



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: 4/25/18 **ONSITE SEWAGE DISPOSAL SYSTEM**

P 562973

APPROVAL DATE: 7/25/18 SEC **PERMIT: CONSTRUCTION**

A \_\_\_\_\_

PROPERTY ADDRESS: 12502 Triadelphia Road

SUBDIVISION: The Woods at Triadelphia

LOT: 4

TAX ID:

03-522773

CONTRACTOR: Paul H. Dymond Corp.

EMAIL: phdymondcorp@netzero.net

CONTRACTOR ADDRESS: 14631 Red Lion Drive, Woodbine, MD 21797 PHONE: (410) 442-5774

PROPERTY OWNER: Michael Eckstein

EMAIL: \_\_\_\_\_

OWNER ADDRESS: 9427 Fields Road

PHONE: 240-893-0036

SEPTIC TANK SIZE (GALLONS): 2000

TANK MANUFACTURER: Mayer Bros.

WE0511H or

PUMP MODEL: WE0511HH

PUMP SIZE

1/2HP

PUMP TANK CAPACITY: 1500GAL

DISTRIBUTION SYSTEM: ☐ GRAVITY

☒ PRESSURE DOSED

BEDROOMS: 5

APPLICATION RATE: 0.8

TRENCHES:	LINEAR FEET REQUIRED: <u>195</u>	INLET DEPTH: <u>4</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>7</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>5</u>
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: Robert Freemon

ISSUE DATE: 5/11/18

EXPIRATION DATE: 4/25/19

**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 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 \_\_\_\_\_

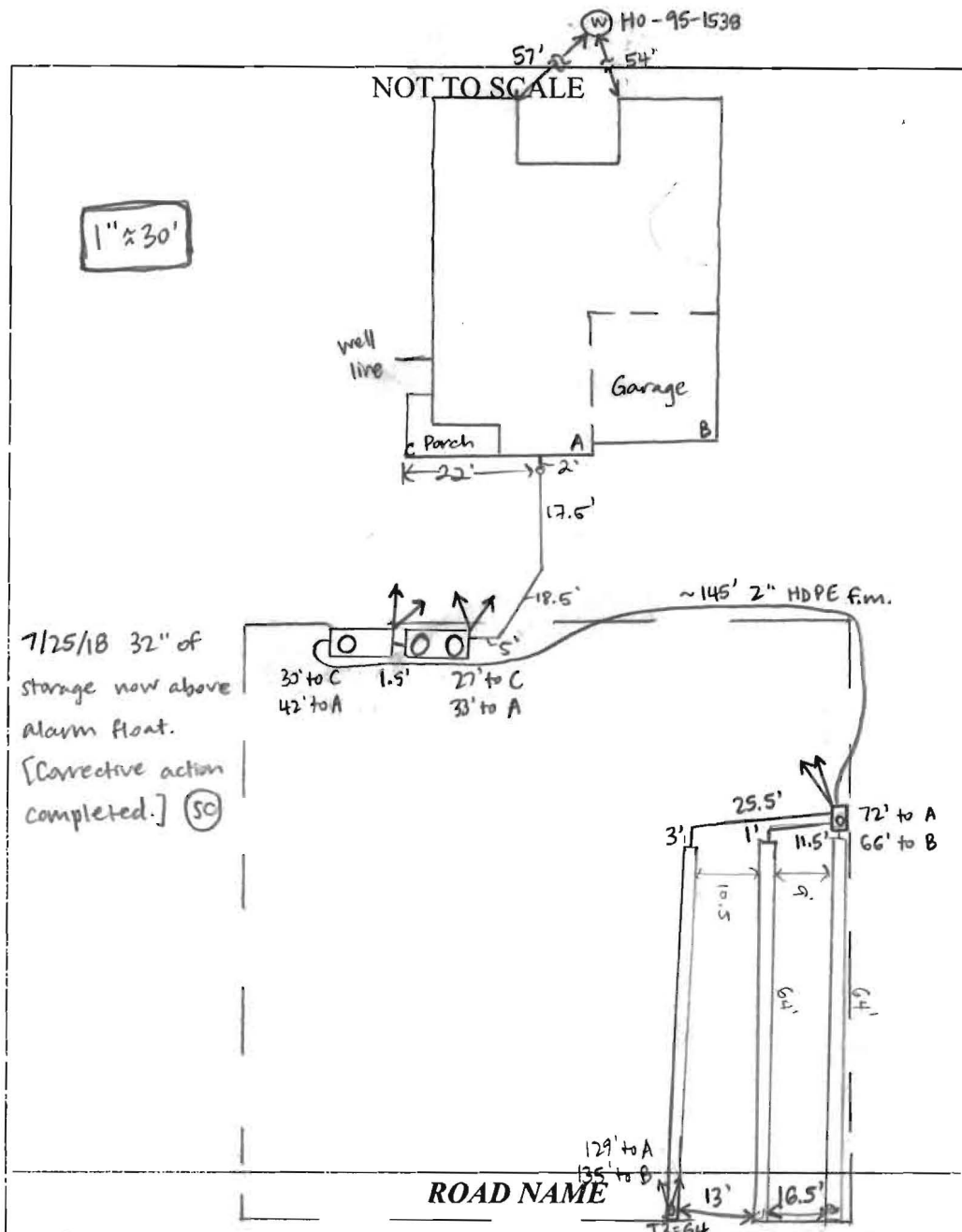
**NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA**

**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'	4'	7'
NUMBER OF TRENCHES		3
TOTAL LENGTH		192'
ABSORPTION AREA		476' + SIDEWALL
DISTRIBUTION BOX LEVEL		YES
DISTRIBUTION BOX BAFFLE		YES
DISTRIBUTION BOX PORT		YES

#### SEPTIC TANK DATA

SEPTIC TANK I LEVEL	YES
MANUFACTURER	BABYLON
CAPACITY	2000 GAL
SEAM LOC	TOP
TANK LID DEPTH	0.5 - 1.5'
BAFFLES	YES
BAFFLE FILTER	NO
MANHOLE LOC	FRONT + REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	YES
DATE ON LID	5-11-18

#### PUMP/SEPTIC TANK LEVEL YES

MANUFACTURER	BABYLON
CAPACITY	1500 GAL
SEAM LOC	TOP
TANK LID DEPTH	1.5 - 3'
BAFFLES	NO
BAFFLE FILTER	NO
MANHOLE LOC	REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	NO
DATE ON LID	4-18-18
Pump: WE0511H (1/2 hp)	

#### PRE-CONSTRUCTION:

5/16/18 Met Paul Dymond on site for layout. Tanks + trenches staked, upper two SDA corner stakes missing. Fill/gravel over upper trench - shot elevations and it's ~7". Need fill removed + SDA corners restaked. Dumpster + porta potty in SDA must be moved. Trees currently in tank locations. Call to reschedule layout. (SC) 5/24/18 Fill + dumpster still present. OK to set tanks, will layout trenches when tanks are set. (SC) 6/6/18 Dumpster moved, SDA corners + trenches staked. Shot elevations @ trench ends + adjusted stakes. INSTALLATION: to be 13' center-to-center. (SC) 6/7/18 T3 complete - left open for inspection. 3' wide, 3.5-4' to stone. (SC) 6/8/2018 Excavator - is bermed for levelness. Trenches

are to Spec. OK + backfill. (P) 6/14/18 Pump tank set, setting septic tank while on site. Using laser to check level of tank hole. House connection made. (SC) 6/15/2018 SEWER LINE INSTALLED FROM HOUSE TO SEPTIC TANK, 4" to 6" INLET BAFFLE INSTALLED. (P) 6/19/18 Force main run from pump tank to D-box. D-box connected to trenches. Speed levelers appear level in D-box, contractor not on site to check w/ water. F.m. runs outside of SDA corner. Need pump + alarm test. (SC) 7/24/18 On site for pump + alarm test. Pump pumps effluent to D-box, alarm sounds. Need 32" above alarm float (=750 gal storage). [Corrective action.] (SC)

FINAL INSPECTOR Sarah Collins DATE OF APPROVAL 7/25/18



## GENERAL NOTES

(ACCURACY OF SETBACKS: 2' +/-)



**SITE)RITE**

# WILLIS TOWERS WATKINS SURVEYING INC.

LOT 4

TRIADDELPHIA WOODS

PLAT #19926

DEED REFERENCE:17678/61

3RD ELECTION DISTRICT

HOWARD COUNTY, MD

Scale: 1" = 50'

Date: 12/29/17

FIELD: DTW/JK

Drawn: BLM

Checked: MVM

Job: 10459



RECEIPT DATE: 12/19/12

P 544475-C

INSTALLATION  
APPROVAL DATE: \_\_\_\_\_

# PERMIT

A \_\_\_\_\_

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

PROPERTY OWNER: Greenfield Homes Inc.

OWNER'S  
ADDRESS: 6656 Luster Drive, Highland MD 20777 PHONE: 443-535-0418

ADDRESS: 12502 Triadelphia Road TAX ACC'T #: 03-352277

SUBDIVISION: The Woods at Triadelphia LOT: 4

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: 12/19/12 EXPIRATION DATE: 12/19/13

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.**



RECEIPT DATE: 12/19/12

P 544475-C

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APPROVAL DATE: \_\_\_\_\_

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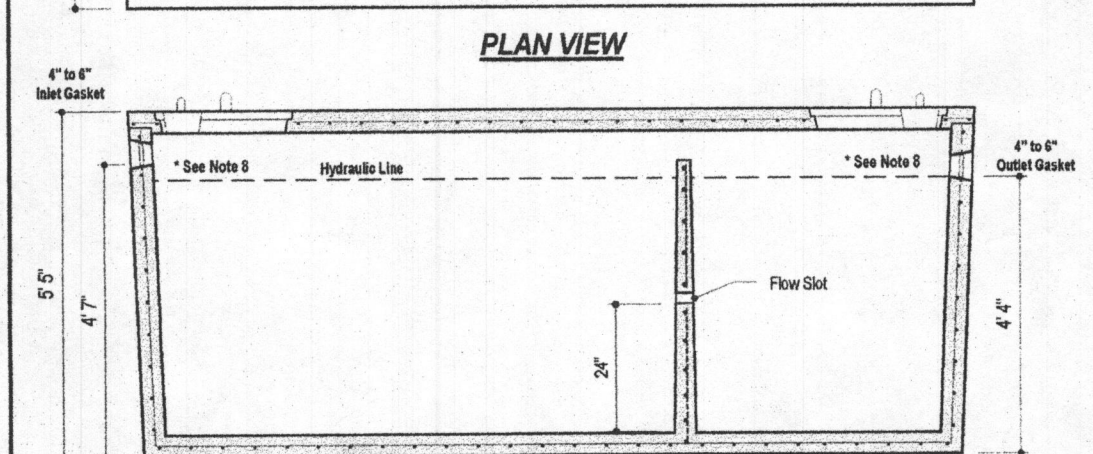
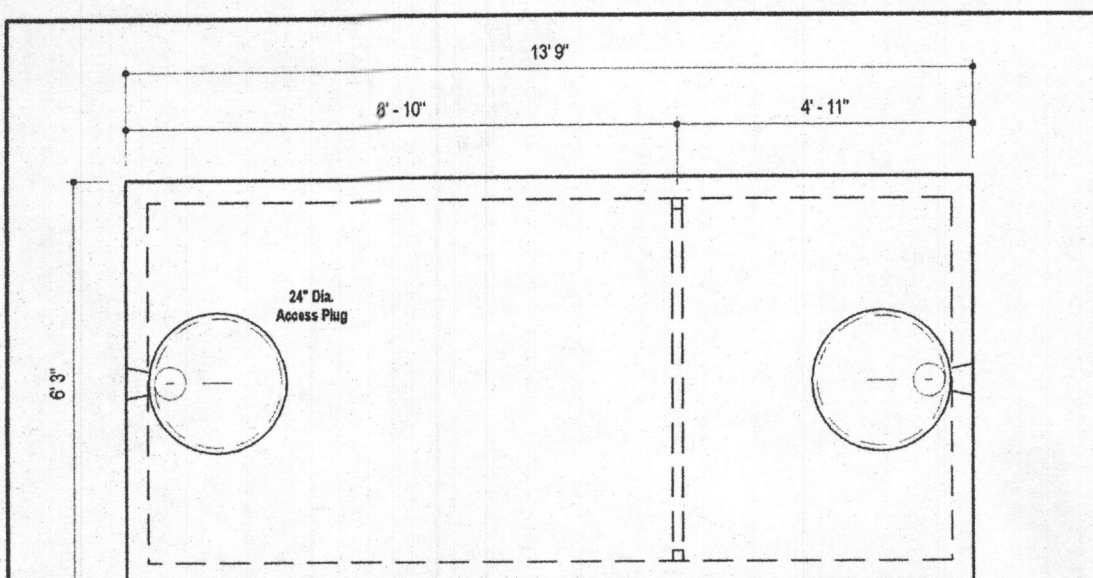


