

Menu Save Reset Cancel Help

Approval 1/31/23
MRE

Record Detail * (This section is required.)

Permit Type	Permit Number	Opened Date
Building/Residential/Misc/Porch	B23000254	01/26/2023
Description of Work		
SFD/ CONSTRUCT A 14' X 16' SCREENED IN PORCH WITH STEPS		

[check spelling](#)

Address * (This section is required.)

Search Reset Clear Get Parcel & Owner

Street #	Street Name	Street Type
14511	MACCLINTOCK	CT
Unit Type	Unit #	X Coordinate
-Select--		-77.02106
		Y Coordinate
		39.27924
City	State	Zip Code
GLENWOOD	MD	21738
	Primary	
	Yes	

Parcel * (This section is required.)

Search Reset Clear Get Address & Owner

GIS ID *	Parcel	Parcel Area	Land Value	Improved Value	Exemption Value	Plan Area
897561	129	1.01	220100	220100	0	RURAL
Legal Description						
LOT 21 BL A S 4 [] MACCLINTOCK CT [] WARFIELD ESTS						

[check spelling](#)

Block	Lot	Census Tract	Council Dist	Inspection Dist	Supervisor Dist	Map #	DAP Zone
A	21	605601	5				
Plan Area	State Tax Id	Subdivision Name					
	1404323254	WARFIELD ESTATES					
Section	Area	Tax Map					
		21					
Grid	Zoning District	ADC Map					
21-5	RR-DEO	4812-G6					
SDP No.	Final Plan No.	WP File No.					
Record Plat No.	WS Contract No.	FDP No.	Primary				
21 98			Yes				
Owner Occupied	Year Built	Historic District					
<input type="radio"/> Yes <input checked="" type="radio"/> No		<input type="radio"/> Yes <input checked="" type="radio"/> No					
Historic District Registry No.	Stat Area	Flood Plain					
	4-09	<input type="radio"/> Yes <input checked="" type="radio"/> No					
Building No							

Owner * (This section is required.)

Search Reset Clear

Name *		
Brooke Curley		
Address Line 1		
14511 Macclintock Court		
Address Line 2		
Address Line 3		
Mail City	Mail State	Mail Zip Code
Glenwood	MD	21738
Phone	Primary	
410-913-9787	Yes	

E-mail

Cell Number	Fax Number

Professionals (This section is not required.)

License # * 08010107535	Business Name SBC LANDSCAPING LLC		
License Type * MHIC Ind	First Name BRAD	Middle Name	Last Name CRIST
Primary Yes	Address Line 1 1704 CHATEAU CT		
	Address Line 2		
	City FALLSTON	State MD	ZIP Code 21047
	Phone 1 4439661177	Phone 2	Fax
	E-mail WENDY@SBCLANDSCAPING.COM		

Applicant (This section is not required.)

Search As Owner As Lic. Prof As Contact

Type * Applicant	First Name BRAD	MI	Last Name CRIST
Relationship Applicant	Full Name BRAD CRIST		
Primary Yes	Organization Name SBC LANDSCAPING LLC		
	Street Address 1704 CHATEAU CT		
	Address Line 2		
	City FALLSTON	State MD	Zip Code 21047
	Phone 4439661177	Cell	Fax
	E-mail * WENDY@SBCLANDSCAPING.COM		

Addtl Info

Est Construction Cost * 41000	Housing Units * 0	Number of Buildings * 0	Public Owned No
Construction Type --Select--			

PORCH INFORMATION

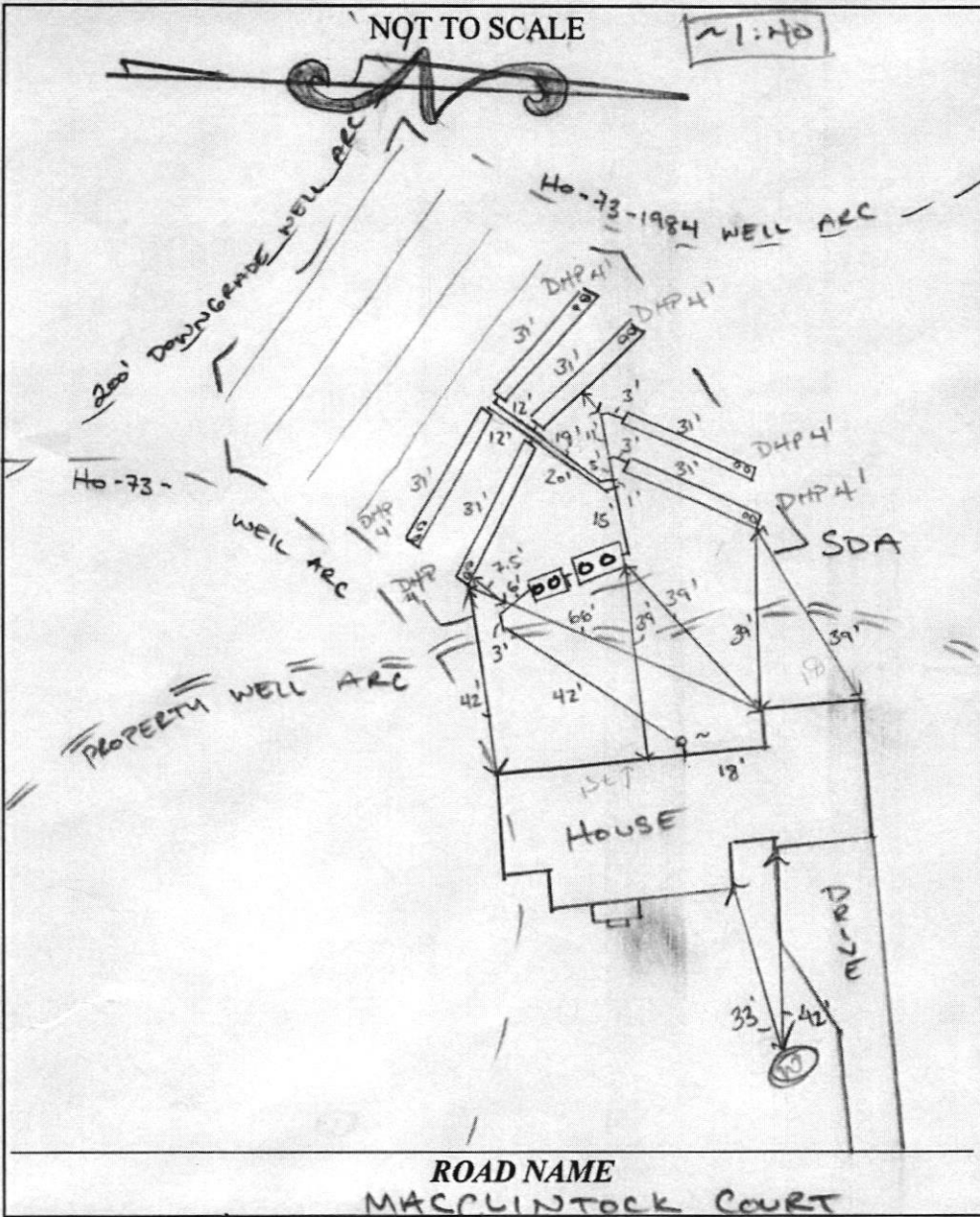
PORCH INFORMATION

Capital Project-No Fee * <input type="radio"/> Yes <input checked="" type="radio"/> No	Capital Project Number <input type="text"/>	Fee Exempt * <input type="radio"/> Yes <input checked="" type="radio"/> No	Roadside Tree Project Permit * <input type="radio"/> Yes <input checked="" type="radio"/> No	Roadside Tree Project Permit # <input type="text"/>
Existing Use * SFD	Type of Porch * Screened Porch	Type of Porch Foundation * New Deck	Total Square Footage * 224 SQFT	
Water Supply Private	Sewage Disposal Private	Expiration Date 7/30/2023		

PAYMENT INFORMATION

Check 1 <input type="text"/>	Payee 1 <input type="text"/>	Check 2 <input type="text"/>	Payee 2 <input type="text"/>	SAP Doc No <input type="text"/>	SAP Entered <input type="text"/>
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Submit Cancel



