

**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](http://www.facebook.com/hocohealth)

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

RECEIPT DATE: 5/29/18 **ONSITE SEWAGE DISPOSAL SYSTEM**

P 563004

APPROVAL DATE: 7/11/18 SEC **PERMIT: CONSTRUCTION**

A \_\_\_\_\_

PROPERTY ADDRESS: 3396 Jennings Chapel Road

SUBDIVISION: Marjories Green

LOT: 2

TAX ID:

04-354648

CONTRACTOR: Fogle's Septic Clean, Inc.

EMAIL: Kurt@foglesinc.com

CONTRACTOR ADDRESS: 580 Obrecht Road, Sykesville, MD 21784

PHONE: 410-795-5670

PROPERTY OWNER: Joan Varga and Allan Rosenberger

EMAIL: Joan.a.varga@vencore.com

OWNER ADDRESS: 6035 Red Clover Lane, Clarksville, MD 21029

PHONE: 443-745-1675

SEPTIC TANK SIZE (GALLONS): 1500

TANK MANUFACTURER: Babylon Vault or equivalent

PUMP MODEL: WEO3L

PUMP SIZE

1/3

PUMP TANK CAPACITY: 1500

DISTRIBUTION SYSTEM:  GRAVITY

PRESSURE DOSED

BEDROOMS: 4

APPLICATION RATE: 1.2

|           |   |  |
|-----------|---|--|
| TRENCHES: | LINEAR FEET REQUIRED: <u>70</u>   | INLET DEPTH: <u>4</u>                    |
|           | TRENCH WIDTH: <u>3</u>  | MAXIMUM BOTTOM DEPTH: <u>8</u>           |
|           | MINIMUM SPACE BETWEEN TRENCHES: <u>11</u>   | EFFECTIVE AREA BEGINNING DEPTH: <u>4</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: 5/29/18

EXPIRATION DATE: 5/29/19

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

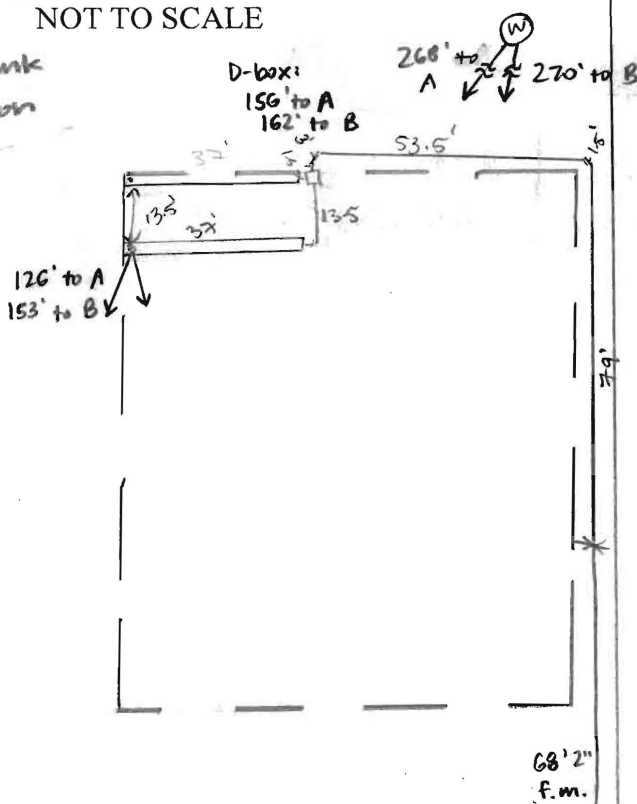
**NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM.**

**PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.**

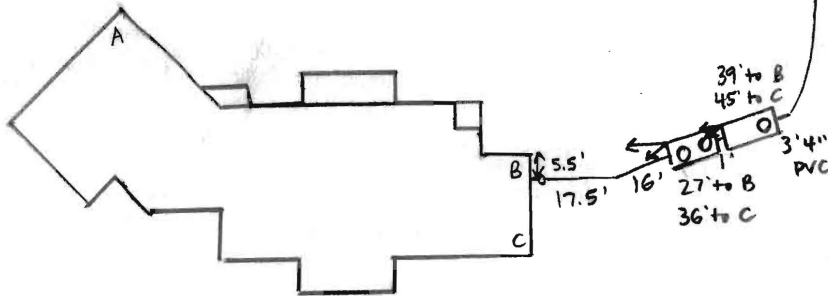
**CALL 410-313-1771 TO SCHEDULE INSPECTIONS.**

