



# Howard County Health Department

## 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](http://www.hchealth.org)

Facebook: [www.facebook.com/hocohealth](https://www.facebook.com/hocohealth)

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

RECEIPT DATE: 8-13-18

### ONSITE SEWAGE DISPOSAL SYSTEM

563980

APPROVAL DATE: 08/20/2018

### PERMIT: CONSTRUCTION

A

PROPERTY ADDRESS: 12535 Westland Court

SUBDIVISION: Westland Farm Estates

LOT: 9

TAX ID:

05-4433490

CONTRACTOR: P.O. Box 519, Appleton, WI 54911

EMAIL: N/A

CONTRACTOR ADDRESS: Westland Farm Estates

PHONE: 301 490 4289

PROPERTY OWNER: Williamsburg Group LLC

EMAIL: N/A

OWNER ADDRESS: 5485 Harpers Farm Road, Columbia, MD 21044

PHONE: 410-997-8800

SEPTIC TANK SIZE (GALLONS): 2000

TANK MANUFACTURER: Babylon Vault

PUMP MODEL: N/A

PUMP SIZE: N/A

PUMP TANK CAPACITY: N/A

DISTRIBUTION SYSTEM: ☒ GRAVITY ☐ PRESSURE DOSED

BEDROOMS: 6

APPLICATION RATE: 1.2

~ 65 Ton Stone

TRENCHES:

LINEAR FEET REQUIRED: 99

12 H L F

INLET DEPTH: 3.5

TRENCH WIDTH: 3

2' K

MAXIMUM BOTTOM DEPTH: 8

MINIMUM SPACE

BETWEEN TRENCHES: 12

EFFECTIVE AREA BEGINNING DEPTH: 3.5

LOCATION:

PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.

NOTES:

3 x 42' TRENCHES. USE LASER AND START FROM P Box CENTER.

original stone amount = 74 tons

ISSUED BY: Robert Freeman

ISSUE DATE: 8-13-18

EXPIRATION DATE: 8-13-19

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 DOWNGRADE 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

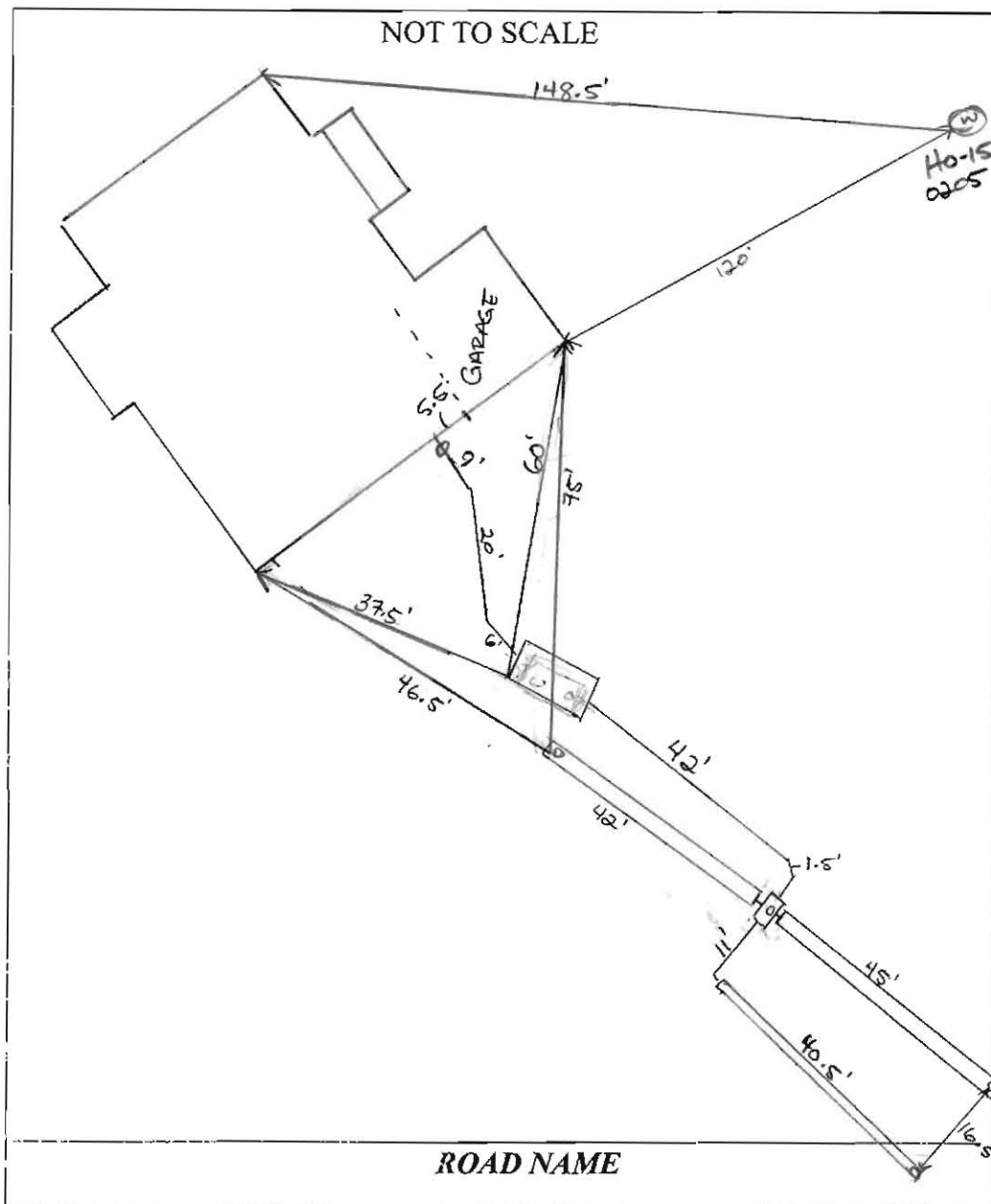
N/A

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.



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
2'	3.5'	8'
NUMBER OF TRENCHES	3	
TOTAL LENGTH	127.5 ft	
ABSORPTION AREA	255 ft <sup>2</sup>	
DISTRIBUTION BOX LEVEL	YES	
DISTRIBUTION BOX BAFFLE	YES	
DISTRIBUTION BOX PORT	YES	

SEPTIC TANK DATA	
SEPTIC TANK 1 LEVEL	
MANUFACTURER	BABYLON
CAPACITY	2000 GAL
SEAM LOC	TOP
TANK LID DEPTH	2'
BAFFLES	YES
BAFFLE FILTER	NO
MANHOLE LOC	FRONT/BACK
6" PORT LOC	INLET
WATERTIGHT TEST	N/A
SLOTTED	YES
DATE ON LID	7/9/2018
PUMP/SEPTIC TANK LEVEL	
MANUFACTURER	
CAPACITY	GAL
SEAM LOC	
TANK LID DEPTH	
BAFFLES	
BAFFLE FILTER	
MANHOLE LOC	
6" PORT LOC	
WATERTIGHT TEST	
SLOTTED	
DATE ON LID	

**PRE-CONSTRUCTION:**

8/15/2018 HOUSE OUTLET WAS SHIFTED TOWARD CENTER OF HOUSE BY THE GARAGE. SHIFTED THE S.T. TOWARD THE DRIVEWAY TO HELP FALL. EXTENDED THE UPPER TRENCHES A FEW FEET OUT OF SDA TO MAKE 2' WIDE. (W)

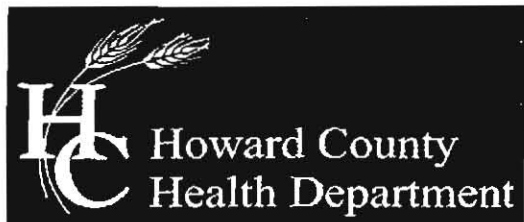
**INSTALLATION:**

8/17/2018 SEWER HOUSE CONNECTION INSTALLED. SEWER LINE FROM HOUSE TO SEPTIC TANK INSTALLED. TANK SET. FALL IS OK. EFFLUENT LINE FROM TANK TO D.BOX SET. D.BOX PLACED AND TWO DISTAL TRENCHES COMPLETE. REINSPECT FOR PROXIMAL TRENCH CONSTRUCTION AND SPEED LEVEL D.BOX. OK TO COVER WORK. (W) 8/20/2018 FINAL TRENCH COMPLETE. D.BOX LEVELED. OK TO BACKFILL. (W)

FINAL INSPECTOR

DATE OF APPROVAL

08/20/2018



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Twitter: HowardCoHealthDep

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

### SEWAGE DISPOSAL SYSTEM SPECIFICATIONS WORKSHEET

Address: \_\_\_\_\_

Subdivision: Westland Farms Estates Lot: 9

Initial system: Application rate: 1.2 Effective area beginning depth: 3.5 Bottom maximum depth: 8

1<sup>st</sup> Replacement: Application rate: 1.2 Effective area beginning depth: 3 Bottom maximum depth: 7.5

2<sup>nd</sup> Replacement: Application rate: \_\_\_\_\_ Effective area beginning depth: \_\_\_\_\_ Bottom maximum depth: \_\_\_\_\_

Design Flow = 150 gallons per day per bedroom

Design flow ÷ application rate = square footage of drainfield required

Linear length of trench required = drainfield square footage x sidewall reduction percentage ÷ trench width

Sidewall reduction credit formula:

$$\frac{W + 2}{W + 1 + 2D} \times 100 = \text{Percent of length of standard trench where } W = \text{trench width and } D = \text{depth between effective area beginning depth and trench bottom.}$$

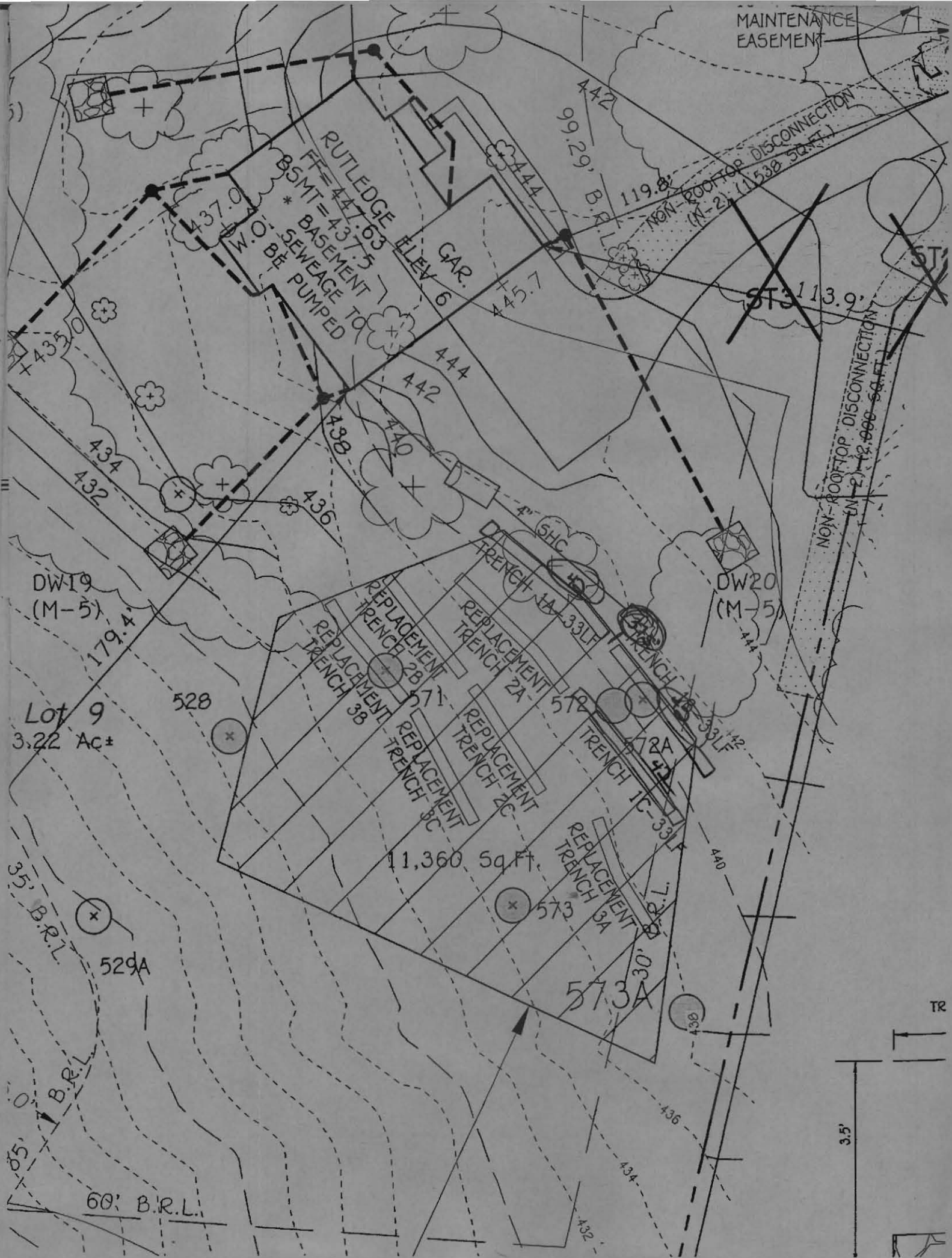
Standard design requirements:

- All trenches must be equal length unless low pressure dosed
- All trenches must be on contour
- Minimum trench spacing: 10' for all trenches utilizing sidewall reduction credit. Additional spacing may be necessary for any trench using over 3.5' of effective sidewall. In those cases, the spacing formula is  $2D + W$  up to a maximum spacing of 18'.
- Minimum trench spacing for trenches with no sidewall credit (bottom area only) is 6' for a 2' wide trench and 9' for a 3' wide trench (spacing is measured edge to edge)
- Maximum trench length is 100'
- Maximum pipe depth is 4'

Additional requirements:

Approved: Hank Oswald Date: 5/18/15

MAINTENANCE  
EASEMENT



Lot 9  
3.22 Ac±

528  
529A

60' B.R.L.

11,360 Sq. Ft.

573A

3.5' TR



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

**MEMORANDUM**

**TO:** Fisher, Collins & Carter  
*Sent via email to Stephanie Tuite ([Stephanie@fcc-eng.com](mailto:Stephanie@fcc-eng.com)) on 11/21/16*

**FROM:** Sarah Collins, L.E.H.S. SEC  
Howard County Health Department  
Well and Septic Program

**DATE:** November 21, 2016

**RE:** 12549 Lime Kiln Road  
Fulton, MD 20759  
Map 45, Grid 5, Parcel 28  
Abandonment of existing septic tanks on property

The Health Department has received documentation of the abandonment of several septic tanks at 12549 Lime Kiln Road.

