HOWARD COUNTY
HEALTH DEPARTMENT

Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
410.313.2648 - Fax
1.866.313.6300 - Toll Free

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

January 9th, 2024

TO: Fisher, Collins, & Carter, INC.
RE: 1680 Woodstock Road

To Whom It May Concern,

There were issues out in the field during the installation of your engineered OSDS plan. The following comments should be addressed for a redline revision.

1. **There are two options to try & resolve the lack of access to install a 2000 GAL concrete tank in the backyard.**
   A. **Install two 1000 GAL Poly-Ethelene tanks in succession. Or one 1850 GAL Poly (if it exists).**
      1. **Tank must be pre-approved by Howard County Health Department.**
   B. **Design a path of construction via a non-evasive, and temporary "road" which will make bringing materials easier for all phases of project and possibly the 2000 GAL concrete tank.**
   c. **Consult with Fogles, hired septic contractor.**

2. **Since we last spoke, Ricky from Fogle's Septic believes that the only way to replace the tank may be by removing the old tank off-site, which should be noted as hazardous waste, and installing the new one at the old tank location.**
   a. **It may be possible to designate a new tank location, we were missing the septic profile to be able to determine this while out in the field.**
   b. **Please consult with Fogle's.**

3. **Missing tank & septic profile showing all necessary elevations (I missed this on the previously approved plans.)**

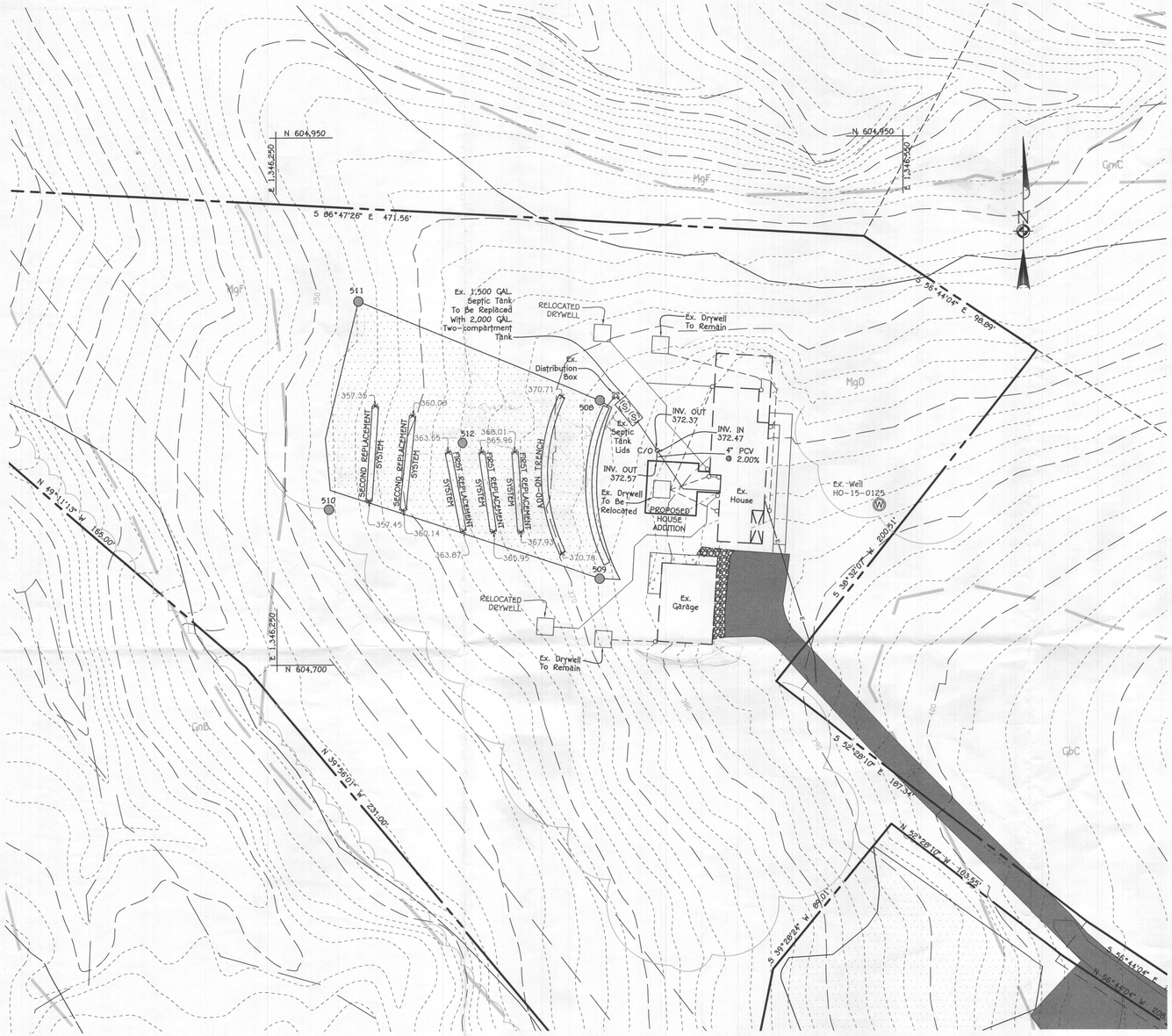
4. **The main septic line from house to tank, cannot be shown how it currently is drawn.**
   a. **The addition construction will surely have a negative impact on its functionality.**
   b. **Consult architect.**

