



**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: 10/12/18

**ONSITE SEWAGE DISPOSAL SYSTEM**

P 560429

APPROVAL DATE: 11/30/18 SEC

**PERMIT: CONSTRUCTION**

A

PROPERTY ADDRESS: 1044 Fairlane Road

SUBDIVISION: Fairlane Farms

LOT: 21

TAX ID:

CONTRACTOR: South Carroll Backhoe

EMAIL: scbackhoe@comcast.com

CONTRACTOR ADDRESS: 4410 Salem Bottom Road, Westminster, MD 21157

PHONE: 410-596-3618

PROPERTY OWNER: NV Homes

EMAIL:

OWNER ADDRESS: 9720 Patuxent Woods Drive, Columbia, MD 21046

PHONE: 410-379-5956

SEPTIC TANK SIZE (GALLONS): 2000

TANK MANUFACTURER: Babylon Vault or equivalent

PUMP MODEL: N/A

PUMP SIZE

1/3 hp

PUMP TANK CAPACITY: 1500

DISTRIBUTION SYSTEM:



GRAVITY



PRESSURE DOSED

BEDROOMS: 5

APPLICATION RATE

1.2

TRENCHES:

LINEAR FEET REQUIRED: 130.21

INLET DEPTH: 3

TRENCH WIDTH: 3

MAXIMUM BOTTOM DEPTH: 5

MINIMUM SPACE

BETWEEN TRENCHES: 10

EFFECTIVE AREA BEGINNING DEPTH: 3

LOCATION:

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

NOTES:

ISSUED BY: Hank Oswald

ISSUE DATE: 10/12/18

EXPIRATION DATE: 10/12/19

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

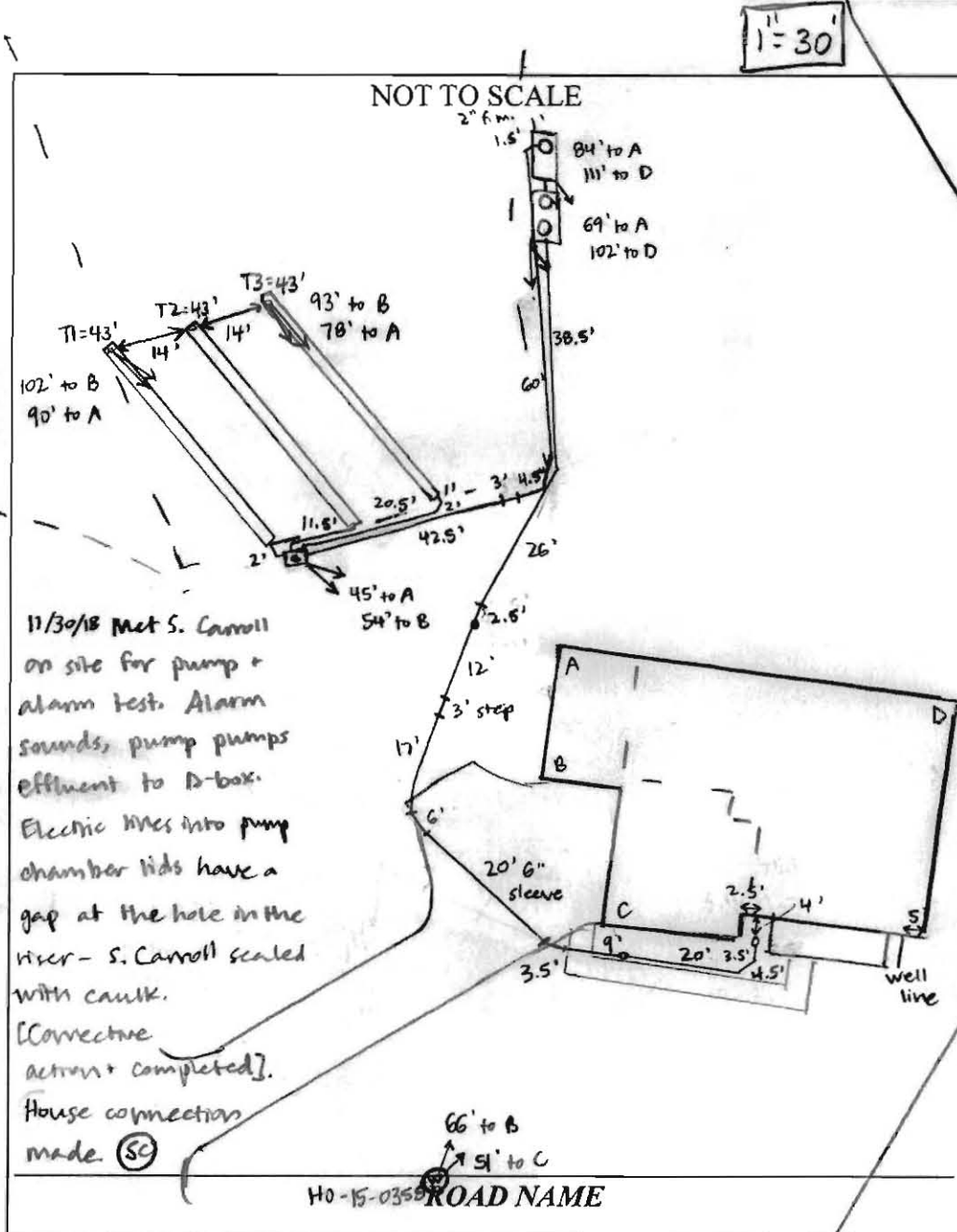
E 18004360

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
3'	3'	5'
NUMBER OF TRENCHES	3	
TOTAL LENGTH	129'	
ABSORPTION AREA	307' + SIDEWALL	
DISTRIBUTION BOX LEVEL	YES	
DISTRIBUTION BOX BAFFLE	ELBOW	
DISTRIBUTION BOX PORT	YES	

#### SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL	YES
MANUFACTURER	BABYLON
CAPACITY	2000 GAL
SEAM LOC	TOP
TANK LID DEPTH	1.5-2.5'
BAFFLES	YES
BAFFLE FILTER	NO
MANHOLE LOC	FRONT + REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	YES
DATE ON LID	9-26-18

#### PUMP/SEPTIC TANK LEVEL

PUMP/SEPTIC TANK LEVEL	YES
MANUFACTURER	BABYLON
CAPACITY	1500 GAL
SEAM LOC	TOP
TANK LID DEPTH	1.5-2.5'
BAFFLES	NO
BAFFLE FILTER	NO
MANHOLE LOC	REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	NO
DATE ON LID	9-11-18

Pump: Gould's 1/3 hp

#### PRE-CONSTRUCTION:

10/15/18 Met S. Carroll on site for layout. SDA corner stakes present. Shot elevations and with 2% fall in the line from the house to the tanks. Septic tank would have 5' cover.

[Shot tank elevation 15' farther from house b/c plan shows tank 110' from lot 22 well site.] Contact builder + engineer about a new tank location. (SC) 10/19/18 Grade cut slightly in area of tanks near SDA. Shot elevations and septic tank will have 4' cover w/ 2% fall in the sewer line. (SC) 11/20/18 Met S. Carroll on site for trench layout. Contour slightly

INSTALLATION: Different than shown on plan - laid out 3 x 44' trenches to conserve area in the SDA. Need trees cleared in order to do tank layout. (SC) 11/21/18 Trenches

dug. T1 + T2 complete + left open at ends for inspection. S. Carroll adding stone to T3. 3' wide, 2.5' to stone. Area around tanks cleared, pump tank will have >3' cover if tanks are set per plan. OK to either set in a straight line or set pump tank downhill of septic tank. (SC) 11/26/18 Tanks set in location shown on plan in a line. (SC) 11/27/18 Force main run

from pump tank to D-box. D-box connected to trenches. Pipe into D-box needs gap at box sealed. [Corrective action.] S. Carroll digging house sewer line. (SC) 11/27/18 Sewer line installed, need house connection. D-box patched @ force main [Corrective action completed.] Need pump + alarm. (SC)

FINAL INSPECTOR Sarah Collins DATE OF APPROVAL 11/30/18



11/5/18  
Fairlane Farm lot 21 grading



11/5/18  
Fairlane Farm lot 21 grading



11/5/18

Fairlane Farm lot 21 grading



Fairlane Farm, lot 21 – 10/31/18

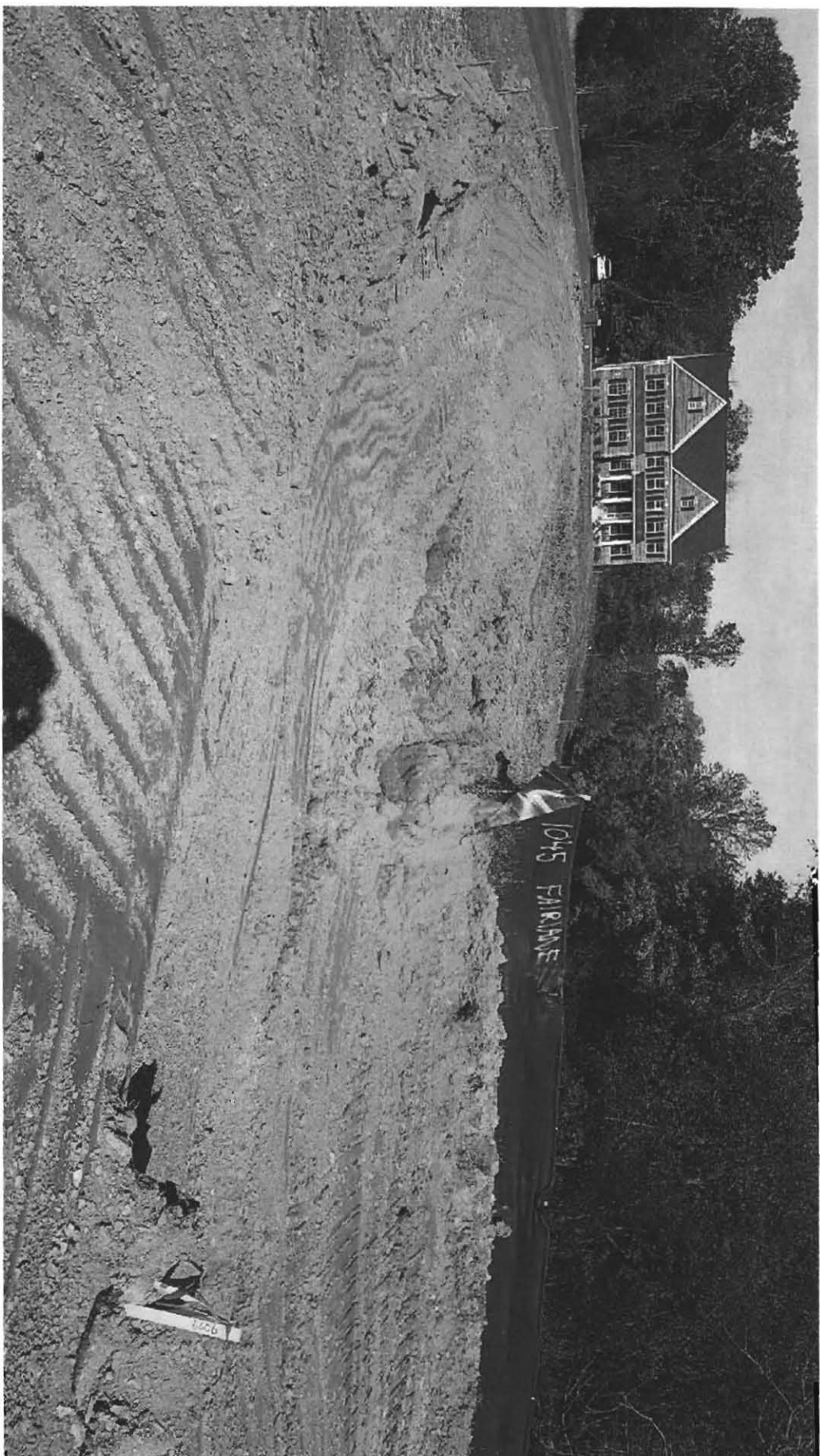




Fairlane Farm, lot 21 – 10/31/18



Fairlane Farm, lot 21 – 10/31/18



## Collins, Sarah

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**From:** Collins, Sarah  
**Sent:** Thursday, November 01, 2018 7:32 AM  
**To:** 'Cagle, Clint'; Dave Harward, III; Keyser, Nolan; Anastasia, James  
**Cc:** Hanauer, Brent; Mark Robel; Oswald, Hank  
**Subject:** RE: Fairlane Farm lot 21

Hi Clint,

I received pictures of the final grading at Fairlane Farm lot 21 from and spoke with Jeff in our office. The approved septic plan shows a profile with less than a foot removed over the tanks, yet there is much more removed which creates a steep dropoff just above the top edge of the septic area. The plan must be revised to show correct grading around the tanks and tank depths. Also, there cannot be a steep dropoff above the septic area and the grading that was done must be filled in.

