

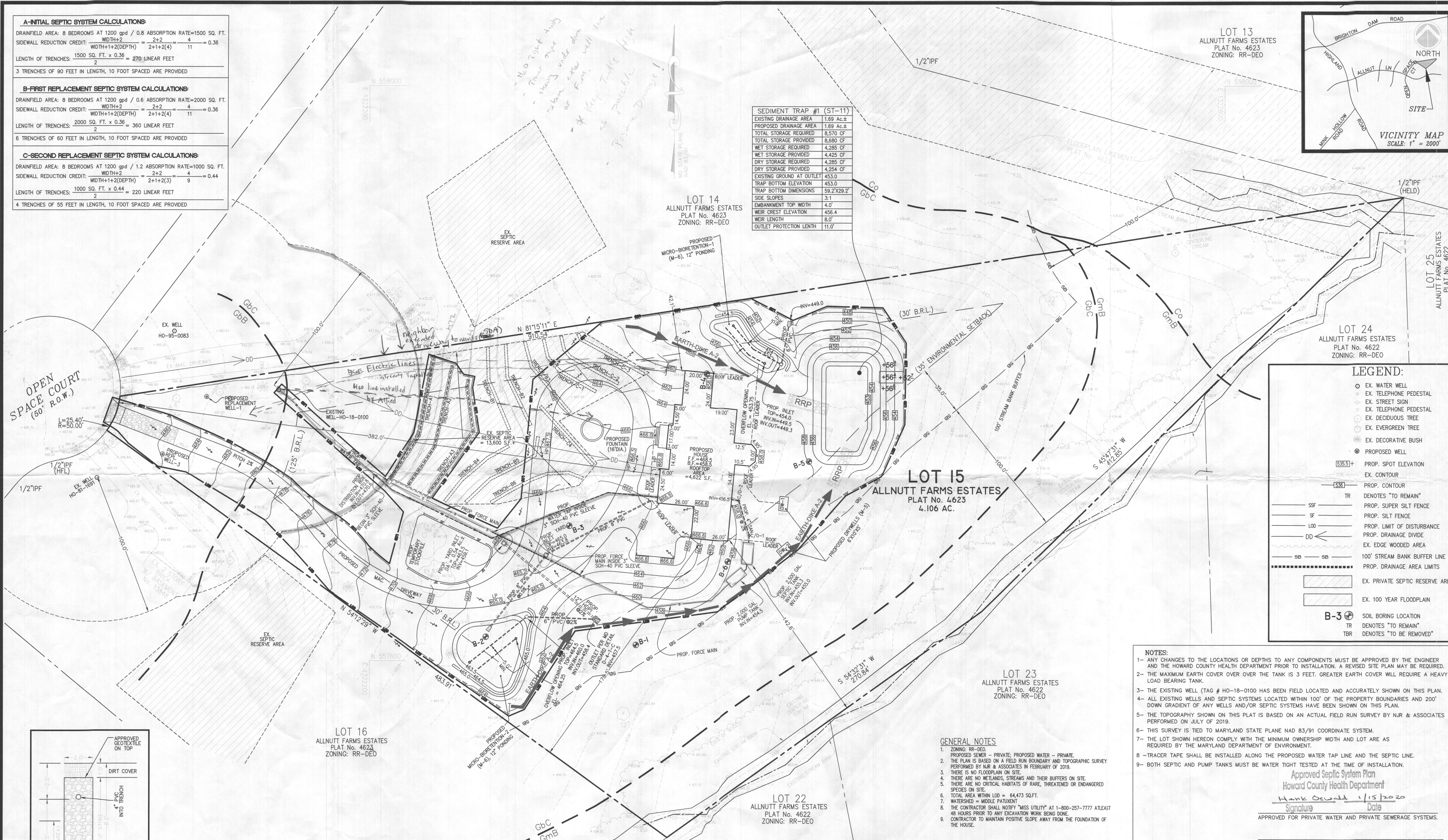
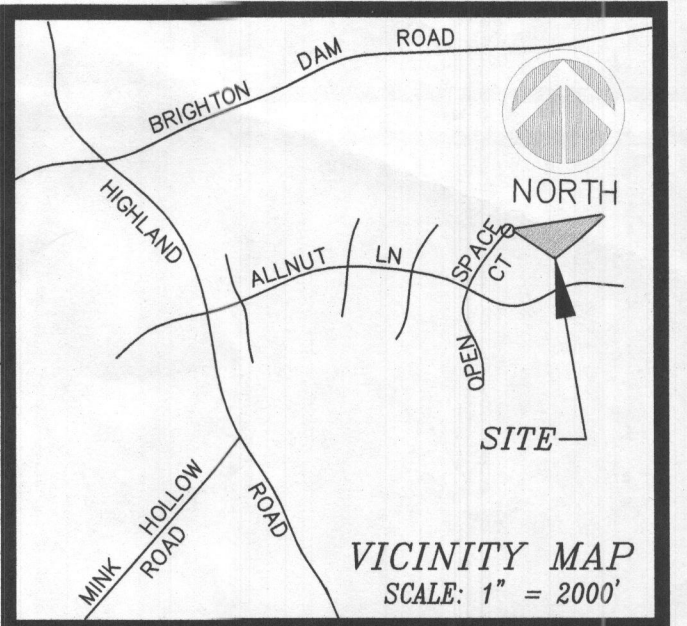
A-INITIAL SEPTIC SYSTEM CALCULATIONS:
 DRAINFIELD AREA: 8 BEDROOMS AT 1200 gpd / 0.8 ABSORPTION RATE=1500 SQ. FT.
 SIDEWALL REDUCTION CREDIT: $\frac{WIDTH+2}{2+2} \times \frac{4}{11} = 0.36$
 LENGTH OF TRENCHES: $\frac{1500 \text{ SQ. FT.} \times 0.36}{2} = 270 \text{ LINEAR FEET}$
 3 TRENCHES OF 90 FEET IN LENGTH, 10 FOOT SPACED ARE PROVIDED

B-FIRST REPLACEMENT SEPTIC SYSTEM CALCULATIONS:
 DRAINFIELD AREA: 8 BEDROOMS AT 1200 gpd / 0.6 ABSORPTION RATE=2000 SQ. FT.
 SIDEWALL REDUCTION CREDIT: $\frac{WIDTH+2}{2+2} \times \frac{4}{11} = 0.36$
 LENGTH OF TRENCHES: $\frac{2000 \text{ SQ. FT.} \times 0.36}{2} = 360 \text{ LINEAR FEET}$
 6 TRENCHES OF 60 FEET IN LENGTH, 10 FOOT SPACED ARE PROVIDED

C-SECOND REPLACEMENT SEPTIC SYSTEM CALCULATIONS:
 DRAINFIELD AREA: 8 BEDROOMS AT 1200 gpd / 1.2 ABSORPTION RATE=1000 SQ. FT.
 SIDEWALL REDUCTION CREDIT: $\frac{WIDTH+2}{2+2} \times \frac{4}{9} = 0.44$
 LENGTH OF TRENCHES: $\frac{1000 \text{ SQ. FT.} \times 0.44}{2} = 220 \text{ LINEAR FEET}$
 4 TRENCHES OF 55 FEET IN LENGTH, 10 FOOT SPACED ARE PROVIDED

SEDIMENT TRAP #1 (ST-11)

EXISTING DRAINAGE AREA	1.69 Ac.±
PROPOSED DRAINAGE AREA	1.69 Ac.±
TOTAL STORAGE REQUIRED	8,570 CF
TOTAL STORAGE PROVIDED	8,680 CF
WET STORAGE REQUIRED	4,285 CF
WET STORAGE PROVIDED	4,425 CF
DRY STORAGE REQUIRED	4,285 CF
DRY STORAGE PROVIDED	4,254 CF
EXISTING GROUND AT OUTLET	453.0
TRAP BOTTOM ELEVATION	453.0
TRAP BOTTOM DIMENSIONS	58.2'x29.2'
SIDE SLOPES	3:1
EMBANKMENT TOP WIDTH	4.0'
WEIR CREST ELEVATION	456.4
WEIR LENGTH	8.0'
OUTLET PROTECTION LENGTH	11.0'



LEGEND:

- EX. WATER WELL
- EX. TELEPHONE PEDESTAL
- EX. STREET SIGN
- EX. TELEPHONE PEDESTAL
- EX. DECIDUOUS TREE
- EX. EVERGREEN TREE
- EX. DECORATIVE BUSH
- PROPOSED WELL
- 555.51+ PROP. SPOT ELEVATION
- 555.1 PROP. CONTOUR
- TR DENOTES "TO REMAIN"
- SSF PROP. SUPER SILT FENCE
- SF PROP. SILT FENCE
- LOO PROP. LIMIT OF DISTURBANCE
- DD PROP. DRAINAGE DIVIDE
- EX. EDGE WOODED AREA
- SB-100' PROP. 100' STREAM BANK BUFFER LINE
- PROP. DRAINAGE AREA LIMITS
- EX. PRIVATE SEPTIC RESERVE AREA
- EX. 100 YEAR FLOODPLAIN
- B-3 SOIL BORING LOCATION
- TR DENOTES "TO REMAIN"
- TBR DENOTES "TO BE REMOVED"