5. **Add a reference point to the beginning of add-on trench that the hired septic contractor will do some slight grading to deter negative swale impact on existing SDA.**

6. **Need to add newly chosen tank details to septic plan, if applicable.**

Thank you for your time and consideration. We look forward to the redline submittal.

Zack Silvast (LEHS)
Plan Review Supervisor - Water & Sewer Division
410-313-1777
Environmental Health Bureau
Howard County Health Department



PLAN
SCALE: 1" = 30'

0' 30' 60' 120'

SCALE: 1" = 30'

Profile?

SOILS LEGEND

SOIL	NAME	CLASS
GbC	Gladstone Loam, 3 to 8 percent slopes	A
GnB	Glenville-Baile silt loams, 0 to 8 percent slopes	C
MgD	Manor-Bannertown sandy loams, 15 to 25 percent slopes, rocky	B
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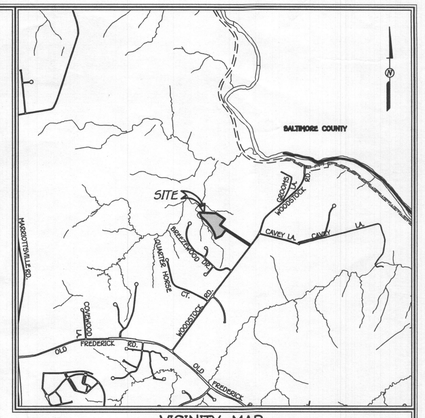
LEGEND

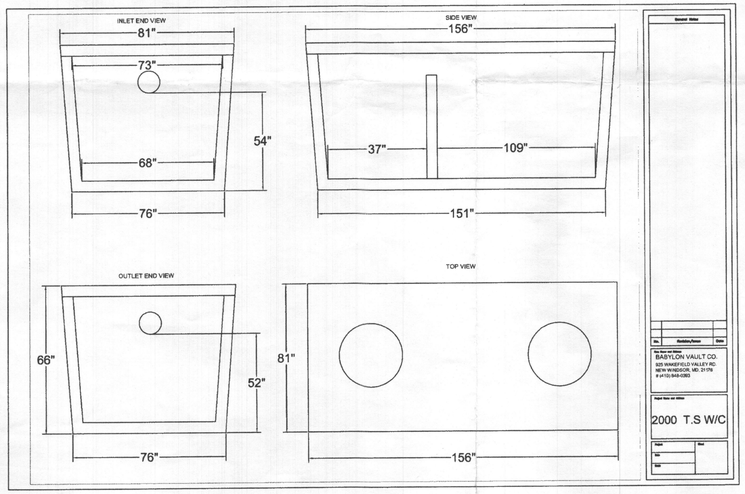
SYMBOL	DESCRIPTION
	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
	EXISTING ELECTRIC
	EXISTING DRIVEWAY PAVING
	EXISTING TREE LINE
GnB GbC	SOIL LINES AND TYPES
	EXISTING ROOF LEADER
	DENOTES EXISTING PASSED PERC
	EXISTING SEWAGE DISPOSAL AREA