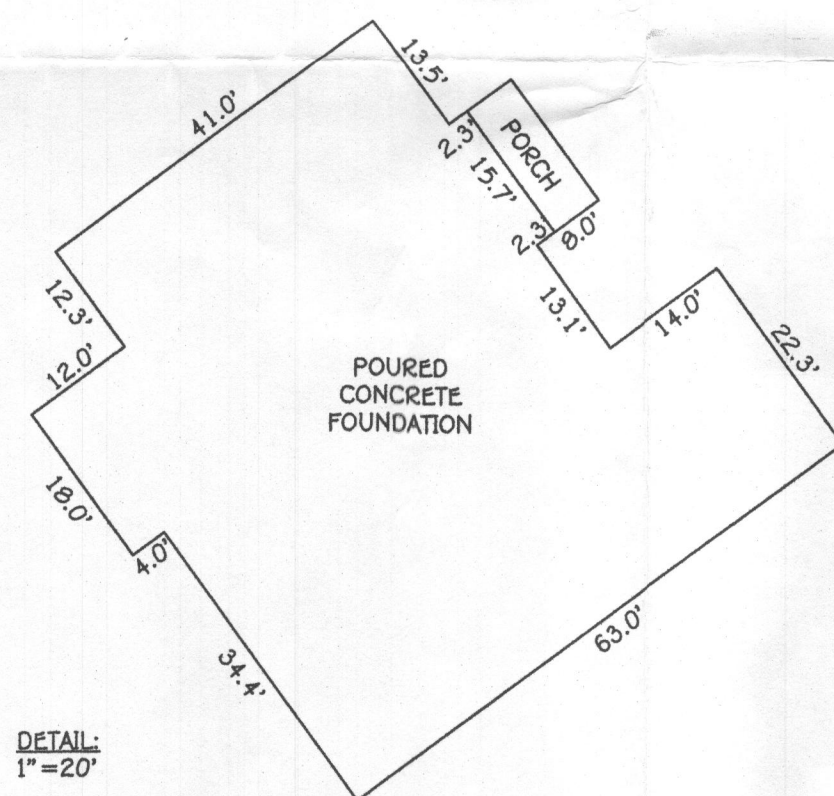
The septic tank at the tenant house was abandoned by Heath Contractors, LLC on 4/6/16. The tank at the tenant house was dry; the tank was crushed and backfilled. The septic tank at the main house and a septic tank at the barns were abandoned by Heath Contractors, LLC on 11/8/16. The tank at the main house was pumped, crushed, and backfilled. The tank at the barns was dry; the tank was crushed and backfilled.

*IF ANY ADDITIONAL WELL OR SEPTIC COMPONENTS ARE FOUND DURING SITE WORK, PLEASE NOTIFY THE HOWARD COUNTY HEALTH DEPARTMENT IMMEDIATELY.*

Cc: Williamsburg Group, LLC – Bob Corbett ([bobcorbett@williamsburgllc.com](mailto:bobcorbett@williamsburgllc.com))  
File

- 1) 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.
- 2) SUBJECT PROPERTY IS SHOWN IN ZONE X ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP OF HOWARD COUNTY, MARYLAND, COMMUNITY PANEL NO. 24027C0140D EFFECTIVE 11/06/2013.
- 3) THE OFFSETS FROM BUILDING LINE TO PROPERTY LINE AS SHOWN ON THE PLAT HEREON ARE TO AN ACCURACY OF PLUS OR MINUS 1'.
- 4) NO TITLE REPORT FURNISHED. SUBJECT TO ALL EASEMENTS, RIGHTS OF WAY AND CONDITIONS OF RECORD.
- 5) THE EXISTING WELL(S) SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-15-0205) HAS BEEN FIELD LOCATED BY FISHER, COLLINS AND CARTER, INC. PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.
- 6) PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROPERTY LINE SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 339, EXPIRATION DATE 10/04/2018.
- 7) BUILDING PERMIT # B-18001112

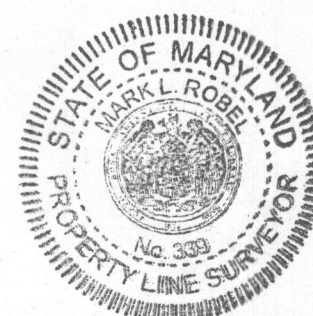
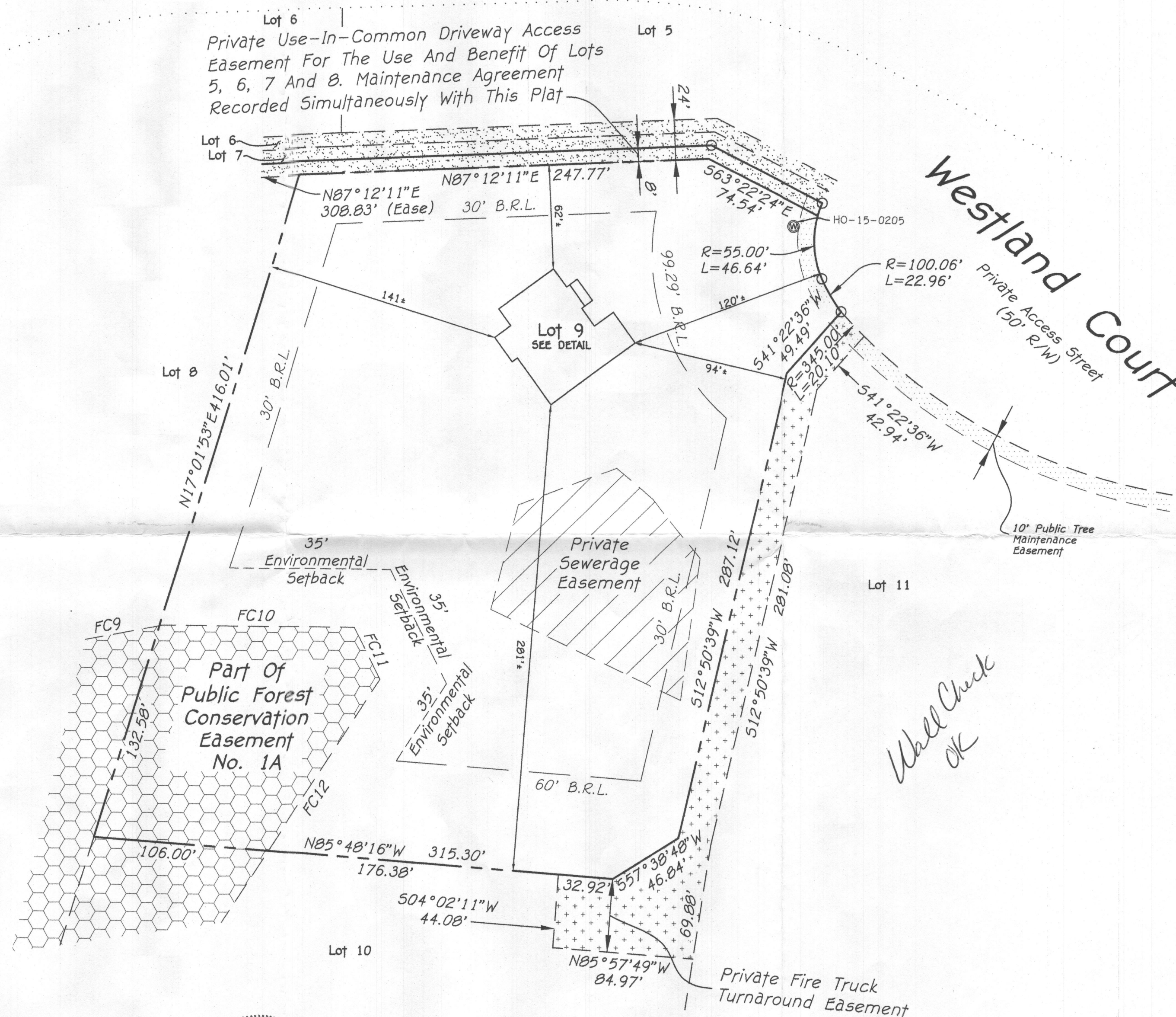
Line	Bearing	Length
FC9	N 79°20'03" E	62.23'
FC10	S 89°39'37" E	116.93'
FC11	S 26°38'09" E	35.04'
FC12	S 33°07'04" W	180.53'



Private Use-In-Common Driveway Access Easement For The Use And Benefit Of Lots 5, 6, 7 And 8

Private Fire Truck Turnaround Easement

10' Public Tree Maintenance Easement (Maintenance Agreement Recorded Simultaneously With The Plat)



HOUSE LOCATION  
DRAWING

FOUNDATION LOCATION: 7/2/10  
FINAL LOCATION: \_\_\_\_\_  
BOUNDARY SURVEY: \_\_\_\_\_

SCALE: 1"=50'  
DATE: 7/6/18  
DRAWN BY: MD  
CHECKED BY: MLR  
PROJECT No.: 05062-3003

LOT 9  
WESTLAND FARM ESTATES  
PHASE II  
LOTS 3 THRU 14 AND  
OPEN SPACE LOT 15  
PLAT NOS. 23905 THRU 23907  
FIFTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

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

# Transmittal

Via: ☐ Fax ☐ Mail ☒ Messenger ☐ E-Mail ☐ To Be Picked Up  
☐ Fax (original to follow via U.S. Mail)

To: <b>Bureau of Environmental Health</b> <b>8930 Stanford Blvd</b> <b>Columbia, MD 21046-4544</b>	Attn: <b>Robert Freemon</b> Fax: <b>(410) 313-2648</b> Phone: <b>(410) 313-2640</b>
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From: <b>Stephanie Tuite</b>	CC:
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Re: <b>Westland Farm Estates Lot 9 - Septic Plan</b>	W.O.# <b>05062-3003</b>
Date: <b>05/16/18</b>	Pages: <b>Page(s) including this cover</b>

We are forwarding: <input checked="" type="checkbox"/> Prints <input type="checkbox"/> Copy of Letter <input type="checkbox"/> Specifications <input type="checkbox"/> Shop drawings <input checked="" type="checkbox"/> Other
<input type="checkbox"/> Urgent <input type="checkbox"/> For your use <input type="checkbox"/> As requested <input type="checkbox"/> For Review & Comment

Remarks:

Attached please find three copies of the revised Septic Plan for Permit # B18001112, 12535 Westland Court. Drywells were unfortunate frozen in the CAD drawing, and have now been shown.

Please call with any questions.

Stephanie Tuite, RLA, PE, LEED AP BD&C  
Fisher, Collins & Carter, Inc.

## **CONFIDENTIALITY NOTICE**

This transmission contains confidential information which may be legally privileged, and is intended only for the use of the individual named above. If you are not the intended recipient, you are hereby notified that any distribution (except to the intended recipient), copying, or disclosure of this transmission is strictly prohibited.

# Transmittal

Via: ☐ Fax ☐ Mail ☒ Messenger ☐ E-Mail ☐ To Be Picked Up  
☐ Fax (original to follow via U.S. Mail)

To: **Bureau of Environmental Health**  
**8930 Stanford Blvd**  
**Columbia, MD 21046-4544**

Attn: **Robert Freeman**  
Fax: **(410) 313-2648**  
Phone: **(410) 313-2640**

From: **Stephanie Tuite**

CC:

Re: **Westland Farm Estates Lot 9 - Septic Plan**

W.O.# **05062-3003**

Date: **05/10/18**

Pages: **Page(s) Including this cover**

We are forwarding: ☒ Prints ☐ Copy of Letter ☐ Specifications ☐ Shop drawings ☒ Other  
☐ Urgent ☐ For your use ☐ As requested ☐ For Review & Comment

Remarks:

Attached please find three copies of the revised Septic Plan for Permit # B18001112, 12535 Westland Court. The following is a response to your comments dated 5/9/2018:

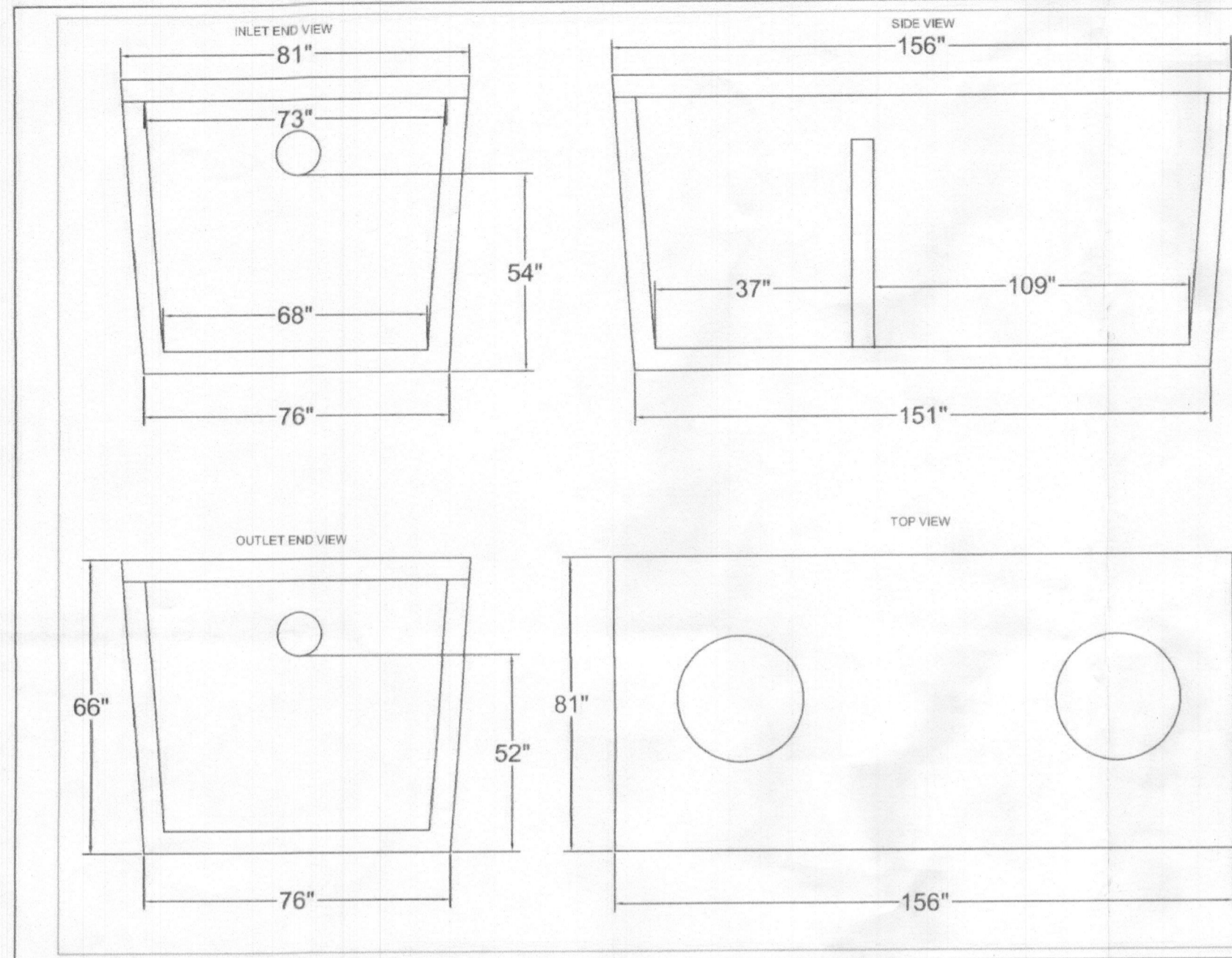
1. Revised well box has been shown.
2. Calculations were correct, label was wrong on the table.
3. Trench Design has been corrected.
4. Existing well and septic were abandoned at time house was demolished. Sarah forwarded you letter

Please call with any questions.

