

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

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

RECEIPT DATE: 7/11/19

ONSITE SEWAGE DISPOSAL SYSTEM

P 5105547

APPROVAL DATE: 09/23/2019

PERMIT: CONSTRUCTION

A _____

PROPERTY ADDRESS: 13375 Forsythe Road

SUBDIVISION: Hofmeister Property

LOT: 2

TAX ID: _____

CONTRACTOR: Cliff Bennett

EMAIL: _____

CONTRACTOR ADDRESS: _____

PHONE: 240 367 0312

PROPERTY OWNER: Robert & Elizabeth Taylor

EMAIL: _____

OWNER ADDRESS: 19050 New Hampshire Avenue

PHONE: 301-460-9416

SEPTIC TANK SIZE (GALLONS): 1500

TANK MANUFACTURER: Babylon

PUMP MODEL: WE05HH

PUMP SIZE _____

0.5 HP

PUMP TANK CAPACITY: 1250

DISTRIBUTION SYSTEM:



GRAVITY



PRESSURE DOSED

BEDROOMS: 2

APPLICATION RATE: 0.8

| | | |
|-----------|---|---|
| TRENCHES: | LINEAR FEET REQUIRED: <u>78 FT</u> | INLET DEPTH: <u>1.6 FT</u> |
| | TRENCH WIDTH: <u>3 FT</u> | MAXIMUM BOTTOM DEPTH: <u>8 FT</u> |
| | MINIMUM SPACE BETWEEN TRENCHES: <u>10 FT</u> | EFFECTIVE AREA BEGINNING DEPTH: <u>4 FT</u> |
| LOCATION: | PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION. | |
| NOTES: | Install 2 Trenches @ 39 FT | |

ISSUED BY: Hank Oswald

ISSUE DATE: 7/11/19

EXPIRATION DATE: 7/11/20

- 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 DOWNGRADIENT 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 19002667
- 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.

NOT TO SCALE

See Separate sheet
for As-Built

ROAD NAME

TRENCH/DRAINFIELD DATA

| WIDTH | INLET | BOTTOM |
|-------------------------|-------|--------|
| 3' | 1.5' | 8' |
| NUMBER OF TRENCHES | | 2 |
| TOTAL LENGTH | | 78 F |
| ABSORPTION AREA | | 234 SF |
| DISTRIBUTION BOX LEVEL | | N/A |
| DISTRIBUTION BOX BAFFLE | | YES |
| DISTRIBUTION BOX PORT | | YES |

SEPTIC TANK DATA

| | |
|---------------------|------------|
| SEPTIC TANK 1 LEVEL | YES |
| MANUFACTURER | BABYLON |
| CAPACITY | 1500 GAL |
| SEAM LOC | TOP |
| TANK LID DEPTH | 2' |
| BAFFLES | YES |
| BAFFLE FILTER | NO |
| MANHOLE LOC | FRONT/BACK |
| 6" PORT LOC | - |
| WATERTIGHT TEST | - |
| SLOTTED | YES |
| DATE ON LID | 5/14/2019 |

PUMP/SEPTIC TANK LEVEL

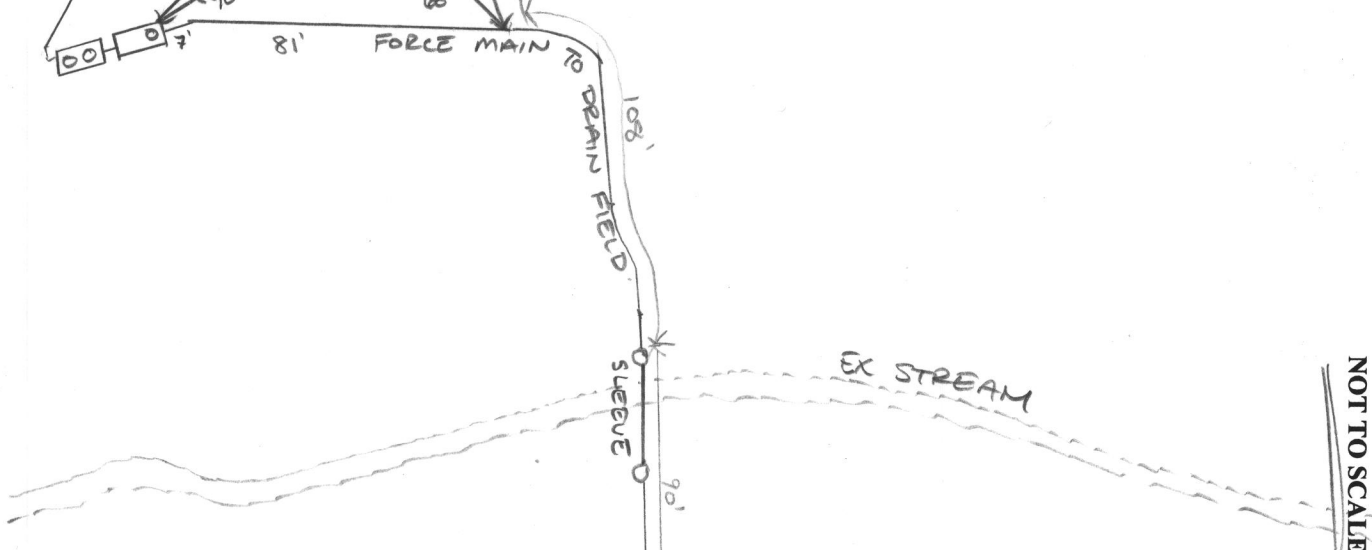
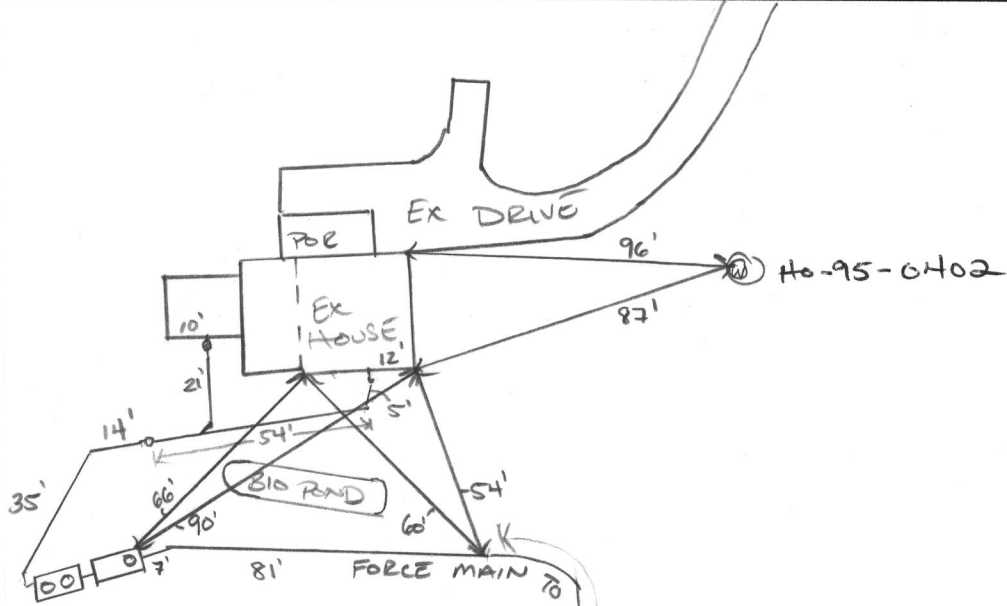
| | |
|-------------------|------------|
| SEPTIC TANK LEVEL | YES |
| MANUFACTURER | BABYLON |
| CAPACITY | 1250 GAL |
| SEAM LOC | TOP |
| TANK LID DEPTH | 2' |
| BAFFLES | NO |
| BAFFLE FILTER | NO |
| MANHOLE LOC | BACK |
| 6" PORT LOC | - |
| WATERTIGHT TEST | - |
| SLOTTED | - |
| DATE ON LID | 06/24/2019 |

PRE-CONSTRUCTION:

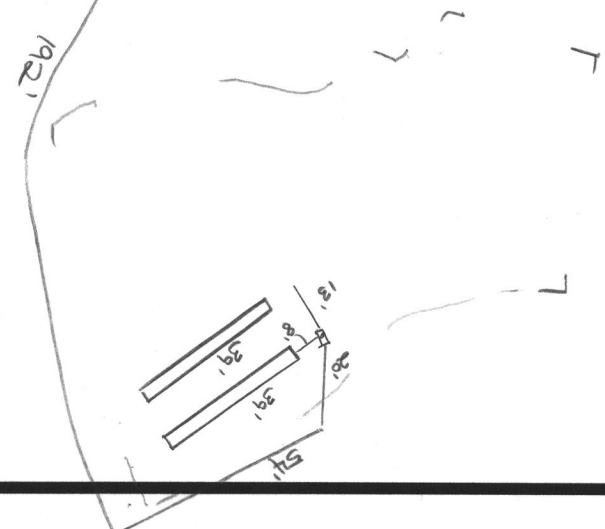
7/16/15 met Contractor on site. OK to set tanks. Stake out confirmed. Did not walk to CPA. air, overgrown needs to be cut down. Will call in inspector for tanks and layout to be done @ that time (KME)