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. ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
3. WELL HO-15-0125 HAS BEEN FIELD LOCATED.
4. 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.
5. THE ENGINEER IS REGISTERED WITH MDE TO PROVIDE ON-SITE WASTEWATER SERVICES IN MARYLAND.
6. CONTOURS ARE BASED ON A TOPOGRAPHIC FIELD RUN SURVEY PERFORMED BY FISHER, COLLINS AND CARTER ON OR ABOUT AUGUST, 2023.
7. EXISTING TRENCHES BASED ON HOWARD COUNTY COUNTY AS-BUILTS.
8. CONTRACTOR TO TEST PIT EXISTING SEWER HOUSE CONNECTIONS TO DETERMINE INVERTS BEFORE INSTALLATION.
9. SEPTIC SYSTEM SHALL BE UPGRADED PRIOR TO BUILDING PERMIT APPROVAL DUE TO INCREASE IN SEPTIC FLOW BY PROPOSED ADDITIONAL BEDROOM.
10. PROPOSED SEPTIC TANK SHALL MATCH EXISTING INVERT ELEVATIONS.



VICINITY MAP
SCALE : 1" = 2000'

THE PURPOSE OF THIS SEPTIC INSTALL PLAN IS TO UPGRADE THE SEPTIC SYSTEM FOR THE PROPOSED ADDITION THAT INCLUDES A TANK UPGRADE FROM 1,500 GALLONS TO 2,000 GALLONS, AN ADD-ON TRENCH, AND FUTURE REPLACEMENT SYSTEMS FOR A 6-BEDROOM DESIGN.



ADD-ON TO EXISTING SYSTEM

SEWAGE DISPOSAL SYSTEM DATA - INITIAL SYSTEM
6 BEDROOMS
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM GPD = 900 GPD
APPLICATION RATE = 1.2
EFFECTIVE SIDEWALL BEGINS AT 3.5 FEET
TRENCH DEPTH = 7 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 3.5 FEET
SF OF DRAINFIELD = 900 GPD / 1.2 = 750 SF
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D)=(3+2)/(3+1+(2x3.5)=0.455
TRENCH LENGTH = 750 SF x 0.455 / 3 = 114 FEET
2 TRENCHES AT 76'
TRENCH SPACING = 2D+W = ((2x3) + 3) = 9' USE 10'
* THERE IS ONE EXISTING 76' TRENCH, ANOTHER 76' TRENCH WILL BE ADDED TO BALANCE THE SYSTEM

1ST REPLACEMENT SYSTEM

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DAILY STABILIZATION NOTE:
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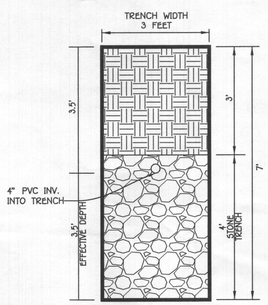
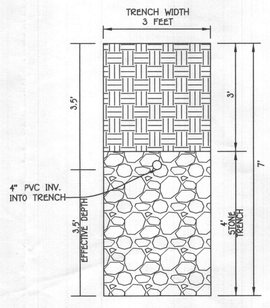
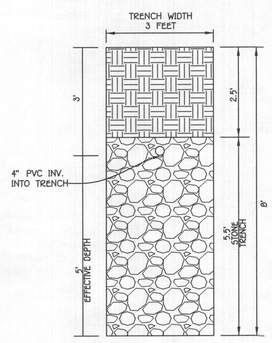


ADD-ON TRENCH DETAIL
SCALE 1" = 2'



FIRST REPLACEMENT TRENCH DETAIL
SCALE 1" = 2'



SECOND REPLACEMENT TRENCH DETAIL
SCALE 1" = 2'

Approved Septic System Plan
Howard County Health Department
Signature — Date 11/16/23

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. 46091, EXPIRATION DATE: 05/14/2025.