**Stephanie Tuite, RLA, PE, LEED AP BD&C**  
**Fisher, Collins & Carter, Inc.**

## **CONFIDENTIALITY NOTICE**

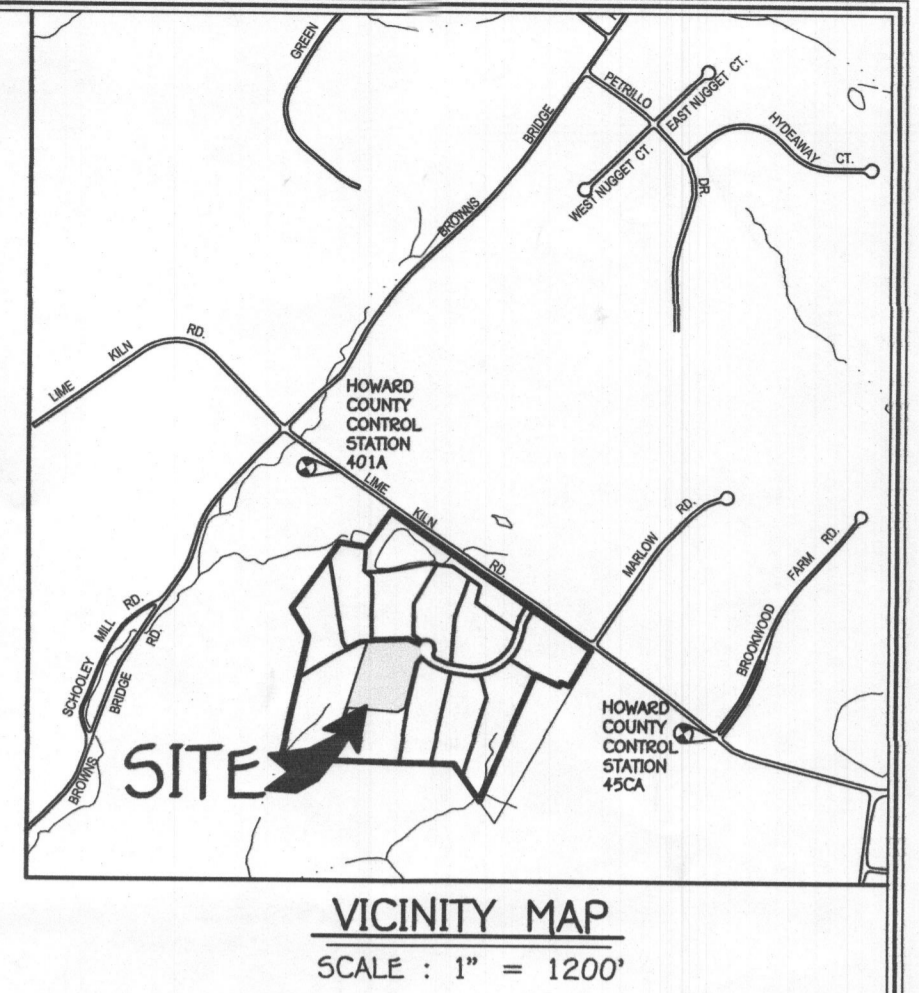
This transmission contains confidential information which may be legally privileged, and is intended only for the use of the individual named above. If you are not the intended recipient, you are hereby notified that any distribution (except to the intended recipient), copying, or disclosure of this transmission is strictly prohibited.



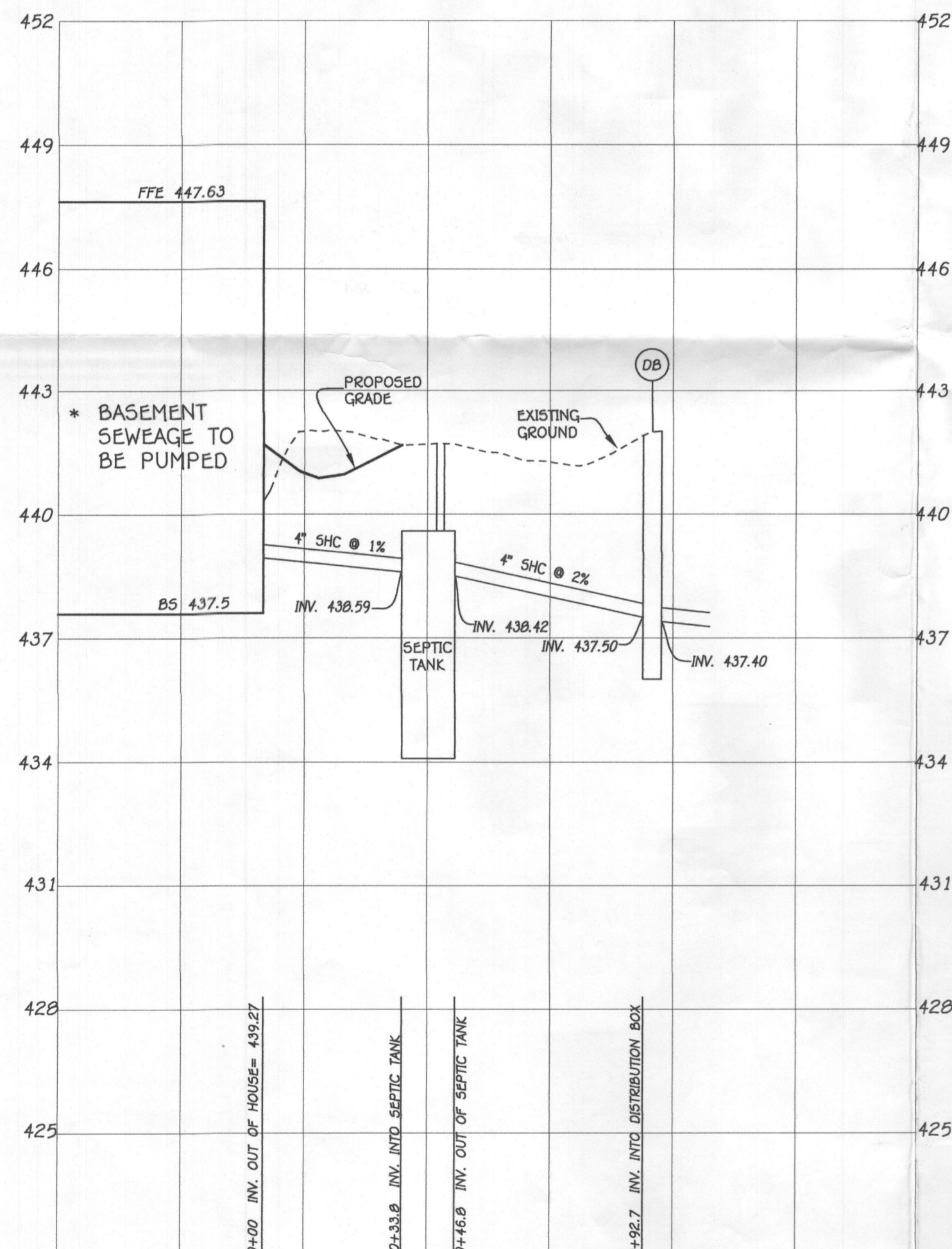
BARYLON VAULT CO.	
1000 W. HARRIS RD.	WILMINGTON, DE 19804
TEL: 302-438-1100	FAX: 302-438-1101
2000 T.S.W.C.	

**NOTE:**  
THE EXISTING WELLS SHOWN ON THIS PLAN, HO-15-0205 HAS BEEN FIELD LOCATED BY FISHER, COLLINS & CARTER, INC. PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.

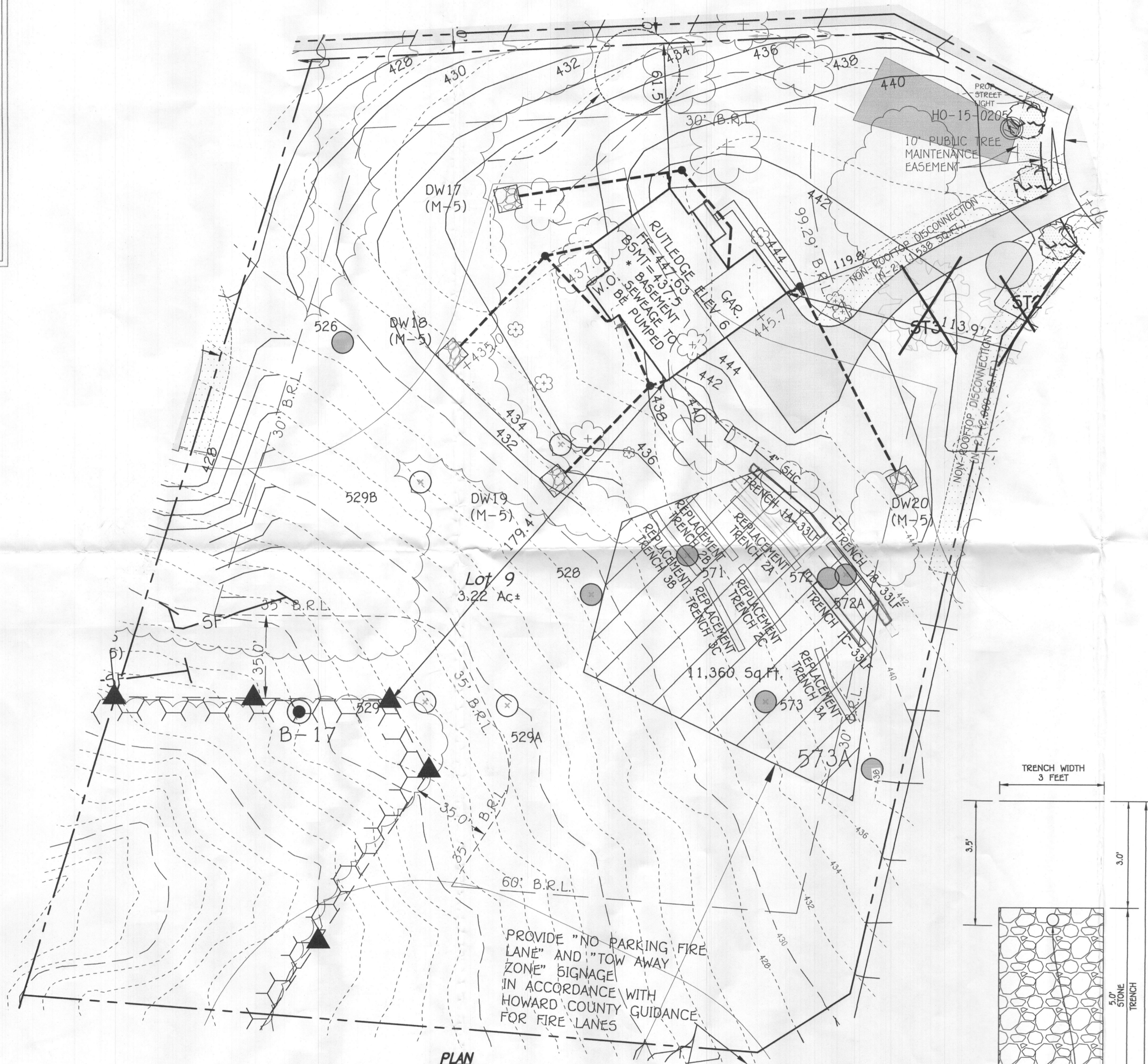
- LEGEND**
- EXISTING 2' CONTOURS
  - EXISTING 10' CONTOURS
  - EXISTING TREE LINE
  - SOIL LINES AND TYPES
  - DENOTES EXISTING WELL
  - DENOTES PROPOSED TREELINE
  - DENOTES 1500 Sq.Ft. ALTERNATE WELL SITE
  - 530 PASSED PERC HOLES
  - 537A FAILED PERC HOLES



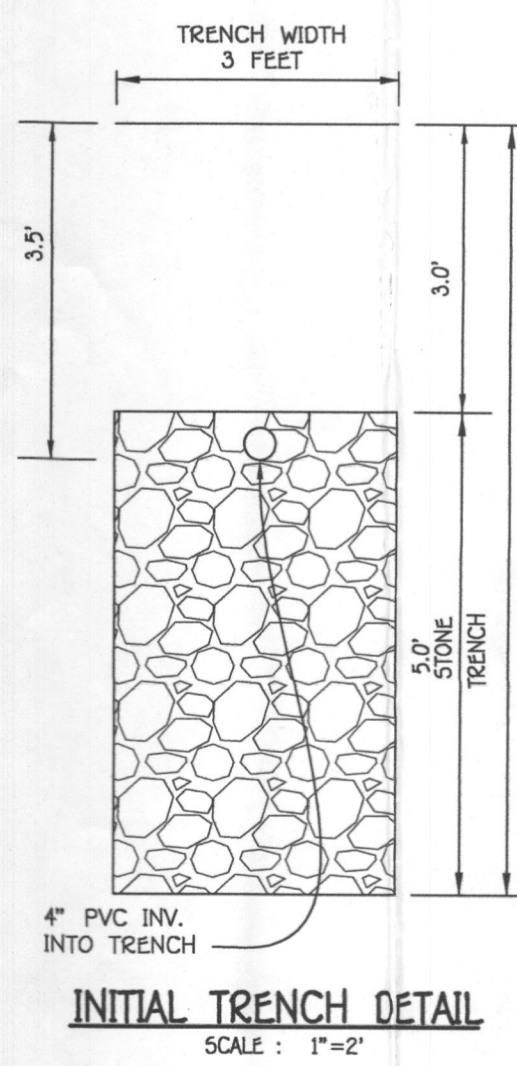
- GENERAL NOTES:**
- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.
  - ADJUSTMENTS TO SEPTIC EASEMENT AREA IS NOT PERMITTED WITHOUT ADDITIONAL TESTING. THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
  - ALL WELLS AND SEPTIC SYSTEMS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND 200 FEET DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
  - TOPOGRAPHIC CONTOURS BASED ON HARFORD AERIAL SURVEYS, INC. DATED JANUARY 2006 AND SUPPLEMENTED WITH FIELD RUN TOPOGRAPHY BY FISHER, COLLINS & CARTER, INC. ON OR ABOUT APRIL, 2006 AND JANUARY, 2015.
  - BOUNDARY OF LOT BASED ON PLAT #23986 AND FIELD SURVEY BY FISHER, COLLINS & CARTER, INC.
  - PLAT REFERENCE: 23985 THRU 23987.
  - SUBJECT PROPERTY ZONED: RR-DEO
  - TOTAL AREA OF PROPERTY: 3.22 AC.
  - WETLANDS, STREAMS, THEIR BUFFERS, FLOODPLAIN, AND STEEP SLOPES DO NOT EXIST ON THIS LOT.
  - SOILS SHOWN HEREON ARE BASED ON NRCS WEB SOIL SURVEY AND HOWARD COUNTY SOILS MAP.
  - 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.
  - THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET.
  - EXISTING WELL AND SEPTIC ON LOT 9 HAS BEEN PROPERLY ABANDONED.