7/11/18 Junction box NOT TO SCALE

now outside pump tank riser. [Corrective action completed.] (SC)



1" ≈ 40'



ROAD NAME

| TRENCH/DRAINFIELD DATA  |       |                 |
|-------------------------|-------|-----------------|
| WIDTH                   | INLET | BOTTOM          |
| 3'                      | 4'    | 8'              |
| NUMBER OF TRENCHES      |       | 2               |
| TOTAL LENGTH            |       | 74'             |
| ABSORPTION AREA         |       | 222' + SIDEWALL |
| DISTRIBUTION BOX LEVEL  |       | YES             |
| DISTRIBUTION BOX BAFFLE |       | ELBOW           |
| DISTRIBUTION BOX PORT   |       | YES             |

| SEPTIC TANK DATA    |              |
|---------------------|--------------|
| SEPTIC TANK 1 LEVEL | YES          |
| MANUFACTURER        | BABYLON      |
| CAPACITY            | 1500 GAL     |
| SEAM LOC            | TOP          |
| TANK LID DEPTH      | 2-2.5'       |
| 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         | 3'               |
| BAFFLES                | NO               |
| BAFFLE FILTER          | NO               |
| MANHOLE LOC            | REAR             |
| 6" PORT LOC            | NONE             |
| WATERTIGHT TEST        | NO               |
| SLOTTED                | NO               |
| DATE ON LID            | 5-29-18          |
| Pump:                  | WE0311M (1/3 hp) |

PRE-CONSTRUCTION:

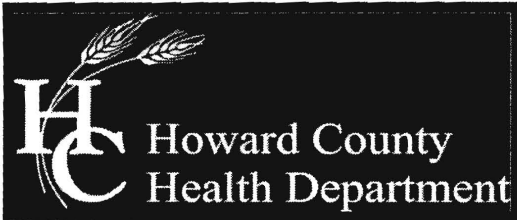
6/28/18 Met Fogle's on site for layout. SDA corners all staked except for one closest to house. Tanks not staked. Found a location for tanks as shown on plan - OK per builder if locations shift slightly to get around a rain leader pipe already in place. Perc holes #1, #2 had mottling @ 9' - install 2 x 35' trenches on opposite side of SDA. OK per Jeff Williams to keep original specs of inlet 4', bottom 8'. Shot contour + laid out 2 x 35' trenches. D-box to go in middle of upper SDA edge. (SC)

INSTALLATION: 6/29/2018 TRENCHES COMPLETE. WELL LINE FROM HO-15-0006 IS MORE THAN 10' FROM SDA + END OF TRENCHES, MARKED w/ TRACE WIRE (BLUE).

D Box + FORCE MAIN INSTALLED. 90° TURN DOWN AS BAFFLE. (⊕) 7/2/18 Tank holes dug - Fogle's waiting on tanks. OK per Kevin Wolf to set 1500-gal, 2-compartment tank w/ slot that was modified w/ bottom half of dividing wall knocked out. for pump chamber. No 1500-gal, single-compartment tanks in stock. (SC) 7/3/18 Tanks set, house connection made. Force main run to trenches. Pump tank riser lid = 4' 2" - make sure cover ≤ 3'. Need pump + alarm test. (SC) 7/11/18 Met Fogle's on site for pump + alarm.

Pump pumps effluent to D-box, alarm sounds when triggered. Junction box is inside riser lid - FINAL INSPECTOR Sarah Collins. DATE OF APPROVAL 7/11/18

must be mounted on post outside riser. [Corrective action.] (SC)



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

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

Twitter: [HowardCoHealthDep](https://twitter.com/HowardCoHealthDep)

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

### MEMORANDUM

TO: Dustin M. Lavelle  
Lavelle & Associates Incorporated  
P.O. Box 372  
Frederick, MD 21705

- Suggested reducing  
trench calculation columns

FROM: Robert Freemon *RF*  
Well & Septic Program

- Silt fence possible removal

RE: Marjorie's Green, Lot 2  
3396 Jennings Chapel Rd.  
Woodbine, MD 21797

- Revised site plan

DATE: 10/20/17

I have reviewed the septic plan for 3396 Jennings Chapel Rd. and here are my comments.