Let me know if you have any questions.

Thanks,  
Sarah

**From:** Cagle, Clint [mailto:ccagle@nvrinc.com]  
**Sent:** Friday, October 19, 2018 3:48 PM  
**To:** Collins, Sarah; Dave Harward, III; Keyser, Nolan; Anastasia, James  
**Cc:** Hanauer, Brent; Mark Robel; Oswald, Hank  
**Subject:** RE: Fairlane Farm lot 21

Hi Sarah,

Got it. I'm just looking at on paper, so Jimmy will need to figure out what will work best in the field next week with you guys. Have a nice week off. Will someone be able to handle this with Jimmy next week while you are out?

Thanks,

**Clint Cagle** | NVHomes | 301-237-5776  
-----

Message classified as *NVR - Business Use Only* on Friday, October 19, 2018 3:47:58 PM

**From:** Collins, Sarah <SCollins@howardcountymd.gov>  
**Sent:** Friday, October 19, 2018 3:36 PM  
**To:** Cagle, Clint <ccagle@nvrinc.com>; Dave Harward, III <DaveH@fcc-eng.com>; Keyser, Nolan <nkeyser@nvrinc.com>; Anastasia, James <janastas@nvrinc.com>  
**Cc:** Hanauer, Brent <bhanauer@nvrinc.com>; Mark Robel <robelf@fcc-eng.com>; Oswald, Hank <hoswald@howardcountymd.gov>  
**Subject:** [Ext] Re: Fairlane Farm lot 21

Hi Clint,



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

MEMORANDUM

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

FROM: Hank Oswald, L.E.H.S.  
Well & Septic Program

RE: 1044 Fairlane Road  
Fairlane Farms, Lot 21

Date: July 26, 2018

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The OSDS Plan for has been reviewed with the following comments:

- 1.) Correct *trench length* calculations (i.e. Initial trench length needed after credit is 195.31)
- 2.) Pump curve is more like 38 gallons/min. at 7 ft. of head.



**FISHER, COLLINS  
& CARTER, INC.**

**CIVIL ENGINEERING CONSULTANTS  
and LAND SURVEYORS**

Terrell A. Fisher, P.E., L.S.  
Earl D. Collins, P.E.  
Charles J. Crovo, Sr., P.E., L.S.

Paul W. Kriebel, P.E.  
Mark L. Robel, P.L.S.  
Aldo M. Vitucci, P.E.  
Frank Manalansan II, L.S.  
Stephanie Tulte, RLA, P.E., LEED AP BD&C

# 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, Maryland 21046-4544</b>	Attn: <b>Hank</b> Fax: Phone: <b>410-313-2640</b>
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From: <b>Tony Fertitta</b>	CC:
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Re: <b>Fairlane Farms, Lot 21</b>	W.O.# <b>05106-3003</b>
Date: <b>November 12, 2018</b>	Pages: <b>0</b> Page(s) Including this cover

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

Remarks:

Re: Fairlane Farm, Lot 21, 1044 Fairlane Road.

Here are 3 new copies of the OSDS for Lot 21 for your review. Please let me know if you have any questions.

Thank You,

Tony.

Fisher, Collins, & Carter, Inc. Ph. 410-461-2855

### **CONFIDENTIALITY NOTICE**

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## Oswald, Hank

---

**From:** Dave Harward, III <DaveH@fcc-eng.com>  
**Sent:** Thursday, November 08, 2018 3:36 PM  
**To:** Williams, Jeffrey  
**Cc:** Collins, Sarah; Oswald, Hank  
**Subject:** RE: Fairlane Farms Lot 21

Jeff,

Yes, we have 2 ft. of cover and 2% of fall. Also less than 3 ft. of cover over both the standard tank and the pump tank. We will get plans done and to you asap for review & approval.

Thanks,  
Dave.

---

**From:** Williams, Jeffrey [mailto:jewilliams@howardcountymd.gov]  
**Sent:** Thursday, November 08, 2018 2:58 PM  
**To:** Dave Harward, III  
**Cc:** Collins, Sarah; Oswald, Hank  
**Subject:** RE: Fairlane Farms Lot 21

In terms of location, I think that looks good. Without seeing the hydraulic profile, I'm assuming that we have at least 1% fall with at least 2' cover through the swale to tanks 3' or less deep in that location? If the 4" sewer needs to be only 18" deep, that wouldn't be the end of the world. If all that is in place, just send us 2 copies for approval and we can forward to the contractor after review and approval. Thanks  
Jeff

---

**From:** Dave Harward, III [mailto:DaveH@fcc-eng.com]  
**Sent:** Wednesday, November 07, 2018 5:28 AM  
**To:** Williams, Jeffrey  
**Cc:** Collins, Sarah; Oswald, Hank  
**Subject:** RE: Fairlane Farms Lot 21

Jeff,

Thanks for your prompt attention to this issue. I've worked on the new design based on where you and Sarah have suggested the tank locations to be. I've oriented the the sewer pipes, modified the grading (to have adequate cover over them), and have determined new elevations of the pipes and tanks. The customer was promised a rear yard that is level and usable for a pool, large deck and patio, with the walkout elevation held along the entire back wall. There has to be a drainage swale in the back yard that conveys drainage from the left side. That being said, this has been reduced in depth & I believe this will work....gravity flow from the front, where the internal plumbing drains to. Please review the attached plan and let me know is this is acceptable.

Thanks,  
Dave.

---

**From:** Williams, Jeffrey [mailto:jewilliams@howardcountymd.gov]  
**Sent:** Monday, November 05, 2018 2:41 PM  
**To:** Dave Harward, III

## Oswald, Hank

---

**From:** Williams, Jeffrey  
**Sent:** Thursday, November 08, 2018 2:58 PM  
**To:** 'Dave Harward, III'  
**Cc:** Collins, Sarah; Oswald, Hank  
**Subject:** RE: Fairlane Farms Lot 21

In terms of location, I think that looks good. Without seeing the hydraulic profile, I'm assuming that we have at least 1% fall with at least 2' cover through the swale to tanks 3' or less deep in that location? If the 4" sewer needs to be only 18" deep, that wouldn't be the end of the world. If all that is in place, just send us 2 copies for approval and we can forward to the contractor after review and approval. Thanks

Jeff

---

**From:** Dave Harward, III [mailto:[DaveH@fcc-eng.com](mailto:DaveH@fcc-eng.com)]  
**Sent:** Wednesday, November 07, 2018 5:28 AM  
**To:** Williams, Jeffrey  
**Cc:** Collins, Sarah; Oswald, Hank  
**Subject:** RE: Fairlane Farms Lot 21

Jeff,

Thanks for your prompt attention to this issue. I've worked on the new design based on where you and Sarah have suggested the tank locations to be. I've oriented the the sewer pipes, modified the grading (to have adequate cover over them), and have determined new elevations of the pipes and tanks. The customer was promised a rear yard that is level and usable for a pool, large deck and patio, with the walkout elevation held along the entire back wall. There has to be a drainage swale in the back yard that conveys drainage from the left side. That being said, this has been reduced in depth & I believe this will work....gravity flow from the front, where the internal plumbing drains to. Please review the attached plan and let me know is this is acceptable.

Thanks,  
Dave.

---

**From:** Williams, Jeffrey [mailto:[jewilliams@howardcountymd.gov](mailto:jewilliams@howardcountymd.gov)]  
**Sent:** Monday, November 05, 2018 2:41 PM  
**To:** Dave Harward, III  
**Cc:** Collins, Sarah; Oswald, Hank  
**Subject:** RE: Fairlane Farms Lot 21

The trench I refer to is the area where the tanks were proposed in which there are two steep walls of grading going from 590 down to 586. We went out there today and that whole area is collecting water as would be expected in a large cut out area like that. The tanks were at the top of the slope within the middle of the swale/trench, but it is still a bottom area of a 4' deep cut out.

The grading proposed to achieve tanks at that location at the top corner of the SDA is not going to be acceptable in any scenario. The cut out to try to achieve that is not going to work for drainage or tank positioning. The tanks have to go somewhere else. My suggestion for where they could possibly go is shown in the attachment. That area is away from the graded swale cutting through the yard. There's minimal trees cut out to get them there and the pump would not need to be large to pump from there up to a d box. A standard 1/3 hp pump should easily handle it.

---

**From:** Dave Harward, III [mailto:DaveH@fcc-eng.com]  
**Sent:** Monday, November 05, 2018 9:39 AM  
**To:** Williams, Jeffrey  
**Cc:** Collins, Sarah; Oswald, Hank  
**Subject:** RE: Fairlane Farms Lot 21

Jeff,

I am wondering what happened from Friday to today on this. It sounded like we were getting close to a solution that would work well. This "big swale" you refer to, is carrying very little drainage (the driveway slopes away from the swale, so no surface flow from the driveway is draining into it. I do not understand your reference to a "big trench". Where the tanks are, the slopes are very flat.

If you can sketch where you are talking about setting the tanks and email it to me, that would be helpful, so we know exactly where you are thinking. It sounds like it would be in the trees. It also sounds like a long distance for maintenance of the septic tanks. Also, this would result in the need for a much stronger pump (much more elevation difference to the D box), and it would require tree clearing for the tanks and what would be a very long pressure line (with a lot of tree roots possibly being an issue in the future for the pressure line). I believe we could revise the trench layout some to get more distance from the top of slope of the swale to the end of the first initial trench.

Thanks,  
Dave.

---

**From:** Williams, Jeffrey [mailto:jewilliams@howardcountymd.gov]  
**Sent:** Monday, November 05, 2018 8:37 AM  
**To:** Dave Harward, III  
**Cc:** Collins, Sarah; Oswald, Hank  
**Subject:** RE: Fairlane Farms Lot 21

That location for the tanks is just not going to work. You're proposing to cut out too much in too little a space. You're sticking them in a big trench. Our suggestion is to propose the tanks on the bottom edge of the SDA on the other side of the graded swale and to fill in what was cut out on the side of the SDA by the shared driveway to remove that big swale.

---

**From:** Dave Harward, III [mailto:DaveH@fcc-eng.com]  
**Sent:** Friday, November 02, 2018 2:26 PM  
**To:** Williams, Jeffrey  
**Cc:** Collins, Sarah; Oswald, Hank  
**Subject:** RE: Fairlane Farms Lot 21

Jeff,

Attached is a new plan with the tanks adjusted and the grading significantly improved to lessen the slope around the tanks. The If this is acceptable, will you want to revise the SDA (require an revised Perc. Cert.)? The length of pipe from the house ends up with this plan to be a minute amount shorter in distance, and would not even change the inverts into the standard tank, or the grade over.

Thanks,  
Dave.

---

**From:** Williams, Jeffrey [mailto:jewilliams@howardcountymd.gov]  
**Sent:** Friday, November 02, 2018 9:43 AM  
**To:** Dave Harward, III; Collins, Sarah



**Cc:** Collins, Sarah; Oswald, Hank  
**Subject:** RE: Fairlane Farms Lot 21

Ok. I was thinking if you hug the edge of the SDA with the tanks, you'll be on the other side of the graded drainage swale and far enough away from it. I imagine that fall could be had from the hung sewer over to there as well.

---

**From:** Dave Harward, III [<mailto:DaveH@fcc-eng.com>]  
**Sent:** Friday, November 02, 2018 9:41 AM  
**To:** Williams, Jeffrey; Collins, Sarah  
**Cc:** Collins, Sarah; Oswald, Hank  
**Subject:** RE: Fairlane Farms Lot 21

The house is so far along in construction the internal plumbing is all done and directed to the front of the house as shown on the plan, so that would be a huge problem. Let me look at this some more....I have some another thought to resolve this. The location for the tanks is near a swale that directs drainage to bypass the micro bioretention facility, as well as some trees are there. But the biggest issue is the existing house plumbing. I'll get back to you later today.

Greatly appreciate your help in resolving this.

---

**From:** Williams, Jeffrey [<mailto:jewilliams@howardcountymd.gov>]  
**Sent:** Friday, November 02, 2018 9:22 AM  
**To:** Dave Harward, III; Sarah Jahng  
**Cc:** Collins, Sarah; Oswald, Hank  
**Subject:** RE: Fairlane Farms Lot 21

No problem Dave. We want to try and get things right.

I was looking at the layout trying to see how it could be possible to adjust the grading to be appropriate and I realized that the top corner where the septic tank is located is inside the neighbor's well arc. In order to get away from that, the tanks would have to be pushed down the side, more in the created swale, and away from the only part of the SDA that could be slightly graded to lessen a slope. There's just no way that the tanks can be up there in a swale specifically created to get the right cover over the tanks.

I don't know how the inside plumbing is oriented and how easily that could be routed out a different wall, but there is space for the tanks right at the bottom edge of the SDA by the "T" in "first replacement" on your plan. You're pumping the system anyway and then you can regrade at the top to not have a swale right next to the SDA.

