

PUMP TANK DETAIL NOT TO SCALE

TRENCH DATA:

TRENCH 1: EX. GROUND ABOVE = 548 BOTTOM TRENCH = 538



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: 02/22/2023.



Howard County Health Department

Hank Oswald

(USE 2 TRENCHES AT 68.75 L.F.) TRENCH SPACING = 2D+W = ((2*2.5) + 3) = 8' USE 10' SEPTIC SYSTEM INSTALLATION SITE PLAN

VICINITY MAP

FFE 537.20 BSE 527.20

INITIAL SYSTEM

APPLICATION RATE = 1.2

TRENCH DEPTH = 8 FEET TRENCH WIDTH (W) = 3 FEET EFFECTIVE DEPTH (D) = 5 FEET

EFFECTIVE SIDEWALL BEGINS AT 3 FEET

6 BEDROOMS

6 BEDROOMS

6 BEDROOMS

APPLICATION RATE = 1.2

TRENCH DEPTH = 8 FEET TRENCH WIDTH (W) = 3 FEET EFFECTIVE DEPTH (D) = 2.5 FEET

APPLICATION RATE = 1.2

TRENCH DEPTH = 8 FEET

TRENCH WIDTH (W) = 3 FEET

EFFECTIVE DEPTH (D) = 5 FEET

(USE 2 TRENCHES AT 44.63 L.F.)

2ND REPLACEMENT SYSTEM

EFFECTIVE SIDEWALL BEGINS AT 2.5 FEET

SF OF DRAINFIELD = 900 GPD / 1.2= 750 SF

(W+2)/(W+1+2D)=(3+2)/(3+1+(2x2.5))=.55

COEFFICIENT OF REDUCTION OF TRENCH LENGTH =

TRENCH LENGTH = $250 \text{ SF } \times 0.55 = 137.50 \text{ FEET}$

INV. OUT OF HOUSE = 524.18

INV. INTO CLEANOUT = 523.65 INV. OUT OF CLEANOUT = 523.55

TOP OF SEPTIC TANK = 524.31 INV. INTO SEPTIC TANK = 523.31 INV. OUT OF SEPTIC TANK = 523.06 EX. GROUND AT PUMP TANK = 527.00 PROP. GRADE ABOVE PUMP TANK = 527.00

TOP OF PUMP TANK = 524.00 INV. INTO PUMP TANK = 523.00

INV. OUT OF PUMP TANK = 522.75

INV. INTO DISTRIBUTION BOX = 546.10 INV. OUT OF DISTRIBUTION BOX = 546.00

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR

SF OF DRAINFIELD = 900 GPD / 1.2= 750 SF COEFFICIENT OF REDUCTION OF TRENCH LENGTH =

TRENCH LENGTH = 250 SF x 0.357 = 89.25 FEET

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR

TRENCH SPACING = 2D+W = ((2*5) + 3) = 13' USE 13'

LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD

(W+2)/(W+1+2D)=(3+2)/(3+1+(2x5))=.357

(USE 2 TRENCHES AT 44.63 L.F.)

15T REPLACEMENT SYSTEM

EFFECTIVE SIDEWALL BEGINS AT 3 FEET

SF OF DRAINFIELD = 900 GPD / 1.2= 750 SF

(W+2)/(W+1+20)=(3+2)/(3+1+(2x5))=.357

COEFFICIENT OF REDUCTION OF TRENCH LENGTH =

TRENCH LENGTH = 250 SF x 0.357 = 89.25 FEET

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR

TRENCH SPACING = 2D+W = ((2*5) + 3) = 13' USE 13'

LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD

EX. GROUND AT DISTRIBUTION BOX = 548.00

LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD

PROP. GROUND AT CLEANOUT # 1 = 527

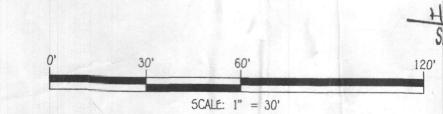
EX. GROUND AT SEPTIC TANK = 527.00 PROP. GRADE ABOVE SEPTIC TANK = 527.00

