

**PROFESSIONAL CERTIFICATION**

PROFESSIONAL CERTIFICATION: I, MICHAEL J. WENNER, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 23380, EXPIRATION DATE 8-19-18.

Signature: *[Signature]* Date: 7/10/17  
Name: Michael J. Wenner  
Firm Name: M.A.F. & ASSOCIATES LLC  
Address: 526 HOODS MILL ROAD  
WOODBINE MD. 21797



**M.A.F. & ASSOCIATES, LLC**  
526 HOODS MILL ROAD  
WOODBINE MD. 21797  
PHONE: 410-552-5541  
FAX: 410-552-5546

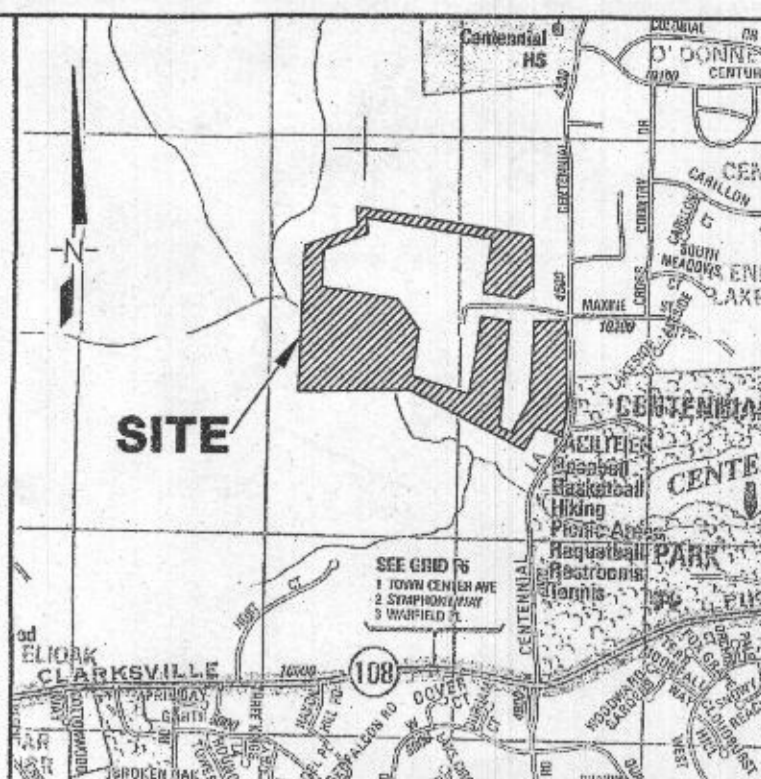
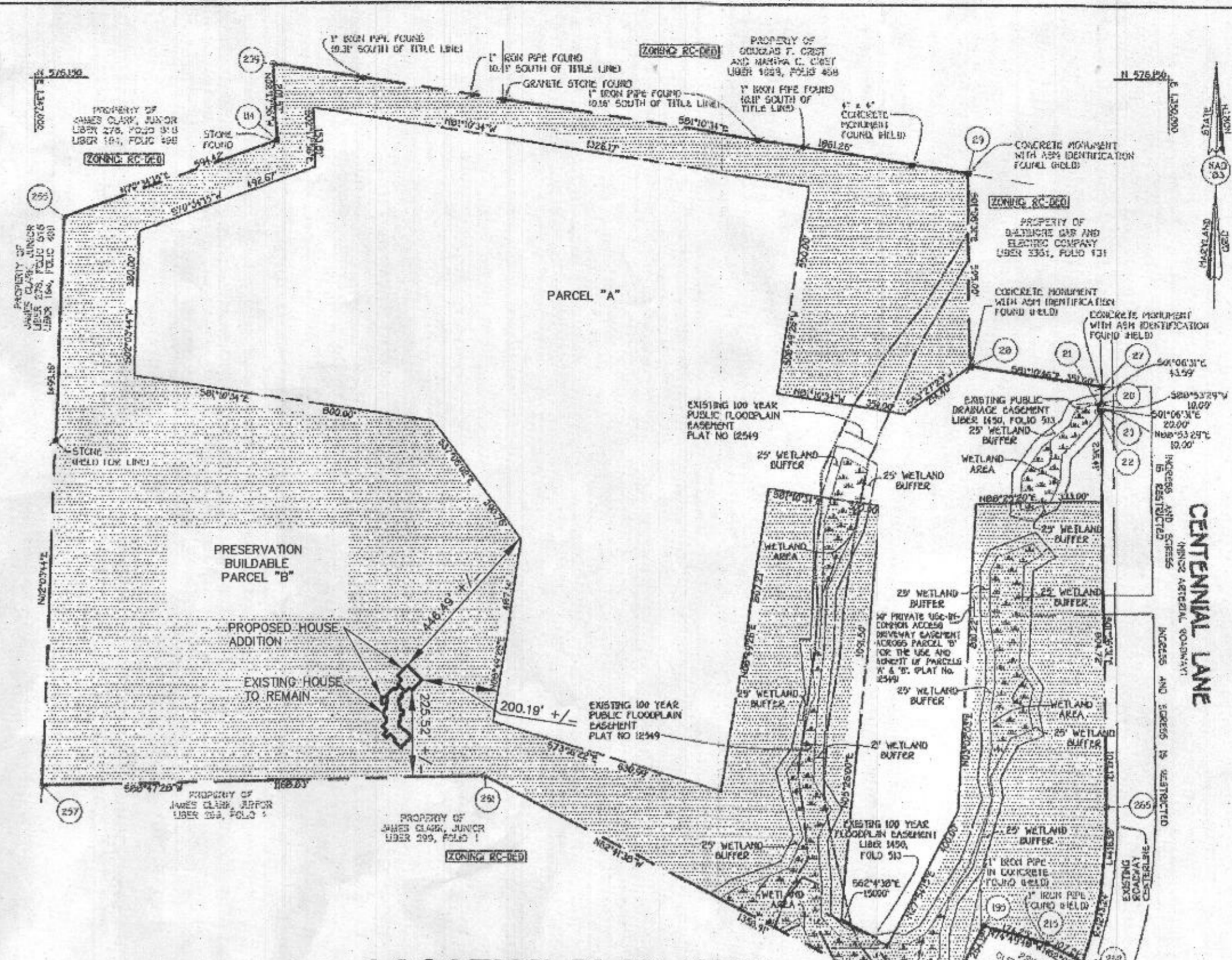
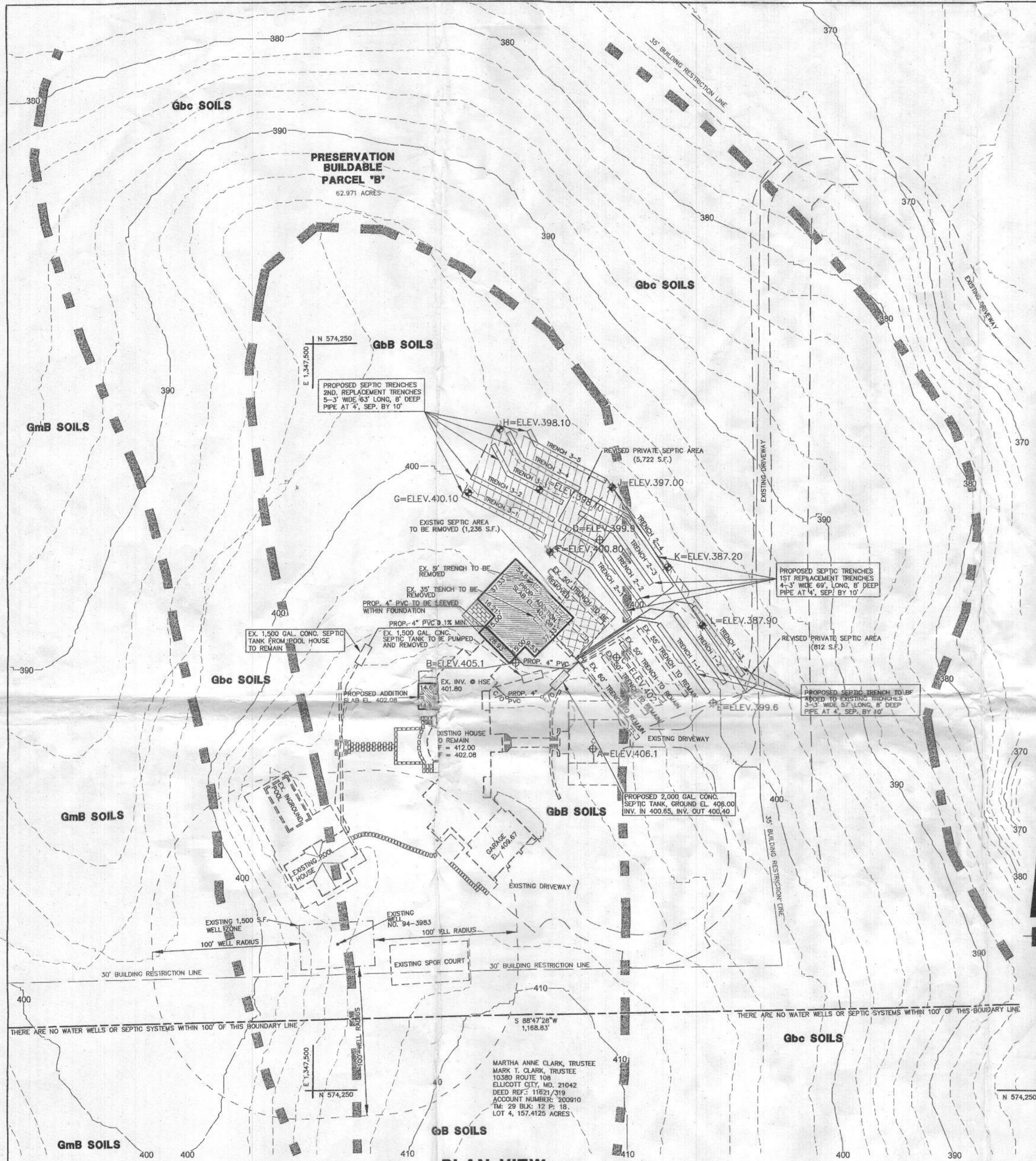
**SHEET 2 of 2**