- A "Plan View" of the septic tank and its dimensions must be added to the plan. This section must include the tanks manufacturer and tank size.
- Replacement well sites need to be added to the plan in case the existing well fails. These can be added in as two separate well sites or as one well box (must be 1,000sqft). These sites must be labeled as alt or replacement wells. If designers are pinched for space sometimes they will prefer the well box. If alternate well sites are used they must be 50' apart from other wells. These alt/replacement well sites are treated the same as existing well sites (100' arch, 30' arch, setbacks, etc...).
- The neighboring well needs to have a 100' well arch.
- Perc hole locations and elevations must be shown on the plan. Perc holes must be labeled to with their corresponding ID's to be able to identify them each individually. Perc holes must also be labeled as to which holes passed and which holes failed (if any).
- The well statement in the "Septic System Notes" must include the tag number and who field located it. The tag number must also be shown on the plan.
- The sewage disposal area (SDA) must be labeled with its sqft.

- There are conflicting statements concerning the dose (58.3gals vs. 83.3gals) in the “Plan View” of the pump tank.
- The calculations involving the number of gals per 1 day of emergency storage in the “Plan View” section needs to be checked.
- The calculations involving static head need to be checked as they are affecting the total dynamic head calculations. The pump graph will need to be changed as the calculations are changed.

October 10, 2017

Comments Sent  
10/20/17

~~Robert Bricker~~  
Freeman  
Robert Bricker  
Howard County Health Department  
Bureau of Environmental Health  
8390 Stanford Boulevard  
Columbia, Maryland 21045

RE: **Majorie's Green, Lot 2**  
**OSDS Report**

Dear Mr. Bricker:

Please find below the Septic System Design for this project:

**1) Septic System Trench Design**

- Initial System:
  - Application Rate: 1.2
  - Effective Area Beginning Depth: 4.0'
  - Bottom Maximum Depth: 8.0'
  - Trench Effective Depth: 4.0'
- Replacement System #1
  - Application Rate: 1.2
  - Effective Area Beginning Depth: 4.0'
  - Bottom Maximum Depth: 8.0'
  - Trench Effective Depth: 4.0'
- Replacement System #2
  - Application Rate: 1.2
  - Effective Area Beginning Depth: 4.0'
  - Bottom Maximum Depth: 8.0'
  - Trench Effective Depth: 4.0'
- Design Flow:
  - 4 Bedrooms at 150 gpd
    - $4 \times 150 \text{ gpd} = 600 \text{ gpd}$
- Square Footage of Drain Field Required
  - Design Flow (600 gpd) / Application Rate (1.2) = 500 sf
- Sidewall Reduction Credit:
  - Initial System:
    - Trench Width (W) = 3'
    - Trench Effective Depth (D) = 4.0'
    - $[(W+2) / (W+1+2D)] \times 100 = [(3'+2)/(3'+1+2(4'))] \times 100 = 41.7\%$

166.05

- Replacement System #1:
  - Trench Width (W) = 3'
  - Trench Effective Depth (D) = 4.0'
  - $[(W+2) / (W+1+2D)] \times 100 = [(3'+2)/(3'+1+2(4'))] \times 100 = 41.7\%$
- Replacement System #2:
  - Trench Width (W) = 3'
  - Trench Effective Depth (D) = 4.0'
  - $[(W+2) / (W+1+2D)] \times 100 = [(3'+2)/(3'+1+2(4'))] \times 100 = 41.7\%$
- Linear Length of Trench Required:
  - Initial System
    - Drain field Square Footage (500) x Sidewall Reduction Credit (41.7%) / Trench Width (3') = 69.5'
  - Replacement System #1
    - Drain field Square Footage (375) x Sidewall Reduction Credit (41.7%) / Trench Width (3') = 69.5'
  - Replacement System #2
    - Drain field Square Footage (375) x Sidewall Reduction Credit (41.7%) / Trench Width (3') = 69.5'
- Linear Length of Trench Provided
  - Initial System:
    - Provided: 70'
      - a. One trench 70 LF
  - Replacement System #1:
    - Provided: 70'
      - One trench 70 LF
  - Replacement System #2:
    - Provided: 70'
      - One trench 70 LF

