LAYOUT 11-15-02 1-2pm INSP 4 F-U 8-18-03 3pm

INSP 2 6/16/03 3PM INSP 5 F/U 9/16/03 KC/FA 11 30

INSP 3 6/30/03 12 INSP 6 9/26/03 1pm pump & alarm

9/29 12 noon

ISSUE DATE: 10/29/2002

APPROVAL DATE: 9/29/03

PERMIT

INDEXED

P 517979

A 35462

05-407400

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

Fogles Septic Clean, Inc IS PERMITTED TO INSTALL ☒ ALTER ☐

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

SUBDIVISION: Waterford LOT NUMBER: 6

ADDRESS: 13185 Brighton Dam Road PROPERTY OWNER: Joseph Nazario

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

PUMP CHAMBER CAPACITY (GALLONS): 1500 COMPARTMENTED TANK REQUIRED ☒

NUMBER OF BEDROOMS: 5

SQUARE FEET PER BEDROOM: 180

LINEAR FEET OF TRENCH REQUIRED: 300 HOUSE SERVED BY PUBLIC WATER ☐

TRENCHES:	Trench to be 3.0 feet wide. Inlet 3.0 feet below original grade. Bottom maximum depth 4.5 feet below original grade. Effective area begins at 3.0 feet below original grade. 1.5 feet of stone below distribution pipe.
LOCATION:	Place the distribution box as shown on the approved site plan. Run four(4) - 75' trenches on contour 10' center to center.
NOTES:	SEE APPROVED PLANS FOR DETAILS ON PUMPS & IN-LINE FLUSHING CON.

PLANS APPROVED: Steven R. Krieg OKSRK 7/24/02 DATE: 6/26/2002

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

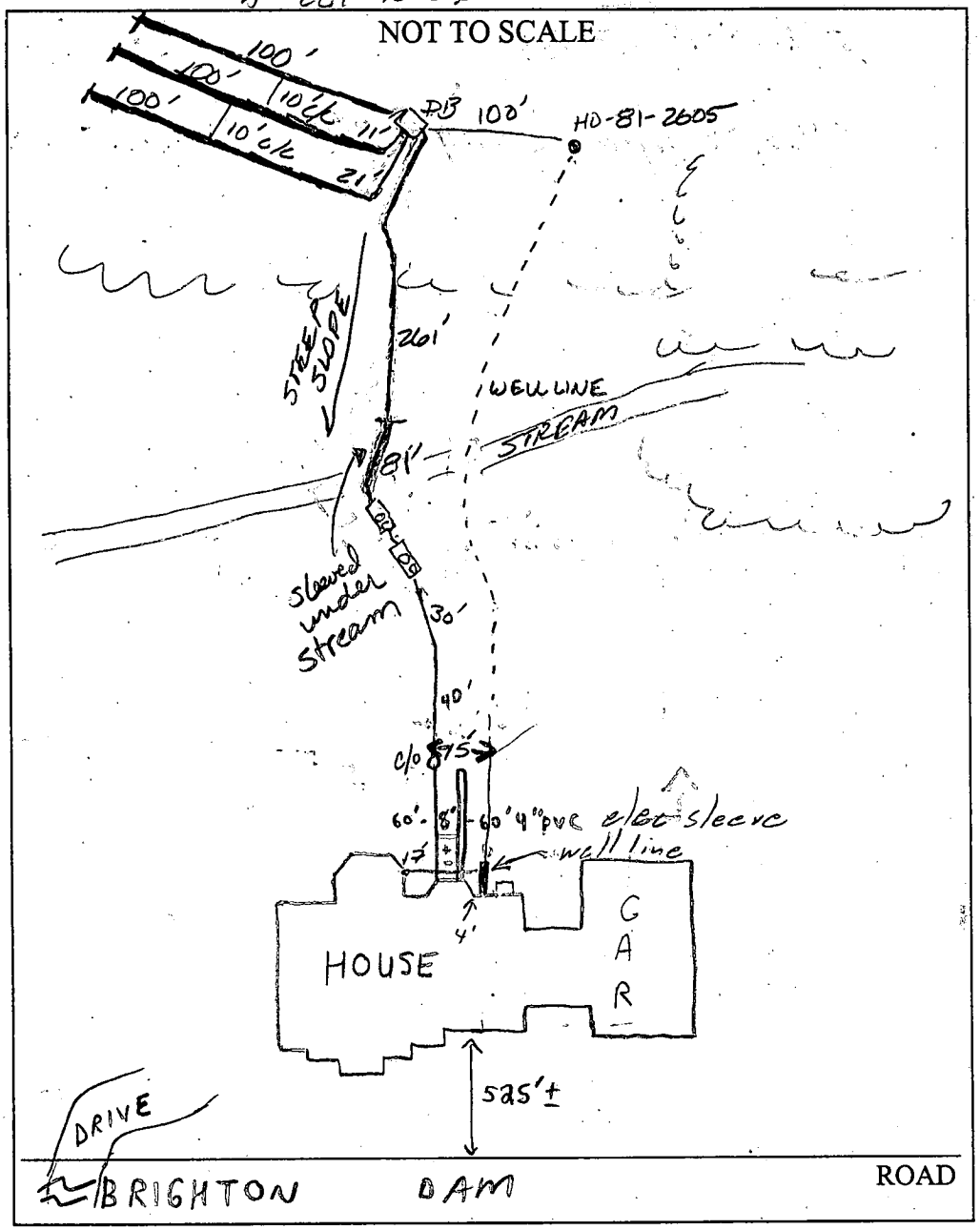
NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM
PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT
ALL 410-313-2640 FOR INSPECTION OF SEPTIC SYSTEM

BUILDING PERMIT SIGNED AND RETURNED

10/16/2003 B00144551 2-1000 gal underground LP Tanks

A 35462

A-231' TO DB



TRENCH/DRAINFIELD DATA

	WIDTH	INLET	BOTTOM
	3'	3'	4.5'

NUMBER OF TRENCHES 3
TOTAL LENGTH 300'
ABSORPTION AREA 900 ft
DISTRIBUTION BOX LEVEL ✓
DISTRIBUTION BOX BAFFLE ✓
DISTRIBUTION BOX PORT

SEPTIC TANK DATA

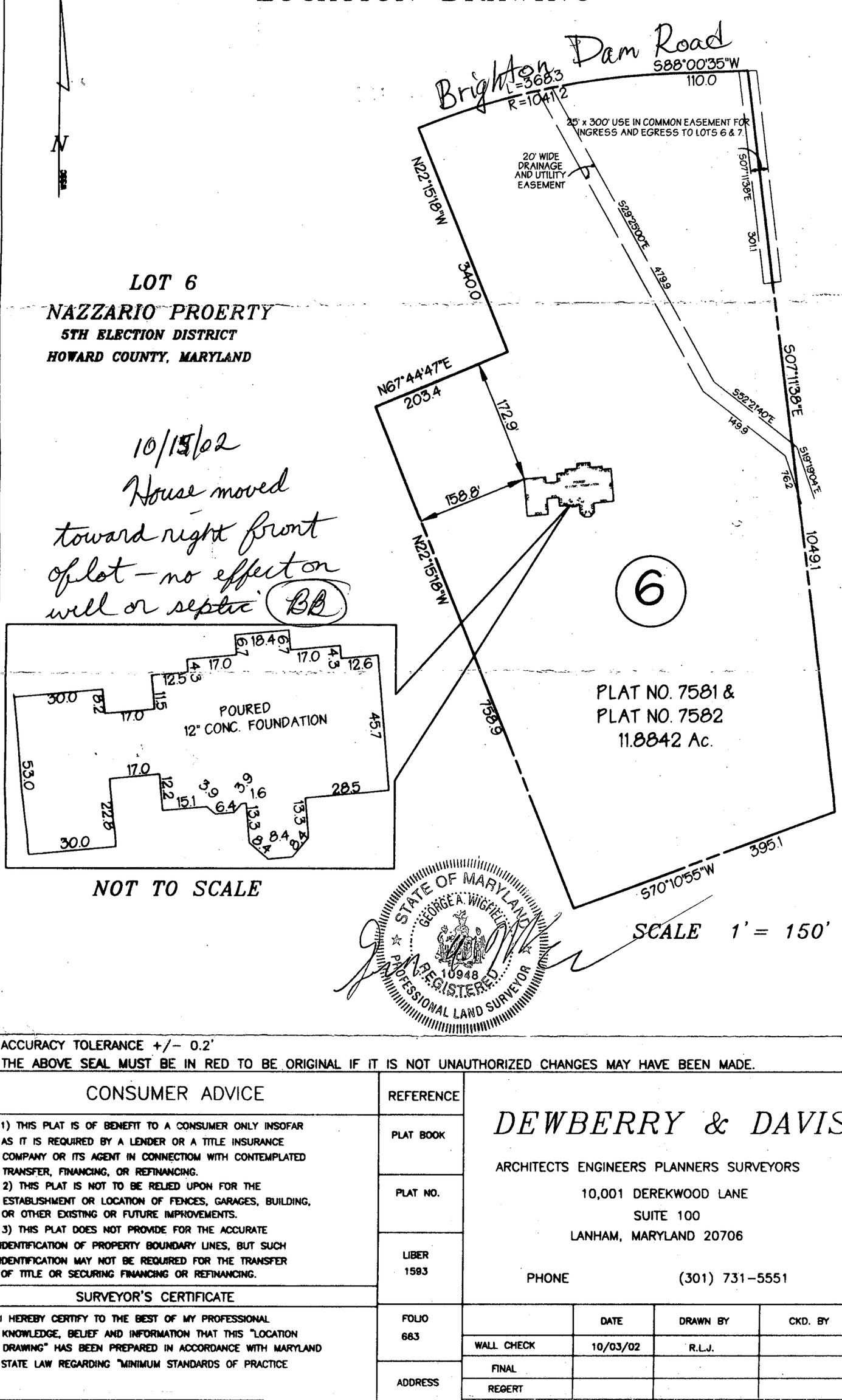
SEPTIC TANK 1 LEVEL ✓
CAPACITY 1500 GAL
SEAM LOC Top
TANK LID DEPTH 2.5-3'
BAFFLES ✓
BAFFLE FILTER
MANHOLE LOC F & B
6" PORT LOC —
WATERTIGHT TEST —
SEPTIC TANK 2 LEVEL ✓
CAPACITY 1500 GAL
SEAM LOC Top
TANK LID DEPTH 2.5-3'
BAFFLES ✓
BAFFLE FILTER —
MANHOLE LOC Center
6" PORT LOC Front
WATERTIGHT TEST —

PRE-CONSTRUCTION 11/15/02-MET KENNY MAYNE, HE MENTIONED HE MAY NOT BE INSTALLING THIS SYSTEM. OK TO INSTALL & COVER HOUSE SEWER & WELL LINE SLEEVE, OK FOR WELL LINE TO BE LESS THAN 10' APART BECAUSE IT IS 12" ABOVE SEPTIC LINE & SLEEVED- ~~INSTALLATION~~ ANY CHANGES IN SEPTIC DESIGN SHOULD BE CLEARED THRU THE ENGINEER VIA KURT AT FOGLES-(SRV) 6/16/03 SRA not staked, no trenches until staked. S.T. & P.T. installed OK to cover (SO) 6/30/03 SRA Staked, install (3) 100' trenches on contour, move D.B back, no closer than 10' from well line. Sleeve well line past tanks until 10' separation (SO) 8/19/03 - Trenches installed OK to cover (SO). 8/19/03 - 117 feet from wall bumpout to water line; 15' From c/o to water line, 10' from waste line to water line at house ~~connection~~ Allowed to cover trenches, ~~pump~~ line to DB + Pump 2605 ~~test needed~~ (FA/KW)

FINAL INSPECTOR [signature] DATE OF APPROVAL 9/29/03

9/26/03 - Alarm OK, Pump not going (SO) 9/29/03 Pump test functional (KB/SO)

LOCATION DRAWING



ACCURACY TOLERANCE +/- 0.2'

THE ABOVE SEAL MUST BE IN RED TO BE ORIGINAL IF IT IS NOT UNAUTHORIZED CHANGES MAY HAVE BEEN MADE.

CONSUMER ADVICE

1) THIS PLAT IS OF BENEFIT TO A CONSUMER ONLY INSOFAR AS IT IS REQUIRED BY A LENDER OR A TITLE INSURANCE COMPANY OR ITS AGENT IN CONNECTION WITH CONTEMPLATED TRANSFER, FINANCING, OR REFINANCING.
2) THIS PLAT IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATION OF FENCES, GARAGES, BUILDING, OR OTHER EXISTING OR FUTURE IMPROVEMENTS.
3) THIS PLAT DOES NOT PROVIDE FOR THE ACCURATE IDENTIFICATION OF PROPERTY BOUNDARY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR SECURING FINANCING OR REFINANCING.

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, BELIEF AND INFORMATION THAT THIS "LOCATION DRAWING" HAS BEEN PREPARED IN ACCORDANCE WITH MARYLAND STATE LAW REGARDING "MINIMUM STANDARDS OF PRACTICE

GEORGE A. WIGFIELD PROF. L.S. 10948 MD

REFERENCE

PLAT BOOK

PLAT NO.

LIBER 1583

FOLIO 683

ADDRESS

DEWBERRY & DAVIS

ARCHITECTS ENGINEERS PLANNERS SURVEYORS

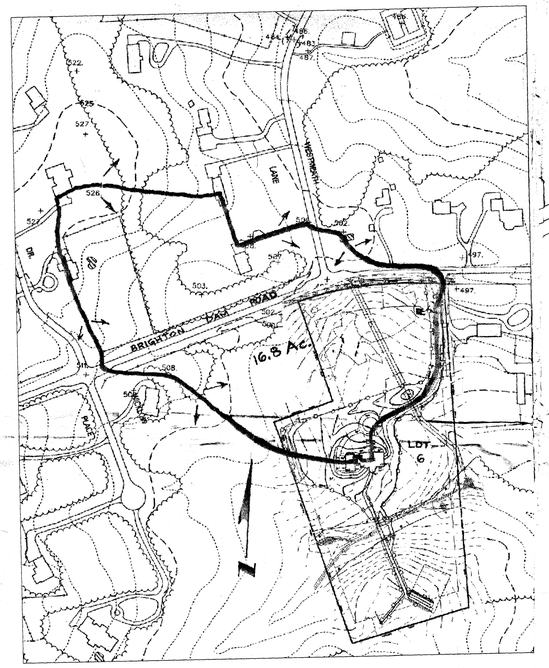
10,001 DEREKWOOD LANE

SUITE 100

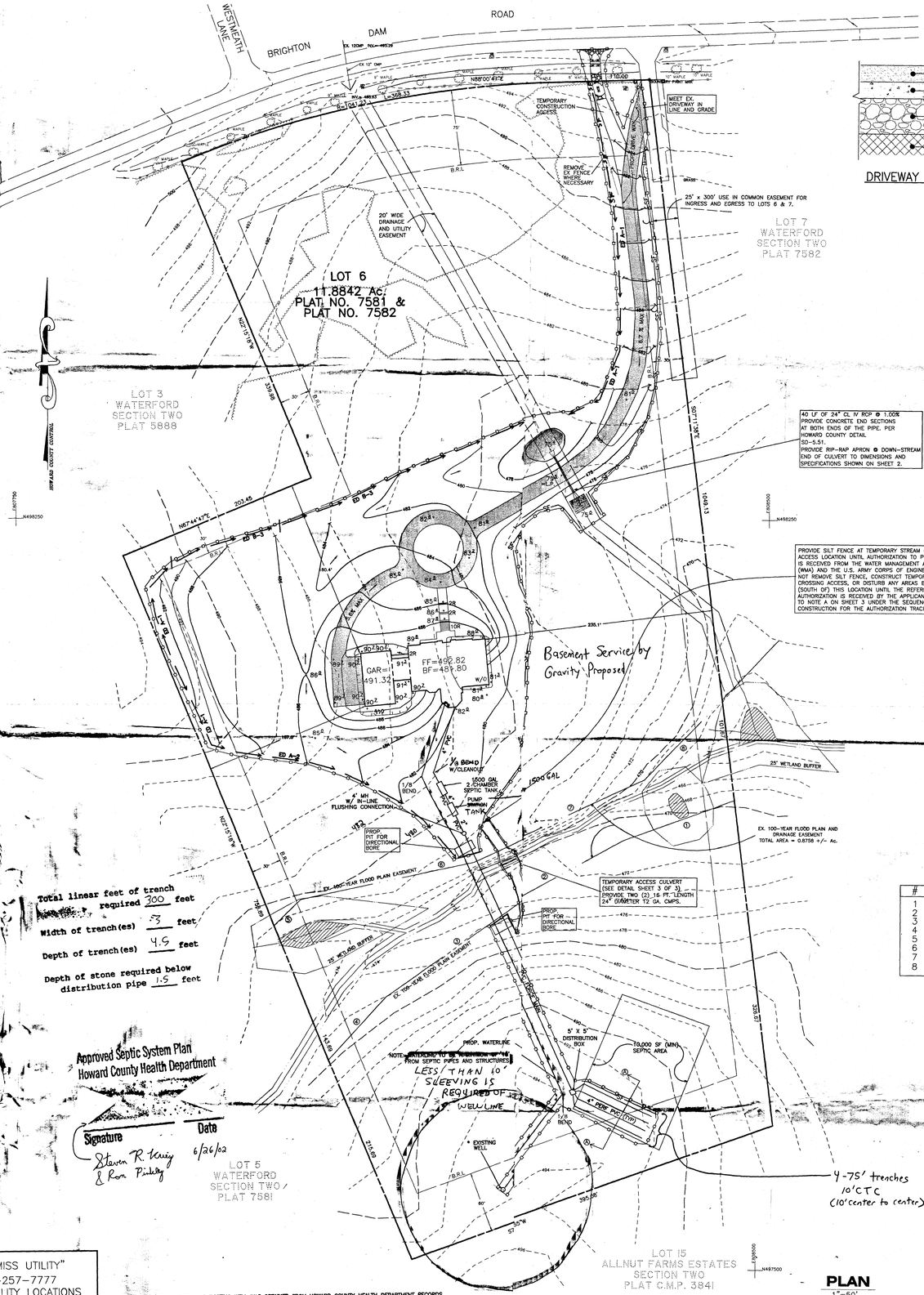
LANHAM, MARYLAND 20706

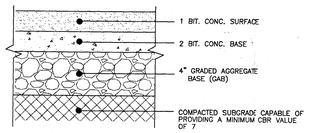
PHONE (301) 731-5551

	DATE	DRAWN BY	CKD. BY
WALL CHECK	10/03/02	R.L.J.	
FINAL			
REGERT			

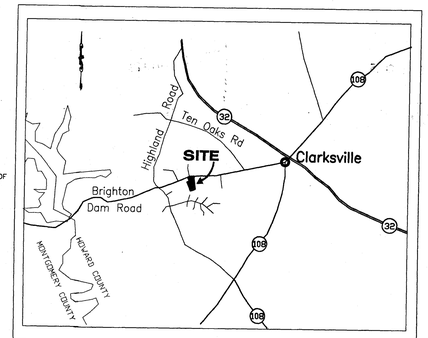


DRAINAGE AREA MAP – PROPOSED 24" RCP
SCALE: 1" = 200'



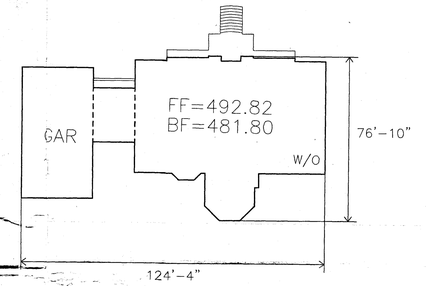


DRIVEWAY PAVEMENT SECTION
NTS



VICINITY MAP
1"=5000'
HOWARD COUNTY MAP PAGE 13; GRID K-9

SHEET INDEX



APPROX. LIVING AREA= 4,359 S.F.
GARAGE= 1,582 S.F.
N.T.S.