**SEPTIC SYSTEM PLAN**

**BERG RESIDENCE**  
**AT 4580 CENTENNIAL LANE**  
**ELLCOTT CITY MD. 21042**

2ND DISTRICT SCALE: AS SHOWN TAX MAP 30 HOWARD COUNTY, MARYLAND DRAWN ON: JULY 16, 2017 PARCEL 001

BLOCK 1 ZIPCODE: 21042



- GENERAL NOTES:**
- THIS SITE CONSISTS OF 62.970 ACRES.
  - TAX ACCOUNT NUMBER: 383861
  - EXISTING USE: SINGLE FAMILY DWELLING
  - PROPOSED USE: SINGLE FAMILY DWELLING ADDITION
  - PROPERTY ADDRESS: 4580 CENTENNIAL LANE, ELLICOTT CITY, MD, 21045
  - OWNER: ROBERT SCOTT BERG, LISA ANNETTE BERG, 4580 CENTENNIAL LANE, ELLICOTT CITY, MD, 21045, PHONE: 443-839-0856
  - DEVELOPER: ROBERT SCOTT BERG, LISA ANNETTE BERG, 4580 CENTENNIAL LANE, ELLICOTT CITY, MD, 21045, PHONE: 443-839-0856
  - NO PROPERTY LINE SURVEY HAS BEEN MADE AT THIS TIME.
  - THE EXISTING UTILITIES HAVE NOT BEEN FIELD VERIFIED AT THE TIME. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE LOCATION OF THE EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY GRADING ACTIVITY.
  - ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.