## FSH ASSOCIATES — TRANSMITTAL OF MATERIALS

[illegible]

**FSH Associates** • 6339 Howard Lane • ElkrIDGE, Maryland 21075  
Phone: 410-567-5200 • Fax: 410-796-1562 • Email: [ZFisch@fsheri.com](mailto:ZFisch@fsheri.com)





**DESIGN DATA & GENERAL NOTES**

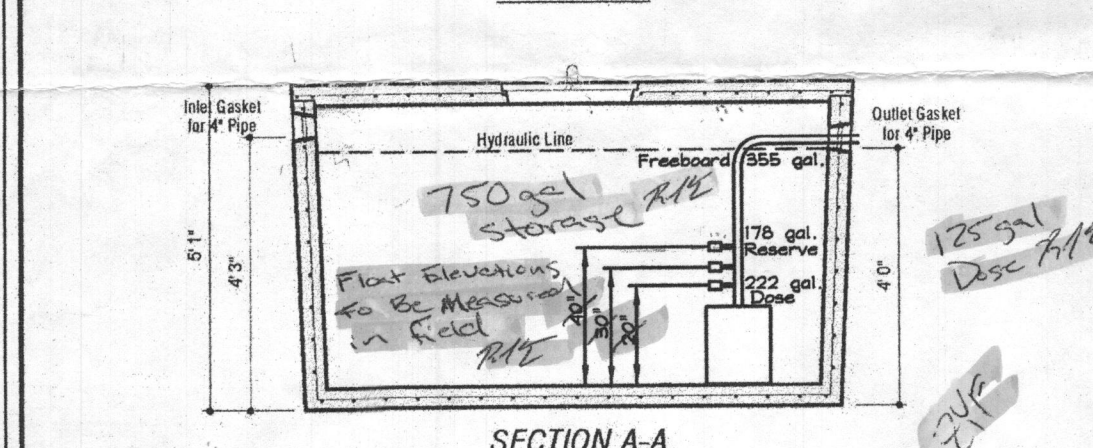
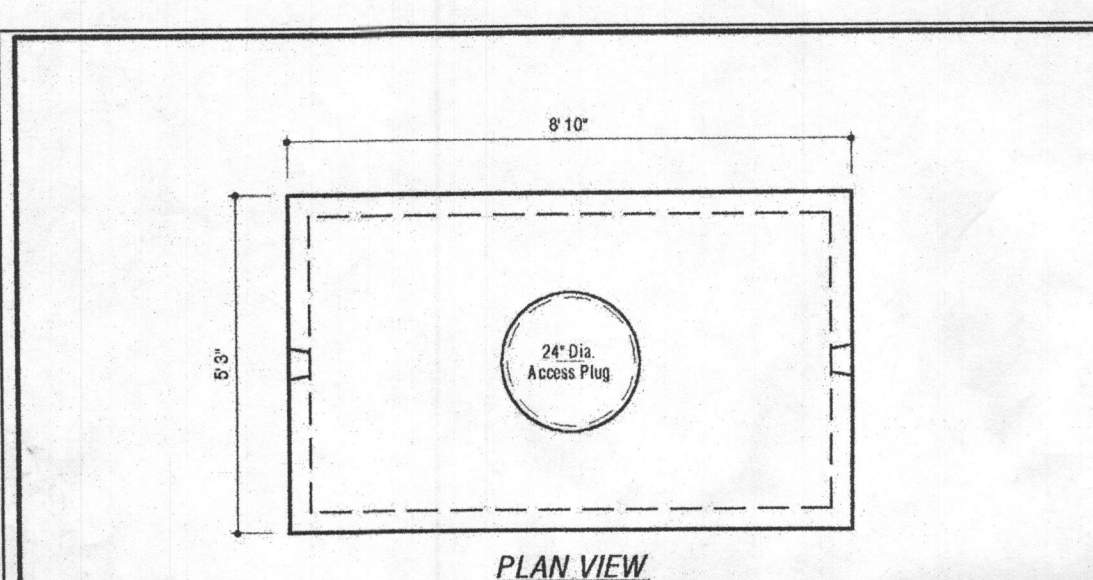
- Concrete strength F<sub>cm</sub> 4000 p.s.i. @ 28 days. Density = 150 pcf.
- General - Permitted Type III per ASTM C 150-02.
- Accessories & placements per ASTM C 200-02 & C 484-02.
- Reinforcing per ASTM A 630. Max. 1/2" cover.
- Top slab sealed with butyl rope mastic.
- 6" min. 1" base, 6" top thickness.
- Max. 1" of cover.
- Depending on use of tank, Inlet & Outlet may be repaired by code.

**2,000 GALLON SEPTIC TANK**  
2-Compartment  
Stock Item (Approx. 19,900 lbs)

Mayer Bros, Inc. 804 Race Road, Elkhridge, Maryland 21075  
Tel. 410.796.1434 Fax. 410.796.1438  
www.mayerbrosinc.com

Dwg. No. 2000-2C No Scale Aug 11, 2008

- OR EQUIVALENT SEPTIC TANK -



**DESIGN DATA & GENERAL NOTES**

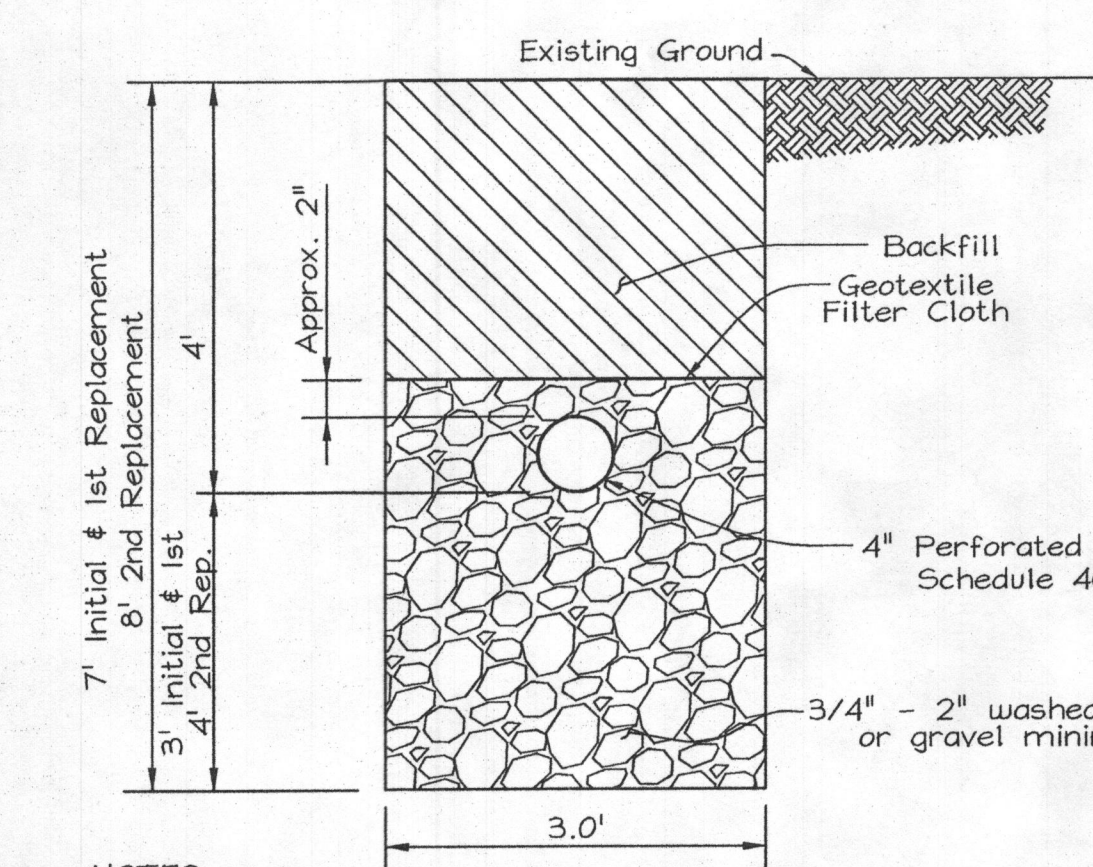
- Concrete strength F<sub>cm</sub> 4000 p.s.i. @ 28 days. Density = 150 pcf.
- General - Permitted Type III per ASTM C 150-02.
- Accessories & placements per ASTM C 200-02 & C 484-02.
- Reinforcing per ASTM A 630. Max. 1/2" cover.
- Top slab sealed with butyl rope mastic.
- 6" min. 1" base, 6" top thickness.
- Depending on use of tank, Inlet & Outlet may be repaired by code.