LEGEND

- EXIST. CONTOURS
- PROP. CONTOURS
- PROP. SPOT ELEVATION
- EXIST TREE
- PROPERTY LINE
- STREAM
- EX. EDGE PAVEMENT
- LIMIT OF DISTURBANCE
- EX. WOOD FENCE
- TREE LINE
- EARTH DIKE
- SILT FENCE
- SUPER SILT FENCE
- PROP. WELL WATERLINE
- WETLAND BUFFER
- WETLAND
- STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL MATTING
- STRUCTURAL FILL AREA

Total linear feet of trench required 300 feet
Width of trench(es) 3 feet
Depth of trench(es) 4.5 feet
Depth of stone required below distribution pipe 1.5 feet

Approved Septic System Plan
Howard County Health Department
Signature — Date 6/26/02
Steven R. Lewis & Ron Pinkley

100-YEAR FLOODPLAIN DATA	
#	BEARING/DIST
1	S 69°58'40" W 116.4'
2	S 61°10'09" W 124.4'
3	S 54°58'48" W 167.2'
4	S 42°21'01" W 84.6'
5	N 45°14'23" E 37.3'
6	N 77°55'40" E 176.9'
7	N 65°15'57" E 195.9'
8	N 43°31'52" E 111.3'

DEVELOPER'S CERTIFICATION

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER — DATE: 3-18-02

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASE ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature — Date: 3/18/02
Name: Eric R. Becker, PE MD. Regn No.: 21440

Reviewed for ... and found Technical Requirements ... Date 3/19/02
Signature
USDA, NATURAL RESOURCES CONSERVATIONS. SERVICE

HOWARD SCD APPROVAL

These plans for soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard S.C.D. — Date 3/19/02

WETLAND / WATERWAY NOTE:

IT IS THE APPLICANT'S RESPONSIBILITY TO OBTAIN ANY STATE PERMITS, IF REQUIRED, FOR ANY CONSTRUCTION ACTIVITY COVERED BY THIS PLAN WHICH IMPACTS A STATE REGULATED WETLANDS OR CORPS OF ENGINEER'S WATERWAY. ANY CHANGES TO PLANS FOR THIS PROJECT WHETHER REQUIRED BY THE STATE, CORPS OF ENGINEERS, OR INITIATED BY THE APPLICANT TO MEET STATE OR CORPS REQUIREMENTS MUST BE APPROVED BY HOWARD COUNTY SOIL CONSERVATION DISTRICT.

GP- 02-85

SITE, SEPTIC, GRADING AND SEDIMENT CONTROL PLAN

DESIGNED	ERB	03/02 DATE
DRAWN	WPK	03/02 DATE
CHECKED	MRS	03/02 DATE
APPROVED		DATE

REVISIONS		
DATE	DESCRIPTION	BY

Dewberry & Davis LLC
Engineers . Planners . Surveyors . Landscape Architects
10001 DEREKWOOD LANE, SUITE 100, LANHAM, MD 20706
(301) 731-5551 WWW.DEWBERRY.COM FAX (301) 731-0188

STATE OF MARYLAND — ERIC R. BECKER — No. 21440 — PROFESSIONAL ENGINEER — 3/18/02

OWNER / DEVELOPER / APPLICANT

JOSEPH NAZARIO
6500 AMMENDALE ROAD
BELTSVILLE, MD 20705-1484
PHONE: 301-927-4664
FAX: 301-937-9454

NAZARIO PROPERTY
WATERFORD LOT 6
TAX MAP 34 GRID 9 PARCEL 261
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN	CONTACT NO.	FILE NO. NZ882	SHEET 1 OF 3

GREENHORNE & O'MARA, INC. ----- STORM SEWER SYSTEM DESIGN

PAGE: 1
TIME: 08:20:45
DATE: 03-15-02

TABLE 1: INPUT VERIFICATION

DESIGNED BY: ERB

NAZARIO PROP (RNAZARIO.dat) CULVERT DESIGN March, 2002

CHECKED BY: MRS

UPSTREAM STRUCTURE NUMBER	DWNSTREAM STRUCTURE NUMBER	WTR SRFCE ELEVATION (FEET)	WTR SRFCE ELEVATION MODIFIER	HEAD LOSS MODIFIER	DRAINAGE AREA (ACRES)	RUNOFF COEFFICIENT	CONCNTRTN TIME (MINUTES)	PIPE LENGTH (FEET)	HORIZONTL ANGLE (DEGREES)	MINIMUM SLOPE (%)	MINIMUM PIPE DIAM (INCHES)	MANNINGS COEFFICINT
24" RCP	N/A	.000	.000	102.000	16.800	.210	10.000	40.000	.000	1.000	24.000	.013

GREENHORNE & O'MARA, INC. ----- STORM SEWER SYSTEM DESIGN

PAGE: 2
TIME: 08:20:45
DATE: 03-15-02

TABLE 2: FINAL DESIGN OUTPUT - 10 YEAR STORM

DESIGNED BY: ERB

NAZARIO PROP (RNAZARIO.dat) CULVERT DESIGN March, 2002

CHECKED BY: MRS

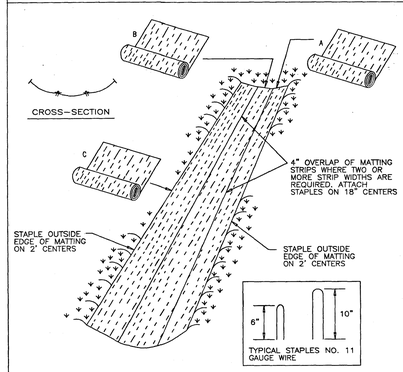
LINE DEFINITION DATA									DESIGN DETAIL DATA							
FROM	TO	AREA INCRM (AC)	AREA TOTAL (AC)	R COEF	A*R INCRM	A*R TOTAL	TIME CONC (MIN)	RAIN INTSTY (IN/HR)	Q (CFS)	PIPE SIZE (IN)	SLOPE (%)	MANNG COEF	VELCTY F/S)	QFUL (CFS)	LEN (FT)	TIME (SEC)	STR NO.	STR LOSS (FT)
N/A	24"	16.80	16.80	.21	3.53	3.53	10.00	5.87	20.71	24.	.84	.013	6.61	20.71	40.	6.06	1	.00

HEALTH DEPT COPY

SEPTIC SYSTEM DESIGN ✓

1. PERK TEST RESULTS –
   ON FILE WITH HOWARD COUNTY HEALTH DEPARTMENT.
2. ESTIMATED FLOW –
   750 ~~1000~~ GALLONS PER DAY
   RESERVE CAPACITY – 5 BEDROOMS @ 150 GALLONS = 750 GALLONS
3. SEPTIC TANK DESIGN –
   1500 GALLON TOP SEAM DOUBLE COMPARTMENT TANK
4. TRENCH DESIGN – to 2"
   HOWARD COUNTY RECOMMENDATION
   300 FEET OF 3' WIDE, 4.5 DEEP WITH 1/2" WASHED GRAVEL BACKFILL TRENCH, 10' CENTER TO CENTER. AND TWO REPLACEMENT AREAS. POLY-FILTER X FILTER FABRIC TO BE PLACED ON TOP OF GRAVEL PRIOR TO EARTH BACKFILL. (RED-ROSIN OR GEOTEXTILE FABRIC) (O.K. SRK)
5. ALTERNATING SEPTIC TANK EFFLUENT PUMPS (STEP) DESIGN– SEE PUMP STATION DETAIL THIS SHEET FOR INFORMATION.
6. ALL PUMP CHAMBER AND ACCESS RING SEAMS SHALL BE MADE WATERTIGHT, OR IF A HIGH WATER TABLE EXISTS THE ENTIRE OUTSIDE SURFACE OF THE PUMP CHAMBER AND ACCESS RING(S) SHALL BE TARRED OR SEALED WITH HYDAULIC CEMENT PAINT. ALL SEAMS MUST BE MADE WATER TIGHT PRIOR TO SEALING.
7. THE ALARM FLOAT AND THE PUMP MOTORS SHALL BE PLACED ON SEPARATE ELECTRICAL CIRCUITS.
8. SEPTIC TANK AND PUMP STATION STRUCTURE ARE NOT DESIGNED FOR HYDRAULIC GROUNDWATER CONDITIONS. CONTRACTOR TO TEST PIT CONST. AREA PRIOR TO ORDERING PRECAST STRUCTURE TO IDENTIFY POSSIBLE PRESENCE OF GROUNDWATER TABLE. IF GROUND WATER IS PRESENT, CONTRACTOR TO IMMEDIATELY NOTIFY ENGINEER.

DETAIL 30 - EROSION CONTROL MATTING



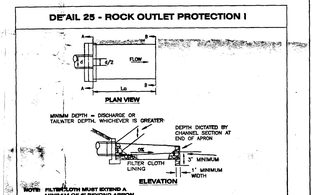
Construction Specifications

1. Key–in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross–section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed–in.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G – 22 – 2 & 2A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 25 - ROCK OUTLET PROTECTION I



Construction Specifications

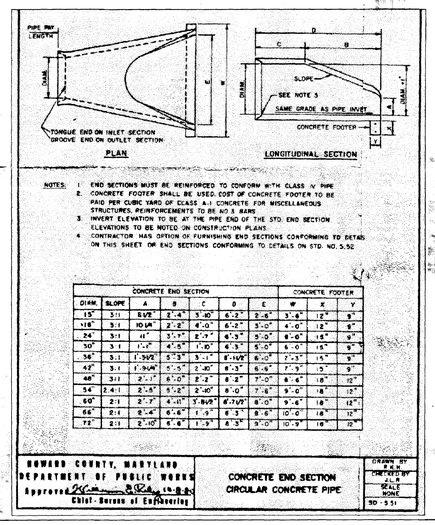
1. The subgrade for the filter, rip–rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip–rap or filter.
3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
4. Stone for the rip–rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip–rap or gabion outlets shall be reasonably well graded from the smaller to the larger sizes such that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip–rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F – 18 – 5 & 5A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

RIP–RAP APRON DIMENSIONS

STRUCTRE	LENGTH (FT)	WIDTH (FT)	THICKNESS (IN)
24" CL I RCP	14	16	20

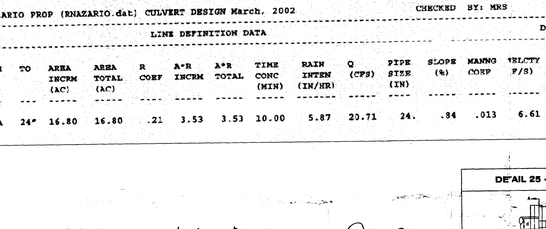
RIP–RAP APRON TO HAVE MSHA CL I RIP–RAP
I A LONGITUDINAL SLOPE OF 0.0%. Dw =0" WITH POLYFILTER "X" FABRIC OR APPROVED EQUAL.



NOTES:
1. END SECTIONS MUST BE REINFORCED TO CONFORM WITH CLASS V PIPE
2. CONCRETE FOOTER SHALL BE USED. COST OF CONCRETE FOOTER TO BE PAID PER CUBIC YARD OF CLASS A-1 CONCRETE FOR MISCELLANEOUS STRUCTURES. REINFORCEMENTS TO BE NO.5 BARS
3. INVERT ELEVATION TO BE AT THE PIPE END OF THE STD. END SECTION ELEVATIONS TO BE NOTED ON CONSTRUCTION PLANS.
4. CONTRACTOR HAS OPTION OF FURNISHING END SECTIONS CONFORMING TO DETAILS ON THIS SHEET OR END SECTIONS CONFORMING TO DETAILS ON STD. NO. 5.52

CONCRETE END SECTION							CONCRETE FOOTER		
DIAM.	SLOPE	A	B	C	D	E	W	X	Y
15"	3:1	8'-2"	2'-4"	3'-10"	6'-2"	2'-6"	3'-6"	12"	9"
18"	3:1	10'-4"	2'-8"	4'-0"	6'-2"	3'-0"	4'-0"	12"	9"
24"	3:1	11'-0"	3'-7"	5'-7"	6'-3"	4'-0"	5'-0"	15"	9"
30"	3:1	11'-6"	4'-5"	7'-0"	6'-3"	5'-0"	6'-0"	15"	9"
36"	3:1	11'-9½"	5'-3"	8'-1"	6'-3"	6'-0"	7'-3"	15"	9"
42"	3:1	11'-9½"	5'-5"	9'-0"	6'-3"	6'-6"	7'-9"	15"	9"
48"	3:1	12'-1"	6'-0"	9'-8"	6'-3"	7'-0"	8'-6"	18"	12"
54"	2.4:1	12'-5"	5'-2"	9'-0"	6'-0"	7'-8"	9'-0"	18"	12"
60"	2:1	12'-7"	4'-0"	8'-8½"	6'-0"	8'-0"	9'-6"	18"	12"
66"	2:1	12'-4"	6'-6"	11'-9"	6'-3"	8'-6"	10'-0"	18"	12"
72"	2:1	12'-10"	6'-8"	11'-9"	6'-3"	9'-0"	10'-9"	18"	12"

HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS Approved ... Chief - Bureau of Engineering	CONCRETE END SECTION CIRCULAR CONCRETE PIPE	DRAWN BY CHECKED BY A.L.R. SCALE NONE 300 - 5.51



DESIGN DATA

300 Linear feet of drainfield
195.8 Volume of drainfield pipe ($\pi \times R^2 \times L \times 7.48$)
166.4 Gallons pumped each cycle (85% of drainfield volume)
5 +/– Inches drawdown per cycle (gal. pumped x 12) / (L x W x 7.48)

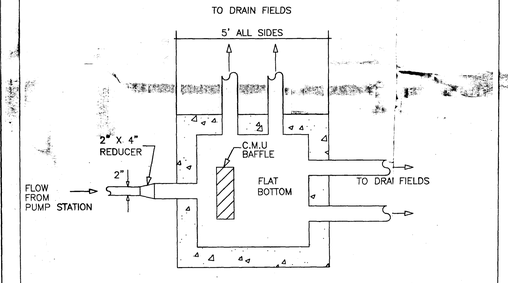
250(min) Gallons of Reserve Capacity
(L x W x (inlet elev. – lag/alarm elev.) x 7.48)
2 Diameter of force main pipe (inches)
301 Linear length of force main pipe (ft)

40 Equivalent length of pipe
341 Total pipe length (linear + equivalent)
4.26' Frictional loss per 100' of pipe with min. velocity of 2.0ft/sec
14.1 System frictional loss (total pipe length x frictional less 100')
40.0 Static head loss (highest pipe elev. – lowest pipe elev.)
38.5 Total head loss (frictional loss + static loss)
Size horsepower pump needed (refer to pump curve)
Down draw time: 3 minutes 30 sec. at 47.5 GPM:
Recommended pump: #1 make Zoeller Model # E–161/163

47.5 GPM at 38.5 feet TDH
230 volts 1 phase 1/2 horsepower
Contol Panel: Make Zoeller Model # 10–0093
230 volts 1 phase 0.5 maximum horsepower

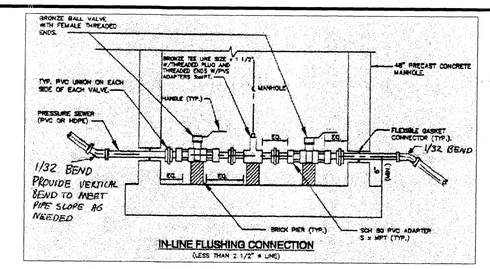
PUMP STATION DETAIL ✓

N.T.S.



