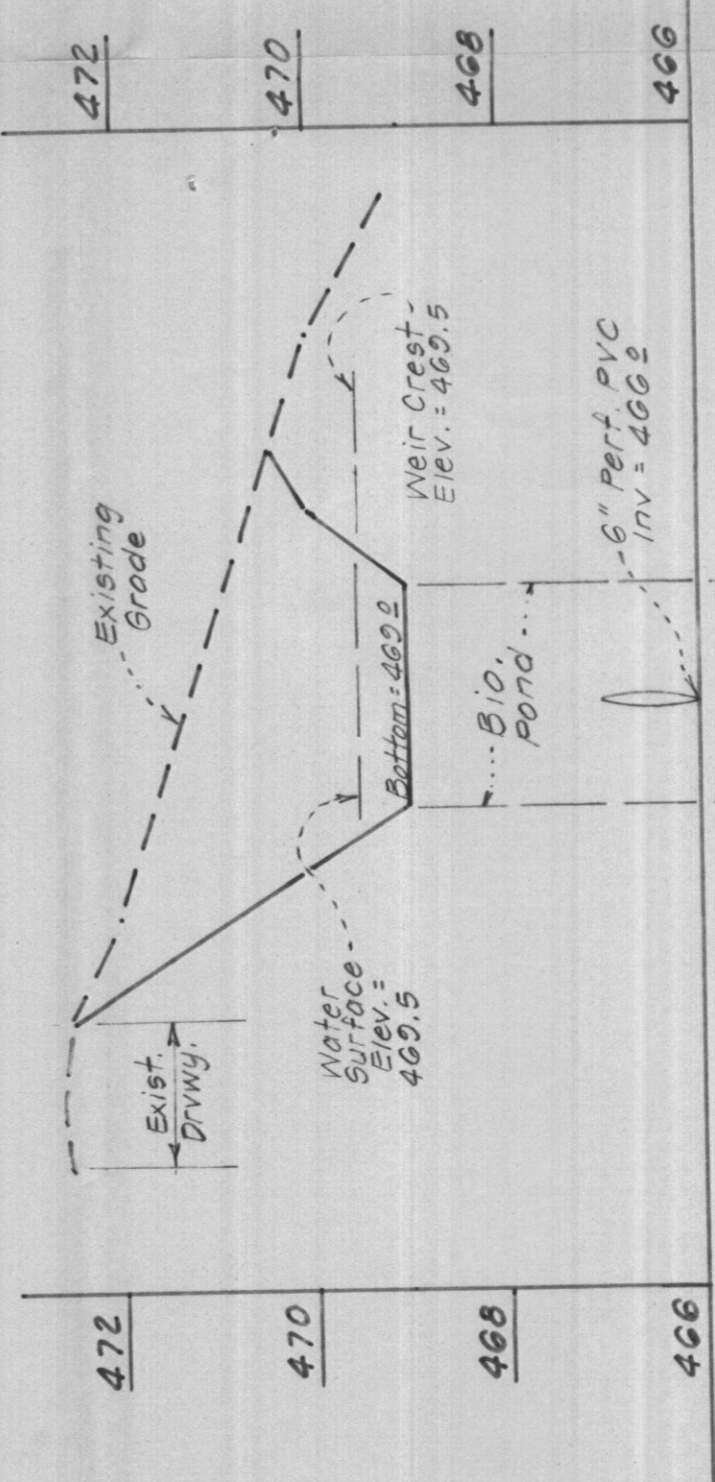


DETAIL: BIORETENTION POND
SCALE: 1" = 30'

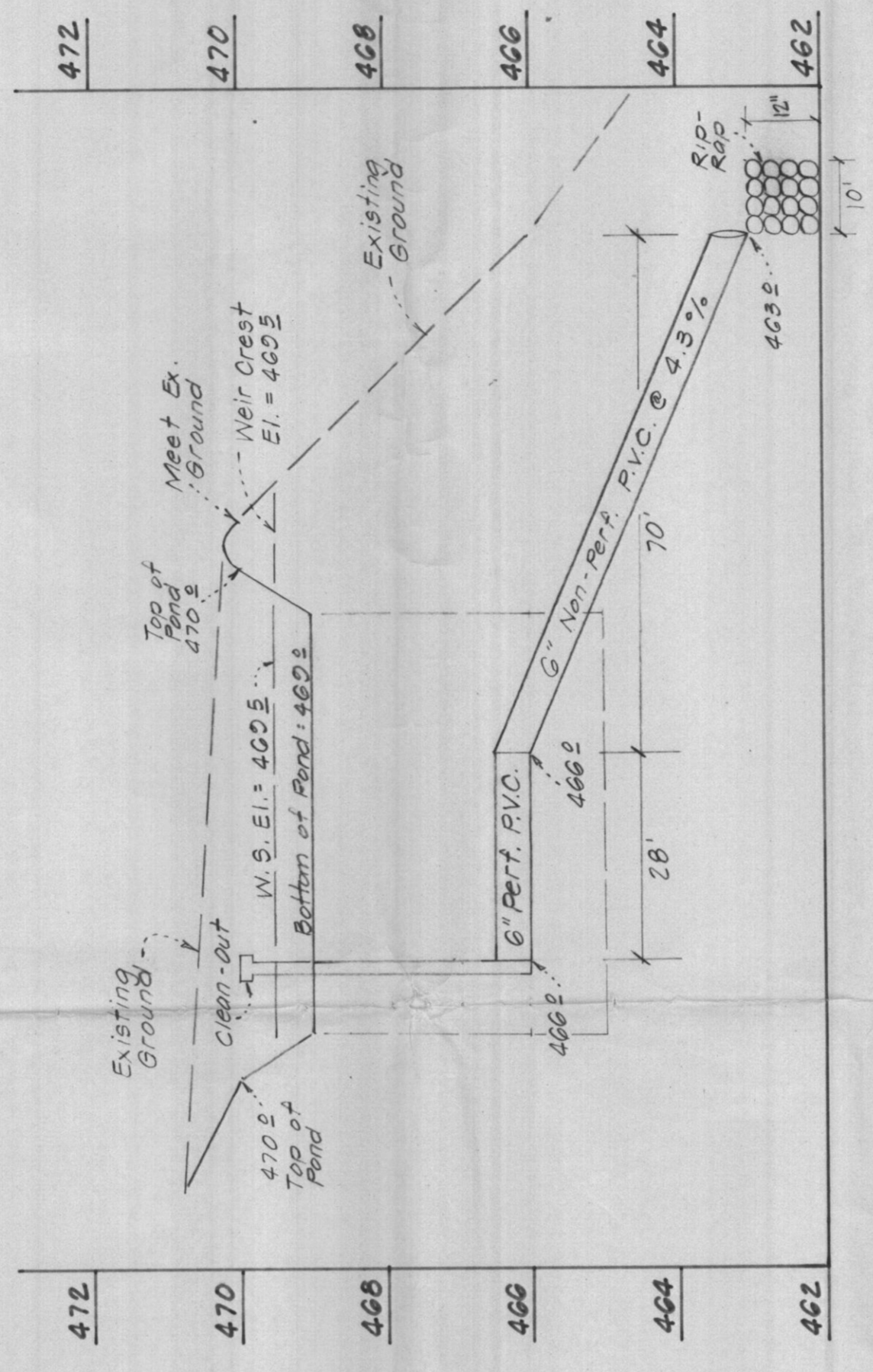
Symbol	Quantity
①	2
②	0
③	16
④	14
⑤	14
⑥	16
⑦	9

