

Bureau of Environmental Health
 8930 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

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

RECEIPT DATE: 07/26/2021 **ONSITE SEWAGE DISPOSAL SYSTEM** P 569622

APPROVAL DATE: 3/16/22 **PERMIT: CONSTRUCTION** A _____

PROPERTY ADDRESS: 1433 Underwood Road, Sykesville, MD 21784

SUBDIVISION: Rizk Property LOT: 4 TAX ID: 03-601464

CONTRACTOR: Sam's Creek EMAIL: Sams.Creek@aol.com

CONTRACTOR ADDRESS: 2810 Sams Creek Road, New Windsor, MD 21776 PHONE: (410) 821 - 4932

PROPERTY OWNER: Mayer, Andrey; Scarfo, Sarah EMAIL: _____

OWNER ADDRESS: 2239 Derussy Hills, San Antonio, MD 78253 PHONE: _____

SEPTIC TANK SIZE (GALLONS): 2000 TANK MANUFACTURER: Babylon or Equivalent

PUMP MODEL: Zoeller Model 50 S PUMP SIZE: 0.3 HP PUMP TANK CAPACITY: 1500

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 5 APPLICATION RATE: 0.8

TRENCHES:	LINEAR FEET REQUIRED: <u>141'</u>	INLET DEPTH: <u>4'</u>
	TRENCH WIDTH: <u>3'</u>	MAXIMUM BOTTOM DEPTH: <u>8'</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10'</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>4.5'</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:		

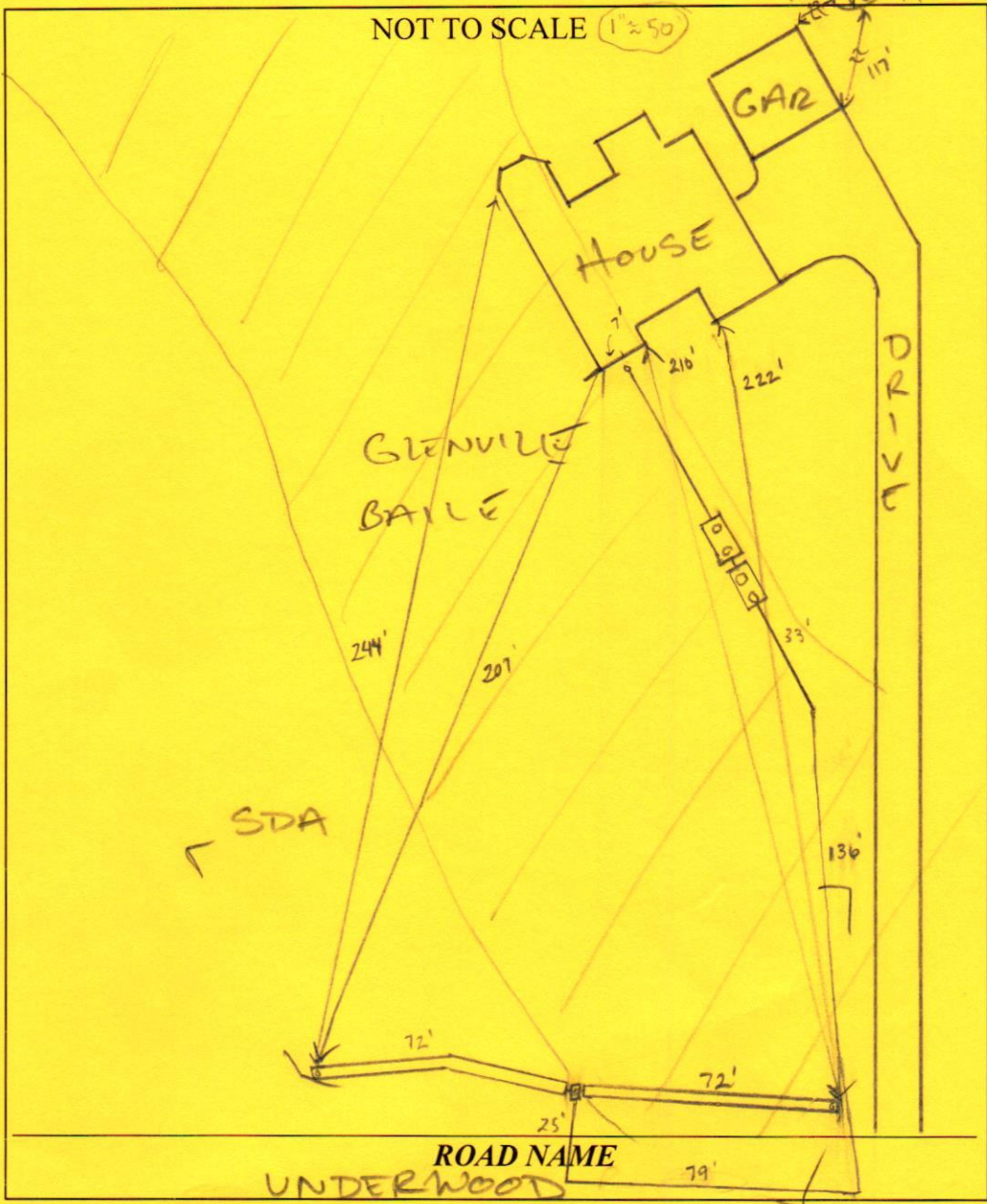
ISSUED BY: Cabahug 001997 ISSUE DATE: 08/02/2021 EXPIRATION DATE: 08/02/2022

- NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION
- NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING
- NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.
- NOTE: WATERTIGHT TANKS REQUIRED
- NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADIENT FROM ANY WATER WELL
- NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS
- NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM
- ELECTRICAL PERMIT ISSUED E ~~21004674~~ 21004674
- NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA

**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.
 CALL 410-313-1771 TO SCHEDULE INSPECTIONS.**

Ho-17-0317

NOT TO SCALE 1" = 50'