**SEPTIC PROFILE**  
HORIZONTAL SCALE: 1"=30'  
VERTICAL SCALE: 1"=3'

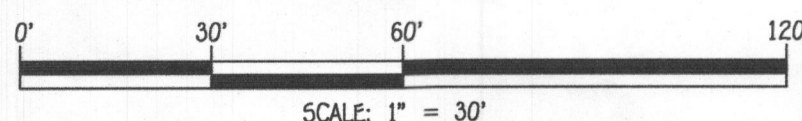


**PLAN**  
SCALE: 1"=30'



**SEWAGE DISPOSAL SYSTEM DATA**  
6 BEDROOMS (INITIAL SYSTEM)  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3.5 FEET  
TRENCH DEPTH = 0 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4.5 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+(2x4.5)) = 0.385  
TRENCH LENGTH = 750 SF x 0.385 / 3 = 96.2 FEET (USE 99 FEET)  
TRENCH SPACING = 20+W = ((2x4.5) + 3) = 12 USE 12'

**SEWAGE DISPOSAL SYSTEM DATA**  
6 BEDROOMS (REPLACEMENT SYSTEMS)  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 7.5 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4.5 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+(2x4.5)) = 0.385  
TRENCH LENGTH = 750 SF x 0.385 / 3 = 96.2 FEET (USE 99 FEET)  
TRENCH SPACING = 20+W = ((2x4.5) + 3) = 12 USE 12'



**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
(410) 461-2895

**OWNER**  
WILLIAMSBURG GROUP, LLC  
C/O BOB CORBETT  
5485 HARPERS FARM ROAD, SUITE 200  
COLUMBIA, MARYLAND 21044  
410-997-0600

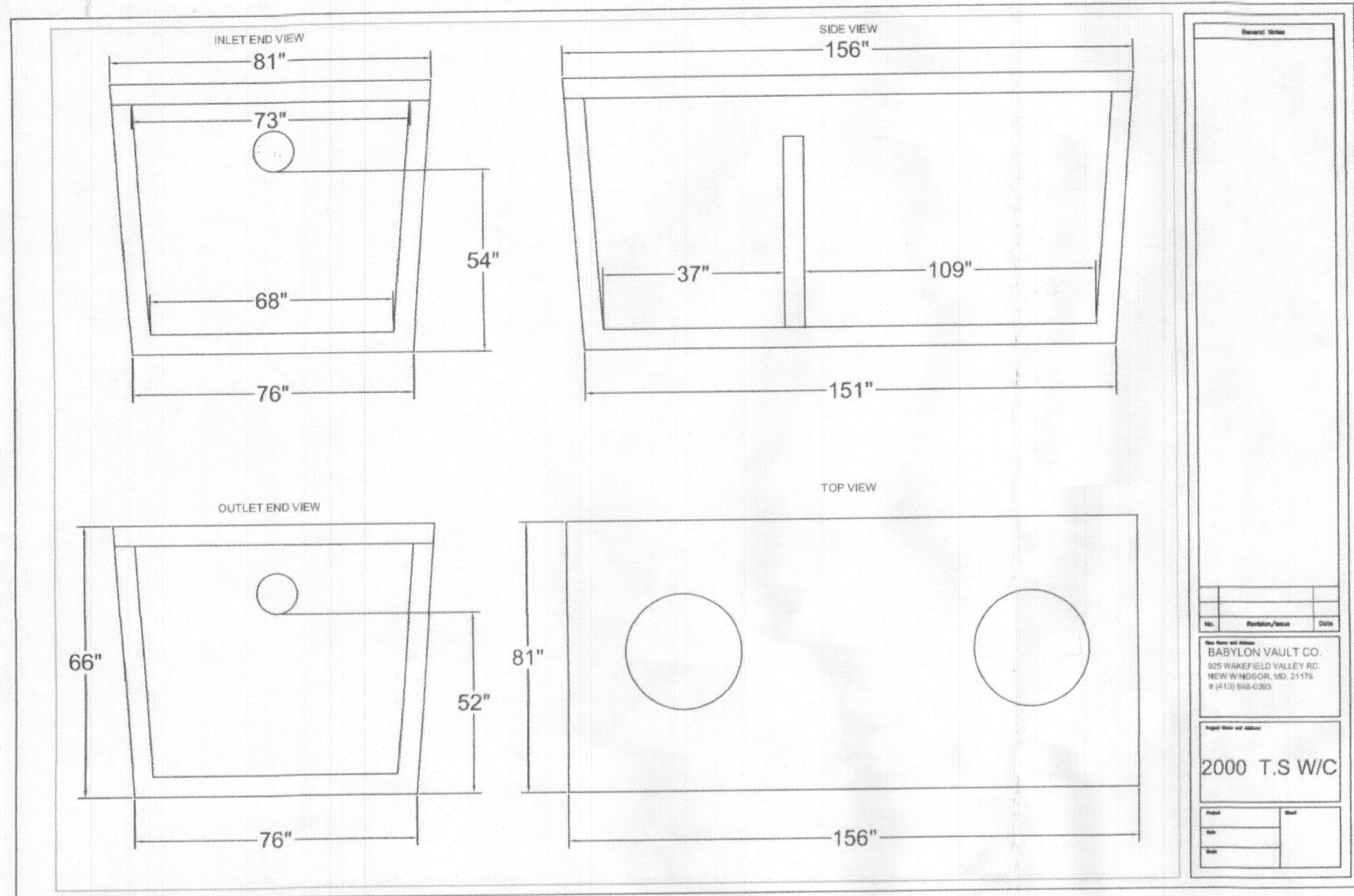
TRENCH	GROUND ELEV.	TOP OF STONE ELEV.	PIPE INVERT ELEV.	DEPTH TO STONE FROM GROUND	DEPTH OF TRENCH (FT)	BOTTOM OF TRENCH ELEV.	EFFECTIVE DEPTH STARTS AT	EFFECTIVE DEPTH (D)	WIDTH OF TRENCHES (W)	TRENCH SPACING
A	440.9	437.9	437.4	3.0'	5.0'	432.9	3.5'	4.5'	3.0'	12'
B	440.9	437.9	437.4	3.0'	5.0'	432.9	3.5'	4.5'	3.0'	12'
C	439.2	436.2	435.7	3.0'	5.0'	431.2	3.5'	4.5'	3.0'	12'

**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. 36386, EXPIRATION DATE: 11/12/2020.  
*Stephen J. Int...* 5/16/18  
Signature Of Professional Engineer DATE



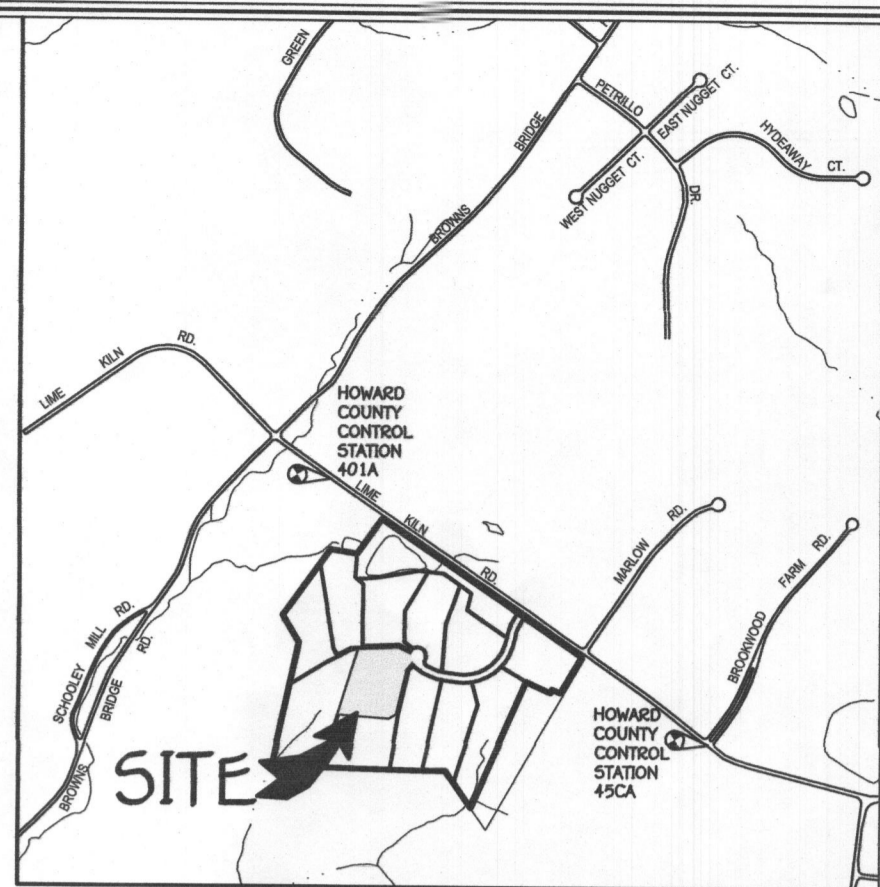
Approved Septic System Plan  
Howard County Health Department  
*Not a signature* 5/21/18  
Signature Date

**SEPTIC PLAN**  
**WESTLAND FARM ESTATES**  
**LOT 9**  
12535 WESTLAND COURT  
TAX MAP #45 PARCEL: 28  
ZONED: RR-DEO  
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: MAY, 2018



NOTE:  
THE EXISTING WELLS SHOWN ON THIS PLAN, HO-15-0205 HAS BEEN FIELD LOCATED BY FISHER, COLLINS & CARTER, INC., PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.

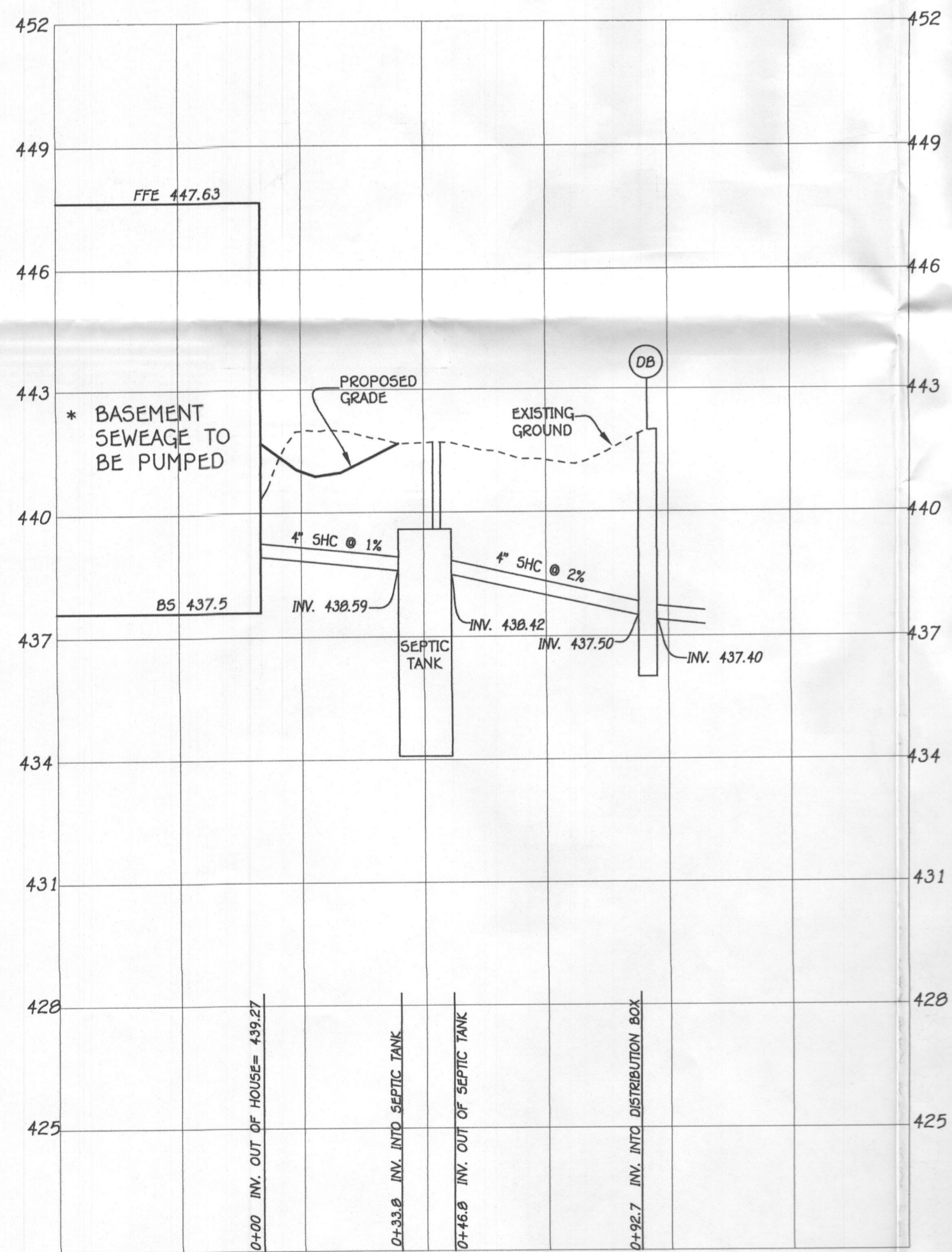
- LEGEND**
- EXISTING 2' CONTOURS
  - - - EXISTING 10' CONTOURS
  - - - EXISTING TREE LINE
  - SOIL LINES AND TYPES
  - ⊙ DENOTES EXISTING WELL
  - ⊙ DENOTES PROPOSED TREELINE
  - ⊙ DENOTES 1500 Sq.Ft. ALTERNATE WELL SITE
  - ⊙ PASSED PERC HOLES
  - ⊙ FAILED PERC HOLES