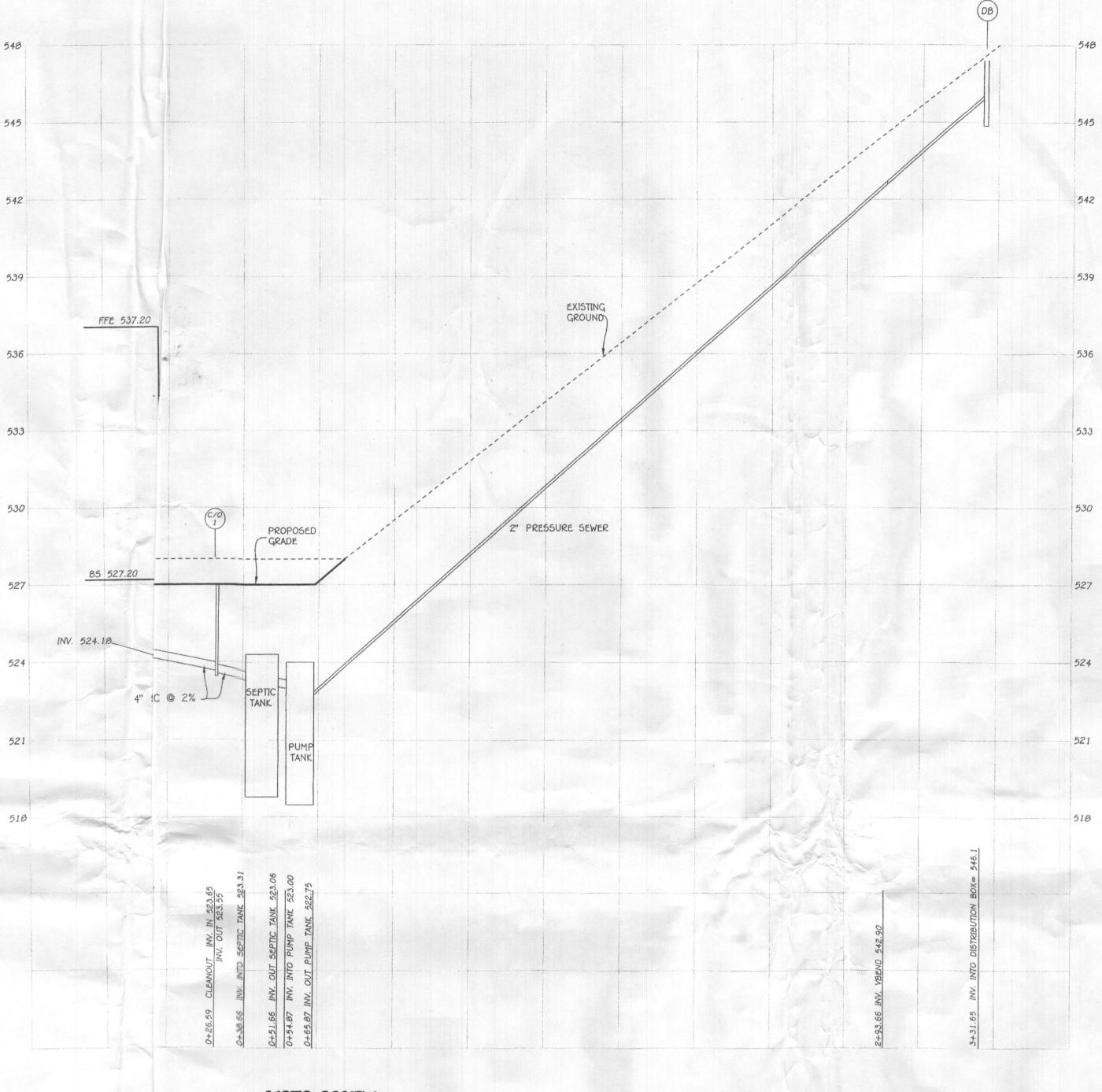
> 5016 TEN OAKS ROAD ZONING: RR-DEO TAX MAP No. 28 GRID No. 14 PARCEL No. 140 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1"=30' DATE: OCTOBER 29, 2021

SHEET 1 OF 2

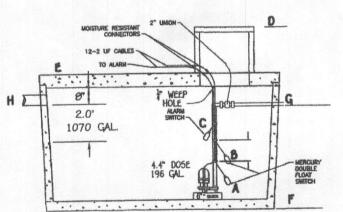
INV. IN = 546BOTTOM TRENCH = 540 TRENCH 2: EX. GROUND ABOVE = 546 INV. IN = 544

PROFESSIONAL CERTIFICATION





PUMP ALARMS / INFORMATION A PUMP OFF: 517.42 B PUMP ON: 517.80 C HIGH WATER ALARM : 518.25 D TOP OF ACCESS COVER : 524.00 E TOP OF TANK : 521.00 F BOTTOM OF TANK : 515.25
G DISCHARGE OUT OF TANK : 519.75
H INVERT INTO TANK : 520.00