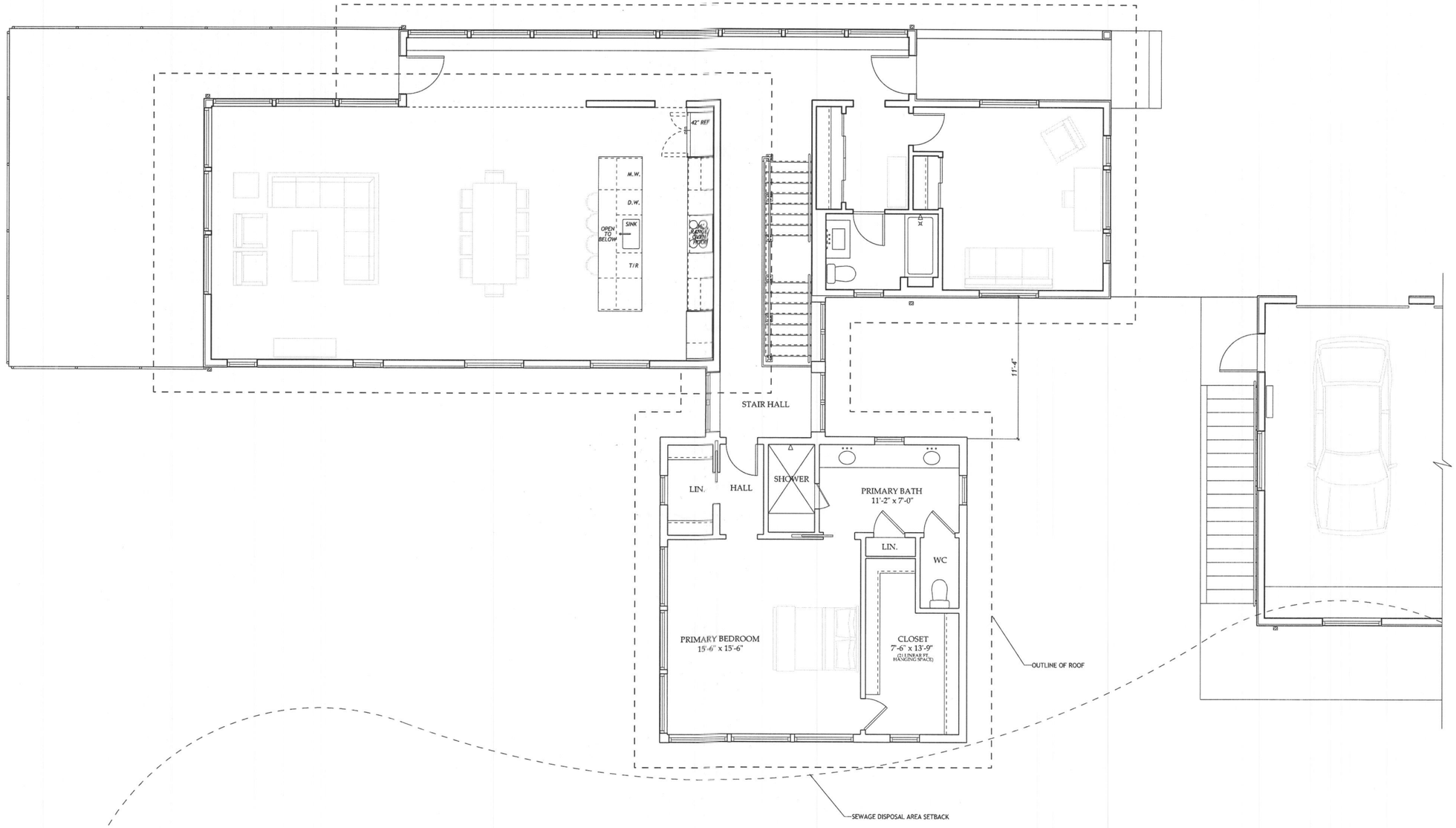
STATE OF MARYLAND — LUKE A. GROOM — 46091 — PROFESSIONAL ENGINEER

Signature Of Professional Engineer — DATE 11-6-23

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

SEPTIC INSTALL PLAN
1680 WOODSTOCK ROAD

ZONING: RC-DEO
TAX MAP No. 10 GRID No. 18 PARCEL No. 50
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: NOVEMBER, 2023
SHEET 1 OF 1



1 / A101c FLOOR PLAN - MAIN LEVEL - OPTION C1

SCALE: 1/4" = 1'- 0"