INSTALLATION: 7/23/2019 SHC CONNECTION AND SL INSTALLED, TANKS SET. (P)
 7/24/2019 FORCE MAIN TO STREAM SLEEVE LOCATED. PROTECTIVE BARRIERS INSTALLED.
 7/25/2019 FM TO STREAM SLEEVE INSTALLED. (C/A) INCREASE SLEEVE BY BIG RET. POND. (P)
 7/26/2019 STREAM TO D BOX INSTALLED. (C/A) ^(VERBAL CONFIRM) COMPLETED. OK TO BACKFILL (P)
 7/29/2019 UPPER TRENCH OPEN INSP. OK TO PROCEED. (P) 7/30/2019 TRENCHES COMPLETE. (C/A) SQUARE OUT T₂ (LOWER) AT TRENCH END. REINSP P/A. (P)
 9/23/2019 PUMP WORKS. FLOWS OBS AT D BOX. OBS HAS PERFORATION ABOVE GRADE, WRAPPED w/ FILTER FABRIC ABOVE AGGREGATE BELOW GRADE. BAFFLES VERBAL CONFIRMATION. (P) PANELS HAD NO LABELS. VERBAL CONFIRMATION. (P)
 FINAL INSPECTOR ate h DATE OF APPROVAL 09/23/2019
 CONFIRMATION SEPTIC PUMP AND ALARM ON DIFFERENT CIRCUITS. DEDICATED

FORSYTHE ROAD



NOT TO SCALE



Oswald, Hank

From: Oswald, Hank
Sent: Monday, April 08, 2019 1:54 PM
To: 'Tony Fertitta'
Subject: RE: Hofmeister Property

Hi Tony:

In addition to the specs on the storm water management device near the tanks, we need to see the tanks more on contour due to the steep slopes (per my supervisor) while making sure they are kept 25 feet from the discharge pipe. Also, please show two alternate well sites while maintaining 50 feet from the discharge pipe.

We don't usually like the force main running up through the SDA but we will accept it. It would be nice to see the trenches lengthened a little bit but it isn't a requirement.

Contact me with any questions.

Hank

From: Tony Fertitta <tonyf@fcc-eng.com>
Sent: Monday, April 08, 2019 12:04 PM
To: Oswald, Hank <hoswald@howardcountymd.gov>
Subject:

[Note: This email originated from outside of the organization. Please only click on links or attachments if you know the sender.]

Would you be able to look at the septic install for lot 2 Hofmeister today the client has been calling non-stop. thanks



Right Click the Card to add me to your Contacts

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: OSDS Plan
13375 Forsythe Road

Date: March 18, 2019

The OSDS Plan has been reviewed with the following comments:

- 1.) As previously stated in first memo, match the shape of the SDA on plan with perc cert plan (see attachment) or revise perc cert plan. (Top of SDA does not match.)
- 2.) Tanks must be located 25 feet from steep slopes.
- 3.) The pump tank appears to be shown before the septic tank on plan.
- 4.) Provide cut sheet with details on the storm water management device near tanks (Classification, lined/not lined etc.). Please label on plan.
- 5.) Add a note; the septic line to be installed in the existing sleeve beneath stream marked by green metal stakes.
- 6.) Volume of force main (450LF x 17.4 gallons/100 feet = 78.3) gallons is slightly more than 1/6th the design flow (75 gallons). Use 81gallon dose as stated.

3.18.19
13375 Forsythe Road
Sykesville, MD



Sleeve Stake

Green Stake for
Installed Sieve
Beneath Stream

3.18.19
13375 Forsythe Road
Sykesville, MD



Sleeve Stake

↓
Green Stake for
Installed Sleeve
Beneath Stream

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: OSDS Plan
13375 Forsythe Road
Hofmeister Property, Lot 2

Date: March 8, 2019

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

- 1.) Match shape of SDA on plan with perc cert plan or revise perc cert plan.
- 2.) Add test hole P-7 to plan.
- 3.) Label object next to test hole P-6.
- 4.) Label/show sleeve extending on both sides of the stream buffer on 1st page and label diameter and depth of pipe. Also, label circles on plan next to sleeve.
- 5.) Add note to indicate the septic line will be installed by directionally boring underneath stream or through MDE permitting process.
- 6.) Raise trench inverts to a minimum depth of 18 inches in keeping with proper system design.
- 7.) Label septic tank/pump tank on 2nd page. The septic tank must show two compartments.

Oswald, Hank

From: Oswald, Hank
Sent: Tuesday, March 12, 2019 1:54 PM
To: Tony Fertitta
Subject: Hofmeister Property

Hi Tony:

It looks like one end of the sleeve is in the stream. Please clarify stream edge on plan because there are so many lines. It's not really clear. Add note that the ~~well~~ ^{septic} line will be installed in the existing sleeve. Add labels to sleeve turn ups on plan.

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

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Oswald, Hank

From: Oswald, Hank
Sent: Friday, March 08, 2019 2:36 PM
To: Stephanie Tuite (Stephanie@fcc-eng.com)
Subject: OSDS Plan_13375 Forsythe Road
Attachments: OSDS Memo To FCC_2019.pdf

Hi Stephanie:

Attached, please find comments to the OSDS Plan for 13375 Forsythe Road. Should you have any questions, please don't hesitate to ask.

Respectfully,

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

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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: Hank Oswald Fax: (410) 313-2648 Phone: (410) 313-2640 |
|--|--|

| | |
|------------------------------|-----|
| From: Stephanie Tuite | CC: |
|------------------------------|-----|

| | |
|---|--|
| Re: Hofmeister Property, Lot 2 - Septic Plan | W.O.# 04149-6001 |
| Date: 03/13/2019 | Pages: 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 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 13375 Forsythe Road. Building Permit #19000445. Following is a point by point response to your 3/8/19 comments:

1. P-7 has been added.
2. Object has been labeled as a rock outcrop.
3. For clarity, we have only shown the stream centerline instead of top of slope lines shown on the previous plan. The circles mark the start and end of the existing sleeve.
4. Since sleeve exists, the directional bore is not required.
5. Trench has been shown with an invert of 1.6'.
6. Tanks have been labeled. Detail has been revised.

Should you have any questions or comments, please feel free to call.

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

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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: Hank Oswald Fax: (410) 313-2648 Phone: (410) 313-2640 |
|--|--|

| | |
|------------------------------|-----|
| From: Stephanie Tuite | CC: |
|------------------------------|-----|

| | |
|---|--|
| Re: Hofmeister Property, Lot 2 - Septic Plan | W.O.# 04149-6001 |
| Date: 03/05/2019 | Pages: 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 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 13375 Forsythe Road. Building Permit #19000445.

Should you have any questions or comments, please feel free to call.

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

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LAYOUT _____ INSP 4 _____

INSP 2 _____ INSP 5 _____

INSP 3 _____ INSP 6 _____

ISSUE DATE: _____

APPROVAL DATE: _____

PERMIT

P _____

A 522010

TAX ID # 03347257

ON-SITE SEWAGE DISPOSAL SYSTEM HOWARD COUNTY HEALTH DEPARTMENT BUREAU OF ENVIRONMENTAL HEALTH

_____ IS PERMITTED TO INSTALL ALTER

ADDRESS: _____ PHONE NUMBER: _____

SUBDIVISION: Hofmeister Property LOT NUMBER: 2

ADDRESS: 13375 Forsythe Rd PROPERTY OWNER: John Gaske

SEPTIC TANK CAPACITY (GALLONS): 2000 OUTLET BAFFLE FILTER REQUIRED

PUMP CHAMBER CAPACITY (GALLONS): 1500 COMPARTMENTED TANK REQUIRED

NUMBER OF BEDROOMS: 4

SQUARE FEET PER BEDROOM: _____

LINEAR FEET OF TRENCH REQUIRED: 214

| | |
|-----------|---|
| TRENCHES: | Trench to be 2.0 feet wide. Inlet 3.0 feet below original grade. Bottom maximum depth 6.0 feet below original grade. Effective area begins at 4.0 feet below original grade. 3.0 feet of stone below distribution pipe. |
| LOCATION: | Distribution box location top center at highest elevation. See plan for system location. |
| NOTES: | Septic area must be staked prior to layout. Layout required prior to installation. Install per plan unless directed by HCHD. Repair systems have only 1' of sidewall. |

PLANS APPROVED: Sara Sappington DATE: 10/30/07

- NOTE: PERMIT VOID AFTER 2 YEARS
- NOTE: CONTRACTOR RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION FOR ALL INSTALLATIONS
- NOTE: WATERTIGHT SEPTIC TANKS REQUIRED
- NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE 100 FEET FROM ANY WATER WELL
- NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS UNLESS SPECIFICALLY AUTHORIZED