**VICINITY MAP**  
SCALE : 1" = 1200'

**GENERAL NOTES:**

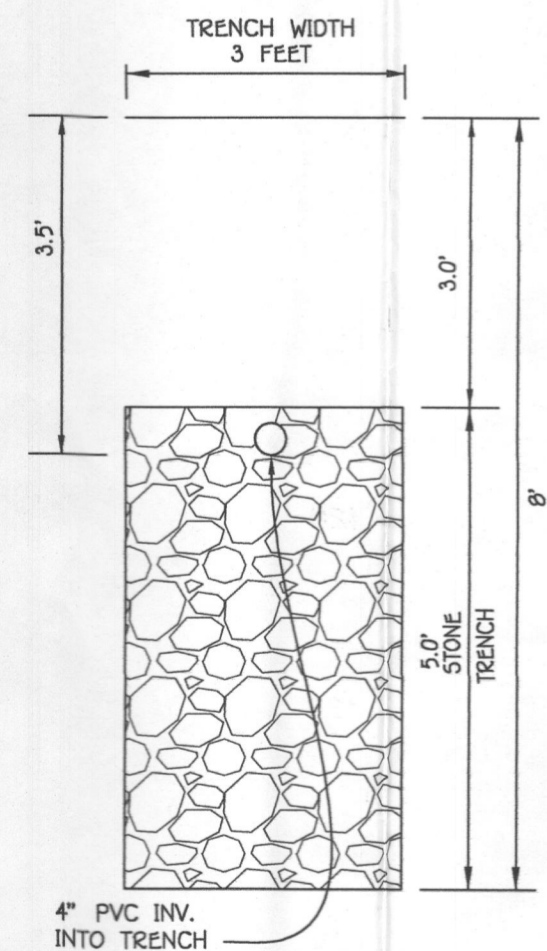
- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.
- ADJUSTMENTS TO SEPTIC EASEMENT AREA IS NOT PERMITTED WITHOUT ADDITIONAL TESTING. THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
- ALL WELLS AND SEPTIC SYSTEMS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND 200 FEET DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
- TOPOGRAPHIC CONTOURS BASED ON HARFORD AERIAL SURVEYS, INC. DATED JANUARY 2006 AND SUPPLEMENTED WITH FIELD RUN TOPOGRAPHY BY FISHER, COLLINS & CARTER, INC. ON OR ABOUT APRIL 2006 AND JANUARY, 2015.
- BOUNDARY OF LOT BASED ON PLAT #23986 AND FIELD SURVEY BY FISHER, COLLINS & CARTER, INC.
- PLAT REFERENCE: 23985 THRU 23987.
- SUBJECT PROPERTY ZONED: RR-DEO
- TOTAL AREA OF PROPERTY: 3.22 AC.
- WETLANDS, STREAMS, THEIR BUFFERS, FLOODPLAIN, AND STEEP SLOPES DO NOT EXIST ON THIS LOT.
- SOILS SHOWN HEREON ARE BASED ON NRCS WEB SOIL SURVEY AND HOWARD COUNTY SOILS MAP.
- 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.
- THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET.
- EXISTING WELL AND SEPTIC ON LOT 9 HAS BEEN PROPERLY ABANDONED.



**SEPTIC PROFILE**  
HORIZONTAL SCALE: 1"=30'  
VERTICAL SCALE: 1"=3'



**PLAN**  
SCALE: 1"=30'



**INITIAL TRENCH DETAIL**  
SCALE: 1"=2'

FFE 447.63  
BSE 437.5  
INV. OUT OF HOUSE = 439.27  
PROP. GROUND AT SEPTIC TANK = 442.0  
COVER OVER TANK = 2.41 FEET  
TOP OF SEPTIC TANK = 439.59  
INV. INTO SEPTIC TANK = 438.59  
INV. OUT OF SEPTIC TANK = 438.52  
EX. GROUND AT DISTRIBUTION BOX = 442.0  
INV. INTO DISTRIBUTION BOX = 437.50  
INV. OUT OF DISTRIBUTION BOX = 437.40

**SEWER DISPOSAL SYSTEM DATA**  
6 BEDROOMS (INITIAL SYSTEM)  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3.5 FEET  
TRENCH DEPTH = 6 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4.5 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+(2x4.5)) = 0.305  
TRENCH LENGTH = 750 SF x 0.305 / 3 = 96.2 FEET (USE 99 FEET)  
TRENCH SPACING = 2D+W = ((2x4.5) + 3) = 12 USE 12'

**SEWER DISPOSAL SYSTEM DATA**  
6 BEDROOMS (REPLACEMENT SYSTEMS)  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 7.5 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4.5 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+(2x4.5)) = 0.305  
TRENCH LENGTH = 750 SF x 0.305 / 3 = 96.2 FEET (USE 99 FEET)  
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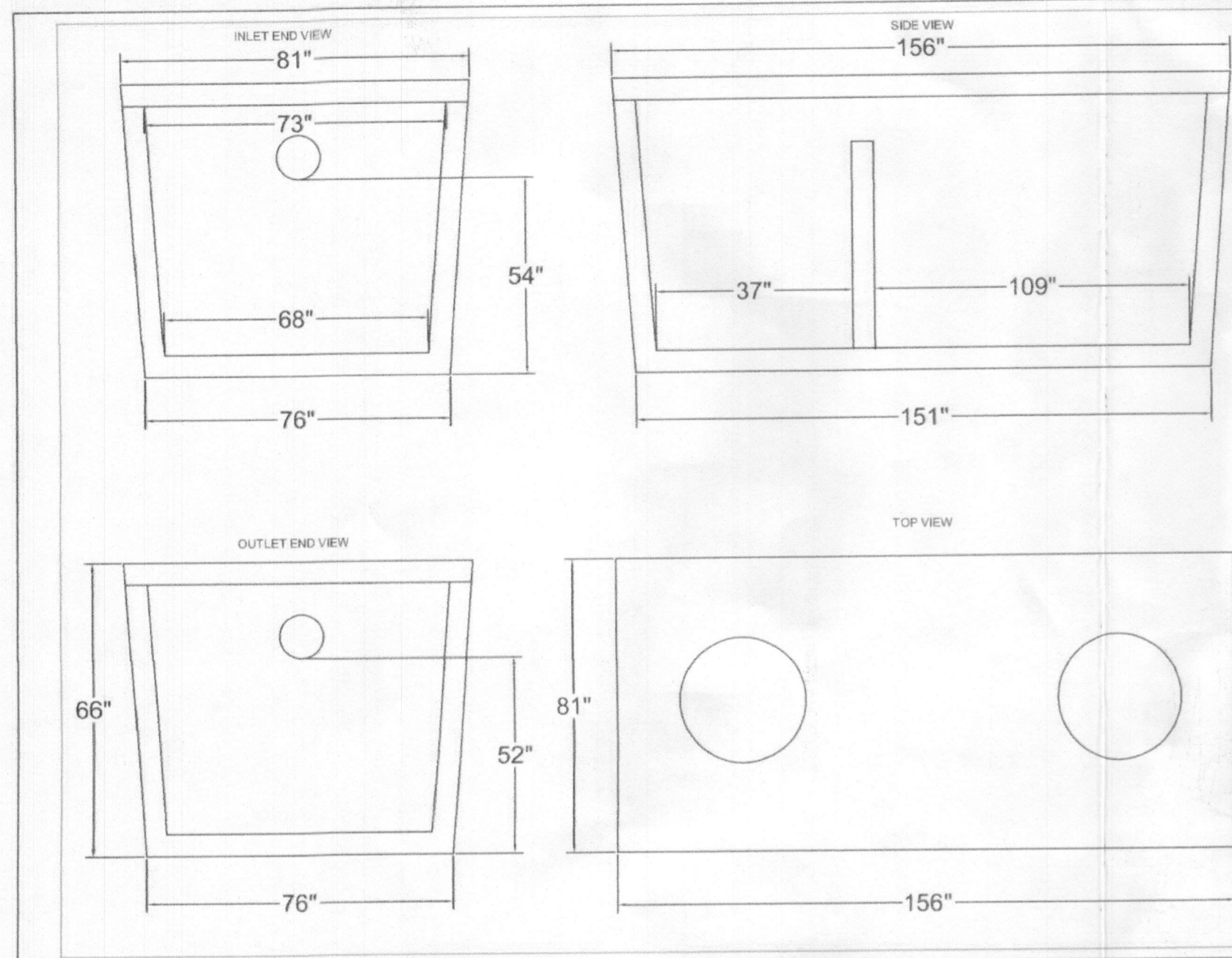
TRENCH DESIGN										
TRENCH	GROUND ELEV.	TOP OF STONE ELEV.	PIPE INVERT ELEV.	DEPTH TO STONE FROM GROUND	DEPTH OF STONE (FT)	BOTTOM OF TRENCH ELEV.	EFFECTIVE DEPTH STARTS AT	EFFECTIVE DEPTH (D)	WIDTH OF TRENCHES (W)	TRENCH SPACING
A	440.9	437.9	437.4	3.0"	5.0"	432.9	3.5'	4.5'	3.0"	12'
B	440.9	437.9	437.4	3.0"	5.0"	432.9	3.5'	4.5'	3.0"	12'
C	439.2	436.2	435.7	3.0"	5.0"	431.2	3.5'	4.5'	3.0"	12'

**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. 30306, EXPIRATION DATE 01/12/2020.

*Signature* 5/10/18  
Signature of Professional Engineer DATE



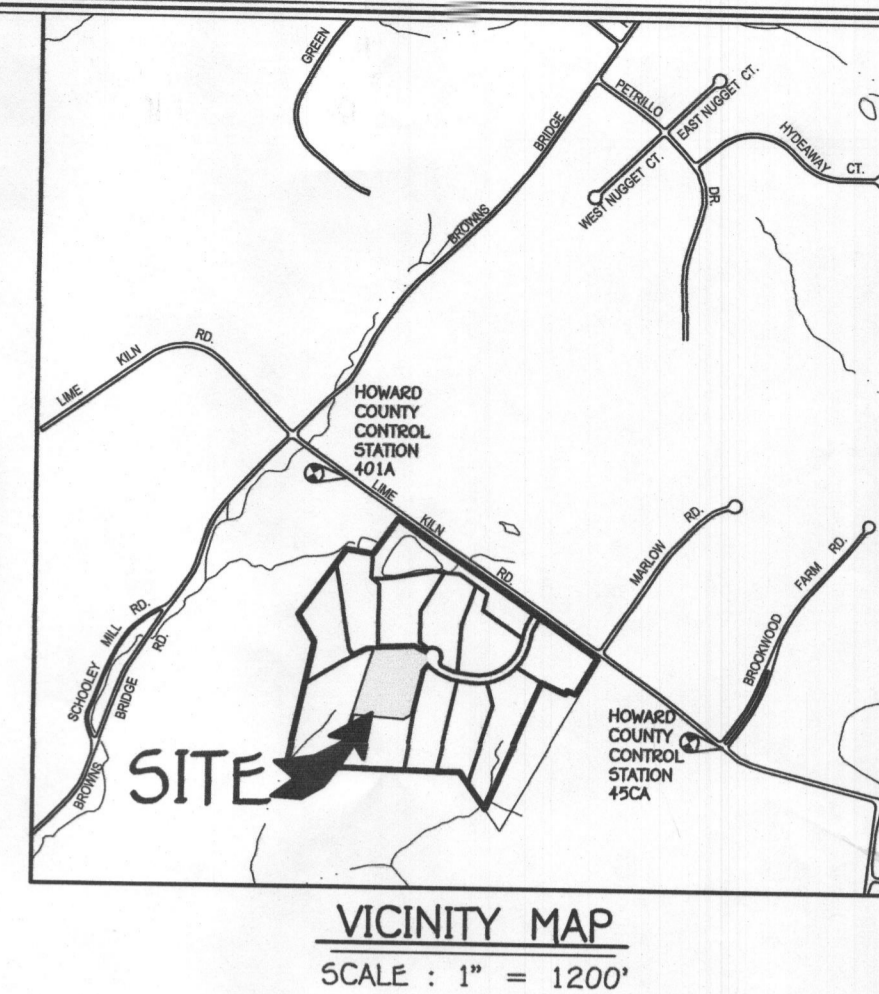
**SEPTIC PLAN**  
**WESTLAND FARM ESTATES**  
**LOT 9**  
12535 WESTLAND COURT  
TAX MAP #45 PARCEL: 28  
ZONED: RR-DEO  
THIRD ELECTION DISTRICT: HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: MAY, 2018



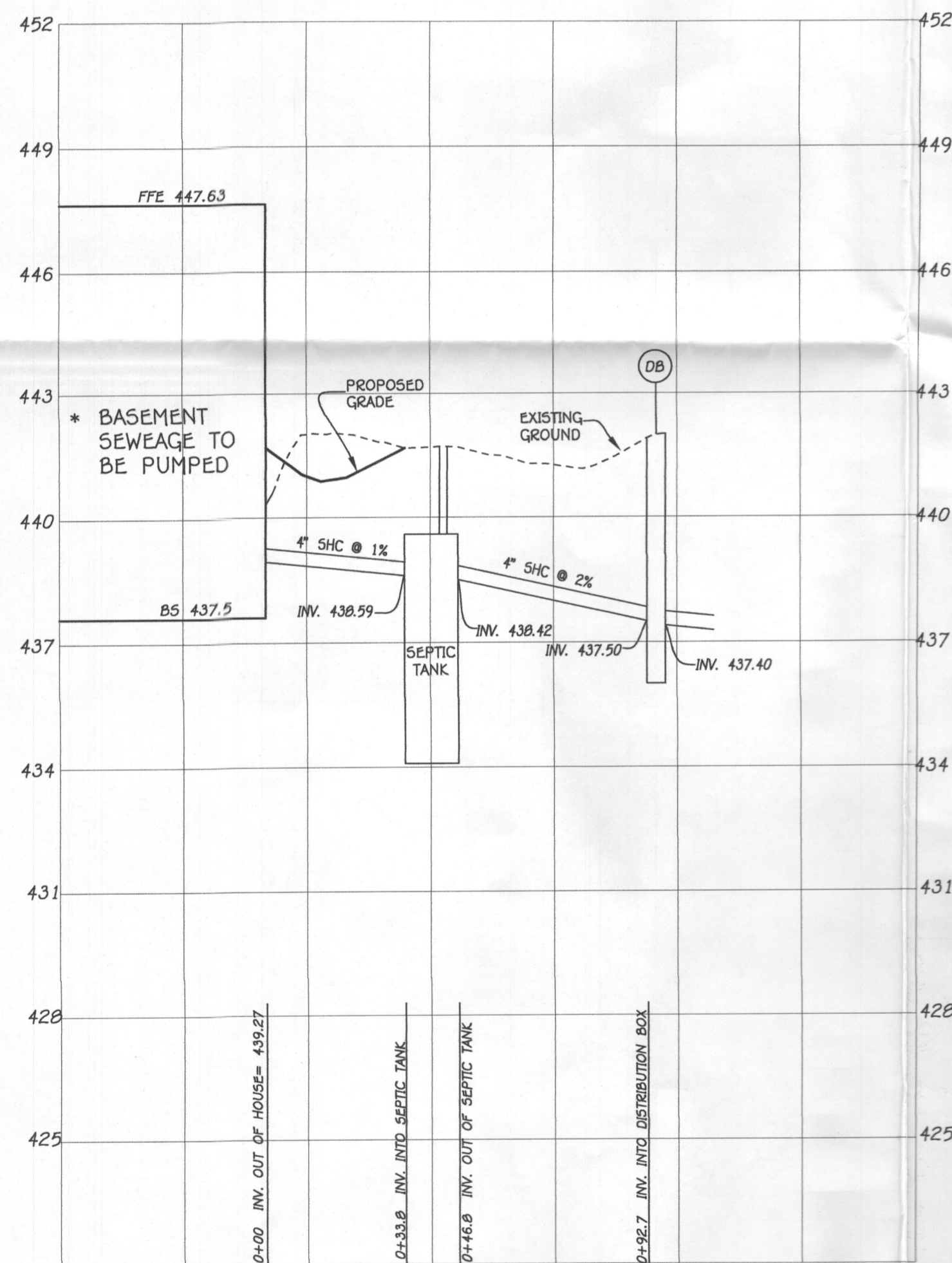
No.	Description	Date
1	2000 T.S.W.C.	

