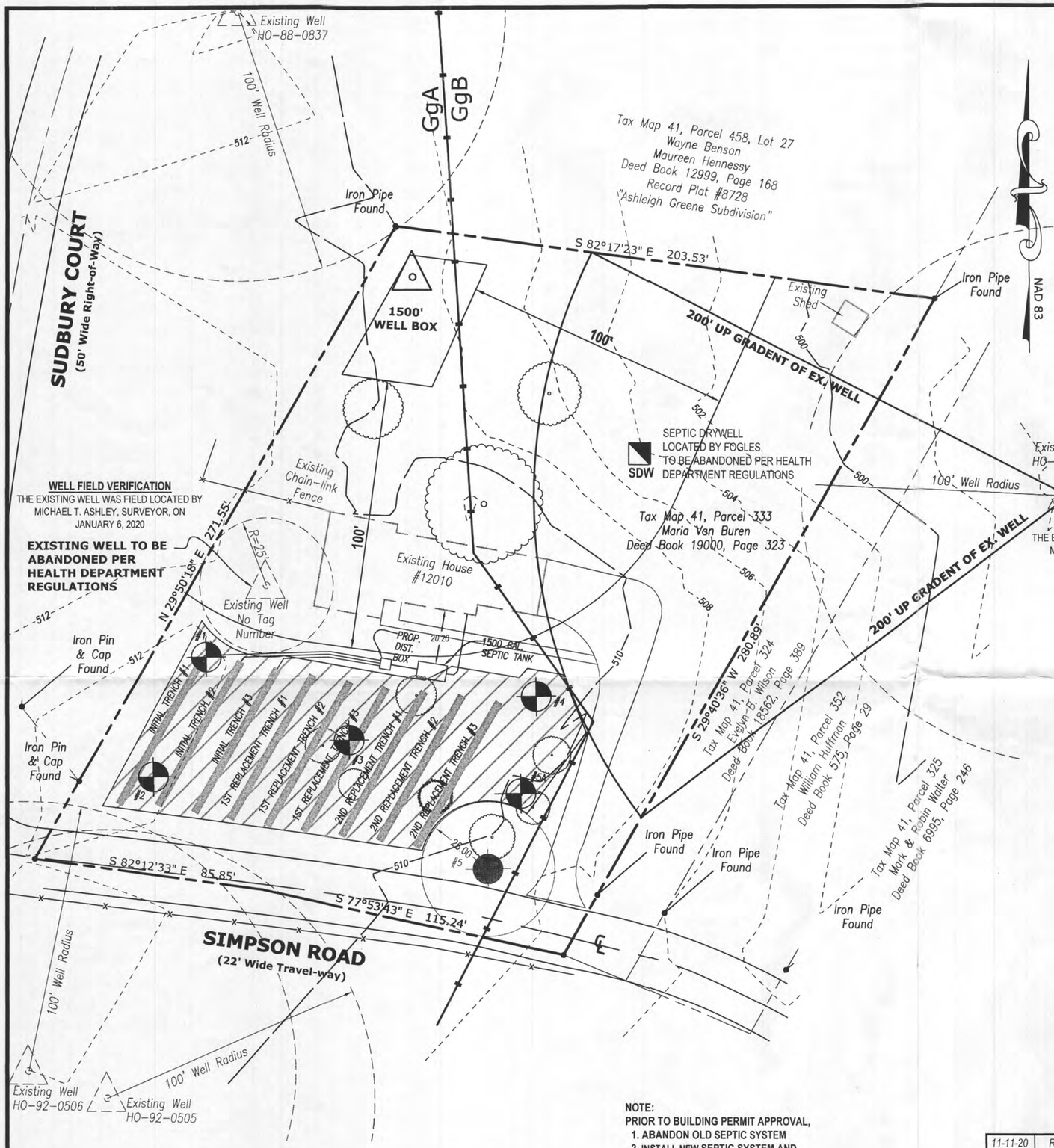

GENERAL NOTES

Current Title Reference
Owner - Maria Van Buren
Deed reference - Liber 19000 Folio 323
Date - October 31, 2019
Grantor - Eva E. Bryan

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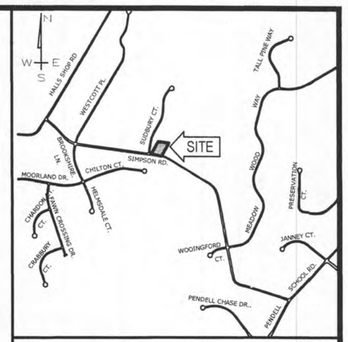

VICINITY MAP
SCALE: 1inch = 2000 feet

5 BEDROOM DESIGN
Deep Trench With 4ft. of Stone
Design flow - 150 Gal./Br.
5br. x 150 Gal. = 750 Gal./ Day = Design Flow (DF)
Application Rate of 0.6 Gal. per Day/ Square Feet
DF ÷ AR = Square Feet of Required Trench
*750 Gal./ Day ÷ 0.6 Gal. per Day/ Square Feet = **1,250 SF of Required Trench***

Length of Trench (Width Adjustment)
Square Feet ÷ Width of Trench
*1,250 SF ÷ 3ft = **416.7 SF***

Sidewall Reduction Credit
$\frac{W+2}{W+1+2(D)} \times 100\% = \frac{3FT.+2}{3FT.+1+2(3.5)} \times 100\% = \frac{5}{11} \times 100\% = 0.45 \times 100\% = \mathbf{45\%}$

W = Trench Width
D = Depth

Length of Trench (Depth Adjustment)
Square Feet of Trench Required (after length adjustment) X Sidewall Reduction Credit
*416.7 SF X 0.45 = **187.5 FT. Length of Trench Required***

Trench Design Per System
Length of Required Trench ÷ # of Trenchs per System
*187.5 FT. ÷ 3 trenches per system = **62.5 FT** Length of Trench (Each System)*
Requires 3 systems