**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 FOR INSPECTION OF SEPTIC SYSTEM**

NOT TO SCALE

TRENCH/DRAINFIELD DATA

WIDTH INLET BOTTOM

NUMBER OF TRENCHES _____

TOTAL LENGTH _____

ABSORPTION AREA _____

DISTRIBUTION BOX LEVEL _____

DISTRIBUTION BOX BAFFLE _____

DISTRIBUTION BOX PORT _____

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL _____

CAPACITY _____ GAL

SEAM LOC _____

TANK LID DEPTH _____

BAFFLES _____

BAFFLE FILTER _____

MANHOLE LOC _____

6" PORT LOC _____

WATERTIGHT TEST _____

SEPTIC TANK 2 LEVEL _____

CAPACITY _____ GAL

SEAM LOC _____

TANK LID DEPTH _____

BAFFLES _____

BAFFLE FILTER _____

MANHOLE LOC _____

6" PORT LOC _____

WATERTIGHT TEST _____

ROAD

PRE-CONSTRUCTION _____

INSTALLATION _____

FINAL INSPECTOR _____ DATE OF APPROVAL _____

RECEIPT DATE: 12/12/12

P 544430

INSTALLATION
APPROVAL DATE: _____

PERMIT

A _____

**ON-SITE SEWAGE DISPOSAL SYSTEM
HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH**

PROPERTY OWNER: John Gaske

OWNER'S
ADDRESS: 13375 Forsythe Road PHONE: 443-463-2754

ADDRESS: 13375 Forsythe Road TAX ACC'T #: 03-347257

SUBDIVISION: Hofmeister Property LOT: 2

SEPTIC TANK CAPACITY (GALLONS): TBD

PUMP CHAMBER CAPACITY (GALLONS): TBD

NUMBER OF BEDROOMS: TBD APPLICATION RATE: TBD

SQUARE FOOTAGE OF HOUSE: TBD

LINEAR FEET OF TRENCH REQUIRED: TBD

| | |
|-----------|---|
| TRENCHES: | TO BE DETERMINED ON APPROVED SUPPLEMENTAL PLAN |
| LOCATION: | TO BE DETERMINED ON APPROVED SUPPLEMENTAL PLAN |
| NOTES: | A SUPPLEMENTAL PLAN PROVIDING SYSTEM DETAILS IS REQUIRED PRIOR TO HEALTH APPROVAL OF BUILDING PERMIT, PLOT PLAN, AND WALL CHECK. AN APPROVED WALL CHECK IS REQUIRED PRIOR TO PRE-CONSTRUCTION INSPECTION. THE OSDS PERMITTED HEREIN IS NOT SUBJECT TO REVISIONS TO COMAR 26.04.02 EFFECTIVE 1/1/2013 ON THE CONDITION THAT FINAL HEALTH APPROVAL OF THE INSTALLATION IS GRANTED PRIOR TO PERMIT EXPIRATION. |

ISSUED BY: JEFF WILLIAMS ISSUE DATE: 12/12/12 EXPIRATION DATE: 12/12/13

- NOTE: CONTRACTOR RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION
- NOTE: WATERTIGHT SEPTIC TANKS REQUIRED
- NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE 100 FEET 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

**NEITHER THE HOWARD COUNTY COUNCIL OR 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 FOR INSPECTION OF SEPTIC SYSTEM.**

Oswald, Hank

From: Oswald, Hank
Sent: Monday, March 18, 2019 1:19 PM
To: 'Tony Fertitta'
Cc: Williams, Jeffrey
Subject: OSDS Plan Review Comments_13375 Forsythe Road
Attachments: plan.pdf; OSDS Memo To FCC_Forsythe_2019.pdf

Hi Tony:

Attached, please find a copy of the perc cert plan along with additional comments to the OSDS plan for 13375 Forsythe Road. Are the elevations in the septic profile for the sleeve shown accurately? Another word, have the sleeve elevations been field verified?

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

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SOILS LEGEND

| SOIL | NAME | CLASS |
|------|---|-------|
| GgB | Glenelg loam, 3 to 8 percent slopes | B |
| GmC | Glenville silt loam, 0 to 15 percent slopes | C |
| MaC | Manor loam, 0 to 15 percent slopes | B |
| MaD | Manor loam, 15 to 25 percent slopes | B |

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-15-0402 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.
6. ADD A NOTE, THE SEPTIC LINE TO BE INSTALLED IN THE EXISTING SLEEVE BENEATH STREAM MARKED BY GREEN METAL STAKES.

INITIAL SYSTEM

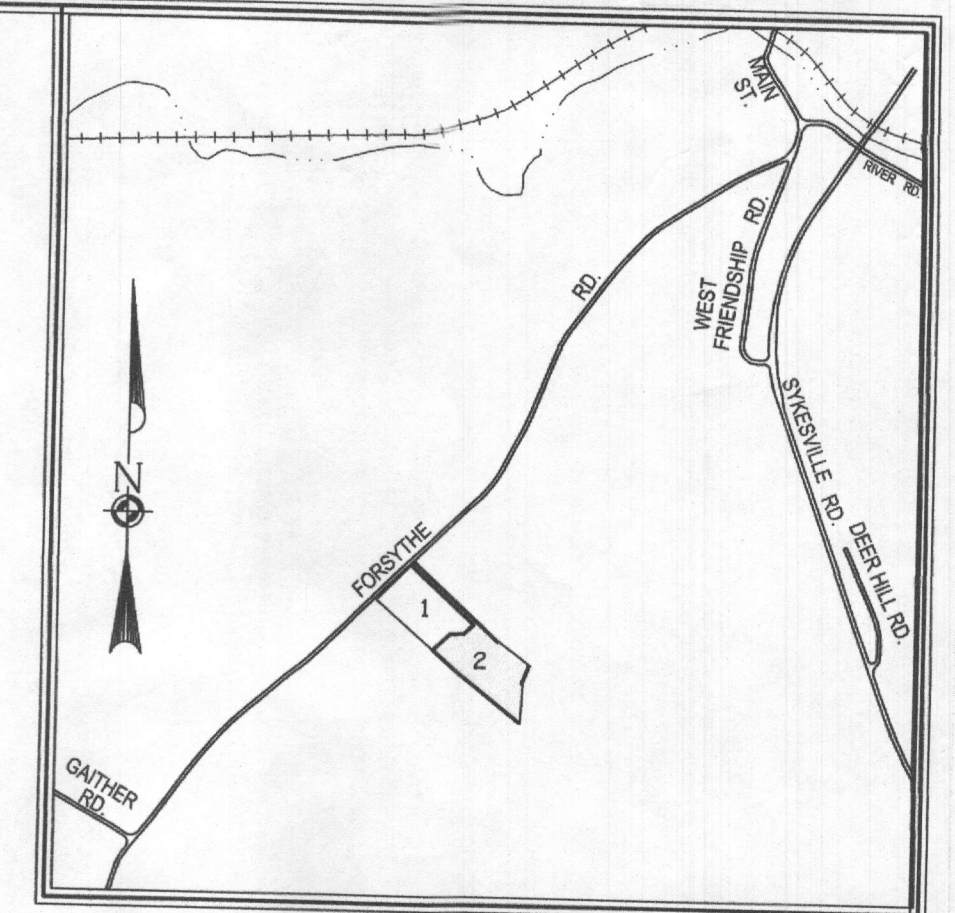
SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 3 BEDROOMS
 LOADING RATE = 3 BEDROOMS X 150 GPD/BEDROOM = 450 GPD
 APPLICATION RATE = 0.8
 EFFECTIVE SIDEWALL BEGINS AT 4 FEET
 TRENCH DEPTH = 8 FEET
 TRENCH WIDTH (W) = 3 FEET
 EFFECTIVE DEPTH (D) = 4 FEET
 SF OF DRAINFIELD = 450 GPD / 0.8 = 562.5 SF
 COEFFICIENT OF REDUCTION OF TRENCH LENGTH = $(W+2)/(W+1+2D) = (3+2)/(3+1+(2*4)) = 0.416$
 TRENCH LENGTH = 187.50 SF x 0.416 = 78 FEET
 (USE 2 TRENCHES AT 39 L.F.)
 TRENCH SPACING = 2D+W = ((2*4) + 3) = 11' USE 11'

1ST & 2ND REPLACEMENT SYSTEM

SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 3 BEDROOMS
 LOADING RATE = 3 BEDROOMS X 150 GPD/BEDROOM = 450 GPD
 APPLICATION RATE = 0.8
 EFFECTIVE SIDEWALL BEGINS AT 4 FEET
 TRENCH DEPTH = 8 FEET
 TRENCH WIDTH (W) = 3 FEET
 EFFECTIVE DEPTH (D) = 4 FEET
 SF OF DRAINFIELD = 450 GPD / 0.8 = 562.5 SF
 COEFFICIENT OF REDUCTION OF TRENCH LENGTH = $(W+2)/(W+1+2D) = (3+2)/(3+1+(2*4)) = 0.416$
 TRENCH LENGTH = 187.50 SF x 0.416 = 78 FEET
 (USE 2 TRENCHES AT 39 L.F.)
 TRENCH SPACING = 2D+W = ((2*4) + 3) = 11' USE 11'