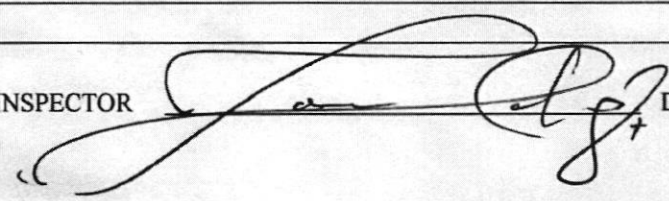
TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
3'	4'	8'
NUMBER OF TRENCHES	6	
TOTAL LENGTH	186 F	
ABSORPTION AREA	558 SF + 2.5' SIDE W/ML	
DISTRIBUTION BOX LEVEL	LPD	
DISTRIBUTION BOX BAFFLE	MANIFOLD	
DISTRIBUTION BOX PORT	-	

SEPTIC TANK DATA	
SEPTIC TANK 1 LEVEL	YES
MANUFACTURER	BAKWER
CAPACITY	600 600 GAL TMRP 600
SEAM LOC	TOP
TANK LID DEPTH	1-2'
BAFFLES	BAT
BAFFLE FILTER	BAT
MANHOLE LOC	
6" PORT LOC	=
WATERTIGHT TEST	=
SLOTTED	BAT
DATE ON LID	05/12/2021
PUMP/SEPTIC TANK LEVEL	YES
MANUFACTURER	BAKWER
CAPACITY	1500 GAL
SEAM LOC	TOP
TANK LID DEPTH	1-2'
BAFFLES	-
BAFFLE FILTER	-
MANHOLE LOC	FRONT/BACK
6" PORT LOC	=
WATERTIGHT TEST	=
SLOTTED	=
DATE ON LID	07/05/2021

NORWECO

PRE CONSTRUCTION:
 08/16/2021 REMOVE WOOD CHIPS AND REINSPECT CONTOUR FOR LPD TRENCH INSTALL. USE LAZER LEVEL FROM MANIFOLD REGION TO LEVEL 8' TRENCH BOTTOM. OK TO SET TANKS CONFIRMED LATERAL SPECS. Ⓟ

INSTALLATION: 08/27/2021 ST, SHC ~~TANK~~ D Box SET. TRENCHES INSTALLED. PUMP/ALARM DHP = 4" ALARM WORKS. *NEED TO INSTALL DIGITAL TRENCH OBS PORT. Ⓟ 09/21/2021 INSTALLED C/O @ ENDS OF TRENCHES Ⓟ

FINAL INSPECTOR  DATE OF APPROVAL 09/21/2021



SBC
OUTDOOR SERVICES

11119 Pulaski Highway
White Marsh, MD 21162
(410) 679-1683 Office
www.sbclandscaping.com
sbclandscaping@gmail.com

No.	Revision / Issue	Date
*	Initial Plan	5/19/2022
	Revision	12/30/2022

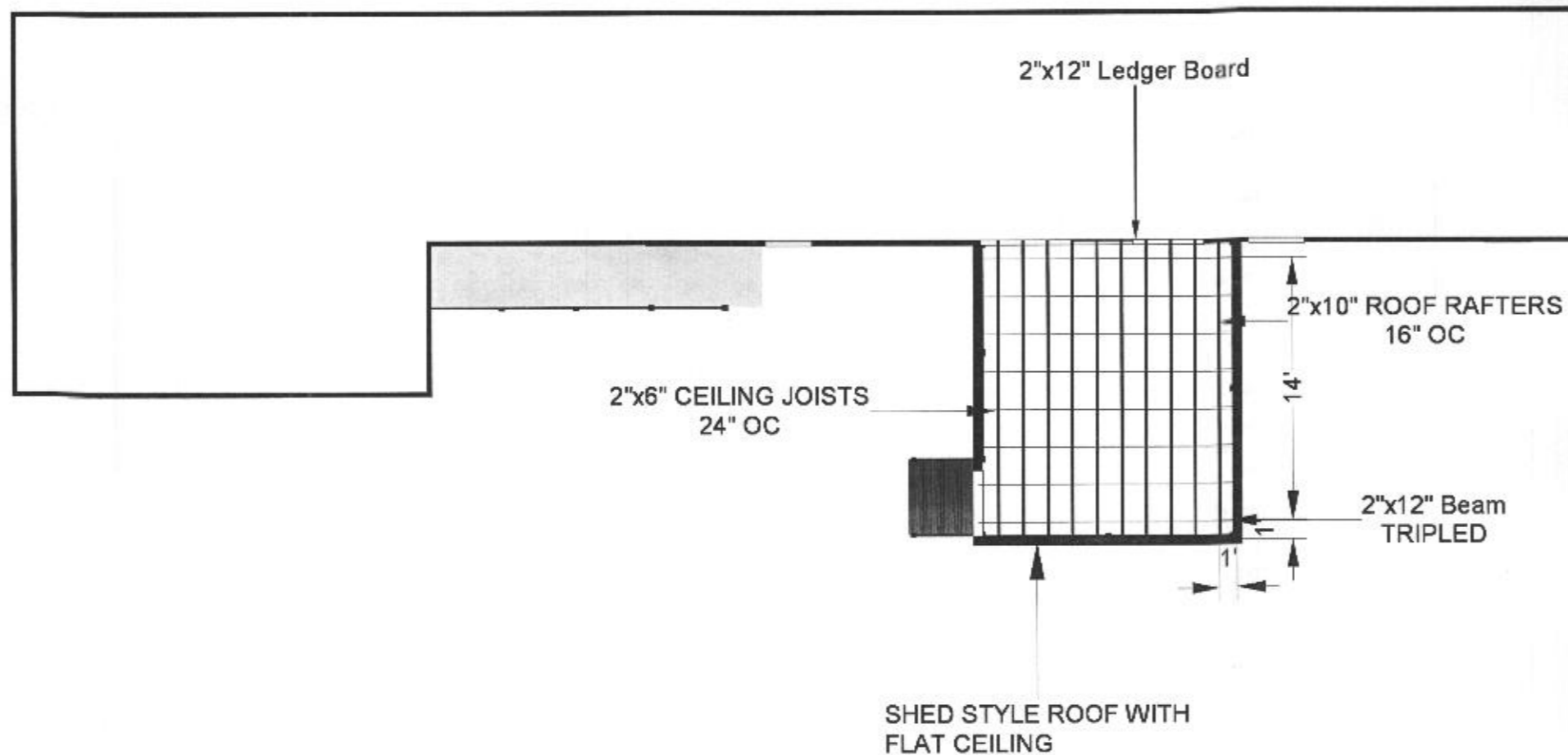
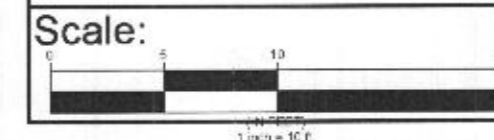
CURLEY RESIDENCE