## 2) Dose Tank Design

- Design Flow: 600 GPD
- Diameter of Force Main: 2.0"
- Material: Schedule 40 PVC
- Dose Calculations:
  - Design Flow: 600 GPD
  - Length of Force main:
    - 2.0" force main = 150.9'
  - Volume of force main:
    - 150.9' x 17.4 gallons per 100' = 26.3 gallons ✓
  - Minimum dose is the greater of:
    - Volume of force main: 26.3 gallons
    - OR
    - 1/6<sup>th</sup> the design flow: 1/6 x 600 gallons = 100 gallons
    - Therefore, use 100 gallons for dose min.

### 3) Pump Design

- Pump Flow required: 31 GPM
- Dose Amount: 100 gallons
- Pump Run Time: 3.2 minutes

### 4) Calculate Friction Loss in delivery pipe

| FITTINGS                        | EQUIVALENT LENGTH (FT.)                            |
|---------------------------------|--|
| Fitting                         | 2.0" Force Main                                    |
| 1/4 Bend (90°)                  | -  |
| 1/8 Bend (45°)                  | $\times 5$ $\times 2$ $\times 1$ 3 @ 2.00' = 6.00' |
| 1/16 Bend (22.5°)               | -  |
| 1/32 Bend (11.25°)              | -  |
| Gate Valve                      | 1 @ 1.30' = 1.30'                                  |
| Standard Tee                    | -  |
| Run Tee                         | -  |
| Cross                           | -  |
| Reducer                         | -  |
| Couplings                       | 4 @ 2.00' = 8.00'                                  |
| Quick Connect/Disconnect        | 1 @ 1.35' = 1.35'                                  |
| Total Equivalent Length of pipe | 16.65'   |

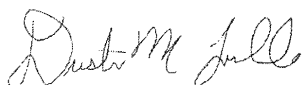
- Flow at 2.0" pipe = 31 gpm
- Friction loss per 100' (Table 4.4) of 2.0" schedule 40 plastic pipe: 1.10
  - Total equivalent length of 2.0" Force Main and appurtenances =  $150.9' + 16.65' = 167.55'$
  - Friction loss in 2.0" pipe =  $167.55/100 \times 1.10 = 1.84'$
- Total Friction Head = 1.84'
- Total Dynamic Head = Static Head + Friction Head
  - $4.53' + 1.84' = 6.37'$  use 6.5'
- Pump Chamber Design
  - For pump tank dimensions and detail, see plans.
  - Pump chamber elevations:
    - Pump grade at top of tank (at inlet): 547.74'
    - Top of Pump Tank: 544.74'
    - Interior Top of pump tank: 544.41'
    - Pump chamber invert in: 543.66'
    - High Water Alarm: 541.20'
    - Pump On: 540.70'
    - Pump Off: 540.41'
    - Bottom inside slab of tank: 538.57'

- Pump Chamber Volumes:
  - Pump On to Pump Off: 13.37 cf (100 gallons +/-)
  - Interior Top of pump tank to High Water Alarm: 147.12 cf or 1,100.49 gallons
- Design based on:
  - C.R. Semler, Inc. 1500 Gallon Pump Tank
  - Goulds WE03L series pump or equivalent

NOTE: CALCULATIONS & TANK / PUMP SPECIFICATIONS PROVIDED BY J M CARLISLE.

Please let me know if you have any comments or questions!

Sincerely,



Dustin M. Lavelle, Prof. L.S.  
Vice President



Reg. No. 21701, Exp. 6/11/2019

**LAVELLE** & ASSOCIATES,  
INCORPORATED  
SURVEYORS · PLANNERS · CONSULTANTS

October 27, 2017

Robert Freemon  
Howard County Health Department  
Bureau of Environmental Health  
8390 Stanford Boulevard  
Columbia, Maryland 21045

Approved Septic System Plan  
Howard County Health Department

  
Signature

11/6/17  
Date

RE: **Majorie's Green, Lot 2**  
**OSDS Report**

Dear Mr. Freemonr:

This letter is a point-by-point response to your email and comments dated 10/20/17.

In response to your email:

- The Silt fence has been revised.
- Calculations have been added to the plan.