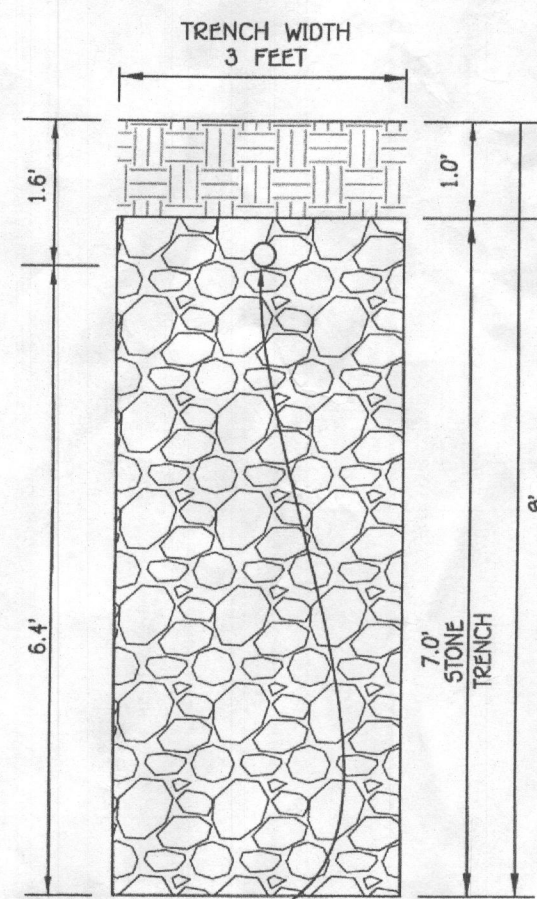
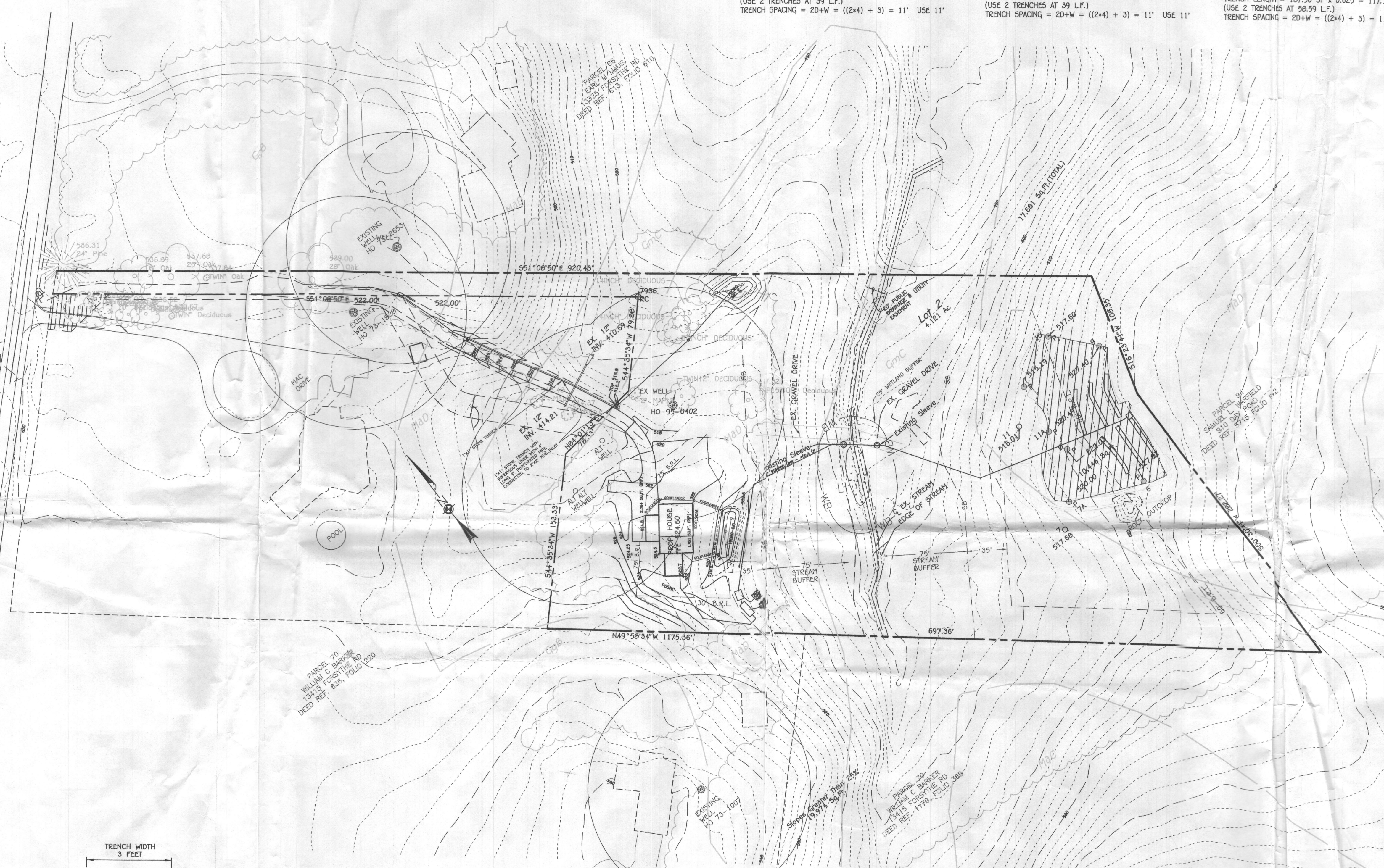
ADDITIONAL REPLACEMENT AREA

SEWAGE DISPOSAL SYSTEM DATA DESIGN FOR 3 BEDROOMS
 LOADING RATE = 3 BEDROOMS X 150 GPD/BEDROOM = 450 GPD
 APPLICATION RATE = 0.8
 EFFECTIVE SIDEWALL BEGINS AT 3 FEET
 TRENCH DEPTH = 5 FEET
 TRENCH WIDTH (W) = 3 FEET
 EFFECTIVE DEPTH (D) = 2 FEET
 SF OF DRAINFIELD = 450 GPD / 0.8 = 562.5 SF
 COEFFICIENT OF REDUCTION OF TRENCH LENGTH = $(W+2)/(W+1+2D) = (3+2)/(3+1+(2*2)) = 0.625$
 TRENCH LENGTH = 187.50 SF x 0.625 = 117.19 FEET
 (USE 2 TRENCHES AT 58.59 L.F.)
 TRENCH SPACING = 2D+W = ((2*4) + 3) = 11' USE 11'



VICINITY MAP
 SCALE: 1" = 1200'

FORSYTHE ROAD
 (MINOR COLLECTOR)
 (ULTIMATE 60'-8.1' W)

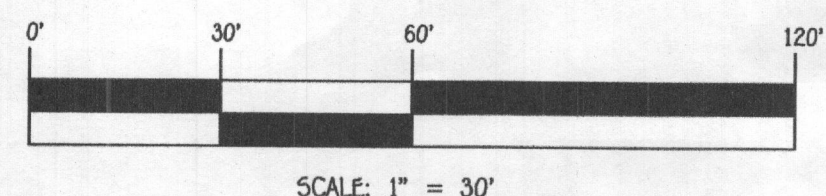


INITIAL TRENCH DETAIL
 SCALE: 1" = 2'

TRENCH DATA:

TRENCH 1:
 EX. GROUND ABOVE = 527.7
 INV. IN = 526.1
 BOTTOM TRENCH = 519.7

TRENCH 2:
 EX. GROUND ABOVE = 527.7
 INV. IN = 526.1
 BOTTOM TRENCH = 519.7



SCALE: 1" = 30'

PLAN
 SCALE: 1" = 50'

FFE BSE 524.6
 INV. OUT OF HOUSE = 521.0
 PROP. GROUND AT CLEANOUT = 522.7
 INV. INTO CLEANOUT = 520.75
 INV. OUT OF CLEANOUT = 519.89
 EX. GROUND AT SEPTIC TANK = 522.5
 PROP. GRADE ABOVE SEPTIC TANK = 522.0
 TOP OF SEPTIC TANK = 519.0
 INV. INTO SEPTIC TANK = 518.17
 INV. OUT OF SEPTIC TANK = 517.84
 EX. GROUND AT PUMP TANK = 520.0
 PROP. GRADE ABOVE PUMP TANK = 520.5
 TOP OF PUMP TANK = 518.61
 INV. INTO PUMP TANK = 517.53
 INV. OUT OF PUMP TANK = 518.70
 GROUND AT DISTRIBUTION BOX = 527.7
 INV. INTO DISTRIBUTION BOX = 526.1
 INV. OUT OF DISTRIBUTION BOX = 526.0

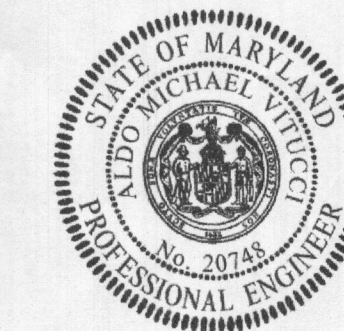
Approved Septic System Plan
 Howard County Health Department
 Signature: *[Signature]* Date: 4/15/19