685 GSF ADDITION

MUSE | KIRWAN ARCHITECTS
ARCHITECTURE AND INTERIOR DESIGN
7401 Wisconsin Avenue, Suite 500, Bethesda, MD 20814
Phone 301.718.8118 www.musekirwan.com

RENOVATION OF & ADDITION TO THE
ALIPRANDO / PALMER RESIDENCE
1680 WOODSTOCK ROAD WOODSTOCK, MD 21163

22.23

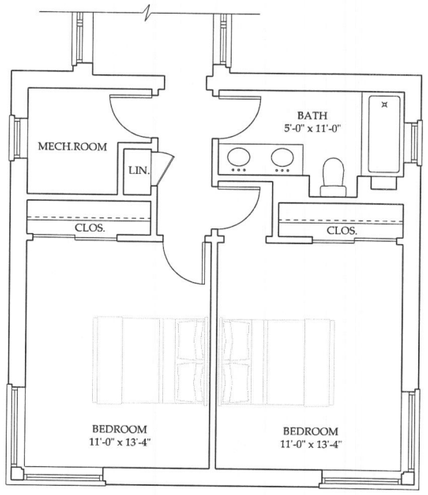
2023 MARCH 09

MAIN LEVEL FLOOR PLAN - OPTION C1

SCALE: ¼" = 1'-0"

SHEET NO.
A101c

1 A102c FLOOR PLAN - LOWER LEVEL - OPTION C1
SCALE: 1/4" = 1'- 0"



2 A102c FLOOR PLAN - LOWER LEVEL - OPTION C2
SCALE: 1/4" = 1'- 0"

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LOWER LEVEL FLOOR PLAN - OPTION C1

SCALE: ¼" = 1'-0"

SHEET NO.
A102c

1 / A201 NORTH ELEVATION
SCALE: 1/4" = 1'- 0"

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NORTH ELEVATION

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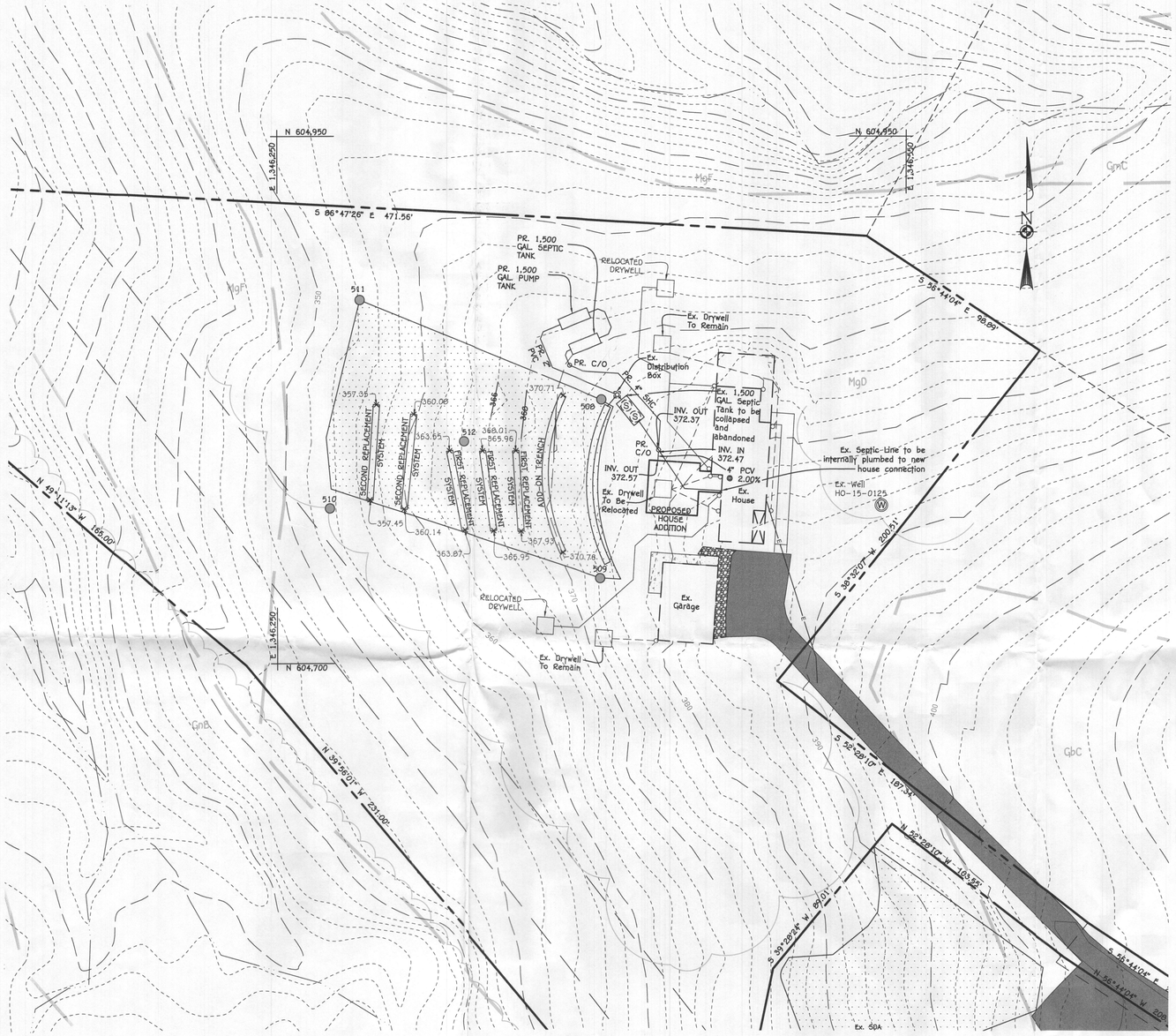
SHEET NO.
A201