*Comment: A "Plan View" of the septic tank and its dimensions must be added to the plan. This section must include the tanks manufacturer and tank size.*

**Response: A "Plan View" of the septic tank was not available to be included upon the preparation of this plan, the builder will supply a copy of the plan view. Inverts are shown on the Septic System Profile.**

---

*Comment: Replacement well sites need to be added to the plan in case the existing well fails. These can be added in as two separate well sites or as one well box (must be 1,000sqft). These sites must be labeled as alt or replacement wells. If designers are pinched for space sometimes they will prefer the well box. If alternate well sites are used they must be 50' apart from other wells. These alt/replacement well sites are treated the same as existing well sites (100' arch, 30' arch, setbacks, etc...).*

**Response: A 1,000sf replacement well box has been added to the plan.**

---

*Comment: The neighboring well needs to have a 100' well arch.*

**Response: Added.**

---

*Comment: Perc hole locations and elevations must be shown on the plan. Perc holes must be labeled to with their corresponding ID's to be able to identify them each individually. Perc holes must also be labeled as to which holes passed and which holes failed (if any).*

**Response: Added.**

*Comment: The well statement in the "Septic System Notes" must include the tag number and who field located it. The tag number must also be shown on the plan.*

**Response: Added.**

---

*Comment: The sewage disposal area (SDA) must be labeled with its sqft.*

**Response: Added. Area has been hatched and referenced in the legend as "Private Sewage Disposal Area (See Note #12). Note #12 identifies the area as at least 10,000 SF and lists more relevant information on the SDA.**

---

*Comment: There are conflicting statements concerning the dose (58.3gals vs. 83.3gals) in the "Plan View" of the pump tank.*

**Response: The Plan View has been corrected.**

---

*Comment: The calculations involving the number of gals per 1 day of emergency storage in the "Plan View" section needs to be checked.*

**Response: The Plan View has been corrected.**

---

*Comment: The calculations involving static head need to be checked as they are affecting the total dynamic head calculations. The pump graph will need to be changed as the calculations are changed.*

**Response: Static head, TDH, Pump Curve, and Calculations have been revised**

Please find below the Septic System Design for this project:

**1) Septic System Trench Design**

- Initial System:
  - Application Rate: 1.2
  - Effective Area Beginning Depth: 4.0'
  - Bottom Maximum Depth: 8.0'
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  - Trench Effective Depth: 4.0'
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- Design Flow:
  - 4 Bedrooms at 150 gpd
    - $4 \times 150 \text{ gpd} = 600 \text{ gpd}$
- Square Footage of Drain Field Required
  - Design Flow (600 gpd) / Application Rate (1.2) = 500 sf
- Sidewall Reduction Credit:
  - Initial System:
    - Trench Width (W) = 3'
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    - $[(W+2) / (W+1+2D)] \times 100 = [(3'+2)/(3'+1+2(4'))] \times 100 = 41.7\%$
  - Replacement System #1:
    - Trench Width (W) = 3'
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    - $[(W+2) / (W+1+2D)] \times 100 = [(3'+2)/(3'+1+2(4'))] \times 100 = 41.7\%$
  - Replacement System #2:
    - Trench Width (W) = 3'
    - Trench Effective Depth (D) = 4.0'
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- Linear Length of Trench Required:
  - Initial System
    - Drain field Square Footage (500) x Sidewall Reduction Credit (41.7%) / Trench Width (3') = 69.5'
  - Replacement System #1
    - Drain field Square Footage (375) x Sidewall Reduction Credit (41.7%) / Trench Width (3') = 69.5'

- Replacement System #2
  - Drain field Square Footage (375) x Sidewall Reduction Credit (41.7%) / Trench Width (3') = 69.5'
- Linear Length of Trench Provided
  - Initial System:
    - Provided: 70'
      - a. One trench 70 LF
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- Dose Calculations:
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  - Volume of force main:
    - 150.9' x 17.4 gallons per 100' = 26.3 gallons
  - Minimum dose is the greater of:
    - Volume of force main: 26.3 gallons
    - OR
    - 1/6<sup>th</sup> the design flow: 1/6 x 600 gallons = 100 gallons
    - Therefore, use 100 gallons for dose min.