1070 + 200 = 1270 GALLONS 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. SEPTIC PROFILE

SCALE: 1"=30"

2".H. 40 PVC = 266 LF 1 UNION @ 2 EQLENT FEET = 2 LF 1 1/8 HB @ 4 EVALENT FEET = 4 LF TOTAL LINEAR FEIF 2" 5CH. 40 PVC = 272 LF

DYNAMIC HEAD

272 X 2.05 FT PER 100 LF OF 2" PIPE = 5.50 FT OF FRICTION HEAD

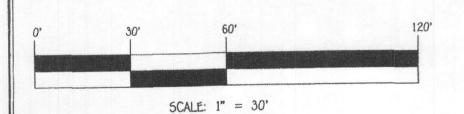
VERTICAL FROM P OFF TO HIGH POINT IN PUMP CHAMBER = 2.33 FT OF FRICTION HEAD

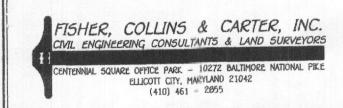
HIGH POINT IN P CHAMBER TO HIGHEST ELEV OF SYSTEM = 26.23 FT (PUMP OUT IS THE HIGHEST POINT)

TOTAL DYNAMIC HEAD = 34.14 FT

1/6 DESIGN FLOW0/6=150) USE 194 GALLONSE (150 GALLON MINIMUM)
(RUN TIME = 7 (28 GPM X 7 = 196 GALLON DOSE)

PUMP NEEDS TO DLE 28 GPM AT 34.14 FT OF HEAD USE 0.5 HP (ZOR MODEL 153 PUMP)