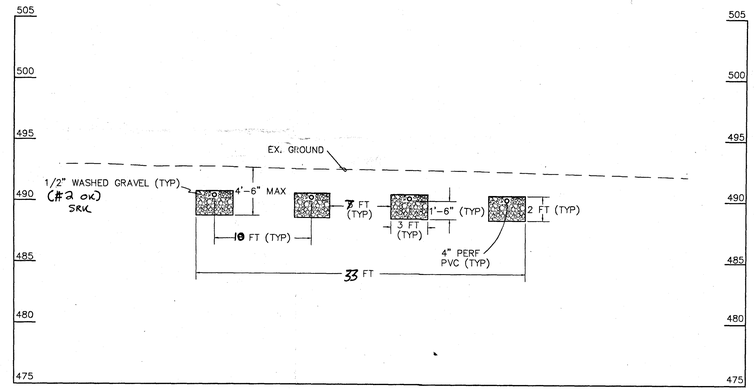
DISTRIBUTION BOX DETAIL ✓

N.T.S.



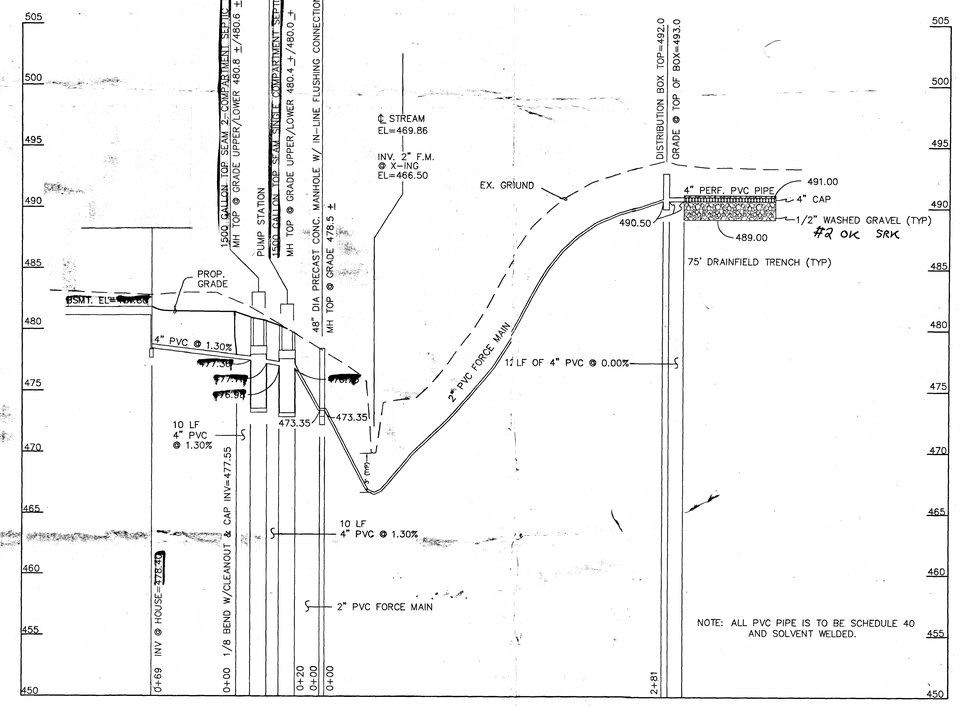
IN-LINE FLUSHING CONNECTION

(LESS THAN 2 1/2" ø LINE)



SECTION A-A TRENCH DETAIL ✓

SCALE: 1"= 5'



NOTE: ALL PVC PIPE IS TO BE SCHEDULE 40 AND SOLVENT WELDED.

PROFILE OF SEPTIC SYSTEM ✓

SCALE: HORZ. 1"= 5'
VERT. 1"= 5'

CALL "MISS UTILITY" 1–800–257–7777 FOR UTILITY LOCATIONS AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION

SEPTIC SYSTEM, SITE, AND SEDIMENT CONTROL DETAILS

DESIGNED	ERB	03/02
DRAWN	WPK	03/02
CHECKED	MRS	03/02
APPROVED		

REVISIONS		
DATE	DESCRIPTION	BY

Dewberry & Davis LLC
Engineers . Planners . Surveyors . Landscape Architects
10001 DEREKWOOD LANE, SUITE 100, LANHAM, MD 20706
(301) 731-5551 WWW.DEWBERRY.COM FAX (301) 731-0188

STATE OF MARYLAND — WILLIAM P. KIRKLAND — No. 21410 — PROFESSIONAL ENGINEER — 3/8/02

OWNER / DEVELOPER / APPLICANT

JOSEPH NAZARIO
6500 AMMENDALE ROAD
BELTSVILLE, MD 20705
PHONE: 301-927-4664
FAX: 301-937-9454

NAZARIO PROPERTY

WATERFORD LOT 6
TAX MAP 34 GRID 9 PARCEL 261
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN	CONTACT NO.	FILE NO. NZ882	SHEET 2 OF 3

Nazario Property

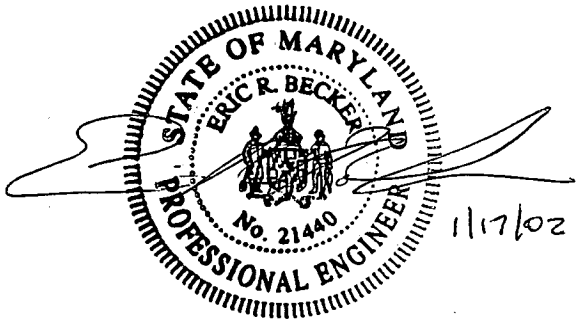
Howard County
Maryland

Septic System Calculations

Prepared by:
Dewberry & Davis, LLC
10001 Derekwood Lane, Suite 100
Lanham, Maryland 20706
January, 2002

Prepared For:

Joseph Nazario
6500 Ammendale Road
Beltsville, MD 20705



1/17/02

6/24/02 -
Calculations OK
GM, SRK & RJP

Eric R. Becker, P.E. 21440
Project Engineer

NAZARIO PROPERTY

TABLE OF CONTENTS

SEPTIC SYSTEM CALCULATIONS

PAGE

Calculation Sheet

Designer E BECKER Date 12/2001 Checker _____ Date _____
Title NAZARIO PROPERTY Job No. _____
Subject SEPTIC SYSTEM CALCULATIONS Sheet No. _____ of _____

SHALLOW SYSTEM TRENCHES

$$\text{TRENCH LENGTH} = \frac{\#\text{ OF BEDROOMS} * \text{REQUIRED ABSORPTION AREA}}{\text{WIDTH OF TRENCH}}$$

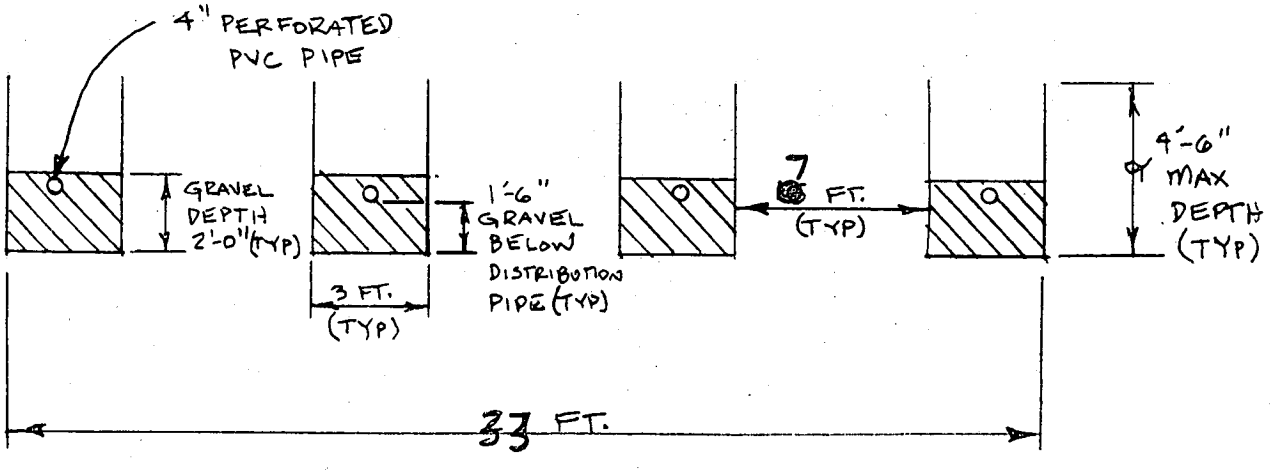
PROVIDED BY HOWARD COUNTY HEALTH DEPT. SEE APPENDIX A

REQUIRED ABSORPTION AREA = 180 FT²/BEDROOM
WIDTH OF TRENCH = 3 FT.
OF BEDROOMS PROPOSED = 5

$$\text{TRENCH LENGTH} = \frac{(5) * (180)}{(3)} = 300 \text{ FT}$$

SUMMARY:
TOTAL TRENCH LENGTH = 300
TRENCH DEPTH = 4.5 FT
GRAVEL DEPTH = 2.0 FT (1-6" BELOW DISTRIBUTION PIPE)
TRENCH WIDTH = 3.0 FT.

DESIGN FOUR TRENCHES @ 75 FT EA.



Calculation Sheet

Designer E. BECKER Date _____ Checker _____ Date _____

Title NAZARIO PROPERTY Job No. _____

Subject SEPTIC SYSTEM CALCULATIONS Sheet No. — of _____

SEPTIC TANK SIZE

AMOUNT OF PROPOSED BEDROOMS = 5

PER THE CRITERIA OUTLINE IN THE APPENDIX "WATERFORD SEC. 2 LOT 6 OF APPROVED PRELIMINARY PLAN DATED MARCH, 1987," A 1,500 GALLON TANK IS SATISFACTORY FOR THE PROPOSED RESIDENCE.

FROM CHART F IN APPENDIX "A", A 1,500 GALLON DOUBLE COMPARTMENT TANK HAS A DESIGN FLOW OF 1000 GALLONS/DAY.

Dewberry & Davis

Calculation Sheet

Designer E. BECKER Date 01/02 Checker _____ Date _____

Title NAZARIO PROPERTY Job No. _____

Subject SEPTIC SYSTEM CALCULATIONS Sheet No. _____ of _____

SEWAGE DISPOSAL PUMPING SYSTEMS

PUMP "OFF FLOAT ELEVATION FOR 12'-7" X 4'-7" SEPTIC STRUCTURE

VOL = (L)(W)(H) VOLUME REQUIRED TO PROVIDE 24" BETWEEN THE PUMP CHAMBER BOTTOM AND THE PUMP "OFF" FLOAT (WHERE (L) IS THE LENGTH OF THE STRUCTURE, (W) IS THE WIDTH OF THE STRUCTURE, AND (H) IS THE 24" DISTANCE

VOL = (12.58')(4.58')(2') x 7.48 GALLONS / 1 FT^3 = 862.3 GALLONS

PUMP "ON" ELEVATION

SINCE THIS IS A DUPLEX PUMP SYSTEM, THE PUMPING DOSE IS EQUAL TO 85% OF THE TOTAL DRAINFIELD PIPE CAPACITY.

CALCULATE THE PUMP DOSE FOR 300 FT. OF DRAINFIELD

DOSE = 85% OF 300 ~~FEET~~ OF 4 INCH DRAINPIPE

= (0.85)(300 FT) π r^2 (7.48 GAL/FT^3) r = RADIUS IN FT.

= (0.85)(300 FT) π (0.1667')^2 (7.48 GAL/FT^3)

DOSE = 166.4 GALLONS

CALCULATE THE DISTANCE BETWEEN THE PUMP "ON" AND "OFF" FLOAT. FOR SEPTIC STRUCTURE

VOLUME = L(FT.) W(FT) H(FT) (7.48 GAL/FT^3)

166.4 = (12.58)(4.58) H (7.48)

$$H = \frac{166.4}{(12.58)(4.58)(7.48)} = 0.40 \text{ FT}$$

Calculation Sheet

Designer E. BECKER Date ____ Checker ____ Date ____

Title ____ Job No. ____

Subject SEPTIC SYSTEM CALCULATIONS Sheet No. ____ of ____

LAG PUMP/ ALARM FLOAT

THE LAG PUMP/ALARM FLOAT IS SET 6 INCHES ABOVE THE PUMP "ON" FLOAT

THE VOLUME REQUIRED TO PROVIDE 6 INCHES BETWEEN THE LAG PUMP/ALARM FLOAT AND THE PUMP "ON" FLOAT IS AS FOLLOWS:

$VOL = (W)(L)\ H\ (7.48\ GAL/FT^3)$

$VOL = (12.58)(4.58)(0.5)(7.48\ GAL/FT^3)$

VOL = 216 GALLONS

RESERVE CAPACITY

THE DISTANCE BETWEEN THE LAG PUMP/ALARM FLOAT AND THE INVERT OF THE INLET PIPE WILL ACCOMMODATE THE RESERVE CAPACITY FOR THE STRUCTURE BEING SERVED.

RESERVE CAPACITY FOR RESIDENTIAL HOMES = 50 GALLONS/BEDROOM

RESERVE CAPACITY = 150 GAL/BDRM. (5 BEDROOMS)

RESERVE CAPACITY = 250 GALLONS

THE HEIGHT REQUIRED TO PROVIDE 250 GALLONS CAPACITY IS AS FOLLOWS:

$$H\ (FT) = \frac{VOL\ (GALLONS)}{(L)\ (W)\ 7.48\ GAL/FT^3} = \frac{250}{(12.58)(4.58)(7.48)} = 0.58\ FT$$

H = 0.58 FT. OR 7"

Dewberry & Davis

Calculation Sheet

Designer E. BECKER Date _____ Checker _____ Date _____

Title _____ Job No. _____

Subject SEPTIC SYSTEM CALCULATIONS Sheet No. _____ of _____

DETERMINATION OF THE TOTAL DYNAMIC HEAD

TOTAL DYNAMIC HEAD = STATIC HEAD LOSS + FRICTION LOSS THROUGH PIPING SYSTEM

STATIC HEAD LOSS = DIFFERENCE IN ELEVATION BETWEEN THE HIGHEST ELEVATION POINT OF THE FORCE MAIN AND THE PUMP INTAKE.

FRICTION LOSS THROUGH PIPING SYSTEM = ƒ [
- MATERIAL USED IN PIPING SYSTEM
- TOTAL LENGTH OF FORCE MAIN
- PUMP INTAKE]

STATIC HEAD LOSS

INV. OF 2" FORCE MAIN @ CHANNEL CROSSING

SHL = 490.50 − (466.50)' = 24.00'

SHL = 24

CALCULATE FRICTIONAL LOSS:

SYSTEM FRICTIONAL LOSS = (TOTAL PIPE LENGTH) x (FRICTION LOSS PER 100')

TOTAL PIPE LENGTH = LINEAR FEET OF FORCE MAIN + EQUIVALENT LENGTH OF FITTINGS

LINEAR PIPE LENGTH = 301 FT.

Dewberry & Davis

Calculation Sheet

Designer E. BECKER Date _____ Checker _____ Date _____

Title _____ Job No. _____

Subject SEPTIC SYSTEM CALCULATIONS Sheet No. _____ of _____

FRICTIONAL LOSS (CON'T)

EQUIVALENT LENGTH OF PIPE = STRAIGHT PIPE INSIDE TANK AND EQUIVALENT NUMBER OF FEET FOR PIPE FITTINGS.

= STRAIGHT PIPE	=	6.0 FT.
+ 90° ELBOW	=	5.5 FT
+ CHECK VALVE (SWING)	=	13.0 FT.
+ GATE VALVE (FULLY OPEN)	=	1.2 FT
+ TEE (SIDE OUTLET)	=	12.0 FT
+ 45° ELBOW	=	2.5 FT

DIAGRAM "C" & "D" APPENDIX A

TOTAL EQUIVALENT LENGTH OF PIPE = 40.2 FT

TOTAL PIPE LENGTH = (LINEAR + EQUIVALENT)

= 301' + 40.2

= 341.2

TOTAL DYNAMIC HEAD

RER DOSE = 166.4 GAL

TIME REQUIRED TO PUMP DOSE TO LATERAL

2 MIN + 5 MIN / 2 = 3.5 MIN [AVERAGE TIME REQ.]

$\therefore \frac{166.4 \text{ GAL}}{3.5 \text{ MIN}} = 47.5 \frac{\text{GAL}}{\text{MIN}}$

REFER TO THE CHART ON THE FOLLOWING SHEET

45 GAL/MIN H_L = 37.1 FT

50 GAL/MIN H_L = 39.9 FT

[LINEAR INTERPOLATION] H_L FOR 47.5 $\frac{\text{GAL}}{\text{MIN}}$ = $37.1 + (47.5 - 45.0)\frac{39.9 - 37.1}{50 - 45}$

= 38.5 FT TOTAL DYNAMIC HEAD

Dewberry & Davis

Calculation Sheet

Designer E. BECKER Date _____ Checker _____ Date _____

Title _____ Job No. _____

Subject SEPTIC SYSTEM CALCULATIONS Sheet No. _____ of _____

TOTAL DYNAMIC HEAD = STATIC HEAD LOSS + FRICTIONAL LOSS

= 24 FT + 14.5 FT

= 38.5 FT

BELOW IS A CHART THAT GIVES THE TOTAL DYNAMIC HEAD FOR DIFFERENT FLOWRATES. THIS CHART IS SHOWN IN GRAPH FORM, ALONG WITH THE HEAD CAPACITY CURVE, IN APPENDIX A.

FLOWRATE Q (GAL/MIN)	FRICTION LOSS (FT.) PER 100 FT.	FRICTION LOSS (FT.) FOR SYSTEM 341.2 FT.	STATIC HEAD LOSS (FT)	TOTAL DYNAMIC HEAD. (FT)
30	1.81	6.18	24	30.2
35	2.42	8.26	↓	32.3
40	3.11	10.61		34.6
45	3.84	13.10		37.1
50	4.67	15.93		39.9
60	6.60	22.52		46.5
70	8.83	30.13		54.1

THE CURVES INTERSECT @ TDH = 38.5 FT.