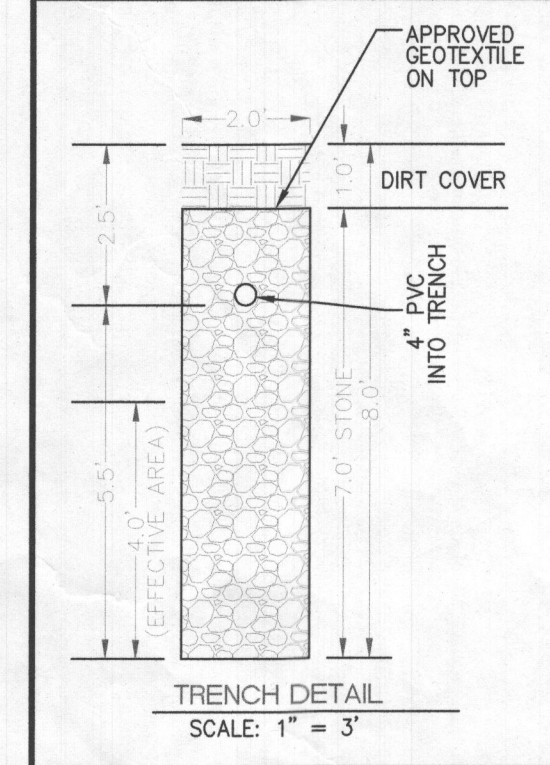
NOTES:

- ANY CHANGES 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.
- THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
- THE EXISTING WELL (TAG # HO-18-0100 HAS BEEN FIELD LOCATED AND ACCURATELY SHOWN ON THIS PLAN.
- ALL EXISTING 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 ON THIS PLAN.
- THE TOPOGRAPHY SHOWN ON THIS PLAN IS BASED ON AN ACTUAL FIELD RUN SURVEY BY NJR & ASSOCIATES PERFORMED ON JULY OF 2019.
- THIS SURVEY IS TIED TO MARYLAND STATE PLANE NAD 83/91 COORDINATE SYSTEM.
- THE LOT SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT.
- TRACER TAPE SHALL BE INSTALLED ALONG THE PROPOSED WATER TAP LINE AND THE SEPTIC LINE.
- BOTH SEPTIC AND PUMP TANKS MUST BE WATER TIGHT TESTED AT THE TIME OF INSTALLATION.

Approved Septic System Plan
 Howard County Health Department
 Hank Oswald 1/15/2020
 Signature Date
 APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS.
 HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT. DATE

GENERAL NOTES:

- ZONING: RR-DEO.
- PROPOSED SEWER - PRIVATE; PROPOSED WATER - PRIVATE.
- THE PLAN IS BASED ON A FIELD RUN BOUNDARY AND TOPOGRAPHIC SURVEY PERFORMED BY NJR & ASSOCIATES IN FEBRUARY OF 2019.
- THERE IS NO FLOODPLAIN ON SITE.
- THERE ARE NO WETLANDS, STREAMS AND THEIR BUFFERS ON SITE.
- THERE ARE NO CRITICAL HABITATS OF RARE, THREATENED OR ENDANGERED SPECIES ON SITE.
- TOTAL AREA WITHIN LOD = 64,473 SQ.FT.
- WATERSHED = MIDDLE PATENT
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 ATLEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- CONTRACTOR TO MAINTAIN POSITIVE SLOPE AWAY FROM THE FOUNDATION OF THE HOUSE.



TRENCH INFO, INITIAL SYSTEM

TRENCH	TRENCH LENGTH	EX. TOP OF GROUND	TOP OF GRAVEL	INV. INTO TRENCH	BOTTOM OF TRENCH
A-1	90'	472.8±	471.8	470.3	464.8
A-2	90'	471.5±	470.5	469.0	463.5
A-3	90'	470.2±	469.2	467.7	462.2

SOIL TABLE

SYMBOL	NAME/DESCRIPTION	TYPE	HYDROLOGIC
ObB	Gladstone loam, 8 to 8% slope	A	No
ObC	Gladstone loam, 8 to 15% slope	A	No
GmB	Glenville silt loam, 3 to 8% slope	C/D	Yes
Co	Codorus and Habtoro silt loam 0 to 3% slope	C	Yes

MISS-UTILITY NOTE:
 1. CONTACT MISS-UTILITY 72 HOURS BEFORE ANY TRENCHING, (800) 257 - 7777.

PLAN PREPARED BY:
NJR & ASSOCIATES
 Land Surveying and Planning
 2770 STATE ROUTE 32
 WEST FRIENDSHIP, MD 21794
 TEL: (240) 508-3200

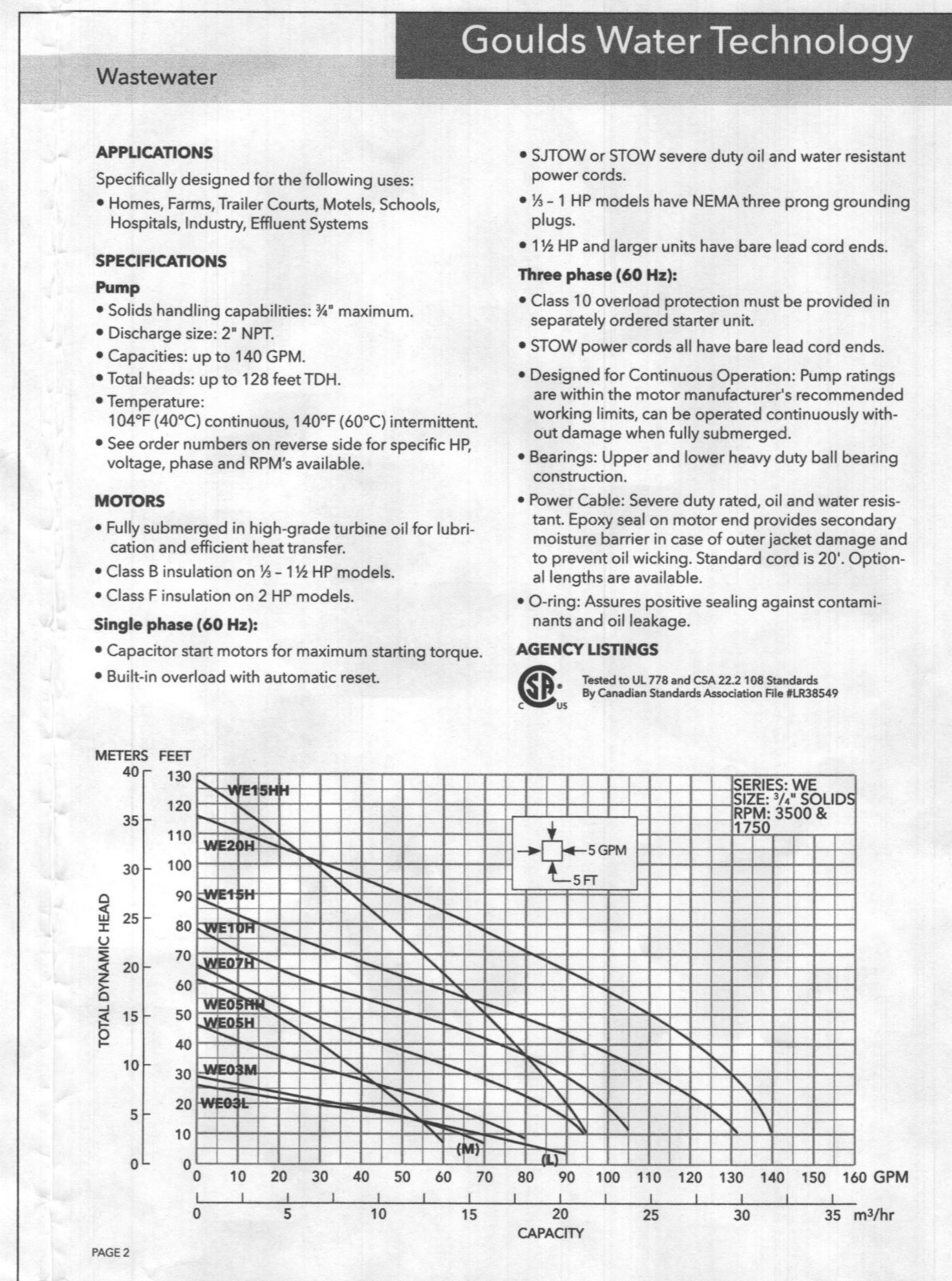
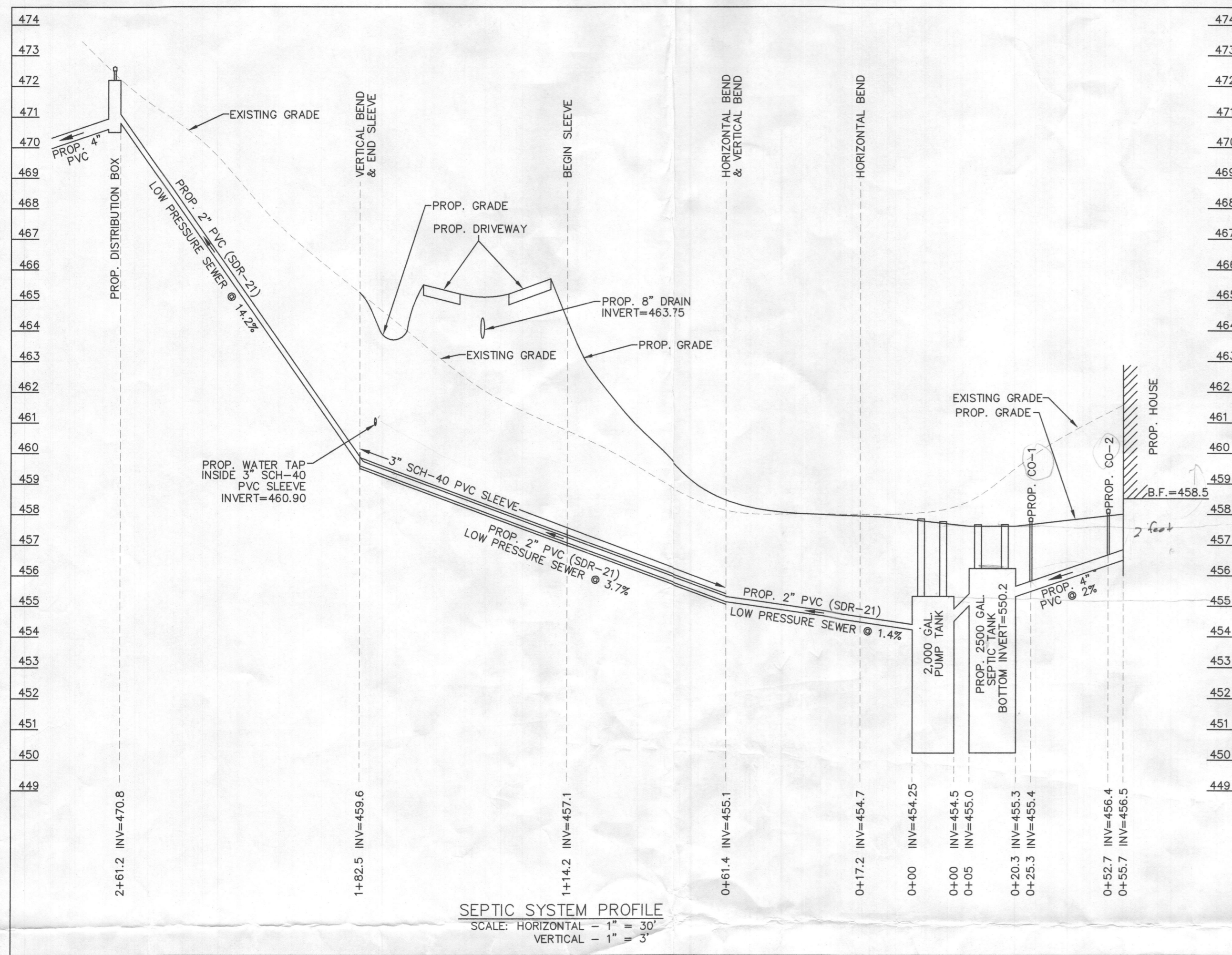
PROFESSIONAL CERTIFICATION:
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE # 11046, EXPIRATION DATE: 2/10/2021.
 January 7, 2020
 DATE