---

**From:** Dave Harward, III [<mailto:DaveH@fcc-eng.com>]  
**Sent:** Friday, November 02, 2018 8:20 AM  
**To:** Williams, Jeffrey; Sarah Jahng; Oswald, Hank  
**Subject:** Fairlane Farms Lot 21

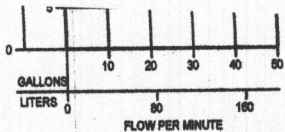
Good Morning Jeff & Sarah,

I want to let you know how much I appreciate you taking some time from your busy schedule to look at this. Attached is a highlighted plan showing what we think is a possible adjustment to the SDA to take out a wedge of the upper SDA and how the final grading can be done to work quite well. Please let me know your thoughts on this.

Thanks again,  
Dave.

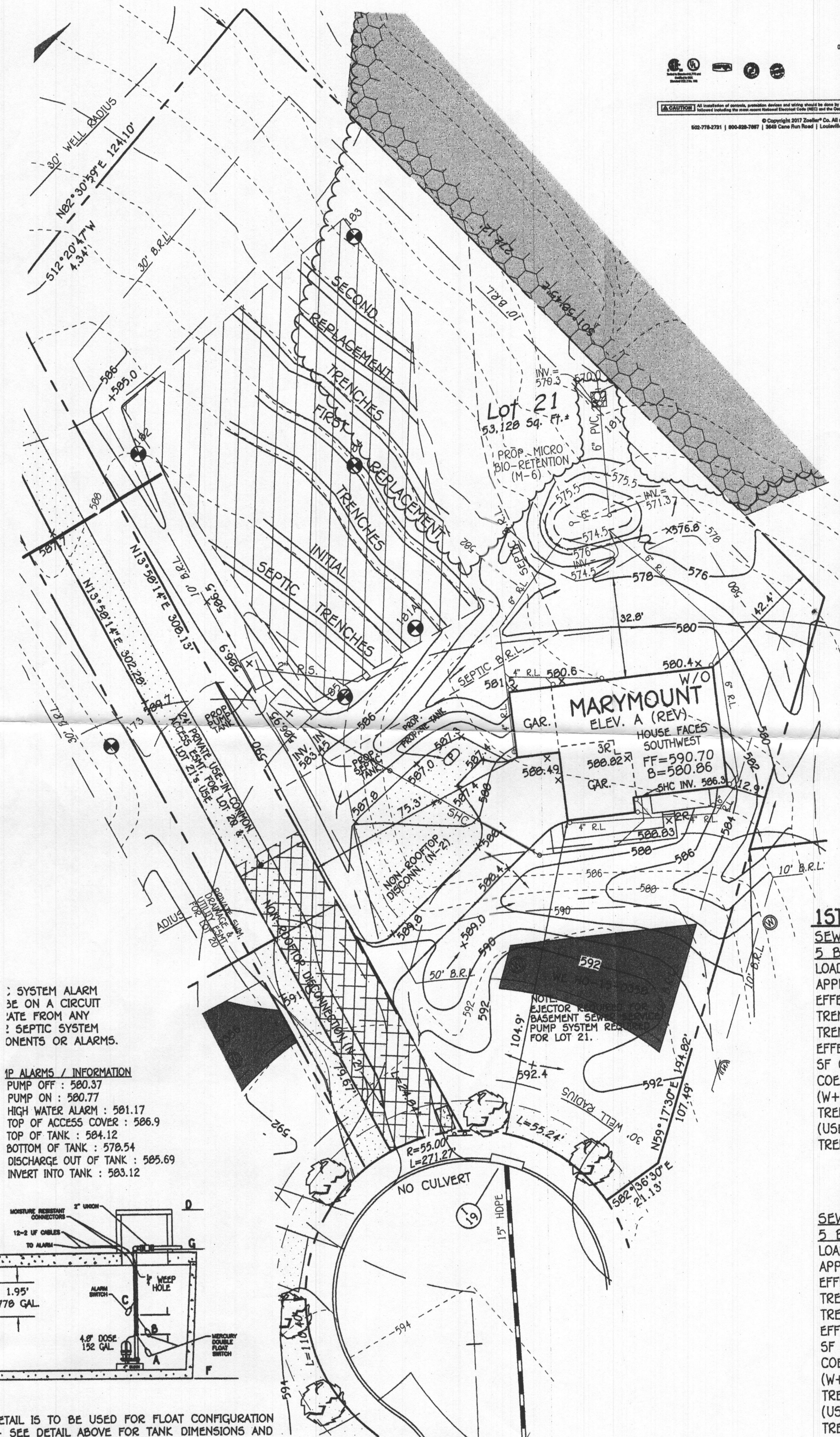






**CAUTION** All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

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BSE 580.86  
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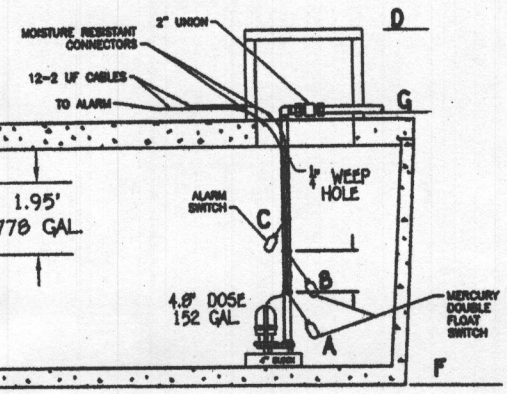
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**TRENCH LENGTH = 3**  
**(USE 4 TRENCHES AT**  
**TRENCH SPACING = 2**

: SYSTEM ALARM  
BE ON A CIRCUIT  
ATE FROM ANY  
: SEPTIC SYSTEM  
ONENTS OR ALARMS.

**1P ALARMS / INFORMATION**  
PUMP OFF : 580.37  
PUMP ON : 580.77  
HIGH WATER ALARM : 581.17  
TOP OF ACCESS COVER : 586.9  
TOP OF TANK : 584.12  
BOTTOM OF TANK : 578.54  
DISCHARGE OUT OF TANK : 585.69  
INVERT INTO TANK : 583.12



DETAIL IS TO BE USED FOR FLOAT CONFIGURATION  
- SEE DETAIL ABOVE FOR TANK DIMENSIONS AND  
L LOCATION OF ACCESS COVER.

**PLAN**

SCALE: 1" = 30'



**PR**

I HEREBY CERTIFY THAT



## Oswald, Hank

---

**From:** Oswald, Hank  
**Sent:** Thursday, July 26, 2018 2:08 PM  
**To:** 'Tony Fertitta'  
**Subject:** OSDS Plan\_1044 Fairlane Road  
**Attachments:** OSDS Memo To FCC\_\_2018.pdf

Tony:

Please see attached memo regarding the OSDS Plan for 1044 Fairlane Road.

Thanks,

Hank

Hank Oswald  
Licensed Environmental Health Specialist  
Howard County Health Department  
Bureau of Environmental Health  
Well & Septic Program  
8930 Stanford Boulevard  
Columbia, MD 21045  
410.313.1786 (Office)  
[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)

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**FISHER, COLLINS  
& CARTER, INC.**

**CIVIL ENGINEERING CONSULTANTS  
and LAND SURVEYORS**

**Transmittal**

Terrell A. Fisher, P.E., L.S.  
Earl D. Collins, P.E.  
Charles J. Crovo, Sr., P.E., L.S.

Paul W. Kriebel, P.E.  
Mark L. Robel, P.L.S.  
Aldo M. Vitucci, P.E.  
Frank Manalansan II, L.S.  
Stephanie Tuite, RLA, P.E., LEED AP BD&C

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, Maryland 21046-4544**

Attn: **Hank**  
Fax:  
Phone: **410-313-2640**

From: **Tony Fertitta**

CC:

Re: **Fairlane Farms, Lot 21**

W.O.# **05106-3003**

Date: **July 24, 2018**

Pages: **0** **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:

**Re: Fairlane Farm, Lot 21, 1044 Fairlane Road.**

**Here are 3 new copies of the OSDS for Lot 21 for your review. Please let me know if you have any questions.**

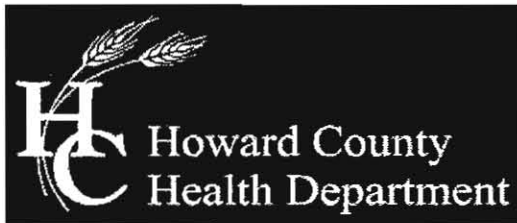
**Thank You,**

**Tony.**

**Fisher, Collins, & Carter, Inc. Ph. 410-461-2855**

**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.



## 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

Facebook: www.facebook.com/hocohealth

Twitter: HowardCoHealthDep

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

### SEWAGE DISPOSAL SYSTEM SPECIFICATIONS WORKSHEET

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

Subdivision: Fairlane Farm Lot: 21

Initial system: Application rate: 1.2 Effective area beginning depth: 3' Bottom maximum depth: 5'

1<sup>st</sup> Replacement: Application rate: 0.8 Effective area beginning depth: 2' Bottom maximum depth: 4'

2<sup>nd</sup> Replacement: Application rate: 0.8 Effective area beginning depth: 2' Bottom maximum depth: 4'

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:

I.S. by holes 181A 184 ± 185

Approved: Hank Oswald Date: 12/14/17

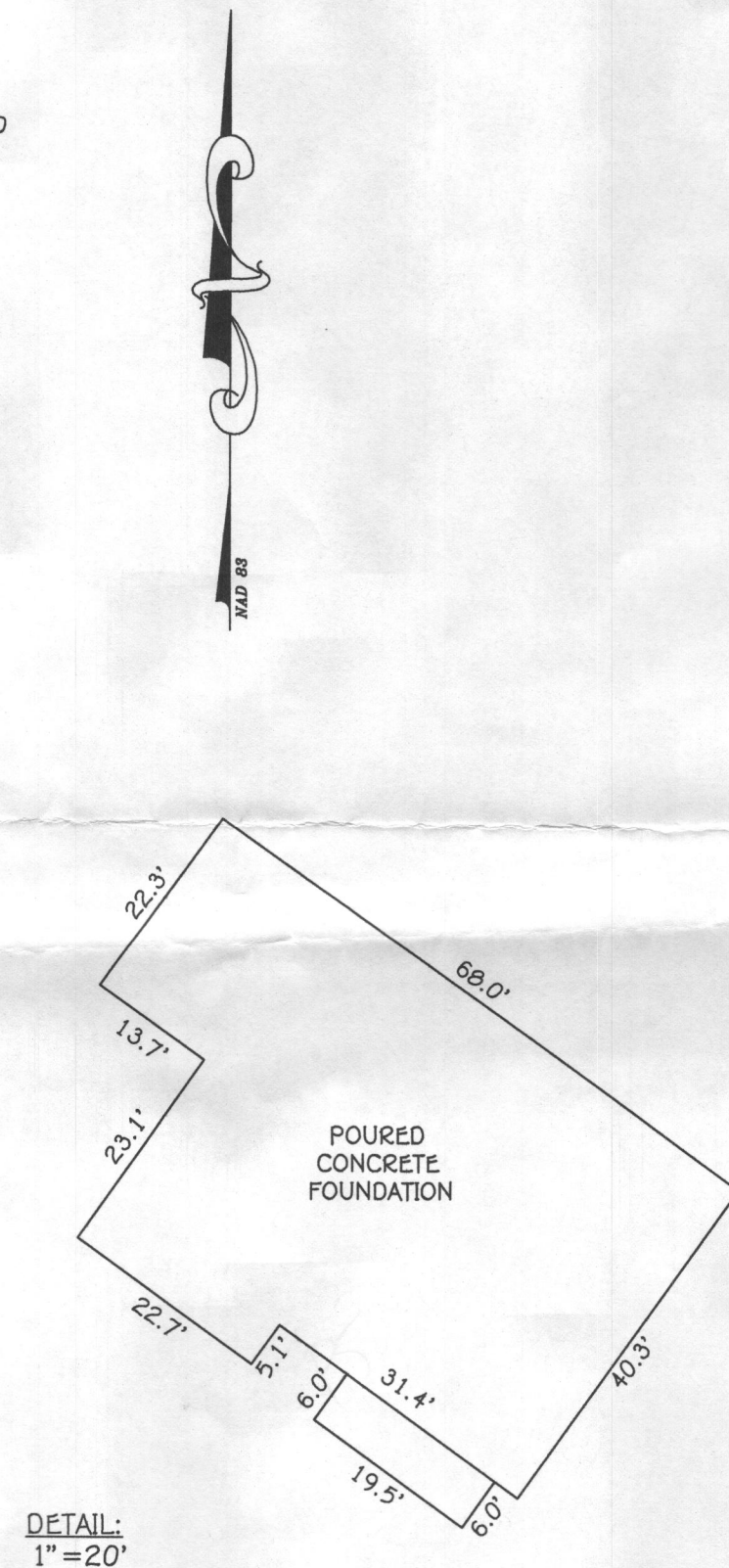


# GENERAL NOTES:

- 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. 24027C00350 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 0.5'.
- 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-15-0358) 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-18001343