FLOWRATE = GAL/MIN → 47.5 GAL/MIN OK

∴ VELOCITY IN 2" PIPE → $V = Q/A$

Q = FLOWRATE
A = CROSS-SECTIONAL AREA OF PIPE

$$\text{VELOCITY} = \frac{47.5 \text{ GAL/MIN} \times \frac{1 \text{ MIN}}{60 \text{ SEC}} \times \frac{1 \text{ FT}^3}{7.48 \text{ GAL}}}{\pi \left(\frac{2''}{(12''/1 \text{ FT.})}\right)^2 / 4}$$

VELOCITY = 4.9 FPS

Appendix A

CHART F

0-1,750 sq. ft.	1,000 gals.	720 gal/day	70 ft.
1,751-2,250 sq. ft.	1,500 gals.	900 gal/day	100 ft.
2,251-3,000 sq. ft.	1,750 gals.	1,000 gal/day	120 ft.
3,000 + sq. ft.	2,000 gals.	1,000 gal/day	130 ft.

Double Compartment Tank

Gross Square Footage	Septic tank Capacity	Design Flow	Minimum Drainfield Length
0-1,750 sq. ft.	1,000 gals.	720 gal/day	70 ft.
1,751-2,250 sq. ft.	1,250 gals.	900 gal/day	100 ft.
2,251-3,000 sq. ft.	1,500 gals.	1,000 gal/day	120 ft.
3,000 + sq. ft.	1,800 gals.	1,000 gal/day	130 ft.

Commercial:

Normally the design flow for a commercial establishment is based on the square footage of the proposed building multiplied by a flow factor found in Table A.

An alternative method for determining daily sewage flow is to base it on the maximum number of occupants multiplied by 25 gallons per occupant.

The method yielding the greater daily sewage flow is used. In either case, non-residential design sewage flow shall be equal to twice the daily average sewage flow.

Documentation of estimated flow figures by Washington Suburban Sanitary Commission (WSSC) data may be used when applicable.

After the design flow has been determined, requirements for sizing of tank and drainfields are the same as for residential sewage disposal systems. However, a double compartment tank is always required for commercial sewage disposal systems.

Examples:
Deep System - test conducted at depths 5 feet or greater.

Applicant is building a 2,400 square foot house. The basement of 1,200 square feet is unfinished with a rough-in for future plumbing. Percolation tests were done at a depth of 6 feet. Absorptive soil was found from 3 feet to 6 feet. Average percolation test rate was 4 minutes/inch.

- First determine amount of living space

DIAGRAM C

Friction Loss

TECHNICAL DATA

PLASTIC PIPE:

FRICTION LOSS PER 100 FT.

GPM	GPH	2"		2½"		3"		4"		6"		8"		10"	
		Ft.	Lbs.	Ft.	Lbs.	Ft.	Lbs.	Ft.	Lbs.	Ft.	Lbs.	Ft.	Lbs.	Ft.	Lbs.
6	360	.10	.044												
8	480	.17	.073												
10	600	.25	.108	.11	.046										
15	900	.52	.224	.22	.094										
20	1,200	.86	.375	.36	.158	.13	.056								
25	1,500	1.29	.561	.54	.234	.19	.083								
30	1,800	1.81	.786	.75	.327	.26	.114								
35	2,100	2.42	1.05	1.00	.436	.35	.151	.09	.041						
40	2,400	3.11	1.35	1.28	.556	.44	.191	.12	.052						
45	2,700	3.84	1.67	1.54	.668	.55	.239	.15	.064						
50	3,000	4.67	2.03	1.93	.839	.66	.288	.17	.076						
60	3,600	6.60	2.87	2.71	1.18	.93	.406	.25	.107						
70	4,200	8.83	3.84	3.66	1.59	1.24	.540	.33	.143						
80	4,800	11.43	4.97	4.67	2.03	1.58	.687	.41	.180						
90	5,400	14.26	6.20	5.82	2.53	1.98	.861	.52	.224						
100	6,000			7.11	3.09	2.42	1.05	.63	.272	.08	.036				
125	7,500			10.83	4.71	3.80	1.65	.95	.415	.13	.055				
150	9,000					5.15	2.24	1.33	.580	.18	.077				
175	10,500					6.90	3.00	1.78	.774	.23	.102				
200	12,000					8.90	3.87	2.27	.985	.30	.130				
250	15,000							3.36	1.46	.45	.195	.12	.051		
300	18,000							4.85	2.11	.63	.275	.17	.072		
350	21,000							6.53	2.84	.84	.367	.22	.095		
400	24,000									1.08	.471	.28	.121		
500	30,000									1.66	.720	.42	.182	.14	.059
550	33,000									1.98	.861	.50	.219	.16	.071
600	36,000									2.35	1.02	.59	.258	.19	.083
700	42,000											.79	.343	.26	.112
800	48,000											1.02	.443	.33	.143
900	54,000											1.27	.554	.41	.179
950	57,000													.46	.198
1000	60,000													.50	.218

DIAGRAM D

Friction Loss

TECHNICAL DATA

EQUIVALENT NUMBER OF FEET STRAIGHT PIPE FOR DIFFERENT FITTINGS

Size of Fittings, Inches	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"
90° Ell	1.5	2.0	2.7	3.5	4.3	5.5	6.5	8.0	10.0	14.0	15	20	25
45° Ell	0.8	1.0	1.3	1.7	2.0	2.5	3.0	3.8	5.0	6.3	7.1	9.4	12
Long Sweep Ell	1.0	1.4	1.7	2.3	2.7	3.5	4.2	5.2	7.0	9.0	11.0	14.0	
Close Return Bend	3.6	5.0	6.0	8.3	10.0	13.0	15.0	18.0	24.0	31.0	37.0	39.0	
Tee–Straight Run	1	2	2	3	3	4	5						
Tee–Side Inlet or Outlet	3.3	4.5	5.7	7.6	9.0	12.0	14.0	17.0	22.0	27.0	31.0	40.0	
Globe Valve Open	17.0	22.0	27.0	36.0	43.0	55.0	67.0	82.0	110.0	140.0	160.0	220.0	
Angle Valve Open	8.4	12.0	15.0	18.0	22.0	28.0	33.0	42.0	58.0	70.0	83.0	110.0	
Gate Valve–Fully Open	0.4	0.5	0.6	0.8	1.0	1.2	1.4	1.7	2.3	2.9	3.5	4.5	
Check Valve (Swing)	4	5	7	9	11	13	16	20	26	33	39	52	65
Check Valve (Spring)	4	6	8	12	14	19	23	32	43	58			

Example:

(A) 100 ft. of 2" plastic pipe with one (1) 90° elbow and one (1) swing check valve.

90° elbow — Equivalent to 5.5 ft. of straight pipe
Swing Check — Equivalent to 13.0 ft. of straight pipe
100 ft. of pipe — Equivalent to 100.0 ft. of straight pipe
118.5 ft. = Total equivalent pipe

Figure friction loss for 118.5 ft. of pipe.

(B) Assume flow to be 80 GPM through 2" plastic pipe.

1. Friction loss table shows 11.43 ft. loss per 100 ft. of pipe.
2. In step (A) above we have determined total feet of pipe to be 118.5 ft.
3. Convert 118.5 ft. to percentage. 118.5 ÷ 100 = 1.185.
4. Multiply 11.43
   x 1.185
   13.54455 or 13.5 ft. = Total friction loss in this system.

Post-It™ brand fax transmittal memo 7671 | # of pages ▸ 1

To	From
Mike Snyder	Dave Shawver
Dewberry & Davis	Co. Zoeller Co
Dept.	Phone #
Fax #	Fax #

PUMP CO.
16347 • Louisville, KY 40256-0347
Fillers Lane • Louisville, KY 40216
(502) 778-2731 • 1 (800) 928-PUMP • FAX (502) 774-3624

SECTION: 5.10.040
FM0919
0194
Supersedes
1191

UL LISTED

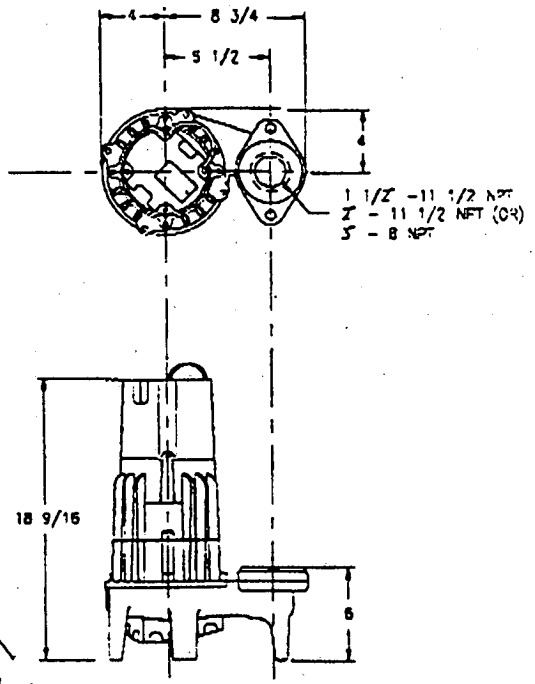
ENGINEERING SPECIFICATIONS SHEET
SUBMERSIBLE EFFLUENT & DEWATERING PUMP
161/163 SERIES

MATERIAL SPECIFICATIONS:

- Castings- Cast iron class 25-30 25000# tensile
  Impeller, bronze class 85-5-5-5
- Motor - ½ HP, 60 cycles, 3450 RPM, 1 PH or 3 PH oil filled, hermetically sealed, automatic reset thermal overload protected (1 PH)
- Shaft Seal - Stainless steel, carbon & ceramic rotary
- Hardware - Stainless steel, screws, bolts, washers, & lifting handle
- Square Ring & Gasket - Neoprene
- Bearings - Lower ball & upper sleeve
- Cord - 20' UL Listed 3-wire neoprene cord and plug

ENGINEERING FEATURES:

- Passes ¾" solids (sphere)
- No strainer to clog or stop up.
- 1½" NPT female vertical discharge with 2" or 3" NPT flange available
- Temperature to 130° F. (54° C) (ED 140° F, 60° C)**
- Variable level control systems available
- Impeller - Non-clogging vortex
- Shipping Weight - 80 lbs.

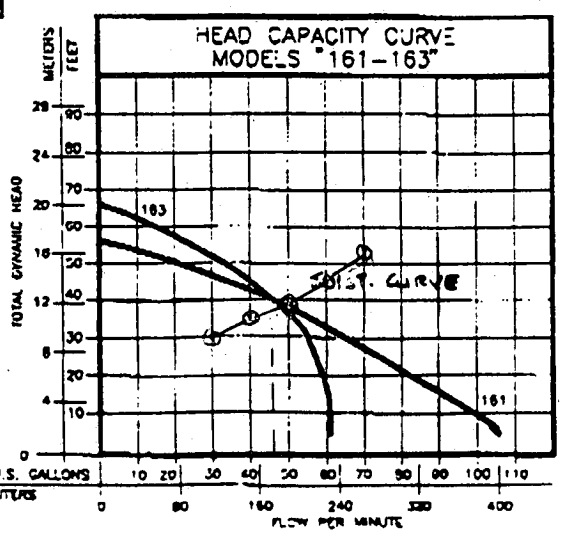


FROM GRAPH - OPERATING POINT TDH

MODELS		SPECIFICATIONS					CONTROLS-SELECTION GUIDE			
			Amps						Listings	
Model	Mode	Volts	161	163	PH	Cord	Simplex	Duplex	CSA[3]	UL
M161/163	Auto	115	15.5	14.0	1	14-3 SOWA 20'	1 or 1 & 8	—	Y/Y	Y/Y
N161/163	NonAuto	115	15.5	14.0	1	14-3 SOWA 20'	2 or 2 & 7	3 or 5 & 6	Y/Y	Y/Y[1]
D161/163	Auto	230	7.0	7.0	1	16-3 SOWA 20'	1 or 1 & 8	—	Y/Y	Y/Y
E161/163	NonAuto	230	7.0	7.0	1	16-3 SOWA 20'	2 or 2 & 7	3 or 5 & 6	Y/Y[2]	Y/Y
* H161/163	Auto	200-208	8.2	8.2	1	16-3 SOWA 20'	1 & 8	—	Y/Y	N/N
* I161/163	NonAuto	200-208	8.2	8.2	1	16-3 SOWA 20'	2 & 7	3 or 5 & 6	Y/Y	N/N
* J161/163	NonAuto	200-208	5.2	5.2	3	16-4 SOWA 20'	2 & 4	3 & 4 or 5 & 6	Y/Y	Y/Y
* F161/163	NonAuto	230	4.0	4.0	3	16-4 SOWA 20'	2 & 4	3 & 4 or 5 & 6	Y/Y	Y/Y
* G161/163	NonAuto	460	2.0	2.0	3	16-4 SOWA 20'	2 & 4	3 & 4 or 5 & 6	Y/Y	Y/Y

* No Molded Plug.

SSPMA MEMBER



SELECTION GUIDE:

1. Integral float operated mechanical switch, no external control required.
2. Single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.
3. Mechanical alternator "M-Pak" 10-0072 or 10-0075.
4. Combination starter. Refer to FM0514
5. See FM0712 for correct model of Electrical Alternator, "E-Pak".
6. Variable level ontrol switch 10-0225 used as a control activator, with "E-Pak" alternator, 3 or 4 float system.
7. Four (4) hole "J-Pak", junction box, for watertight connection or wired-in simplex or duplex operation.
8. Two (2) hole "J-Pak", junction box, for watertight connection or splice.

** ED pumps not UL or CSA approved.

[1] UL Listed unit available with 20 Amp Plug.

[2] CSA Approved unit available without plug.

[3] All CSA certified pumps must operate totally submerged.

Appendix B

35462

SUBDIVISION: WATERFORD Sec. 2

LOT NUMBER: 6 OF APPROVED Preliminary 3/87

DRY WELL OR DRY WELL AND TRENCH

_____ sq. ft./bedroom

	Septic Tank	Minimum Total Square Feet
3 bedroom	1000 gallon	_____
4 bedroom	1250 gallon	_____
5 bedroom	1500 gallon	_____

Inlet _____ feet below original grade.

Bottom maximum depth _____ feet below original grade.

Effective area begins at _____ feet below original grade.

NOTE: If trench is used to make up absorbent area, run the trench on level ground and leave a 5-foot earth buffer between dry well and trench. No trench is to exceed 100 feet in length. Trench inlet to be same as dry well, with _____ feet of stone below distribution pipe.

TRENCHES

180 → 180 FT PER MARK RIFKIN

~~187~~ sq. ft./bedroom

Trench to be 3 wide.

Inlet 3.0 feet below original grade.

Bottom maximum depth 4.5 feet below original grade.

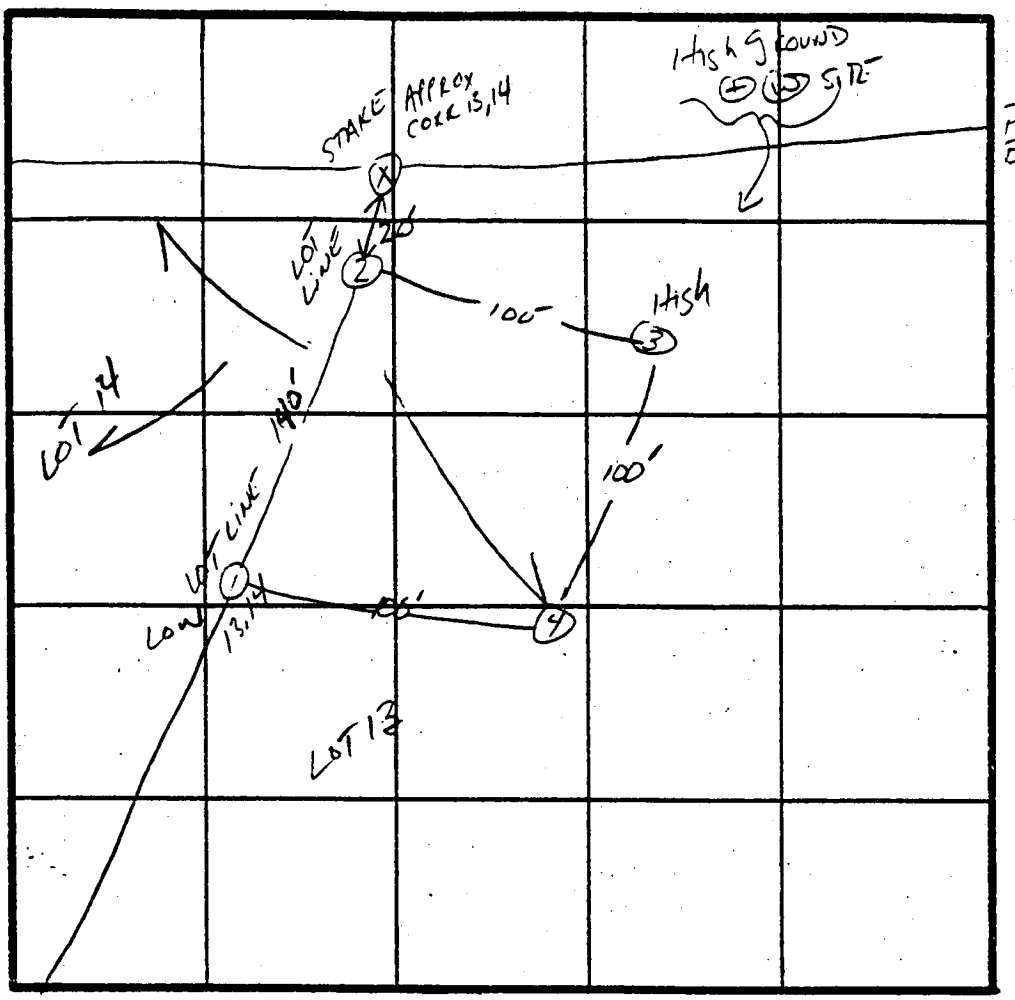
Effective area begins at 30 feet below original grade.

1.5 feet of stone below distribution pipe.

NOTE:
(1) No trench to exceed 100 feet in length.
(2) If more than one trench used, a distribution box is required.
(3) Trenches to be installed on level ground.
(4) Call for inspection of trench before gravel is installed.
(5) Provide 6" - 8" diameter cleanout and cap to grade or above on septic tank and drywell.
(6) If a garbage disposal is used, increase septic tank capacity by 50% and increase absorbent sidewall area by 22%.