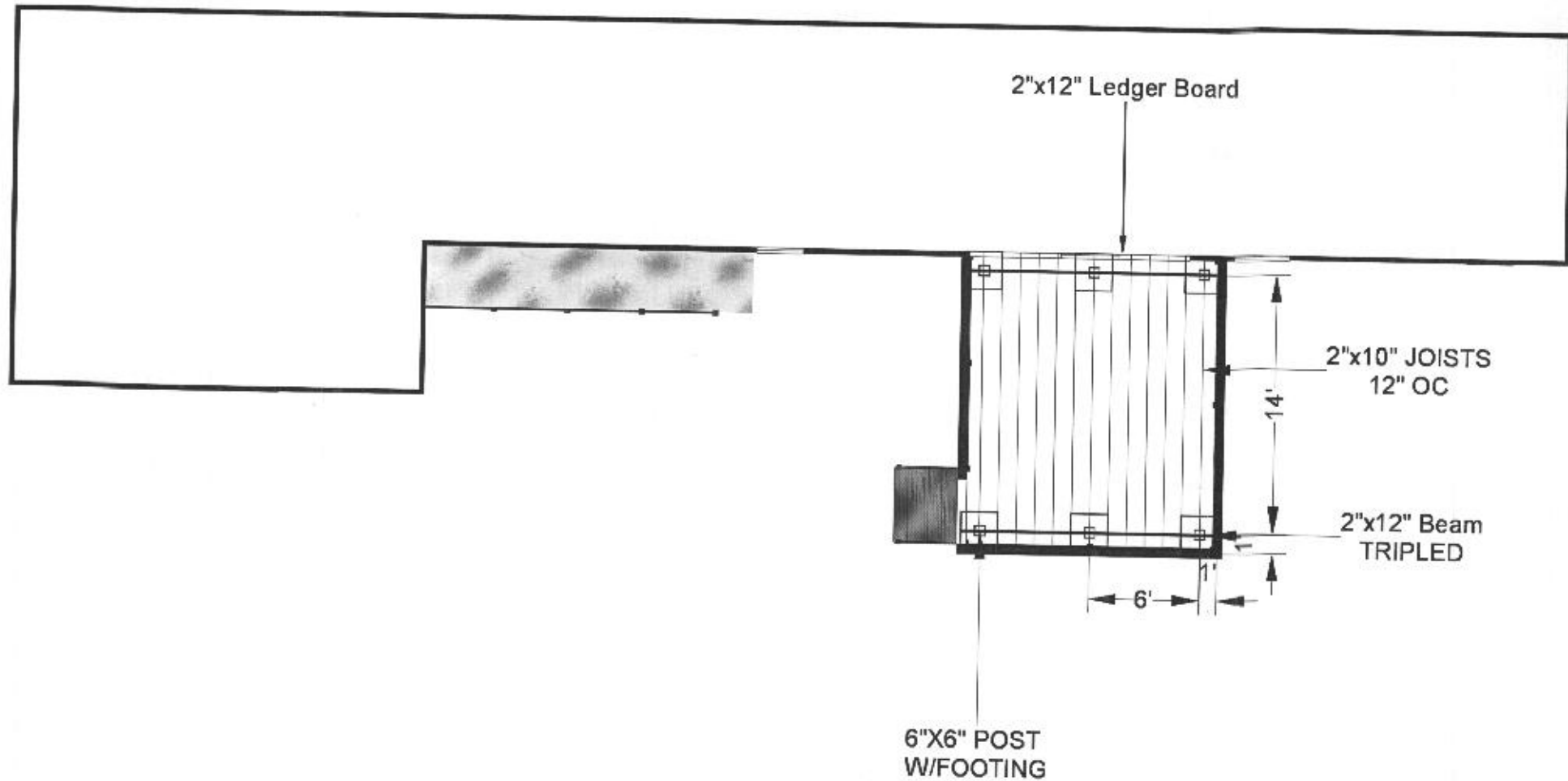
14511 MACCLINTOCK COURT
GLENWOOD, MD 21738
PHONE: (410) 913-9787
EMAIL: curley.patrick26@gmail.com

SCREENED IN DECK DESIGN

Drawn By:
BRAD VECERE

Date:
DECEMBER 30, 2022





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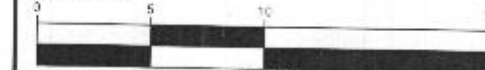
Drawn By:

BRAD VECERE

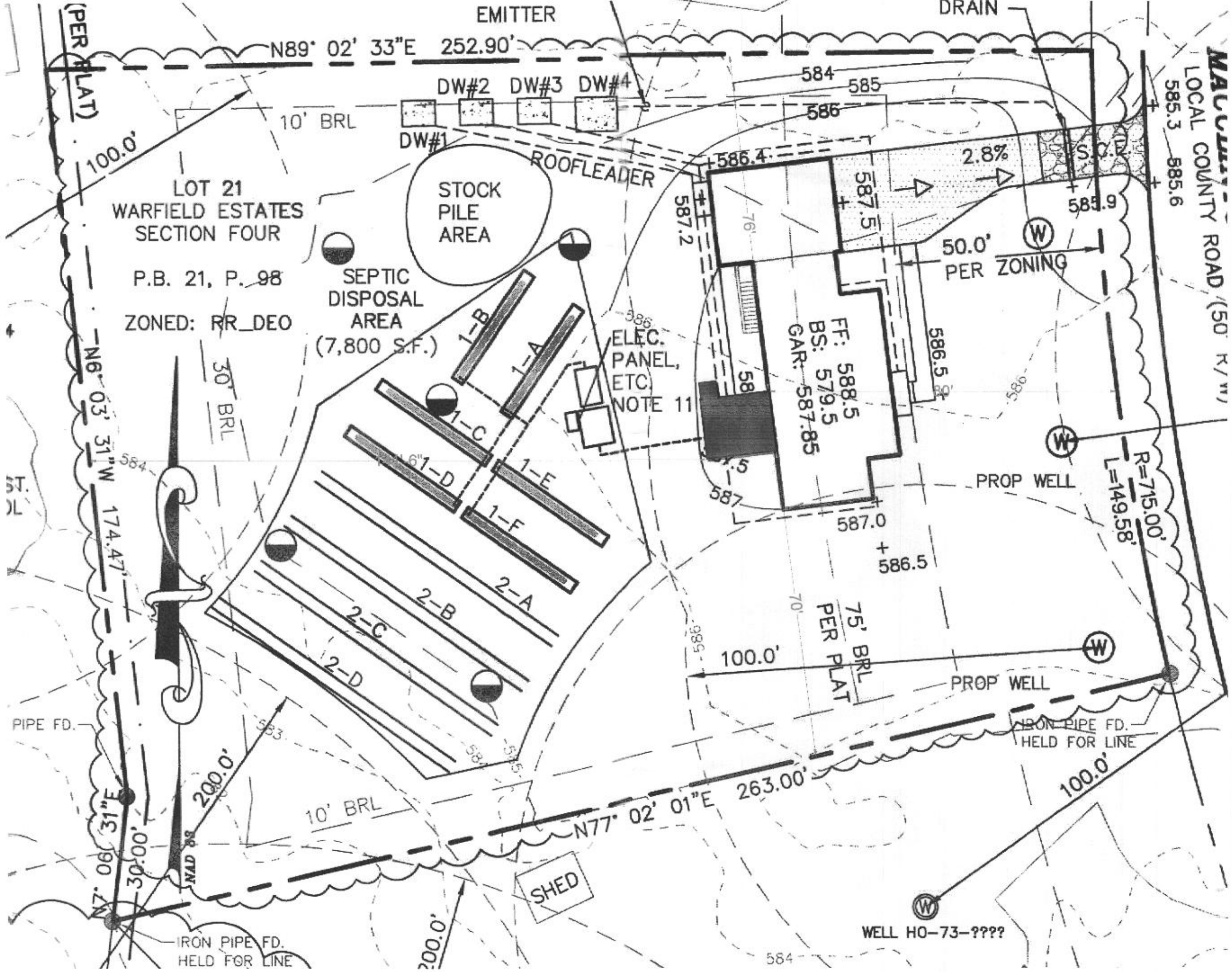
Date:

DECEMBER 30, 2022

Scale:



Pg. 1 of 1



(PER PLAT)

EMITTER

DRAIN

N89° 02' 33"E 252.90'

DW#2 DW#3 DW#4
DW#1

584 585
586

100.0'

10' BRL

LOT 21
WARFIELD ESTATES
SECTION FOUR

STOCK
PILE
AREA

ROOFLEADER

P.B. 21, P. 98

SEPTIC
DISPOSAL
AREA
(7,800 S.F.)

ZONED: RR_DEO

ELEC.
PANEL,
ETC.
NOTE 11

FF: 588.5
BS: 579.5
GAR: 587.85

2.8%

50.0'
PER ZONING

-N6° 03' 31"W

30' BRL

174.47'

584



1-B 1-A
1-C 1-E
1-D 1-F

2-C 2-B 2-A
2-D

PROP WELL

R=715.00'
L=149.58'

587.0
+ 586.5

75' BRL
PER PLAT

PROP WELL

IRON PIPE FD.
HELD FOR LINE

PIPE FD.

30.00'

200.0'

10' BRL

SHED

N77° 02' 01"E 263.00'

100.0'

IRON PIPE FD.
HELD FOR LINE

WELL HO-73-????