LANDSCAPE SCHEDULE
(Bioretention Pond Only)

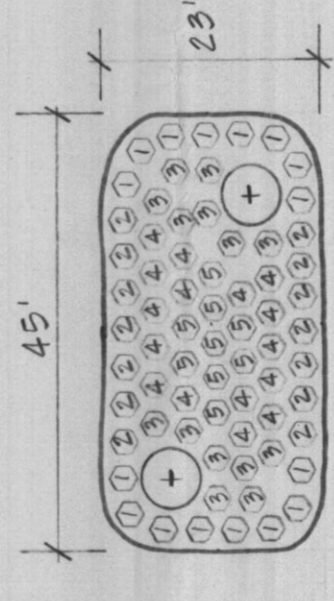
- ① Tree/Shrub Species
- ② Acer Rubrum (Red Maple)
- ③ Betula Nigra (River Birch)
- ④ Iris Vesicolor (Iris)
- ⑤ Aster Novae-Belgii (New York)
- ⑥ Hemerocallis Sp. (Daylily)
- ⑦ Mentha Arvensis (Wild Mint)
- ⑧ Astilbe Sp. (White Glory)



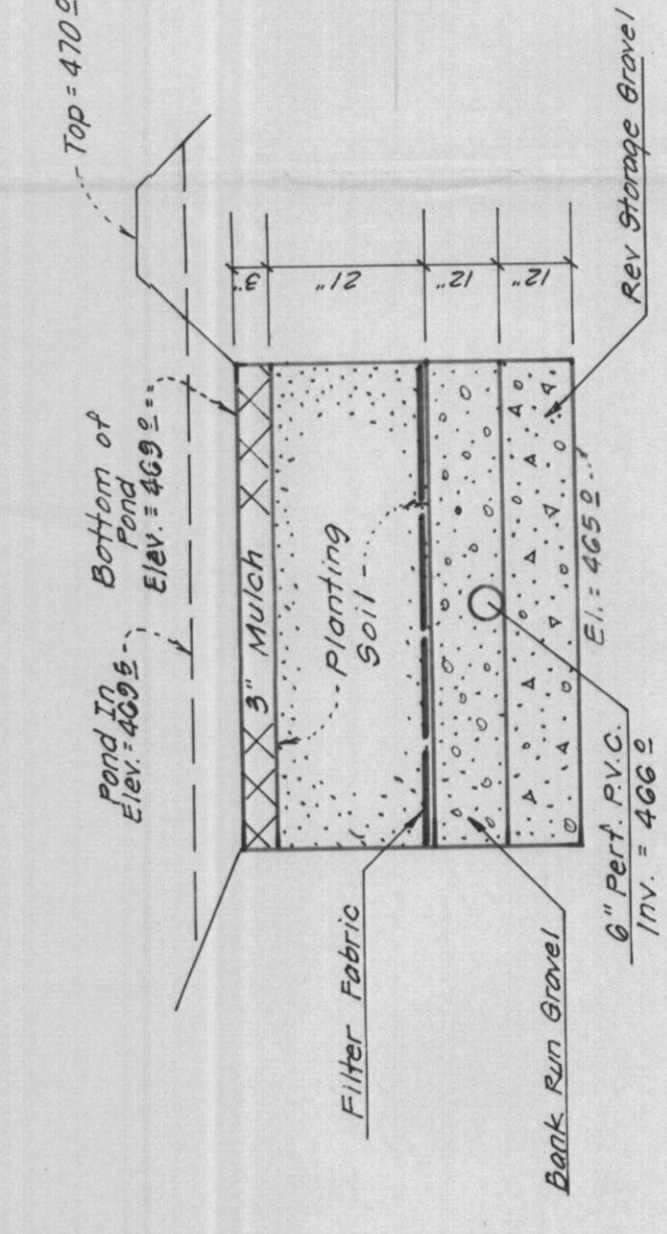
SECTION "A - A"
SCALES: Horiz. 1" = 20',
Vert. 1" = 2'