LOCATION: PLACE THE DISTRIBUTION BOX 90 Ft OFF THE BACK (395.08') LOT LINE AND 225 Ft OFF THE RIGHT (758.89') LOT LINE AS SEEN WHEN FACING THE LOT FROM BRIGHTON DAM Rd RUN TRENCHES ON CONTOUR TOWARD THE BACK LOT LINE. 4-1-87. SAM

HD-191



① ③ SOIL PROFILE

0	
4"	A1-3
	BROWN CLAY SAND MIX L10%
2.5'	SAPROLITE
	BROWN SAND SILTY MICACEOUS L10% SAPROLITE

② SOIL PROFILE

0	
4"	A1-3
	BROWN CLAY SAND MIX L10% SAPROLITE
2'	BROWN SILTY SAND WITH LARGE ROCK FRAGMENTS L10% SAPROLITE
11'	ROCK

④ SOIL PROFILE

0	
4"	A1-3
	BROWN/ORANGE CLAY SAND MIX L10% SAPROLITE
2'	GREY BROWN SILTY SAND L100% SAPROLITE
12'	

X PERC
3 MIN
INLET 3.0'
BOTTOM 4.5'

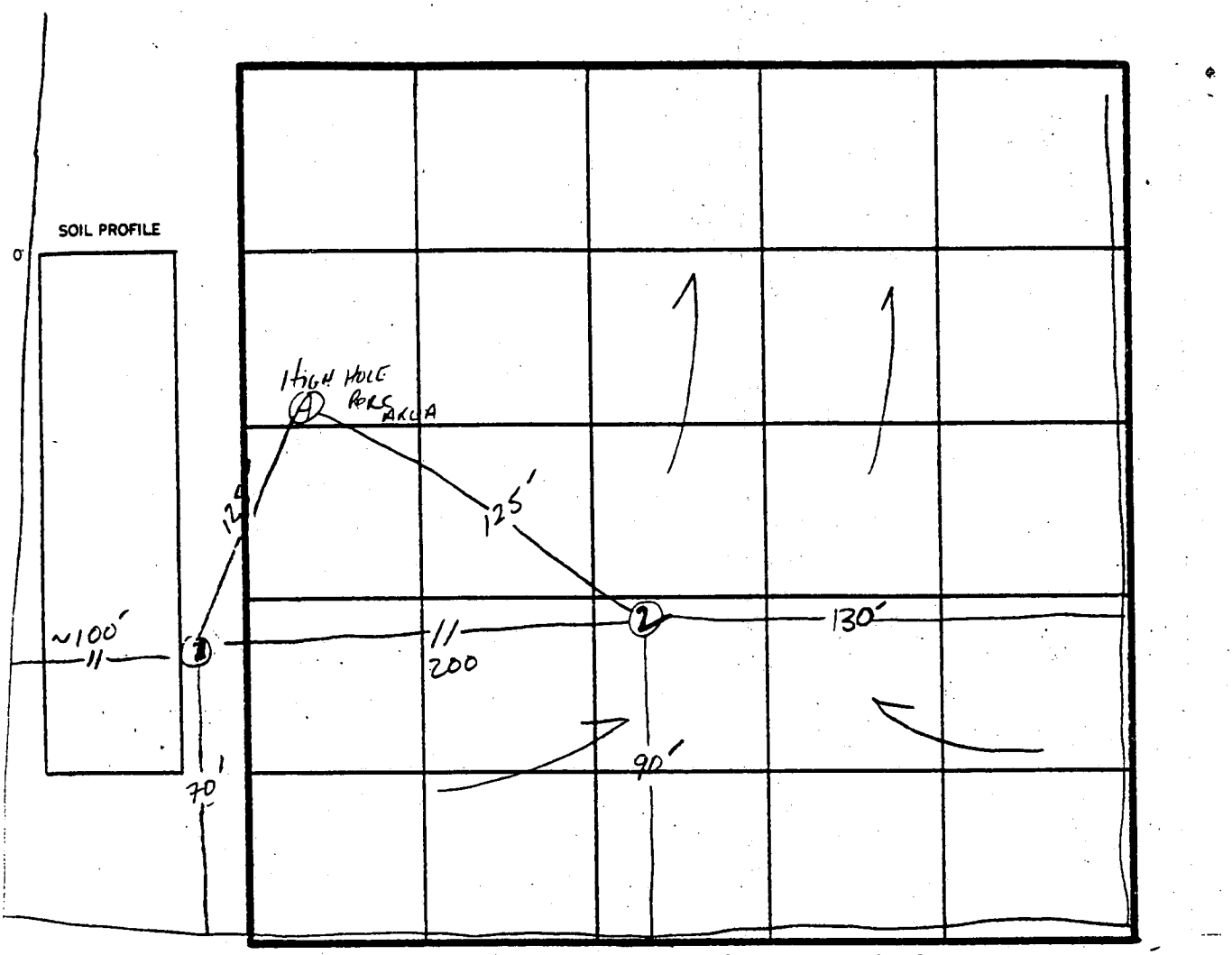
DATE	TEST NO.	DEPTH	PRE-WET START	PRE-WET STOP	TEST - 1" DROP START	TEST - 1" DROP STOP	TIME
5/6/25	1 S V	2.5' 12'	10:56 UNIFORM SOIL	10:57 STRUCTURE	10:57 Below 2.5'	10:59	2MIN
	2 S V	2.5' 11'	11:05 ROCK AT 11'	11:07 UNIFORM	11:07 SOIL STRUCTURE	11:11 Below 2'	4MIN
	3 S V	2.5' 12'	11:11 UNIFORM SOIL	11:12 STRUCTURE	11:12 Below 2'	11:13:30	1.5MIN
	4 S V	3' 12'	11:14 UNIFORM SOIL	11:15 STRUCTURE	11:15 Below 2'	11:17:30	2.5MIN

REMARKS Limited House + Well House. - Shallow System Only

TYPE OF SOIL

TESTED BY S Paul LES, TERRY, DONNY

EH-12-1079



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

BRIGHTON DAM RD.

DATE	TEST NO.	DEPTH	PRE-WET START	PRE-WET STOP	TEST - 1" DROP START	TEST - 1" DROP STOP	TIME
5/2/85	1V	WATER AT 6' CLAY AT 5' MOTTLED AT 5'					
	2V	WATER AT 11' CLAY TO 5' ABANDONED					
5/2/85	A	WATER AT 5' MOTTLED AT 5' CLAY TO 4.5'					

REMARKS INSUFFICIENT AREA REMAINING TO TEST

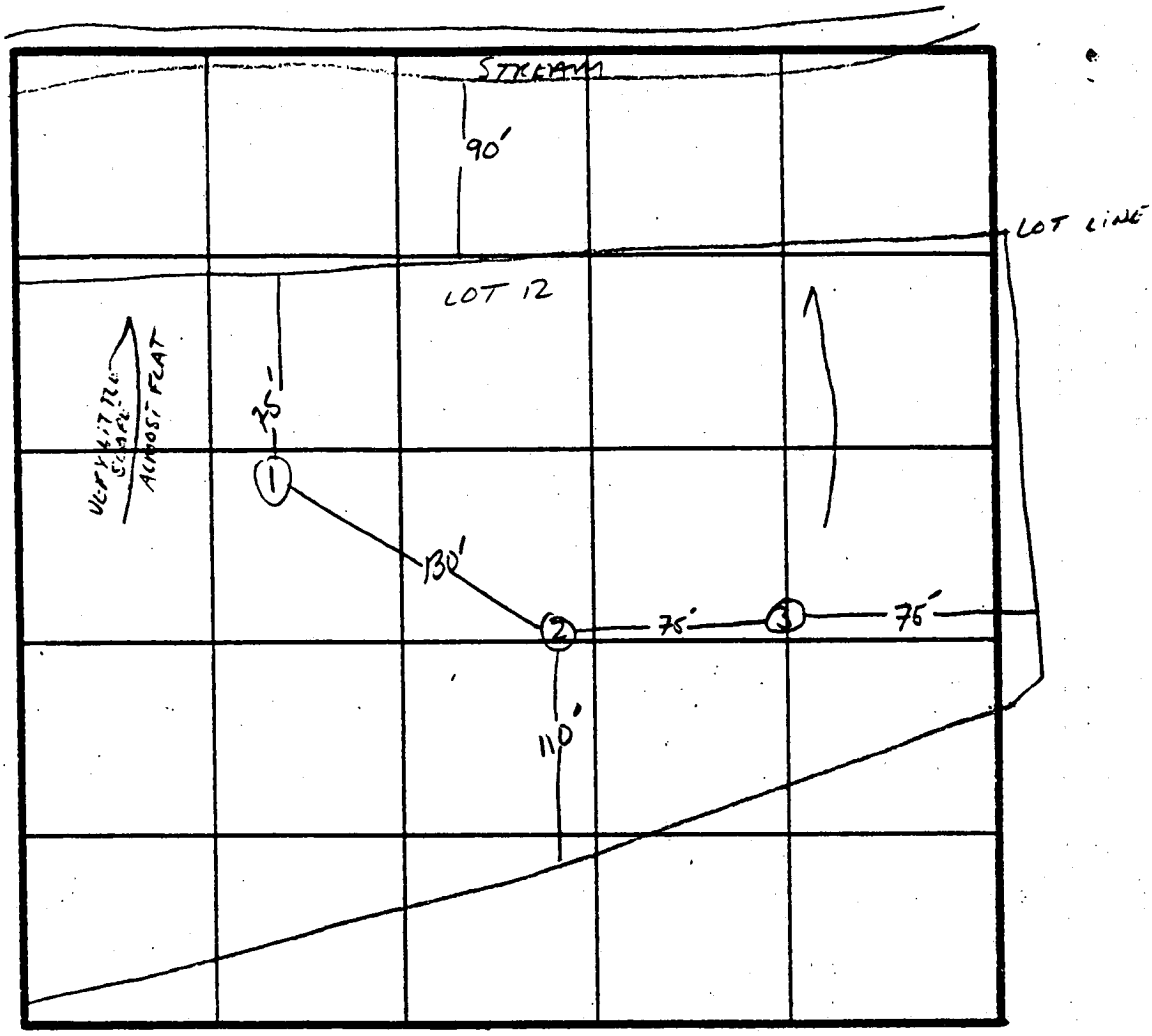
TYPE OF SOIL

TESTED BY ALSO PRESENT

EH-12-1079

SOIL PROFILE

0'



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

Brighton Dam Rd.

DATE	TEST NO.	DEPTH	PRE-WET START	PRE-WET STOP	TEST - 1" DROP START	TEST - 1" DROP STOP	TIME
6/2/85	1V	WATER AT	6' MOTTED AT	5'	CLAY AT	5+'	
	2V	WATER AT	5' MOTTED AT	3'	CLAY AT	3+'	
	3V	WATER AT	5' MOTTED AT	4'	CLAY AT	4+'	

REMARKS Insufficient Area Remaining To Test.

TYPE OF SOIL

TESTED BY S. Abel ALSO PRESENT Lee, Terry, Donny

EH-12-1079

fw: 8/19/03

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
WATER AND SEWERAGE PROGRAM
TEL: (410)313-2640 FAX: (410)313-2648

Information Form for the Installation of the Well Pump, Pitless Adapter, and Supply Piping

NOTE: The installer is responsible for requesting an inspection prior to 9 am on the day of the desired inspection. No work is to be covered until approved by the Health Department. All installations must comply with the National Standard Plumbing Code (NSPC, as amended locally) and COMAR 26.04.04 (MD Well Construction Regulations). Submission of a complete form is required prior to Use and Occupancy approval.

Company Name: Eagles Well Drilling Telephone #: 410-795-5670
Address: 580 Obecott Rd
Sykesville MD 21784

(Must circle one) Licensed Plumber (Licensed Well Driller) Licensed Well Pump Installer
License # and name of individual responsible for the field installation:
Name (Print): Allen Compton License# MSD 009
*A licensed individual must perform the actual installation. Apprentices must be under the direct supervision of a licensed journeyman or master plumber, pump installer or well driller. Licenses may be subjected to field verification.

Name of Property Owner: Joe Nazacio/ Bowman Construction Telephone #: 301-937-4664
Subdivision: Lot #: Well Tag #: HO-81-2605
Site Address: 13185 Brighton Dam RD

Submersible Pump Data
Make: Goulds
Model #: 7SB07422
Pump Capacity 7 GPM
Well Yield: GPM

Pitless Adapter
Make: Campbell
Model#: N/A
Depth: 42 (36" min)
NSF approved: Yes

Well Cap and Electric Conduit
Two piece watertight cap: Yes
Screened, vented well cap: Yes
Cap secured to casing: Yes
Conduit min 18" B.G.: Yes
Conduit secured to well cap: Yes

Depth of well encountered at time of pump installation: 300 (feet)
If pump capacity exceeds well yield, a low water cut off switch is required by NSPC 1990 Section 17.8.4
Torque arrestors or Cable guards are required – Must circle one
Safety rope, if used, attached to inside of well casing with eye bolt N/A

Piping to house
Type: 1" Black Plastic
PSI: Well (160 psi min)
Depth of supply line: 42 (36" min)

House Connection
PVC sleeved to undisturbed soil at wall penetration: Yes
Approximate length of sleeve: 5'
Sleeve caulked and sealed properly: Yes

The water supply line is required to be at least ten feet from the septic tank, pump chamber, sewage piping, distribution box, drainfields, and sewage reserve area. If this cannot be accomplished, contact this office for approval prior to installation.

Allen Compton
Signature of company representative responsible for installation 8-19-03 date

For Health Department Use Only – Not to be completed by Installer

Date Insp. Requested: 9/24/03 Date Insp. Approved: 9/24/03 SD

Inspection Data:
- Pitless adapter and water supply line at least 36" below grade ✓
- Two piece cap installed and attached to casing securely ✓
- Elec. conduit extends at least 18" below grade/attached to cap properly ✓
- Safety rope installed inside of well casing ✓
- Correct well tag attached properly and casing 8" above finished grade ✓
- Water supply line sleeved adequately at house connection ✓
- Adequate grout observed below pitless adapter ✓

HD-215(Rev. 8/00)

C 1 7711 SEQUENCE NO. (OEP USE ONLY) 0861

(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE PRINT OR TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER A 35462

DATE Received

DATE WELL COMPLETED 6 4 2 6

Depth of Well 240 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" HO-81-2695

OWNER LISTRANI RICHARD (lastname, first name)

STREET OR RFD BRIGHTON DAM ROAD TOWN CLARKSVILLE

SUBDIVISION WATERFORD SECTION 2 LOT 6

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	Check if water bearing
Top Soil	0	1	
Red Clay	1	3	
Br. Mica	3	20	
Gray Mica	20	130	
White Mica	130	135	
Gray Mica	135	240	

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes (Y) no (N)

TYPE OF GROUTING MATERIAL

CEMENT (CM) BENTONITE CLAY (BC)

NO. OF BAGS 8 NO. OF POUNDS 800

GALLONS OF WATER 40

DEPTH OF GROUT SEAL (to nearest foot)

from 0 ft. to 21 ft.

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

ST STEEL CO CONCRETE PL PLASTIC OT OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)	Total depth of main casing (nearest foot)
ST	6	24

OTHER CASING (if used) EACH CASING

diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole insert appropriate code below

ST STEEL BR BRASS BRONZE HO OPEN HOLE PL PLASTIC OT OTHER

EACH SCREEN

		DEPTH (nearest ft.)	
1	HO	24	240
2			
3			

SLOT SIZE 1 ____ 2 ____ 3 ____

DIAMETER OF SCREEN ____ (NEAREST INCH)

GRAVEL PACK from ____ to ____

IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68

PUMPING TEST
HOURS PUMPED (nearest hour) 3

PUMPING RATE (gal. per min. to nearest gal.) 10

METHOD USED TO MEASURE PUMPING RATE Bucket

WATER LEVEL (distance from land surface)

BEFORE PUMPING 17

WHEN PUMPING 45

TYPE OF PUMP USED (for test)

A air P piston T turbine

C centrifugal R rotary O other (describe below)

J jet S submersible

PUMP INSTALLED
DRILLER WILL INSTALL PUMP (CIRCLE) (YES or NO) YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS EXCEPT HOME USE

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX - SEE ABOVE:

CAPACITY: GALLONS PER MINUTE (to nearest gallon)

PUMP HORSE POWER

PUMP COLUMN LENGTH (nearest ft.)

CASING HEIGHT (circle appropriate box and enter casing height)

+ above / − below LAND SURFACE 2 (nearest foot)

CIRCLE APPROPRIATE LETTER
A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED

E ELECTRIC LOG OBTAINED

P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.17.13 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS IDENT. NO. 40

Henry J. Eyerly

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

Robert Lee Thomas

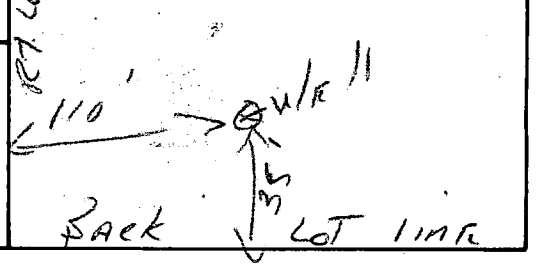
SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

OEP USE ONLY
(NOT TO BE FILLED IN BY DRILLER)

T (E.R.O.S.) WQ

TELESCOPE CASING | LOG INDICATOR | OTHER DATA

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)



Page ____ of ____

Date ____

Well 4-20-88 10:30 no inspection

Review ok 8/25/88 CW

FIELD DATA SHEET
HOWARD COUNTY WELL YIELD TEST

Well Permit No. HO - 81-2605
Location of property (road) BRIGHTON DAM ROAD
Subdivision WATSFORD Lot 6 Block ____ Plat ____ Sec. 2
Well Driller GEORGE DASTSRDAY Owner LISTRANI, RICHARD

Depth of well 240 15 GPM
Distance of measuring point (M.P.) above ground 24"
Static water level (S.W.L.) below M.P. 17'

I. High rate pumping -- reservoir drawdown

Time pump started 11:45 Pumping rate 10 GPM
Total time 15 min to reach pumping water level 34' ft. below M.P.