584

MACULLEY LOCAL COUNTY ROAD (50' R/W)

585.3 585.6

SOILS TABLE (WITHIN LOT)

SYMBOL	DEPTH	NAME	K FACTOR
1-A	0-10"	CLAYEY SAND, 2-15% SILT	20
2-B	10-20"	CLAYEY SAND, 2-15% SILT	20

LOW PRESSURE DOSING SYSTEM - INITIAL INSTALLATION

TRENCH	GROUND ELEVATION (FT)	PUMP INV. ELEVATION (FT)	TRENCH LENGTH (FT)	LATERAL LENGTH (FT)	PERFORATION SPACING (IN)	PERFORATION HEAD (FT)	PERFORATION FLOW RATE (GPM)	PERFORATION SPACING (FT)	NUMBER OF PERFORATIONS	TRENCH FLOW RATE (GPM)
1-A	255.45	262.00	31.00	25.00	5/8"	2.0	1.53	6.2	5	8.15

GROUND ELEVATION TAKEN DIRECTLY FROM SURVEY SURFACE

LOW PRESSURE DOSING SYSTEM

NO. OF SEWERHOLES: 5
MINIMUM LENGTH: TRENCH # THRU #6 = 25.0'
FLOW THROUGH TRENCH TO SEPTIC TANK
LOW PRESSURE DOSE PUMPING TO TRENCH SYSTEM

MANHOLE TYPE: END FEED MANHOLE
HOLE DIAMETER: 24" (TABLE 4.1)
HOLE SPACING: LATERAL #1 THRU #6 = 6.2'
LATERAL LENGTH: LATERAL #1 THRU #6 = 25.0'
HOLE NO. / LATERAL: LATERAL #1 THRU #6 = 5
LATERAL DIAMETER: 2.25" (TABLE 4.1)
PRESSURE HEAD: LATERAL #1 THRU #6 = 2.0'
ORifice DISCHARGE: LATERAL #1 THRU #6 = 1.63 GPM PER ORIFICE
LATERAL DISCHARGE: (NO. OF HOLES x ORIFICE DISCHARGE)
LATERAL #1 THRU #6 = 8.15 GPM

MINIMUM DOSE

DIAPHRAGM VOLUME: 1.00 GAL / 100 GPM (TABLE 4.2)
FORCE MAIN DIAMETER: 2" 27.14" x 38.4 GAL / 100' = 18.4 GAL
MANHOLE DIAMETER: 2" 66.50" x 17.4 GAL / 100' = 11.6 GAL
LATERAL VOLUME: 1.25" 28.80" x 7.8 GAL / 100' = 2.1 GAL
NO. OF LATERALS = 5 x LATERAL VOL. = 2.1 x 5 = 10.5 GAL

MINIMUM DOSE: 10.5 GAL / 100 GPM x 11.6 = 12.2 GAL

DISCHARGE PER DAY: 100 GALLONS PER DAY (GPD) = 100 GPD / 1440 = 0.69 GPM

TOTAL HEAD

DYNAMIC HEAD = STATIC HEAD + FRICTION HEAD + 25% LOSS
48.9 GPM

FORCE MAIN FRICTION LOSS: 33.45' x 0.06 / 100 = 0.20' (TABLE 4.3)

MANHOLE FRICTION LOSS: 25.00' x 0.02 / 100 = 0.01' (TABLE 4.3)

FORCE MAIN FITTINGS FRICTION LOSS (EQUIVALENT PIPE LENGTHS):
3 QUICK CONNECT = 25' x 0.02 / 100 = 0.01'
1 T 90 ELBOW = 10' x 0.02 / 100 = 0.002'
1 GATE VALVE = 3' x 0.02 / 100 = 0.0006'
1 T 90 ELBOW = 10' x 0.02 / 100 = 0.002'
1 1/2" ELBOW = 6' x 0.02 / 100 = 0.0012'
FV FITTINGS TOTAL: 42' x 0.06 / 100 = 0.25' (TABLE 4.3)

MANHOLE FITTINGS FRICTION LOSS (EQUIVALENT PIPE LENGTHS):
4 T 90 ELBOW = 4 x 10' = 40'
4 T 90 ELBOW = 4 x 10' = 40'
3 90° ELBOW = 3 x 10' = 30'
MANHOLE FITTINGS TOTAL: 102' x 0.02 / 100 = 0.21' (TABLE 4.3)

LATERAL SAFETY FACTOR: 1.5'
STATIC HEAD: 3.25'
TOTAL HEAD: 3.0'

SOLE OPERATING HEAD: 3.0' (TABLE 4.1) x 1.25 = 3.75 + 0.00
SOLE VALUE TO BE INCLUDED SOLE VALUE WILL BE ADJUSTED TO ALLOW
DESIGN FLOW OF 48.9 GPM (AS NECESSARY)

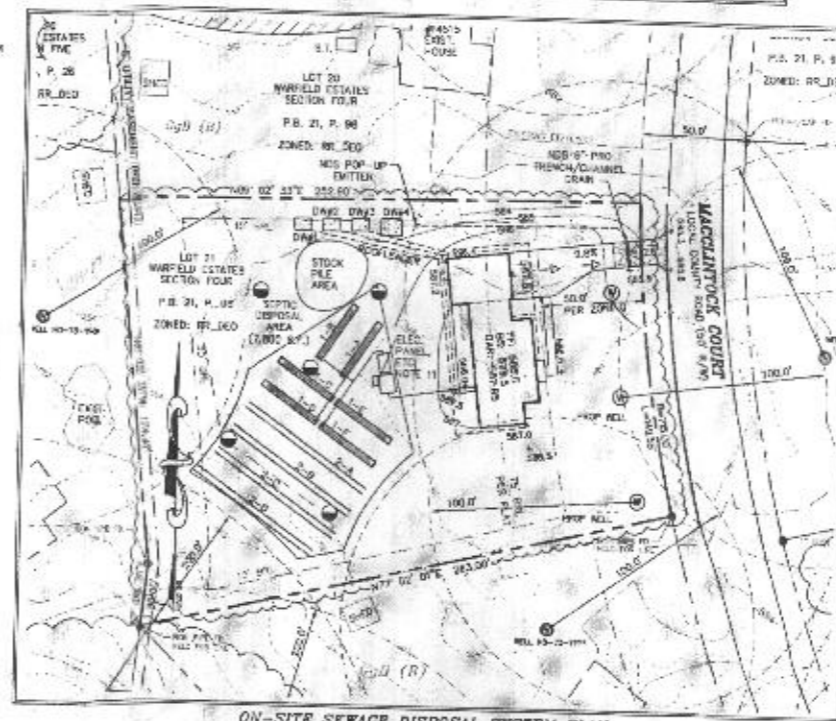
TOTAL DYNAMIC HEAD (ADJUSTED BY VALUE) 48.9 YIELDS 48.9 GPM (APPROX)
USE 48.9 GPM HEAD

CALCULATION FOR STORAGE ABOVE THE HW ALARM

1000 GALLONS NOMINAL STORAGE AT 2" WATER ABOVE
247' 25" BETWEEN INVERT BOTTOM AND WATER LEVEL
400 GALLONS PER FOOT
600 GALLONS REQUIRED 1.47 FEET
WATER LEVEL ELEVATION = 267.67
HW ALARM ELEVATION = 267.67
HW ALARM ELEVATION = 262.00