Minimum Spacing
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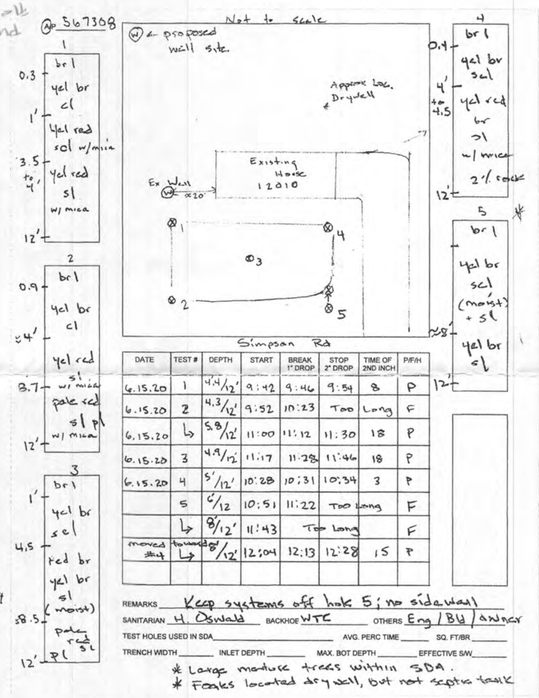

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moved towards #4	4	8'/12'	12:04	12:13	12:28	15	P

REMARKS: Keep systems off lots 5; no sidewalk
SANITARIAN H. Oswald BACKHOE WTC OTHERS Eng / BY / owner
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WELL FIELD VERIFICATION
THE EXISTING WELL WAS FIELD LOCATED BY
MICHAEL T. ASHLEY, SURVEYOR, ON
JANUARY 6, 2020

DATA BLOCK
1. Zoning District :RR-DEO
2. Number of Lots: 1
3. Total area of Lot: 1.1800 Acres

SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND

SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	k-VALUE
GgA		B		GLENELG LOAM, 0 TO 3 PERCENT SLOPES	0.2
GgB		B		GLENELG LOAM, 3 TO 8 PERCENT SLOPES	0.2

NOTE:
PRIOR TO BUILDING PERMIT APPROVAL,
1. ABANDON OLD SEPTIC SYSTEM
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APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

By Wilson for Maura Rossman DATE: 12/1/2020
HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT H.O.

I CERTIFY THAT THE INFROMATION SHOWN HEREON IS BASED ON FIELD WORK PREFORMED BY ME OR UNDER MY DIRECT SUPERVISION, AND IS CORRECT, TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: _____ DATE: 11/11/20

DATE	REVISIONS	BY
11-11-20	REVISED PER COUNTY COMMENTS	BD

LEGEND

- ▨ Denotes sewage disposal areas
- △ Denotes Proposed Well
- △ Denotes Existing Well
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OWNER / DEVELOPER

Maria Van Buren
12010 Simpson Road
Clarksville, MD 21029-1722

PERCOLATION CERTIFICATION PLAN
12010 SIMPSON RD

5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP - 41 GRID - 1 PARCEL - 333

DATE	REVISIONS	BY
5-18-20	REVISED PER COUNTY COMMENTS	BD
6-23-20	REVISE TO PERC CERTIFICATION PLAN	BD
7-30-20	REVISE PER HEALTH DEPT. COMMENTS	BD
10-27-20	REVISE PER HEALTH DEPT. COMMENTS	BD

Surveyed By: M. T. Ashley/A. Leppo
Computed By: S. M. Landis
Drawn By: S. M. Landis
Checked By: R. L. Bachtel
BPR Job No. 19-099-000

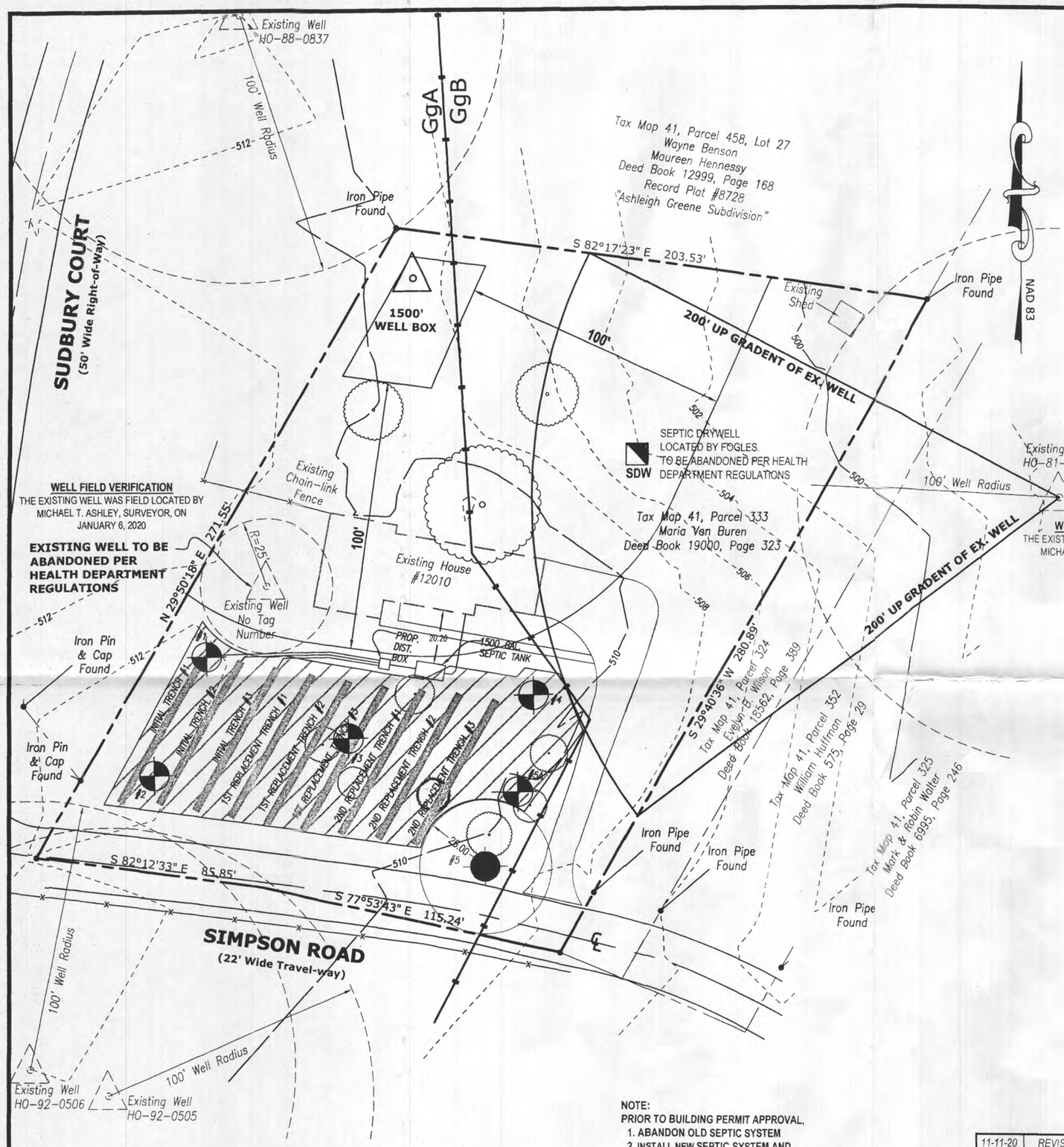
STATE OF MARYLAND · DONALD PICKENS · No. 10661 · PROFESSIONAL LAND SURVEYOR · Expires 11/26/21