SECTION "B - B"
SCALES: Horiz. 1" = 20',
Vert. 1" = 2'



BIO POND
PLANTING DETAIL



SECTIONAL VIEW
OF BIORETENTION POND
No Scale



DETAIL SHEET
Gaither Road
Tax Map 4, Grid 14, Parcel 63
SAVARD PROPERTY
3rd Election District
Howard County, Maryland

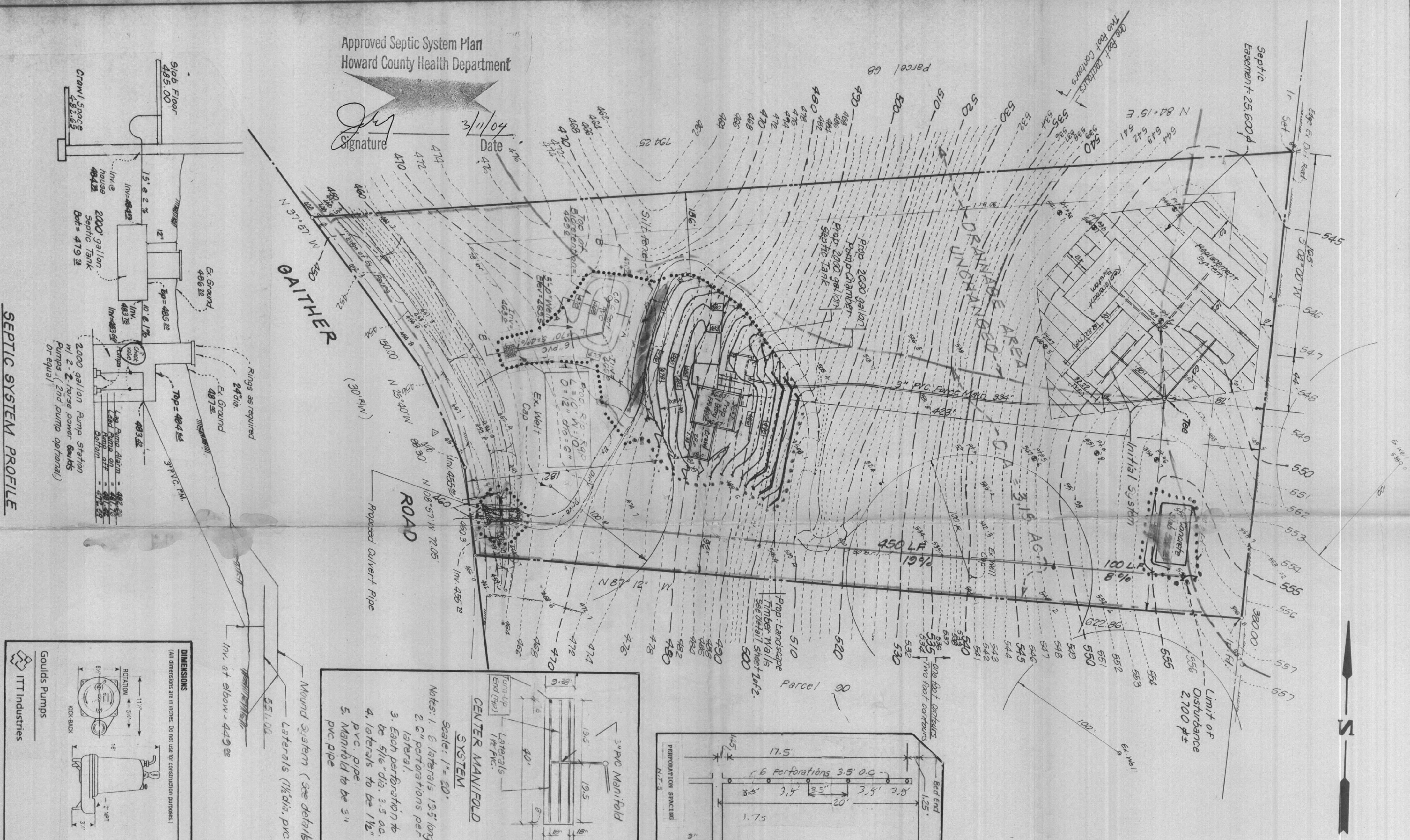
As Shown L.C.