NOTE:  
THE EXISTING WELLS SHOWN ON THIS PLAN, HO-15-0205 HAS BEEN FIELD LOCATED BY FISHER, COLLINS & CARTER, INC., PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.

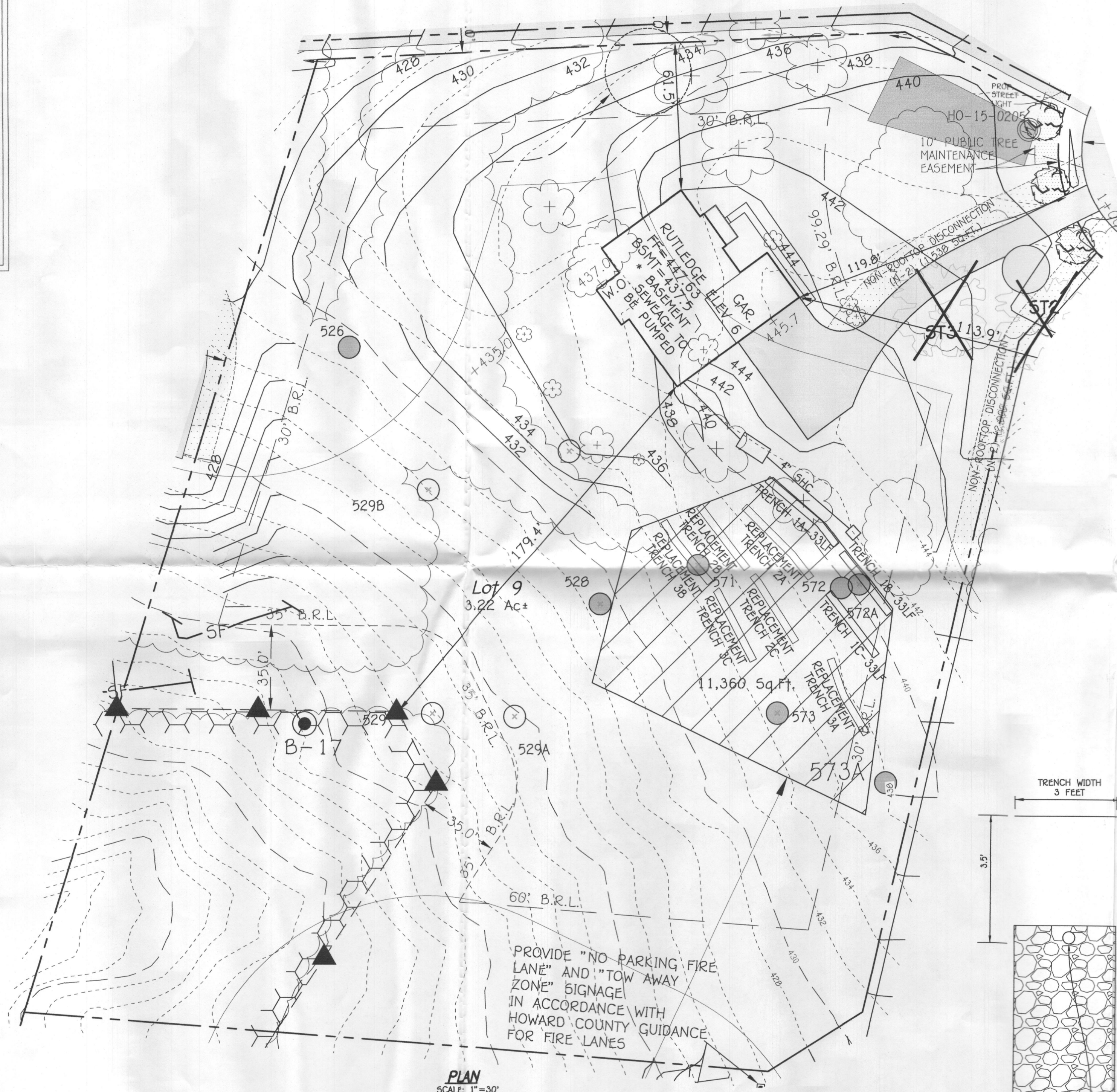
- LEGEND**
- EXISTING 2' CONTOURS
  - EXISTING 10' CONTOURS
  - EXISTING TREE LINE
  - SOIL LINES AND TYPES
  - ⊙ DENOTES EXISTING WELL
  - DENOTES PROPOSED TREELINE
  - ⊙ DENOTES 1500 Sq.Ft. ALTERNATE WELL SITE
  - ⊙ 530 PASSED PERC HOLES
  - ⊙ 537A FAILED PERC HOLES



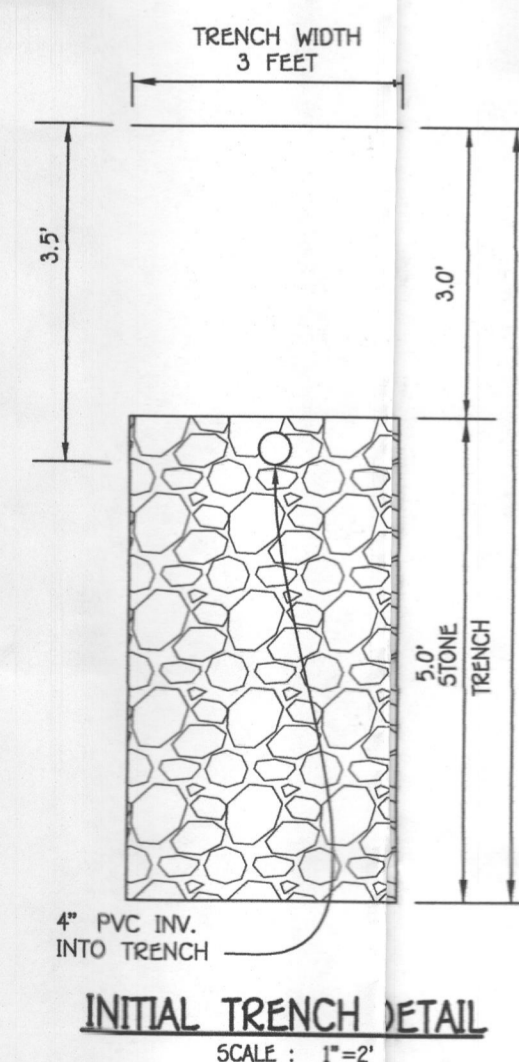
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  - BOUNDARY OF LOT BASED ON PLAT #23986 AND FIELD SURVEY BY FISHER, COLLINS & CARTER, INC.
  - PLAT REFERENCE: 23995 THRU 23987.
  - SUBJECT PROPERTY ZONED: RR-DEO
  - TOTAL AREA OF PROPERTY: 3.22 AC.
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  - EXISTING WELL AND SEPTIC ON LOT 9 HAS BEEN PROPERLY ABANDONED.



**SEPTIC PROFILE**  
HORIZONTAL SCALE: 1"=30'  
VERTICAL SCALE: 1"=3'



**PLAN**  
SCALE: 1"=30'



**SEWAGE DISPOSAL SYSTEM DATA**  
8 BEDROOMS (INITIAL SYSTEM)  
LOADING RATE = 8 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3.5 FEET  
TRENCH DEPTH = 8 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4.5 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+2(4.5)) = 0.385  
TRENCH LENGTH = 750 SF x 0.385 / 3 = 96.2 FEET  
(USE 99 FEET)  
TRENCH SPACING = 2D+W = ((2(4.5) + 3) = 12 USE 12'

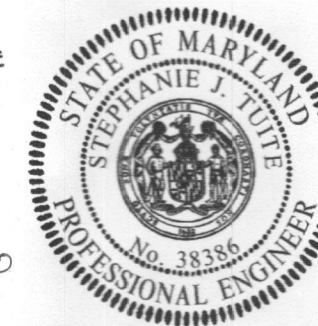
**SEWAGE DISPOSAL SYSTEM DATA**  
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LOADING RATE = 8 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
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TRENCH DESIGN										
TRENCH	GROUND ELEV.	TOP OF STONE ELEV.	PIPE INVERT ELEV.	DEPTH TO STONE FROM GROUND	DEPTH OF STONE (FT)	BOTTOM OF TRENCH ELEV.	EFFECTIVE DEPTH STARTS AT	EFFECTIVE DEPTH (D)	WIDTH OF TRENCHES (W)	TRENCH SPACING
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**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. 38386, EXPIRATION DATE 01/12/2020.

*Stephanie J. Fisher*  
Signature of Professional Engineer  
DATE: MAY 2018



**SEPTIC PLAN**  
**WESTLAND FARM ESTATES**

**LOT 9**  
**12535 WESTLAND COURT**

TAX MAP #45 PARCEL: 2B  
ZONED: RR-DEO  
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: MAY, 2018

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SOURCE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
CLUETT CITY, MARYLAND 21042  
(410) 461-2895

**OWNER**  
WILLIAMSBURG GROUP, LLC  
C/O BOB CORBETT  
5405 HARPERS FARM ROAD, SUITE 200  
COLUMBIA, MARYLAND 21044  
410-997-8800



## 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](http://www.hchealth.org)

Facebook: [www.facebook.com/hocohealth](https://www.facebook.com/hocohealth)

Twitter: HowardCoHealthDep

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

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### MEMORANDUM

TO: Fisher, Collins & Carter, Inc.  
10272 Baltimore National Pike  
Ellicott City, MD 21042

FROM: Robert Freemon *RF*  
Well & Septic Program

RE: Westland Farm Estates  
12535 Westland Court  
Fulton, MD 20759  
"Septic Plan Comments"

DATE: 5/9/18

---

After review of the septic plan here are my comments.

- ✓ • The well box is in a different spot than what was approved on the 6/8/2016 Perc Cert.
- ✓ • In the *Sewage Disposal System Data* calculations it mentions both 5 and 6 bedrooms. The building permit is for 6 bedrooms.
- ✓ • The *Trench Design* only shows elevations for 2 of the 3 trenches.
- ✓ • The existing septic system on the property must be abandoned with documentation sent to the Health Dept. If already abandoned documentation of it must be sent to the Health Dept.

# Transmittal

Via: ☐ Fax ☐ Mail ☒ Messenger ☐ E-Mail ☐ To Be Picked Up  
☐ Fax (original to follow via U.S. Mail)

To: <b>Bureau of Environmental Health</b> <b>8930 Stanford Blvd</b> <b>Columbia, MD 21046-4544</b>	Attn: <b>Jeff Williams/Robert Freemon</b> Fax: <b>(410) 313-2648</b> Phone: <b>(410) 313-2640</b>
--	---

From: <b>Stephanie Tuite</b>	CC:
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Re: <b>Westland Farm Estates Lot 9 - Septic Plan</b>	W.O.# <b>05062-3003</b>
Date: <b>04/24/18</b>	Pages: <b>Page(s) Including this cover</b>

We are forwarding:	<input checked="" type="checkbox"/> Prints	<input type="checkbox"/> Copy of Letter	<input type="checkbox"/> Specifications	<input type="checkbox"/> Shop drawings	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Urgent	<input type="checkbox"/> For your use	<input type="checkbox"/> As requested	<input type="checkbox"/> For Review & Comment	

Remarks:

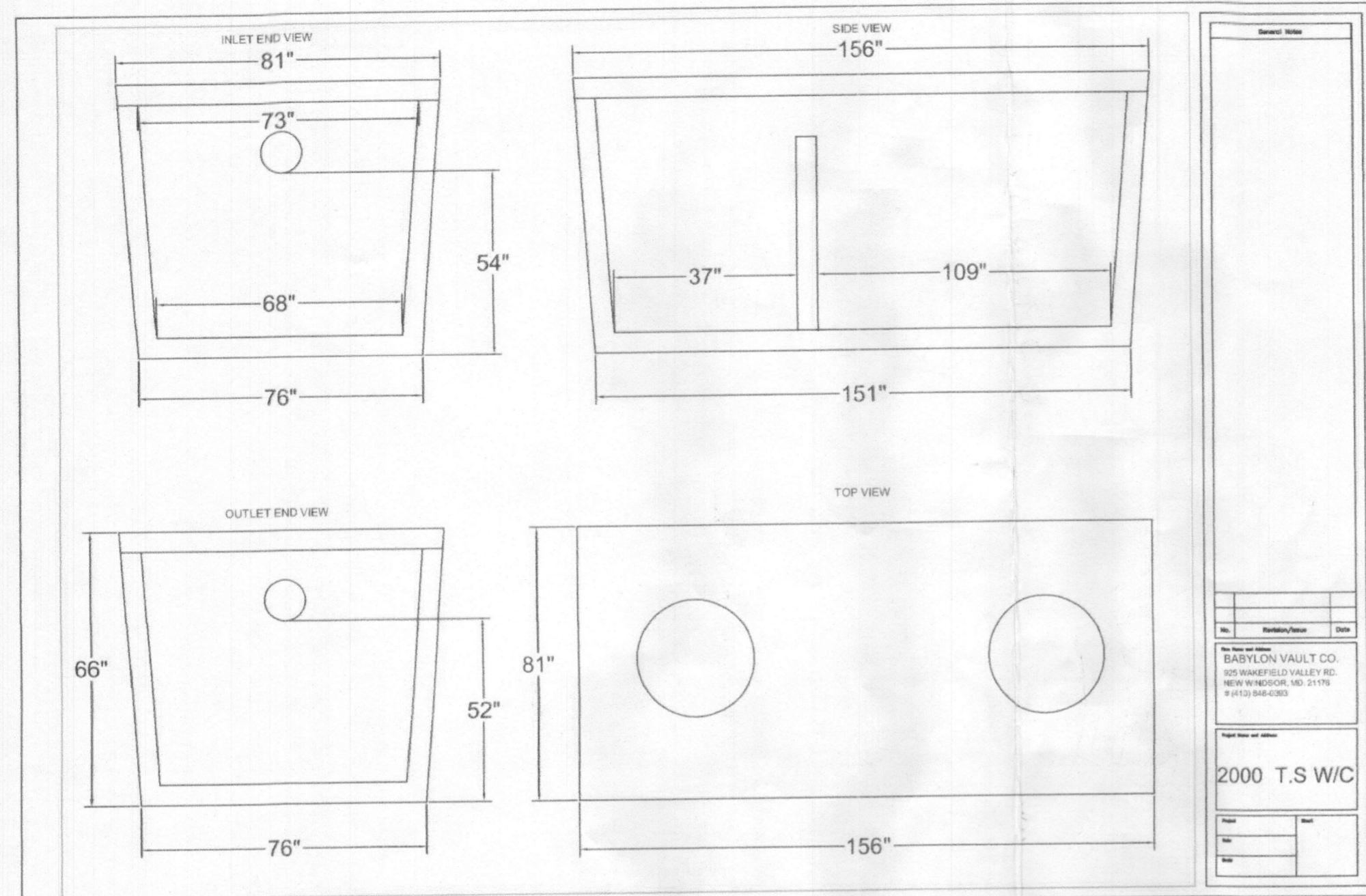
Attached please find three copies of the Septic Plan for Permit # B18001112, 12535 Westland Court.