11/11/20

BPR INC
SURVEYORS - LAND PLANNERS
150 Airport Drive
Suite 4
Westminster, Maryland 21157
Phone: (410)-857-9030
or (410)-876-0333
Fax: (410)-876-1532
www.bprsurveying.com

Date: June 23, 2020 Scale: 1 inch = 30 feet

A licensed Maryland Surveyor either personally prepared the Survey as shown hereon, or was in responsible charge over its preparation and the surveying work reflected in it, in compliance with the Maryland Minimum Standards of Practice for Land Surveyors.



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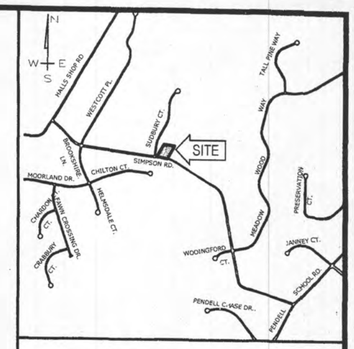

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Length of Trench (Width Adjustment)
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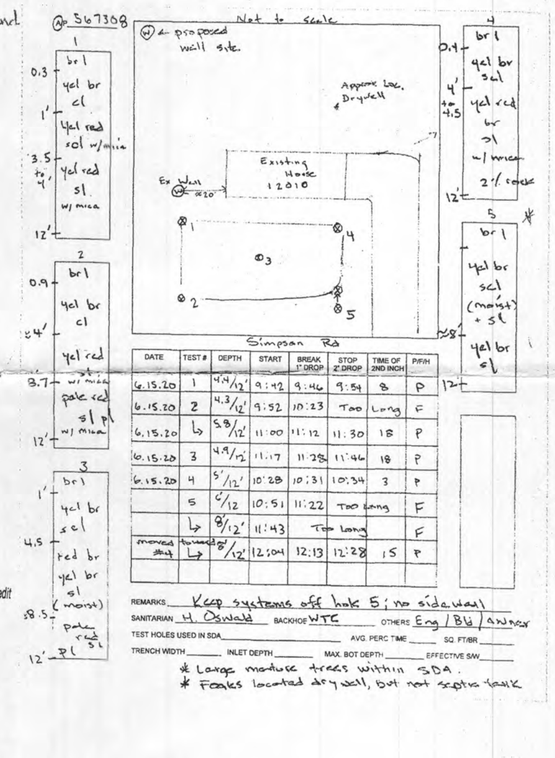

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SANITARIAN: H. Oswald BACKHOE: WTC OTHERS: Eng / Bldr / Owner
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BY Lyn for Maura Rossman DATE: 12/7/2020
HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT H.O

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Surveyed By: M. T. Ashley/A. Leppo
Computed By: S. M. Landis
Drawn By: S. M. Landis
Checked By: R. L. Bachtel
BPR Job No. 19-099-000

STATE OF MARYLAND · GEORGE RONALD PICKWORTH · No. 10664 · PROFESSIONAL LAND SURVEYOR
11/11/20
Expires 11/26/21

A licensed Maryland Surveyor either personally prepared the Survey as shown hereon, or was in responsible charge over its preparation and the surveying work reflected in it, in compliance with the Maryland Minimum Standards of Practice for Land Surveyors.

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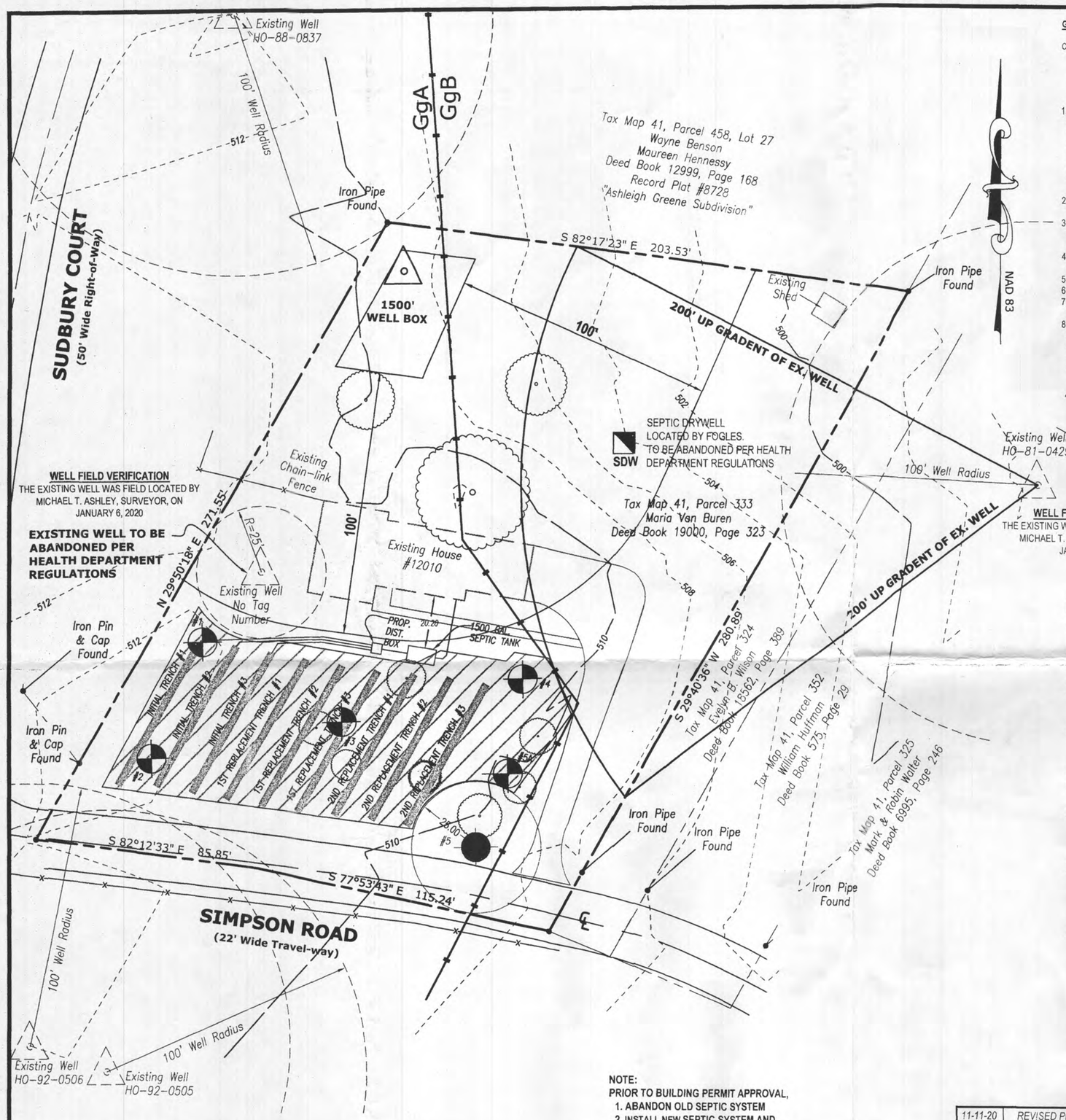
Date: June 23, 2020 Scale: 1 inch = 30 feet