SEPTIC SYSTEM
 INSTALLATION SITE PLAN

13375 FORSYTHE ROAD
 Hofmeister Property
 LOT 2
 ZONED RC-DEO

TAX MAP No. 4 GRID No. 21 PARCEL No. 67

THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL, 2019
 SHEET 1 OF 2



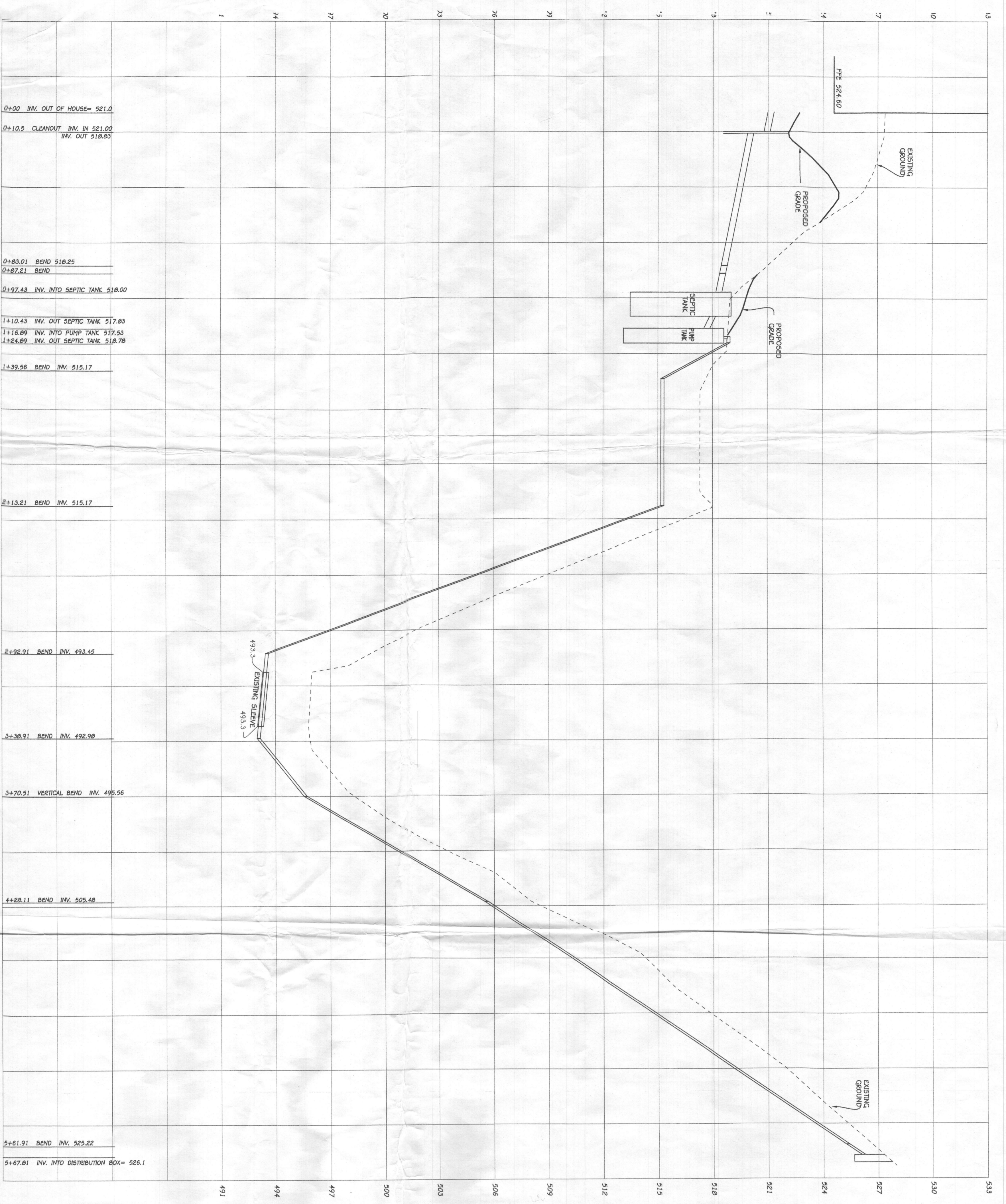
PROFESSION CERTIFICATION

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. 11780, EXPIRATION DATE: 02/22/2022.

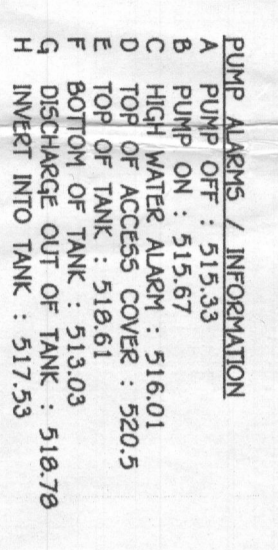
Signature: *[Signature]* Date: 4/15/19

OWNER / DEVELOPER
 ROBERT & ELIZABETH TAYLOR
 19050 NEW HAMPSHIRE AVE
 BERNICLOW MD 20882
 301-460-9416

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELKROTT CITY, MARYLAND 21042
 4100 461 - 2999



| | |
|---------|------------------------------------|
| 0+00 | INV. OUT OF HOUSE = 521.0 |
| 0+10.5 | CLEANOUT INV. IN 521.00 |
| | INV. OUT 518.63 |
| 0+63.01 | BEND 518.25 |
| 0+67.21 | BEND |
| 0+97.43 | INV. INTO SEPTIC TANK 518.00 |
| 1+10.43 | INV. INTO SEPTIC TANK 517.83 |
| 1+16.89 | INV. INTO PUMP TANK 517.53 |
| 1+24.89 | INV. OUT SEPTIC TANK 518.78 |
| 1+39.56 | BEND INV. 519.17 |
| 2+13.21 | BEND INV. 519.17 |
| 2+92.91 | BEND INV. 493.45 |
| 3+36.91 | BEND INV. 492.58 |
| 3+70.51 | VERTICAL BEND INV. 495.56 |
| 4+28.11 | BEND INV. 505.48 |
| 5+61.91 | BEND INV. 525.22 |
| 5+67.01 | INV. INTO DISTRIBUTION BOX = 526.1 |



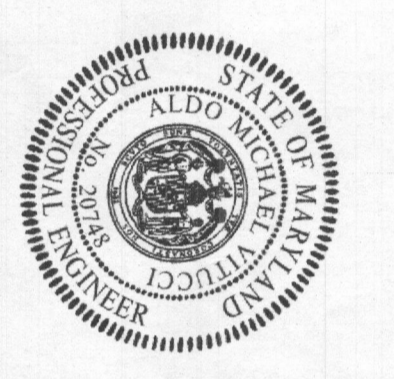
PUMP ALIGNS / INTEGRATION
 A PUMP ON: 519.33
 B PUMP OFF: 519.37
 C TOP OF TANK: 516.01
 D TOP OF ACCESS COVER: 520.5
 E BOTTOM OF TANK: 518.61
 F BOTTOM OF OUT: 513.03
 G INVERT INTO TANK: 518.78
 H INVERT INTO TANK: 517.53