## Legend

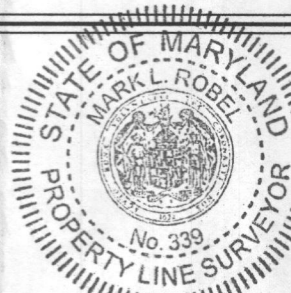
- 10' Public Tree Maintenance Easement
- Private Stormwater Management Drainage & Utility Easement To Serve Lot 20
- Private Use-In-Common Access Easement



#1044 FAIRLANE ROAD  
B.R.L. = BUILDING RESTRICTION LINE  
TOP OF FOUNDATION ELEVATION = 589.8'

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
(410) 461 - 2855

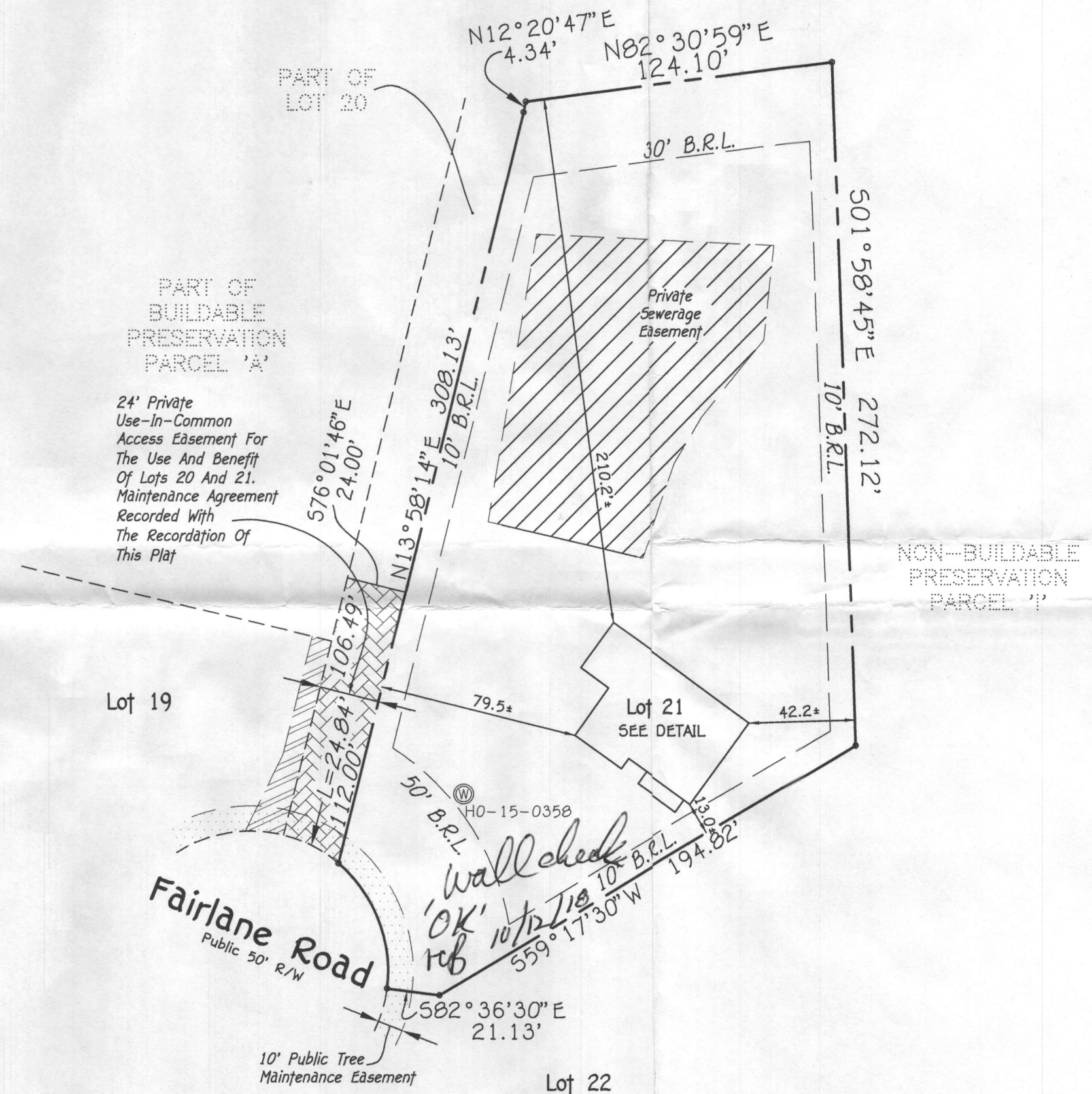


*Mark L. Robel* 9/18/18  
PROPERTY LINE SURVEYOR  
REG. #339

## HOUSE LOCATION DRAWING

FOUNDATION LOCATION: 9/12/18  
FINAL LOCATION:  
BOUNDARY SURVEY:

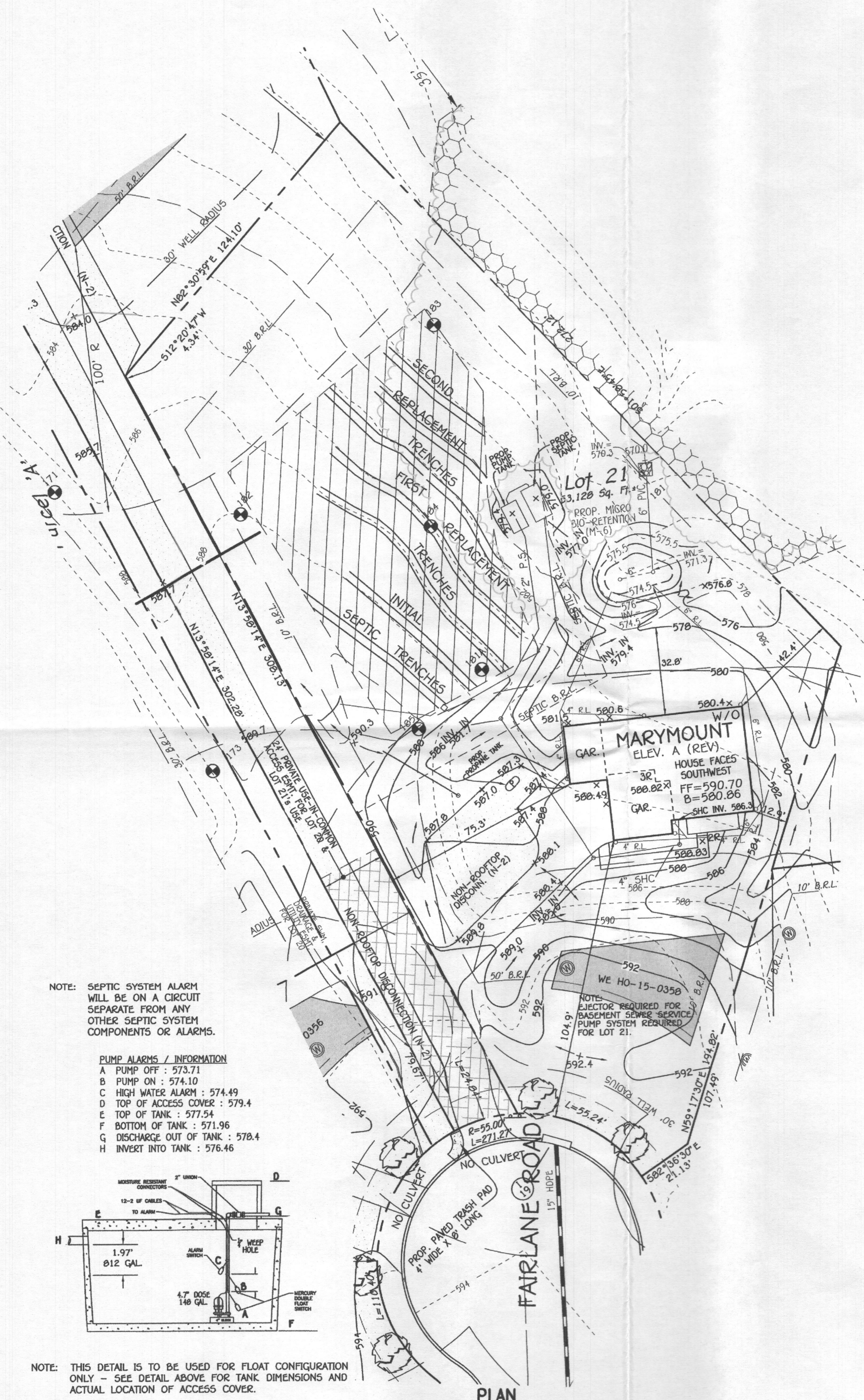
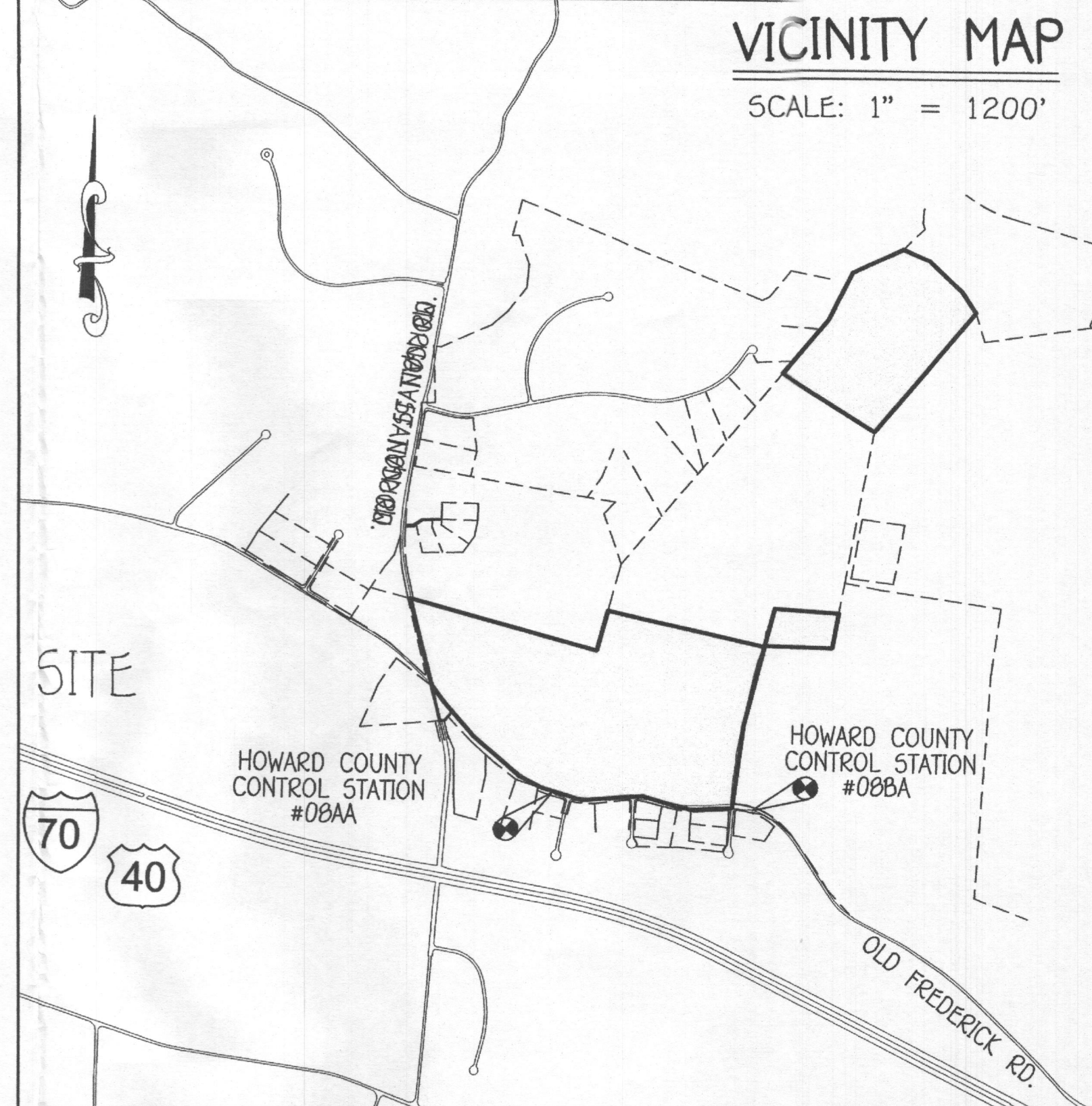
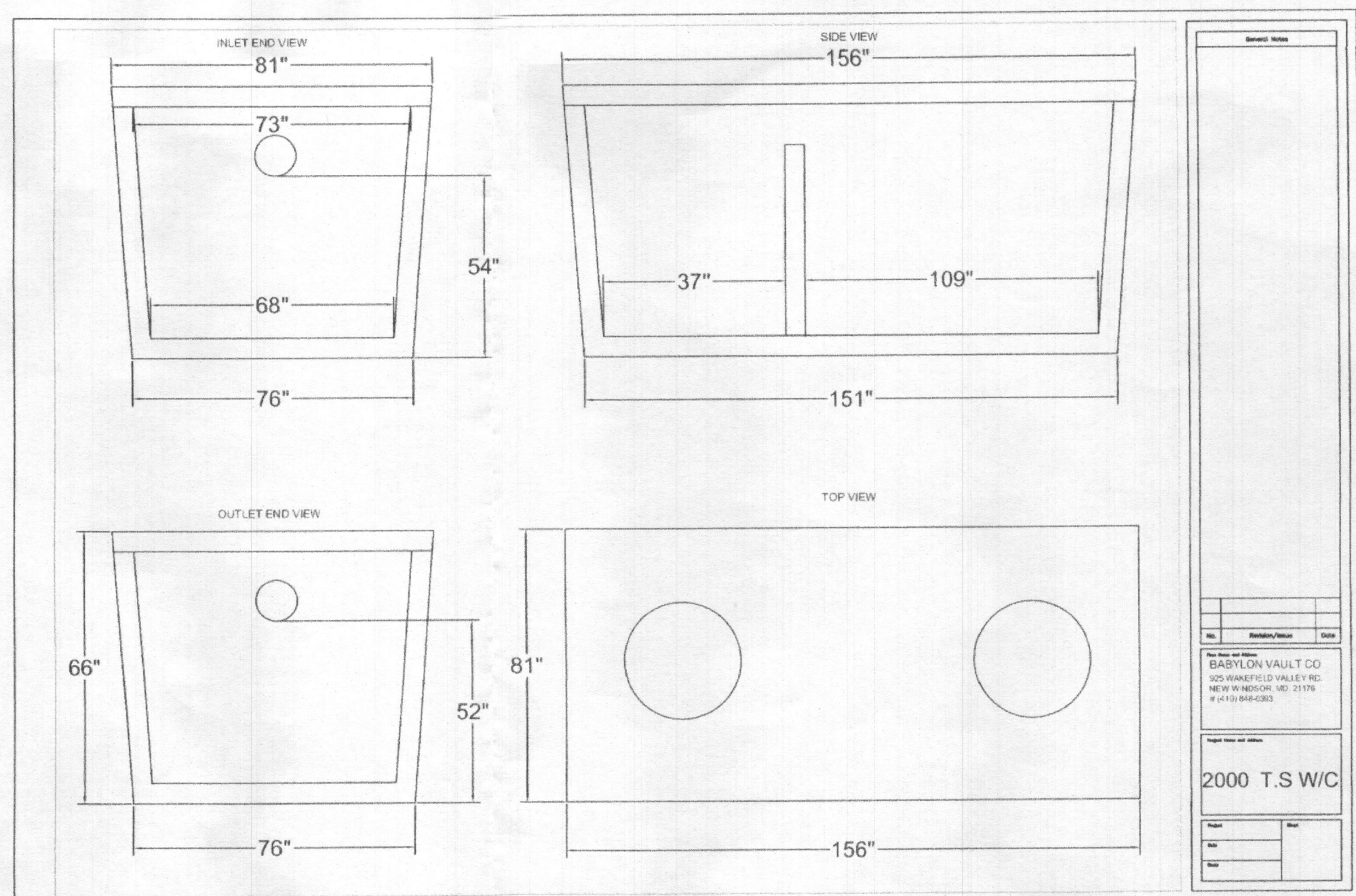
SCALE: 1"=50'  
DATE: 9/18/18  
DRAWN BY: MD  
CHECKED BY: MLR  
PROJECT No.: 25106-3003