00-03 L-0886
SHEET 2 OF 2

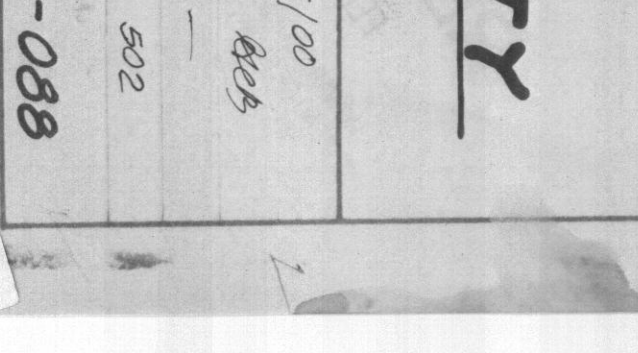
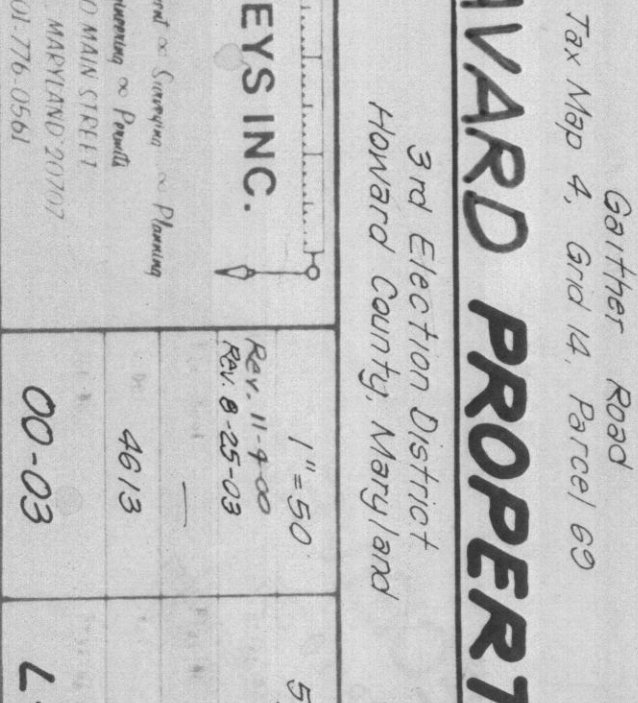
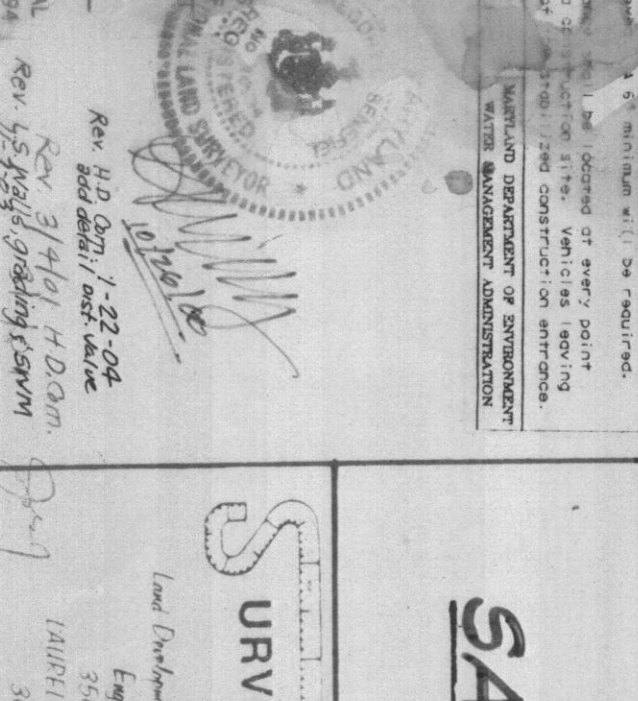
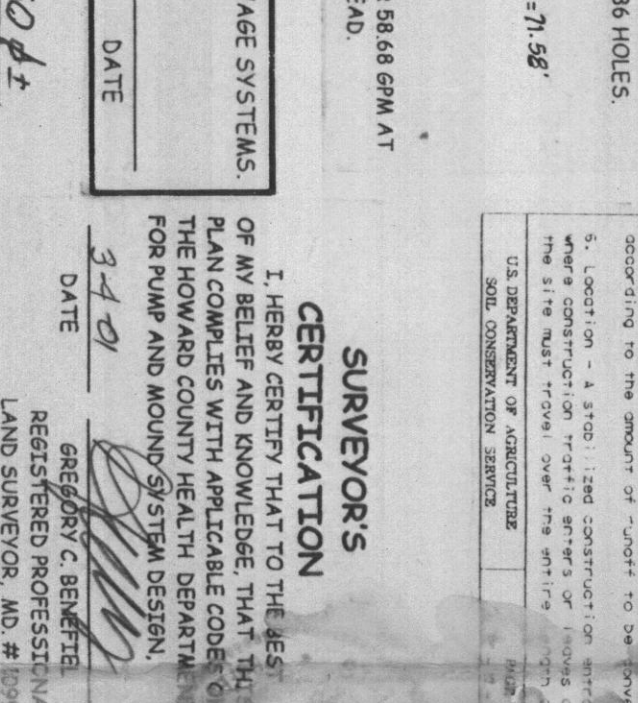
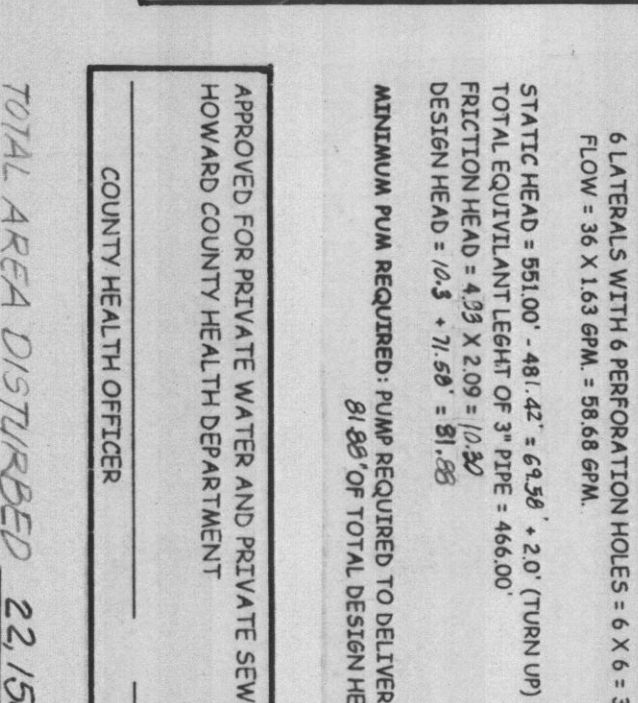
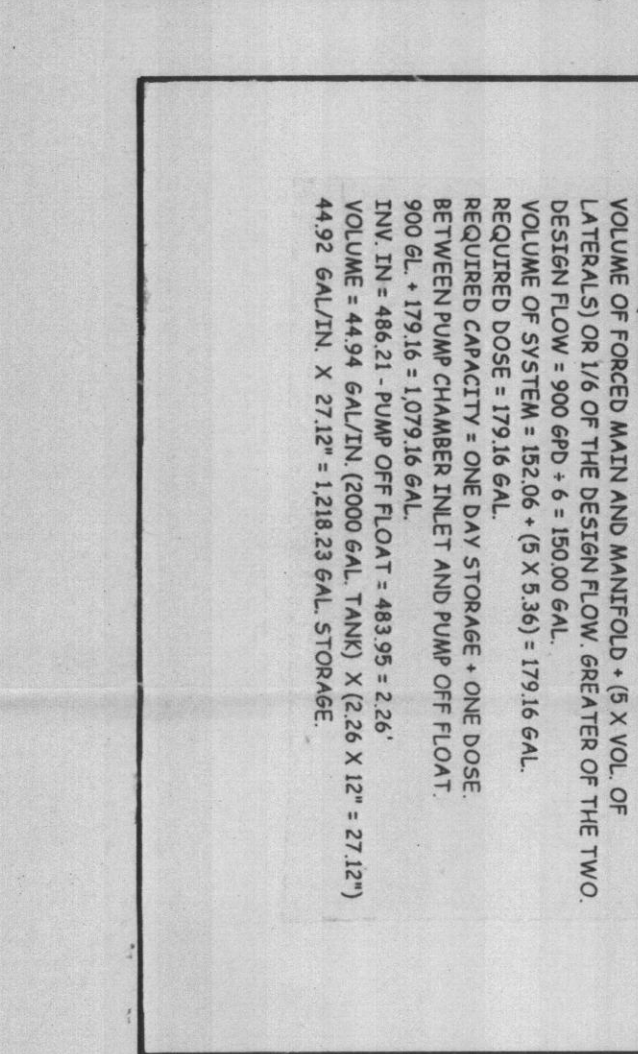
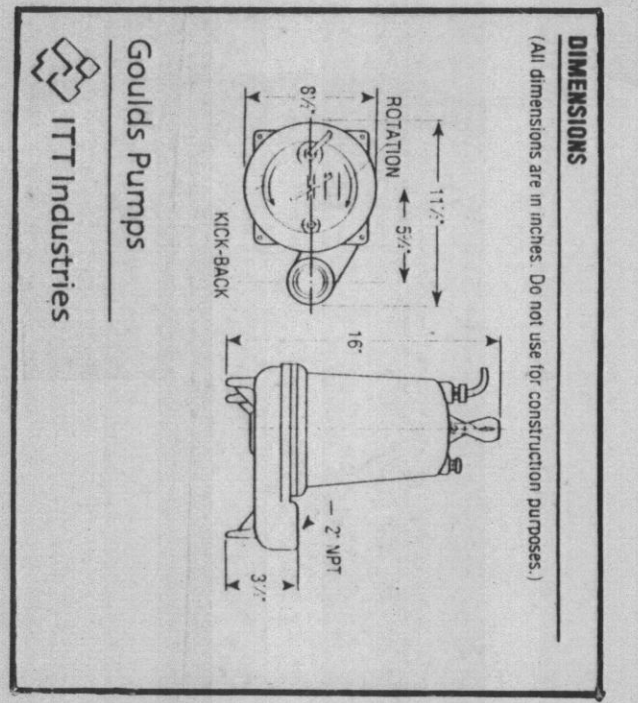
SURVEYS INC.
Local Development - Survey - Planning
Engineering - Field
(410) 410-1400 (2013)
301 776 0541