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

OWNER / DEVELOPER
 ROBERT & ELIZABETH TAYLOR
 19300 NEW HANPSHIRE AVE
 BELLEVILLE, MD
 20711-601-9416

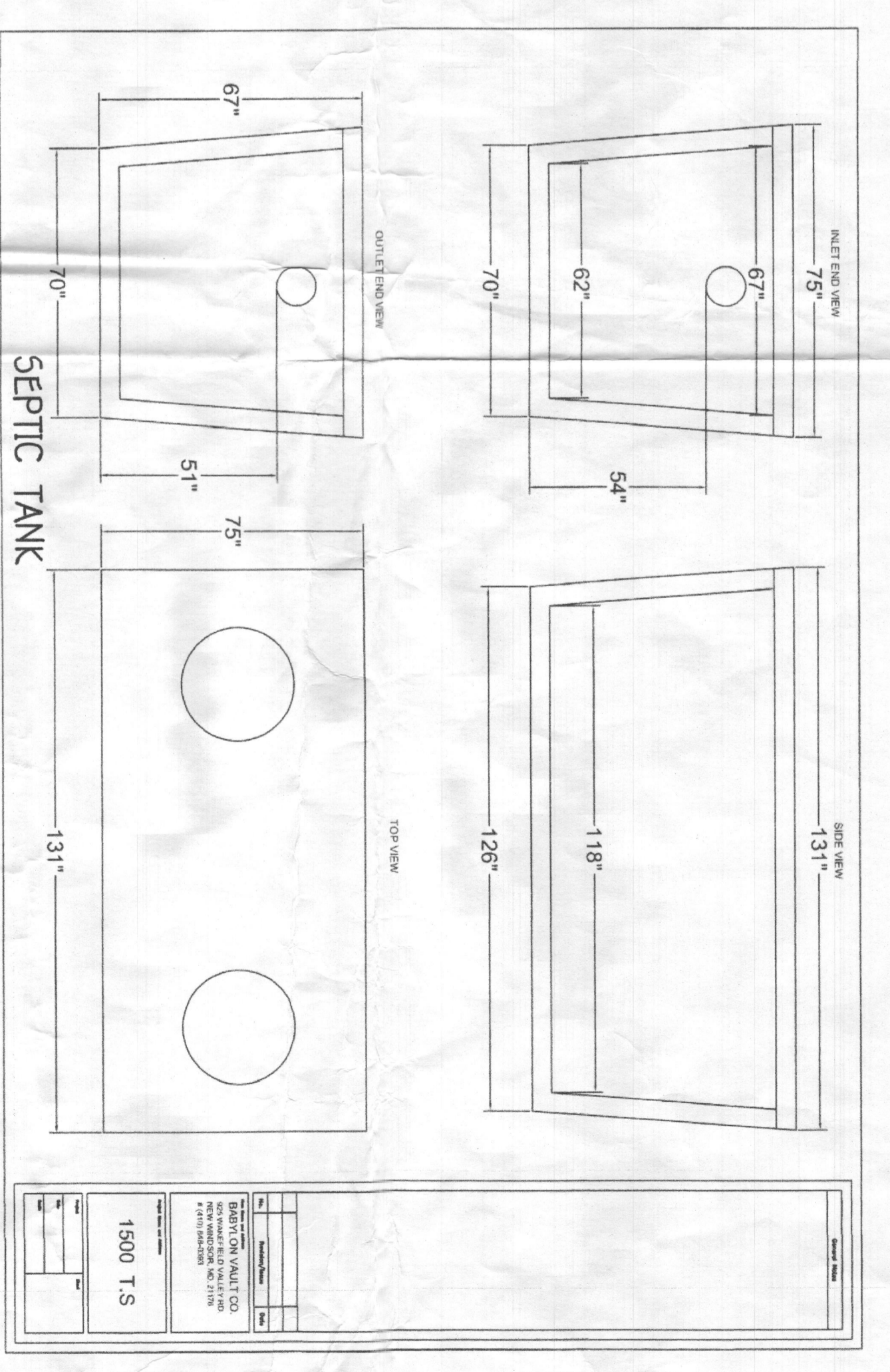
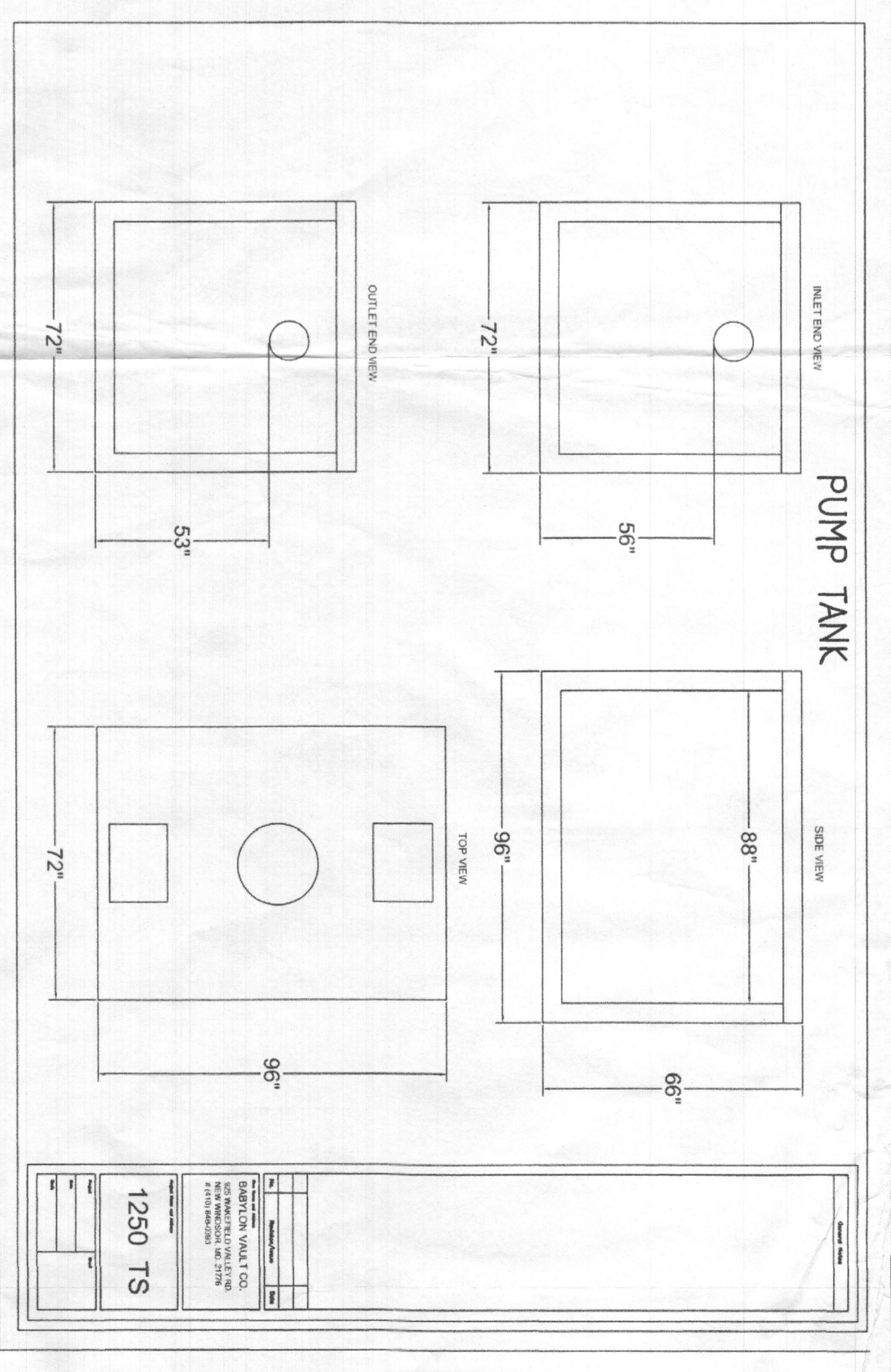
FISHER COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 10000 WOODBURN ROAD
 BELLEVILLE, MD 20711
 (410) 661-9999

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



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AS A PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND. LICENSE NO. 22718A, EXPIRATION DATE 02/28/2022.

Signature of Professional Engineer: *Robert Taylor*
 DATE: 4/1/19



ITT

GOLDS PUMPS
 Wastewater

AGENCY LISTINGS

NOTES

1.1/6 DESIGN FLOW (450 GPD)
 1.1/6 DESIGN FLOW (450 GPD) = 78.3 GPM
 1.1/6 DESIGN FLOW (450 GPD) = 81 GALLON PER HOUR
 PUMP HEADS TO MAXIMIZE OF PUMP AT 42.95 FT OF HEAD
 USE 0.5 HP (ROUND MODEL W/50HP PUMP)

LOW POINT CLASSIFICATION TO REPORT TOTAL DYNAMIC HEAD = 42.95 FT
 DYNAMIC HEAD = 48.0 FT OF PUMP HEAD
 9.1/6 IN. @ 2.0 EQUIVALENT FEET = 2 FT
 TOTAL LINEAR FEET OF P. SCH. 40 PVC = 488 FT

SCALE: 1" = 30"

1500 T.S.

SEPTIC SYSTEM INSTALLATION SITE PLAN

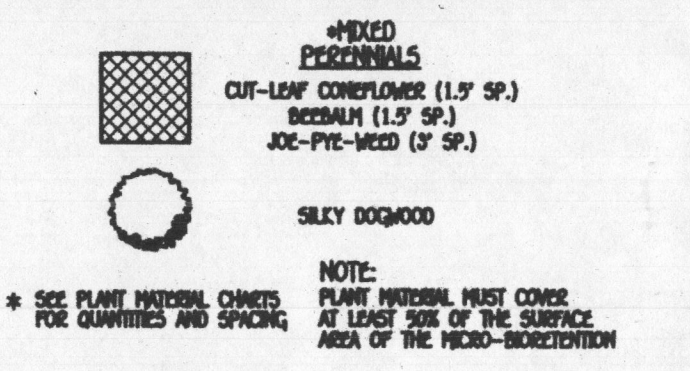
13375 FORSYTHE ROAD
Hofmeister Property
 LOT 2
 ZONED RC-DEO
 TAX MAP No. 4 GRID No. 21 PARCEL No. 67
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: APRIL, 2019
 SHEET 2 OF 2

SOILS LEGEND

| SOIL | NAME | CLASS |
|------|---|-------|
| Ggb | Glenelg loam, 3 to 8 percent slopes | B |
| GmC | Glenville silt loam, 0 to 15 percent slopes | C |
| MbC | Mānor loam, 0 to 15 percent slopes | B |
| MbD | Mānor loam, 15 to 25 percent slopes | B |

MICRO-BIORETENTION PLANT MATERIAL

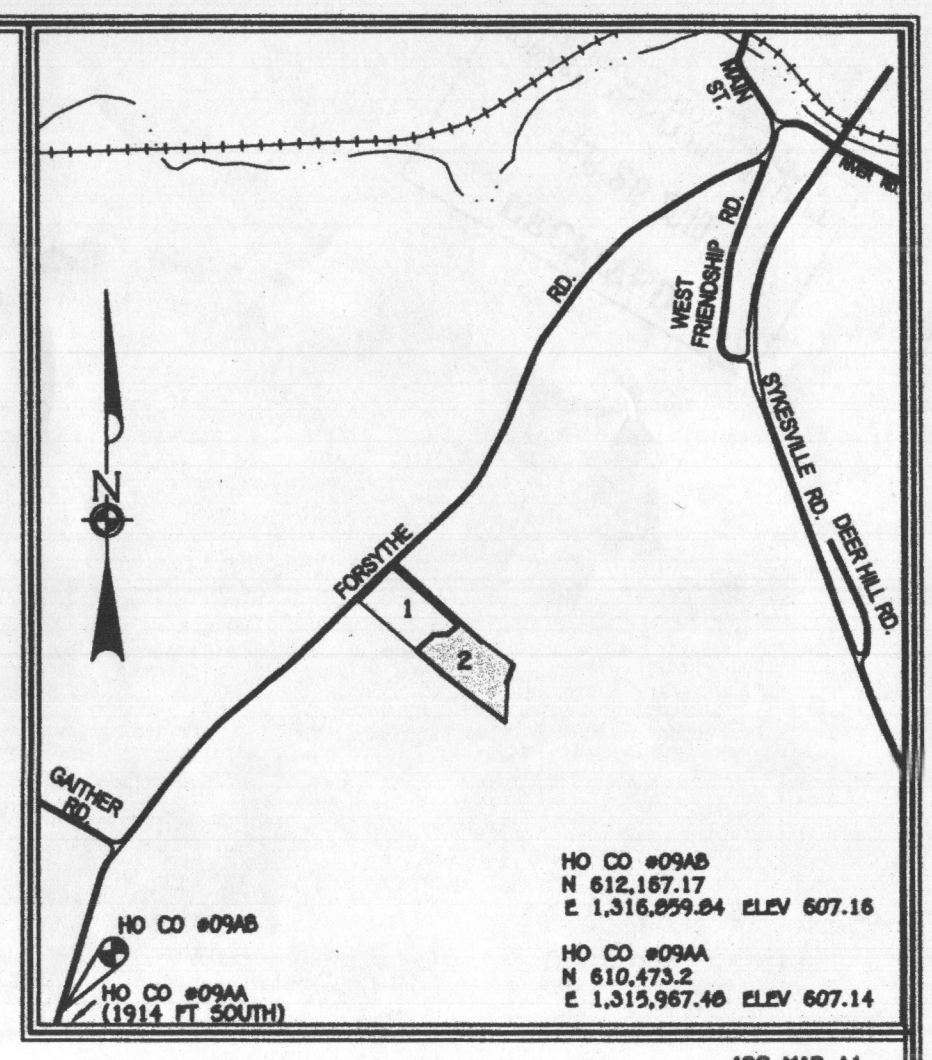
| MICRO-BIO 1 QUANTITY | MICRO-BIO 2 QUANTITY | NAME | MAXIMUM SPACING (FT.) |
|----------------------|----------------------|------------------|---------------------------------|
| 30 | 35 | MIXED PERENNIALS | 1.5 TO 3.0 FT. |
| 1 | 1 | SILLY DOGWOOD | PLANT AWAY FROM INFLOW LOCATION |