LOT 21  
FAIRLANE FARM  
PHASE TWO  
RESUBDIVISION PLAT-LOTS 19 Thru 44 AND  
NON-BUILDABLE PRESERVATION PARCELS 'I' THRU 'N',  
AND REVISION PLAT-BUILDABLE PRESERVATION PARCEL 'A'  
PLATS #24367 THRU #24372  
FOURTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND



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. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
3. ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
4. THE WELL HO-15-0350 HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
5. 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.



#### INITIAL SYSTEM

SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 5 BEDROOMS (PERMIT FOR 5 BEDROOMS)

LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD

APPLICATION RATE = 1.2

EFFECTIVE SIDEWALL BEGINS AT 3 FEET

TRENCH DEPTH = 5 FEET

TRENCH WIDTH (W) = 3 FEET

EFFECTIVE DEPTH (D) = 2 FEET

5F OF DRAINFIELD = 750 GPD / 1.2 = 625 SF

COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 2)) = 0.625$

TRENCH LENGTH = 208.33 SF x 0.625 = 130.21 FEET

(USE 2 TRENCHES AT 65.10 LF.)

TRENCH SPACING = 20+W = ((2x2) + 3) = 7' USE 10'

#### 1ST REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 5 BEDROOMS (PERMIT FOR 5 BEDROOMS)

LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD

APPLICATION RATE = 0.8

EFFECTIVE SIDEWALL BEGINS AT 2 FEET

TRENCH DEPTH = 4 FEET

TRENCH WIDTH (W) = 3 FEET

EFFECTIVE DEPTH (D) = 2 FEET

5F OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF

COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 2)) = 0.625$

TRENCH LENGTH = 312.50 SF x 0.625 = 195.31 FEET

(USE 2 TRENCHES AT 97.66 LF.)

TRENCH SPACING = 20+W = ((2x2) + 3) = 7' USE 10'

#### 2ND REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 5 BEDROOMS (PERMIT FOR 5 BEDROOMS)

LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD

APPLICATION RATE = 0.8

EFFECTIVE SIDEWALL BEGINS AT 2 FEET

TRENCH DEPTH = 4 FEET

TRENCH WIDTH (W) = 3 FEET

EFFECTIVE DEPTH (D) = 2 FEET

5F OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF

COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+(2 \times 2)) = 0.625$

TRENCH LENGTH = 312.50 SF x 0.625 = 195.31 FEET

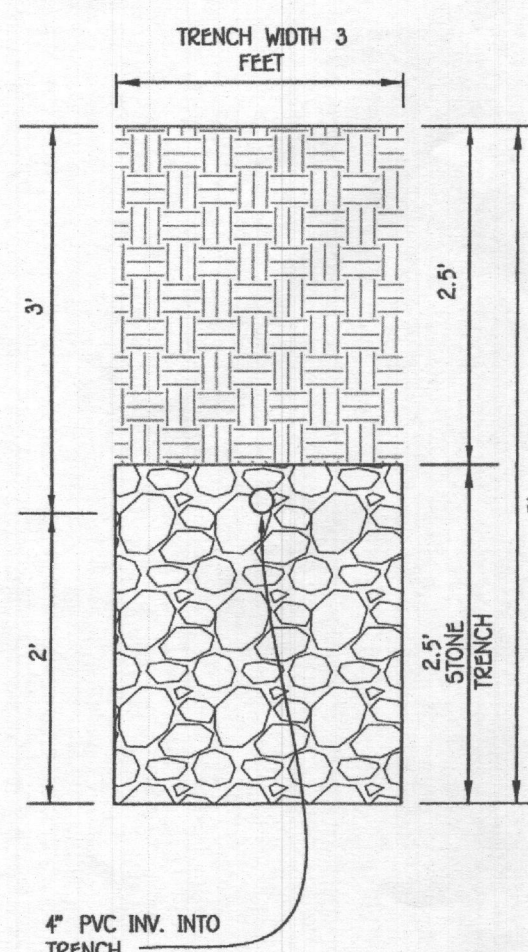
(USE 4 TRENCHES AT 39.06 LF.)

TRENCH SPACING = 20+W = ((2x2) + 3) = 7' USE 10'

#### TRENCH DATA:

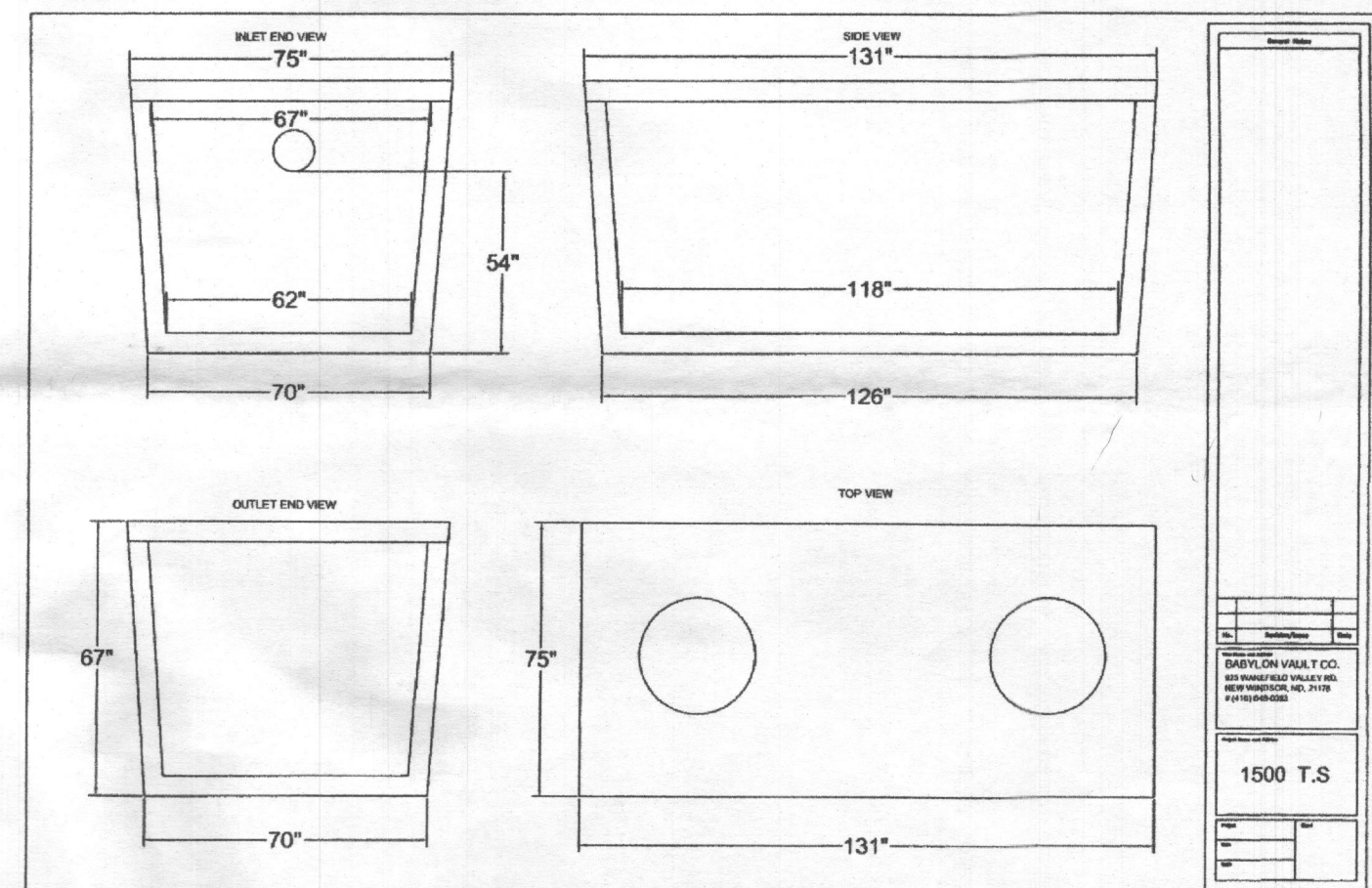
TRENCH 1:  
EX. GROUND ABOVE = 589.2  
INV. IN = 586.2  
BOTTOM TRENCH = 584.2