**4,000 GALLON PUMP TANK**  
1-Compartment  
Stock Item

Mayer Bros, Inc. 804 Race Road, Elkhridge, Maryland 21075  
Tel. 410.796.1434 Fax. 410.796.1438  
www.mayerbrosinc.com

Dwg. No. 1000-P No Scale Jan 1, 2000

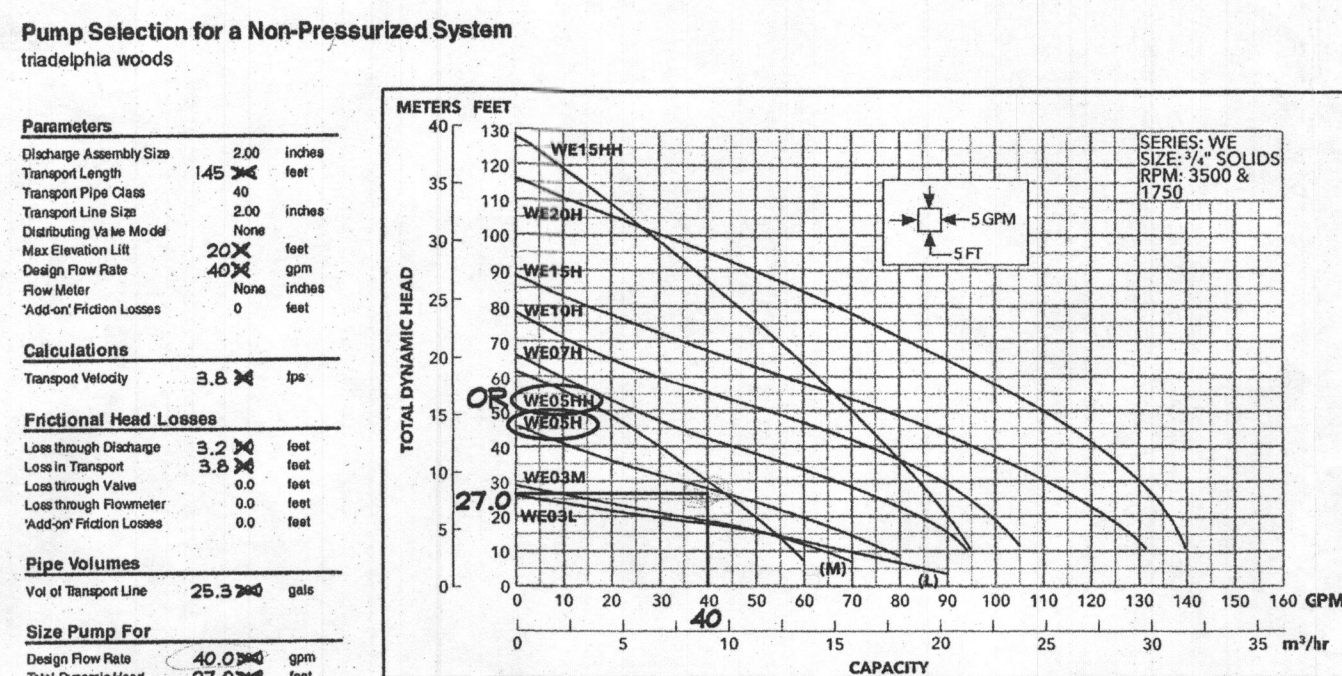
- OR EQUIVALENT PUMP TANK -



**NOTES:**

- Trenches shall be constructed 10 ft. (Min.) edge to edge.
- Trench bottoms shall be level along the length of 4" Perforated Distribution Pipe.

**SEPTIC TRENCH DETAIL**  
Not to Scale



**WE Series Model 3885**  
WE0511H or WE0511H4 Gould Water Technology Effluent Pump  
40 GPM, 1/2HP, 115 1/2

**Goulds Water Technology**

**Wastewater**

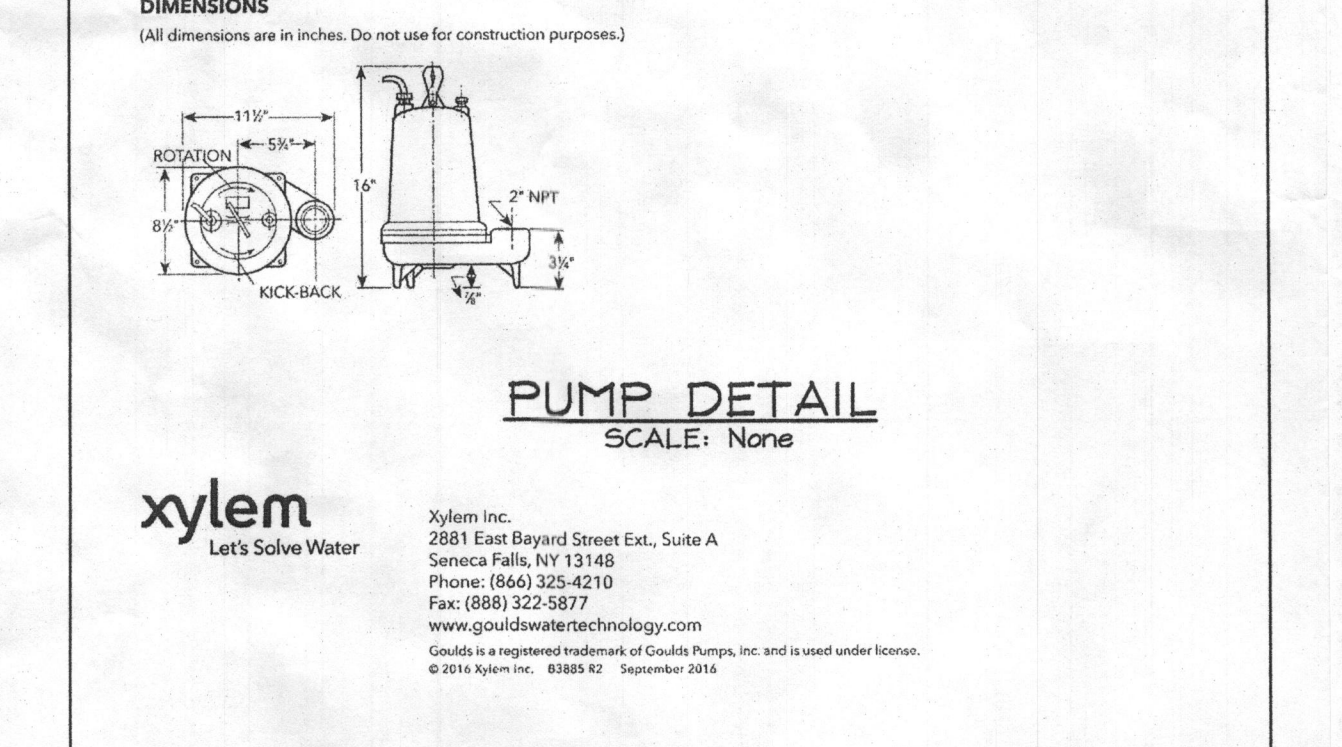
Order Number	HP	Phase	Volts	RFM	Impeller Diameter (in.)	Maximum Amps	Locked Rotor Amps	KVA Code	Full Load Efficiency %	Resistance Start Line-Line	Power Cable Size	Weight (lbs.)
WE0511TL	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511SL	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511L	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511M	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511M	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511M	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511D	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511D	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511D	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511H	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511H	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511H	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511H4	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511H4	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
WE0511H4	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56

**PERFORMANCE RATINGS** (gallons per minute)

Order No.	HP	Phase	Volts	RFM	Impeller Diameter (in.)	Maximum Amps	Locked Rotor Amps	KVA Code	Full Load Efficiency %	Resistance Start Line-Line	Power Cable Size	Weight (lbs.)
1	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
2	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
3	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
4	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
5	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
6	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
7	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
8	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
9	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
10	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
11	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
12	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
13	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
14	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
15	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
16	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
17	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
18	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
19	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
20	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
21	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
22	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
23	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
24	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
25	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
26	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
27	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
28	115	3	115	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
29	208	3	208	1750	5.38	10.7	35.0	M	54	11.9	1/2	56
30	230	3	230	1750	5.38	10.7	35.0	M	54	11.9	1/2	56

**COMPONENTS**

Item No.	Description
1	Impeller
2	Casing
3	Mechanical Seal
4	Motor Shaft
5	Motor
6	Ball Bearings
7	Power Cable
8	Casting Chilling



**TRENCH INFORMATION**

Trench	Length	Pipe Inv.	Bottom	Ground
Initial Sys.	65'	479.0	476.0	483.0
1st Replace	65'	476.4	473.4	480.4
2nd Replace	65'	474.3	471.3	478.3
3rd Replace	65'	472.0	469.0	476.0
4th Replace	65'	470.0	467.0	474.0
5th Replace	65'	468.0	465.0	472.0
6th Replace	65'	466.1	463.1	470.1
7th Replace	65'	464.2	461.2	468.2

**INITIAL SYSTEM**

Number of bedrooms	5
Application rate	0.8 gpd/sf
Effective area beginning depth	5'
Bottom maximum depth	7'
Design flow	750 gpd
Drainage field square footage	938 sf
Sidewall reduction credit	0.625
Trench width	3'
Effective area depth	2'
Linear length of trench required	195 lf

**1st REPLACEMENT SYSTEM**

Number of bedrooms	5
Application rate	0.8 gpd/sf
Effective area beginning depth	5'
Bottom maximum depth	7'
Design flow	750 gpd
Drainage field square footage	938 sf
Sidewall reduction credit	0.625
Trench width	3'
Effective area depth	2'
Linear length of trench required	195 lf