**PURPOSE NOTE:**  
THE PURPOSE OF THIS PLAN IS TO REVISE THE 10,000 SQUARE FOOT SEPTIC AREA. THIS REVISION IS TO ALLOW FOR THE RELOCATION OF SEPTIC TRENCHES FOR A HOUSE ADDITION TO BE PLACED ON SITE.

**TOPOGRAPHY NOTE:**  
THE TOPOGRAPHY SHOWN ON THIS PLAN WAS TAKEN FROM EXISTING APPROVED DRAWINGS ON FILE WITH THE HOWARD COUNTY BUREAU OF ENVIRONMENTAL HEALTH.

**WELL LOCATION NOTE:**  
ALL EXISTING WELLS ON THE SUBJECT PROPERTY AND WITHIN 100 FEET OF SUBJECT PROPERTY BOUNDARIES ARE REPRESENTED TO THE BEST OF MY KNOWLEDGE AND BELIEF.

**NOTE:**  
THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT.

**BOUNDARY AND LOCATION NOTE:**  
THE LOT BOUNDARY IS TAKEN FROM THE FINAL PLAT NUMBER 16986. THE HOUSE AND SEPTIC AREA LOCATION ARE TAKEN FROM THE PREVIOUSLY APPROVED SITE DEVELOPMENT PLAN.

**CERTIFICATION OF COMPLIANCE WITH OWNERSHIP WIDTH AND LOT AREA REQUIREMENTS FOR LOTS CREATED AFTER 1985:**  
THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM WIDTH AND LOT AREA REQUIREMENTS FOR LOT AREA AS REQUIRED BY MARYLAND DEPARTMENT OF ENVIRONMENT.

**"MDE SEWAGE EASEMENT STATEMENT"**  
THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A REVISED EASEMENT SHALL NOT BE NECESSARY.

**SEPTIC TRENCH DESIGN CALCULATION**

INITIAL TRENCHES  
 $7 \times 150 = 1,312.50 = 437.50$  LINEAR FEET  
 0.80

1ST REPLACEMENT TRENCHES  
 $7 \times 150 = 1,312.50 = 437.50 \times 0.6250 = 273.437$  LINEAR FEET  
 0.80

2ND REPLACEMENT TRENCHES  
 $7 \times 150 = 1,312.50 = 437.50 \times 0.7143 = 312.506$  LINEAR FEET  
 0.80

**SEPTIC TRENCH INFORMATION**

TRENCH	TRENCH LENGTH	GROUND ELEVATION	INVERT ELEVATION	MAX. BOTTOM ELEVATION
TRENCH 1-1	57 LIN. FT.	400.00	396.00	392.00
TRENCH 1-2	57 LIN. FT.	398.25	394.25	390.25
TRENCH 1-3	57 LIN. FT.	397.75	393.75	389.75
TRENCH 2-1	69 LIN. FT.	400.00	396.00	392.00
TRENCH 2-2	89 LIN. FT.	399.90	394.90	391.90
TRENCH 2-3	89 LIN. FT.	398.00	394.00	390.00
TRENCH 2-4	89 LIN. FT.	397.90	393.90	389.90
TRENCH 3-1	63 LIN. FT.	400.10	396.10	392.10
TRENCH 3-2	63 LIN. FT.	398.25	394.25	391.25
TRENCH 3-3	63 LIN. FT.	398.20	394.20	390.20
TRENCH 3-4	63 LIN. FT.	398.00	394.00	390.00
TRENCH 3-5	63 LIN. FT.	398.00	394.00	390.00

**SEPTIC SYSTEM INFORMATION**

INVT. OUT OF HOUSE	INVT. IN SEPTIC TANK	TOP OF SEPTIC TANK	GROUND ELEV. OVR SEPTIC TANK	INVT. OUT OF DIST. BOX	GROUND ELEV. OVR DIST. BOX
401.90	400.85	401.90	406.00	400.55	400.45

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Signature: *[Signature]*  
 Name: Michael J. Heiner  
 Firm Name: M.A.F. & ASSOCIATES LLC  
 Address: 526 HOODS MILL ROAD  
 WOODBINE MD. 21797