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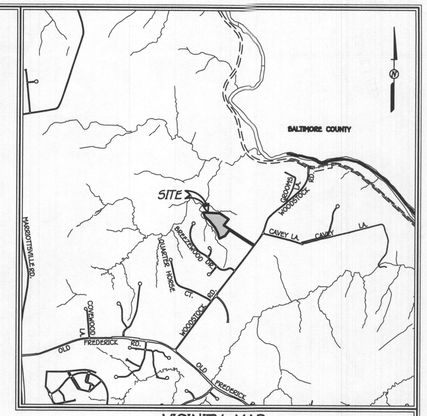

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Revised.
3/6/24

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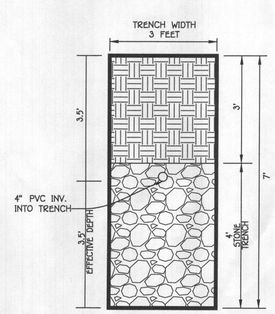

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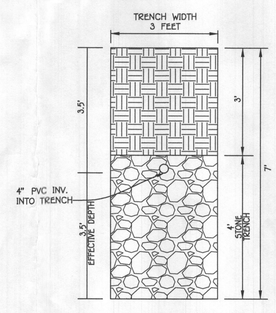
SCALE 1" = 2'



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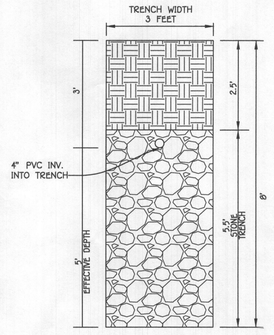

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STATE OF MARYLAND — LUKE A. GROOM — 46091 — PROFESSIONAL ENGINEER

Luke Groom — 2-12-24
Signature Of Professional Engineer — DATE

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1680 WOODSTOCK ROAD

ZONING: RC-DEO
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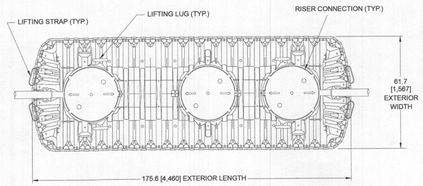
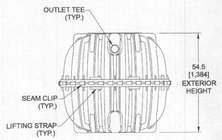
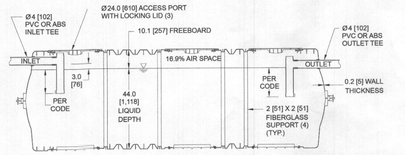
SCALE: AS SHOWN DATE: FEBRUARY, 2023
SHEET 1 OF 2