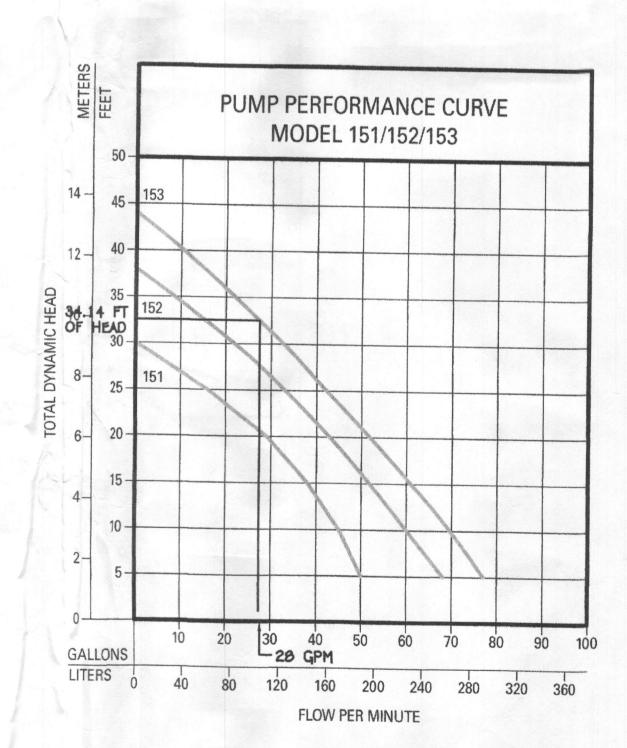




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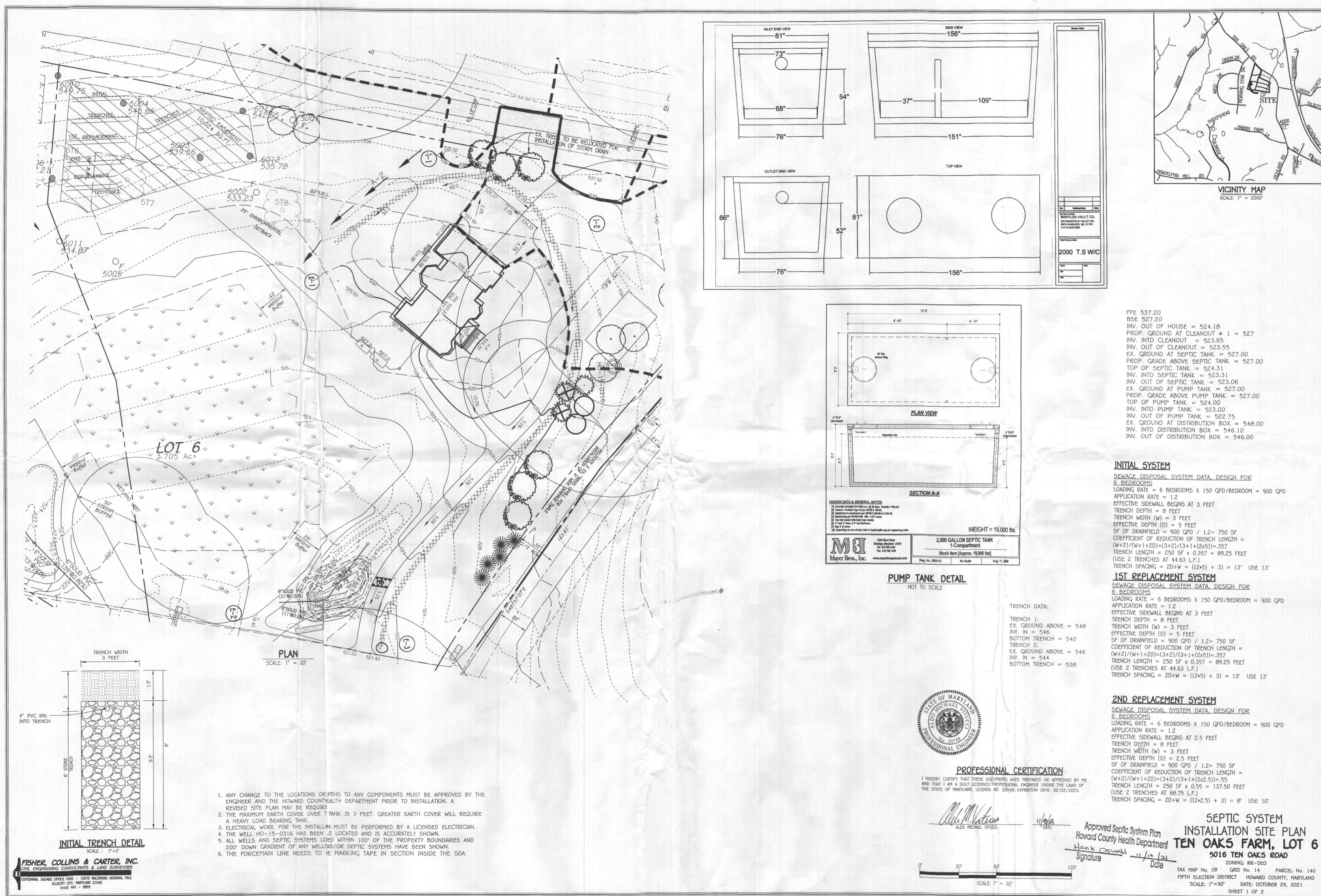




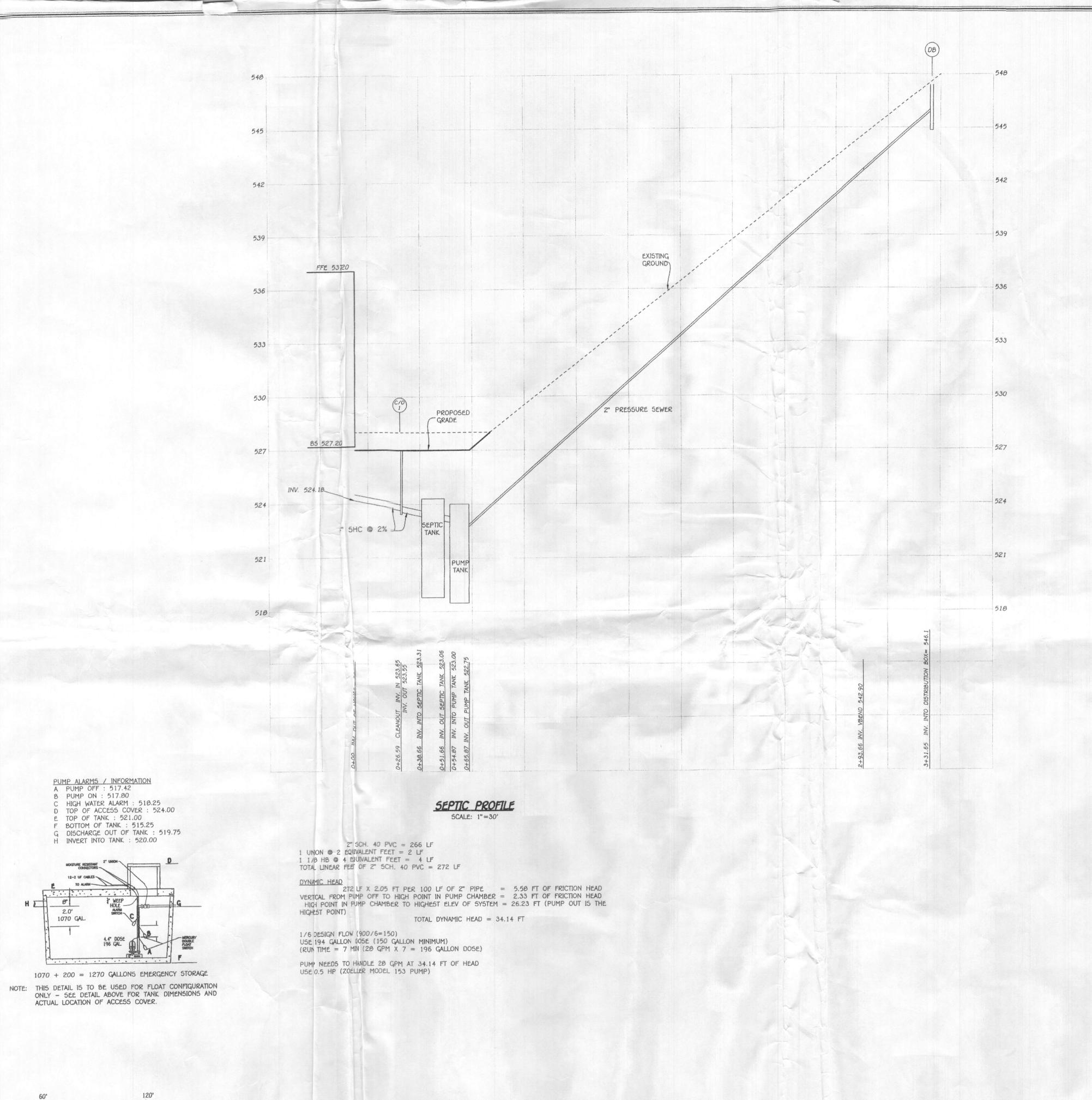
SEPTIC SYSTEM
INSTALLATION SITE PLAN
TEN OAKS FARM, LOT 6