TRENCH 2:  
EX. GROUND ABOVE = 588.0  
INV. IN = 585.0  
BOTTOM TRENCH = 583.0

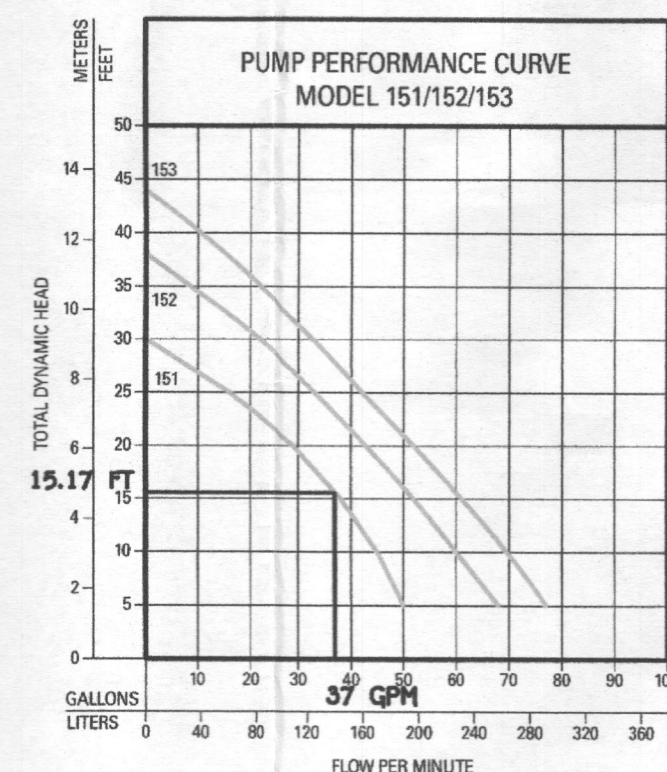


INITIAL TRENCH DETAIL

SCALE: 1"=2'



#### PUMP TANK



Approved Septic System Plan  
Howard County Health Department  
Signature: *Mark Oswald* Date: 11/14/18

#### SEPTIC SYSTEM INSTALLATION SITE PLAN

LOT 21

1044 FAIRLANE ROAD

FAIRLANE FARMS

PHASE TWO

ZONED: RC-DEO

TAX MAP NO.: 8 GRID NO.: 2 PARCEL NO.: 8

5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: 1"=30' DATE: November 9, 2018

SHEET 1 OF 2

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
21	1044 FAIRLANE ROAD

#### 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. 20740, EXPIRATION DATE: 02/22/2019.

*Michael J. Viscusi*  
Signature of Professional Engineer

11/12/18  
DATE



#### OWNER/DEVELOPER

INV HOMES

9720 PATUXENT WOODS DRIVE

COLUMBIA, MD 21046

410-379-5956

FISHER, COLLINS & CARTER, INC.

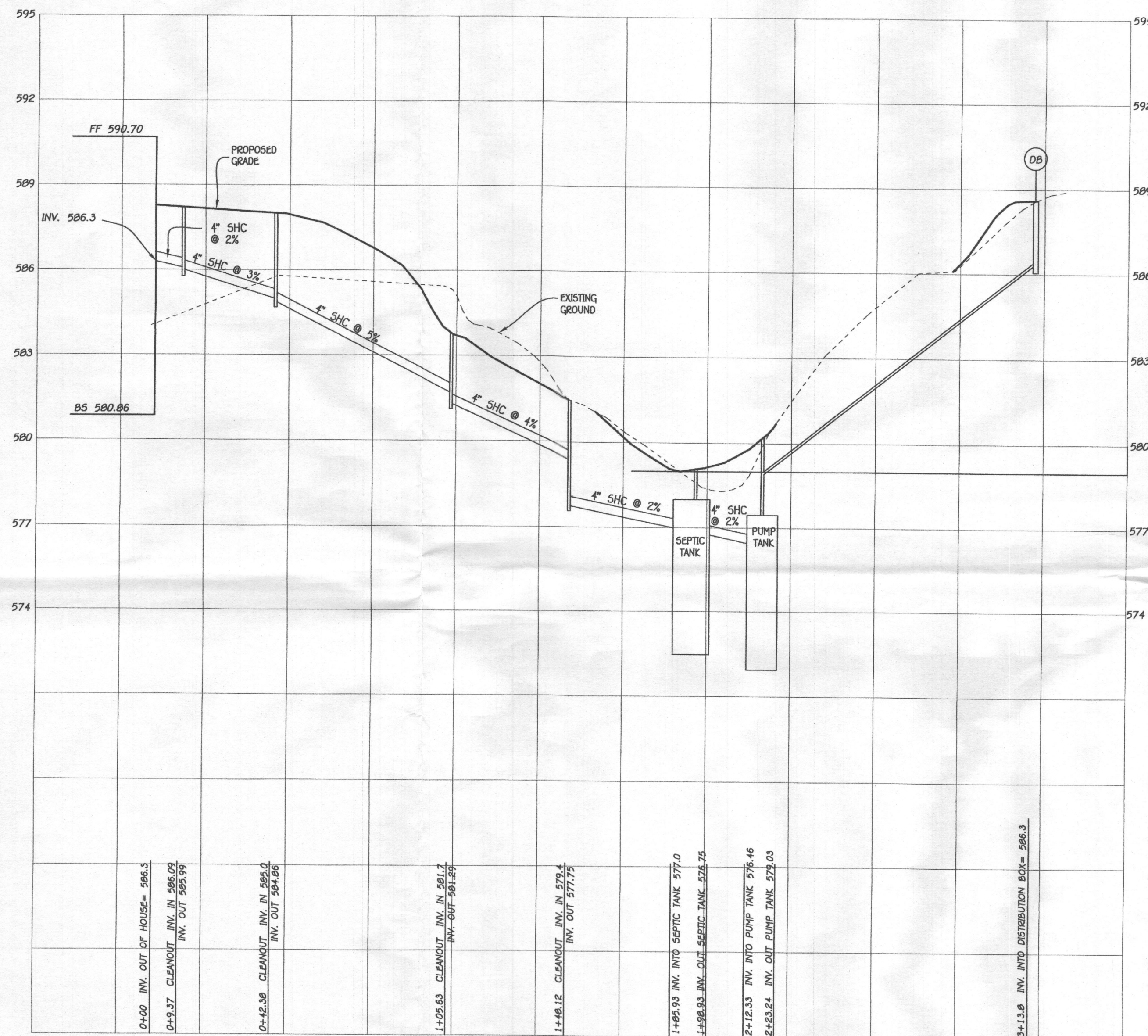
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE

ELIJAH CITY, MARYLAND 21042

(410) 461-2899





**SEPTIC PROFILE**  
SCALE: 1"=30'

2" SCH. 40 PVC = 91 LF  
1 UNION @ 2 EQUIVALENT FEET = 2 LF  
4 ELBOW @ 9 EQUIVALENT FEET = 36 LF  
1 1/8" RB @ 4 EQUIVALENT FEET = 4 LF  
TOTAL LINEAR FEET OF 2" SCH. 40 PVC = 133 LF

**DYNAMIC HEAD**  
133 LF X 1.94 FT PER 100 LF OF 2" PIPE = 2.58 FT OF FRICTION HEAD  
VERTICAL FROM PUMP OFF TO HIGH POINT IN PUMP CHAMBER = 4.89 FT OF FRICTION HEAD  
HIGH POINT IN PUMP CHAMBER TO HIGHEST ELEV. OF SYSTEM = 7.9 FT (PUMP OUT IS THE HIGHEST POINT)  
TOTAL DYNAMIC HEAD = 15.17 FT

1/8" DESIGN FLOW (750/6=125)  
USE 140 GALLON DOSE (125 GALLON MINIMUM)  
(RUN TIME = 4 MIN (37 GPM X 4 = 148 GALLON DOSE))

PUMP NEEDS TO HANDLE 37 GPM AT 15.17 FT OF HEAD  
USE 0.3 HP (ZOEGLER MODEL 151 PUMP)

FFE 590.70  
BSE 580.86  
INV. OUT OF HOUSE = 586.3  
PROP. GROUND AT CLEANOUT #1 = 588.7  
INV. INTO CLEANOUT = 586.09  
INV. OUT OF CLEANOUT = 585.99  
PROP. GROUND AT CLEANOUT #2 = 588.3  
INV. INTO CLEANOUT = 585.0  
INV. OUT OF CLEANOUT = 584.86  
PROP. GROUND AT CLEANOUT #3 = 584.4  
INV. INTO CLEANOUT = 581.7  
INV. OUT OF CLEANOUT = 581.29  
PROP. GROUND AT CLEANOUT #4 = 582.0  
INV. INTO CLEANOUT = 579.4  
INV. OUT OF CLEANOUT = 577.75  
EX. GROUND AT SEPTIC TANK = 582.1  
PROP. GRADE ABOVE SEPTIC TANK = 579.0  
TOP OF SEPTIC TANK = 578.0  
INV. INTO SEPTIC TANK = 577.0  
INV. OUT OF SEPTIC TANK = 576.75  
GROUND AT PUMP TANK = 579.8  
GRADE ABOVE PUMP TANK = 579.4  
TOP OF PUMP TANK = 577.54  
INV. INTO PUMP TANK = 576.46  
INV. OUT OF PUMP TANK = 578.4  
EX. GROUND AT DISTRIBUTION BOX = 589.2  
INV. INTO DISTRIBUTION BOX = 586.3  
INV. OUT OF DISTRIBUTION BOX = 586.2

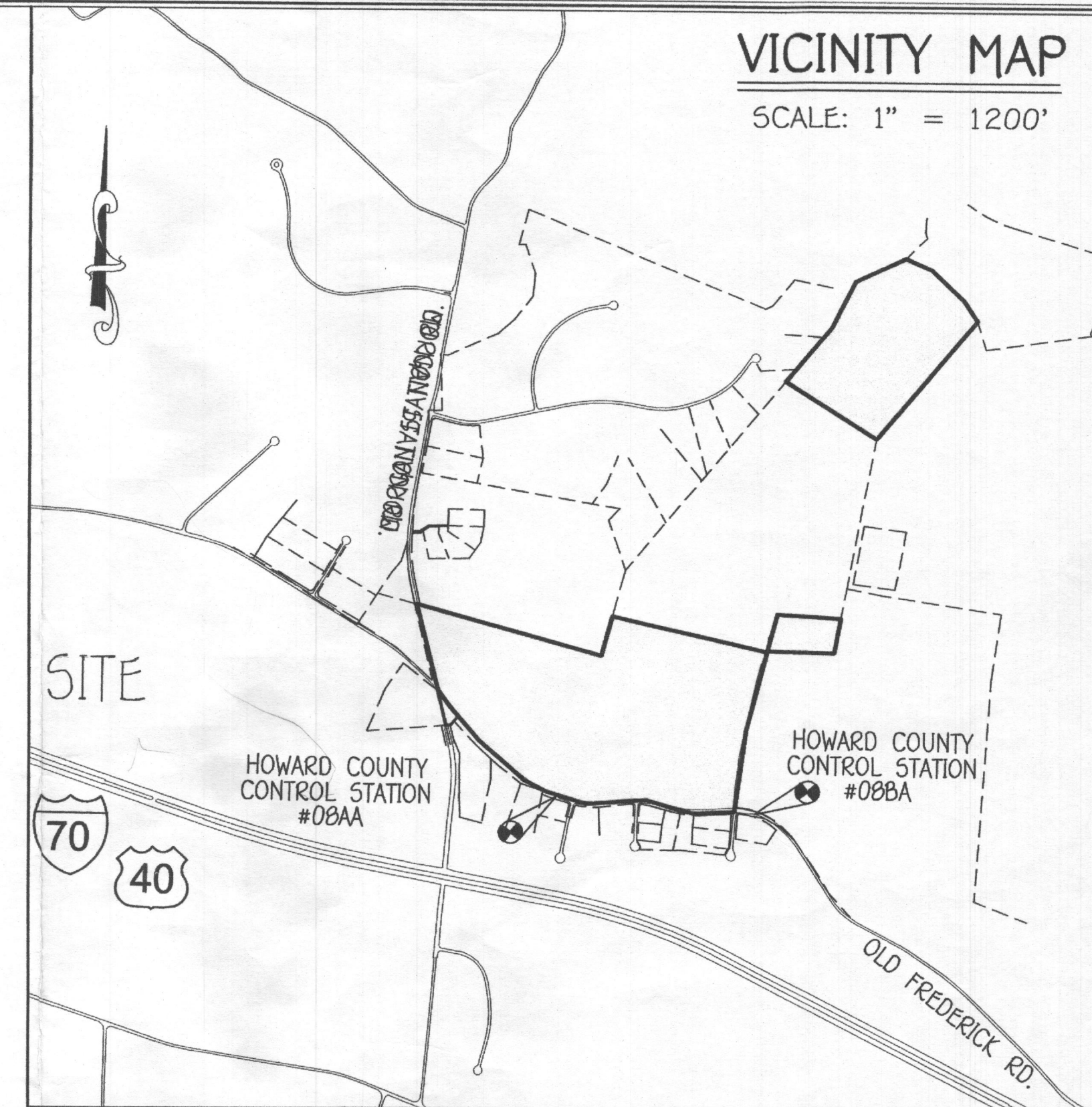
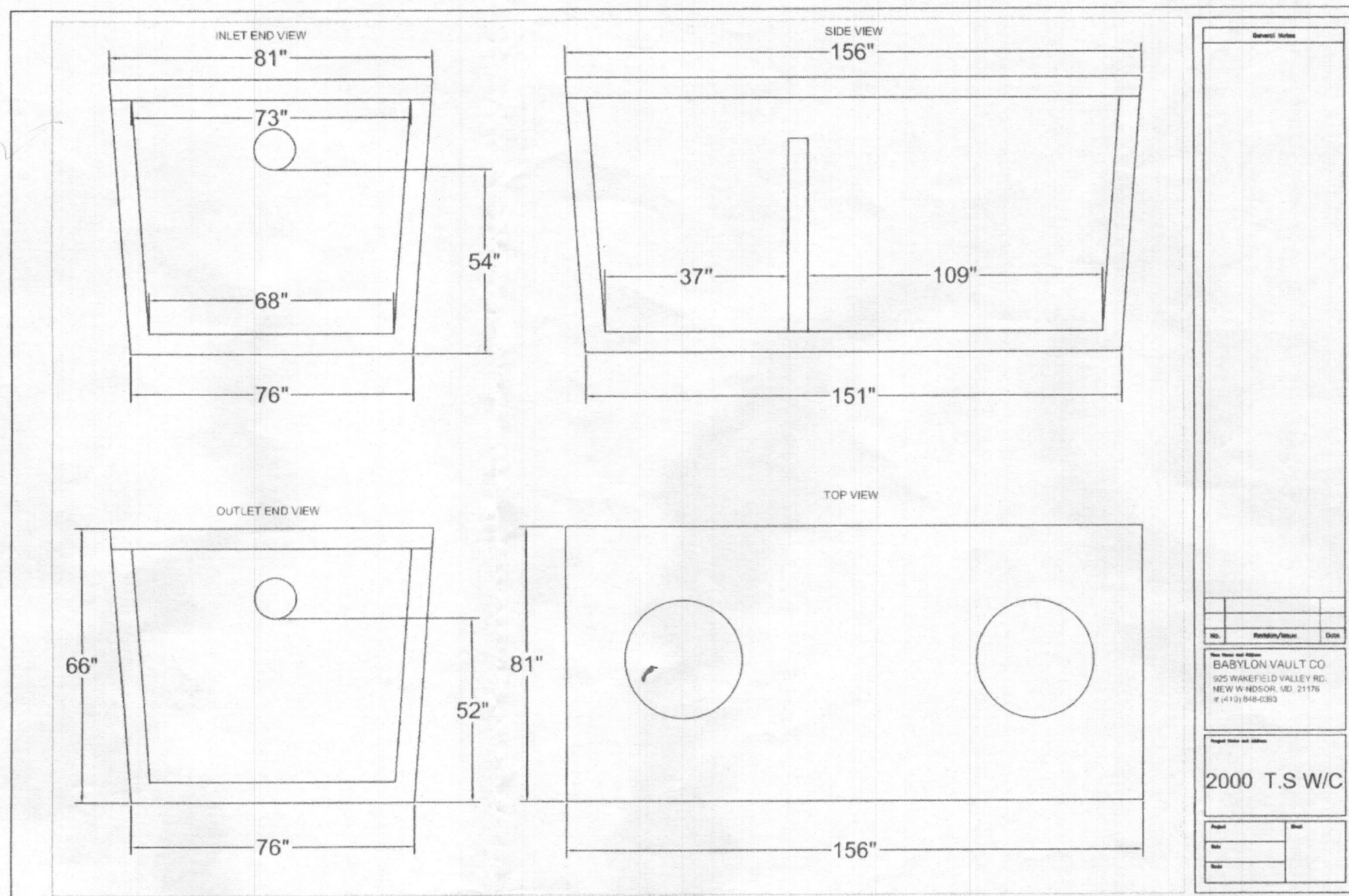
SEPTIC SYSTEM  
INSTALLATION SITE PLAN