STATE OF MARYLAND  
 MICHAEL J. HEINER  
 PROFESSIONAL ENGINEER  
 NO. 23380  
 EXPIRES 8-19-18

**LEGEND**

- 390 --- Existing Grade
- Gbc SOILS --- SOIL BOUNDARY LINE
- Gbb SOILS --- SOIL CLASSIFICATION
- Gmb SOILS --- SOIL CLASSIFICATION
- REVISED PRIVATE SEPTIC AREA TO BE ADDED
- EXISTING SEPTIC AREA TO BE REMOVED
- ⊕=ELEV.387.00 EXISTING PASSING PERCOLATION TEST HOLE LOCATION (5-17-17)
- ⊕=ELEV.399.9 EXISTING PASSING PERCOLATION TEST HOLE LOCATION (12/18/05)
- EXISTING 1,500 GALLON SEPTIC TANK
- PROPOSED 2,000 GALLON SEPTIC TANK
- EXISTING 1,500 S.F. WELL ZONE
- EXISTING WELL

**SHEET 1 of 2**

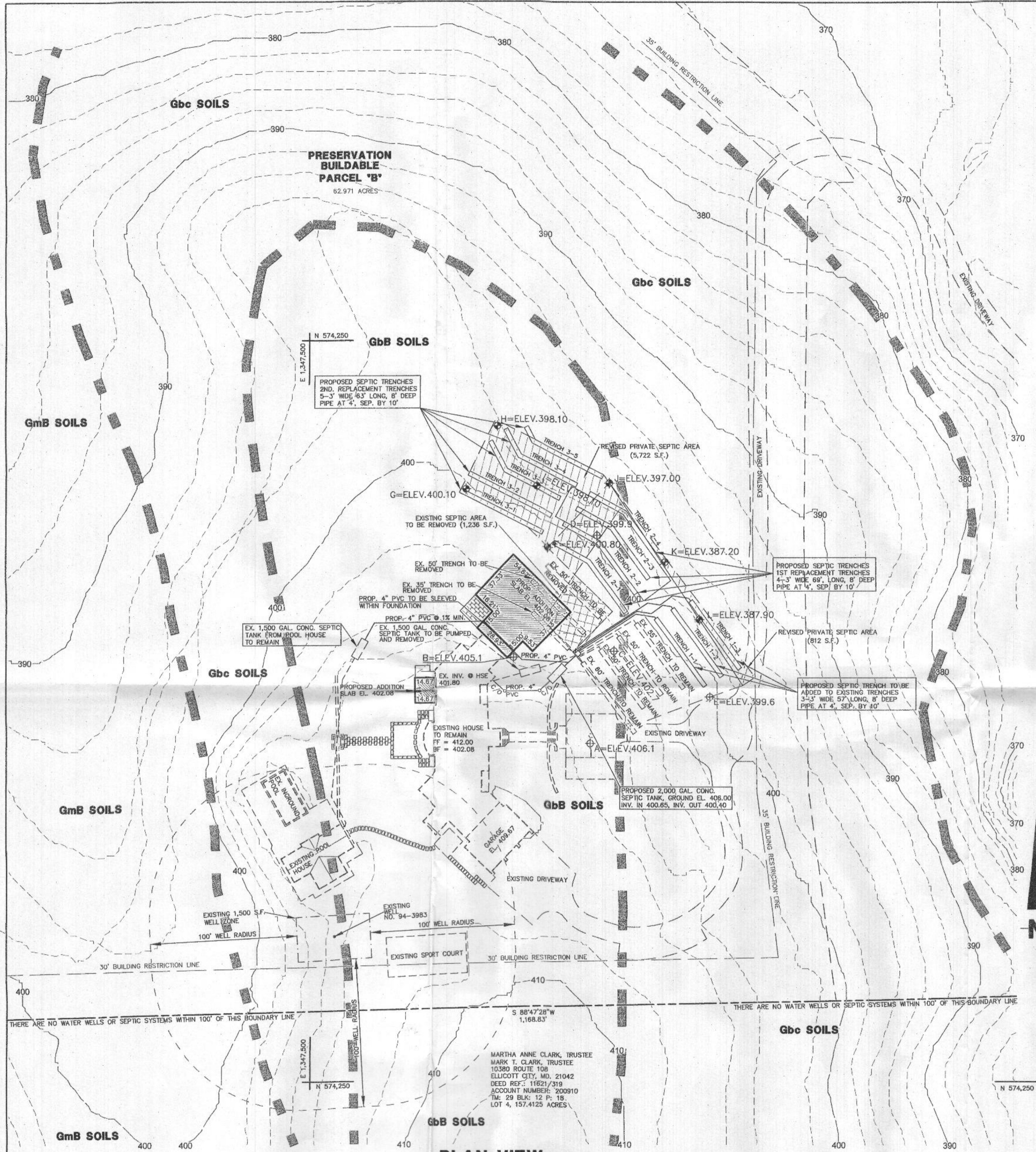
**SEPTIC SYSTEM PLAN**

**BERG RESIDENCE**  
**AT 4580 CENTENNIAL LANE**  
**ELLICOTT CITY MD. 21042**

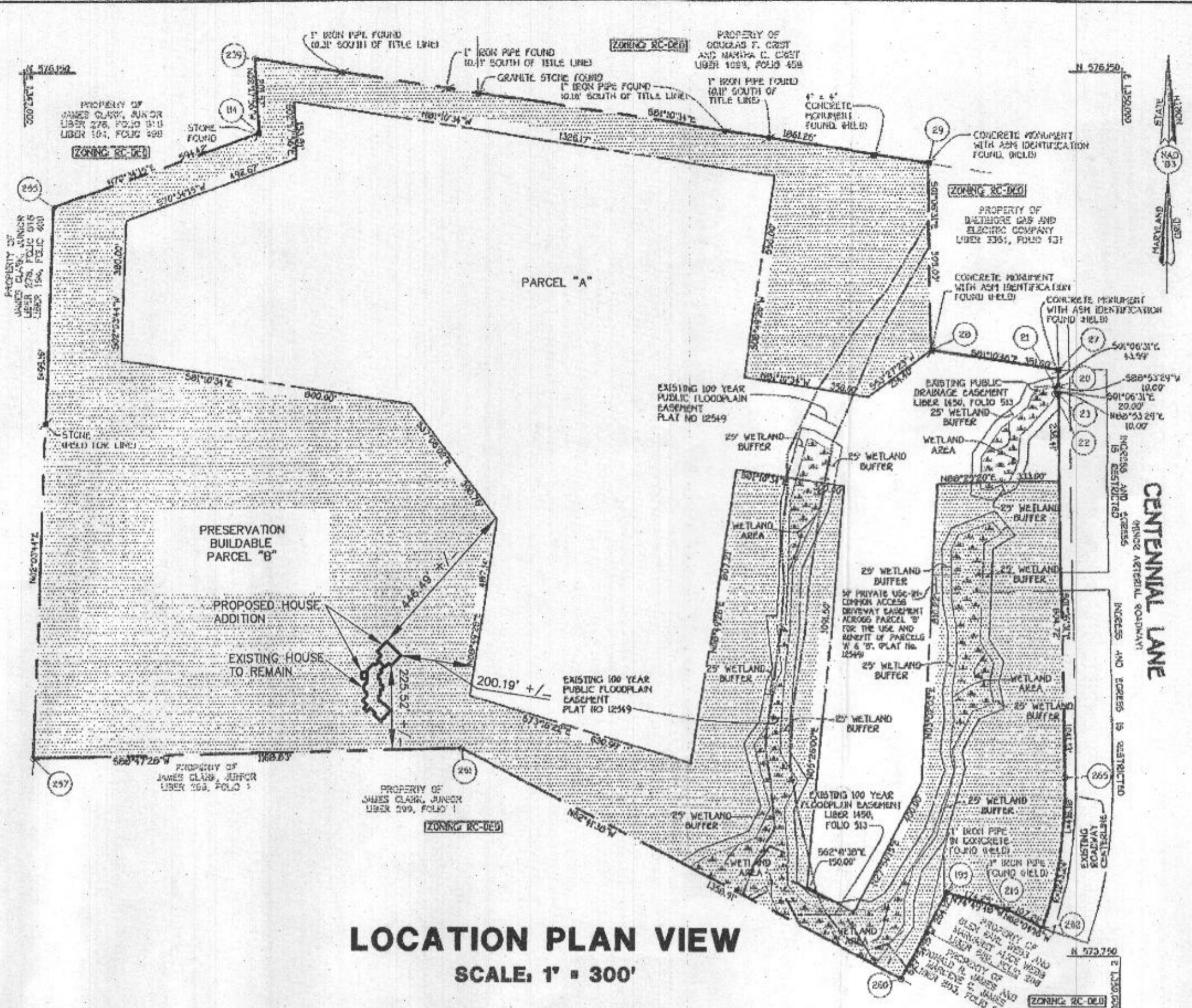
2ND DISTRICT  
 SCALE: AS SHOWN  
 TAX MAP 30