DEVELOPER:
 CARUSO HOMES
 2120 BALDWIN AVENUE, Ste 200
 CROFTON, MD 21144
 (301) 261-0277

OWNER:
 PAUL & ROSAMEE WOLF
 7020 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MD 21046
 (214) 587-2423

ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN
ALLNUT FARM ESTATES, SECTION-4
LOTS 15
 PLAT No. 4623
 13488 OPEN SPACE COURT, HIGHLAND, MD 20777
 TAX MAP 34, GRID 15, PARCEL 375
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: 1" = 30' JOB NO.: 3534 DATE: AUGUST 8, 2019 SHEET: 1 OF 2



PUMP CAPACITY CALCULATIONS

DOSE = 150 g
2" PVC MAIN f = 3.98' / 100'

FORCE MAIN VOLUME:
FORCE MAIN (2") 261.2 X 17.4 GAL/100 LF. = 45.5 GALS.

PUMP CHAMBER:
ONE DAY DOSE = 1,200 GALLONS

TDH: (FITTINGS)

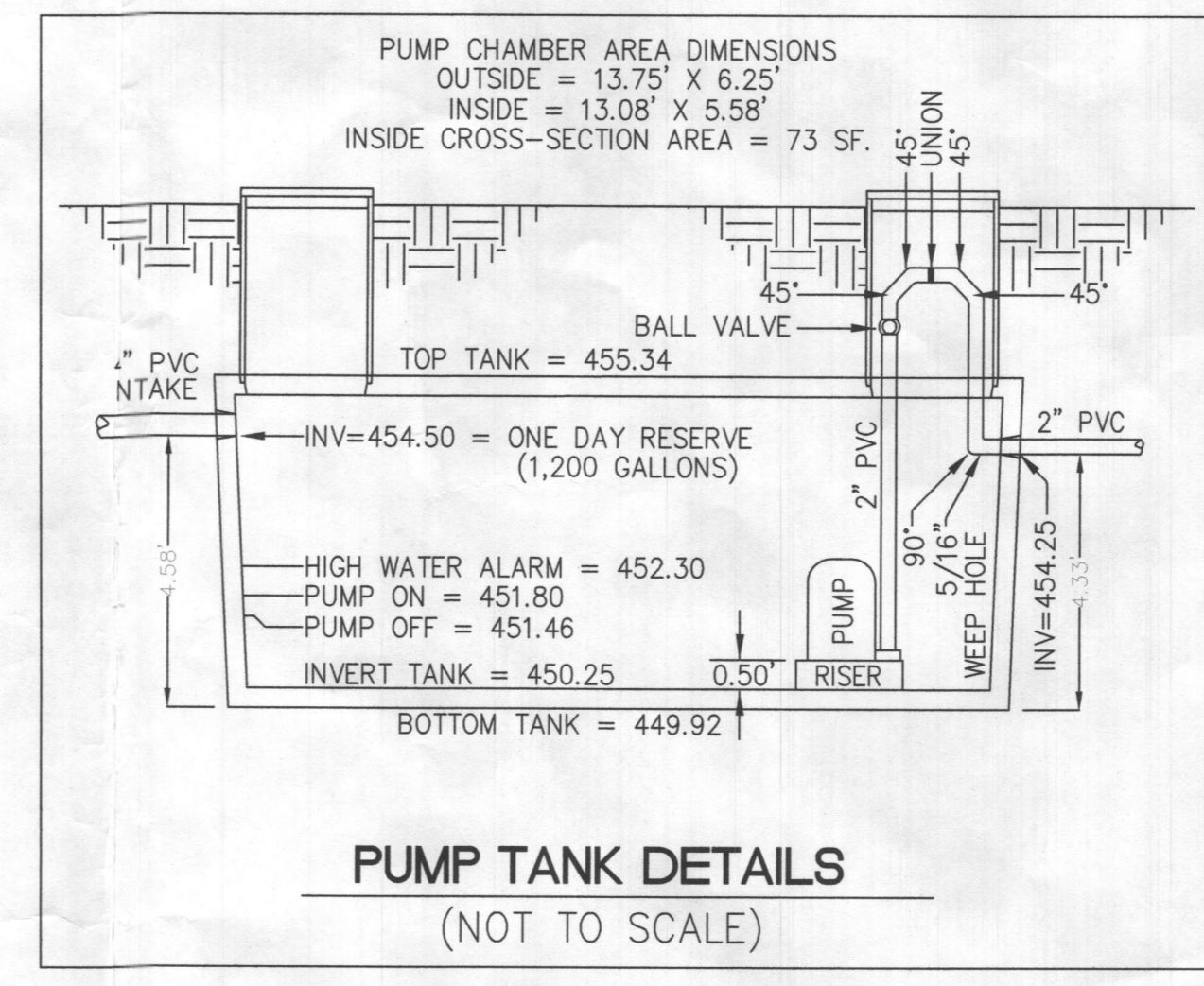
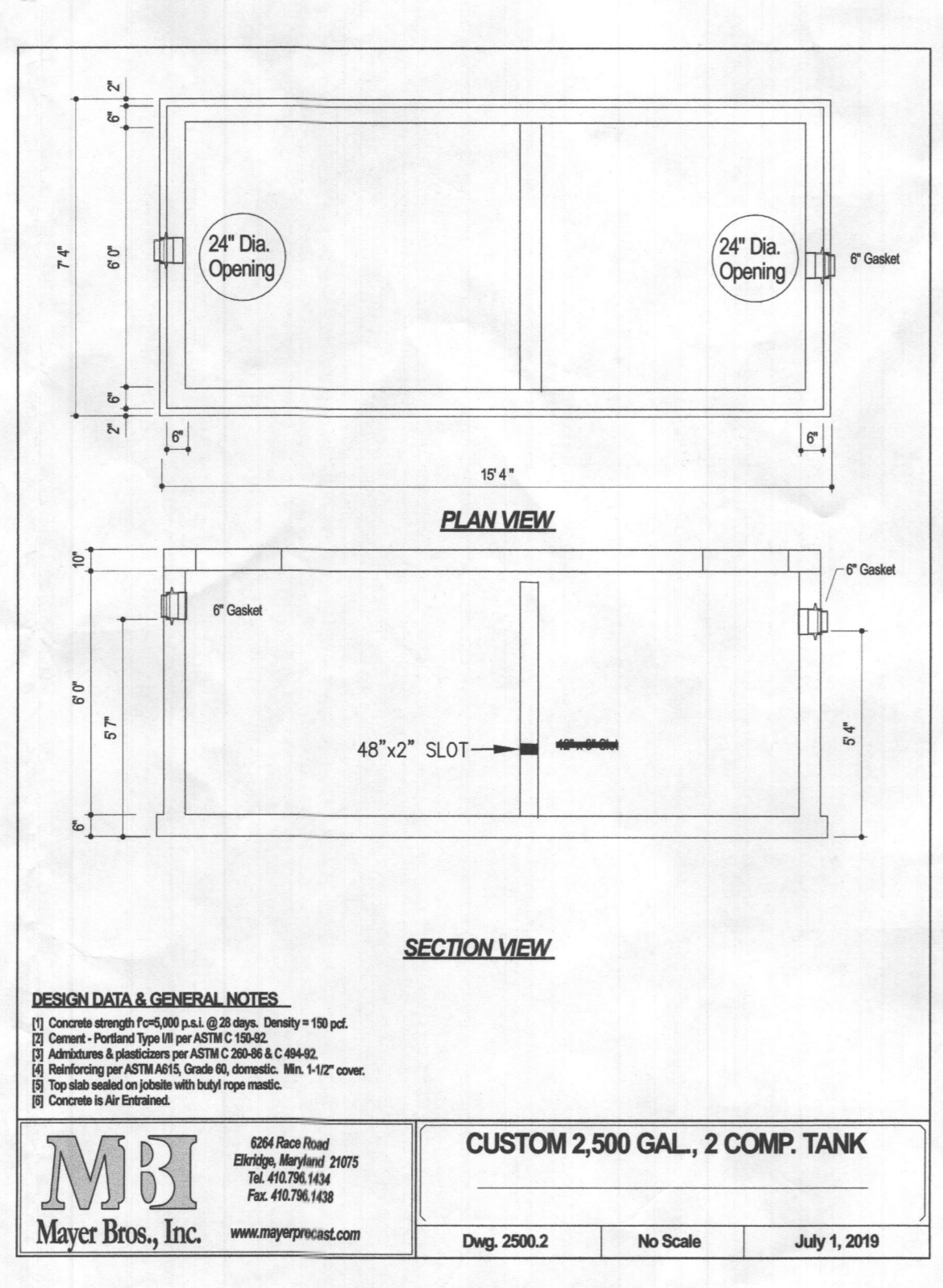
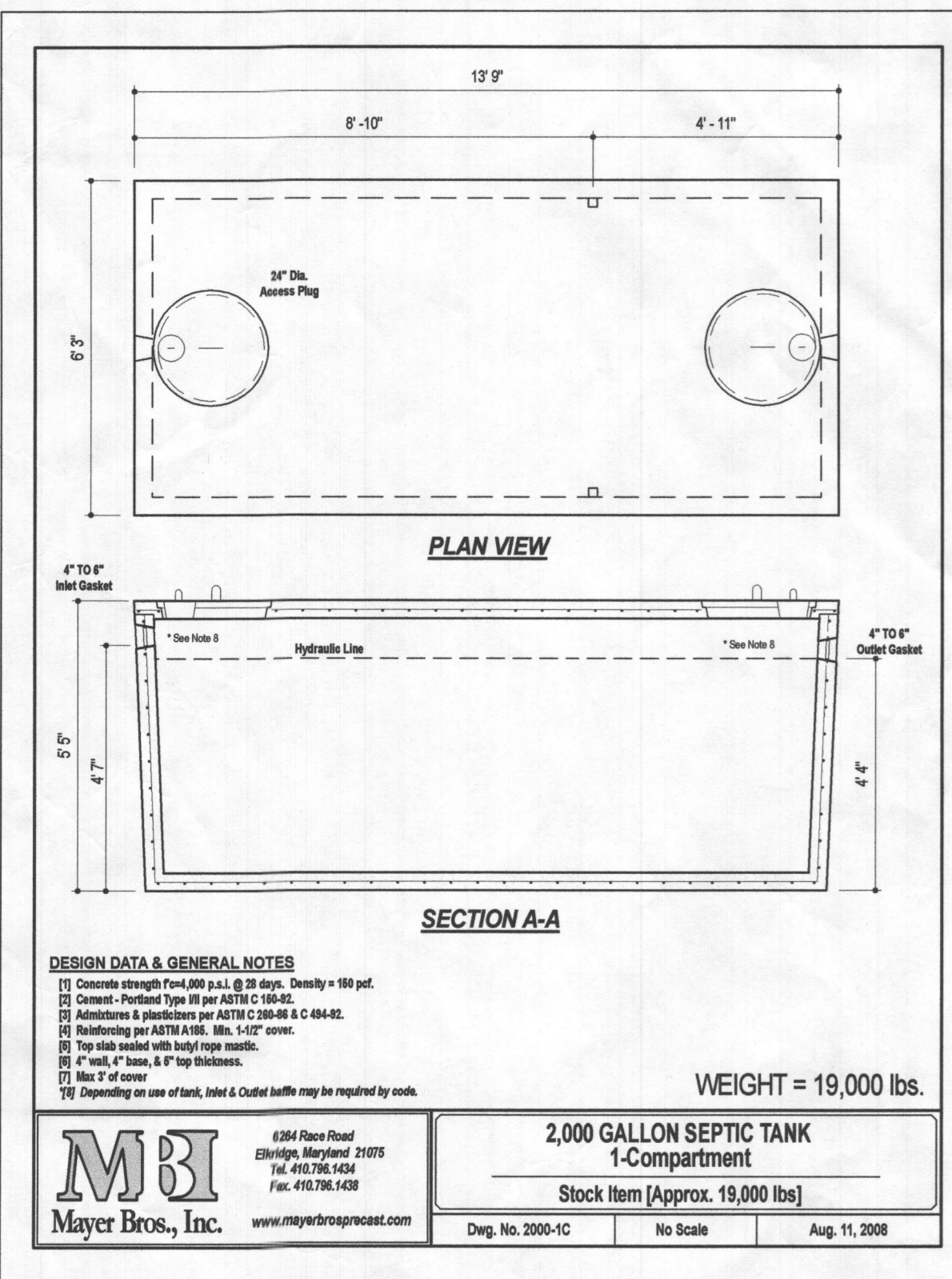
DISCONNECT :	1 X 2.0	= 2.0
45° :	6 X 4.0	= 24.0
90° :	1 X 10.0	= 10.0
TOTAL		= 36.0

FRICITION:
MAIN + FITTINGS = 261.2 + 36.0 = 297.2
297.2 (3.98/100) = 11.83

STATIC:
(INVERT IN, DISTRIBUTION BOX - PUMP OFF) 470.80 - 451.46 = 19.34

TDH (TOTAL DYNAMIC HEAD) (11.83 + 19.34) = 31.17
RT (PUMP RUN TIME) (2.5-3 MINUTES @ 75 GPM)

USE GOULDS PUMP MODEL (WE07H)



NOTES:

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- TRACER TAPE SHALL BE INSTALLED ALONG THE PROPOSED WATER TAP LINE AND THE SEPTIC LINE.