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
4'	4'	8'
NUMBER OF TRENCHES	2	
TOTAL LENGTH	144'	
ABSORPTION AREA	432 sq ft + sidewalk	
DISTRIBUTION BOX LEVEL	Speedy	
DISTRIBUTION BOX BAFFLE	Cement	
DISTRIBUTION BOX PORT	PVC	

SEPTIC TANK DATA	
SEPTIC TANK 1 LEVEL	yes
MANUFACTURER	Babylon
CAPACITY	2000 GAL
SEAM LOC	top
TANK LID DEPTH	1.5'
BAFFLES	Inlet + outlet
BAFFLE FILTER	-
MANHOLE LOC	inlet + outlet
6" PORT LOC	-
WATERTIGHT TEST	-
SLOTTED	yes
DATE ON LID	10-14-21
TB PUMP/SEPTIC TANK LEVEL	yes
MANUFACTURER	Babylon
CAPACITY	1500 GAL
SEAM LOC	top
TANK LID DEPTH	3'
BAFFLES	-
BAFFLE FILTER	-
MANHOLE LOC	-
6" PORT LOC	-
WATERTIGHT TEST	-
SLOTTED	no
DATE ON LID	10-29-21

PRE-CONSTRUCTION:

11/30/21 2x71' trenches staked on contour. Surveyors staked out Trench 1A and Trench 2A, this was approved to use up upper part of SDA. (S)

INSTALLATION:

12/1/21 Tanks set, ST constructed. 1x72' trench complete. Reinsp for baffles and SHC. (S) 12/2/21 Second trench complete. D-box set and leveled. FM partially constructed. (S) 12/3/21 FM complete. Reinsp for SHC. (S)

03/14/2022 SHC OK. PUMP/ALARM WORK; ALARM ON BASEMENT OUTLET. D BOX HAS SPEED LEVELS - PUMP IS TOO MUCH AND SPEED LEVELS SHOULD NOT BE IN BOX. CLOSED GATE VALVE BY ~25%.

Pump installed was a Goulds 1/3 HP.

FINAL INSPECTOR K. Wolf DATE OF APPROVAL 3/16/22
 for J. Cabeling

Sams Creek

*2810 Sams Creek Road
New Windsor, MD 21776*

Ph # (443) 821-4932

Email: Sams.creek@aol.com

To whom it may concern,

Enclosed is a copy of a wall check for lot 4 at Rizk property. Also
Attached is payment for permit with check # 1202.

Please do not hesitate to call me with any questions or concerns.

Thanks,

Jessica

Oswald, Hank

From: Oswald, Hank
Sent: Monday, January 4, 2021 10:58 AM
To: Tony Fertitta
Subject: Fw: OSDS Plan_1433 Underwood Road_Lot 4

Tony:

#5 Correction. No sleeve required on septic line if it's not going under the driveway, but still show cross section detail.

Thanks,

Hank

From: Oswald, Hank
Sent: Monday, January 4, 2021 10:29 AM
To: Tony Fertitta <tonyf@fcc-eng.com>
Subject: OSDS Plan_1433 Underwood Road_Lot 4

Hi Tony:

The following comments pertain to the review of the OSDS Plan for 1433 Underwood Road (Lot 4):

1. Correct elevation #'s on "Septic Profile" starting at 569 ^. Adjust elevation #'s on plan as needed.
2. Raise up tanks but no shallower than 6 inches from grade while maintaining 2% fall and raise up d-box and trench inverts but no shallower than 18 inches from grade. Adjust, "Initial Trench Detail" as needed.
3. Relocate d-box to top center of sewage disposal area. Adjust calculations as needed.
4. Show emergency storage calculation for 1 day design flow.
5. Show cross section detail of septic line at driveway culvert on Septic Profile. Show sleeve on septic line.
6. The floor plan shows 5 BRs and an unfinished basement with a F.B.R.I. The basement has the potential for one or more bedrooms upon conversion to finished living space. It is recommended that the septic system is sized for one additional bedroom (if possible).

Should you have any questions or concerns, please don't hesitate to contact me.

Thanks,

Hank

Hank Oswald
Howard County Health Department
Well and Septic Program

Oswald, Hank

From: Oswald, Hank
Sent: Tuesday, January 12, 2021 3:27 PM
To: Tony Fertitta
Subject: OSDS Plan_1433 Underwood Road_Rizk Property Lot 4

Hi Tony:

Where did you find the friction loss #'s for the fittings used on this plan? As I was saying to Stephanie the other day, we would like engineers to use the charts out of the sand mound manual. If you want to use a different chart(s), then you'll need to specify a pipe manufacturer on your design and those #'s should come from that manufacturer.

Thanks,

Hank

Hank Oswald, L.E.H.S.
Howard County Health Department
Well & Septic Program
410.313.1786

GENERAL NOTES:

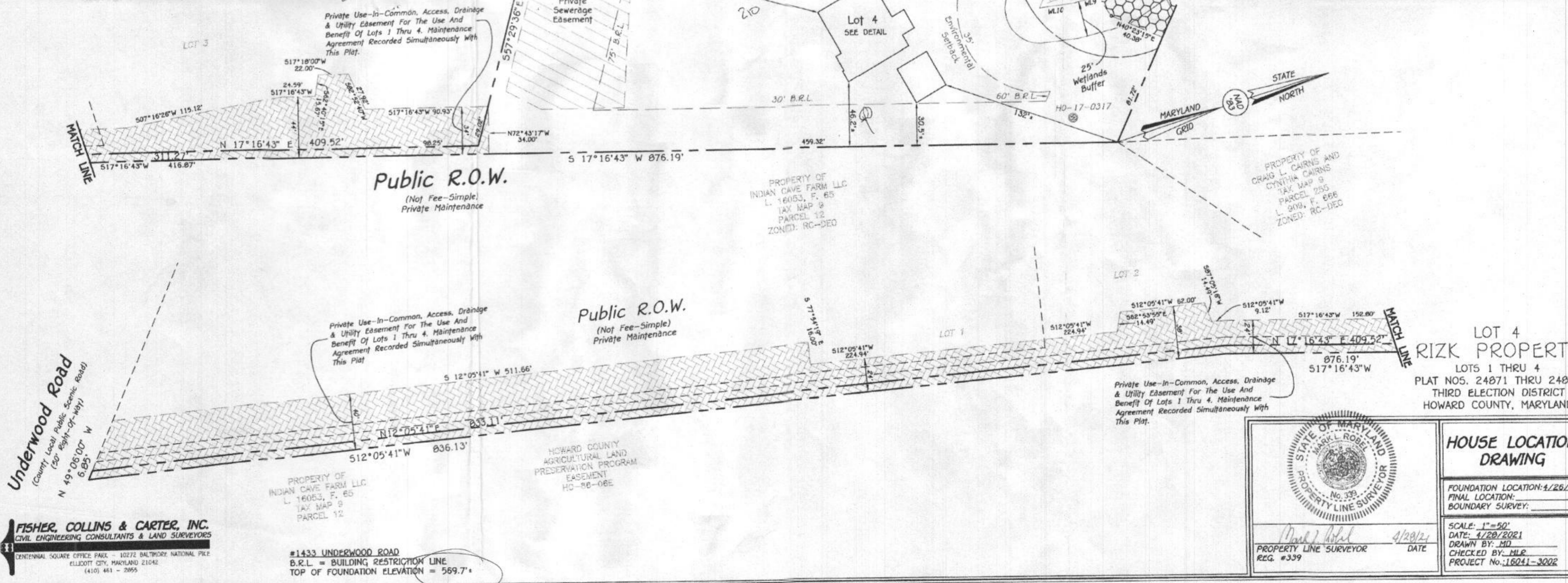
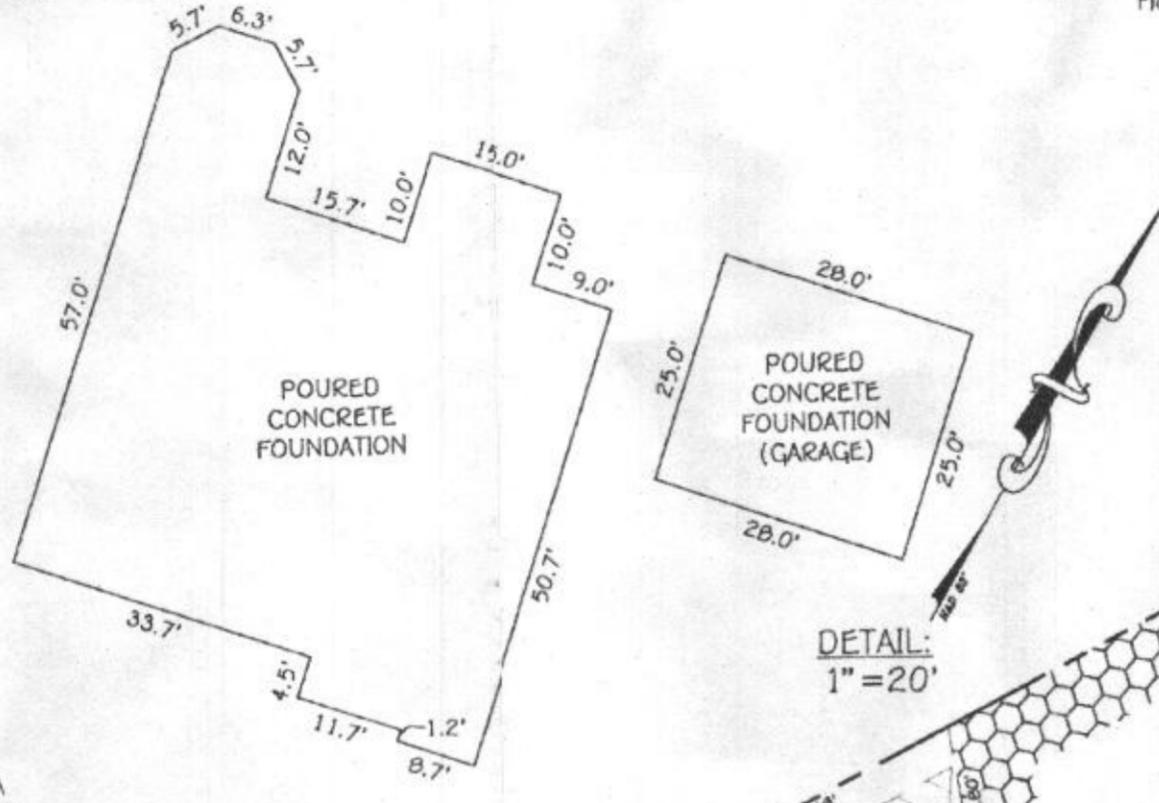
- THIS LOCATION DRAWING IS PREPARED FOR THE BENEFIT OF THE CLIENT SIGNING THE HOUSE LOCATION SURVEY APPROVAL FORM INsofar AS IT IS REQUIRED BY A LENDER OR TITLE INSURANCE COMPANY OR ITS AGENTS IN CONNECTION WITH THE CONTEMPLATED TRANSFER, FINANCING OR REFINANCING OF THE PROPERTY SHOWN HEREON. UNLESS INDICATED AS BEING A BOUNDARY SURVEY, THIS LOCATION DRAWING IS NOT INTENDED FOR USE IN THE ESTABLISHMENT OF PROPERTY LINES AND IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATIONS OF FENCES, GARAGES, BUILDINGS OR OTHER EXISTING OR FUTURE IMPROVEMENTS. AS A RESULT, THIS LOCATION DRAWING DOES NOT PROVIDE FOR ACCURATE IDENTIFICATION OF PROPERTY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR SECURING FINANCING FOR RE-FINANCING.
- SUBJECT PROPERTY IS SHOWN IN ZONE X ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP OF HOWARD COUNTY, MARYLAND, COMMUNITY PANEL No. 24027C0055D, EFFECTIVE NOV. 6, 2013.
- THE OFFSETS FROM BUILDING LINE TO PROPERTY LINE AS SHOWN ON THE PLAT HEREON ARE TO AN ACCURACY OF PLUS OR MINUS 1.0'.
- NO TITLE REPORT FURNISHED. SUBJECT TO ALL EASEMENTS, RIGHTS OF WAY AND CONDITIONS OF RECORD.
- THE EXISTING WELL(S) SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-17-0317 HAS BEEN FIELD LOCATED BY FISHER, COLLINS AND CARTER, INC. PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.
- PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 339, EXPIRATION DATE 10/04/2022.
- BUILDING PERMIT #B-20004288