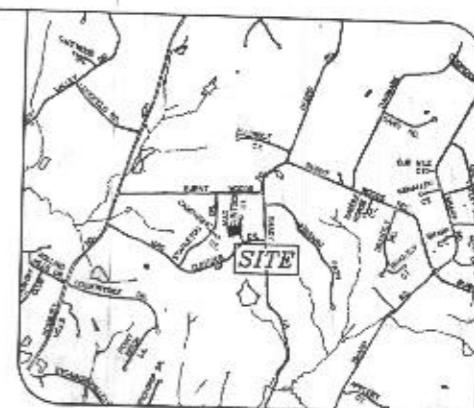
SEPTIC TRENCH SIZING

SYSTEM	APPLICATION RATE (GPD / SF)	ALLOWED FLOW RATE (GPD)	AREA OF TRENCH (SQ. FT)	TRENCH LENGTH (FT)	LOT AREA (SQ. FT)	TRENCH DEPTH (FT)	TRENCH WIDTH (FT)	ADJUSTED LENGTH OF TRENCH (FT)	MINIMUM TRENCH SPACING (FT)	NUMBER OF TRENCHES	REQUIRED TRENCH LENGTH (FT)
INITIAL	0.8	500	1,000	3	333.3	3.5	5.0	0.83	181.3	10.0	30.00
REPLACEMENT	0.6	600	1,000	3	333.3	2.0	0.83	276.7	10.0	4	69.18



ON-SITE SEWAGE DISPOSAL SYSTEM PLAN

SCALE: 1"=40'
DATE: 08/13/2022



VICINITY MAP

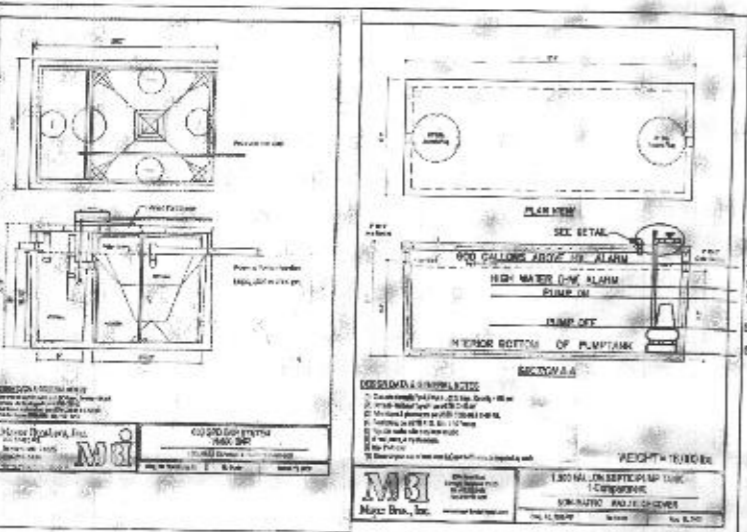
SCALE: 1"=2000'
ADD MAP: 17 (0-7)

GENERAL NOTES:

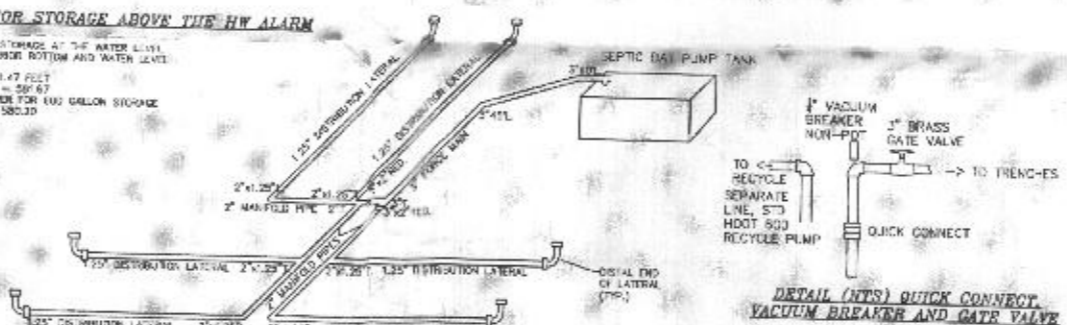
- THE SUBJECT PROPERTY IS ZONED R-100 FOR THE 10/06/2018 COMPREHENSIVE ZONING PLAN.
- PARCEL BACKGROUND: ADDRESS: 14511 MACCOLLIN COURT, CLEWOD, MD 21768. TAX MAP #1; PARCEL: 122, LOT 21. ELECTION DISTRICT: FOURTH. DEED REFERENCE: SET / 686. RTD040 PLAT BOOK 21, PAGE 99 (PLAT DATED JAN. 1971). AREA: 14,200 S.F. OR 1.027 ACRES. TOTAL NUMBER OF LOTS: 1. TYPE OF PROPOSED UNIT: SFD. PROPOSED USE FOR SITE: RESIDENTIAL.
- PROJECT BOUNDARY IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED IN OR ABOUT JULY, 2020 BY WILSON-BOWEN, BORMER & ASSOC.
- TOPOGRAPHY SHOWN HERE IS (AS AND WILL BE) FIELD SURVEY BY WILSON-BOWEN, BORMER & ASSOC. IN JULY 2020 TO ACCURATELY REPRESENT THE RELATIVE CHANGES ON THE SUBJECT PROPERTY.
- SOILS LOCATION AND CLASSIFICATION BASED ON HOWARD COUNTY Q35 SURVEY.
- SEPTIC TANKS AND DRAIN FIELD SHOWN IS BASED ON DATA PROVIDED BY HOWARD COUNTY HEALTH DEPARTMENT.
- THIS AREA DEMONSTRATES A PRIVATE SEWAGE AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL FOR ONE OR MORE UNITS PRIOR TO WATERSHED 1079. IT PROVIDES AT LEAST ENOUGH AREA TO ACCOMMODATE AND INSTALL ONE TWO DEPARTMENT SEPTIC SYSTEMS AS REQUIRED BY THE HOWARD COUNTY HEALTH DEPARTMENT. INTRODUCTION OF ANY MATERIALS IN THIS AREA ARE RESTRICTED UNLESS PUBLIC SEWERAGE IS AVAILABLE. THIS AREA SHALL BECOME FULL AND VALID UPON CONVERSION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE AGREEMENT. REPRODUCTION OF A REPRODUCED PLAN SHALL NOT BE NECESSARY.
- ANY CHANGES TO A PRIVATE SEWAGE DISPOSAL EXPOSURE SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.

BEST AVAILABLE TECHNOLOGY SITE PLAN NOTES

- ANY CHANGE TO THE LOCATION OR DEPTH OF ANY COMPONENTS MUST BE APPROVED BY THE OWNER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM DEPTH OF THE BAT FOR THE MANUFACTURER'S SPECIFICATION IS 3.0'.
- THE BLOWER MAY NOT BE LOCATED MORE THAN 100 FEET FROM THE TANK BASED ON MANUFACTURER'S SPECIFICATIONS.
- THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
- THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
- WITHIN ONE (1) MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE BATH AND DEPARTMENT OF THE ENVIRONMENT (BATH) IN A MANNER APPROPRIATE TO THE BATH, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.
- ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY.
- THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.
- HIGH WATER (HW) ALARM MUST BE ON A SEPARATE CIRCUIT.
- ELECTRICAL PANEL, BLOWER MOTOR, AND ALARM TO BE LOCATED ABSENT TO 4-1000 UNIT.

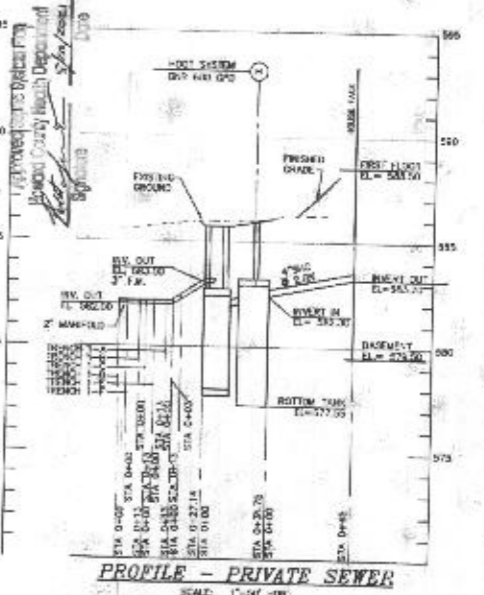
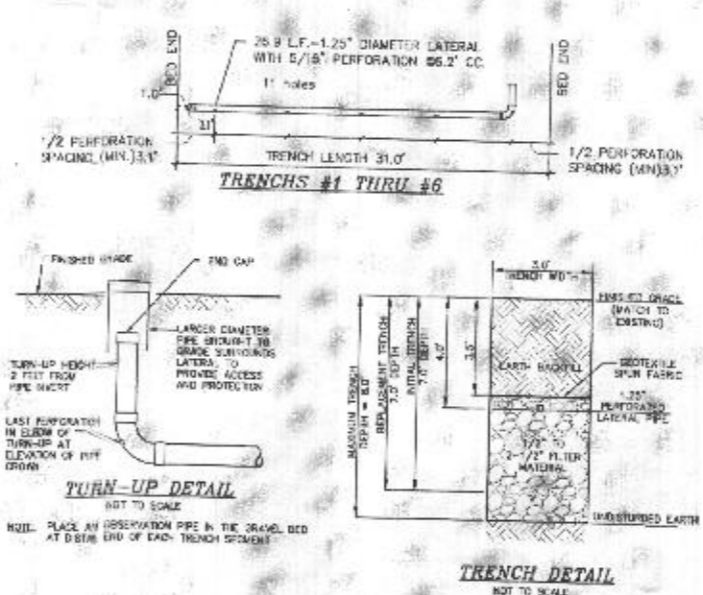