- BOTH SEPTIC AND PUMP TANKS MUST BE WATER TIGHT TESTED AT THE TIME OF INSTALLATION.

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS.

HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT. DATE

PAN PREPARED BY:

NJR & ASSOCIATES
Land Surveying and Planning
2770 STATE ROUTE 32
WEST FRIENDSHIP, MD 21794
TEL: (240) 508-3200

PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE # 11049, EXPIRATION DATE: 2/10/2021.
January 7, 2020
DATE

DEVELOPER
CARUSO HOMES
2120 BALDWIN AVENUE, Ste 200
CROFTON, MD 21114
(301) 261-0277

OWNER
PAUL & ROSAMÉE WOLF
7020 COLUMBIA GATEWAY DRIVE
COLUMBIA, MD 21046
(214) 587-2423

ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN
ALLNUT FARM ESTATES, SECTION-4
LOTS 15
PLAT No. 4623
13488 OPEN SPACE COURT, HIGHLAND, MD 20777
TAX MAP 34, GRID 15, PARCEL 375
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: 1" = 30' JOB NO.: 3534 DATE: AUGUST 8, 2019 SHEET: 2 OF 2

A-INITIAL SEPTIC SYSTEM CALCULATIONS

DRAINFIELD AREA: 6 BEDROOMS AT 900 gpd / 0.8 ABSORPTION RATE=1125 SQ. FT.
 SIDEWALL REDUCTION CREDIT: $\frac{WIDTH+2}{2+1+2(4)} = \frac{4}{11} = 0.36$
 LENGTH OF TRENCHES: $\frac{1125 \text{ SQ. FT.} \times 0.36}{2} = 202.5 \text{ LINEAR FEET}$
 3 TRENCHES OF 68 FEET IN LENGTH, 10 FOOT SPACED ARE PROVIDED