Please call with any questions.

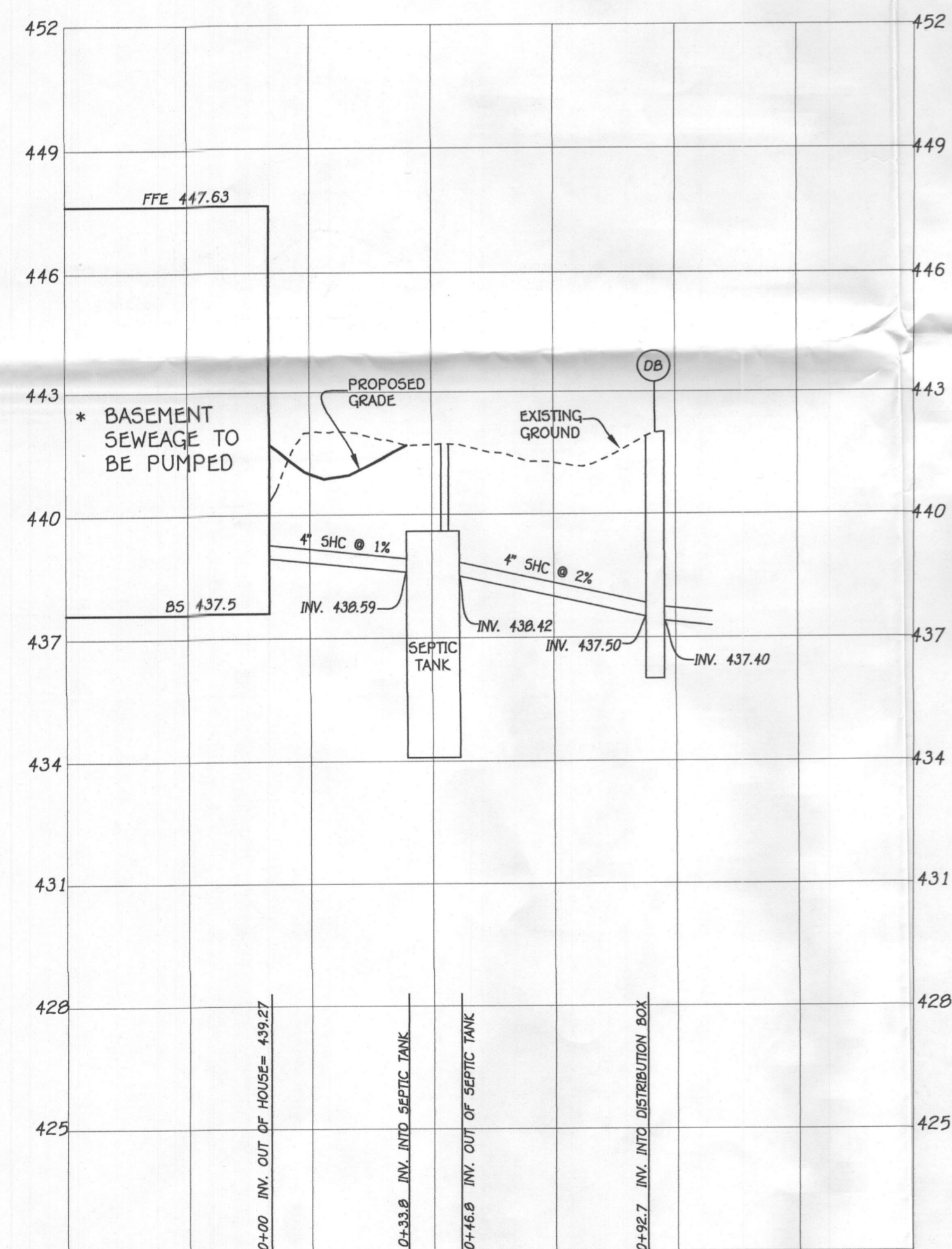
Stephanie Tuite, RLA, PE, LEED AP BD&C  
Fisher, Collins & Carter, Inc.

## **CONFIDENTIALITY NOTICE**

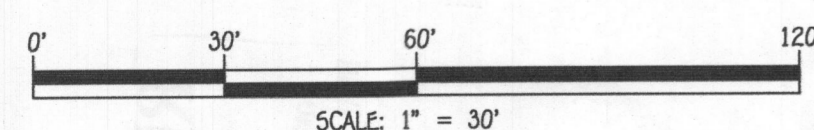
This transmission contains confidential information which may be legally privileged, and is intended only for the use of the individual named above. If you are not the intended recipient, you are hereby notified that any distribution (except to the intended recipient), copying, or disclosure of this transmission is strictly prohibited.



No.	Description/Notes	Date
1	BABYLON VAULT CO. 150 HARPER ROAD, SUITE 200, COLUMBIA, MD 21046	
2	2000 T.S.W.C.	



**SEPTIC PROFILE**  
HORIZONTAL SCALE: 1"=30'  
VERTICAL SCALE: 1"=3'



**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALDWIN NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21042  
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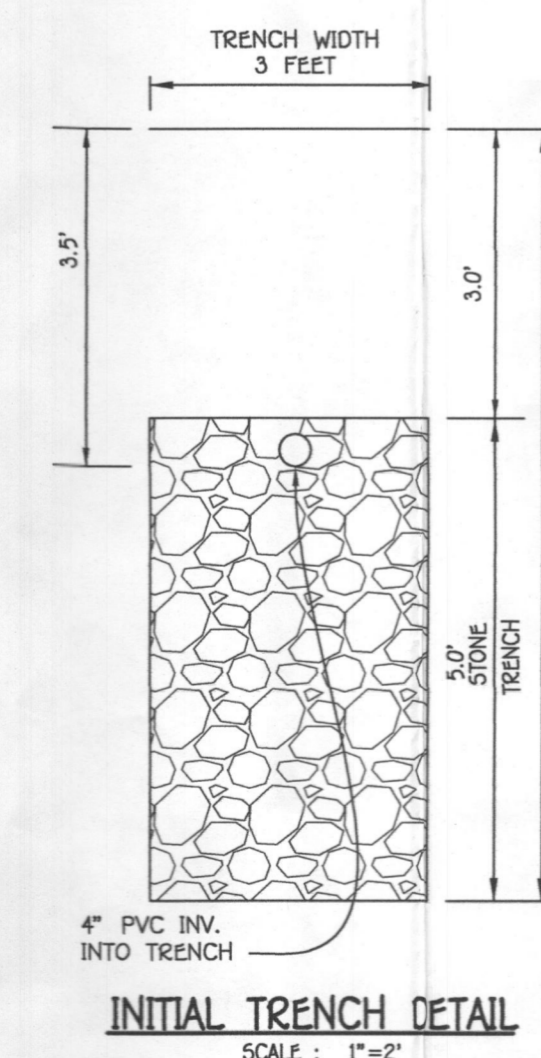
**OWNER**  
WILLIAMSBURG GROUP, LLC  
C/O BOB CORRETT  
5405 HARPER ROAD, SUITE 200  
COLUMBIA, MARYLAND 21044  
410-997-8800

TRENCH DESIGN									
TRENCH	GROUND ELEV.	TOP OF STONE ELEV.	PIPE INVERT ELEV.	DEPTH TO STONE FROM GROUND	DEPTH OF STONE (FT)	BOTTOM OF TRENCH ELEV.	EFFECTIVE DEPTH STARTS AT	EFFECTIVE DEPTH (D)	WIDTH OF TRENCHES (W)
A	440.9	437.9	437.4	3.0"	5.0"	432.9	3.5'	4.5'	3.0'
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**NOTE:**  
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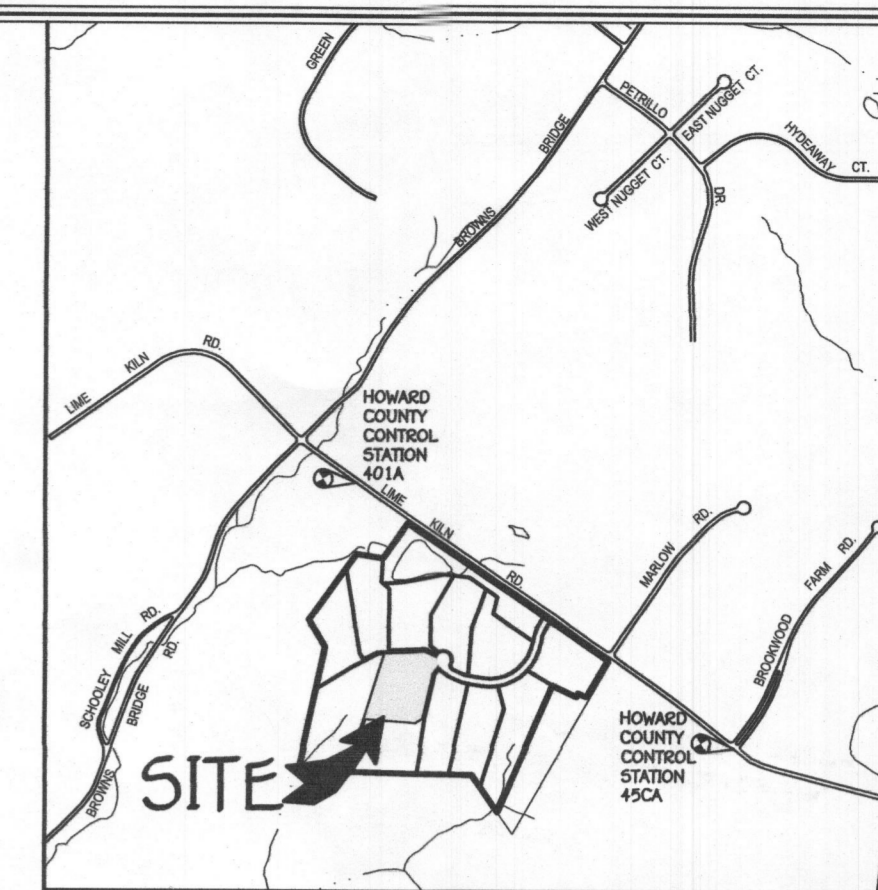


**PLAN**  
SCALE: 1"=30'



**INITIAL TRENCH DETAIL**  
SCALE: 1"=2'

- LEGEND**
- EXISTING 2' CONTOURS
  - - - EXISTING 10' CONTOURS
  - - - EXISTING TREE LINE
  - SOIL LINES AND TYPES
  - DENOTES EXISTING WELL
  - DENOTES PROPOSED TREELINE
  - DENOTES 1500 Sq.Ft. ALTERNATE WELL SITE
  - PASSED PERC HOLES
  - FAILED PERC HOLES



**VICINITY MAP**  
SCALE: 1" = 1200'

**GENERAL NOTES:**

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- BOUNDARY OF LOT BASED ON PLAT #23986 AND FIELD SURVEY BY FISHER, COLLINS & CARTER, INC.
- PLAT REFERENCE: 23989 THRU 23987.
- SUBJECT PROPERTY ZONED: R2-DEO
- TOTAL AREA OF PROPERTY: 3.22 AC.
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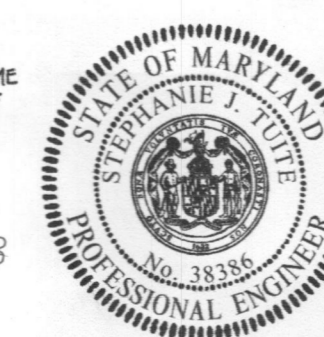
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APPLICATION RATE = 1.2  
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**SEWER DISPOSAL SYSTEM DATA**  
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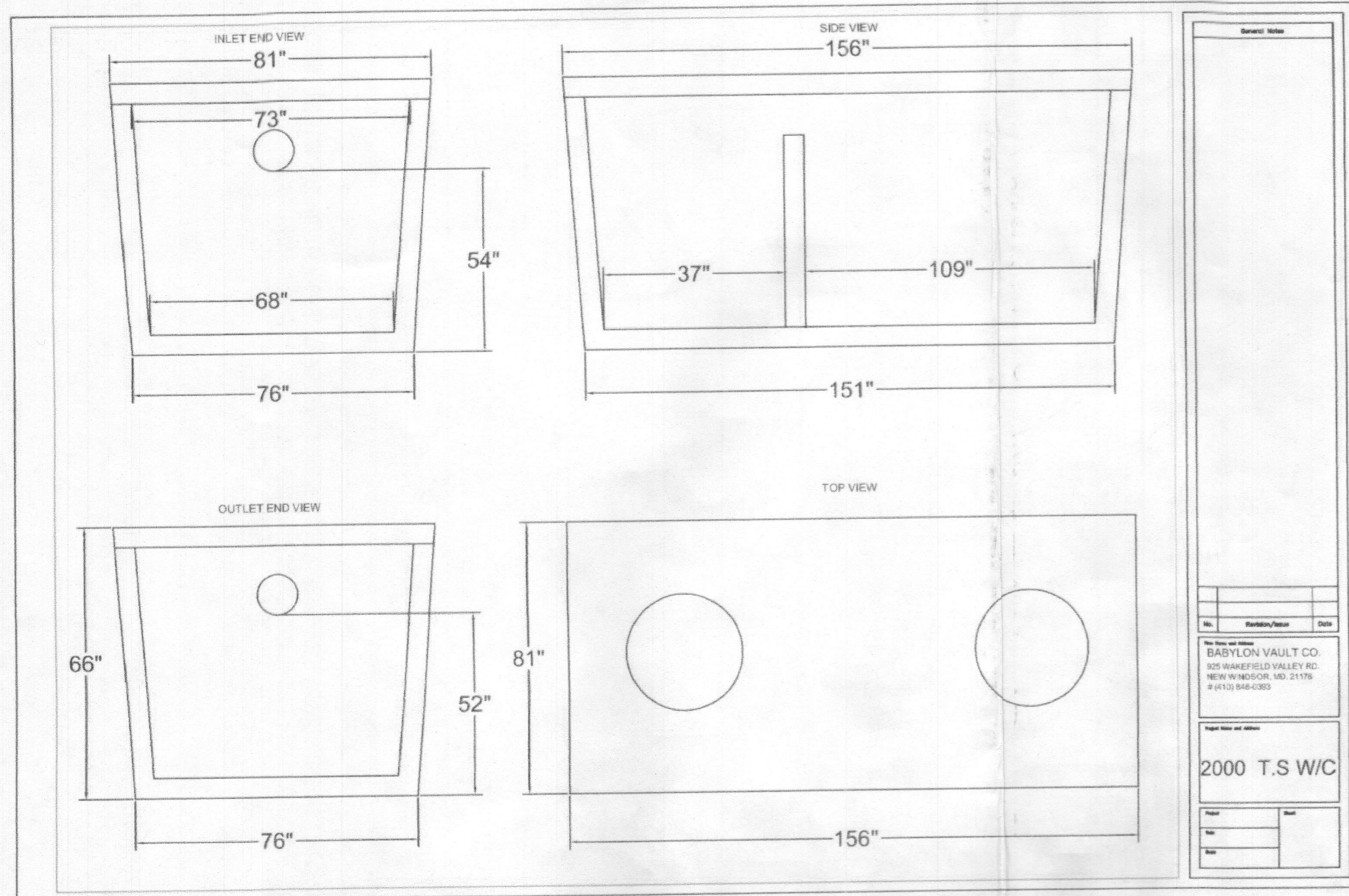
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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38366, EXPIRATION DATE 9/12/2020.