Legend

- Private Use-In-Common, Access, Drainage & Utility Easement For The Use And Benefit Of Lots 1 Thru 4
- Public Forest Conservation Easement (Retention)
- Public 100 Year Floodplain, Drainage & Utility Easement
- Limits Of Wetlands
- Denotes Public 100 Year Floodplain Water Surface Elevation

08/02/2021
CONFIRM
HOUSE DISTANCES

Limit Of Wetlands Line Table Chart			Limit Of Wetlands Line Table Chart		
LINE	BEARING	LENGTH	LINE	BEARING	LENGTH
WL1	N84°29'17"E	35.91'	WL14	S22°12'09"W	18.70'
WL2	N41°02'45"E	31.47'	WL15	S42°56'00"W	12.16'
WL3	N46°34'59"E	78.01'	WL16	N69°26'54"W	20.98'
WL4	N03°16'20"W	27.87'	WL17	N56°59'25"W	27.12'
WL5	S48°04'42"E	229.83'	WL18	S65°24'24"W	19.74'
WL6	S79°09'31"W	20.50'	WL19	S85°34'37"W	23.29'
WL7	S19°30'56"E	24.20'	WL20	S91°38'17"W	27.12'
WL8	S15°22'44"E	32.21'	WL21	N13°43'11"W	23.62'
WL9	S05°14'34"W	31.10'	WL22	N14°16'19"E	26.95'
WL10	S10°59'46"W	25.14'	WL23	S89°51'17"W	35.24'
WL11	N48°47'45"W	30.04'	WL24	N14°54'19"W	10.46'
WL12	N65°07'32"W	38.09'	WL25	N34°30'37"W	41.11'
WL13	S56°19'47"W	31.17'	WL26	N09°32'14"W	78.34'



HOUSE LOCATION DRAWING

FOUNDATION LOCATION: 4/26/21
FINAL LOCATION:
BOUNDARY SURVEY:

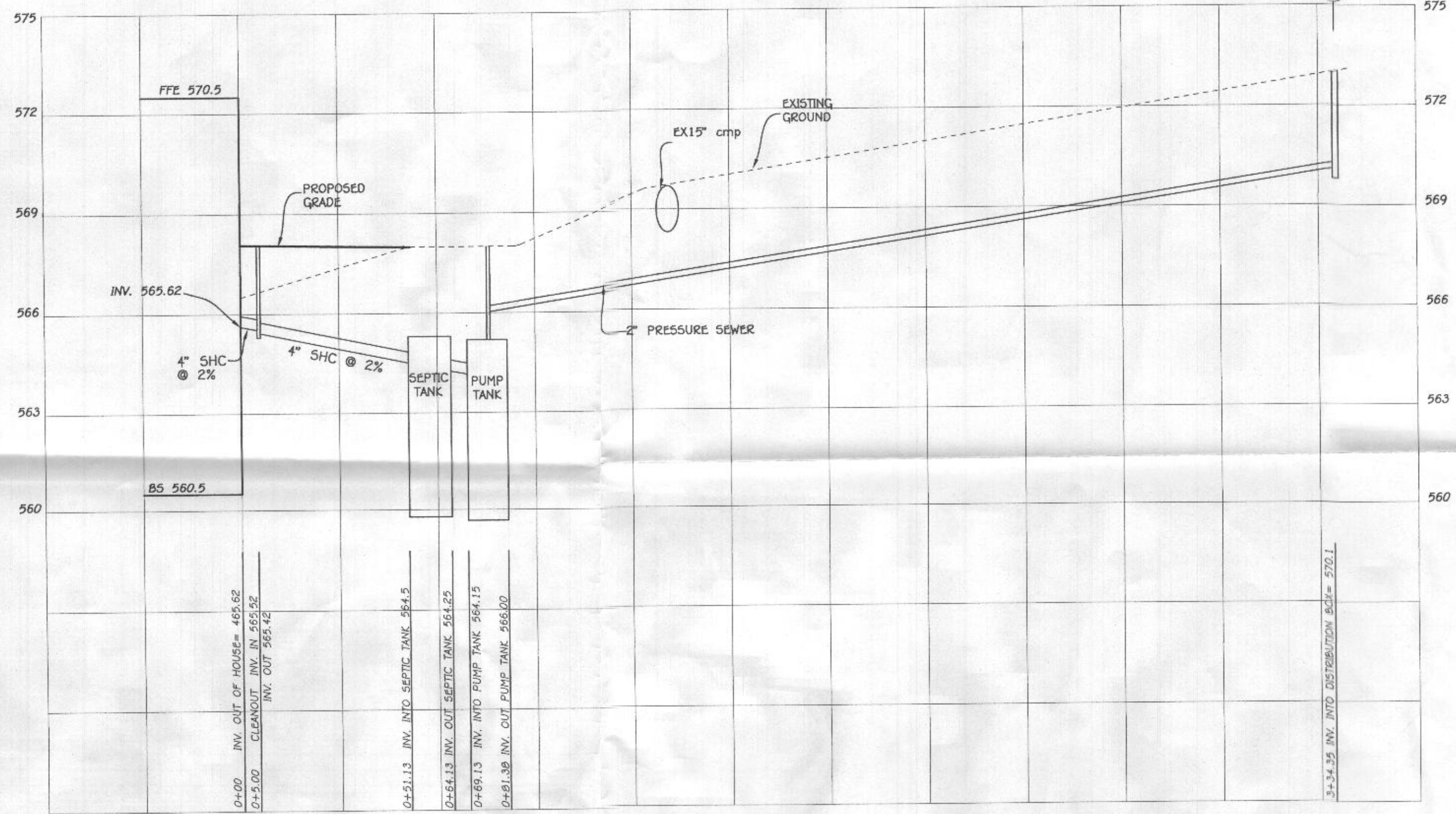
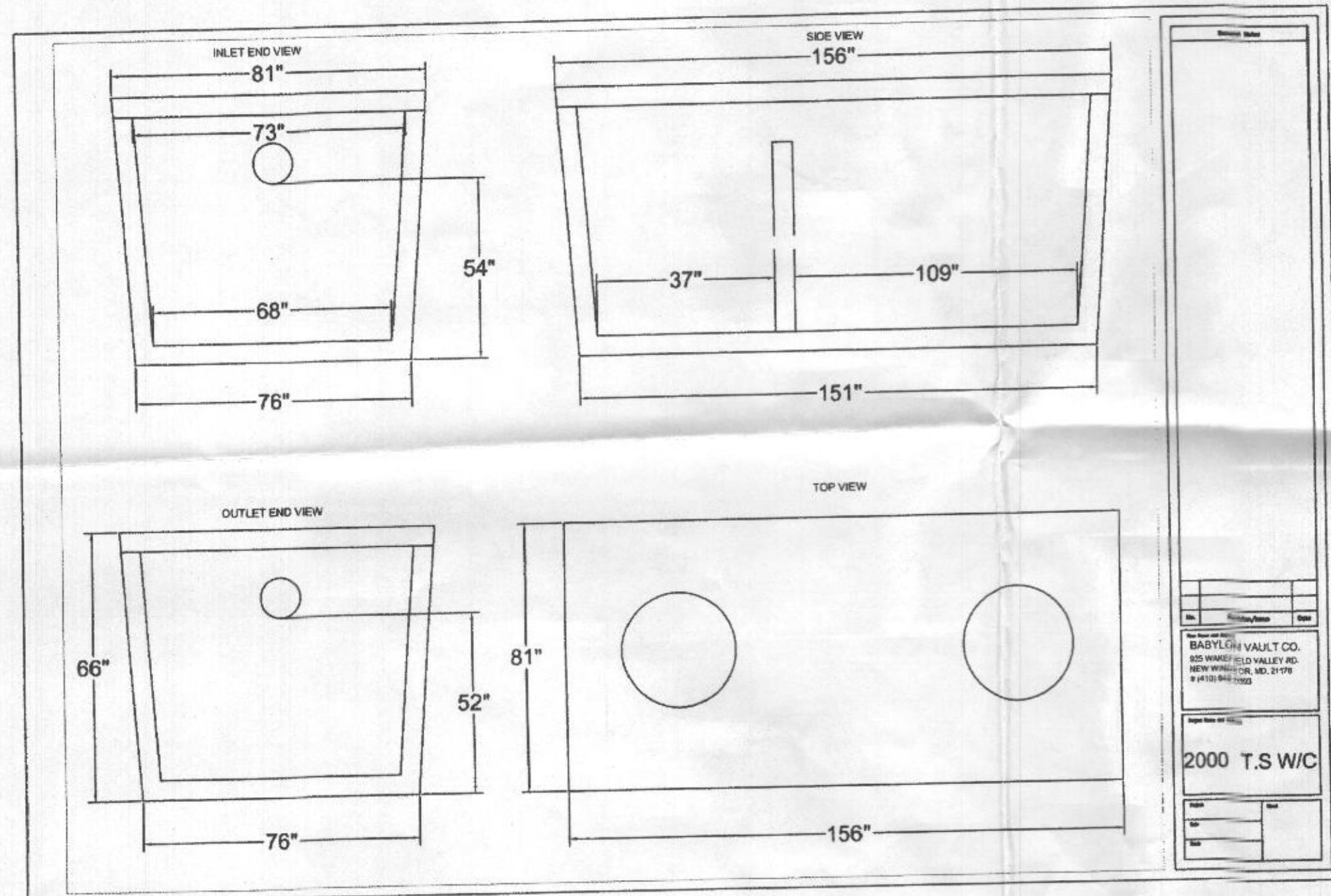
SCALE: 1"=50'
DATE: 4/28/2021
DRAWN BY: MD
CHECKED BY: MLR
PROJECT No.: 16041-3002