LOT 21  
1044 FAIRLANE ROAD  
FAIRLANE FARMS

PHASE TWO  
ZONED: RC-DEO  
TAX MAP NO.: 8 GRID NO.: 2 PARCEL NO.: 8  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1"=30' DATE: November 9, 2018  
SHEET 2 OF 2



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. THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
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5. 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.



#### INITIAL SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS (PERMIT FOR 5 BEDROOMS)  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 1.2  
EFFECTIVE SIDEWALL BEGINS AT 3 FEET  
TRENCH DEPTH = 5 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 2 FEET  
SF OF DRAINFIELD = 750 GPD / 1.2 = 625 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+2(2)) = 0.625$   
TRENCH LENGTH = 208.33 SF x 0.625 = 130.21 FEET  
(USE 2 TRENCHES AT 65.10 LF.)  
TRENCH SPACING =  $2D+W = ((2(2) + 3) = 7'$  USE 10'

#### 1ST REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS (PERMIT FOR 5 BEDROOMS)  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 2 FEET  
TRENCH DEPTH = 4 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 2 FEET  
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+2(2)) = 0.625$   
TRENCH LENGTH = 312.50 SF x 0.625 = 195.31 FEET  
(USE 2 TRENCHES AT 97.66 LF.)  
TRENCH SPACING =  $2D+W = ((2(2) + 3) = 7'$  USE 10'

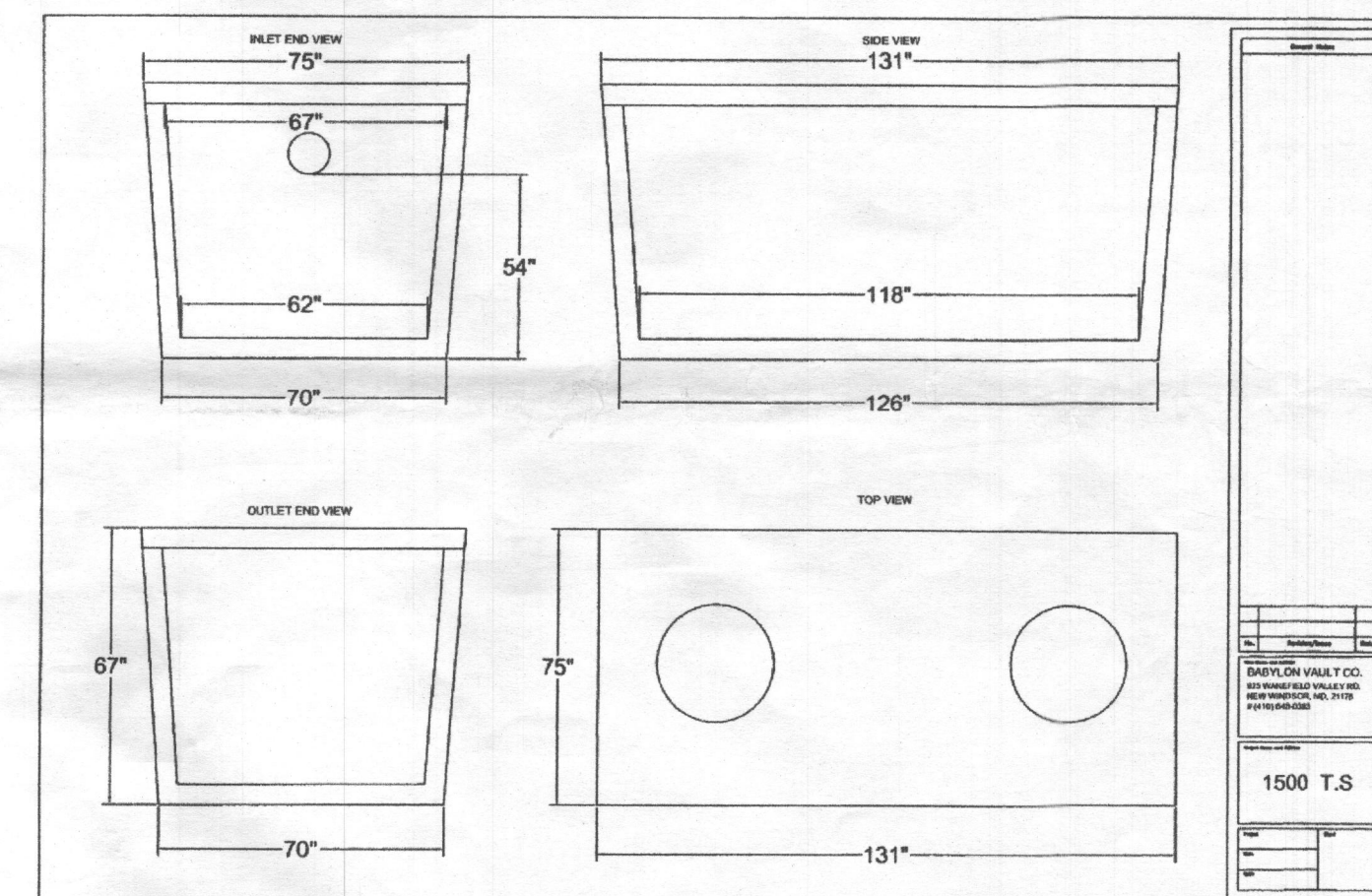
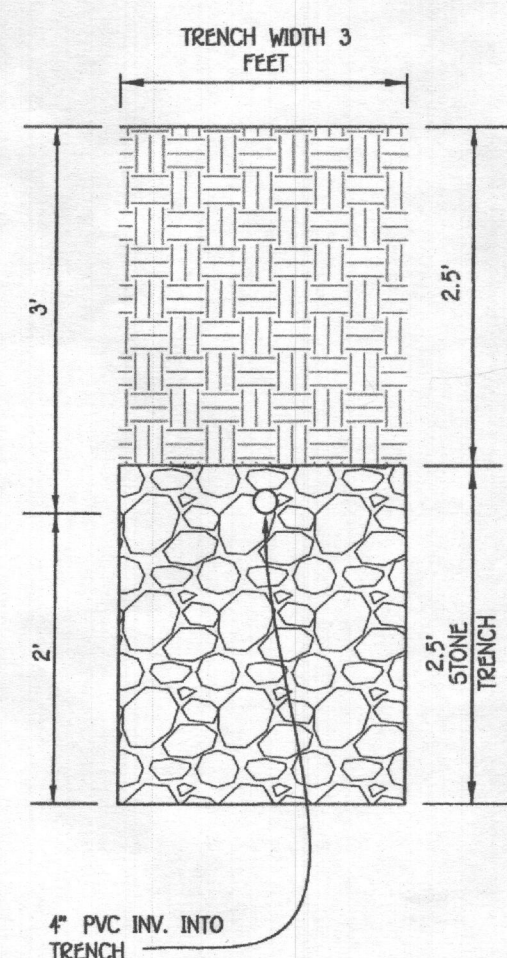
#### 2ND REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA, DESIGN FOR 5 BEDROOMS (PERMIT FOR 5 BEDROOMS)  
LOADING RATE = 5 BEDROOMS X 150 GPD/BEDROOM = 750 GPD  
APPLICATION RATE = 0.8  
EFFECTIVE SIDEWALL BEGINS AT 2 FEET  
TRENCH DEPTH = 4 FEET  
TRENCH WIDTH (W) = 3 FEET  
EFFECTIVE DEPTH (D) = 2 FEET  
SF OF DRAINFIELD = 750 GPD / 0.8 = 937.5 SF  
COEFFICIENT OF REDUCTION OF TRENCH LENGTH =  $(W+2)/(W+1+2D) = (3+2)/(3+1+2(2)) = 0.625$   
TRENCH LENGTH = 312.50 SF x 0.625 = 195.31 FEET  
(USE 4 TRENCHES AT 48.83 LF.)  
TRENCH SPACING =  $2D+W = ((2(2) + 3) = 7'$  USE 10'

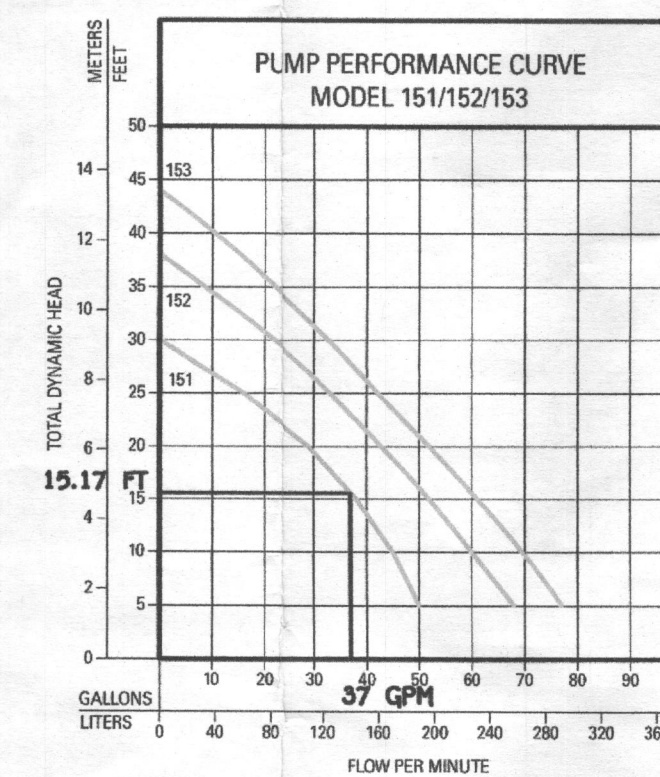
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EX. GROUND ABOVE = 509.2  
INV. IN = 506.2  
BOTTOM TRENCH = 504.2