II. Recovery pump test data - observations to be recorded every 15 minutes

TIME (in 15 minute intervals	WATER LEVEL below M.P.	PUMPING RATE time to fill #1 gallon bucket	FLOW METER READING (if used)	CALCULATED FLOW (gallons per minute)
12:15	36	6 Sec		10
12:30	38	6 Sec		10
12:45	39	6 Sec		10
1:00	39	6 Sec		10
1:15	41	6 Sec		10
1:30	41	6 Sec		10
1:45	43	6 Sec		10
2:00	43	6 Sec		10
2:15	45	6 Sec		10
2:30	44	6 Sec		10
2:45	45	6 Sec		10
3:00	45	6 Sec		10
		Pump set		
		240'		
		Joe Weston		

EMERGENCY/TEMP NO. IF ANY

B 1 | 1572 | SEQUENCE NO. (DP USE ONLY)
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
PERMIT TO DRILL WELL
please print or type

STATE PERMIT NUMBER: HP-81-2605
fill in this form completely

Date Received (APA): 02 28 88

OWNER INFORMATION
LISTRANI RICHARD
Last Name | Owner | First Name
160 HAVILAND MILL RD
Street or RFD
BROOKEVILLE MD 20833
Town | State | Zip

DRILLER INFORMATION
George F. Easterday
Driller's Name | License No. 80
L. Franklin Easterday, Inc.
Firm Name
9265 Brown Church Rd., Mt.Airy, Md. 21771
Address
George F. Easterday
Signature | Date

LOCATION OF WELL
R 4/10/45
2/24/88
40.10

HOWARD
8 COUNTY
WATERFORD
23 SUBDIVISION
SECTION 2 | LOT 3 LOT 6
CLARKSVILLE
52 NEAREST TOWN
MILES FROM TOWN (enter 0 if in town): 2 MI

B 4
DIRECTION OF WELL FROM TOWN (CIRCLE BOX)
N 8 | NW 8-9 | NE 8-9 | W 8 | TOWN | E 8 | SW 8-9 | S 8 | SE 8-9

BRIGHTON DAM
NEAR WHAT ROAD

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
NORTH N | WEST W | 32 | EAST E | SOUTH S

DISTANCE FROM ROAD: 200
ENTER FT or MI: FT

WELL INFORMATION
B 2
APPROX. PUMPING RATE (GAL. PER MIN.): 5
AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY): 500

USE FOR WATER (CIRCLE APPROPRIATE BOX)
- D HOME (SINGLE OR DOUBLE HOUSEHOLD UNIT ONLY)
- F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
- I INDUSTRIAL, COMMERCIAL, STATE AND FEDERAL GOV. OTHER (REQUIRES APPROPRIATION PERMIT)
- P PUBLIC OR PRIVATE WATER COMPANY (REQUIRES APPROPRIATION PERMIT AND STATE HEALTH DEPARTMENT APPROVAL)
- T TEST, OBSERVATION, MONITORING (MAY REQUIRE APPROPRIATION PERMIT)

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

HOWARD | COUNTY NAME
A 35462 | COUNTY NO.
STATE SIGNATURE | INSERT S
DATE ISSUED: 03 08 88 | B Wilson | CO SIGNATURE | 09/08/88 EXP. DATE

NORTH GRID: 4 9 4 0 0 0
EAST GRID: 0 8 1 4 0 0 0

APPROXIMATE DEPTH OF WELL: 200 FEET

APPROXIMATE DIAMETER OF WELL: 6 NEAREST INCH

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X

4/20/88
NO INSP.

SOURCES OF DRILLING WATER
1. WELL
2.
3.

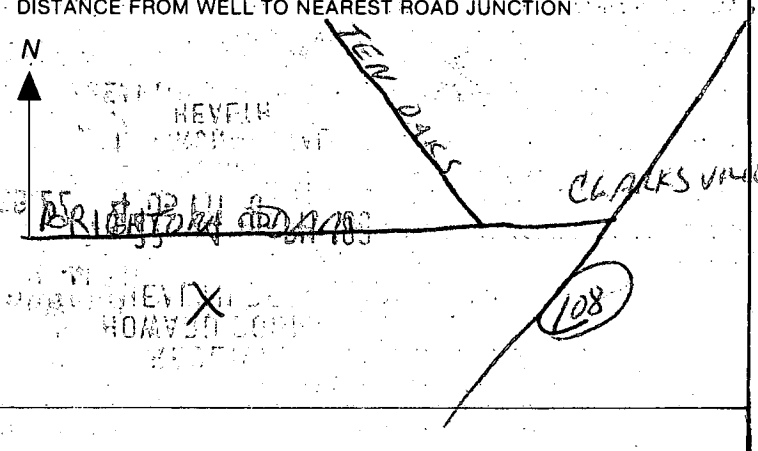
WRITE THE BOX NUMBER FROM THE MAP HERE
E 8 1 4
N 4 9 0 9
000 000

METHOD OF DRILLING (circle one)
BORED (or Augered) | JETTED | Jetted & DRIVEN
AIR-ROTary | AIR-PERcussion | ROTARY (Hydraulic Rotary)
CABLE | REVerse-ROTary | DRive-POINT
other

REPLACEMENT OR DEEPENED WELLS
(CIRCLE APPROPRIATE BOX)
- N THIS WELL WILL NOT REPLACE AN EXISTING WELL
- Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
- S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY
- D THIS WELL WILL DEEPEN AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPENDED (IF AVAILABLE)

DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION



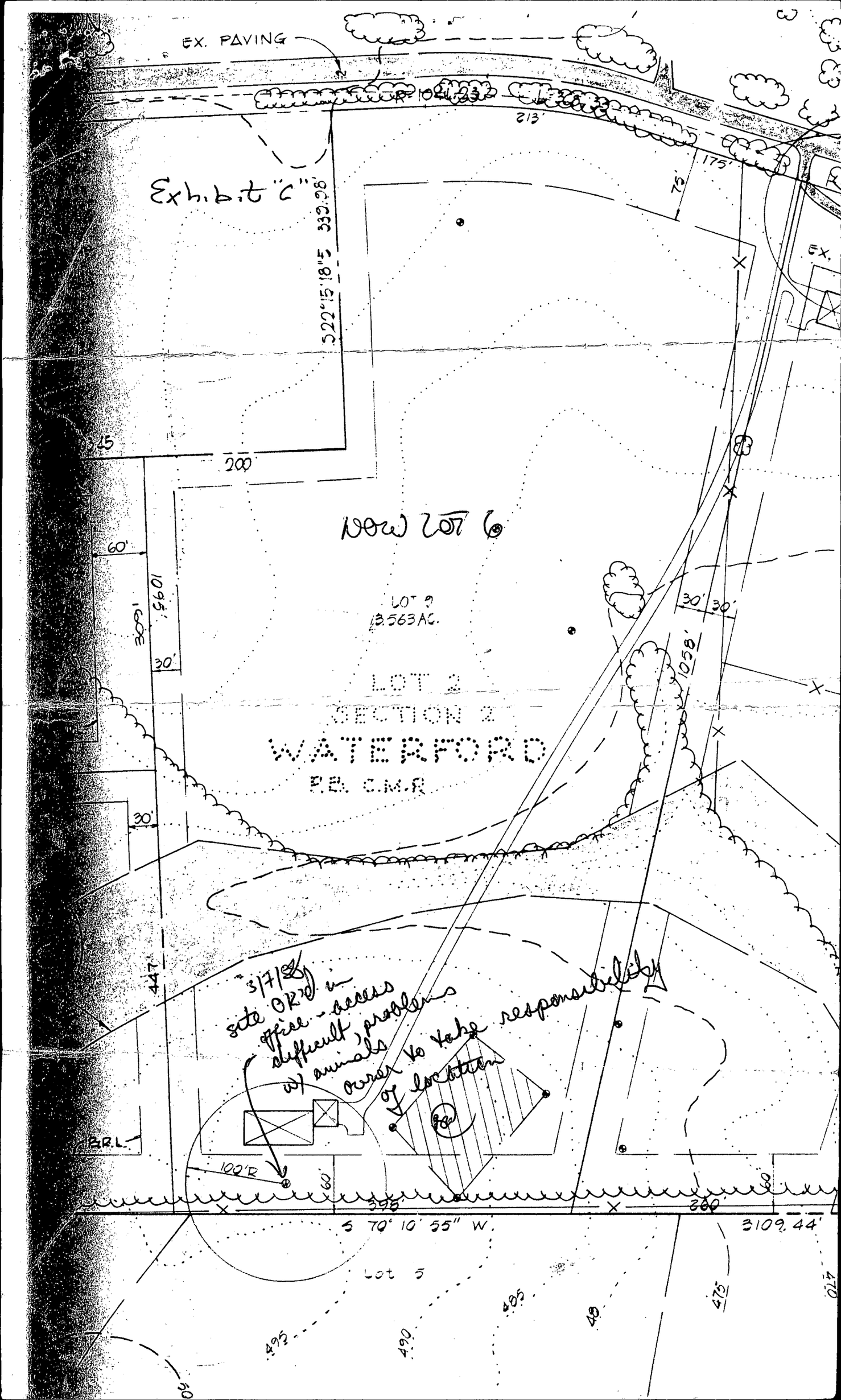
Not to be filled in by driller (OEP USE ONLY)

APPROP. PERMIT NUMBER: GAP

FORCE: RW (WRITE INITIALS IN BOX) PERMIT No. HP-81-2605

SPECIAL CONDITIONS

COUNTY


EX. PAVING
R=1041.23'
213'
175'
75'
Exhibit "C"
S22°15'18"E 339.98'
345
200
NEW LOT 6
60'
300'
S69°01'
30'
LOT 9
13.563AC.
LOT 2
SECTION 2
WATERFORD
P.B. C.M.R.
30'
30'
30'
1058'
447'
3/7/18
site OK'd in office - access difficult, problems w/ animals, owner to take responsibility for location
BRL
100'R
60'
395'
200'
S 70° 10' 55" W.
3109.44'
Lot 5
EX.

EMERGENCY/TEMP NO. IF ANY

B 1 | 5524 | SEQUENCE NO. (OEP USE ONLY)
(THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
PERMIT TO DRILL WELL
please print or type

OEP PERMIT NUMBER ___-___-____ (70–79)
fill in this form completely

Date Received (8–13)

OWNER INFORMATION
Listrani, Richard (15 Last Name, Owner, First Name, 34)
160 Hanilland Mill Rd (36 Street or RFD, 55)
Brookville MD 20833 (57 Town, 70 State 72, Zip 76)

DRILLER INFORMATION
GEORGE F. EASTERDAY — 40 (Driller's Name, 77 License No. 80)
L. FRANKLIN EASTERDAY, INC (Firm Name)
9245 BR. CH. RD., MT. AIRY, MD 21771 (Address)
George F. Easterday — 7/29/87 (Signature, Date)

B 2 WELL INFORMATION
APPROX. PUMPING RATE (GAL. PER MIN.) 5 (8–12)
AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 500 (14–20)

USE FOR WATER (CIRCLE APPROPRIATE BOX)
- D HOME (SINGLE OR DOUBLE HOUSEHOLD UNIT ONLY)
- F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
- 22 I INDUSTRIAL, COMMERCIAL, STATE AND FEDERAL GOV. OTHER (REQUIRES APPROPRIATION PERMIT)
- P PUBLIC OR PRIVATE WATER COMPANY (REQUIRES APPROPRIATION PERMIT AND STATE HEALTH DEPARTMENT APPROVAL)
- T TEST, OBSERVATION, MONITORING (MAY REQUIRE APPROPRIATION PERMIT)

APPROXIMATE DEPTH OF WELL 200 FEET (24–28)

APPROXIMATE DIAMETER OF WELL 6 NEAREST INCH

METHOD OF DRILLING (circle one)
BORED (or Augered) JETTED Jetted & DRIVEN
30 37 AIR-ROTary AIR-PERcussion ROTARY (Hydraulic Rotary)
CABLE REVerse-ROTary DRive-POINT
other ___

REPLACEMENT OR DEEPENED WELLS (CIRCLE APPROPRIATE BOX)
- N THIS WELL WILL NOT REPLACE AN EXISTING WELL
- Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
- 39 S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY
- D THIS WELL WILL DEEPEN AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPENDED (IF AVAILABLE) (41–52)

Not to be filled in by driller (OEP USE ONLY)
APPROP. PERMIT NUMBER ____GAP____ (54–63)
FORCE __ (67–68) WRITE INITIALS IN BOX PERMIT No. ___-___-____ (70–79)

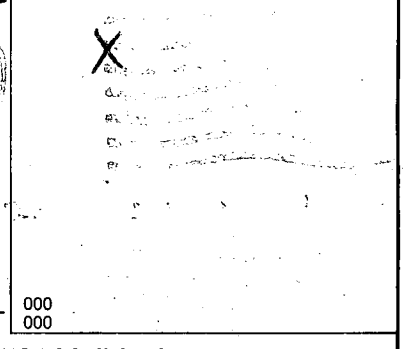
B 3 LOCATION OF WELL
R 390-44 8/13/87 40.00
8 COUNTY Howard (1–21)
23 SUBDIVISION Waterford (42)
SECTION 2 (44–46) LOT 6 (48–50) OF APPROVED Preliminary
52 NEAREST TOWN Clarksville (71)
MILES FROM TOWN (enter 0 if in town) 2 M I (73–78)

B 4
DIRECTION OF WELL FROM TOWN (CIRCLE BOX)
NW 8–9 | N 8 | NE 8–9 | W 8 | TOWN | E 8 | SW 8–9 | S 8 | SE 8–9

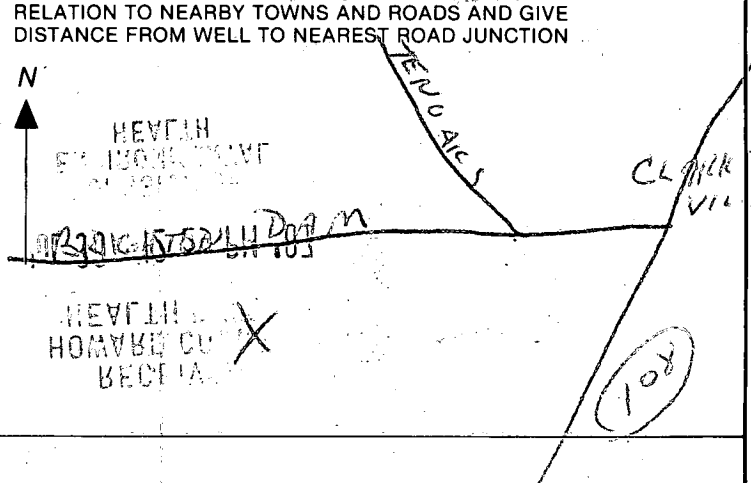
NEAR WHAT ROAD Patuxent Room (11–30)
ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX)
NORTH N; WEST W 32 E EAST; S SOUTH
34 2000 37 DISTANCE FROM ROAD
ENTER FT or MI F T (38–39)

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL
COUNTY NAME ___ COUNTY NO. ___
OEP SIGNATURE ___ STATE HEALTH INSERT S (41)
DATE ISSUED ___ (43–48) CO SIGNATURE ___ EXP. DATE ___
NORTH GRID 000 (50–55) EAST GRID 000 (57–63)

SHOW MAJOR FEATURES OF BOX & LOCATE WELL WITH AN X
SOURCES OF DRILLING WATER
1. WELL
2.
3.
WRITE THE BOX NUMBER FROM THE MAP HERE
E 810
N 490
000 000



DRAW A SKETCH BELOW SHOWING LOCATION OF WELL IN RELATION TO NEARBY TOWNS AND ROADS AND GIVE DISTANCE FROM WELL TO NEAREST ROAD JUNCTION



SPECIAL CONDITIONS

HEALTH

APPLICATION

35-462
A ~~34896~~

SEWAGE DISPOSAL TESTING

STATE OF MARYLAND - DEPARTMENT OF HEALTH AND MENTAL HYGIENE

P _____

HOWARD COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH SERVICES
P. O. BOX 476 ELLICOTT CITY, MARYLAND 21043
TELEPHONE: 992-2330

DISTRICT 5

DATE 1-25-85

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I, HEREBY, APPLY FOR THE NECESSARY TEST IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY ~~OWNER~~ Developer — Highland Development Corp.