PROPERTY LINE SURVEYOR
REQ. #339

DATE
4/28/21

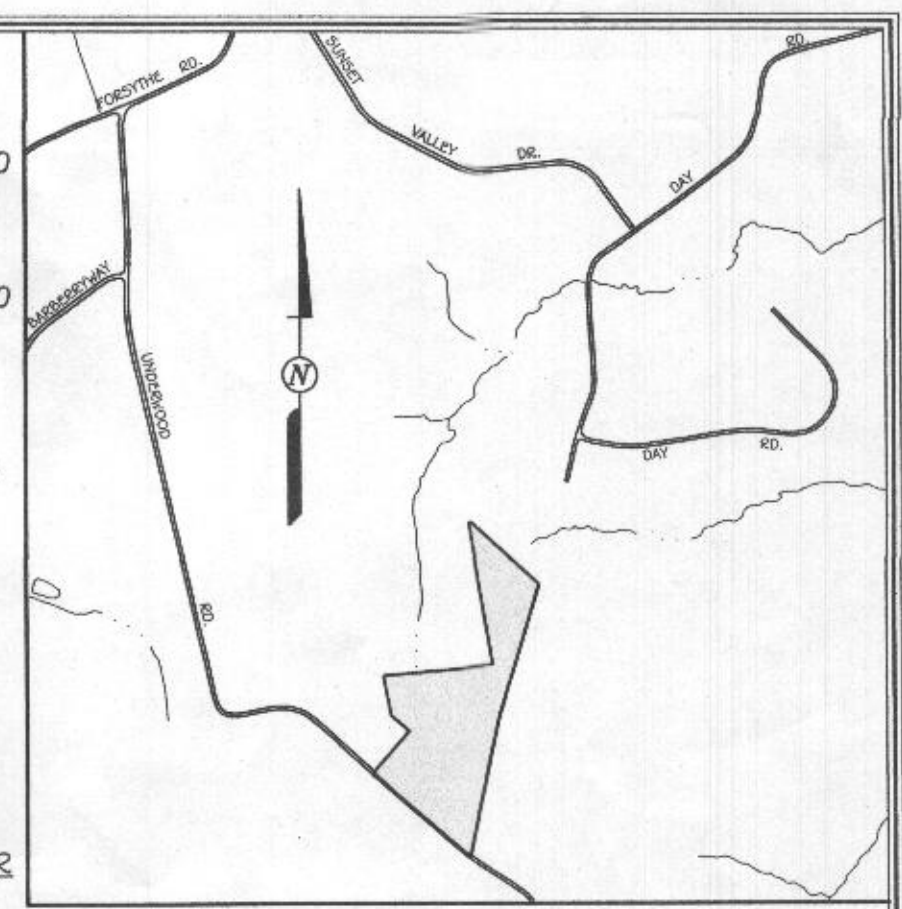
#1433 UNDERWOOD ROAD
B.R.L. = BUILDING RESTRICTION LINE
TOP OF FOUNDATION ELEVATION = 569.7'

1. ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
2. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
4. THE WELL, HO-17-0317, HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
5. ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.