Approved Septic System Plan
Howard County Health Department

Signature: *[Signature]*
Date: 11/1/04



SEPTIC SYSTEM PROFILE
No Scale



SEQUENCE OF CONSTRUCTION FOR SAND MOUND SEWAGE DISPOSAL SYSTEMS

1. SITE PREPARATION
2. MOUND PERIMETER AND ABSORPTION BED STAKEOUT
3. MOUND PERIMETER
4. WITHIN MOUND PERIMETER
5. WITHIN SEWAGE DISPOSAL AREA
6. CEMENTATION CUT AND REMOVAL
7. SETS CUT OFF AT GROUND LEVEL, STUMPS GROUND FLUSH, STUMP REMAINS
8. SOIL TOWED TO A SUITABLE DEPTH AND REPERFORATED TO SLOPE
9. SOILS MUST BE BELOW GROUND TO PERMIT CONSTRUCTION
10. LOCATION OF SEPTIC TANK, PUMP STATION STAKEOUT
11. SAND FILL AND ABSORPTION AREA
12. SAND MUST MEET SPECIFICATIONS
13. SAND FILL BROUGHT TO PROPER DEPTH
14. SIX (6) INCHES OF SUITABLE GRAVEL BETWEEN SAND AND DISTRIBUTION LATERALS
15. INSTALL LATERALS, TURN-UPS, MANIFOLDS, OBSERVATION PORTS AND WELLS
16. GRAVEL TO BE PLACED BETWEEN TWO ONE AND TWO INCHES OVER LATERALS
17. UPSLOPE AND DOWN SLOPE SAND FILL WILL BE PLACED
18. GEOTEXTILE FABRIC WILL BE PLACED OVER THE GEOTEXTILE FABRIC
19. A FINE TEXTURED SAND WILL BE PLACED OVER THE GEOTEXTILE FABRIC
20. H. A FINE TEXTURED SAND WILL BE PLACED OVER THE GEOTEXTILE FABRIC
21. L. A FINE TEXTURED SAND WILL BE PLACED OVER THE GEOTEXTILE FABRIC
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29. L. A FINE TEXTURED SAND WILL BE PLACED OVER THE GEOTEXTILE FABRIC
30. L. A FINE TEXTURED SAND WILL BE PLACED OVER THE GEOTEXTILE FABRIC