LEGEND

| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION |
|--------|------------------------------|--------|--------------------------------------|
| --- | EXISTING 2' CONTOURS | --- | PROPOSED CONTOUR |
| --- | EXISTING 10' CONTOURS | --- | SPOT ELEVATION |
| --- | SOILS LINES AND TYPE | --- | UNITS OF DISTURBANCE |
| --- | EXISTING TREELINE | --- | PROPOSED TREELINE |
| --- | 15% TO 24.9% STEEP SLOPES | --- | EXISTING & PROPOSED PAVING |
| --- | 25% AND GREATER STEEP SLOPES | --- | SILT FENCE |
| --- | STREAM BANK BUFFER | --- | PERMANENT SOIL STABILIZATION MATTING |
| --- | EARTH DIKE | --- | STABILIZED CONSTRUCTION ENTRANCE |

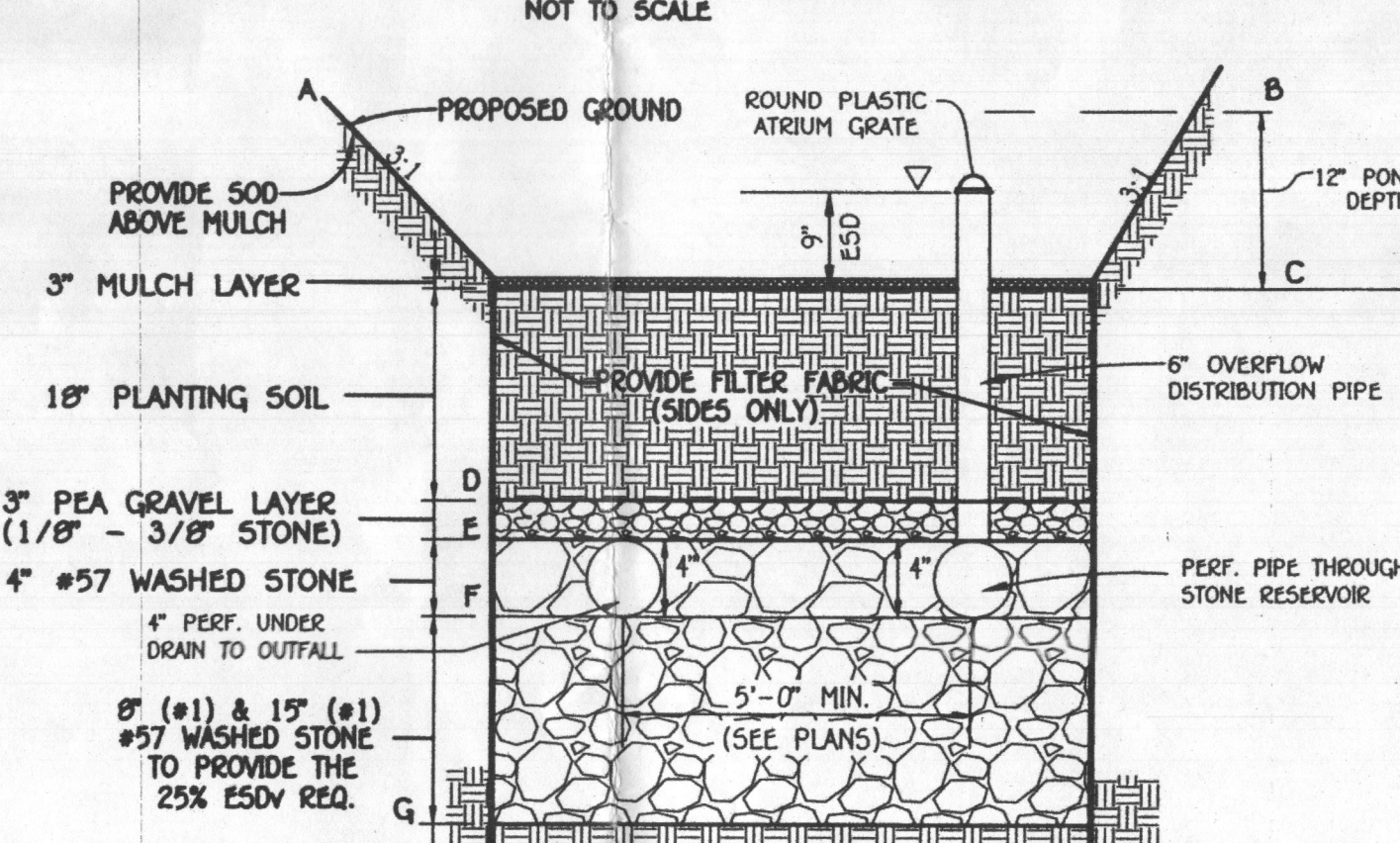
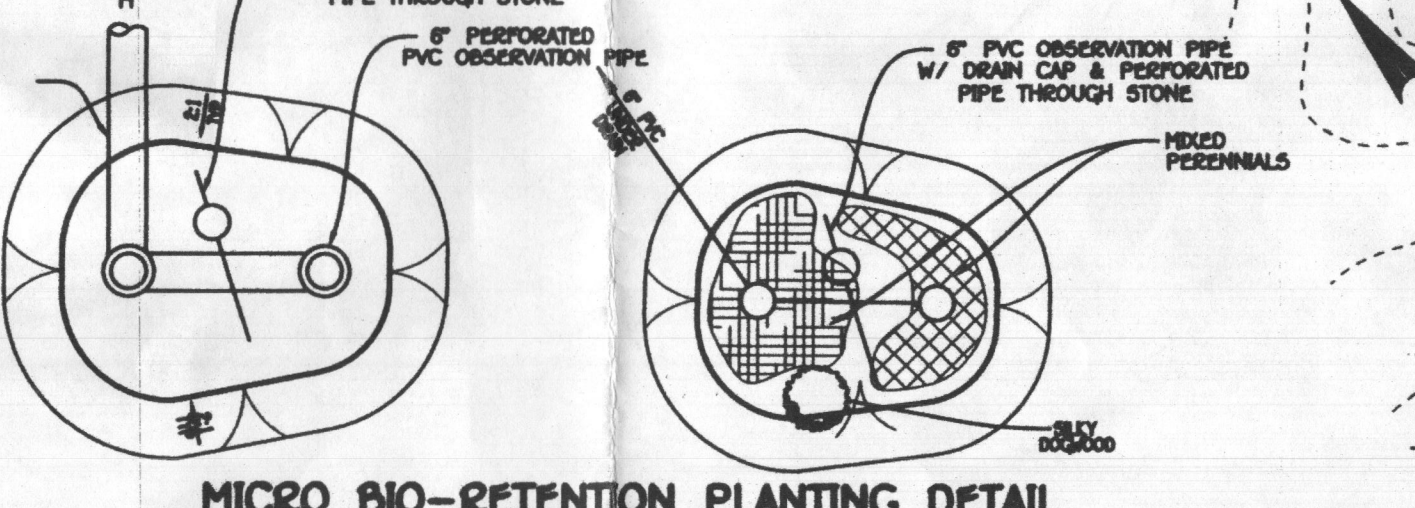
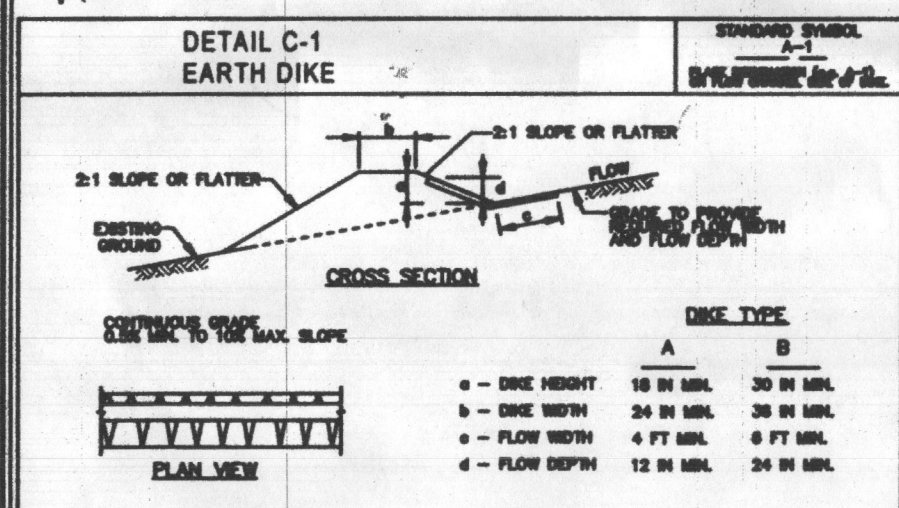
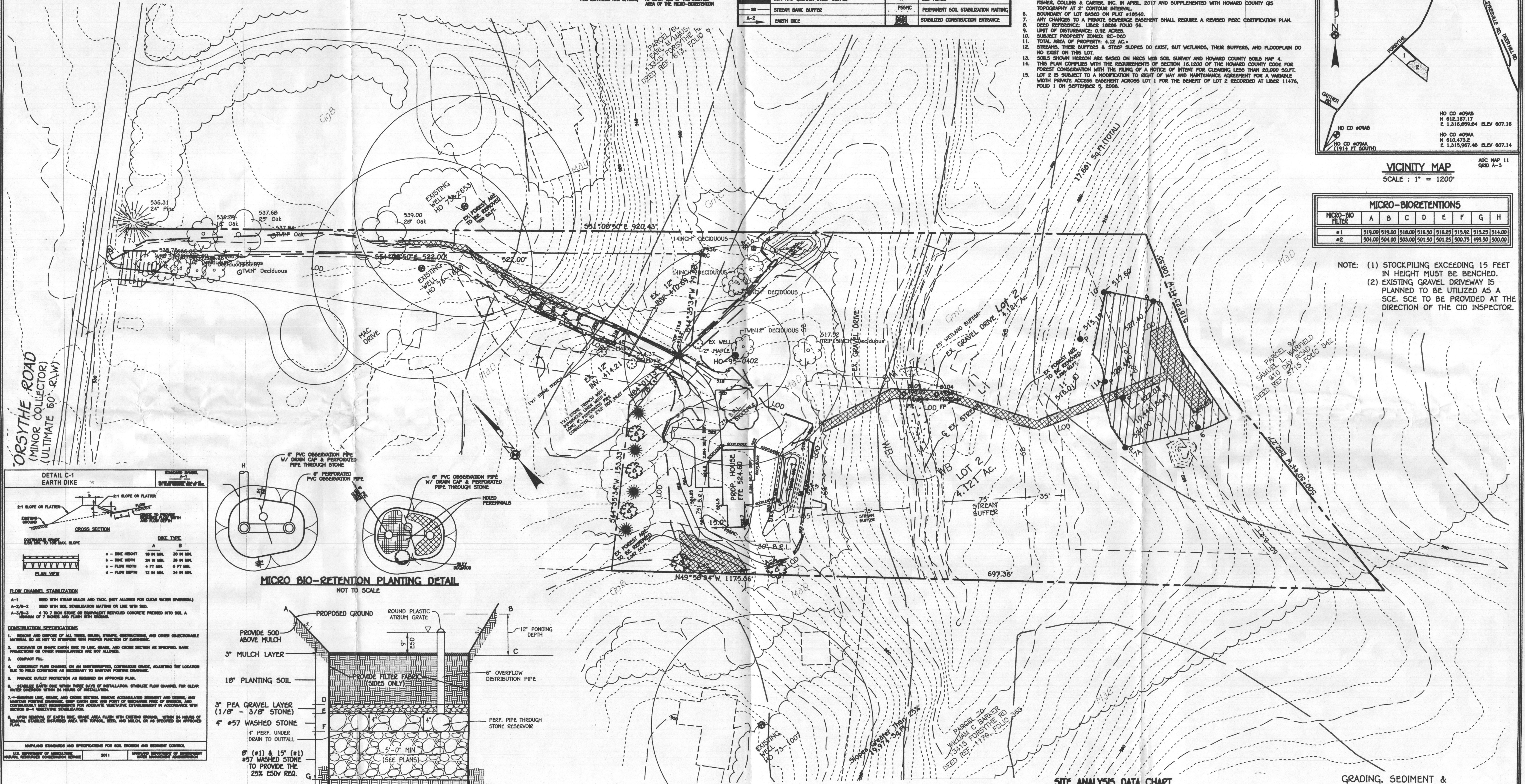
- ### GENERAL NOTES:
- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA. PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL 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. RECONSTRUCTION OF A HOODED SEWERAGE EASEMENT SHALL NOT BE NECESSARY. ADJUSTMENTS TO SEPTIC EASEMENT AREA IS NOT PERMITTED WITHOUT ADDITIONAL TESTING.
 - THE LOT SHOWN HEREON COMPLES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
 - EXISTING WELLS AND/OR SEWERAGE EASEMENTS WITHIN 100 FEET OF THE PROPERTY HAVE BEEN SHOWN FROM THE BEST AVAILABLE INFORMATION.
 - TOPOGRAPHY SHOWN IN THE AREA OF THE LOT BEING DISTURBED IS BASED ON A TOPOGRAPHIC SURVEY BY FISHER, COLLINS & CARTER, INC. IN APRIL, 2017 AND SUPPLEMENTED WITH HOWARD COUNTY GIS TOPOGRAPHY AT 2' CONTOUR INTERVAL.
 - BOUNDARY OF LOT BASED ON PLAT #18940.
 - ANY CHANGES TO A PRIVATE SEWERAGE EASEMENT SHALL REQUIRE A REVISED PERC CERTIFICATION PLAN.
 - DEED REFERENCE: LIBER 18286 FOLD 56.
 - LIMIT OF DISTURBANCE: 0.92 ACRES.
 - SUBJECT PROPERTY ZONE: RC-DEO
 - TOTAL AREA OF PROPERTY: 4.12 AC.
 - STREAMS, THEIR BUFFERS & STEEP SLOPES DO EXIST, BUT WETLANDS, THEIR BUFFERS, AND FLOODPLAIN DO NOT EXIST ON THIS LOT.
 - SOILS SHOWN HEREON ARE BASED ON NRCS WEB SOIL SURVEY AND HOWARD COUNTY SOILS MAP 4.
 - THIS PLAN COMPLES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WITH THE FILING OF A NOTICE OF INTENT FOR CLEARING LESS THAN 20,000 SQ.FT. LOT 2 IS SUBJECT TO A MODIFICATION TO RIGHT OF WAY AND MAINTENANCE AGREEMENT FOR A VARIABLE WIDTH PRIVATE ACCESS EASEMENT ACROSS LOT 1 FOR THE BENEFIT OF LOT 2 RECORDED AT LIBER 11476, FOLD 1 ON SEPTEMBER 5, 2008.