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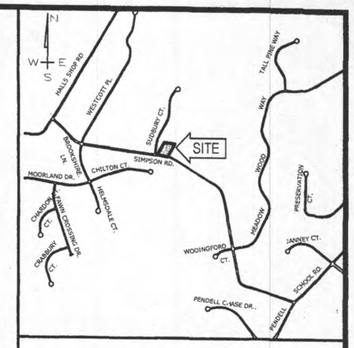

VICINITY MAP
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WELL FIELD VERIFICATION
THE EXISTING WELL WAS FIELD LOCATED BY MICHAEL T. ASHLEY, SURVEYOR, ON JANUARY 6, 2020

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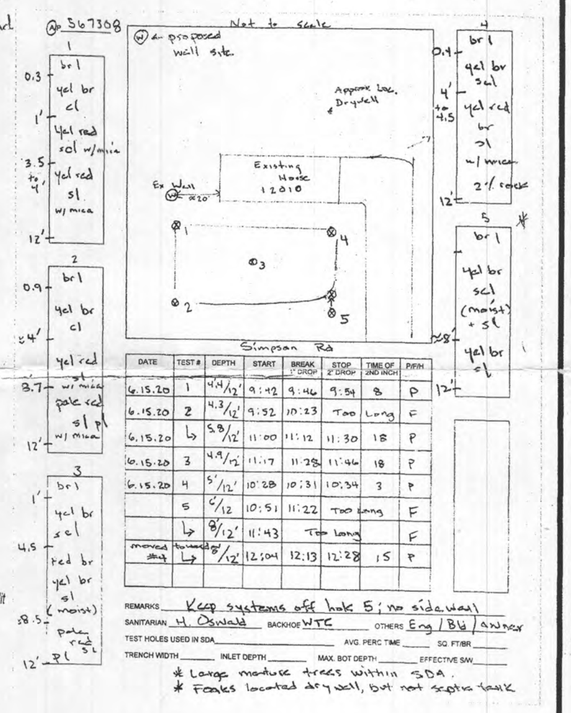

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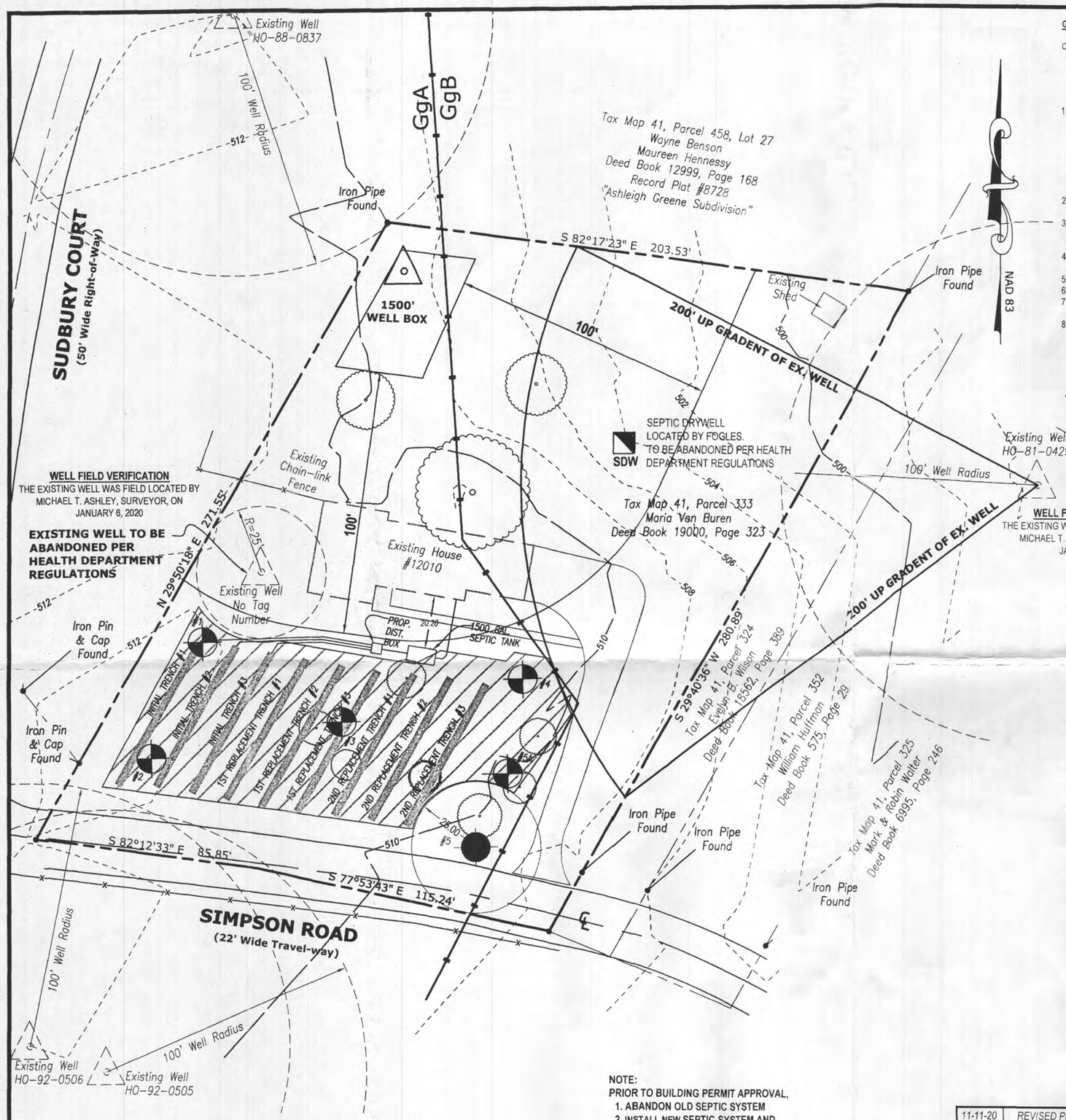