PUMP CHAMBER & SEPTIC TANK

STANDARD 2000 GALLON PUMP CHAMBER
STANDARD 2000 GALLON SEPTIC TANK

Top Sealm - 2 Compartment Tank

TABLE 3.1
EQUATIONS FOR CALCULATING SAND MOUND DIMENSIONS
(System designed for 6 (Six) bedrooms)

Absorption bed (A) = 1.4 x B x C
B = 1.2 Bed/ft.
C = 1.2 Bed/ft.

Bed depth (D) = 40 in. (21 ft. x 101 ft. dependent on soil)
Bed width (W) = Bed Length (L) = 120 ft. (135 ft. x 101 ft. x 2.938 = 40 ft. x 120 ft.)
Downslope sand fill depth (E) = 12 x (W x L) / (12 x 12 in.)
E = 12 x (120 ft. x 120 ft.) / (12 x 12 in.) = 22.5 ft.

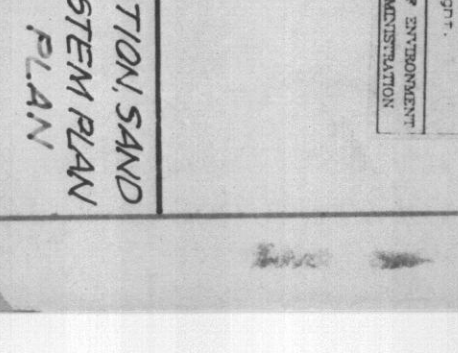
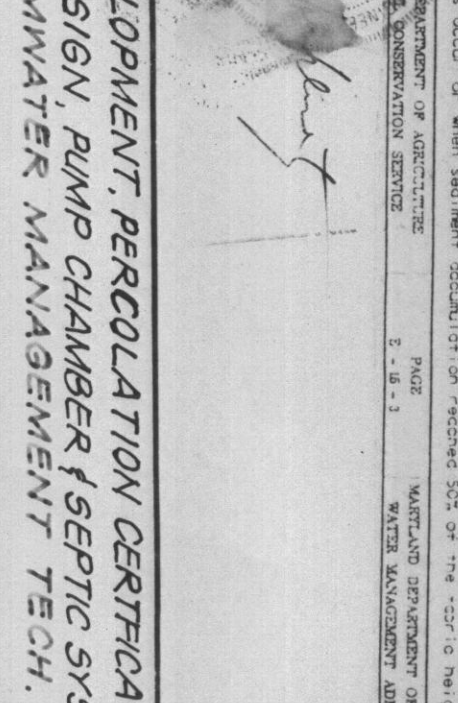
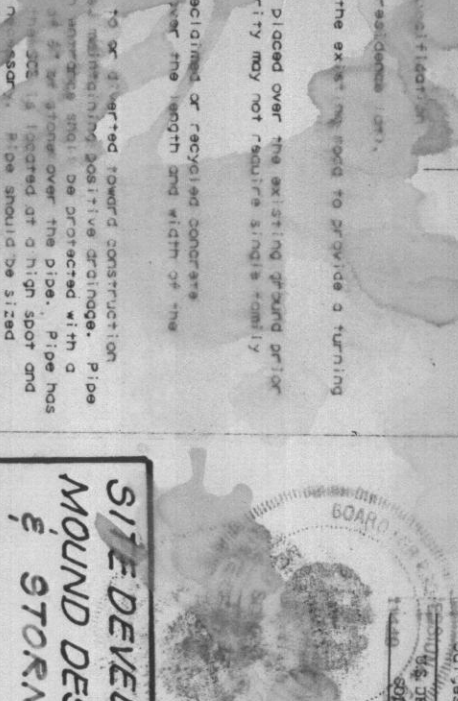
Cap + topsoil at bed center (F) = 18 in.
Cap + topsoil at bed edge (G) = 12 in.
Total Bed Depth (H) = 10 in.

Slope angle (I) = 12 x (W x L) / (12 x 12 in.)
I = 12 x (120 ft. x 120 ft.) / (12 x 12 in.) = 22.5 ft.

Downslope sand fill depth (J) = 12 x (W x L) / (12 x 12 in.)
J = 12 x (120 ft. x 120 ft.) / (12 x 12 in.) = 22.5 ft.

Downslope sand fill depth (K) = 12 x (W x L) / (12 x 12 in.)
K = 12 x (120 ft. x 120 ft.) / (12 x 12 in.) = 22.5 ft.

Total Width of Mound (M) = 120 ft. x 1.2 = 144 ft.
Total Length of Mound (N) = 120 ft. x 1.2 = 144 ft.



PUMP CHAMBER DESIGN CALCULATIONS

DESIGN FLOW: 1.5 GPM
DESIGN HEAD: 4.0 FT.
DESIGN SPEED: 1725 RPM

PUMP DESIGN CALCULATIONS:

DISCHARGE RATE FOR 5/8" PERFORATION HOLES = 1.63 GPM
6 LATERALS WITH 6 PERFORATION HOLES = 9.78 GPM
FLOW = 9.78 GPM x 1.5 GPM = 14.67 GPM
DESIGN HEAD = 4.0 FT. x 1.5 = 6.0 FT.