**2nd REPLACEMENT SYSTEM**

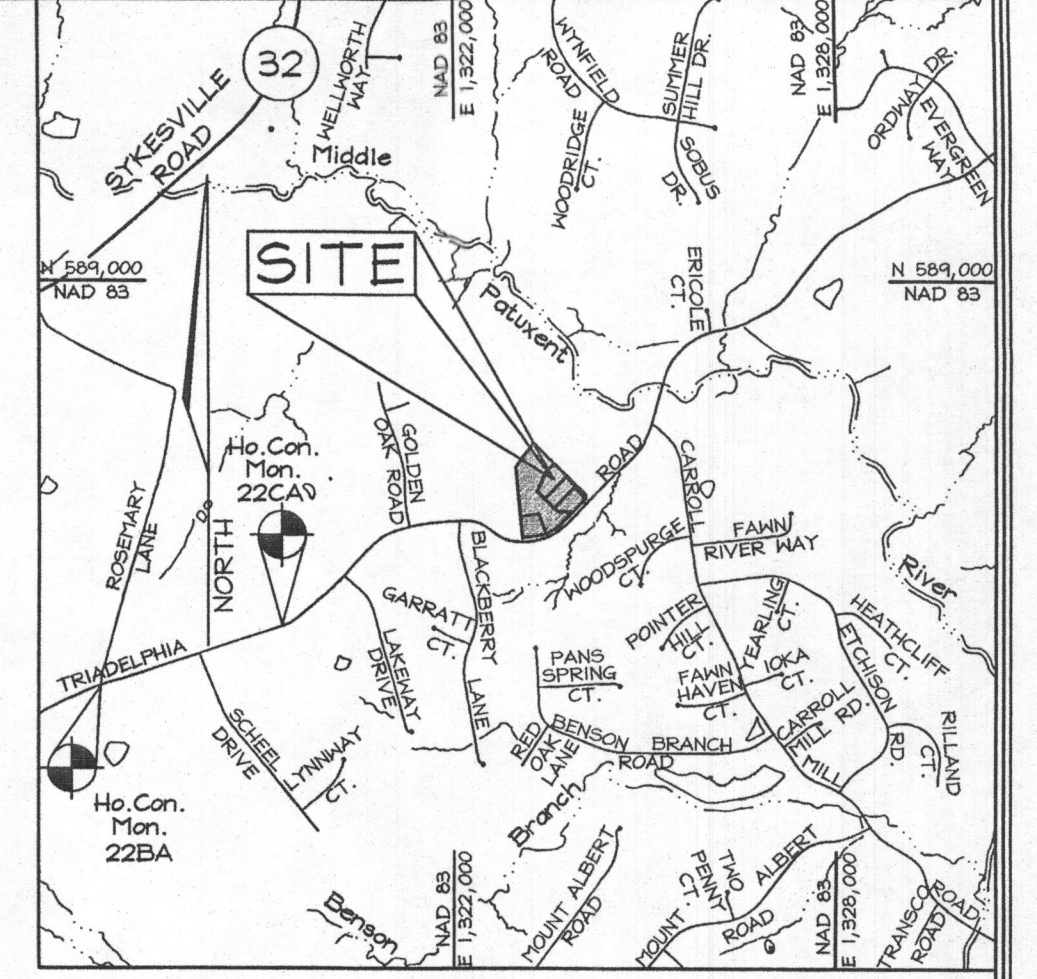
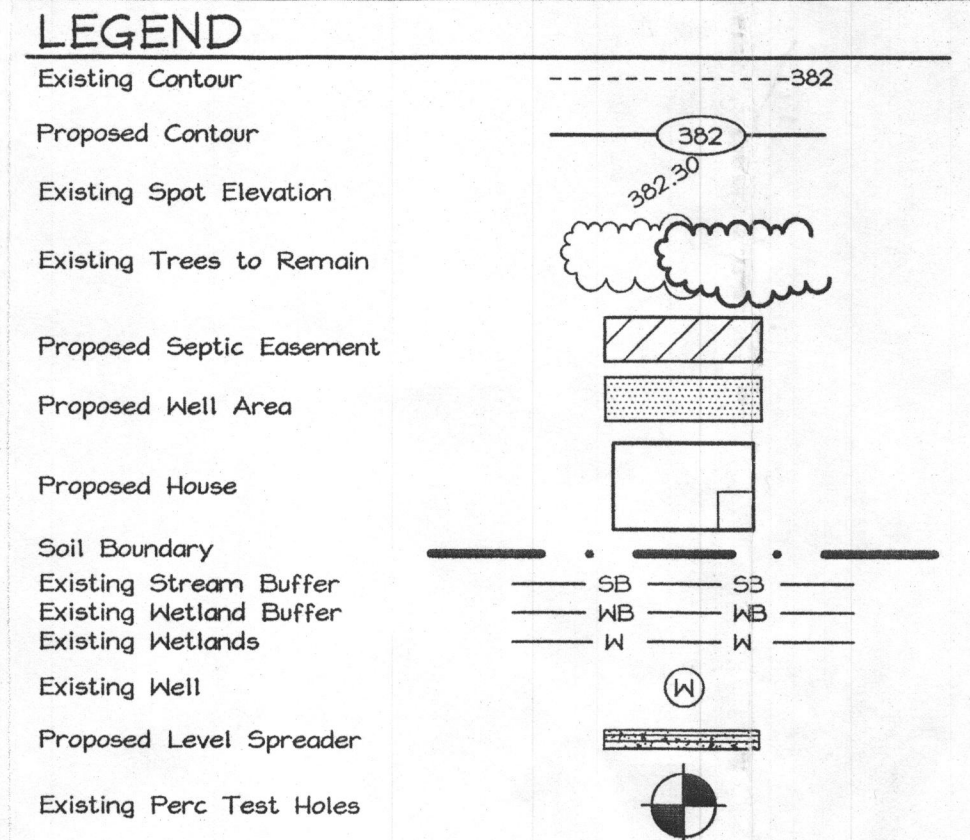
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Drainage field square footage	938 sf
Sidewall reduction credit	0.625
Trench width	3'
Effective area depth	2'
Linear length of trench required	195 lf

**SOILS LEGEND**

SYMBOL	NAME / DESCRIPTION	K VALUE	SOIL GROUP
MaC	Manr. loam, 8 to 15 percent slopes	0.25	B
MaD	Manr. loam, 15 to 25 percent slopes	0.25	B
GmC	Gelville silt loam, 8 to 15 percent slopes	0.43	C

**PROFESSIONAL CERTIFICATION**

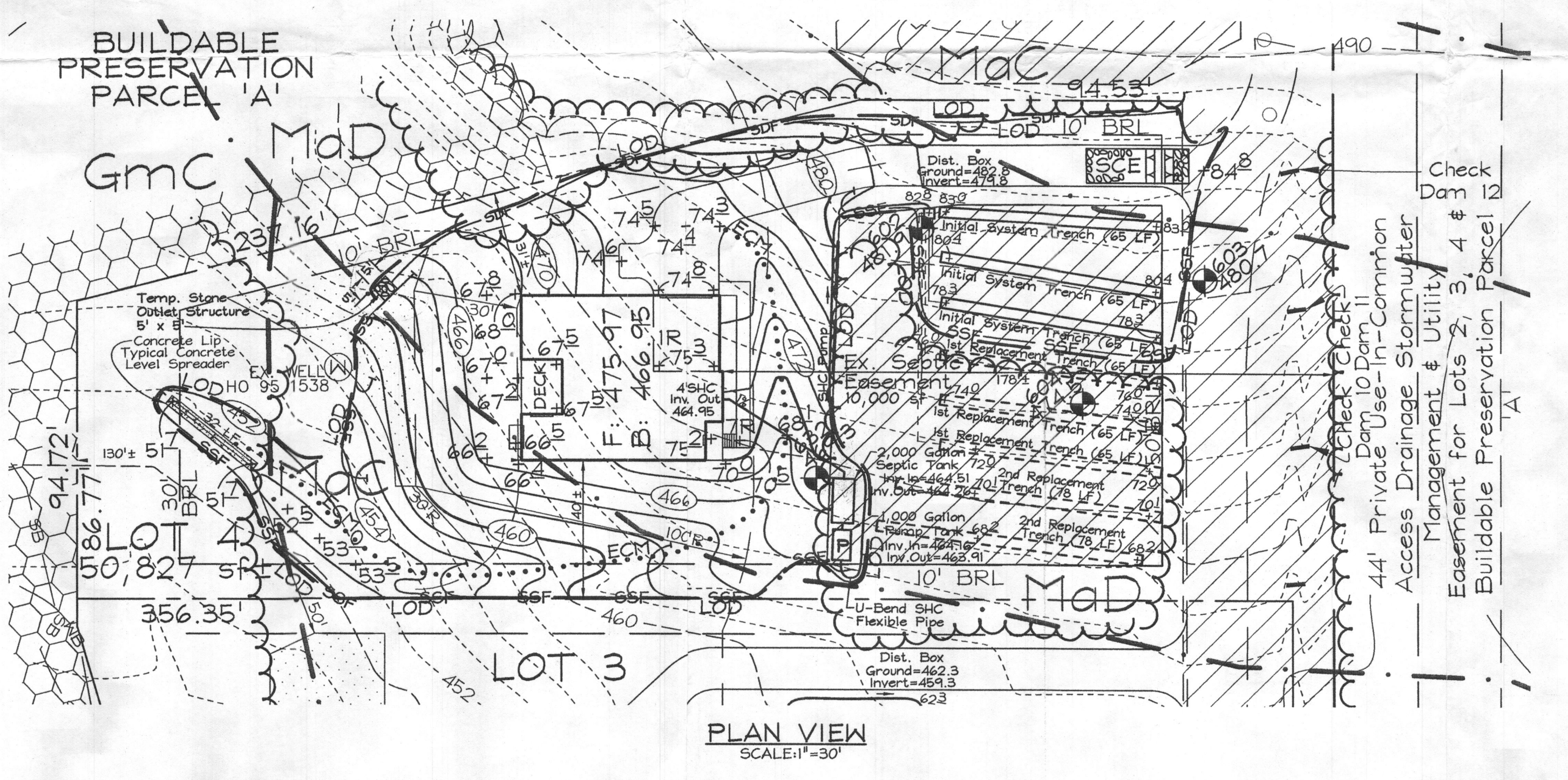
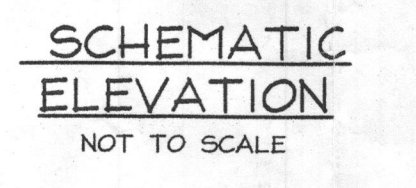
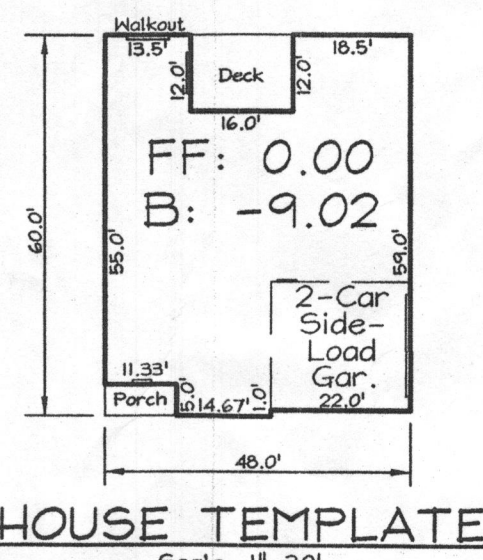
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. #22416, Expiration Date: 07/24/2019.



**GEODETIC CONTROL STATIONS**

Coordinates based on NAD'83, Maryland coordinate system as projected by Howard County geodetic control stations no. 22BA and no. 22CA denotes approximate location (see vicinity map).

Sta.	NAD 83	Easting	Northing	Elevation (feet)
22BA	N 585,134.7933	E 1,323,322.6629	E1: 576.164	(feet)
22CA	N 585,783.3061	E 1,325,230.5994	E1: 574.248	(feet)



**HOUSE WILL NOT SEWER BY GRAVITY.**

**PLAN FOR SEPTIC & PUMP INSTALLATION**  
**THE WOODS AT TRIADDELPHIA**  
LOT 4  
TRIADDELPHIA WOODS PLAT #19925  
12502 Triadelphia Road

TAX MAP 22 GRIDS 5 & 6  
3RD ELECTION DISTRICT

PARCEL 582  
HOWARD COUNTY, MARYLAND

**FSH Associates**  
Engineers Planners Surveyors  
6339 Howard Lane, Elkhridge, MD 21075  
Tel: 410-567-5200 Fax: 410-796-1562  
E-mail: info@fshn.com