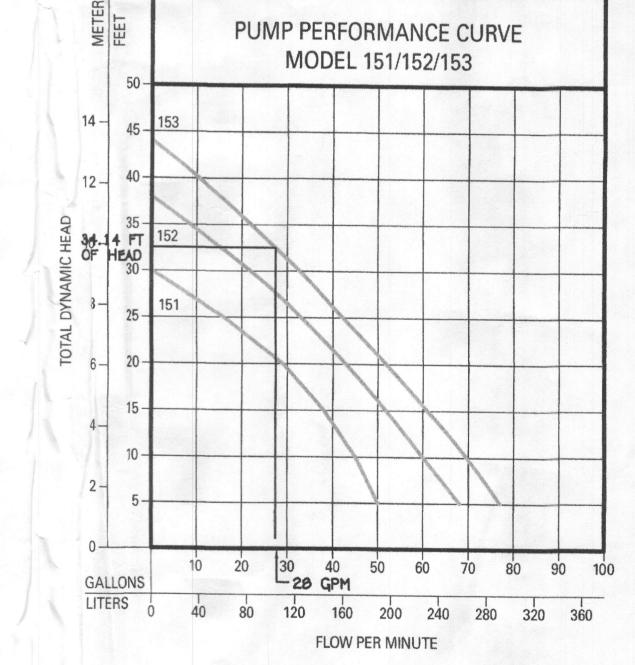
5016 TEN OAKS ROAD

ZONING: RR-DEO TAX MAP No. 28 GRID No. 14 PARCEL No. 140 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND 5CALE: 1"=30' DATE: OCTOBER 20, 2021 SHEET 2 OF 2



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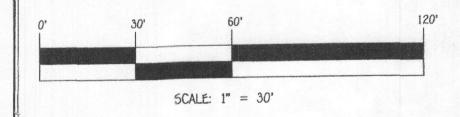




SEPTIC SYSTEM INSTALLATION SITE PLAN
TEN OAKS FARM, LOT 6

5016 TEN OAKS ROAD ZONING: RR-DEO TAX MAP No. 28 GRID No. 14 PARCEL No. 140 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1"=30' DATE: OCTOBER 20, 2021

SHEET 2 OF 2



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E TOP OF TANK : 521.00

2.0' 1070 GAL.

C HIGH WATER ALARM : 518.25

D TOP OF ACCESS COVER : 524.00

F BOTTOM OF TANK : 515.25
G DISCHARGE OUT OF TANK : 519.75
H INVERT INTO TANK : 520.00





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