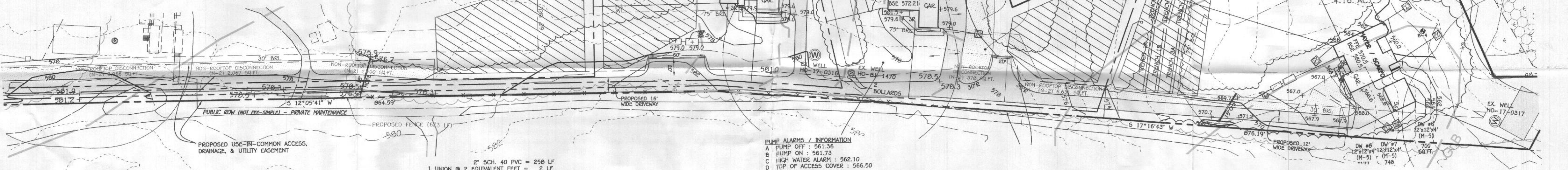
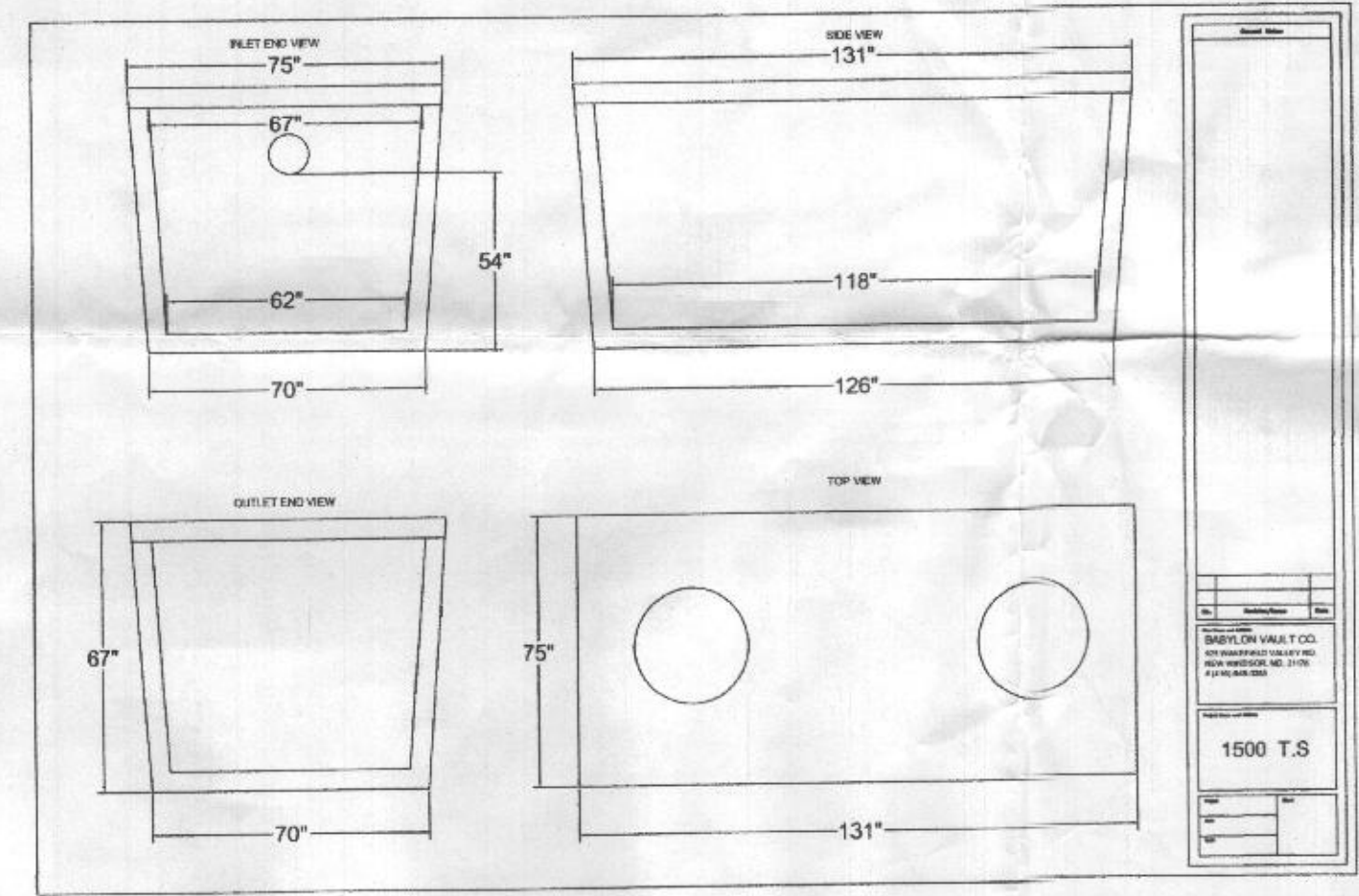
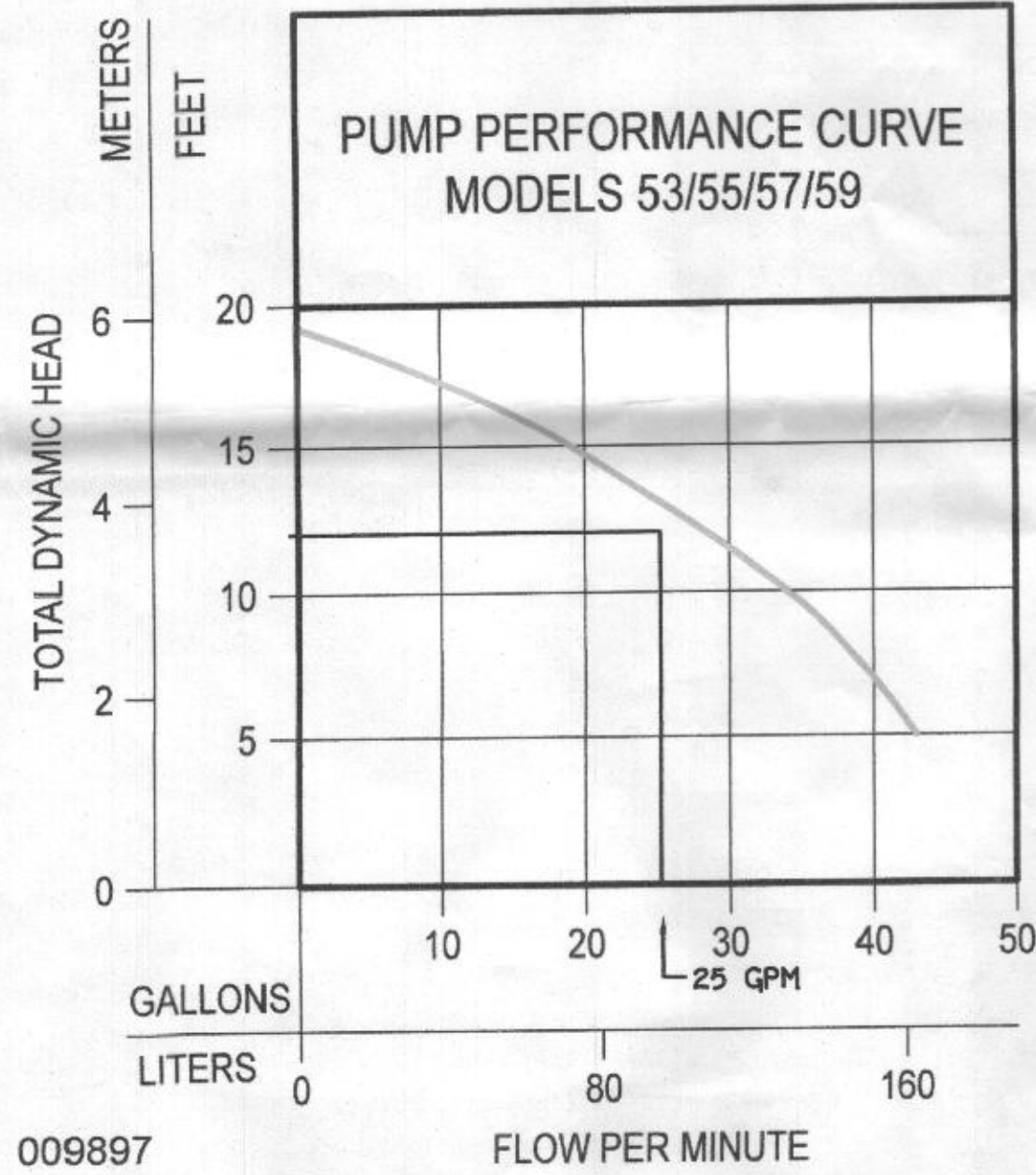
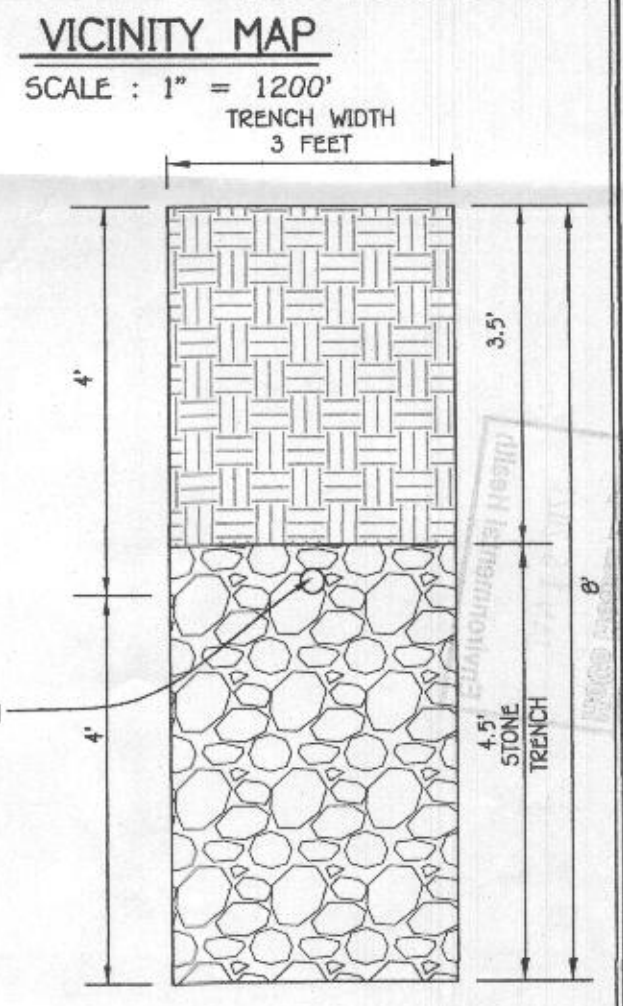
FFE 570.5
BSE 560.5