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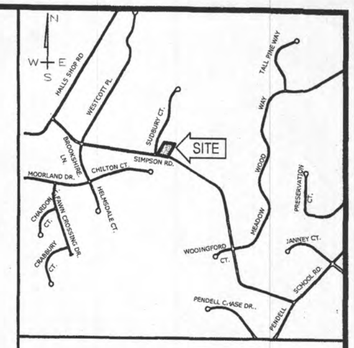
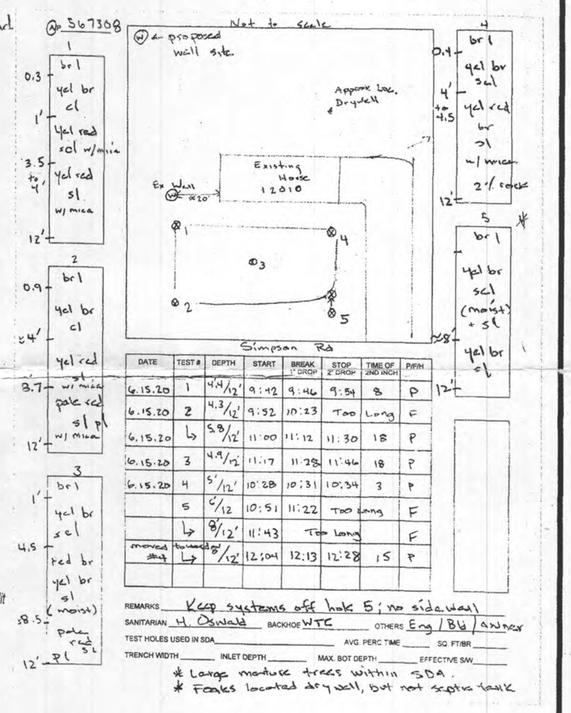
7. Existing well must be properly abandoned with documentation sent to the Health Department prior to building permit or septic permit issuance.
8. The Maryland Department of the Environment has reviewed the existing well and proposed sewage disposal area locations illustrated on this plan as recommended by Howard County Health Department and has granted a variance to allow the location of the existing well on 11978 Simpson Road to be down gradient of the proposed sewage disposal area on 12010 Simpson Road, pursuant to the following condition:
   a.) Future replacement systems will be required to have a BAT unit and LPD design.
9. Prior to building approval, abandon old septic systems, install new septic systems, and appeal the septic permit.



VICINITY MAP
SCALE: 1inch = 2000 feet

WELL FIELD VERIFICATION
THE EXISTING WELL WAS FIELD LOCATED BY MICHAEL T. ASHLEY, SURVEYOR, ON JANUARY 6, 2020

5 BEDROOM DESIGN
Deep Trench With 4ft. of Stone
Design flow - 150 Gal./Br.
5br. x 150 Gal. = 750 Gal./ Day = Design Flow (DF)
Application Rate of 0.6 Gal. per Day/ Square Feet
DF ÷ AR = Square Feet of Required Trench
*750 Gal./ Day ÷ 0.6 Gal. per Day/ Square Feet = **1,250 SF of Required Trench***
Length of Trench (Width Adjustment)
Square Feet ÷ Width of Trench
*1,250 SF ÷ 3ft = **416.7 SF***
Sidewall Reduction Credit
$\frac{W+2}{W+1+2(D)} \times 100\% = \frac{3FT.+2}{3FT.+1+2(3.5)} \times 100\% = \frac{5}{11} \times 100\% = 0.45 \times 100\% = \mathbf{45\%}$
W = Trench Width
D = Depth
Length of Trench (Depth Adjustment)
Square Feet of Trench Required (after length adjustment) X Sidewall Reduction Credit
*416.7 SF X 0.45 = **187.5 FT. Length of Trench Required***
Trench Design Per System
Length of Required Trench ÷ # of Trenchs per System
*187.5 FT. ÷ 3 trenches per system = **62.5 FT** Length of Trench (Each System)*
Requires 3 systems
Minimum Spacing
2 x Effective Depth + Width of Trench
*2 x 3.5FT + 3FT = **10FT (Between Trenchs)***



DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2ND INCH	P/F/H
6.15.20	1	4'4½'	9:42	9:46	9:54	8	P
6.15.20	2	4'3½'	9:52	10:23	Too Long		F
6.15.20	4	5'8½'	11:00	11:12	11:30	18	P
6.15.20	3	4'9½'	11:17	11:28	11:46	18	P
6.15.20	4	5'½'	10:28	10:31	10:34	3	P
	5	6'½	10:51	11:22	Too Long		F
	4	8'½'	11:43	Too Long			F
moved to 4	4	8'½'	12:04	12:13	12:28	15	P

REMARKS: Keep systems off hole 5; no sidewall
SANITARIAN: H. Oswald BACKHOE: WTC OTHERS: Eng / Bd / owner
TEST HOLES USED IN SDA: AVG. PERC TIME: SQ. FT/BR:
TRENCH WIDTH: INLET DEPTH: MAX. BOT DEPTH: EFFECTIVE SW:
* Large mature trees within SDA.
* Foxes located dry well, but not septic tank

DATA BLOCK
1. Zoning District :RR-DEO
2. Number of Lots: 1
3. Total area of Lot: 1.1800 Acres

SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND					
SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME	k-VALUE
GgA		B		GLENELG LOAM, 0 TO 3 PERCENT SLOPES	0.2
GgB		B		GLENELG LOAM, 3 TO 8 PERCENT SLOPES	0.2

NOTE:
PRIOR TO BUILDING PERMIT APPROVAL,
1. ABANDON OLD SEPTIC SYSTEM
2. INSTALL NEW SEPTIC SYSTEM AND APPROVE THE SEPTIC PERMIT.