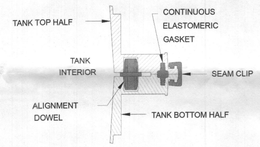
TOP VIEW



END VIEW



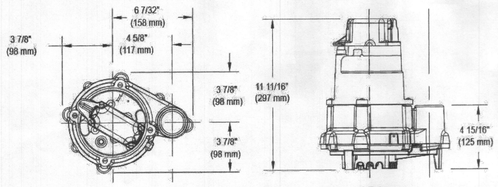
SIDE VIEW



MID-HEIGHT SEAM SECTION

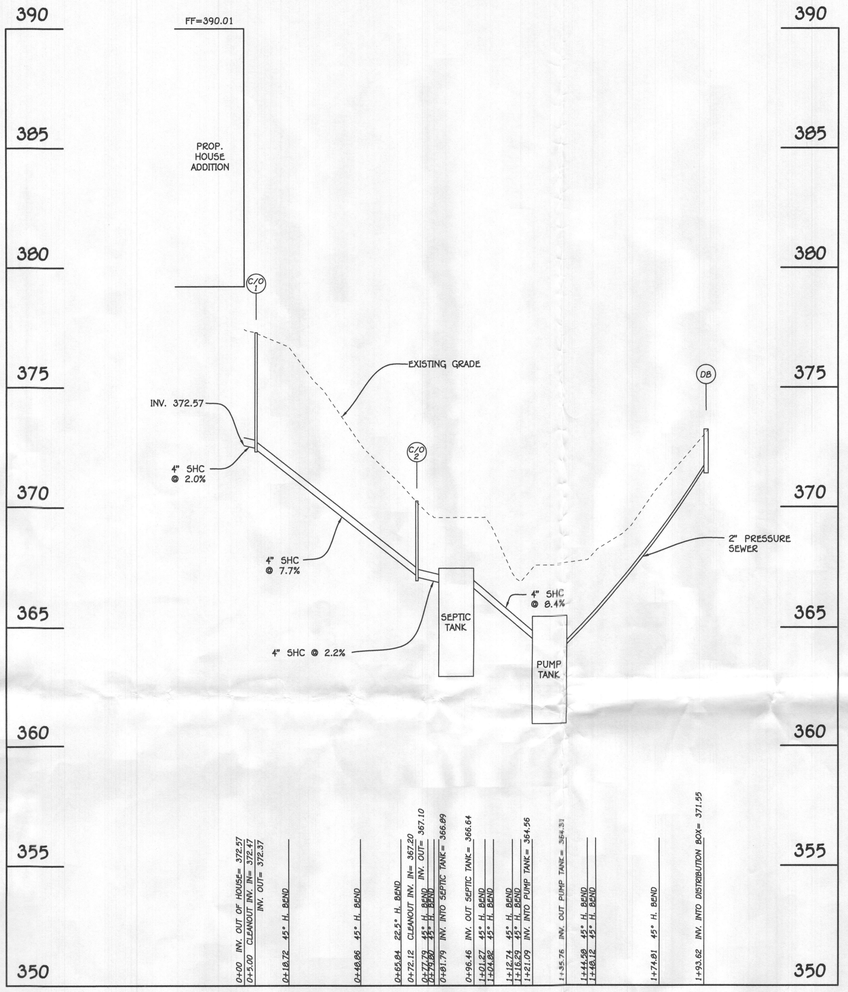
SEPTIC/PUMP TANK DETAIL IM-1530

NOT TO SCALE



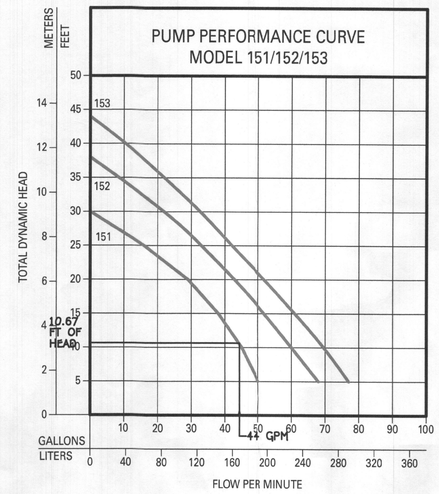
ZOELLER 151 PUMP DETAIL

NOT TO SCALE



PROFILE SEPTIC

SCALE HORZ. 1" = 30'
VERT. 1" = 3'