HOWARD COUNTY, MARYLAND  
 DRAWN ON: JULY 16, 2017  
 PARCEL 001

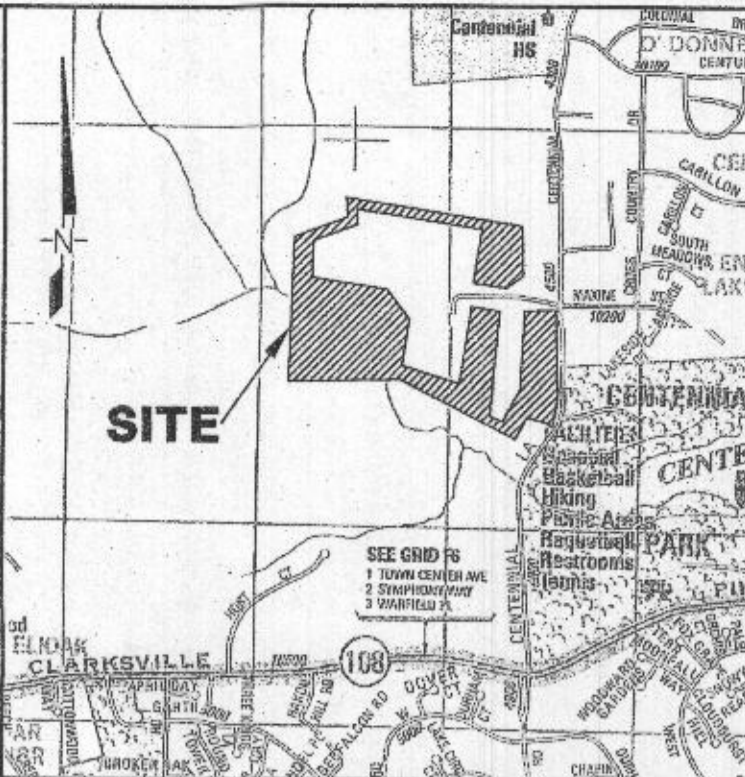
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**PLAN VIEW**  
SCALE: 1" = 40'



**LOCATION PLAN VIEW**  
SCALE: 1" = 300'



**VICINITY MAP**  
SCALE: 1" = 2,000'  
ADC MAP: 15, GRID: E1  
Copyright © The Map People  
Permitted Use Number 2071191

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**SEPTIC TRENCH DESIGN CALCULATION**

INITIAL TRENCHES	1ST REPLACEMENT TRENCHES	2ND REPLACEMENT TRENCHES
7 x 150 = 1,312.50 = 437.50 LINEAR FEET 0.80	7 x 150 = 1,312.50 = 437.50 x 0.6250 = 273.437 LINEAR FEET 0.80	7 x 150 = 1,312.50 = 437.50 x 0.7143 = 312.506 LINEAR FEET 0.80