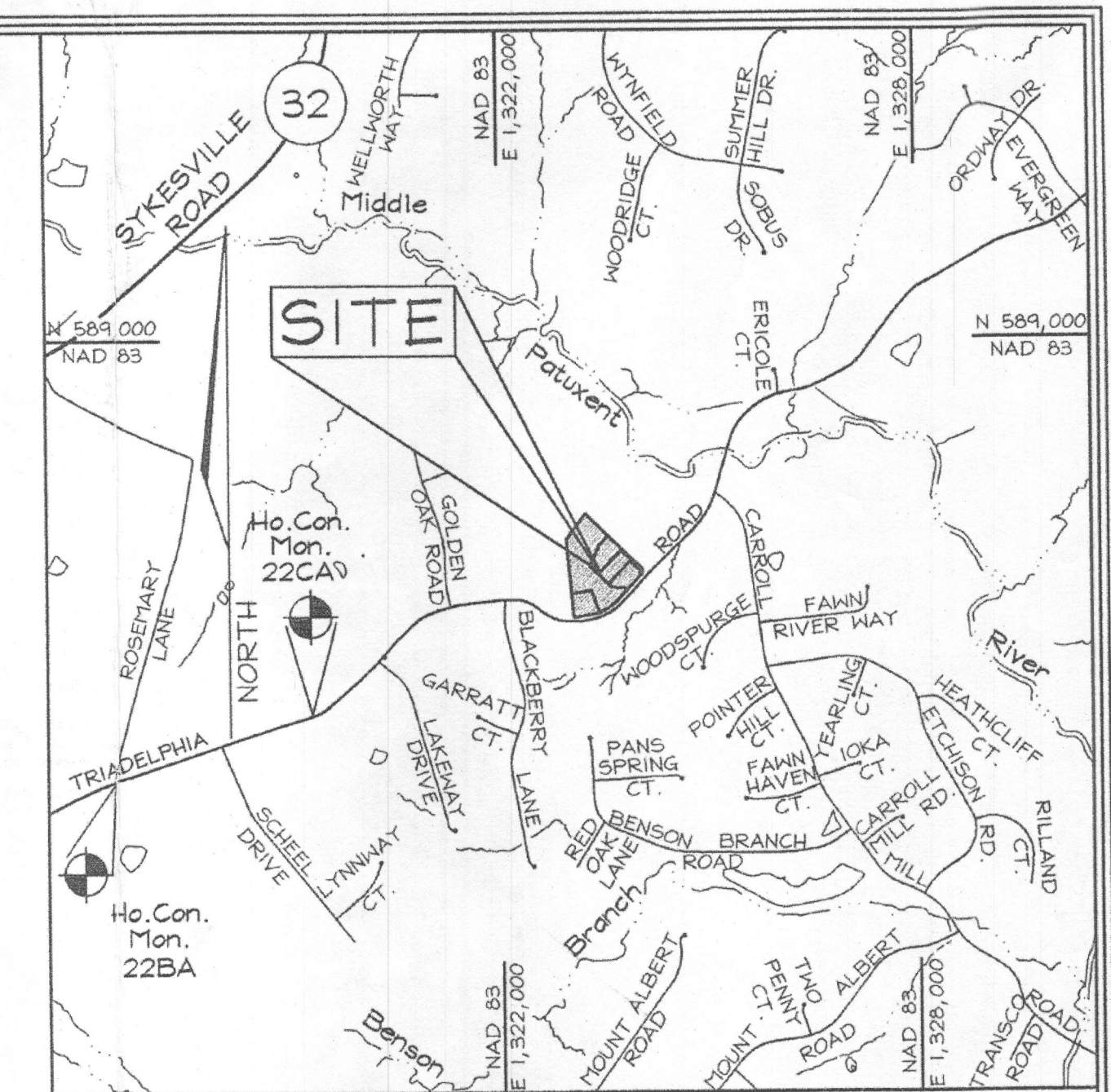
**DESIGN BY: CRH2**  
**DRAWN BY: CRH2**  
**CHECKED BY: ZTF**  
**SCALE: As Shown**  
**DATE: Oct. 23, 2017**  
**W.O. No.: 4038**  
**SHEET No.: 1 OF 1**



SYMBOL	NAME / DESCRIPTION	SOIL GROUP
CHD2	Chester silt loam, 15 to 25 percent slopes, moderately eroded	B
GNB2	Glenville silt loam, 3 to 8 percent slopes, moderately eroded	C
MAC2	Manor gravely loam, 8 to 15 percent slopes, moderately eroded	B
MIB2	Manor loam, 3 to 8 percent slopes, moderately eroded	B
MIC2	Manor loam, 8 to 15 percent slopes, moderately eroded	B
MID3	Manor loam, 15 to 25 percent slopes, severely eroded	B

Coordinates shown hereon are based on NAD '83, Maryland Coordinate System as projected by Howard County. Geodetic Control Stations no. 341A and no. 341B. ⊕ Denotes approximate location (see vicinity map).

Sta. 22BA	N 585,134.7933	E 1,323,322.6629	El: 576.164 (feet)
Sta. 22CA	N 585,783.3061	E 1,325,230.5994	El: 574.248 (feet)



VICINITY MAP  
SCALE: 1" = 2000'

Existing Contour

Proposed Contour

Spot Elevation

Direction of Flow

Super Silt Fence

Silt Fence

Limit of Disturbance

Soil Boundary

Walk Out Basement

Septic Easement

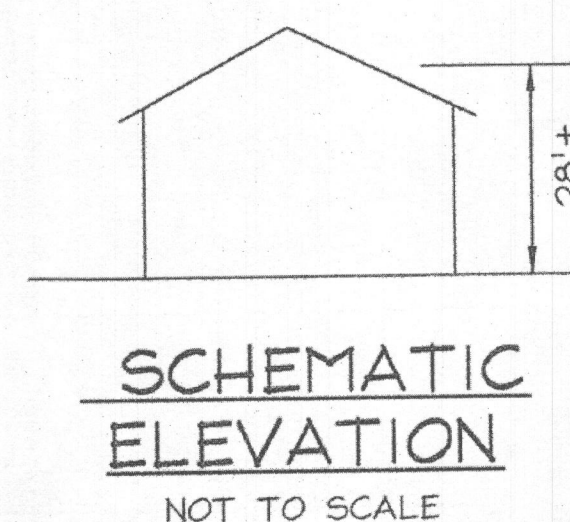
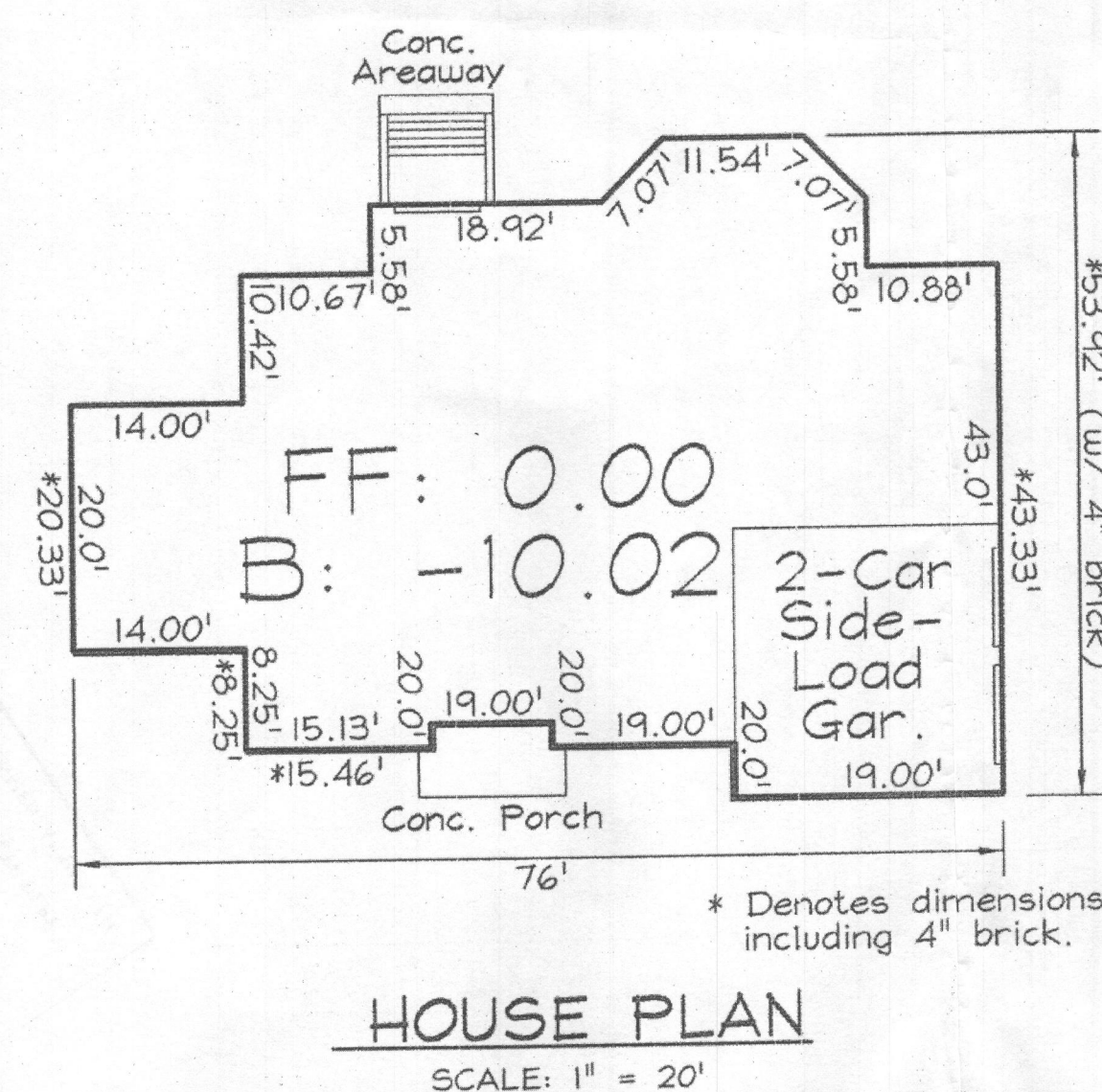
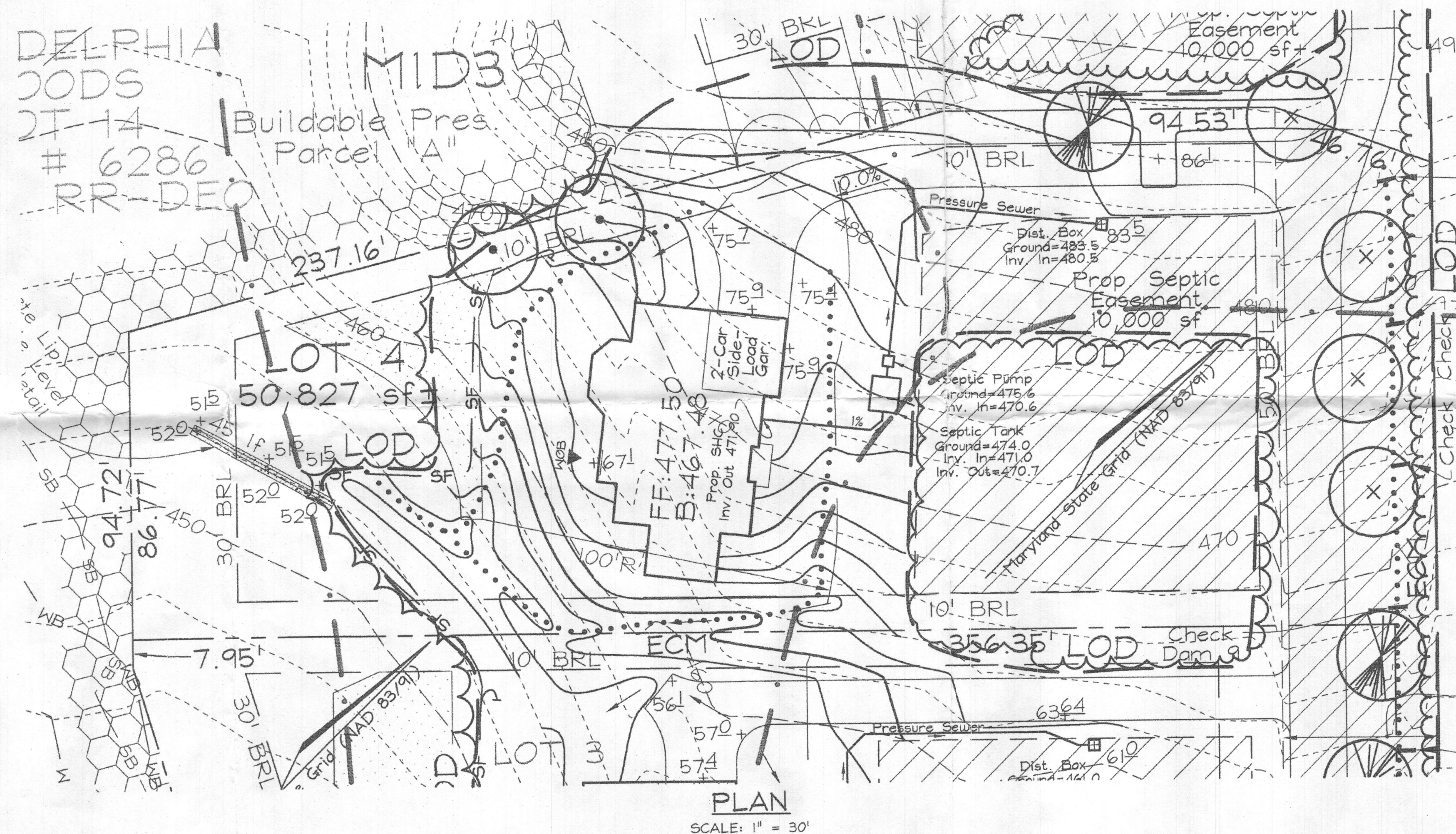
Diagram details: The diagram shows a horizontal road layout. At the top, a dashed line represents the 'Existing Contour' and a solid line represents the 'Proposed Contour'. A dimension line between them is labeled '82'. To the right, a dimension line is labeled '382'. Below the contours, a 'Spot Elevation' of '+82.53' is marked with an arrow pointing to the proposed contour. A 'Direction of Flow' arrow points to the left. Two 'Super Silt Fence' (SSF) locations are indicated by vertical lines with horizontal bars. Two 'Silt Fence' (SF) locations are indicated by vertical lines. A 'Limit of Disturbance' (LOD) is marked with a horizontal line. A 'Soil Boundary' is indicated by a horizontal line with dots. A 'Walk Out Basement' is shown as a triangle pointing down. A 'Septic Easement' is shown as a hatched rectangle at the bottom.