B-FIRST REPLACEMENT SEPTIC SYSTEM CALCULATIONS

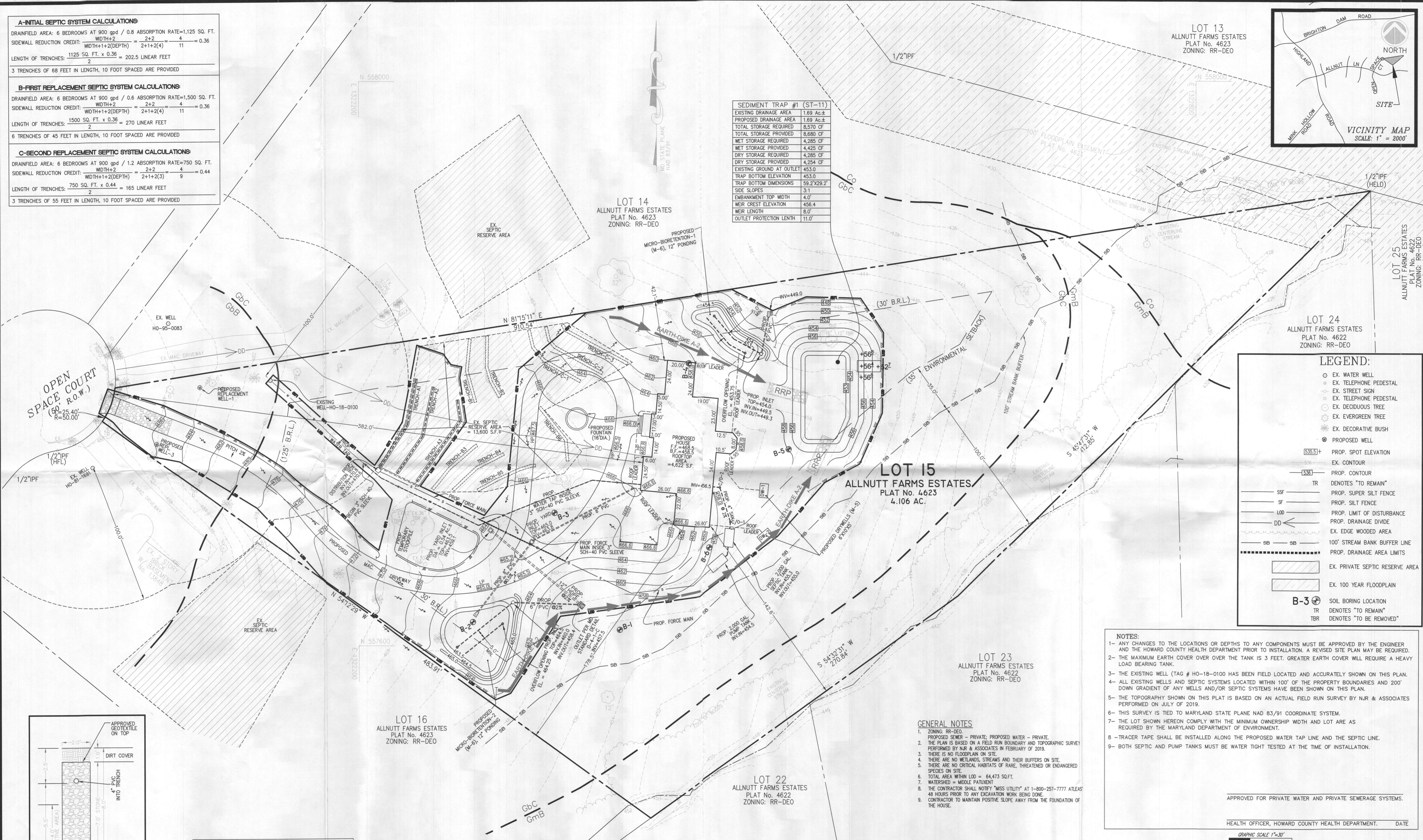
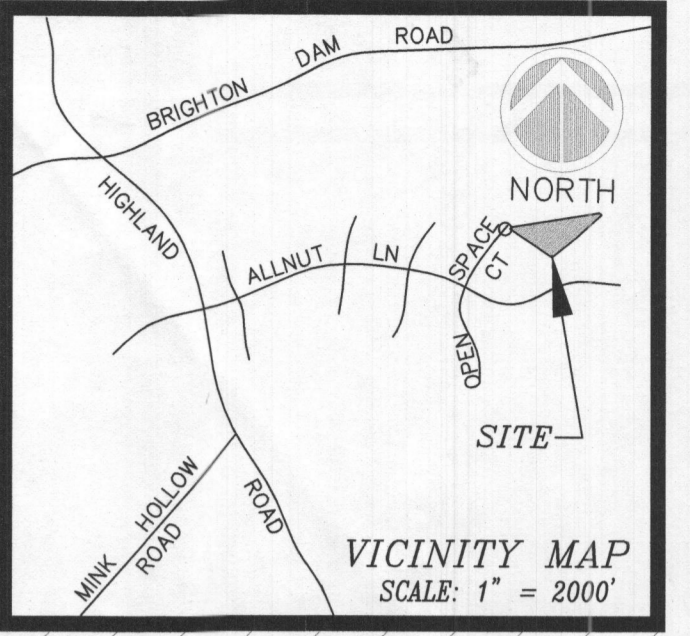
DRAINFIELD AREA: 6 BEDROOMS AT 900 gpd / 0.6 ABSORPTION RATE=1500 SQ. FT.
 SIDEWALL REDUCTION CREDIT: $\frac{WIDTH+2}{2+1+2(4)} = \frac{4}{11} = 0.36$
 LENGTH OF TRENCHES: $\frac{1500 \text{ SQ. FT.} \times 0.36}{2} = 270 \text{ LINEAR FEET}$
 6 TRENCHES OF 45 FEET IN LENGTH, 10 FOOT SPACED ARE PROVIDED

C-SECOND REPLACEMENT SEPTIC SYSTEM CALCULATIONS

DRAINFIELD AREA: 6 BEDROOMS AT 900 gpd / 1.2 ABSORPTION RATE=750 SQ. FT.
 SIDEWALL REDUCTION CREDIT: $\frac{WIDTH+2}{2+1+2(3)} = \frac{4}{9} = 0.44$
 LENGTH OF TRENCHES: $\frac{750 \text{ SQ. FT.} \times 0.44}{2} = 165 \text{ LINEAR FEET}$
 3 TRENCHES OF 55 FEET IN LENGTH, 10 FOOT SPACED ARE PROVIDED

SEDIMENT TRAP #1 (ST-11)

EXISTING DRAINAGE AREA 1.89 AC.±
 PROPOSED DRAINAGE AREA 1.89 AC.±
 TOTAL STORAGE REQUIRED 8,570 CF
 TOTAL STORAGE PROVIDED 8,880 CF
 WET STORAGE REQUIRED 4,285 CF
 WET STORAGE PROVIDED 4,425 CF
 DRY STORAGE REQUIRED 4,285 CF
 DRY STORAGE PROVIDED 4,254 CF
 EXISTING GROUND AT OUTLET 453.0
 TRAP BOTTOM ELEVATION 453.0
 TRAP BOTTOM DIMENSIONS 59.2'X29.2'
 SIDE SLOPES 3:1
 EMBANKMENT TOP WIDTH 4.0'
 WEIR CREST ELEVATION 456.4
 WEIR LENGTH 8.0'
 OUTLET PROTECTION LENGTH 11.0'

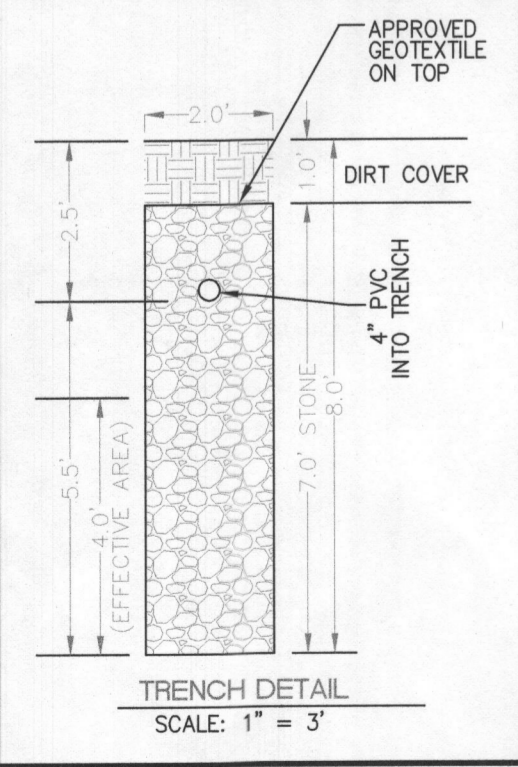


LEGEND:

- EX. WATER WELL
- EX. TELEPHONE PEDESTAL
- EX. STREET SIGN
- EX. TELEPHONE PEDESTAL
- EX. DECIDUOUS TREE
- EX. EVERGREEN TREE
- EX. DECORATIVE BUSH
- PROPOSED WELL
- 555.51+ PROP. SPOT ELEVATION
- 538 EX. CONTOUR
- TR PROP. CONTOUR
- SSF PROP. SUPER SILT FENCE
- SF PROP. SILT FENCE
- LOD PROP. LIMIT OF DISTURBANCE
- DD PROP. DRAINAGE DIVIDE
- SB EX. EDGE WOODED AREA
- SB 100' STREAM BANK BUFFER LINE
- PROP. DRAINAGE AREA LIMITS
- EX. PRIVATE SEPTIC RESERVE AREA
- EX. 100 YEAR FLOODPLAIN
- B-3 SOIL BORING LOCATION
- TR DENOTES "TO REMAIN"
- TBR DENOTES "TO BE REMOVED"

- NOTES:**
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- GENERAL NOTES**
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 - PROPOSED SEWER - PRIVATE; PROPOSED WATER - PRIVATE.
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 - WATERSHED = MIDDLE PATUXENT
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 - CONTRACTOR TO MAINTAIN POSITIVE SLOPE AWAY FROM THE FOUNDATION OF THE HOUSE.