INV. OUT OF HOUSE = 565.62
PROP. GROUND AT CLEANOUT # 1 = 567.0
INV. INTO CLEANOUT = 565.52
EX. GROUND AT SEPTIC TANK = 568.0
PROP. GRADE ABOVE SEPTIC TANK = 568.0
TOP OF SEPTIC TANK = 565.5
INV. INTO SEPTIC TANK = 564.5
INV. OUT OF SEPTIC TANK = 564.25
EX. GROUND AT PUMP TANK = 568.0
PROP. GRADE ABOVE PUMP TANK = 566.5
TOP OF PUMP TANK = 565.19
INV. INTO PUMP TANK = 564.19
INV. OUT OF PUMP TANK = 566.00
EX. GROUND AT DISTRIBUTION BOX = 573
INV. INTO DISTRIBUTION BOX = 570.1
INV. OUT OF DISTRIBUTION BOX = 570.0



INITIAL SYSTEM
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS

LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD
APPLICATION RATE = 0.8
EFFECTIVE SIDEWALL BEGINS AT 4.5 FEET
TRENCH DEPTH = 8 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 3.5 FEET
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 3.5)) = 0.45$
TRENCH LENGTH = 937.5 SF x 0.45 / 3 = 140.63 FEET
(USE 2 TRENCHES AT 70.31 LF.)
TRENCH SPACING = 2D+W = ((2x3.5) + 3) = 10' USE 10'

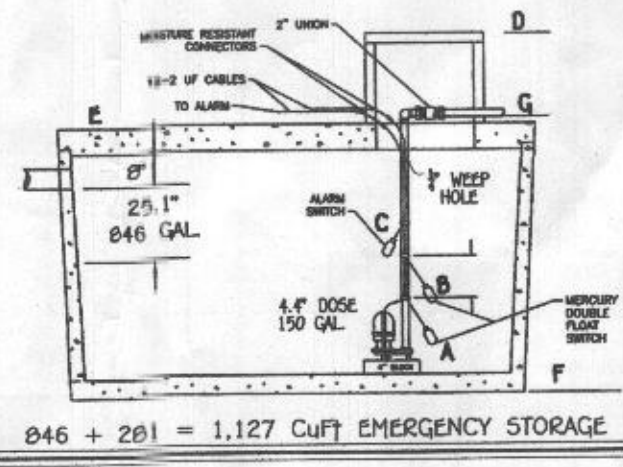


NOTE: SEPTIC SYSTEM ALARM WILL BE ON A CIRCUIT SEPARATE FROM ANY OTHER SEPTIC SYSTEM COMPONENTS OR ALARMS.

- PUMP ALARMS / INFORMATION**
- A PUMP OFF : 561.36
 - B PUMP ON : 561.73
 - C HIGH WATER ALARM : 562.10
 - D TOP OF ACCESS COVER : 566.50
 - E TOP OF TANK : 565.19
 - F BOTTOM OF TANK : 559.61
 - G DISCHARGE OUT OF TANK : 566.00
 - H INVERT INTO TANK : 564.19

DYNAMIC HEAD
287 LF X 1.10 FT PER 100 LF OF 2" PIPE = 3.16 FT OF FRICTION HEAD
VERTICAL FROM PUMP OFF TO HIGH POINT IN PUMP CHAMBER = 4.64 FT OF FRICTION HEAD
HIGH POINT IN PUMP CHAMBER TO HIGHEST ELEV OF SYSTEM = 4.10 FT (PUMP OUT IS THE HIGHEST POINT)
TOTAL DYNAMIC HEAD = 11.9 FT

1/6 DESIGN FLOW (750/6=125)
USE 157.5 GALLON DOSE (125 GALLON MINIMUM)
(RUN TIME = 5 MIN (25 GPM X 5 = 150 GALLON DOSE))
PUMP NEEDS TO HANDLE 25 GPM AT 11.9 FT OF HEAD
USE 0.3 HP (ZOELLER MODEL 50 SERIES PUMP)



1ST REPLACEMENT SYSTEM
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS

LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD
APPLICATION RATE = 0.8
EFFECTIVE SIDEWALL BEGINS AT 4.5 FEET
TRENCH DEPTH = 8 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 3.5 FEET
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 3.5)) = 0.45$
TRENCH LENGTH = 937.5 SF x 0.45 / 3 = 140.63 FEET
(USE 2 TRENCHES AT 70.31 LF.)
TRENCH SPACING = 2D+W = ((2x3.5) + 3) = 10' USE 10'

2ND REPLACEMENT SYSTEM
SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS

LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD
APPLICATION RATE = 0.8
EFFECTIVE SIDEWALL BEGINS AT 4.5 FEET
TRENCH DEPTH = 8 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 3.5 FEET
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 3.5)) = 0.45$
TRENCH LENGTH = 937.5 SF x 0.45 / 3 = 140.63 FEET
(USE 2 TRENCHES AT 70.31 LF.)
TRENCH SPACING = 2D+W = ((2x3.5) + 3) = 10' USE 10'



PROFESSIONAL CERTIFICATION
I 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. 20748, EXPIRATION DATE: 02/22/2019.

Signature Of Professional Engineer: *Stephen Litz*
DATE: 1/13/21

OWNER
CHARBEL RIZK
1445 UNDERWOOD ROAD
SYKESVILLE, MARYLAND 21784