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

BD for Maura Rossman DATE: 12/7/2020
HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT H.O Jr

I CERTIFY THAT THE INFROMATION SHOWN HEREON IS BASED ON FIELD WORK PREFORMED BY ME OR UNDER MY DIRECT SUPERVISION, AND IS CORRECT, TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: DATE: 11/11/20

DATE	REVISIONS	BY
11-11-20	REVISED PER COUNTY COMMENTS	BD

LEGEND

- ▨ Denotes sewage disposal areas
- △ Denotes Proposed Well
- △ Denotes Existing Well
- ⊕ Denotes Percolation Test Passed
- ⊖ Denotes Percolation Test Failed
- SDW ◪ Denotes Septic Dry Well

OWNER / DEVELOPER

Maria Van Buren
12010 Simpson Road
Clarksville, MD 21029-1722

PERCOLATION CERTIFICATION PLAN
12010 SIMPSON RD

5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP - 41 GRID - 1 PARCEL - 333

DATE	REVISIONS	BY
5-18-20	REVISED PER COUNTY COMMENTS	BD
6-23-20	REVISE TO PERC CERTIFICATION PLAN	BD
7-30-20	REVISE PER HEALTH DEPT. COMMENTS	BD
10-27-20	REVISE PER HEALTH DEPT. COMMENTS	BD

Surveyed By	M. T. Ashley/A. Leppo
Computed By	S. M. Landis
Drawn By	S. M. Landis
Checked By	R. L. Bachtel
BPR Job No.	19-099-000

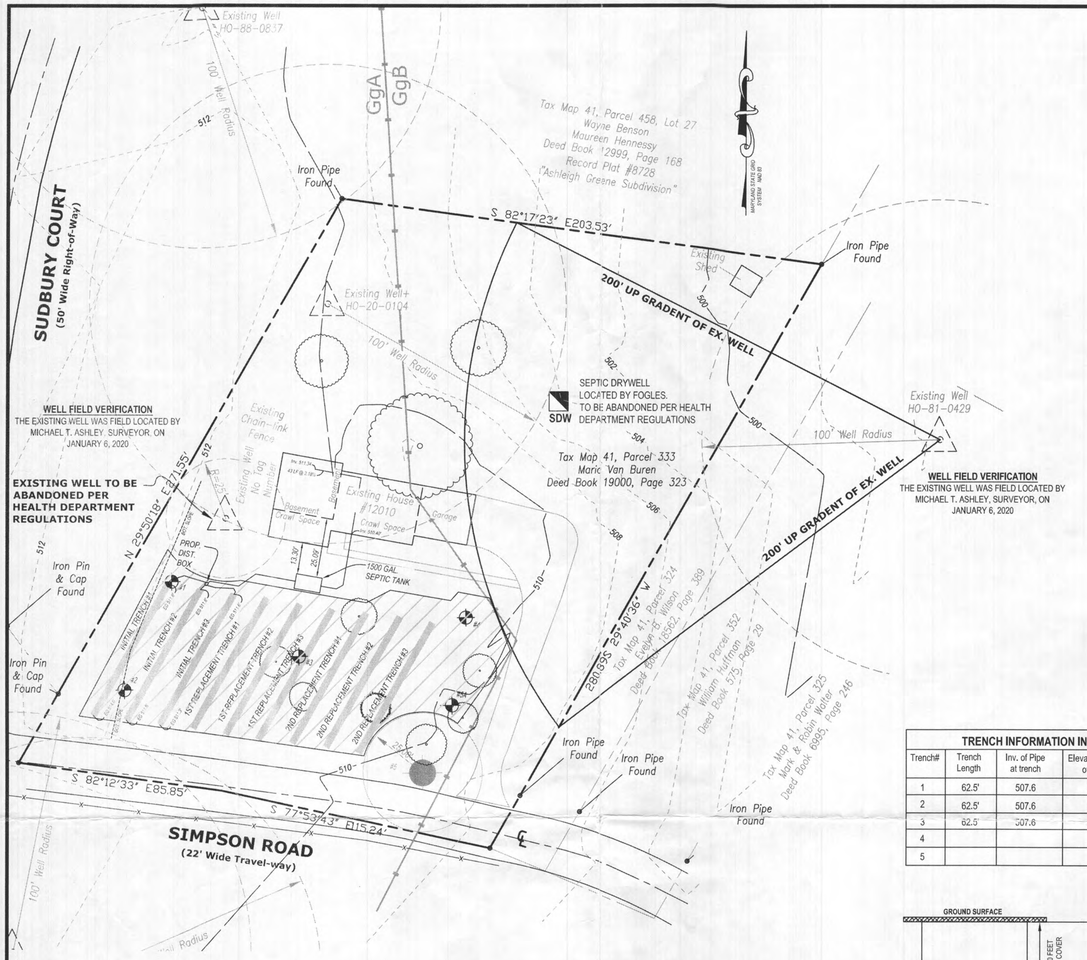
STATE OF MARYLAND · GEORGE RONALD PIERPONT · No. 10664 · PROFESSIONAL LAND SURVEYOR · EXPIRES 11/26/21