STANDARD HEAD - 40 FT. x 1.5 = 60 FT.
DESIGN HEAD = 4.0 FT. x 1.5 = 6.0 FT.

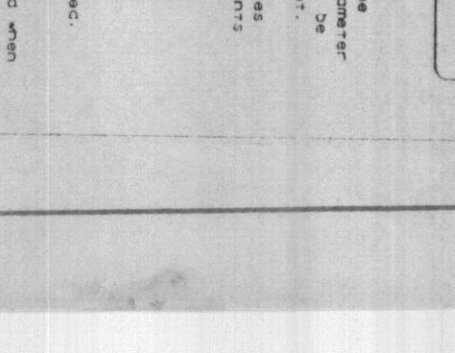
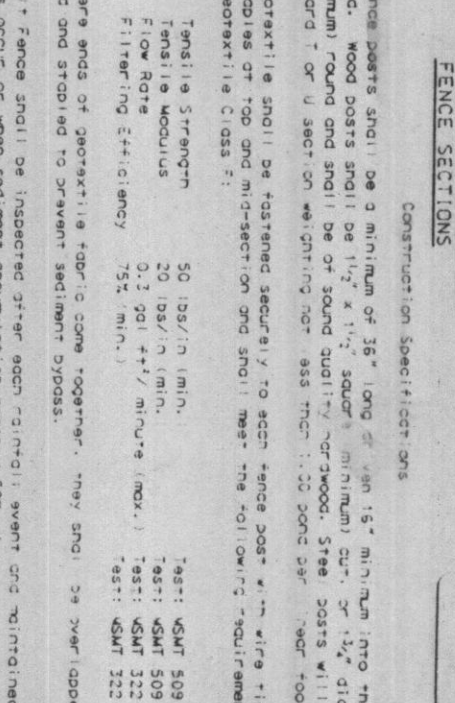
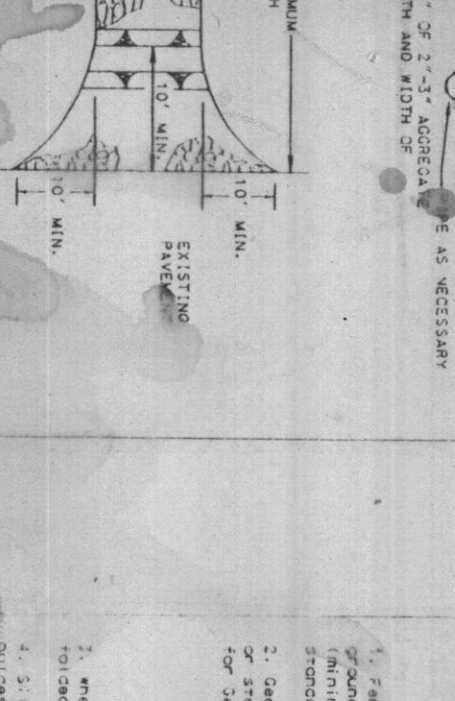
MINIMUM PUMP REQUIRED: PUMP REQUIRED TO DELIVER 9.78 GPM AT 6.0 FT. OF TOTAL DESIGN HEAD.

PUMP SPECIFICATIONS

1. GALLONS PER HOUR	179.16
2. DISCHARGE HEAD IN FEET	38.18
3. DISCHARGE HEAD IN METERS	11.64
4. STATIC HEAD IN FEET	6.91
5. FLOW MAIN LENGTH IN FEET	33.6
6. EQUIVALENT LENGTH	
7. TOTAL EQUIVALENT LENGTH	
8. TOTAL DYNAMIC HEAD (H _T)	10.80
9. TOTAL DYNAMIC HEAD (H _T)	10.80
10. TOTAL DYNAMIC HEAD (H _T)	10.80

GENERAL NOTES

1. AREA OF SITE - 5.17 AC.
2. PROPERTY ZONED - R-2050
3. SITE LOCATED ON TM 4 GRID 14 PARCEL 69
4. WATER TO BE PRIVATE. SEWER TO BE PRIVATE
5. OWNERS: ELIZABETH LIGHT TRUSTEE
6. OWNERS: ELIZABETH LIGHT TRUSTEE
7. CONTRACTOR: BETHESDA, MD. 20817-2313
8. TOPOGRAPHY OBTAINED FROM HOWARD CO. 200 SHEET AND FIELD VERIFIED BY SURVEYOR'S INC.
9. THIS AREA DESIGNATES A PRIVATE SEWAGE RESERVE AREA SUITABLE FOR SAND MOUND TYPE SYSTEMS. ONLY AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THE AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. HIS AREA SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWAGE RESERVE AREAS.
10. THIS SEPTIC SYSTEM IS DESIGNED FOR (6) SIX BEDROOMS.



SURVEYOR'S CERTIFICATION

I, HERBERT GENTY, TRUSTEE TO THE STATE OF MARYLAND, DO HEREBY CERTIFY THAT THE PLAN COMPLETES WITH APPLICABLE CODES TO THE HOWARD COUNTY HEALTH DEPARTMENT FOR PUMP AND MOUND SYSTEM DESIGN.