1. This property is zoned "RR-DEO" per the 02/02/04 Comprehensive Zoning Plan and the Comp Lite Zoning Regulations Amendments effective 07/28/06.
2. Total area of property = 1.167 ac.±
3. Private well water and private septic will serve this lot.
4. Existing Topography on site is based on field run Topographic Survey performed on or about December, 2005.
5. SWM for house is provided by sheet flow to buffer with a level spreader.

**OWNER/  
DEVELOPER**

---

**GREENFIELD HOMES, Inc.**  
6656 Luster Drive  
Highland, Maryland 20777  
410.781.6782



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. #22418, Expiration Date: 07/29/2013.

# SEPTIC PERMIT PLAN TRIADDELPHIA

LOT 4 - 12502 TRAVELER RD.  
Plat #19925

TAX MAP 22 GRID 5 & 6  
3RD ELECTION DISTRICT

PARCEL 528  
HOWARD COUNTY, MARYLAND

## FSH Associates

**Engineers Planners Surveyors**  
6339 Howard Lane, Elkridge, MD 21075  
Tel: 410-567-5200 Fax: 410-796-1562  
E-mail: [info@fsheri.com](mailto:info@fsheri.com)

DESIGN BY: CRH2  
DRAWN BY: CRH2  
CHECKED BY: ZYF  
SCALE: 1" = 30'  
DATE: Dec. 17, 2012  
W.O. No.: 3199  
SHEET No.: 1 OF 1



**Freemon, Robert**

---

**To:** Zach Fisch  
**Cc:** Williams, Jeffrey  
**Subject:** RE: 12502 Triadelphia Rd.

Sent 10/26

Zach,  
The plan shows the invert of the pipe at 464.95' not 465.95'. If you show the invert coming out at 465.95 and raise the septic tank accordingly there would be a very small amount of cover over 3' in which minimal grading may be permitted. With this a note stating, "Minimal grading over the septic tank is permitted by the Health Dept. in order to maintain 3ft or less ground cover," would need to be added. On the plan we would like you to show the minimal proposed grading. Other than that I still need to see a weep hole and proposed fittings shown on the pump tank. In addition the calculations for the pump tank still need to be shown. Please review my email from 8/28/17.

**Robert Freemon**  
**Howard County Health Department**  
**8930 Stanford Blvd. Columbia, MD 21045**  
**Well and Septic Program**  
**Bureau of Environmental Health**  
**Phone: 410-313-6357**  
**Email: [rfreemon@howardcountymd.gov](mailto:rfreemon@howardcountymd.gov)**  
**<https://www.howardcountymd.gov/Departments/Health/Environmental-Health/Well-and-Septic>**

---

**From:** Zach Fisch [mailto:[z.fisch@fsheri.com](mailto:z.fisch@fsheri.com)]  
**Sent:** Monday, October 23, 2017 12:26 PM  
**To:** Freemon, Robert  
**Cc:** Williams, Jeffrey  
**Subject:** RE: 12502 Triadelphia Rd.

Spencer,  
Per your recommendation we revised the invert elevation at the house to 465.95. Please see revised plan and profile. Currently the health department is the last agency holding up the sign off of the building permit. Please approve so we can move on.

Thanks

Zacharia Y. Fisch P.E , Principal  
**FSH ASSOCIATES LLC**  
6339 Howard Lane  
Elkridge MD 21075  
Tel. (410)567-5200 EXT.230  
Fax.(410)796-1562  
E-mail [z.fisch@fsheri.com](mailto:z.fisch@fsheri.com)

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**From:** Freemon, Robert [<mailto:rfreemon@howardcountymd.gov>]  
**Sent:** Tuesday, October 17, 2017 3:56 PM  
**To:** Zach Fisch <[z.fisch@fsheri.com](mailto:z.fisch@fsheri.com)>  
**Cc:** Williams, Jeffrey <[jewilliams@howardcountymd.gov](mailto:jewilliams@howardcountymd.gov)>  
**Subject:** RE: 12502 Triadelphia Rd.

Zach,  
The issue with grading over the tanks is that they are inside of the SDA where grading cannot be allowed. Can the septic line coming from the house be raised from the 464.5' it is currently shown at? If that can be raised to 465.95 than grading over the tanks may not be necessary. As for the septic lines themselves they are not required to have 3' of cover. Let me know what you think.

**Robert Freemon**  
**Howard County Health Department**  
**8930 Stanford Blvd. Columbia, MD 21045**  
**Well and Septic Program**  
**Bureau of Environmental Health**  
**Phone: 410-313-6357**  
**Email: [rfreemon@howardcountymd.gov](mailto:rfreemon@howardcountymd.gov)**  
**<https://www.howardcountymd.gov/Departments/Health/Environmental-Health/Well-and-Septic>**

---

**From:** Zach Fisch [<mailto:z.fisch@fsheri.com>]  
**Sent:** Thursday, October 12, 2017 2:21 PM  
**To:** Freemon, Robert  
**Subject:** RE: 12502 Triadelphia Rd.