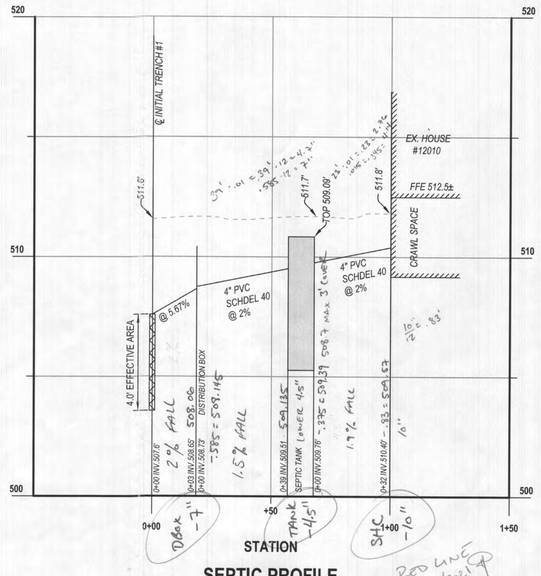
11/11/20

BPR INC
SURVEYORS - LAND PLANNERS
150 Airport Drive
Suite 4
Westminster, Maryland 21157
Phone: (410)-857-9030
or (410)-876-0333
Fax: (410)-876-1532
www.bprsurveying.com

Date: June 23, 2020 Scale: 1 inch = 30 feet

A licensed Maryland Surveyor either personally prepared the Survey as shown hereon, or was in responsible charge over its preparation and the surveying work reflected in it, in compliance with the Maryland Minimum Standards of Practice for Land Surveyors.



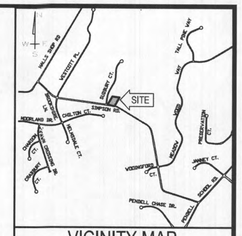


SEPTIC PROFILE

SCALE: H: 1"=30' V: 1"=3'

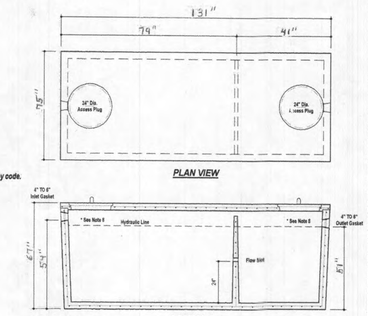
RED LINE 11/16/2021

* BED IN STONE OR Rock Dust - SHC & EFF. LINE TO Box.



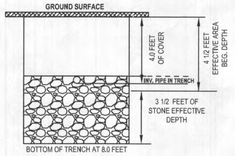
DESIGN DATA & GENERAL NOTES

[1] Concrete strength f'c=4,000 p.s.i. @ 28 days. Density = 150 pcf.
[2] Cement - Portland Type III per ASTM C 150-92.
[3] Admixtures & plasticizers per ASTM C 260-86 & C 494-92.
[4] Reinforcing per ASTM A185. Min. 1-1/2" cover.
[5] Top slab sealed with butyl rope mastic.
[6] 4" wall, base, & top thickness.
[7] Max 3-1/2' of cover
[?] Depending on use of tank, inlet & Outlet baffle may be required by code.



1,500 GAL. 2-COMPARTMENT SEPTIC TANK

TRENCH INFORMATION INITIAL SYSTEM				
Trench#	Trench Length	Inv. of Pipe at trench	Elevation bottom of trench	Existing Ground
1	62.5'	507.6	503.6	511.6'
2	62.5'	507.6	503.6	511.6'
3	62.5'	507.6	503.6	511.6'
4				
5				

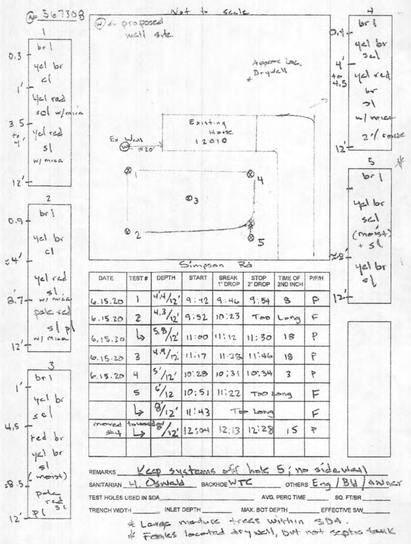


STANDARD TRENCH DETAIL
NOT TO SCALE

DATA BLOCK
1. Zoning Distrct :RR-DEO
2. Number of Lots: 1
3. Total area of Lot: 1.1800 Acres

NOTE:
PRIOR TO BUILDING PERMIT APPROVAL,
1. ABANDON OLD SEPTIC SYSTEM
2. INSTALL NEW SEPTIC SYSTEM AND APPROVE THE SEPTIC PERMIT.

Approved Septic System Plan
Howard County Health Department
Hank Oswald 9/1/21
Signature Date



DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2ND INCH	P/F/N
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6.15.20	6	5'8½'	11:00	11:12	11:30	18	P
6.15.20	3	4'5½'	11:17	11:28	11:46	18	P
6.18.20	4	5'½'	10:28	10:31	10:34	3	P
	5	5'½'	10:51	11:22	Too Long		F
	6	8'½'	11:43	Too Long			F
removed from #4	6	8'½'	12:09	12:13	12:28	15	P

REMARKS: Keep systems off hole 5; no sidewall
SANITARIAN: H. Oswald BACKHOE: WTE OTHERS: Eng / Bill / Contract
TEST HOLES USED IN SOA: AVG. PERC TIME: SQ. FT/BR:
TRENCH WIDTH: INLET DEPTH: MAX. BOT DEPTH: EFFECTIVE SW:
* Large mature trees within 30'.
* Fences located at yard, but not septic tank

A3 67308

Howard County Health Department

Bureau of Environmental Health
6820 Stanford Boulevard, Columbia, MD 21045
Main: 410-313-2640 | Fax: 410-313-2648
TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org
Facebook: www.facebook.com/hocohealth
Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

SEWAGE DISPOSAL SYSTEM SPECIFICATIONS WORKSHEET

Address: 12010 Simpson Road
Subdivision: _____ Lot: _____

Initial system: Application rate: 0.6 Effective area beginning depth: 4.5 Bottom maximum depth: 8' (hole #2)
1st Replacement: Application rate: 0.6 Effective area beginning depth: 4.5 Bottom maximum depth: 8' (#3)
2nd Replacement: Application rate: 0.6 Effective area beginning depth: 4.5 Bottom maximum depth: 8' (#4)
Design Flow = 150 gallons per lay per bedroom: 0.6 8' (#5A)
Design flow ÷ application rate = square footage of drainfield required
Linear length of trench required= drainfield square footage x sidewall reduction percentage ÷ trench width

Sidewall reduction credit formula:
$\frac{W-2}{W+1+2D} \times 100 =$ Percent of length of standard trench where W=trench width and D= depth between effective area beginning depth and trench bottom.