DESCRIPTION	ELEVATION
FINISHED GRADE AT SEPTIC TANK	262.00
INVERT INTO TANK	261.40
EXTERIOR BOTTOM OF HOOT SYS	257.00
INTERIOR BOTTOM OF HOOT SYS	257.50
SEE HOOT 600 DETAIL	
SEE HOOT 600 DETAIL	
INVERT OUT OF HOOT-600	262.17
INVERT INTO PUMP TANK	259.92
EXTERIOR BOTTOM OF PUMP TANK	257.27
INTERIOR BOTTOM OF PUMP TANK	278.00
PUMP ON	279.25
PUMP OFF	279.25
HIGH WATER (HW) ALARM	260.30
600 GALLONS ABOVE HW ALARM	261.60
INVERT OUT TO TRENCHES	263.00
INVERT IN TO MANHOLE	263.00
TOTAL DYNAMIC HEAD	15.18
BOSCO MAINLINE	130.00
PUMP RUNTIME	2.55 MIN.



BAT SYSTEM CHART

DESCRIPTION	ELEVATION
FINISHED GRADE AT SEPTIC TANK	262.00
INVERT INTO TANK	261.40
EXTERIOR BOTTOM OF HOOT SYS	257.00
INTERIOR BOTTOM OF HOOT SYS	257.50
SEE HOOT 600 DETAIL	
SEE HOOT 600 DETAIL	
INVERT OUT OF HOOT-600	262.17
INVERT INTO PUMP TANK	259.92
EXTERIOR BOTTOM OF PUMP TANK	257.27
INTERIOR BOTTOM OF PUMP TANK	278.00
PUMP ON	279.25
PUMP OFF	279.25
HIGH WATER (HW) ALARM	260.30
600 GALLONS ABOVE HW ALARM	261.60
INVERT OUT TO TRENCHES	263.00
INVERT IN TO MANHOLE	263.00
TOTAL DYNAMIC HEAD	15.18
BOSCO MAINLINE	130.00
PUMP RUNTIME	2.55 MIN.



PROFILE - PRIVATE SEWER

SCALE: 1"=4" VERT
1"=40' HOR

YXYM
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INSTALLATION INSTRUCTIONS

PREPARATION

INSTALLATION

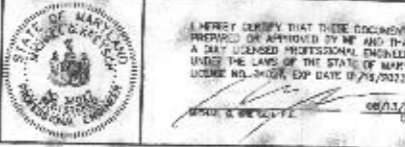
OPERATION

MAINTENANCE

WARRANTY

CONTACT

YXYM
2300-B Green Brook, Columbia, Maryland 21044
(410) 897-0226 Tel. (410) 897-2228 Fax.



OWNER/DEVELOPER
PATRICK CURLEY
14511 MACCOLLIN COURT
CLEWOD, MD. 21768
(410) 913-9757

WARFIELD ESTATES, S-4, BL-A
14511 MACCOLLIN COURT - LOT 21
PARCEL: 122
FOURTH ELECTION DISTRICT
HOWARD COUNTY MARYLAND
ON-SITE SEWAGE DISPOSAL SYSTEM PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
2300-B Green Brook, Columbia, Maryland 21044
(410) 897-0226 Tel. (410) 897-2228 Fax.

DATE: 08/13/2022

SOILS TABLE (WITHIN LOT)

TRENCH	PLATING	MARK	K FACTOR
1-1	1-1	1-1	2.0

ON-SITE SEWAGE DISPOSAL SYSTEM:

RESIDENTIAL SYSTEM DESIGN: 1000 GPD
 4 BEDROOM HOUSE
 150 GALLONS X # OF BEDROOMS = VOLUME OF WASTEWATER / DAY
 150 X 4 = 600 GPD
 FLOW RATE = 15-30 MINUTES/ANCH
 APPLICATION RATE = 0.5 GPD/FOOT
 DESIGN FLOW + APPLICATION RATE = 300 GPD / TRENCH REQUIRED
 300 / 0.5 = 600 GPD / TRENCH REQUIRED
 600 / 0.5 = 1200 GPD / TRENCH REQUIRED
 1200 / 3.0 = 400 GPD / TRENCH REQUIRED

PRIMARY SYSTEM:
 USE 3/4" OF GRAVEL BELOW DRAIN PIPE
 33.3 X 0.5 = 16.65
 USE SIX (6) TRENCHES (6X) EACH
 A MINIMUM OF 10' BETWEEN TRENCHES UTILIZING SIDEWALL
 REDUCTION GRATE.

REPLACEMENT:
 USE 1/2" OF GRAVEL BELOW DRAIN PIPE
 33.3 X 0.5 = 16.65
 USE FOUR (4) TRENCHES (4X)
 A MINIMUM OF 10' BETWEEN TRENCHES UTILIZING SIDEWALL
 REDUCTION GRATE.
 MINIMUM TANK CAPACITY = 750 GALLONS

LOW PRESSURE DOSING SYSTEM - INITIAL INSTALLATION

TRENCH	GROUND ELEVATION (FT)	PIPE INVERT ELEVATION (FT)	TRENCH LENGTH (FT)	LATERAL LENGTH (FT)	PERFORATION SPACING (IN)	PRESSURE HEAD (FT)	PERFORATION FLOW RATE (GPM)	PERFORATION SPACING (IN)	NUMBER OF PERFORATIONS	TRENCH FLOW RATE (GPM)
1-A, 1-F	585.45	585.00	58.00	31.00	35.00	5/16	2.0	1.63	8	5.13

INITIAL SYSTEM TRENCH DATA

TRENCH NUMBER	EX. GROUND ELEVATION	INVERT ELEVATION	BOTTOM OF TRENCH EL.
1-A	585.82	582.00	578.45
1-B	586.76	582.00	578.45
1-C	586.83	582.00	578.45
1-D	586.99	582.00	578.45
1-E	585.85	582.00	578.45
1-F	585.89	582.00	578.45

REPLACEMENT SYSTEM TRENCH DATA

TRENCH NUMBER	EX. GROUND ELEVATION	INVERT ELEVATION	BOTTOM OF TRENCH EL.
2-A	585.45	581.43	577.45
2-B	585.32	581.30	577.30
2-C	584.00	580.00	576.00
2-D	583.82	579.50	575.50

LOW PRESSURE DOSING SYSTEM

NO. OF BEDROOMS: 4
 TRENCH LENGTH: 58.00'

MANHOLE TYPE: END FIELD MANHOLE
 HOLE DRAIN: 300
 HOLE SPACING: 10'

LATERAL LENGTH: 31.00'
 HOLES NO./LATERAL: 8

LATERAL DIAMETER: 1.25"
 PRESSURE HEAD: 5.13'

ORIFICE DISCHARGE: 0.50 GPM
 LATERAL DISCHARGE: 4.13 GPM

SYSTEM DISCHARGE: 40.00 GPM
 MINIMUM DOSE: 0.50 GPM

PERFORMANCE: 40.00 GPM / DAY
 VOLUME PER DISCHARGE (NO. 4) 100 GAL / USE 100 GAL / DOSE

TOTAL HEAD:
 DYNAMIC HEAD = STATIC HEAD + FRICTION HEAD + DISTAL HEAD
 48.9 GPM

FORCE MAIN FRICTION LOSS: 33.42' X 0.05/100 = 0.17' (TABLE 4.4)
 MANHOLE FRICTION LOSS: 33.00' X 0.02/100 = 0.67' (TABLE 4.4)