HERBERT GENTY, SURVEYOR
No. 15799, Gaithersburg, Maryland

SAVARD PROPERTY

3rd Election District
Howard County, Maryland
Gaither Road
Parcel 69

SAVARD PROPERTY

3rd Election District
Howard County, Maryland
Gaither Road
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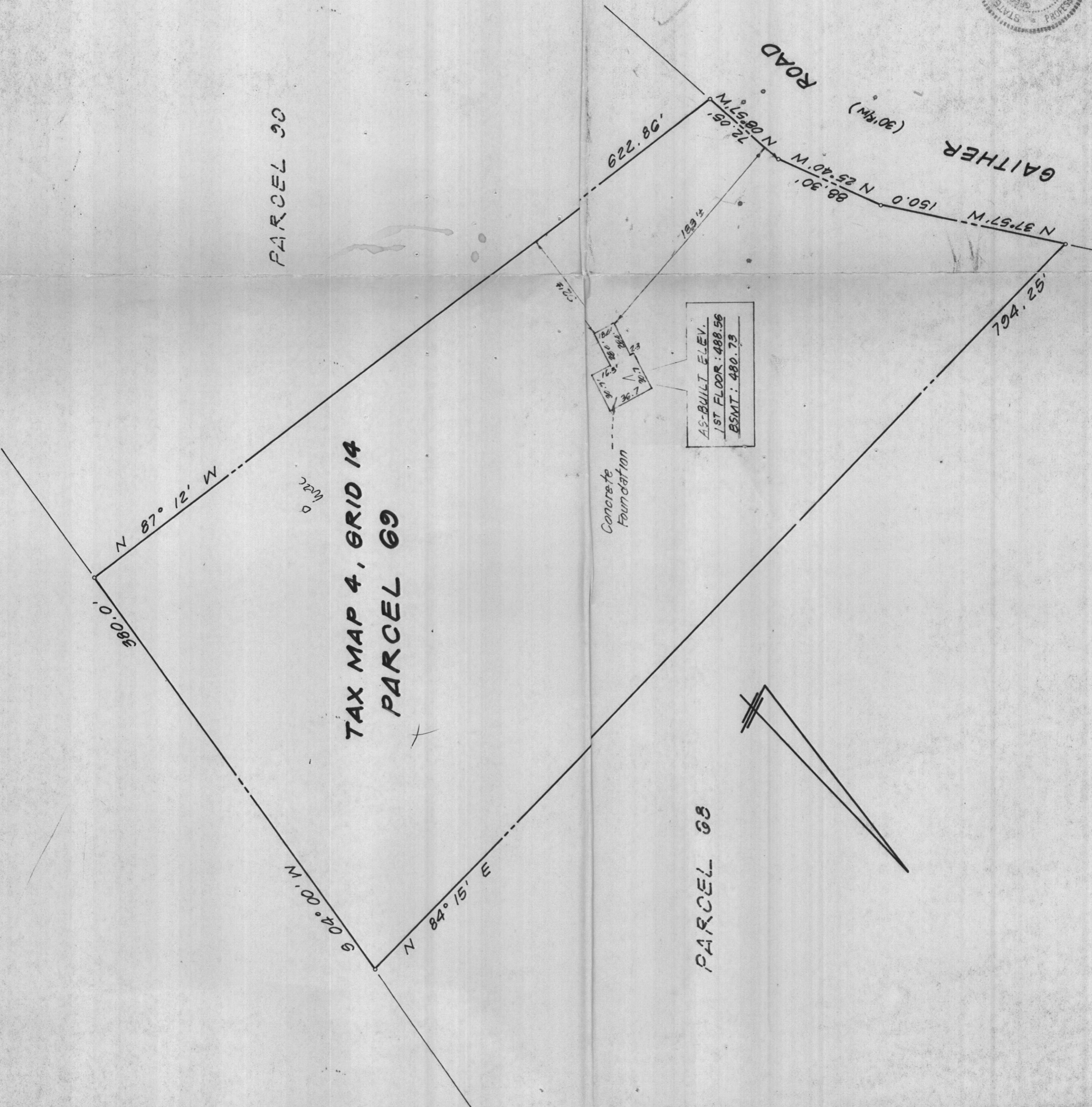
NOTES:

1. This plat is not intended for use in the establishment of property lines, but provides for the exclusive use of the present property owners of record and/or those who purchase, mortgage or guarantee the title within six months from the date hereon and after to them.
2. No title report furnished at this time, subject to all easements and rights of ways of record.
3. Property corners have not been set with this survey. Property information was taken from the best available records.
4. This location plat is not to be used for the construction of fences or other all property lines as shown.
5. and lot stakeout would have to be performed to determine the location of the property lines as shown.
6. The Property shown hereon is located within Zone _____ as shown on F.E.M.A. Flood Insurance Rate Map _____ of _____ County, Maryland.

PARCEL 90

TAX MAP 4, GRID 14
PARCEL 69

PARCEL 68



Jeff S. Parker
 Cell - 410-808-9628
 Home - 717-382-9066
 House Staked: 9-15-03
 House Staked as Indicated
 Offsets Variable
 - Wall Check - 8-2-04
 * Elevation Certification: 7-6-05

HOUSE STAKE - OUT
 Gaither Road
 Tax Map 4, Grid 14, Parcel 69
SAVARD PROPERTY
 3rd Election District
 Howard County, Maryland

LIBERTY PLANNING PARCEL 69
 TAX MAP 4, GRID 14, PARCEL 69
 DESIGNED BY: SCALE 1"=60' DATE 9-12-03 FIELD BK

WCO
 DRAWN BY: WCO
 APPROVED BY: [Signature]
SURVEYS, INC.
 SURVEYORS * ENGINEERS * LAND PLANNERS
 PERMIT SERVICES
 950 MAIN STREET
 LAUREL, MARYLAND, 21071
 PHONE 301-714-0541 FAX 301-714-0544

JOB No. 00-023
 FILE No. M-475



SURVEYOR'S CERTIFICATE
 I hereby certify that the position of all the existing improvements on the above property have been carefully shown by me directly from the ground and that they are located as shown. THIS IS NOT A BOUNDARY SURVEY.
 8-6-04
 [Signature]
 Registered Professional Land Surveyor, No. 10000