ADDRESS 13690 Nichols Drive PHONE 531-5539

PROPERTY LOCATION:

SUBDIVISION ~~Huntington Manor Estates~~ (WATERFORD) Section 2 LOT NO. ~~X~~ 6

ROAD AND DESCRIPTION Brighton Dam Road

SIZE OF LOT 3 Acres TYPE BLDG. Single Family
(NUMBER OF BEDROOMS)

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE. I FULLY UNDERSTAND THE FEE CONNECTED WITH THE FILING OF THIS PERC TEST APPLICATION IS NON-REFUNDABLE UNDER ANY CIRCUMSTANCES. I ALSO AGREE TO COMPLY WITH ALL M.O.S.H.A. REQUIREMENTS IN TESTING THIS LOT. _____
(SIGNATURE OF APPLICANT)

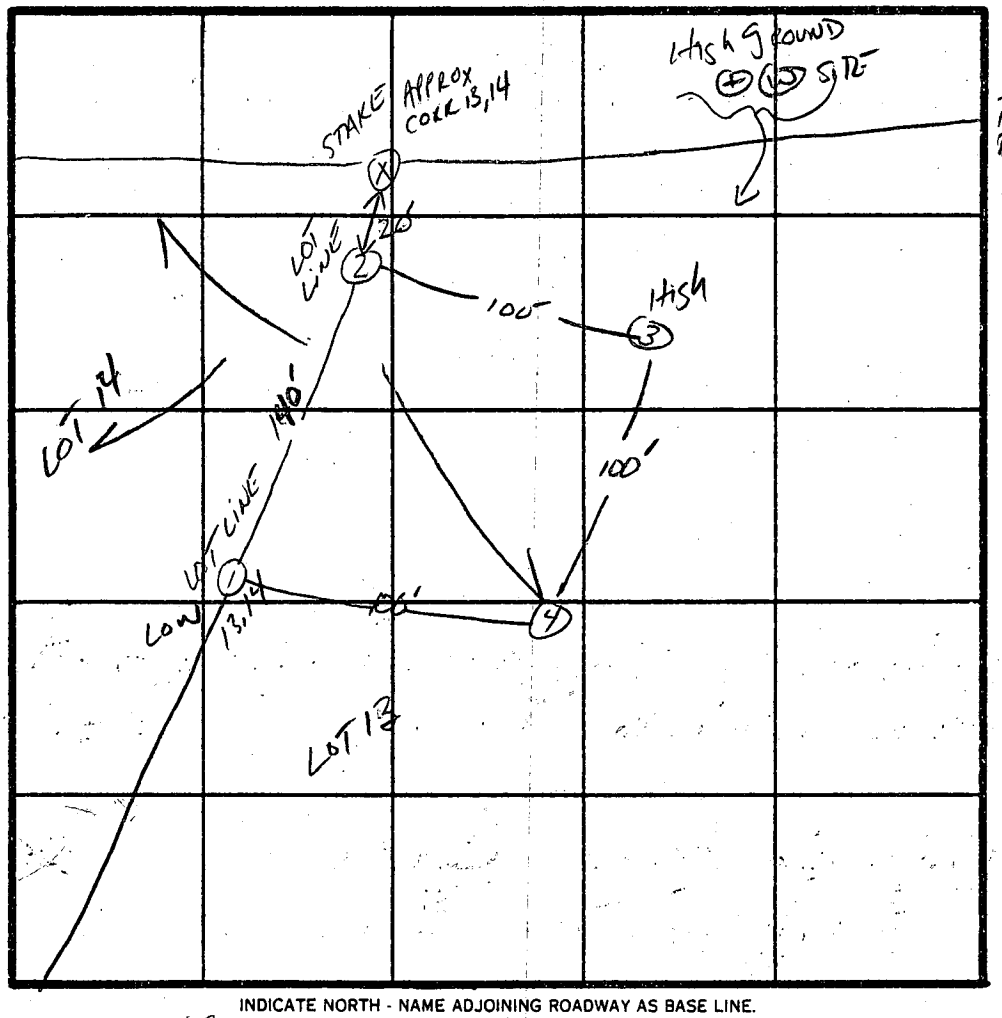
APPROVED BY Sidney Abel FOR Shallow tile fields DATE 4-1-87

REJECTED BY _____ FOR _____ DATE _____

HOLD PENDING FURTHER TESTS _____ DATE _____

REASONS FOR REJECTION OR HOLDING 5-6-85 Perc. Satisfactory; Limited House site/wellsite may require re-engineering; Hold for certified Subdivision Plat. SAbel - Shallow System only

THIS IS NOT A PERMIT



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

BRISHAW DAM Rd.

① ③ SOIL PROFILE

0'
4" A1-3 BROWN CLAY SAND MIX <10% SAPROLITE
2.5' BROWN SAND SILTY MICACEOUS <10% SAPROLITE

0
4" ② A1-3 BROWN CLAY SAND MIX <10% SAPROLITE
2' BROWN SILTY SAND WITH LARGE ROCK FRAGMENTS <10% SAPROLITE
10' ROCK

0
4" ④ A1-3 BROWN/ORANGE CLAY SAND MIX <10% SAPROLITE
2' GREY BROWN SILTY SAND <10% SAPROLITE
12'

X PERC
3MIN
INLET 3.0'
BOTTOM 4.5'

DATE	TEST NO.	DEPTH	PRE-WET START	PRE-WET STOP	TEST - 1" DROP START	TEST - 1" DROP STOP	TIME
5/16/85	1 S V	2.5' 12' UNIFORM SOIL	10:56	10:57 STRUCTURE	10:57 Below	10:59 2.5'	2MIN
	2 S V	2.5' 11' ROCK AT 11'	11:05	11:07 UNIFORM	11:07 SOIL STRUCTURE	11:11 Below 2'	4MIN
	3 S V	2.5' 12' UNIFORM SOIL	11:11	11:12 STRUCTURE	11:12 Below 2'	11:13:30	1.5MIN
	4 S V	3' 12' UNIFORM SOIL	11:14	11:15 STRUCTURE	11:15 Below 2'	11:17:30	2.5MIN

REMARKS Limited House + Well House. - Shallow System Only

TYPE OF SOIL

TESTED BY Staff

ALSO PRESENT LES, TERRY, DONNY

EH-12-1079

APPLICATION

A 35461 ~~34897~~

SEWAGE DISPOSAL TESTING

STATE OF MARYLAND - DEPARTMENT OF HEALTH AND MENTAL HYGIENE

P _____

HOWARD COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH SERVICES
P. O. BOX 476 ELLICOTT CITY, MARYLAND 21043
TELEPHONE: 992-2330

DISTRICT 5

DATE 1-25-85

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I, HEREBY, APPLY FOR THE NECESSARY TEST IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY ~~OWNER~~ Developer - Highland Development Corp.

ADDRESS 13690 Nichols Drive PHONE 531-5539

PROPERTY LOCATION:

SUBDIVISION Huntington Manor Estates Section 4 LOT NO. ~~XX~~ LOT 96

ROAD AND DESCRIPTION Brighton Dam Road

SIZE OF LOT 3 Acres TYPE BLDG. Single Family
(NUMBER OF BEDROOMS)

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE. I FULLY UNDERSTAND THE FEE CONNECTED WITH THE FILING OF THIS PERC TEST APPLICATION IS NON-REFUNDABLE UNDER ANY CIRCUMSTANCES. I ALSO AGREE TO COMPLY WITH ALL M.O.S.H.A. REQUIREMENTS IN TESTING THIS LOT. _____
(SIGNATURE OF APPLICANT)

APPROVED BY _____ FOR _____ DATE _____

REJECTED BY _____ FOR _____ DATE _____

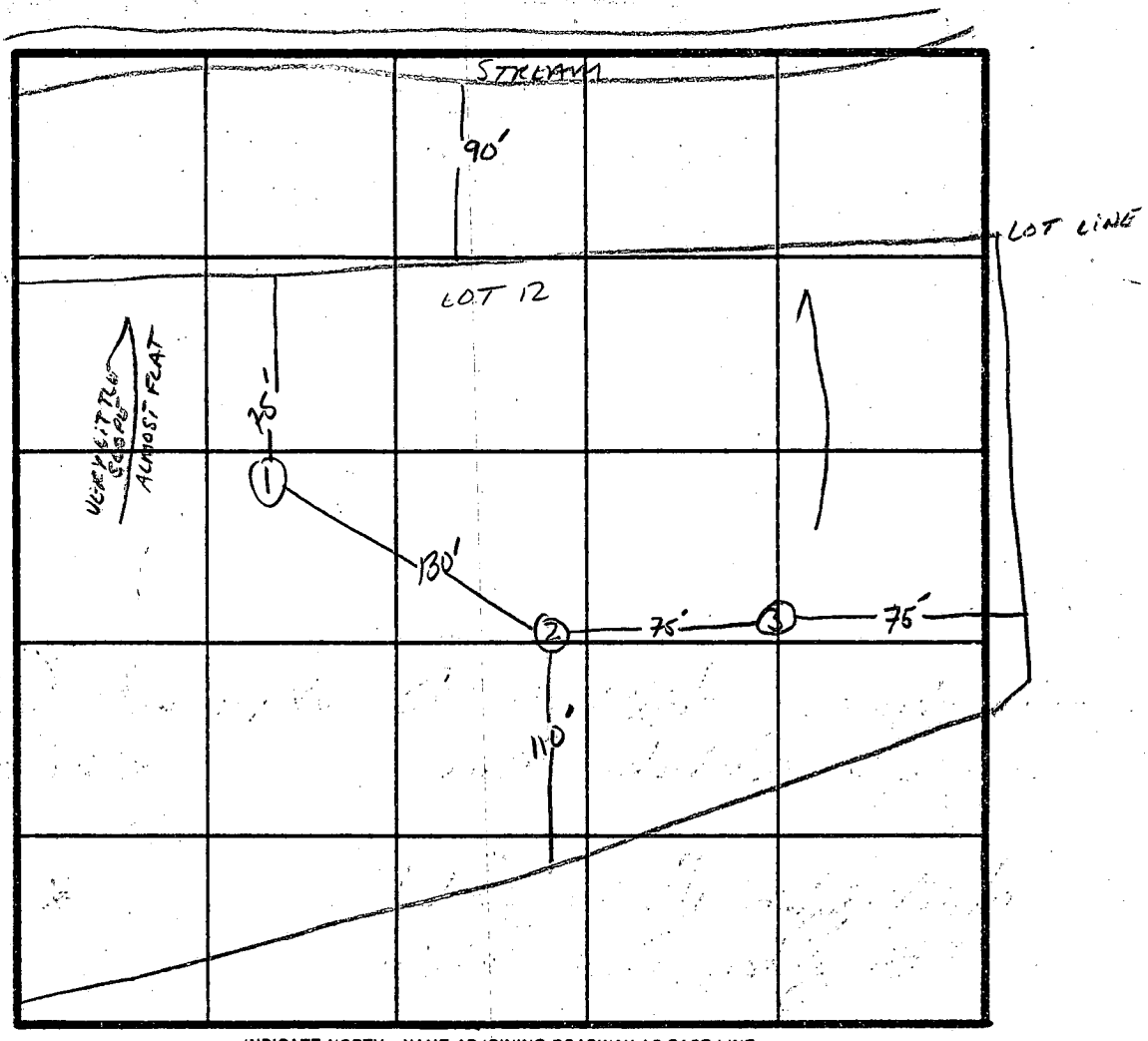
HOLD PENDING FURTHER TESTS _____ DATE _____

REASONS FOR REJECTION OR HOLDING 5-2-85 PERC. UNSATISFACTORY ; WATER + CLAY HAZARDS ; INSUFFICIENT AREA REMAING TO TEST. Held for Certified Subdivision Plat Stake

THIS IS NOT A PERMIT

SOIL PROFILE

0'



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

Brighton Dam Rd.

DATE	TEST NO.	DEPTH	PRE-WET START	PRE-WET STOP	TEST - 1" DROP START	TEST - 1" DROP STOP	TIME	
8/2/85	1V	WATER AT	6' MOTTLED AT	5'	CLAY AT	5+'	NA	Fails
	2V	WATER AT	5' MOTTLED AT	3'	CLAY AT	3+'	NA	
	3V	WATER AT	5' MOTTLED AT	4'	CLAY AT	4+'	NA	

REMARKS Insufficient Area Remaining To Test.

TYPE OF SOIL

TESTED BY S. Abel

ALSO PRESENT Les, Terry, Donny

EH-12-1079

APPLICATION

35460
A ~~34498~~

SEWAGE DISPOSAL TESTING

STATE OF MARYLAND - DEPARTMENT OF HEALTH AND MENTAL HYGIENE

P _____

HOWARD COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH SERVICES
P. O. BOX 476 ELLICOTT CITY, MARYLAND 21043
TELEPHONE: 992-2330

DISTRICT 5

DATE 1-26-85

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I, HEREBY, APPLY FOR THE NECESSARY TEST IN ORDER TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY ~~OWNER~~ Developer - Highland Development Corp.

ADDRESS 13690 Nichols Drive PHONE 531-5539

PROPERTY LOCATION:

SUBDIVISION Huntington Manor Estates LOT NO. ~~#~~ LOT #6

ROAD AND DESCRIPTION Brighton Dam Road

SIZE OF LOT 3 Acres TYPE BLDG. Single Family
(NUMBER OF BEDROOMS)

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE. I FULLY UNDERSTAND THE FEE CONNECTED WITH THE FILING OF THIS PERC TEST APPLICATION IS NON-REFUNDABLE UNDER ANY CIRCUMSTANCES. I ALSO AGREE TO COMPLY WITH ALL M.O.S.H.A. REQUIREMENTS IN TESTING THIS LOT. _____
(SIGNATURE OF APPLICANT)

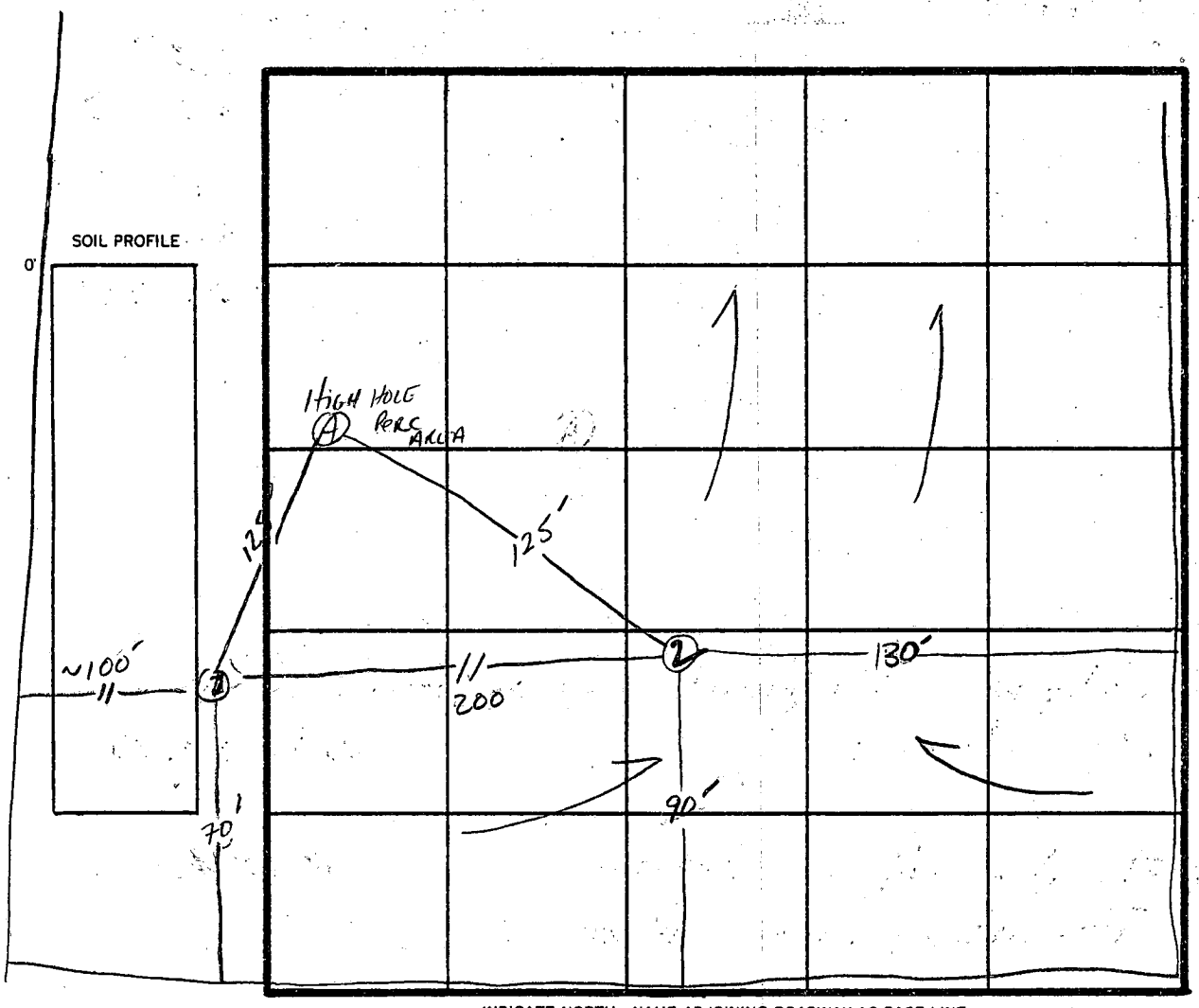
APPROVED BY _____ FOR _____ DATE _____

REJECTED BY _____ FOR _____ DATE _____

HOLD PENDING FURTHER TESTS _____ DATE _____

REASONS FOR REJECTION OR HOLDING 5-2-85 Perc. Unsatisfactory; water + clay hazards; insufficient area remaining to perc. Held for certified subdivision plat-SAM

THIS IS NOT A PERMIT



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE.

Brighton Dam Rd.