TRENCH INFO, INITIAL SYSTEM

TRENCH	TRENCH LENGTH	EX. TOP OF GROUND	TOP OF GRAVEL	INV. INTO TRENCH	BOTTOM OF TRENCH
A-1	90'	472.84	471.9	470.3	464.8
A-2	90'	471.54	470.5	469.0	463.5
A-3	90'	470.24	469.2	467.7	462.2

SOIL TABLE

SYMBOL	NAME/DESCRIPTION	TYPE	HYDROLIC
GbB	Gladstone loam, 3 to 8% slope	A	No
GbC	Gladstone loam, 8 to 15% slope	A	No
GmB	Glenville silt loam, 3 to 8% slope	C/D	Yes
Co	Codorus and Harbor silt loam 0 to 3% slope	C	Yes

MISS-UTILITY NOTE:

- CONTACT MISS-UTILITY 72 HOURS BEFORE ANY TRENCHING, (800) 257 - 7777.

PLAN PREPARED BY:

NJR & ASSOCIATES
 Land Surveying and Planning
 2770 STATE ROUTE 32
 WEST FRIENDSHIP, MD 21794
 TEL: (240) 508-3200

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September 17, 2020
 DATE

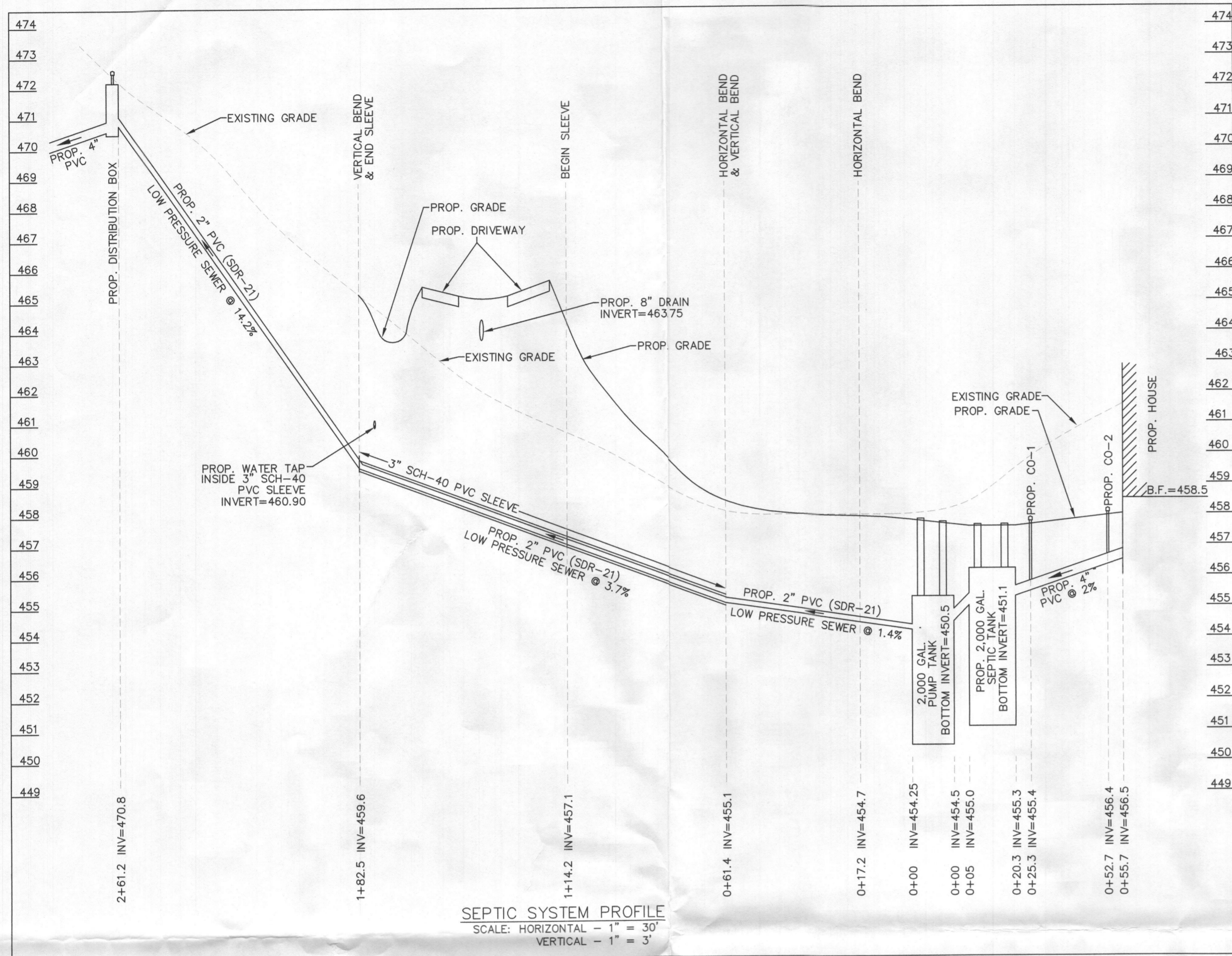
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 (301) 261-0277

OWNER
 PAUL & ROSAMÉE WOLF
 7020 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MD 21046
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ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN
ALLNUT FARM ESTATES, SECTION-4
LOTS 15

PLAT No. 4623
 13488 OPEN SPACE COURT, HIGHLAND, MD 20777
 TAX MAP 34, GRID 15, PARCEL 375
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: 1" = 30' JOB NO.: 3534 DATE: AUGUST 8, 2019 SHEET: 1 OF 2



Goulds Water Technology

Wastewater

APPLICATIONS
Specifically designed for the following uses:
• Homes, Farms, Trailer Courts, Motels, Schools, Hospitals, Industry, Effluent Systems

SPECIFICATIONS
Pump
• Solids handling capabilities: 3/4\" maximum.
• Discharge size: 2\" NPT.
• Capacities: up to 140 GPM.
• Total heads: up to 128 feet TDH.
• Temperature: 104°F (40°C) continuous, 140°F (60°C) intermittent.
• See order numbers on reverse side for specific HP, voltage, phase and RPM's available.

MOTORS
• Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.
• Class B insulation on 1/2 - 1 1/2 HP models.
• Class F insulation on 2 HP models.

Single phase (60 Hz):
• Capacitor start motors for maximum starting torque.
• Built-in overload with automatic reset.

Three phase (60 Hz):
• Class 10 overload protection must be provided in separately ordered starter unit.
• STOW power cords all have bare lead cord ends.
• Designed for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.
• Bearings: Upper and lower heavy duty ball bearing construction.
• Power Cable: Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.
• O-ring: Assures positive sealing against contaminants and oil leakage.

AGENCY LISTINGS
Listed to UL 778 and CSA 22.2 108 Standards
By Canadian Standards Association File #438549

PUMP CAPACITY CALCULATIONS

DOSE = 150 gpm
2\" PVC MAIN f = 3.98' / 100'

FORCE MAIN VOLUME:
FORCE MAIN (2\") 261.2 X 17.4 GAL/100 LF. = 45.5 GALS.