Standard design requirements:
- All trenches must be equal length unless low pressure dosed
- All trenches must be on contour
- Minimum trench spacing: 10' for all trenches utilizing sidewall reduction credit. Additional spacing may be necessary for any trench using over 3.5' of effective sidewall. In those cases, the spacing formula is 2D +W up to a maximum spacing of 18'.
- Minimum trench spacing for trenches with no sidewall credit (bottom area only) is 6' for a 2' wide trench and 9' for a 3' wide trench (spacing is measured edge to edge)
- Maximum trench length is 100'
- Maximum pipe depth is 8'

Additional requirements:
*BAT & LPD Required
*Keep systems away from hole 5

Approved: Hank Oswald Date: 6/18/20 (7.28.20 - modified to include hole #5A) HO.

JW 8/4/14

5 BEDROOM DESIGN

Deep Trench With 4ft. of Stone

Design flow - 150 Gal./Br.
5br. x 150 Gal. = 750 Gal./ Day = Design Flow (DF)

Application Rate of 0.6 Gal. per Day/ Square Feet

DF ÷ AR = Square Feet of Requred Trench
750 Gal./ Day ÷ 0.6 Gal. per Day/ Square Feet = **1,250 SF of Required Trench**

Length of Trench (Width Adjustment)
Square Feet ÷ Width of Trench
1,250 SF ÷ 3ft = **416.7 SF**

Sidewall Reduction Credit
$\frac{W+2}{W+1+2D} \times 100\% = \frac{3FT.+2}{3FT.+1+2\,(3.5)} \times 100\% = \frac{5}{11} \times 100\% = 0.45 \times 100\% =$ **45%**

W = Trench Width
D = Depth

Length of Trench (Depth Adjustment)
Square Feet of Trench Required (after length adjustment) X Sidewall Reduction Credit
416.7 SF X 0.45 = **187.5 FT. Length of Trench Required**

Trench Design Per System
Length of Required Trench ÷ # of Trenchs per System
187.5 FT. ÷ 3 trenches per system = **62.5 FT** Length of Trench (Each System)

Requires 3 systems

Minimum Spacing
2 x Effective Depth + Width of Trench
2 x 3.5FT + 3FT = **10FT (Between Trenchs)**

GENERAL NOTES

Current Title Reference
Owner - Maria Van Buren
Deed reference - Liber 19000 Folio 323
Date - October 31, 2019
Grantor - Eva E. Bryan

1. ☐ This area designates a private sewage area as required by the Maryland Department of the Environment for individual sewage disposal. For lots created prior to March 1972 it provides at least enough area to accommodate an Initial and two replacement septic systems as required by the Howard County Health Department. Improvements of any nature in this area are restricted until public sewerage is available. This area shall become null and void upon connection to a public sewerage system. The county Health Officer shall have the authority to grant adjustments to the private sewage area. Recordation of a modified sewage area shall not be necessary.
2. The lot shown herein complies with the minimum ownership, width, and lot area as required by the Maryland Department of the Environment.
3. Existing wells, septic systems, and sewage disposal areas within 100' of the property and those wells within 200' down gradient of existing or proposed septic systems or sewage disposal areas have been shown.
4. Topography shown is at two-foot contour intervals (one-foot intervals are required for mound systems and systems with pipe depth less than two feet) and has been field verified or field run.
5. Any changes to a private sewage area shall require a revised perc certification plan.
6. New well must be drilled prior to building permit approval by the Health Department.
7. Existing well must be properly abandoned with documentation sent to the Health Department prior to building permit or septic permit issuance.
8. The Maryland Department of the Environment has reviewed the existing well and proposed sewage disposal area locations illustrated on this plan as recommended by Howard County Health Department and has granted a variance to allow the location of the existing well on 11978 Simpson Road to be down gradient of the proposed sewage disposal area on 12010 Simpson Road, pursuant to the following condition:
   a.) Future replacement systems will be required to have a BAT unit and LPD design.

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

_____ DATE: _____
HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT

I CERTIFY THAT THE INFROMATION SHOWN HEREON IS BASED ON FIELD WORK PREFORMED BY ME OR UNDER MY DIRECT SUPERVISION, AND IS CORRECT, TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: _____ DATE: _____

DATE	REVISIONS	BY
08/16/2021	REVISE PER HEALTH DEPT. COMMENTS	BSJ

LEGEND

- Denotes sewage disposal areas
- Denotes Proposed Well
- Denotes Existing Well
- Denotes Percolation Test Passed
- Denotes Percolation Test Failed
- SDW Denotes Septic Dry Well

OWNER / DEVELOPER
Maria Van Buren
12010 Simpson Road
Clarksville, MD 21029-1722

ON-SITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN
12010 SIMPSON RD

MARIA VAN BUREN
TAX ACCOUNT NO. 322832
5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP - 41 GRID - 1 PARCEL - 333

DATE	REVISIONS	BY
10-27-20	REVISE PER HEALTH DEPT. COMMENTS	BD
11-11-20	REVISE PER HEALTH DEPT. COMMENTS	BD
03-25-21	REVISE PER HEALTH DEPT. COMMENTS	BSJ
05-04-21	REVISE PER HEALTH DEPT. COMMENTS	BSJ

Surveyed By	BPR
Computed By	BPR
Drawn By	BD
Checked By	RLB
Drawing No.	19-099-000

BPR INC
SURVEYORS - LAND PLANNERS
150 Airport Drive
Suite 4
Westminster, Maryland 21157
Phone: (410)-857-9030
or (410)-876-0333
Fax: (410)-876-1532
www.bprsurveying.com

Date: September 14, 2020 Scale: 1" = 30' Sheet 1 of 1

A licensed Maryland Surveyor either personally prepared the Survey as shown hereon, or was in responsible charge over its preparation and the surveying work reflected in it, in compliance with chapter 09.13.06.12 of the Maryland Minimum Standards of Practice for Land Surveyors.