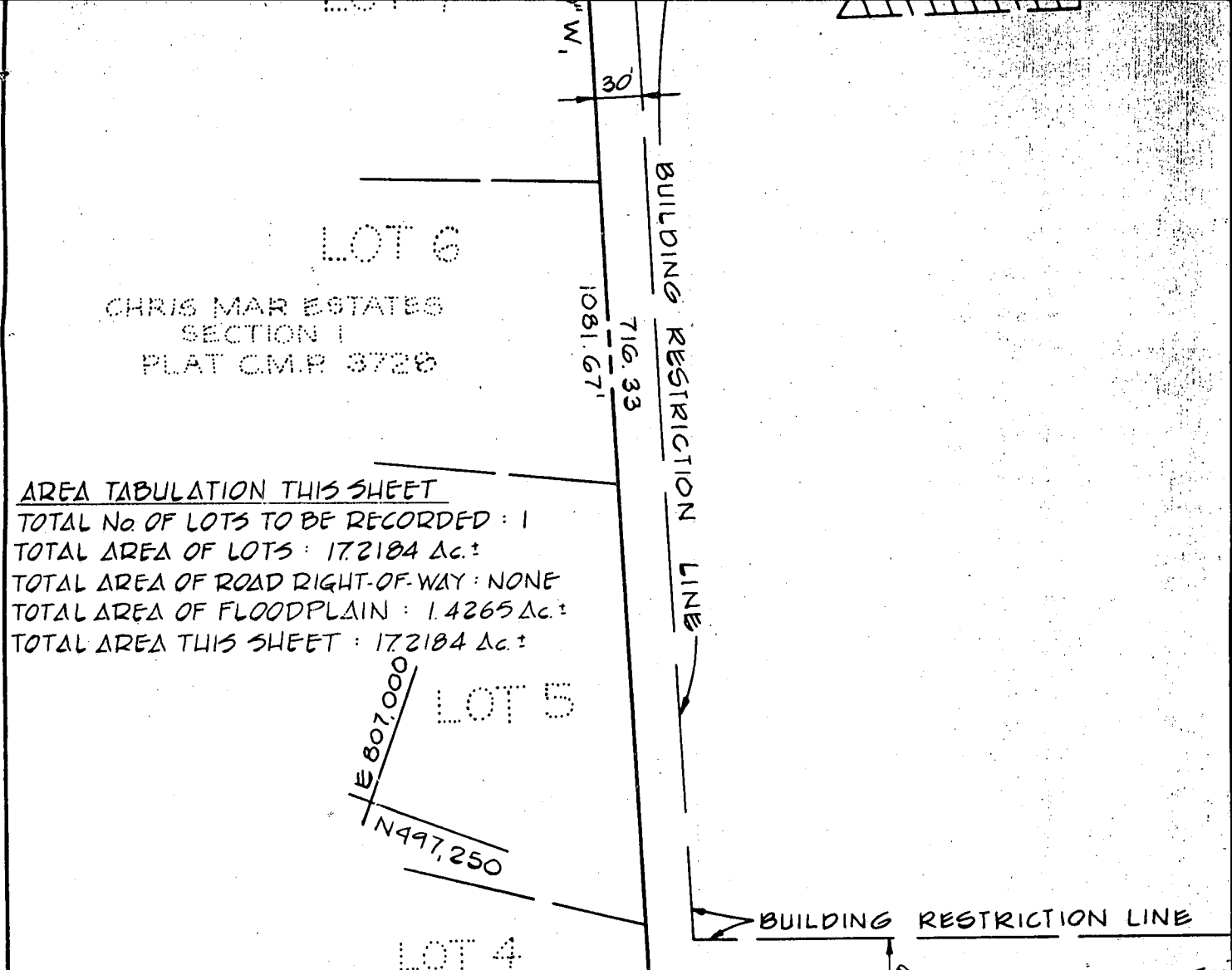
DATE	TEST NO.	DEPTH	PRE-WET START	PRE-WET STOP	TEST - 1" DROP START	TEST - 1" DROP STOP	TIME	
5/2/85	1V	WATER AT 6'	CLAY AT 5'	MOTTLED AT 5'			NA	Fails
	2V	WATER AT 11'	CLAY TO 5'		ABANDONED		NA	Fails
5/2/85	A	WATER AT 5'	MOTTLED AT 5'		CLAY TO 4.5'		NA	Fails

REMARKS Insufficient Area Remaining to Test

TYPE OF SOIL _____

TESTED BY _____ ALSO PRESENT _____

EH-12-1079



APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

HOWARD COUNTY HEALTH OFFICER — DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

DIRECTOR — DATE 12.23.87

APPROVED: FOR STORM DRAINAGE SYSTEMS, AND PUBLIC ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR — DATE

WE, THE BRIGHT
PROPERTY SHOWN AN
SUBDIVISION AND I
THE OFFICE OF PLA
RESTRICTION LINES
AND ASSIGNS, (1)
WATER PIPES AND O
ROADS AND STREET
HEREON; (2) THE R
THE STREETS AND/O
AND FOR GOOD AND
OPTION TO HOWARD
THE STREETS AND/O
OPEN SPACE WHERE
WATERWAYS AND DRA
CONSTRUCTION, REP
STRUCTURE OF ANY
RIGHTS-OF-WAY. WI

LOWRIE SARGENT, G

R=1041.23'

RIP-RAP CHANNEL

C=368.33'

10

11

100.00'

75'

44'42" W, 35.36'

LOT 3

A35458

B.R.L.

339.23'

22°13'15"

30'

9

EX.

N6°-41'42"E 703.15'

200'

30'

B.R.L.

30' DRAINAGE AND UTILITY EASEMENT

30'

B.R.L.

LOT 6
13.563AC.±

30' 30'

LOT 2
SECTION 2
WATERFORD
P.B. C.M.R. 6681

755.89'

30' 30'

100 YEAR FLOOD PLAIN AND DRAINAGE EASEMENT

1059.13'

30' 30'

225'

A35462

B.R.L.

B.R.L.

100'R

60'

98'

259.44'

3109.4

5004.5'

N 70° 10' 55"E

Lot 4

ALLENUTT FARMS ESTATES
SECTION TWO
PLAT C.M.P. 3841

Lot 5

475'

485'

490'

495'

500'

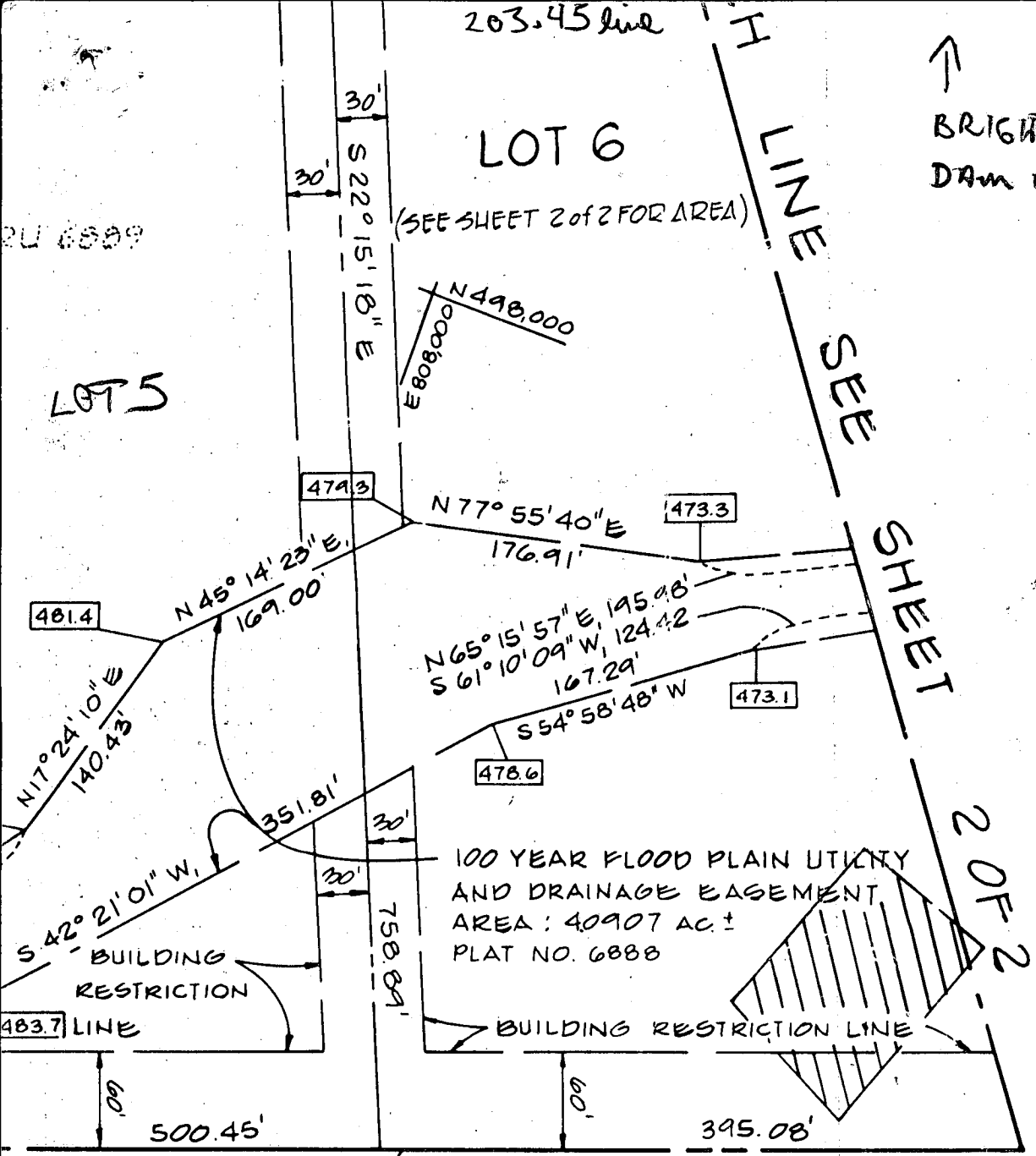
Preliminary plan sent for sig

?

E 808,000

N 497,000

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT



1. TO A PUBLIC SEWERAG
HEALTH OFFICER SHAL
GRANT VARIANCES FOR
PRIVATE SEWAGE EASE
MODIFIED SEWAGE EAS
NECESSARY.
2. THE LOTS SHOWN HERE
MINIMUM OWNERSHIP W
REQUIRED BY THE MAR
OF HEALTH AND MENTA
3. SUBJECT PROPERTY ZO
COMPREHENSIVE ZONIN
4. BOUNDARY SHOWN HERE
BY SHANABERGER & LA
5. THE COORDINATES SHO
THE MARYLAND STATE
FROM THE FOLLOWING
STATIONS:
2535008 N 4987
E 8081
2535002 N 4981
E 8067
6. ALL STRUCTURES SHOW
CONFORM TO THE BUIL
REQUIRED IN SECTION
COUNTY ZONING REGUL
STRUCTURES WHICH DO
SETBACK ARE TO BE R
7. 499.0 - DENOTES APP
FLOODPLAIN ELEVATIO
8. SUBDIVISION OF RESU
CAPABLE OF FURTHER
REQUIRE FULL COMPLI
COUNTY SUBDIVISION
REGULATIONS.
9. FOR A FLAG OR PIPE
COLLECTION, SNOW RE
MAINTENANCE TO BE P
JUNCTION OF FLAG OR
ROAD R/W AND NOT ON
STEM DRIVEWAY.
10. PROPERTY SUBJECT TO
11. MAINTENANCE AGREEMENT
FOR LOTS 6-11 IS RECORD

OWNER & DE

THE BRIGHTON GRO
SUITE 304
5570 STERRETT PL
COLUMBIA, MARYLA

FISHER, COLLINS &

CONSULTING ENGINEER
8388 COURT AVENUE
ELLICOTT CITY, MARYLAND

LOT 15

7581

OF 12-29-87 Signed Record Plat

THE
BY
SORS
AINS,
ALL
OF
CABLE
T AND
OF
AND
OF
MILAR
AND

SIGNED

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE FINAL PLAT SHOWN HEREON IS CORRECT; THAT IT IS A SUBDIVISION OF PART OF THE LANDS CONVEYED BY HUNTINGTON INTERNATIONAL CORPORATION, A MARYLAND CORPORATION TO THE BRIGHTON GROUP, A MARYLAND GENERAL PARTNERSHIP, BY DEED DATED DECEMBER 10, 1986 AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN LIBER 1593 AT FOLIO 663 AND THAT ALL MONUMENTS ARE IN PLACE OR WILL BE IN PLACE PRIOR TO THE ACCEPTANCE OF THE STREETS IN THE SUBDIVISION BY HOWARD COUNTY, MARYLAND AS SHOWN IN ACCORDANCE WITH THE ANNOTATED CODE OF MARYLAND, AS AMENDED.

Charles J. Crovo 6-2-87

CHARLES J. CROVO, SR., L.S. #10763 DATE

WATE

SECTION 2

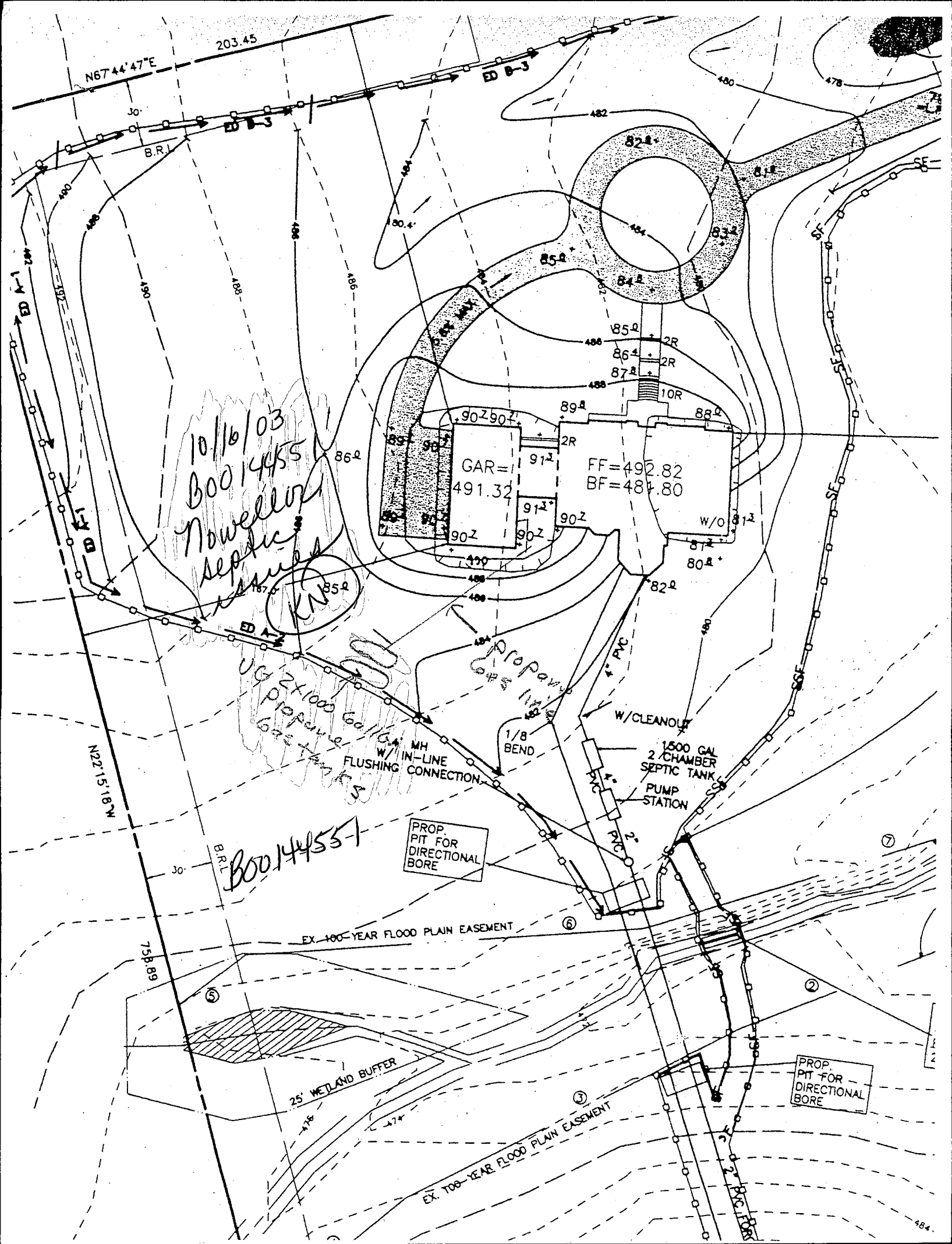
A RESUBDIVI

5TH ELECT

HOWARD COU

TAX MAP 34

SCALE: 1" = 10


N67°44'47"E
203.45
ED B-3
B.R.L.
30'
ED A-1
GAR=
491.32
FF=492.82
BF=487.80
W/O
10/16/03
B00144551
Nowell
Septic
Issued
KN
B00144551
Proposed Gas Line
UG 2x1000 Gal Propane Gas Tank
4" PVC
W/CLEANOUT
1/8 BEND
1500 GAL 2 CHAMBER SEPTIC TANK
PUMP STATION
2" PVC
MH W/ IN-LINE FLUSHING CONNECTION
PROP. PIT FOR DIRECTIONAL BORE
EX. 100-YEAR FLOOD PLAIN EASEMENT
N22°15'18"W
758.89
25' WETLAND BUFFER
EX. 100-YEAR FLOOD PLAIN EASEMENT
PROP. PIT FOR DIRECTIONAL BORE
2" PVC FOR
SF
SE

Howard County
Health Department

3525 H Ellicott Mills Drive, Ellicott City, MD 21043
(410) 313-1771 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

Penny E. Borenstein, M.D., M.P.H., Health Officer

April 30, 2004

Joseph Nazario
6500 Ammendale Road
Beltsville, MD 20705

SENT VIA FACSIMILE 301-937-9454

RE: Waterford 2/2, Lot 6
13185 Brighton Dam Road
BP # B00135214
Well Permit # HO-81-2605

Dear Mr. Hazaric:

This is to advise you that the septic system for the above referenced property has been installed and inspected. Final approval of the septic system was granted on **09/29/2003**.

The water sample results indicate that the water samples submitted for testing were free of coliform and fecal coliform bacteria at the time of sampling and are bacteriologically safe for drinking. The water sample results were found to be in compliance with COMAR water quality standards.

INTERIM CERTIFICATE OF POTABILITY

This certifies that the initial sampling requirements of COMAR 26.04.04 "Well Regulations" have been met for the water supply system installed under well permit #HO-81-2605. Although the submitted sample results are in compliance with COMAR standards, the Health Department does not guarantee water supplies. Based upon satisfactory investigation and evaluation, the Howard County Health Department as authorized by the Maryland Department of the Environment accepts this well system as required by COMAR 26.04.04.

This certificate may become final upon completion of the second bacteriological test, which is to be taken by the county health department within six months of receipt of this letter. **Please contact (410) 313-1773 to schedule a final water sample appointment. Currently, there is no charge for this final sampling.**

Date of Water Samples: 12/23/2003 & two on 4/22/2004
Date of Well Completion: 04/20/1988

Approving Authority,
Brian Baker
Brian Baker, R. S.
Well & Septic Program

cc: Building Inspector's Office
Community Health Services
File