FORCE MAIN (FM) FITTINGS FRICTION LOSS (EQUIVALENT PIPE LENGTHS):
 2 ELBOWS: 2 x 5 = 10'
 1 90° ELBOW: 1 x 10 = 10'
 1 45° ELBOW: 1 x 5 = 5'
 FM FITTINGS TOTAL: 25' X 0.05/100 = 0.13' (TABLE 4.3)

MANHOLE FITTINGS FRICTION LOSS (EQUIVALENT PIPE LENGTHS):
 4 1/2" FITTING: 3 x 4 = 12'
 4 1/2" 90° ELBOW: 1 x 4 = 4'
 4 1/2" 45° ELBOW: 1 x 2 = 2'
 MANHOLE FITTINGS TOTAL: 18' X 0.02/100 = 0.36' (TABLE 4.3)

LATERAL SAFETY FACTOR: 1.5
 STATIC HEAD: 3.75'
 DISTAL HEAD: 2.0'

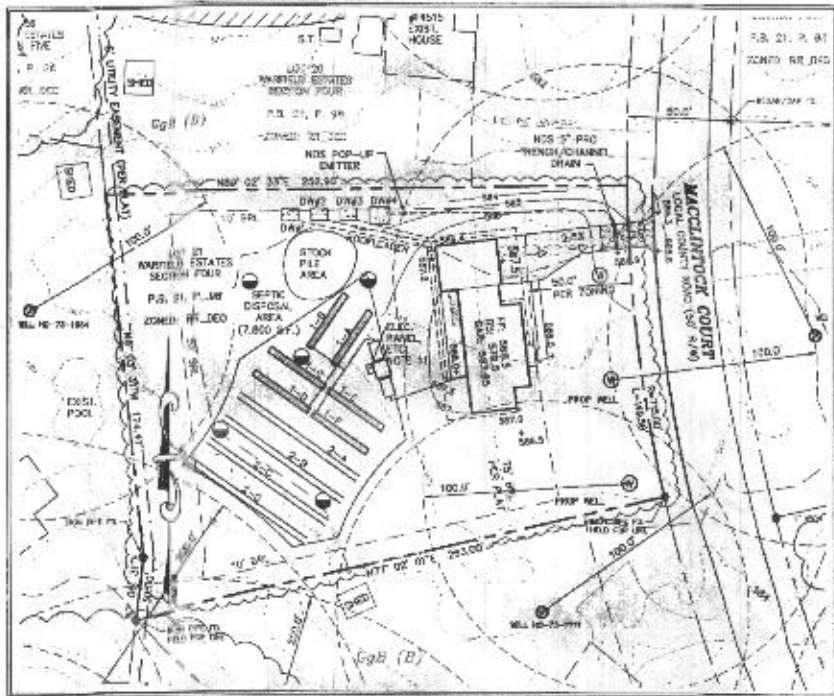
TOTAL DYNAMIC HEAD: 48.9 (18.24 + 1.44 + 3.88 + 1.5 + 3.75 + 2.0)
 VALVE: TO BE INCLUDED. NOTE: VALVE WILL BE ADJUSTED TO ALLOW
 DESIGN FLOW OF 48.9 GPM (AS NECESSARY).
 TOTAL DYNAMIC HEAD (ADJUSTED BY VALVE) 18.5' YIELDS 48.9 GPM (APPROX)
 USE GRAVEL TRENCH MEDIA.

CALCULATION FOR STORAGE ABOVE THE HW ALARM

1500 GALLON STORAGE AT THE WATER LEVEL
 3.67 FEET BETWEEN INTERIOR BOTTOM AND WATER LEVEL
 400 GALLONS PER FOOT
 600 GALLONS REQUIRED 1.67 FEET
 WATER LEVEL ELEVATION = 581.87
 HW ALARM ELEVATION = 582.00
 HW ALARM ELEVATION = 582.00

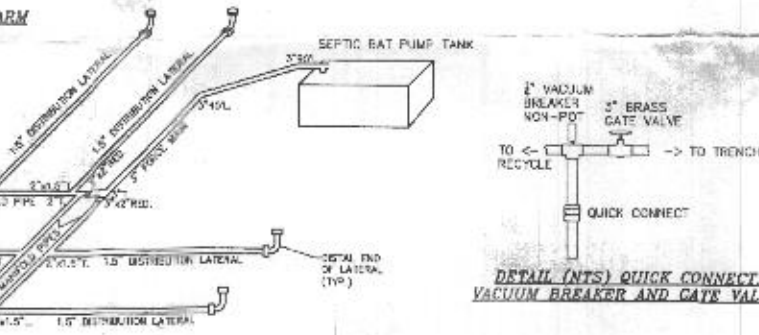
SEPTIC TRENCH SIZING

SYSTEM	APPLICATION RATE (GPD / SF)	MAXIMUM FLOW RATE (GPD)	AREA OF REQUIRED TRENCH (SF)	TRENCH WIDTH (FT)	DEPTH OF TRENCH (FT)	TRENCH LENGTH (FT)	ADJUSTED LENGTH OF TRENCH (FT)	MINIMUM SPACING (FT)	NUMBER OF TRENCHES	REQUIRED TRENCH LENGTH (FT)
INITIAL	0.5	600	1,000	3	33.3	5.5	8.0	0.55	183.3	100'
REPLACEMENT	0.5	400	1,000	3	33.3	7.5	8.0	0.55	276.7	100'



ON-SITE SEWAGE DISPOSAL SYSTEM PLAN

SCALE: 1" = 40'



DETAIL (NTS) QUICK CONNECT VACUUM BREAKER AND GATE VALVE

BAT SYSTEM CHART

DESCRIPTION	ELEVATION
FRESH GRADE AT SEPTIC TANK	586.27
INVERT INTO TANK	582.40
EXTERIOR BOTTOM OF SEPTIC TANK	578.15
INTERIOR BOTTOM OF SEPTIC TANK	578.48
INVERT OUT OF SEPTIC TANK	685.16
INVERT INTO HOOT-1000	582.67
INVERT OUT OF HOOT-1000	582.00
INVERT INTO PUMP TANK	581.92
EXTERIOR BOTTOM OF PUMP TANK	577.67
INTERIOR BOTTOM OF PUMP TANK	578.00
PUMP ON	579.25
WATER (HW) ALARM	580.70
600 GALLONS ABOVE HW ALARM	581.87
INVERT OUT TO TRENCHES	580.00
INVERT IN TO MANHOLE	582.00
TOTAL DYNAMIC HEAD	12.35
BORED VOLUME	820 GAL
PUMP RUNTIME	2.05 MIN



TRENCHES #1 THRU #6

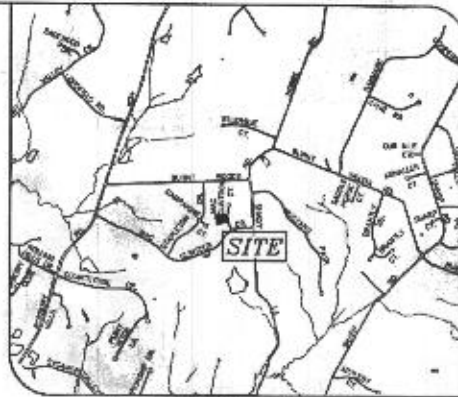


TURN-UP DETAIL

NOTE: PLACE AN OBSERVATION PIPE IN THE GRAVEL BED AT DISTAL END OF EACH TRENCH SEGMENT



TRENCH DETAIL



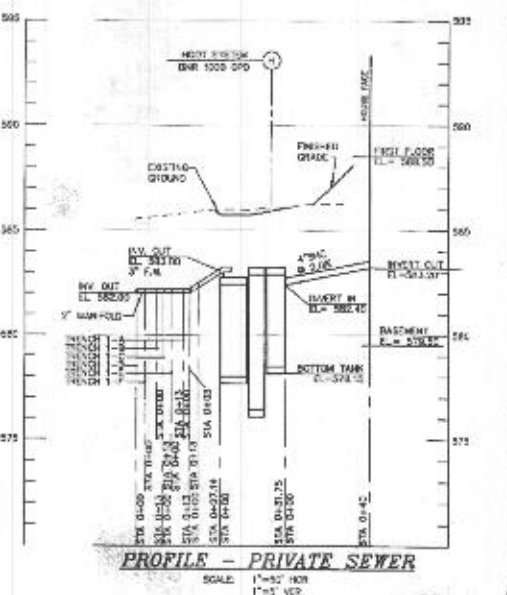
VICINITY MAP

GENERAL NOTES:

- THE SUBJECT PROPERTY IS ZONED RR-DCO FOR THE 10/25/2013 COMPREHENSIVE ZONING PLAN.
- PARCEL BACKGROUND: ADDRESS: 14511 MACCLINTOCK COURT, OLNEY, MD 21758. TAX MAP: 21-1-0001. PARCEL: 125 LOT 21. ELECTION DISTRICT: FOURTH. DECID REFERENCE: 14147/194. RECORD PLAN BOOK 21, PAGE 18 (PLAT DATED JAN. 1971). AREA: 44,365 S.F. OR 1.017 ACRES ±. TOTAL NUMBER OF UNITS: 1. TYPE OF PROPOSED UNIT: 1 STD. PROPOSED USE FOR SITE: RESIDENTIAL.
- PROJECT BOUNDARY IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT JULY, 2002 BY MILBENDER, BOENDER & ASSOC.
- TOPOGRAPHY SHOWN HERE IS 80% AND WILL BE FIELD VERIFIED BY MEASUREMENTS, BORINGS & ASSOC. IN JULY 2002 TO ACCURATELY REPRESENT THE RELATIVE CHANGES ON THE SUBJECT PROPERTY.
- SOILS LOCATION AND CLASSIFICATION BASED ON HOWARD COUNTY GIS SURVEY.
- SEPTIC TANK AND DRAIN FIELD SHOWN IS BASED ON DATA PROVIDED BY HOWARD COUNTY HEALTH DEPARTMENT.
- THIS AREA DESIGNATED A PRIVATE STORAGE AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF ENVIRONMENT FOR BATTERED SEWAGE DISPOSAL FOR LOTS CREATED PRIOR TO MARCH OF 1972 IF PRODUCE AT LEAST EIGHTEEN (18) FEET TO ACCOMMODATE AND INSTALL 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 REMAIN WELL AND WELL UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO MAKE ADJUSTMENTS TO THE PRIVATE SEWERAGE AGREEMENT, REVISIONS OF A WRITTEN AGREEMENT SHALL NOT BE NECESSARY.
- ANY CHANGES TO A PRIVATE SEWERAGE DISPOSAL TREATMENT SHALL REQUIRE A REVISED PERCOLATION CAPACITY PLAN.

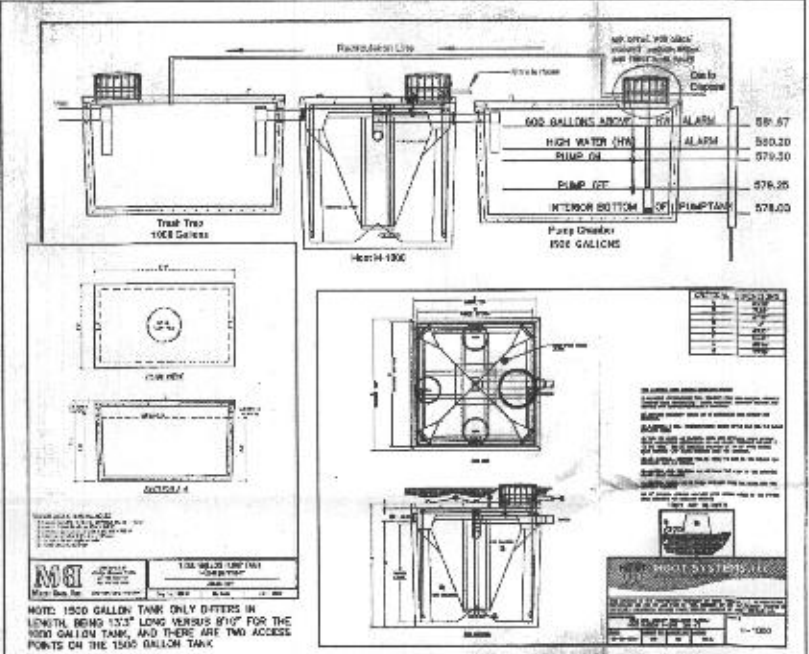
BEST AVAILABLE TECHNOLOGY SITE PLAN NOTES

- ANY CHANGE TO THE LOCATIONS OF EXISTING OR ANY COMPONENTS MUST BE APPROVED BY THE PLUMBER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM DEPTH OF THE GRAVEL FOR THE MANUFACTURER'S SPECIFICATION IS 3.0'.
- THE ELECTRIC MAY NOT BE LOCATED MORE THAN 100 FEET FROM THE TANK BASED ON MANUFACTURER'S SPECIFICATIONS.
- THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
- THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
- WITHIN ONE (1) MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE HEALTH DEPARTMENT OF THE ENVIRONMENT (HDE) IN A MANNER APPROPRIATE TO MEET THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.
- ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES AND REVIEWED BY THE HEALTH DEPARTMENT OF HOWARD COUNTY.
- THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.
- HIGH WATER (HW) ALARM MUST BE ON A DEDICATED CIRCUIT.
- ELECTRICAL PANEL, ELECTRIC MOTOR, AND ALARM TO BE LOCATED ADJACENT TO H-1000 UNIT.



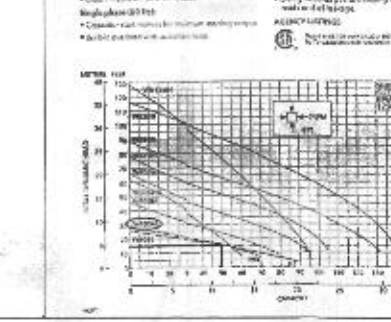
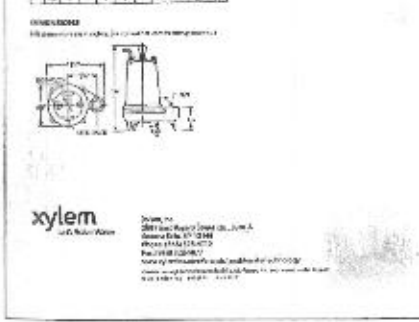
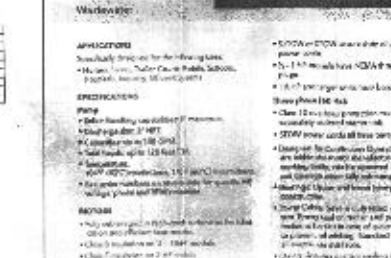
PROFILE - PRIVATE SEWER

SCALE: 1" = 5' VERT



PERFORMANCE TABLE

Flow Rate (GPM)	Head (ft)	Efficiency (%)
0	0	100
10	1.0	95
20	2.0	85
30	3.0	75
40	4.0	65
50	5.0	55
60	6.0	45
70	7.0	35
80	8.0	25
90	9.0	15
100	10.0	5



I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 34827, EXP. DATE 01/15/2023.

DATE: 04/16/2021

GENERAL DEVELOPER:
 PATRICK CURLEY & BROCKE CURLEY
 14211 MACCLINTOCK COURT, SUITE 104
 OLNEY, MD 21758
 (410) 813-8787

Approved by: **Warfield Estates, S-4, BL-A**
 14511 MacClintock Ct. - Lot 21
 Parcel: 21-1-0001-125
 Howard County Health Department
 Approved: [Signature]
 Date: 04/16/2021

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers, Planners, Surveyors
 7800-B Grass Drive, Columbia, Maryland 21044
 (410) 397-0286 Fax: (410) 397-0288 Fax

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