*Stephen J. Tuite* 5/10/18  
Signature Of Professional Engineer DATE



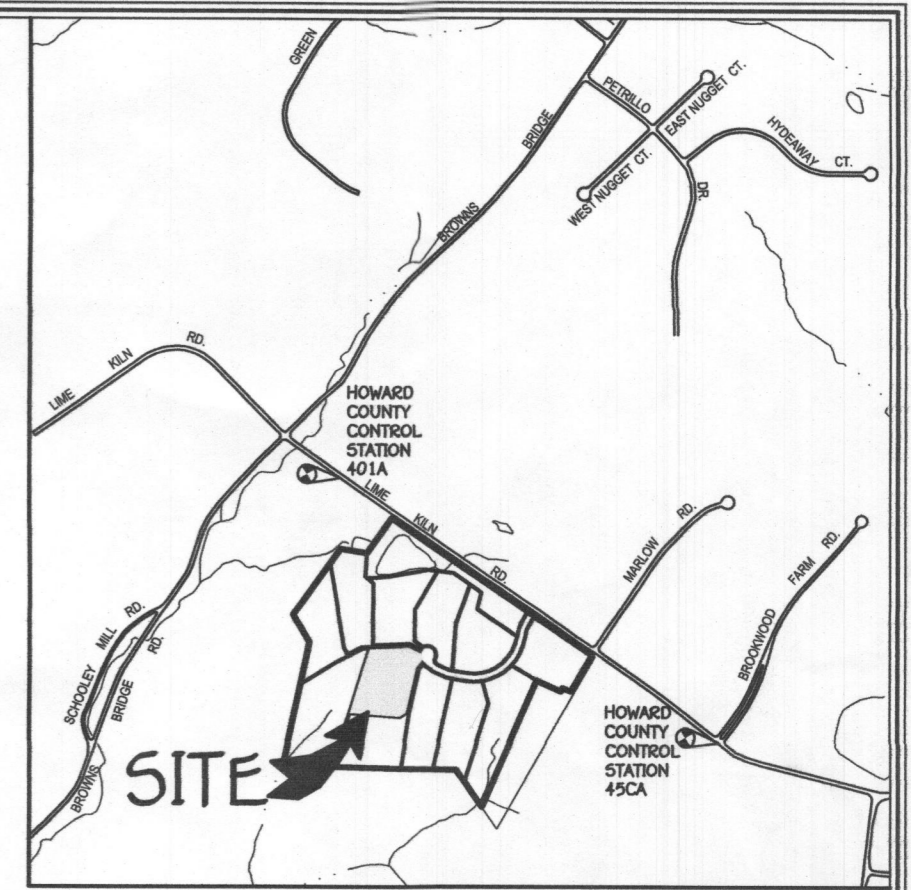
**SEPTIC PLAN**  
**WESTLAND FARM ESTATES**  
**LOT 9**  
12535 WESTLAND COURT  
TAX MAP #45 PARCEL 28  
ZONING: R2-DEO  
THIRD ELECTION DISTRICT: HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: MAY, 2018



NOTE:  
THE EXISTING WELLS SHOWN ON THIS PLAN, HO-15-0205 HAS BEEN FIELD LOCATED BY FISHER, COLLINS & CARTER, INC., PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.

#### LEGEND

- EXISTING 2' CONTOURS
- EXISTING 10' CONTOURS
- - - EXISTING TREE LINE
- SOIL LINES AND TYPES
- DENOTES EXISTING WELL
- DENOTES PROPOSED TREELINE
- DENOTES 1500 Sq.Ft. ALTERNATE WELL SITE
- PASSED PERC HOLES
- FAILED PERC HOLES



**VICINITY MAP**  
SCALE: 1" = 1200'

#### GENERAL NOTES:

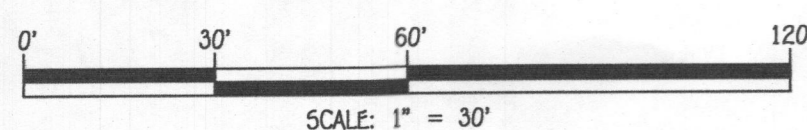
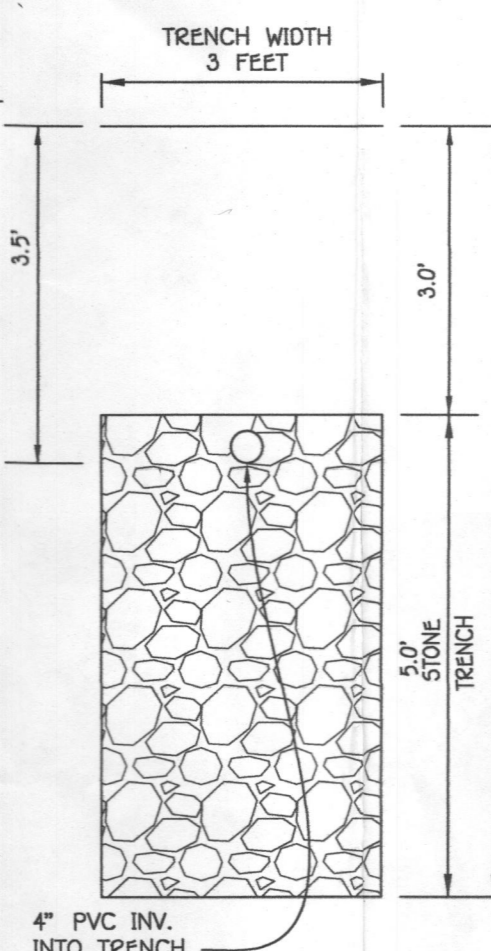
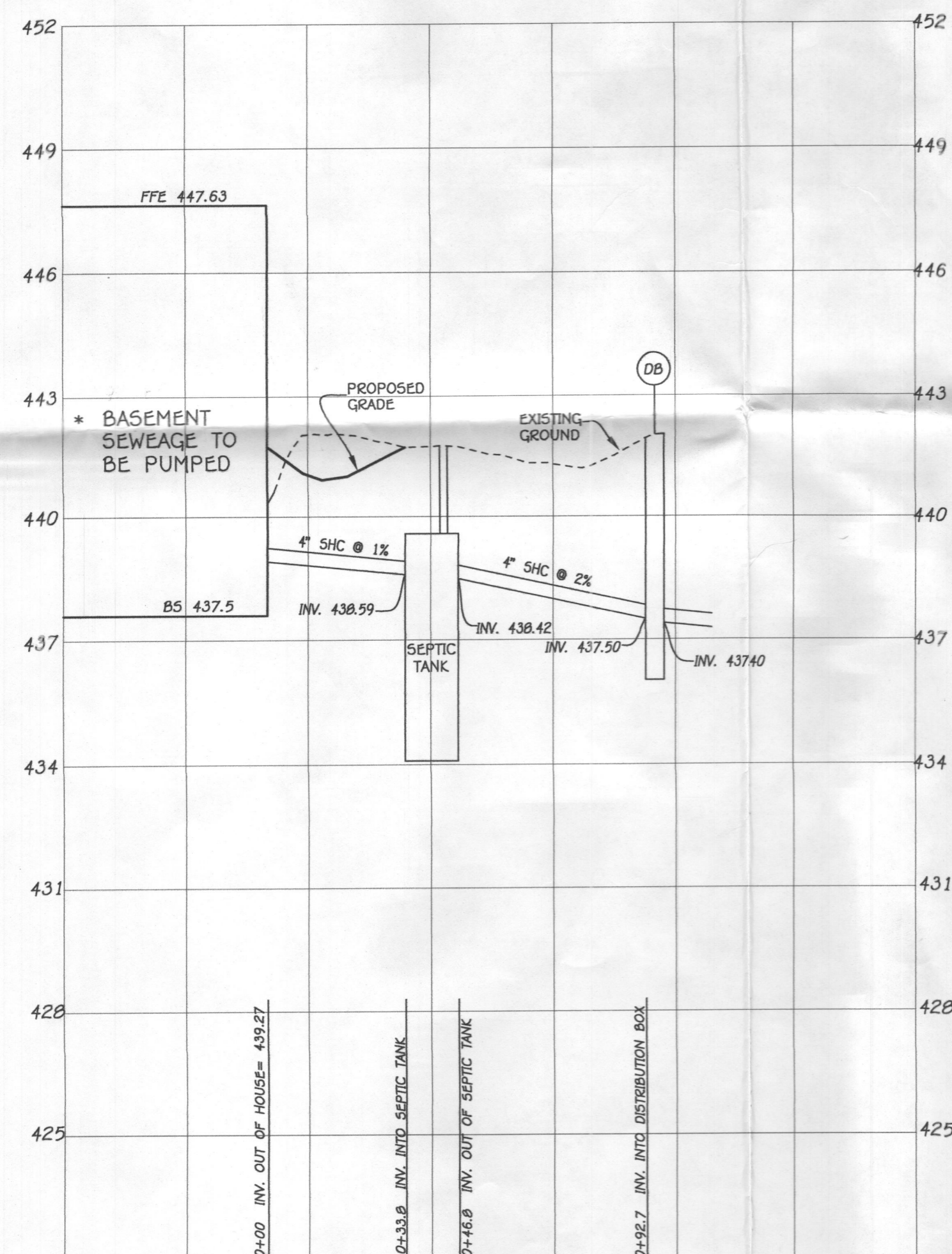
- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.
- ADJUSTMENTS TO SEPTIC EASEMENT AREA IS NOT PERMITTED WITHOUT ADDITIONAL TESTING.
- THE LOT SHOWN HEREON COMPLETES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
- ALL WELLS AND SEPTIC SYSTEMS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND 200 FEET DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
- TOPOGRAPHIC CONTOURS BASED ON HARFORD AERIAL SURVEYS, INC. DATED JANUARY 2006 AND SUPPLEMENTED WITH FIELD RUN TOPOGRAPHY BY FISHER, COLLINS & CARTER, INC. ON OR ABOUT APRIL, 2006 AND JANUARY, 2015.
- BOUNDARY OF LOT BASED ON PLAT #23986 AND FIELD SURVEY BY FISHER, COLLINS & CARTER, INC.
- PLAT REFERENCE: 23995 THRU 23987.
- SUBJECT PROPERTY ZONED: RE-DEO
- TOTAL AREA OF PROPERTY: 3.22 AC.
- WETLANDS, STREAMS, THEIR BUFFERS, FLOODPLAIN, AND STEEP SLOPES DO NOT EXIST ON THIS LOT.
- SOILS SHOWN HEREON ARE BASED ON NRCS WEB SOIL SURVEY AND HOWARD COUNTY SOILS MAP 3.
- 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.
- THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET.

FFE 447.63  
BSE 437.5  
INV. OUT OF HOUSE = 439.27  
PROP. GROUND AT SEPTIC TANK = 442.0  
COVER OVER TANK = 2.41 FEET  
TOP OF SEPTIC TANK = 439.59  
INV. INTO SEPTIC TANK = 438.59  
INV. OUT OF SEPTIC TANK = 438.52  
EX. GROUND AT DISTRIBUTION BOX = 442.0  
INV. INTO DISTRIBUTION BOX = 437.50  
INV. OUT OF DISTRIBUTION BOX = 437.40

**SEWAGE DISPOSAL SYSTEM DATA**  
5 BEDROOMS (INITIAL SYSTEM)  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3.5 FEET  
TRENCH DEPTH = 8 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4.5 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+(2x4.5)) = 0.385  
TRENCH LENGTH = 750 SF x 0.385 / 3 = 96.2 FEET (USE 99 FEET)  
TRENCH SPACING = 2D+W = ((2x4.5) + 3) = 12 USE 12'

**SEWAGE DISPOSAL SYSTEM DATA**  
5 BEDROOMS (REPLACEMENT SYSTEMS)  
LOADING RATE = 6 BEDROOMS X 150 GPD/BEDROOM = 900 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 7.5 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 4.5 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+(2x4.5)) = 0.385  
TRENCH LENGTH = 750 SF x 0.385 / 3 = 96.2 FEET (USE 99 FEET)  
TRENCH SPACING = 2D+W = ((2x4.5) + 3) = 12 USE 12'

- UCA  
- 5/6 BR  
= Trench Repair C

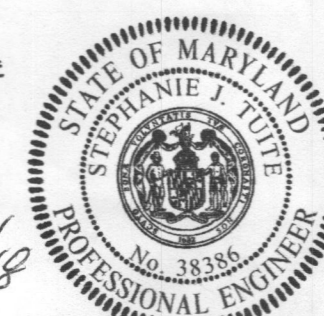


TRENCH DESIGN									
TRENCH	GROUND ELEV.	TOP OF STONE ELEV.	PIPE INVERT ELEV.	DEPTH TO STONE FROM GROUND	DEPTH OF TRENCH (FT)	BOTTOM OF TRENCH ELEV.	EFFECTIVE DEPTH STARTS AT	EFFECTIVE DEPTH (D)	WIDTH OF TRENCHES (W)
A	440.55	437.55	437.05	3.0'	5.0'	432.55	3.5'	4.5'	3.0'
B	440.85	437.85	437.35	3.0'	5.0'	432.85	3.5'	4.5'	3.0'

#### 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. 38386, EXPIRATION DATE 01/12/2020.

*Signature of Professional Engineer*  
DATE: 10/24/18



**SEPTIC PLAN**  
**WESTLAND FARM ESTATES**  
**LOT 9**  
12535 WESTLAND COURT

TAX MAP #45 PARCEL: 28  
ZONED: RE-DEO  
THIRD ELECTION DISTRICT: HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: APRIL, 2018