INV. OUT OF HOUSE = 372.57
EX. GROUND AT CLEANOUT # 1 = 377.27
INV. INTO CLEANOUT = 372.47
INV. OUT OF CLEANOUT = 372.37
EX. GROUND AT CLEANOUT #2 = 370.20
INV. INTO CLEANOUT = 366.20
INV. OUT OF CLEANOUT = 367.10
EX. GROUND AT SEPTIC TANK = 369.00
TOP OF SEPTIC TANK = 367.48
INV. INTO SEPTIC TANK = 366.89
INV. OUT OF SEPTIC TANK = 366.64
EX. GROUND AT PUMP TANK = 366.90
TOP OF PUMP TANK = 365.15
INV. INTO PUMP TANK = 364.56
INV. OUT OF PUMP TANK = 364.31
EX. GROUND AT DISTRIBUTION BOX = 372.98
INV. INTO DISTRIBUTION BOX = 371.55
INV. OUT OF DISTRIBUTION BOX = 371.45

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

2" SCH. 40 PVC = 62 LF
1 UNION @ 2 EQUIVALENT FEET = 2 LF
3 1/8 HB @ 4 EQUIVALENT FEET = 12 LF
TOTAL LINEAR FEET OF 2" SCH. 40 PVC = 76 LF

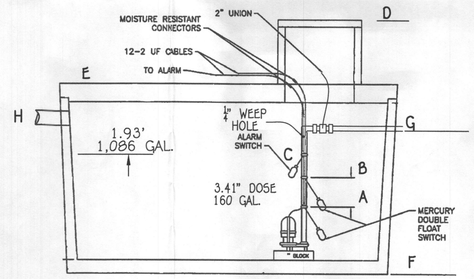
DYNAMIC HEAD

76 LF X 2.05 FT PER 100 LF OF 2" PIPE = 1.56 FT OF FRICTION HEAD
VERTICAL FROM PUMP OFF TO HIGH POINT IN PUMP CHAMBER = 1.87 FT OF HEAD
HIGH POINT IN PUMP CHAMBER TO HIGHEST ELEV OF SYSTEM = 7.24 FT (PUMP OUT IS THE HIGHEST POINT)
TOTAL DYNAMIC HEAD = 10.67 FT

1/6 DESIGN FLOW (900/6=150) PLUS VOLUME OF 2" PIPE (10 GALLONS)
USE 160 GALLON DOSE (150 GALLON MINIMUM)
RUN TIME = 3.64 MIN (44 GPM X 3.64 = 160 GALLON DOSE)

PUMP NEEDS TO HANDLE 44 GPM AT 10.67 FT OF HEAD
USE 0.3 HP (ZOELLER MODEL 151 PUMP)

PUMP ALARMS / INFORMATION
A PUMP OFF : 362.44'
B PUMP ON : 362.72'
C HIGH WATER ALARM : 363.22'
D TOP OF ACCESS COVER: 365.15'
E TOP OF TANK : 365.15'
F BOTTOM OF TANK : 360.61'
G DISCHARGE OUT OF TANK : 364.31'
H INVERT INTO TANK : 364.56'



ONE TWO CHAMBER 1,500-GAL SEPTIC TANK & ONE 1,500-GAL PUMP TANK
W/ ZOELLER BN151 PUMP OR EQUAL TO GRAVITY DISTRIBUTION FOR 6 BEDROOM SFD

PUMP TANK DETAIL IM-1530

1,086 GAL EMERGENCY STORAGE

NOTE: THIS DETAIL IS TO BE USED FOR FLOAT CONFIGURATION ONLY – SEE DETAIL ABOVE FOR TANK DIMENSIONS AND ACTUAL LOCATION OF ACCESS COVER.

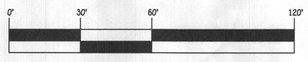
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

STATE OF MARYLAND · LUKE A. GROOM · 46091 · PROFESSIONAL ENGINEER

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. 46091, EXPIRATION DATE: 05/14/2025.

Signature Of Professional Engineer — DATE 2-12-24



SEPTIC INSTALL PLAN
1680 WOODSTOCK ROAD

ZONING: RC-DEO
TAX MAP No. 10 GRID No. 18 PARCEL No. 50
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEBRUARY, 2023