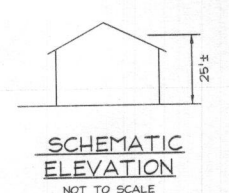
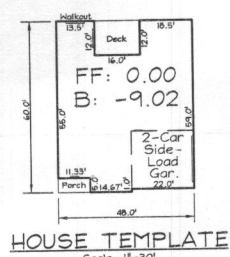
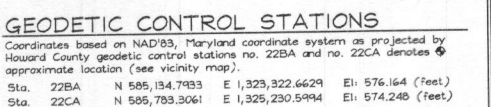
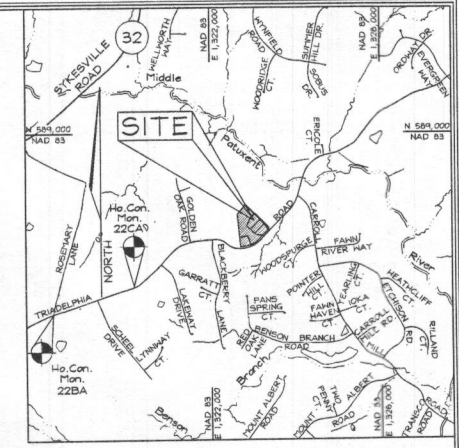
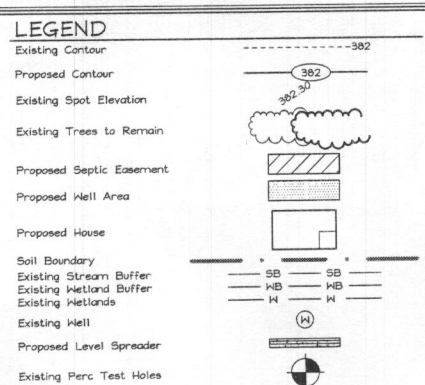
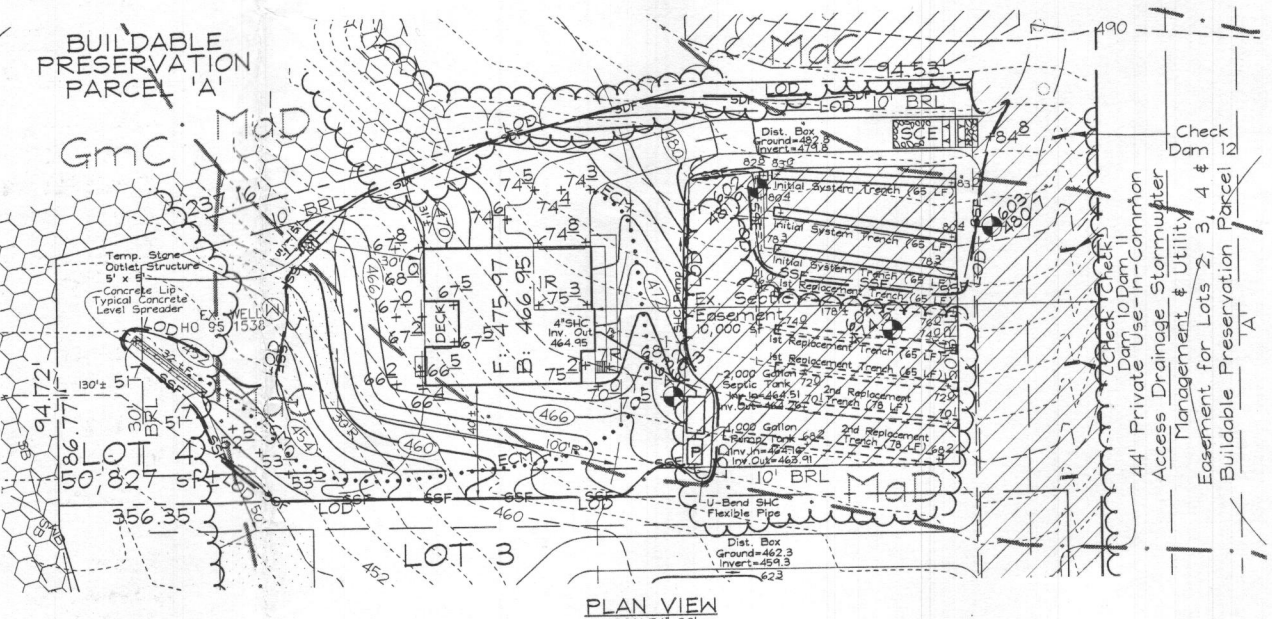
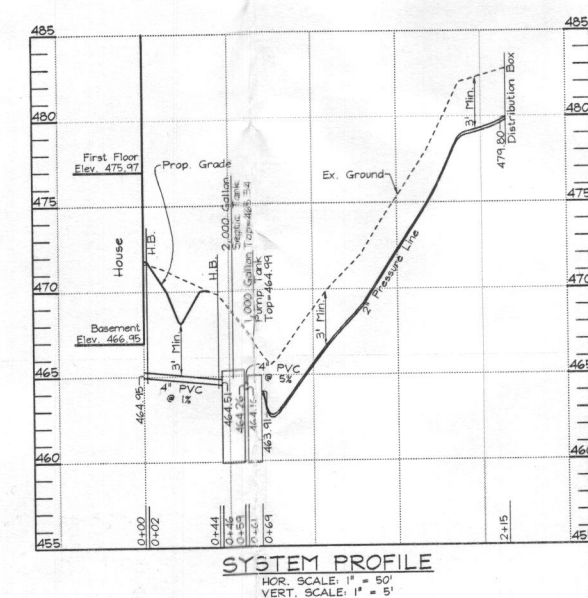
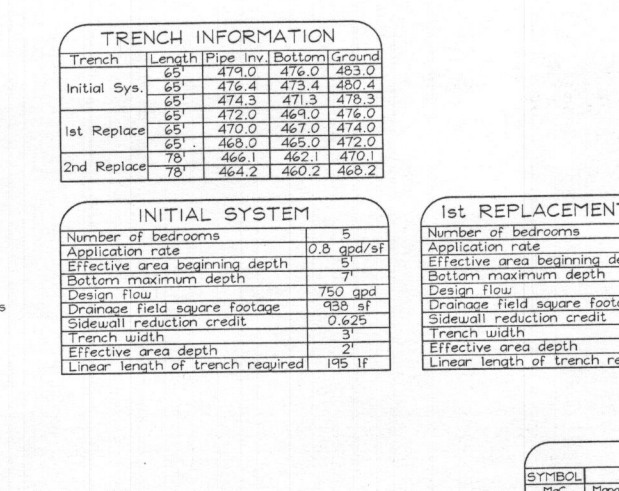
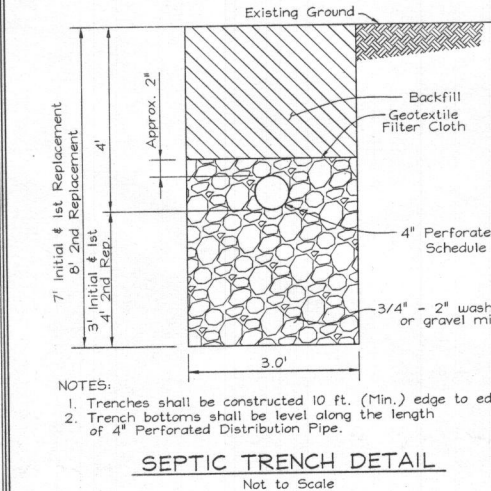
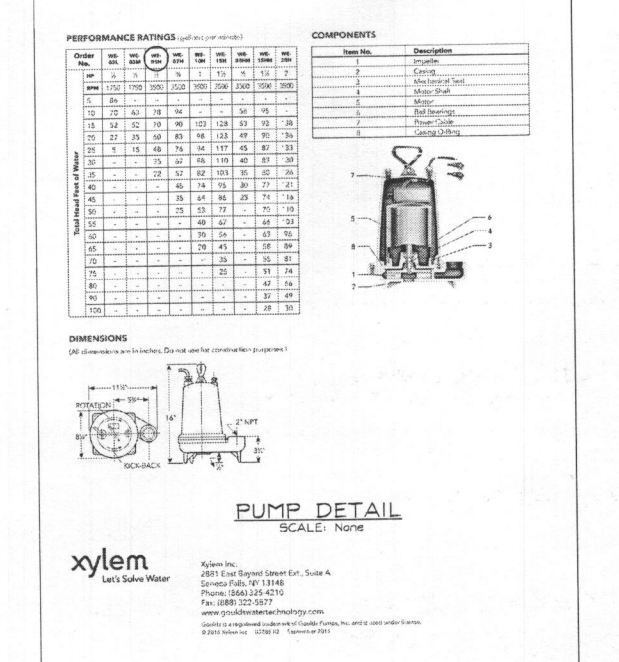
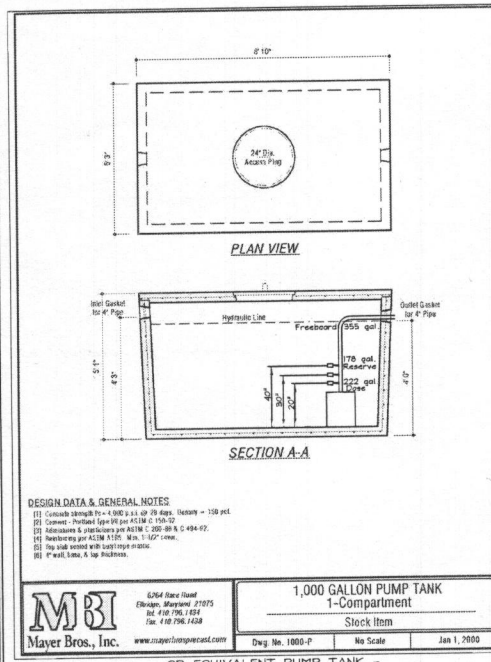
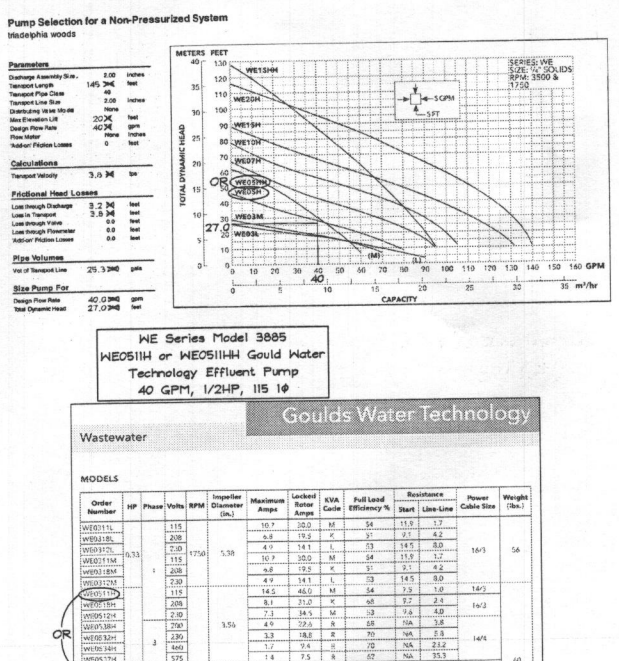
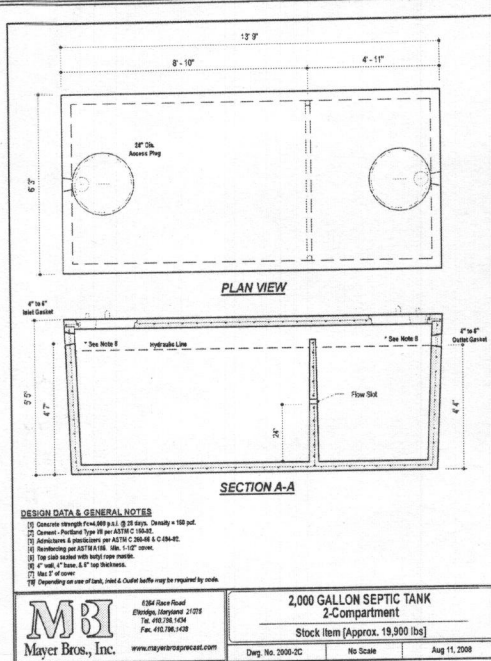
Spencer  
Attached is the revised plan.  
I added the electricians note and also limited the grade over the tanks to be at 3 feet.  
If it looks good I will drop off to you two full size copies.

Thanks

Zacharia Y. Fisch P.E , Principal  
**FSH ASSOCIATES LLC**  
6339 Howard Lane  
Elkridge MD 21075  
Tel. (410)567-5200 EXT.230  
Fax.(410)796-1562  
E-mail [z.fisch@fsheri.com](mailto:z.fisch@fsheri.com) ,

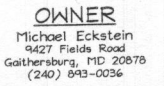
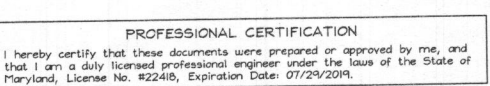
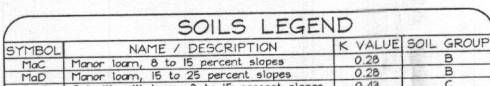
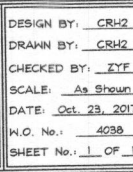
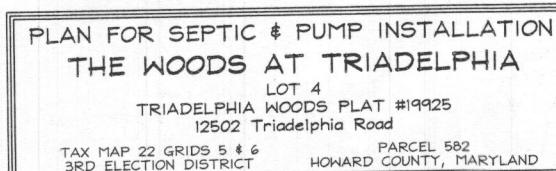
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GENERAL NOTES