**SEPTIC TRENCH INFORMATION**

TRENCH 1-1	TRENCH LENGTH	57 LIN. FT.
	GROUND ELEVATION	402.00
	INVERT ELEVATION	396.00
	MAX. BOTTOM ELEVATION	392.00
TRENCH 1-2	TRENCH LENGTH	57 LIN. FT.
	GROUND ELEVATION	398.25
	INVERT ELEVATION	394.25
	MAX. BOTTOM ELEVATION	390.25
TRENCH 1-3	TRENCH LENGTH	57 LIN. FT.
	GROUND ELEVATION	397.75
	INVERT ELEVATION	393.75
	MAX. BOTTOM ELEVATION	389.75
TRENCH 2-1	TRENCH LENGTH	69 LIN. FT.
	GROUND ELEVATION	400.00
	INVERT ELEVATION	396.00
	MAX. BOTTOM ELEVATION	392.00
TRENCH 2-2	TRENCH LENGTH	89 LIN. FT.
	GROUND ELEVATION	398.90
	INVERT ELEVATION	394.90
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TRENCH 2-3	TRENCH LENGTH	89 LIN. FT.
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	INVERT ELEVATION	394.00
	MAX. BOTTOM ELEVATION	390.00
TRENCH 2-4	TRENCH LENGTH	69 LIN. FT.
	GROUND ELEVATION	397.90
	INVERT ELEVATION	393.90
	MAX. BOTTOM ELEVATION	389.90
TRENCH 3-1	TRENCH LENGTH	63 LIN. FT.
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	INVERT ELEVATION	396.10
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	BOTTOM ELEVATION	390.00
TRENCH 3-5	TRENCH LENGTH	63 LIN. FT.
	GROUND ELEVATION	398.00
	INVERT ELEVATION	394.00
	BOTTOM ELEVATION	390.00

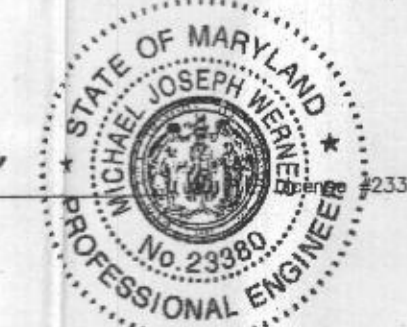
**SEPTIC SYSTEM INFORMATION**

INV. OUT OF HOUSE	401.80
INV. OUT OF SEPTIC TANK	400.90
TOP OF SEPTIC TANK	400.65
GROUND ELEV. OVER SEPTIC TANK	406.00
INV. IN DIST. BOX	400.55
INV. OUT OF DIST. BOX	400.45
GROUND ELEV. OVER DIST. BOX	404.85

**PROFESSIONAL CERTIFICATION**

PROFESSIONAL CERTIFICATION: I, MICHAEL J. VERNER, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 23380, EXPIRATION DATE 8-19-18.

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**LEGEND**

---390---	Existing Grade	⊕=ELEV.387.00	EXISTING PASSING PERCOLATION TEST HOLE LOCATION (5-17-17)
⊕=ELEV.399.9	EXISTING PASSING PERCOLATION TEST HOLE LOCATION (12/18/05)	[Symbol]	EXISTING 1,500 GALLON SEPTIC TANK
[Symbol]	SOIL BOUNDARY LINE	[Symbol]	PROPOSED 2,000 GALLON SEPTIC TANK
[Symbol]	Gbc SOILS	[Symbol]	EXISTING 1,500 S.F. WELL ZONE
[Symbol]	GbB SOILS	[Symbol]	EXISTING WELL
[Symbol]	GmB SOILS	[Symbol]	
[Symbol]	REVISED PRIVATE SEPTIC AREA TO BE ADDED		
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**SEPTIC SYSTEM PLAN**  
**BERG RESIDENCE**  
**AT 4580 CENTENNIAL LANE**  
**ELLICOTT CITY MD. 21042**

2ND DISTRICT  
SCALE: AS SHOWN  
TAX MAP 30

HOWARD COUNTY, MARYLAND  
DRAWN ON: JULY 16, 2017  
PARCEL 001

BLOCK 1  
ZIPCODE: 21042