MICRO-BIORETENTIONS

| MICRO-BIO FILTER | A | B | C | D | E | F | G | H |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| #1 | 519.00 | 519.00 | 518.00 | 516.50 | 516.25 | 515.92 | 515.25 | 514.00 |
| #2 | 504.00 | 504.00 | 503.00 | 501.50 | 501.25 | 500.75 | 499.50 | 500.00 |

- NOTE: (1) STOCKPILING EXCEEDING 15 FEET IN HEIGHT MUST BE BENCHED. (2) EXISTING GRAVEL DRIVEWAY IS PLANNED TO BE UTILIZED AS A SCE. SCE TO BE PROVIDED AT THE DIRECTION OF THE CID INSPECTOR.



SITE ANALYSIS DATA CHART

| | |
|----|--|
| A. | TOTAL AREA OF PROPERTY = 4.12 AC. |
| B. | LIMIT OF DISTURBED AREA (SITE) = 0.92 AC. |
| C. | PRESENT ZONING DESIGNATION = RC-DEO |
| D. | PROPOSED USE: RESIDENTIAL |
| E. | PREVIOUS HOWARD COUNTY FILES: WP-06-047; F-06-080; PLAT #18940 |
| F. | TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC. |
| G. | TOTAL AREA OF SLOPES IN EXCESS OF 15% = 2.00 AC. (0.44 AC. ± 25% OR GREATER) |
| H. | TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC. |
| I. | TOTAL AREA OF STREAM (INCLUDING BUFFER) = 1.30 AC. (322 LF) |
| J. | TOTAL AREA OF EXISTING FOREST = 2.7 AC. |
| K. | TOTAL AREA OF FOREST TO BE CLEARED = 6,600 SQ.FT. |
| L. | TOTAL GREEN OPEN AREA = 1.22 AC. |
| M. | TOTAL PROPOSED IMPERVIOUS AREA = 0.23 AC. |
| N. | TOTAL AREA OF ERODIBLE SOILS = 2.0 AC. |

GRADING, SEDIMENT & EROSION CONTROL PLAN
Hofmeister Property
 LOT 2
 ZONED RC-DEO
 TAX MAP No. 4 GRID No. 21 PARCEL No. 67
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: FEBRUARY 2019
 SHEET 1 OF 2

OWNER / DEVELOPER
 ROBERT & ELIZABETH TAYLOR
 19050 NEW HAMPSHIRE AVE.
 BETHESDA MD 20882
 301-460-9416

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 18272 MILBROOK INDUSTRIAL PARK
 ELICOTT CITY, MARYLAND 21042
 (410) 411-3899

THIS PLAN IS APPROVED FOR SMALL POND CONSTRUCTION, AND SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT:
 Signature: *[Signature]* DATE: 2/12/19
 HOWARD SOIL CONSERVATION DISTRICT

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. 36366, EXPIRATION DATE: 01/12/2020.
 Signature: *[Signature]* DATE: 2/11/19
 PROFESSIONAL ENGINEER

ENGINEER'S CERTIFICATE
 I HAVE CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: *[Signature]* DATE: 2/11/19
 SIGNATURE OF ENGINEER DATE

BUILDER/DEVELOPER'S CERTIFICATE
 I HAVE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZED PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: *[Signature]* DATE: 2/15/19
 SIGNATURE OF DEVELOPER DATE