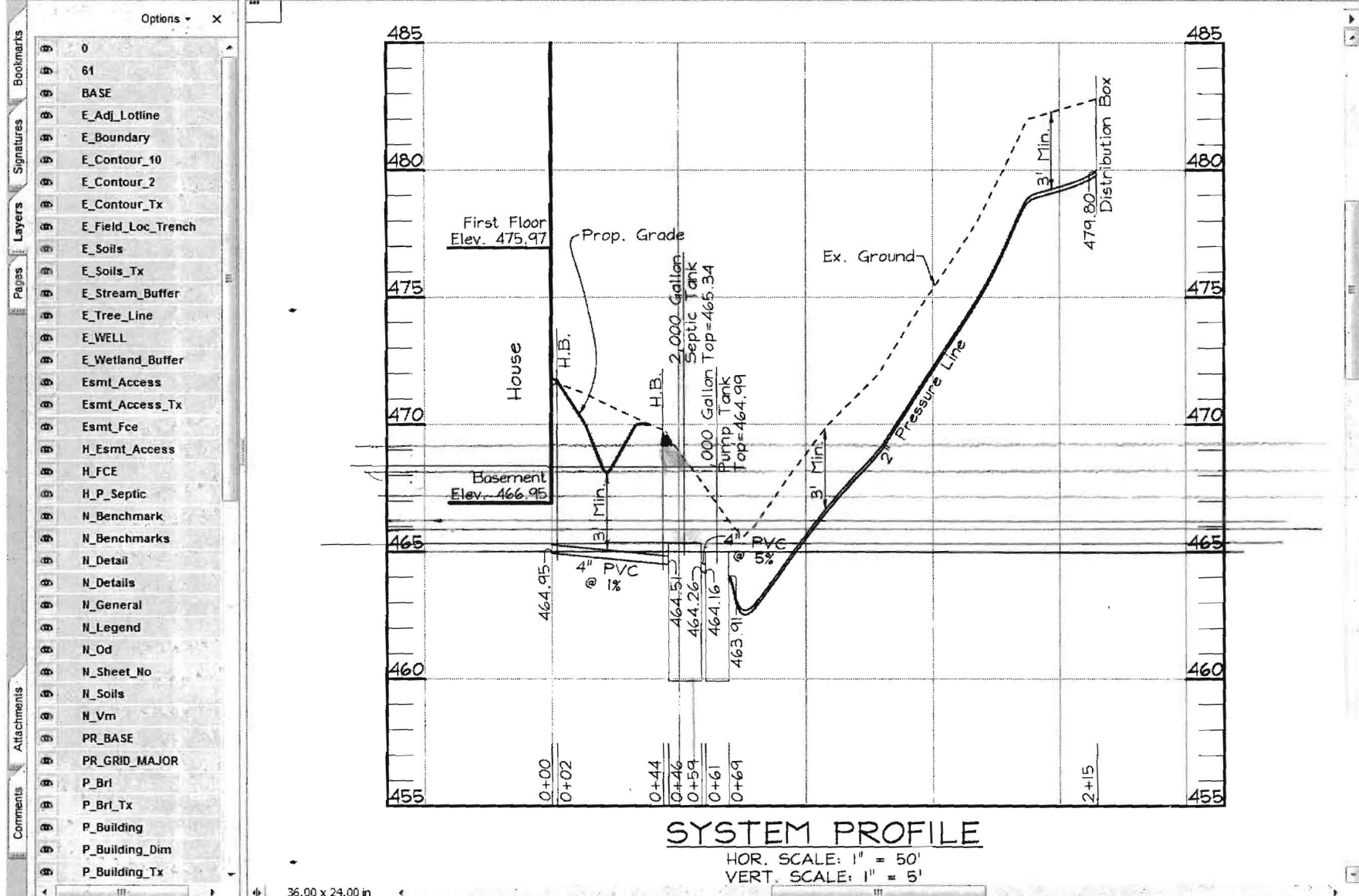
- Any change to the location or depth to any component must be approved by the engineer and Howard County Health Department prior to installation. A revised site plan may be required.
- The maximum earth cover over the tank is 3 feet. Greater earth cover will require a heavy load bearing tank.
- The well HO-95-1538 has been field located by FSH Associates and is accurately shown.
- All wells and septic systems located within 100' of the property boundaries and 200' down gradient of any well and/or septic system have been shown.
- Electrical work for the installation must be performed by a licensed electrician.





DESIGN BY: CRH2  
DRAWN BY: CRH2  
CHECKED BY: ZYF  
SCALE: As Shown  
DATE: Oct. 23, 2017  
W.O. No.: 4038  
SHEET No.: 1 OF 1





465.30  
464.20  
20  
465.20  
464.16



**Freemon, Robert**

---

**To:** Zach Fisch  
**Cc:** Williams, Jeffrey  
**Subject:** RE: 12502 Triadelphia Rd.

Sent 10/20

Zach,

I understand what you are saying about the area being disturbed either way however, even if the grading you are showing inside the SDA were allowed the structure of it concentrates storm/surface water directly on top of the septic tank. This is something we want to avoid if we are designing this system to last as long as possible. We have allowed you to place the tanks inside the SDA and to be 15' from the SWM swale (instead of the full 25'). Grading in slopes (some of it being >25%) that concentrate the surface water directly over the tanks defeats the purpose of moving them into the SDA in the first place. If you are unable to get 3' or less ground cover over the tanks they will have to be shown as traffic bearing.

**Robert Freemon**  
**Howard County Health Department**  
**8930 Stanford Blvd. Columbia, MD 21045**  
**Well and Septic Program**  
**Bureau of Environmental Health**  
**Phone: 410-313-6357**  
**Email: [rfreemon@howardcountymd.gov](mailto:rfreemon@howardcountymd.gov)**  
**<https://www.howardcountymd.gov/Departments/Health/Environmental-Health/Well-and-Septic>**

---

**From:** Zach Fisch [<mailto:z.fisch@fsheri.com>]  
**Sent:** Wednesday, October 18, 2017 9:45 AM  
**To:** Freemon, Robert  
**Cc:** Williams, Jeffrey  
**Subject:** RE: 12502 Triadelphia Rd.

Spencer,

The area disturbed within the SDA overlaps with the installation of the tank we have to disturb this area no matter what so the tank can be installed. We are back filling to a limit of 3 feet over the tank.

Lifting the pipe by 0.45 feet will not reduce the disturbed area within the SDA that needs to be disturbed for the tank installation.

1.45?

Zacharia Y. Fisch P.E , Principal  
**FSH ASSOCIATES LLC**  
6339 Howard Lane  
Elkridge MD 21075  
Tel. (410)567-5200 EXT.230  
Fax.(410)796-1562  
E-mail [z.fisch@fsheri.com](mailto:z.fisch@fsheri.com)

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**From:** Freemon, Robert [mailto:rfeemon@howardcountymd.gov]  
**Sent:** Tuesday, October 17, 2017 3:56 PM  
**To:** Zach Fisch <z.fisch@fsheri.com>  
**Cc:** Williams, Jeffrey <jewilliams@howardcountymd.gov>  
**Subject:** RE: 12502 Triadelphia Rd.

Zach,

The issue with grading over the tanks is that they are inside of the SDA where grading cannot be allowed. Can the septic line coming from the house be raised from the 464.5' it is currently shown at? If that can be raised to 465.95 than grading over the tanks may not be necessary. As for the septic lines themselves they are not required to have 3' of cover. Let me know what you think.

**Robert Freemon**  
**Howard County Health Department**  
**8930 Stanford Blvd. Columbia, MD 21045**  
**Well and Septic Program**  
**Bureau of Environmental Health**  
**Phone: 410-313-6357**  
**Email: [rfeemon@howardcountymd.gov](mailto:rfeemon@howardcountymd.gov)**  
**<https://www.howardcountymd.gov/Departments/Health/Environmental-Health/Well-and-Septic>**

**From:** Zach Fisch [mailto:z.fisch@fsheri.com]  
**Sent:** Thursday, October 12, 2017 2:21 PM  
**To:** Freemon, Robert  
**Subject:** RE: 12502 Triadelphia Rd.

*Attachment w/ Grading*

Spencer

Attached is the revised plan.

I added the electricians note and also limited the grade over the tanks to be at 3 feet.

If it looks good I will drop off to you two full size copies.

Thanks

**Zacharia Y. Fisch P.E , Principal**  
**FSH ASSOCIATES LLC**  
6339 Howard Lane  
Elkridge MD 21075  
Tel. (410)567-5200 EXT.230  
Fax.(410)796-1562  
E-mail [z.fisch@fsheri.com](mailto:z.fisch@fsheri.com)

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**From:** Freemon, Robert [<mailto:rfreemon@howardcountymd.gov>]  
**Sent:** Wednesday, October 11, 2017 2:56 PM  
**To:** Zach Fisch <[z.fisch@fsheri.com](mailto:z.fisch@fsheri.com)>  
**Subject:** RE: 12502 Triadelphia Rd.

Zach,  
If you are proposing the grade over the septic tank to not exceed 3ft it must be clearly shown on the plan. If you are proposing the grade over the septic tank to exceed 3ft a heavy load bearing tank must be clearly shown on the plan. Please refer to both of my emails sent on 10/10.

**Robert Freemon**  
**Howard County Health Department**  
**8930 Stanford Blvd. Columbia, MD 21045**  
**Well and Septic Program**  
**Bureau of Environmental Health**  
**Phone: 410-313-6357**  
**Email: [rfreemon@howardcountymd.gov](mailto:rfreemon@howardcountymd.gov)**  
**<https://www.howardcountymd.gov/Departments/Health/Environmental-Health/Well-and-Septic>**

---

**From:** Zach Fisch [<mailto:z.fisch@fsheri.com>]  
**Sent:** Wednesday, October 11, 2017 9:29 AM  
**To:** Freemon, Robert  
**Subject:** RE: 12502 Triadelphia Rd.

Spencer,  
I would like to flatten the grade over the septic tank to maintain 3 feet of cover.  
Do you see a problem with this approach?

Zacharia Y. Fisch P.E , Principal  
**FSH ASSOCIATES LLC**  
6339 Howard Lane  
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Tel. (410)567-5200 EXT.230  
Fax.(410)796-1562  
E-mail [z.fisch@fsheri.com](mailto:z.fisch@fsheri.com)

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**From:** Freemon, Robert [<mailto:rfreemon@howardcountymd.gov>]  
**Sent:** Tuesday, October 10, 2017 2:56 PM  
**To:** Zach Fisch <[z.fisch@fsheri.com](mailto:z.fisch@fsheri.com)>  
**Subject:** RE: 12502 Triadelphia Rd.

Zach,

The note regarding the septic tank having 3ft or less ground cover is a general statement for everyone encase the plan has to change out in the field due to an unforeseen obstruction during installation. If we are purposely proposing a heavy load bearing tank it must be clearly shown on the plan as to avoid any confusion. If the electrical note was the only issue I would redline it in however, that is not the case.

**Robert Freemon**  
**Howard County Health Department**  
**8930 Stanford Blvd. Columbia, MD 21045**  
**Well and Septic Program**  
**Bureau of Environmental Health**  
**Phone: 410-313-6357**  
**Email: [rfreemon@howardcountymd.gov](mailto:rfreemon@howardcountymd.gov)**  
**<https://www.howardcountymd.gov/Departments/Health/Environmental-Health/Well-and-Septic>**

---

**From:** Zach Fisch [<mailto:z.fisch@fsheri.com>]  
**Sent:** Tuesday, October 10, 2017 2:11 PM  
**To:** Freemon, Robert  
**Subject:** RE: 12502 Triadelphia Rd.

Sorry I missed the note regarding the licensed electrician. I am ok with you writing it in if you don't mind. There is a note on the plan stating that should the septic tank be more than 3 feet deep it has to be load bearing I thought that note should cover.

Zacharia Y. Fisch P.E , Principal  
**FSH ASSOCIATES LLC**  
6339 Howard Lane  
Elkridge MD 21075  
Tel. (410)567-5200 EXT.230  
Fax.(410)796-1562  
E-mail [z.fisch@fsheri.com](mailto:z.fisch@fsheri.com)

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---

**From:** Freemon, Robert [<mailto:rfreemon@howardcountymd.gov>]  
**Sent:** Tuesday, October 10, 2017 1:55 PM  
**To:** Zach Fisch <[z.fisch@fsheri.com](mailto:z.fisch@fsheri.com)>  
**Subject:** 12502 Triadelphia Rd.



Hey Zach,

I have reviewed the septic plan for Woods at Triadelphia, Lot 4. On the "System Profile" section of the plan it shows the septic tank with more than 3ft of cover. If a heavy load bearing tank is being proposed it must be shown on the plan. If a heavy load bearing tank is not being proposed the septic tank must have less than 3ft of cover shown on the plan. In addition, the note regarding electrical work is missing from the plan. Since this system involves a pump tank this note is required. Please refer to the OSDS requirements sheet sent on 8/28. If you have any questions let me know.

*Robert Freemon*

*Howard County Health Department*

*8930 Stanford Blvd. Columbia, MD 21045*

*Well and Septic Program*

*Bureau of Environmental Health*

*Phone: 410-313-6357*

*Email: [rfreemon@howardcountymd.gov](mailto:rfreemon@howardcountymd.gov)*

*<https://www.howardcountymd.gov/Departments/Health/Environmental-Health/Well-and-Septic>*