TRENCH 2:  
EX. GROUND ABOVE = 508.0  
INV. IN = 505.0  
BOTTOM TRENCH = 503.0



#### PUMP TANK



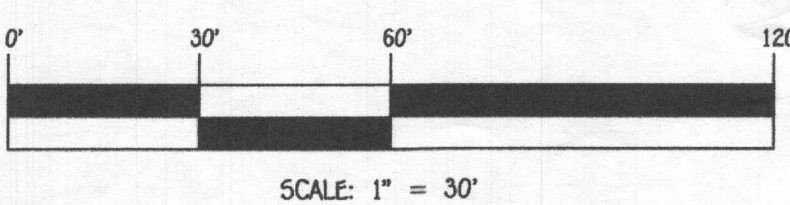
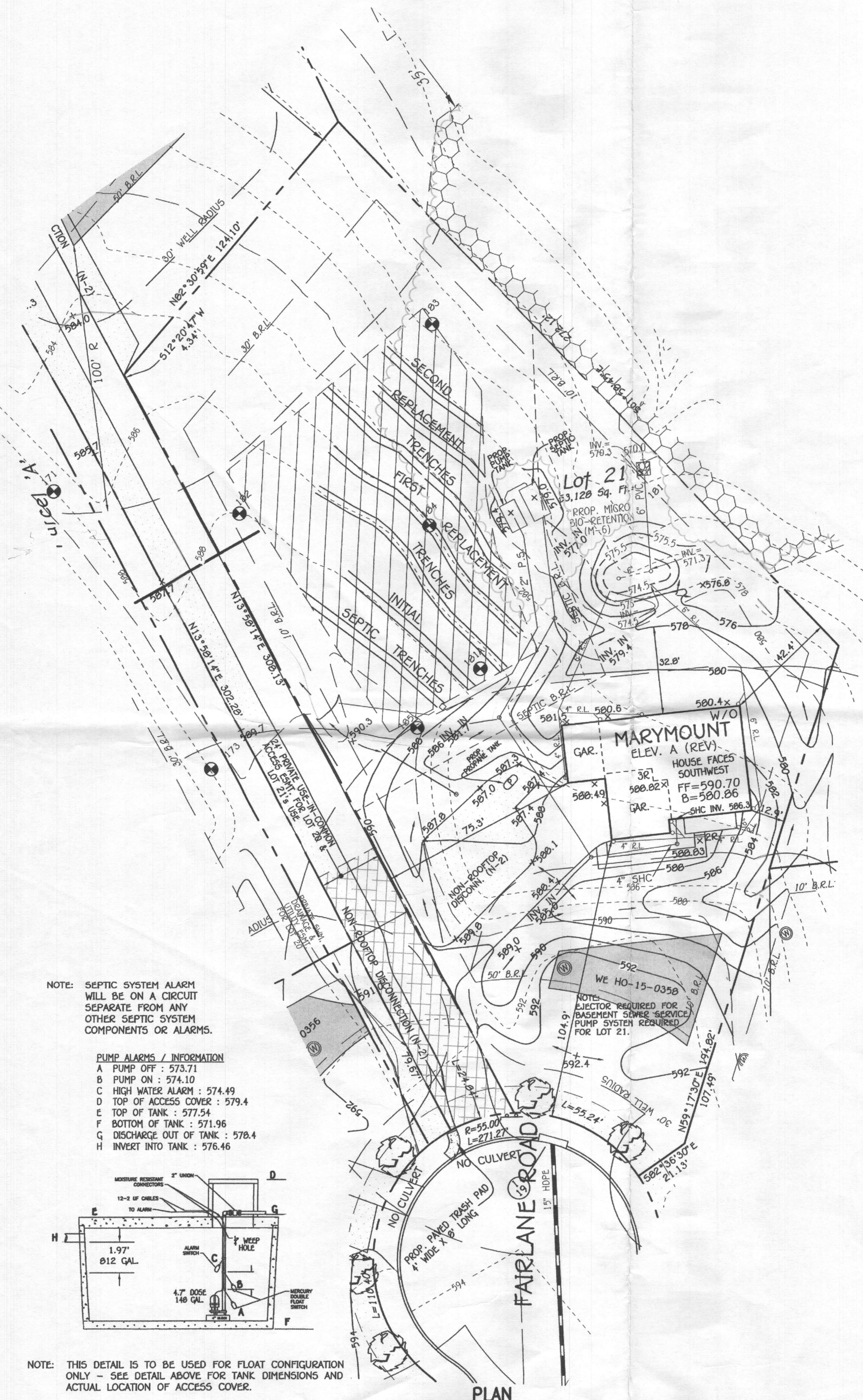
Approved Septic System Plan  
Howard County Health Department  
Signature: *Handwritten Signature* Date: 11/14/18

#### SEPTIC SYSTEM INSTALLATION SITE PLAN

LOT 21  
1044 FAIRLANE ROAD  
FAIRLANE FARMS  
PHASE TWO  
ZONED: RC-DEO

TAX MAP NO.: 8 GRID NO.: 2 PARCEL NO.: 8  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1"=30' DATE: November 9, 2018  
SHEET 1 OF 2

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
21	1044 FAIRLANE ROAD



FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21042  
(410) 461-2095

OWNER/DEVELOPER  
NY HOMES  
9720 PATUXENT WOODS DRIVE  
COLUMBIA, MD 21046  
410-379-5956



#### PROFESSIONAL CERTIFICATION

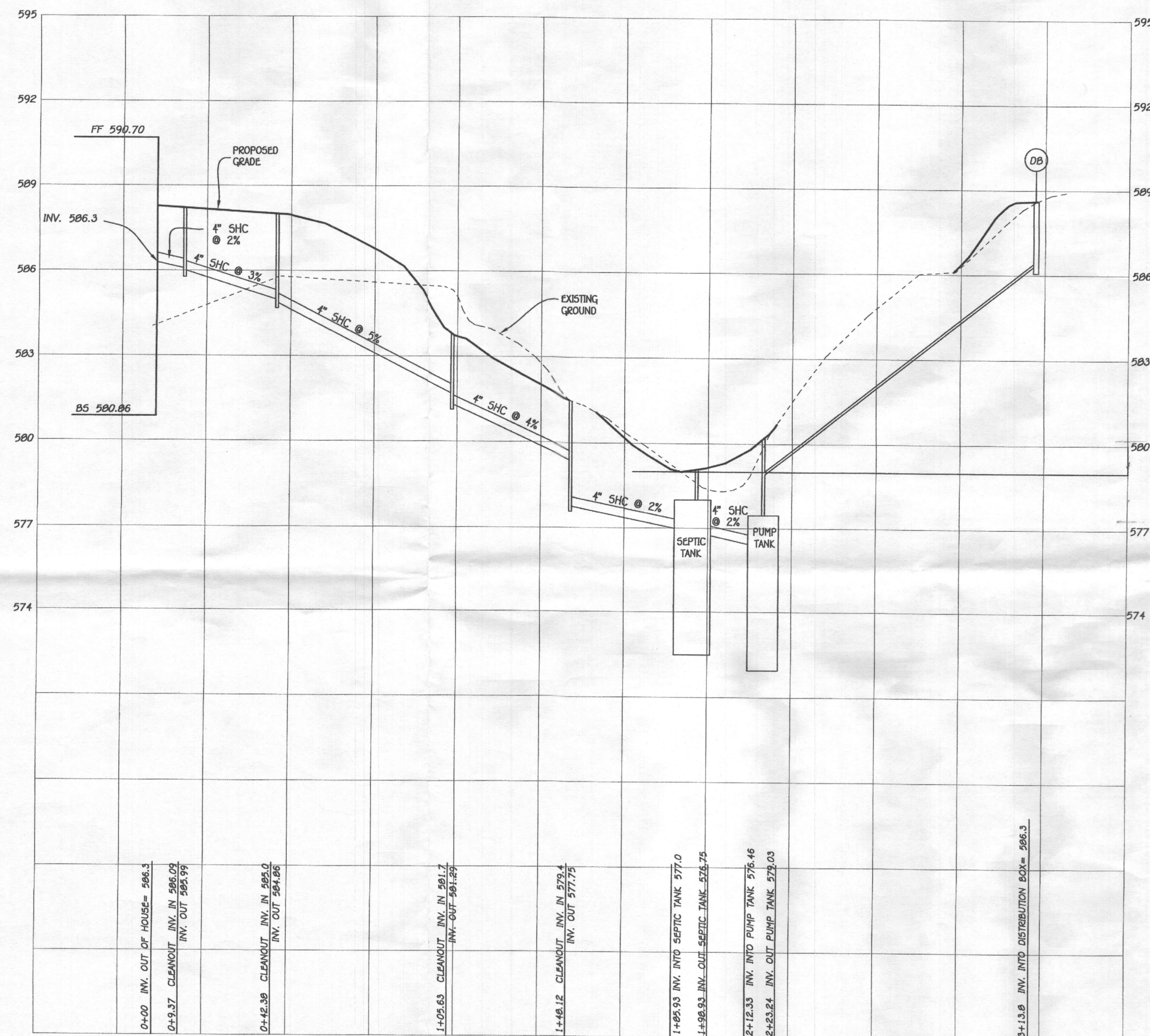
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2019.

Signature of Professional Engineer  
*Handwritten Signature*

11/14/18  
DATE

SEPTIC PROFILE  
SCALE: 1"=30'





**SEPTIC PROFILE**  
SCALE: 1"=30'

2" SCH. 40 PVC = 91 LF  
1 UNION @ 2 EQUIVALENT FEET = 2 LF  
4 ELBOW @ 9 EQUIVALENT FEET = 36 LF  
1 1/8" HD @ 4 EQUIVALENT FEET = 4 LF  
TOTAL LINEAR FEET OF 2" SCH. 40 PVC = 133 LF

**DYNAMIC HEAD**  
133 LF X 1.94 FT PER 100 LF OF 2" PIPE = 258 FT OF FRICTION HEAD  
VERTICAL FROM PUMP OFF TO HIGH POINT IN PUMP CHAMBER = 4.05 FT OF FRICTION HEAD  
HIGH POINT IN PUMP CHAMBER TO HIGHEST ELEV. OF SYSTEM = 7.9 FT (PUMP OUT IS THE HIGHEST POINT)  
TOTAL DYNAMIC HEAD = 15.17 FT

1/8" DESIGN FLOW (750/6=125)  
USE 140 GALLON DOSE (125 GALLON MINIMUM)  
(DRAIN TIME = 4 MIN (37 GPM X 4 = 148 GALLON DOSE))

PUMP NEEDS TO HANDLE 37 GPM AT 15.17 FT OF HEAD  
USE 0.3 HP (ZOEGLER MODEL 151 PUMP)

FFE 590.70  
BSE 580.86  
INV. OUT OF HOUSE = 586.3  
PROP. GROUND AT CLEANOUT #1 = 588.7  
INV. INTO CLEANOUT = 586.09  
INV. OUT OF CLEANOUT = 585.99  
PROP. GROUND AT CLEANOUT #2 = 588.3  
INV. INTO CLEANOUT = 585.0  
INV. OUT OF CLEANOUT = 584.86  
PROP. GROUND AT CLEANOUT #3 = 584.4  
INV. INTO CLEANOUT = 581.7  
INV. OUT OF CLEANOUT = 581.29  
PROP. GROUND AT CLEANOUT #4 = 582.0  
INV. INTO CLEANOUT = 579.4  
INV. OUT OF CLEANOUT = 577.75  
EX. GROUND AT SEPTIC TANK = 582.1  
PROP. GRADE ABOVE SEPTIC TANK = 579.0  
TOP OF SEPTIC TANK = 578.0  
INV. INTO SEPTIC TANK = 577.0  
INV. OUT OF SEPTIC TANK = 576.75  
GROUND AT PUMP TANK = 579.8  
GRADE ABOVE PUMP TANK = 579.4  
TOP OF PUMP TANK = 577.54  
INV. INTO PUMP TANK = 576.46  
INV. OUT OF PUMP TANK = 578.4  
EX. GROUND AT DISTRIBUTION BOX = 589.2  
INV. INTO DISTRIBUTION BOX = 586.3  
INV. OUT OF DISTRIBUTION BOX = 586.2

SEPTIC SYSTEM  
INSTALLATION SITE PLAN

LOT 21

1044 FAIRLANE ROAD

FAIRLANE FARMS

PHASE TWO

ZONED: RC-DEO

TAX MAP NO.: 8 GRID NO.: 2 PARCEL NO.: 8

5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: 1"=30' DATE: November 9, 2018

SHEET 2 OF 2