PUMP CHAMBER:
ONE DAY DOSE = 1,200 GALLONS

TDH: (FITTINGS)

DISCONNECT :	1 X 2.0	= 2.0
45'	6 X 4.0	= 24.0
90'	1 X 10.0	= 10.0
	TOTAL	= 36.0

FRICITION:
MAIN + FITTINGS = 261.2 + 36.0 = 297.2
297.2 (3.98/100) = 11.83

STATIC:
(INVERT IN DISTRIBUTION BOX - PUMP OFF) 470.90 - 451.46 = 19.34

TDH (TOTAL DYNAMIC HEAD) (11.83 + 19.34) = 31.17 @ 150 GPM
RT (PUMP RUN TIME) (2.5-3 MINUTES @ 75 GPM)

USE GOULDS PUMP MODEL (WE07H)

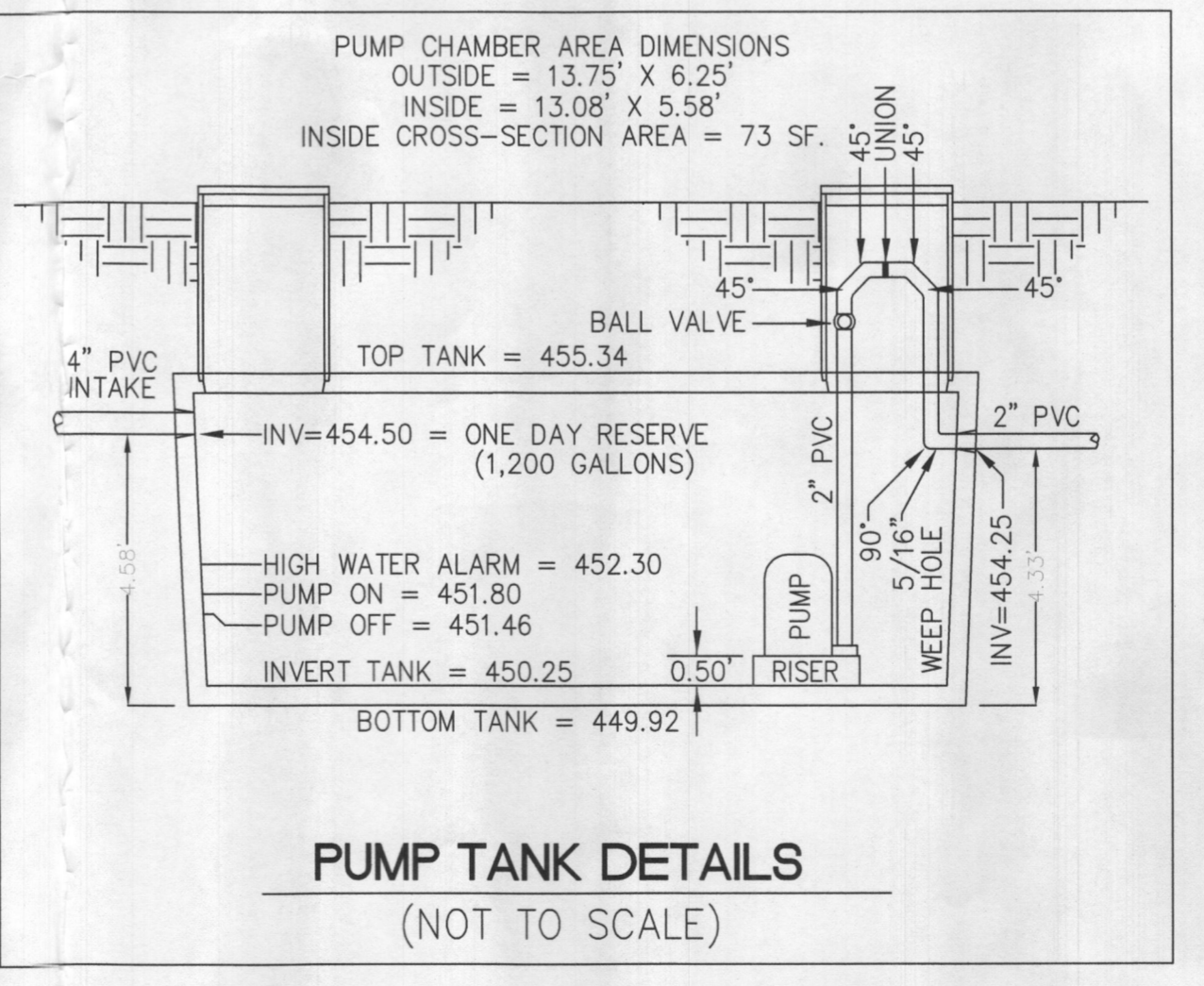
**2,000 GALLON SEPTIC TANK
1-Compartment**

Stock Item (Approx. 19,000 lbs)

Dwg. No. 2000-1C No Scale Aug. 11, 2008

**2,000 GALLON SEPTIC TANK
2-Compartment**

Stock Item (Approx. 19,900 lbs)



NOTES:

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APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS.

HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT. DATE

PLAN PREPARED BY:

NJR & ASSOCIATES
Land Surveying and Planning

2770 STATE ROUTE 32
WEST FRIENDSHIP, MD 21794
TEL: (240) 508-3200

PROFESSIONAL CERTIFICATION:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE # 11049, EXPIRATION DATE: 2/10/2021.

September 17, 2020
DATE

DEVELOPER
CARUSO HOMES
2120 BALDWIN AVENUE, Ste 200
CROFTON, MD 21144
(301) 261-0277

OWNER
PAUL & ROSAMEE WOLF
7020 COLUMBIA GATEWAY DRIVE
COLUMBIA, MD 21046
(214) 587-2423

ONSITE SEWAGE DISPOSAL SYSTEM DESIGN PLAN
ALLNUT FARM ESTATES, SECTION-4
LOTS 15
PLAT No. 4623

13488 OPEN SPACE COURT, HIGHLAND, MD 20777
TAX MAP 34, GRID 15, PARCEL 375
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: 1" = 30' JOB NO.: 3534 DATE: AUGUST 8, 2019 SHEET: 2 OF 2

A-INITIAL SEPTIC SYSTEM CALCULATIONS

DRAINFIELD AREA: 6 BEDROOMS AT 900 gpd / 0.8 ABSORPTION RATE=1,125 SQ. FT.
 SIDEWALL REDUCTION CREDIT: $\frac{WDTH+2}{WDTH+1+2(DEPTH)} = \frac{2+2}{2+1+2(4)} = \frac{4}{11} = 0.36$
 LENGTH OF TRENCHES: $\frac{1125 \text{ SQ. FT.} \times 0.36}{2} = 202.5 \text{ LINEAR FEET}$
 3 TRENCHES OF 68 FEET IN LENGTH, 10 FOOT SPACED ARE PROVIDED

B-FIRST REPLACEMENT SEPTIC SYSTEM CALCULATIONS

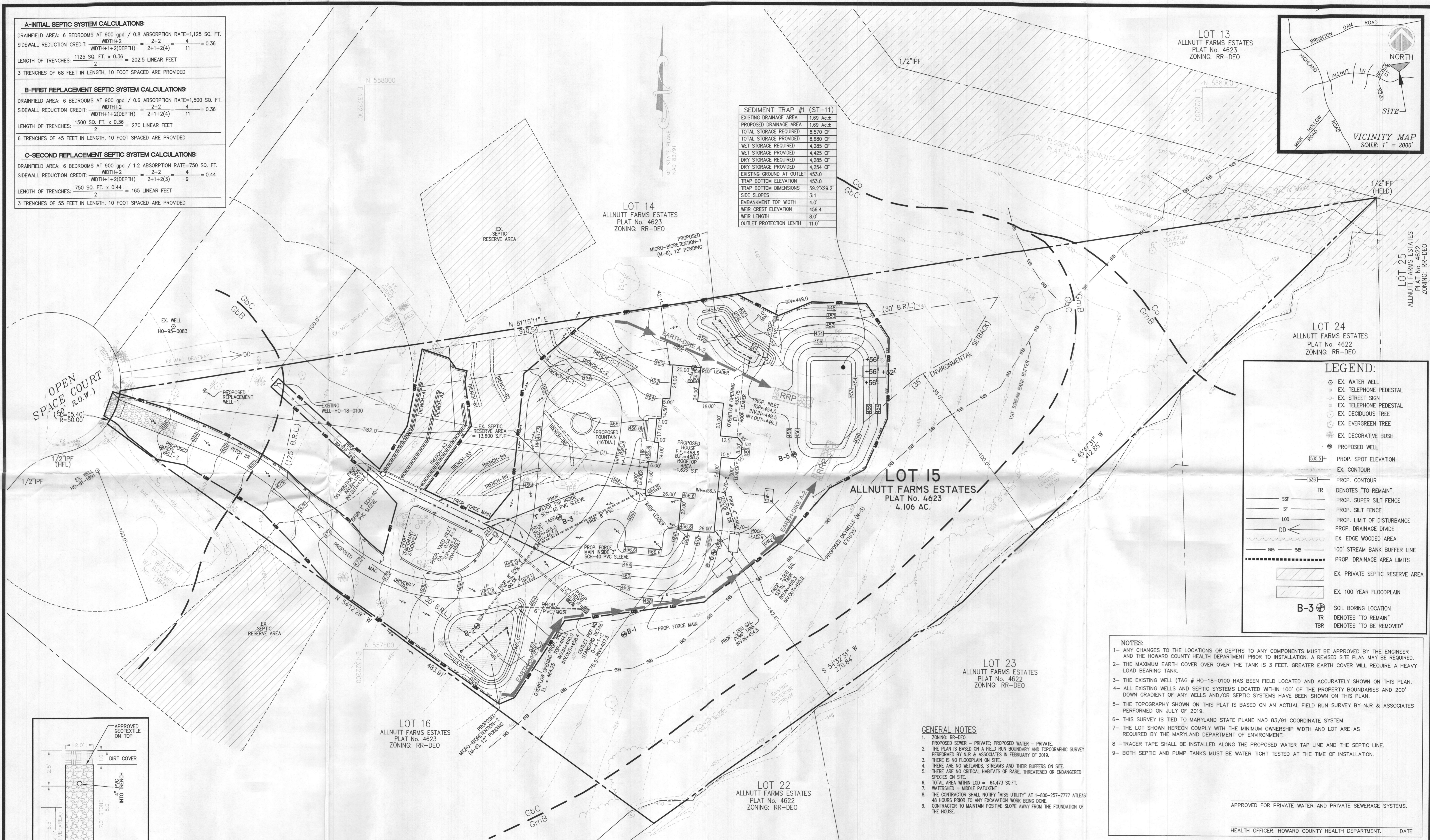
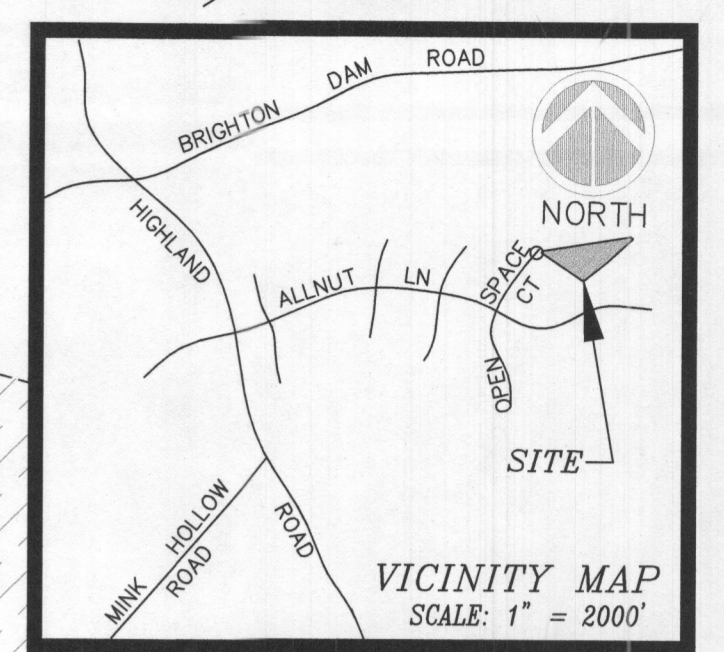
DRAINFIELD AREA: 6 BEDROOMS AT 900 gpd / 0.6 ABSORPTION RATE=1,500 SQ. FT.
 SIDEWALL REDUCTION CREDIT: $\frac{WDTH+2}{WDTH+1+2(DEPTH)} = \frac{2+2}{2+1+2(4)} = \frac{4}{11} = 0.36$
 LENGTH OF TRENCHES: $\frac{1500 \text{ SQ. FT.} \times 0.36}{2} = 270 \text{ LINEAR FEET}$
 6 TRENCHES OF 45 FEET IN LENGTH, 10 FOOT SPACED ARE PROVIDED

C-SECOND REPLACEMENT SEPTIC SYSTEM CALCULATIONS

DRAINFIELD AREA: 6 BEDROOMS AT 900 gpd / 1.2 ABSORPTION RATE=750 SQ. FT.
 SIDEWALL REDUCTION CREDIT: $\frac{WDTH+2}{WDTH+1+2(DEPTH)} = \frac{2+2}{2+1+2(3)} = \frac{4}{9} = 0.44$
 LENGTH OF TRENCHES: $\frac{750 \text{ SQ. FT.} \times 0.44}{2} = 165 \text{ LINEAR FEET}$
 3 TRENCHES OF 55 FEET IN LENGTH, 10 FOOT SPACED ARE PROVIDED

SEDIMENT TRAP #1 (ST-11)

EXISTING DRAINAGE AREA	1.69 AC.±
PROPOSED DRAINAGE AREA	1.69 AC.±
TOTAL STORAGE REQUIRED	8,370 CF
TOTAL STORAGE PROVIDED	8,680 CF
WET STORAGE REQUIRED	4,285 CF
WET STORAGE PROVIDED	4,425 CF
DRY STORAGE REQUIRED	4,285 CF
DRY STORAGE PROVIDED	4,254 CF
EXISTING GROUND AT OUTLET	453.0
TRAP BOTTOM ELEVATION	453.0
TRAP BOTTOM DIMENSIONS	59.2'X29.2'
SIDE SLOPES	3:1
EMBANKMENT TOP WIDTH	4.0'
WEIR CREST ELEVATION	456.4
WEIR LENGTH	8.0'
OUTLET PROTECTION LENGTH	11.0'



LEGEND:

- EX. WATER WELL
- EX. TELEPHONE PEDESTAL
- EX. STREET SIGN
- EX. TELEPHONE PEDESTAL
- EX. DECIDUOUS TREE
- EX. EVERGREEN TREE
- EX. DECORATIVE BUSH
- PROPOSED WELL
- 535.5+ PROP. SPOT ELEVATION
- 536 PROP. CONTOUR
- TR DENOTES "TO REMAIN"
- SSF PROP. SUPER SILT FENCE
- SF PROP. SILT FENCE
- LOD PROP. LIMIT OF DISTURBANCE
- DD PROP. DRAINAGE DIVIDE
- SB EX. EDGE WOODED AREA
- SB 100' STREAM BANK BUFFER LINE
- PROP. DRAINAGE AREA LIMITS
- EX. PRIVATE SEPTIC RESERVE AREA
- EX. 100 YEAR FLOODPLAIN
- B-3 SOIL BORING LOCATION
- TR DENOTES "TO REMAIN"
- TBR DENOTES "TO BE REMOVED"

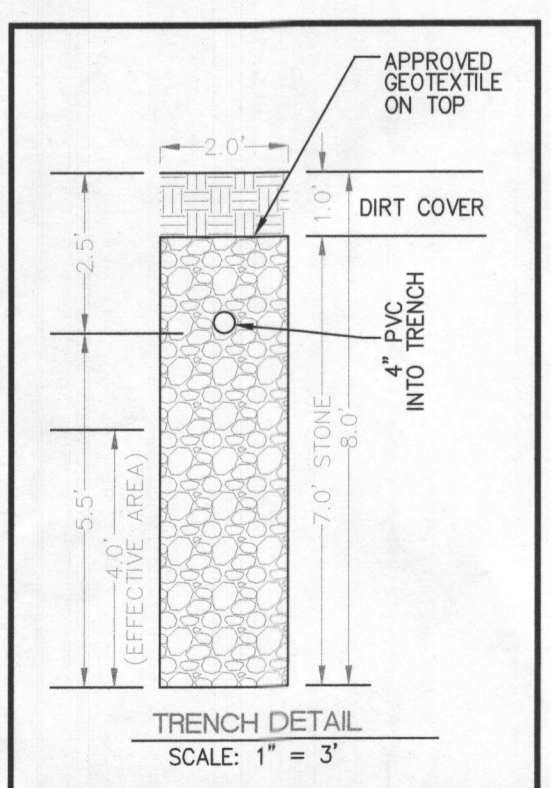
NOTES:

- ANY CHANGES 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.
- THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
- THE EXISTING WELL (TAG # HO-18-0100 HAS BEEN FIELD LOCATED AND ACCURATELY SHOWN ON THIS PLAN.
- ALL EXISTING 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 ON THIS PLAN.
- THE TOPOGRAPHY SHOWN ON THIS PLAN IS BASED ON AN ACTUAL FIELD RUN SURVEY BY NJR & ASSOCIATES PERFORMED ON JULY OF 2019.
- THIS SURVEY IS TIED TO MARYLAND STATE PLANE NAD 83/91 COORDINATE SYSTEM.
- THE LOT SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT ARE AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT.
- TRACER TAPE SHALL BE INSTALLED ALONG THE PROPOSED WATER TAP LINE AND THE SEPTIC LINE.
- BOTH SEPTIC AND PUMP TANKS MUST BE WATER TIGHT TESTED AT THE TIME OF INSTALLATION.

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS.

HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT. DATE

OPEN SPACE COURT
 (50' x 5.40')
 R=50.00'



TRENCH INFO, INITIAL SYSTEM

TRENCH	TRENCH LENGTH OF GROUND	EX. TOP GRAVEL	TOP OF GRAVEL	INV. INTO TRENCH	BOTTOM OF TRENCH
A-1	90'	472.8±	471.8	470.3	464.8
A-2	90'	471.5±	470.5	469.0	463.5
A-3	90'	470.2±	469.2	467.7	462.2

SOIL TABLE

SYMBOL	NAME/DESCRIPTION	TYPE	HYDROLIC
GbB	Gladstone loam, 3 to 8% slope	A	No
GbC	Gladstone loam, 8 to 15% slope	A	No
GmB	Glenville silt loam, 3 to 8% slope	C/D	Yes
Co	Codorus and Harbor silt loam 0 to 3% slope	C	Yes

MISS-UTILITY NOTE:

- CONTACT MISS-UTILITY 72 HOURS BEFORE ANY TRENCHING. (800) 257 - 7777.

PLAN PREPARED BY:
NJR & ASSOCIATES
 Land Surveying and Planning
 2770 STATE ROUTE 32
 WEST FRIENDSHIP, MD 21794
 TEL: (240) 508-3200

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