## 3) Pump Design

- Pump Flow required: 28 GPM
- Dose Amount: 100 gallons
- Pump Run Time: 3.6 minutes

#### 4) Calculate Friction Loss in delivery pipe

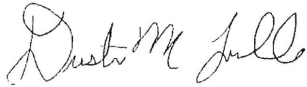
| FITTINGS                        | EQUIVALENT LENGTH (FT.) |
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| 1/4 Bend (90°)                  | -                       |
| 1/8 Bend (45°)                  | 3 @ 2.00' = 6.00'       |
| 1/16 Bend (22.5°)               | -                       |
| 1/32 Bend (11.25°)              | -                       |
| Gate Valve                      | 1 @ 1.30' = 1.30'       |
| Standard Tee                    | -                       |
| Run Tee                         | -                       |
| Cross                           | -                       |
| Reducer                         | -                       |
| Couplings                       | 4 @ 2.00' = 8.00'       |
| Quick Connect/Disconnect        | 1 @ 1.35' = 1.35'       |
| Total Equivalent Length of pipe | 16.65'                  |

- Flow at 2.0" pipe = 28 gpm
- Friction loss per 100' (Table 4.4) of 2.0" schedule 40 plastic pipe: 1.10
  - Total equivalent length of 2.0" Force Main and appurtenances =  $150.9' + 16.65' = 167.55'$
  - Friction loss in 2.0" pipe =  $167.55/100 \times 1.10 = 1.84'$
- Total Friction Head = 1.84'
- Total Dynamic Head = Static Head + Friction Head
  - $7.61 + 1.84' = 9.45'$  use 9.5'
- Pump Chamber Design
  - For pump tank dimensions and detail, see plans.
  - Pump chamber elevations:
    - Pump grade at top of tank (at inlet): 547.74'
    - Top of Pump Tank: 544.74'
    - Interior Top of pump tank: 544.41'
    - Pump chamber invert in: 543.66'
    - High Water Alarm: 541.20'
    - Pump On: 540.70'
    - Pump Off: 540.41'
    - Bottom inside slab of tank: 538.57'
  - Pump Chamber Volumes:
    - Pump On to Pump Off: 13.37 cf (100 gallons +/-)
    - Interior Top of pump tank to High Water Alarm: 147.12 cf or 1,100.49 gallons
  - Design based on:
    - C.R. Semler, Inc. 1500 Gallon Pump Tank
    - Goulds WE03L series pump or equivalent

NOTE: CALCULATIONS & TANK / PUMP SPECIFICATIONS PROVIDED BY J M  
CARLISLE / MANUFACTURER.

Please let me know if you have any comments or questions!

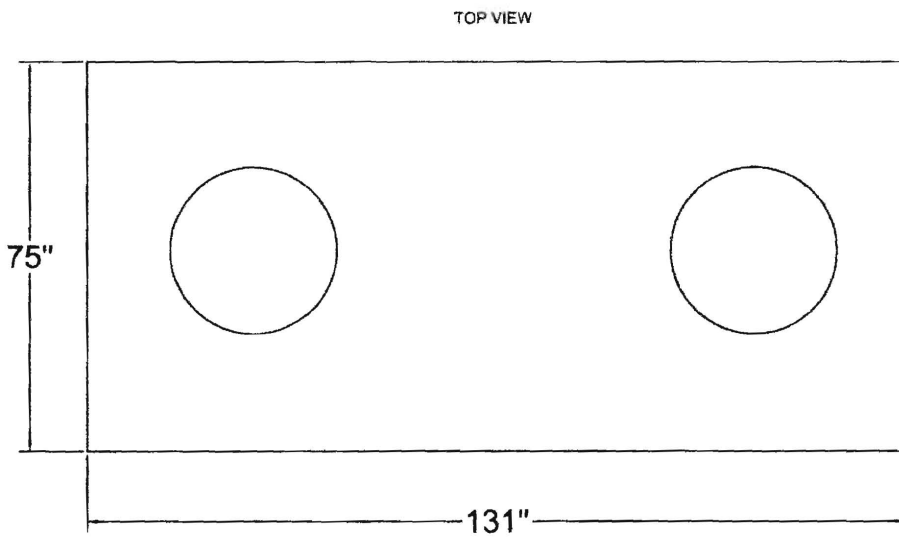
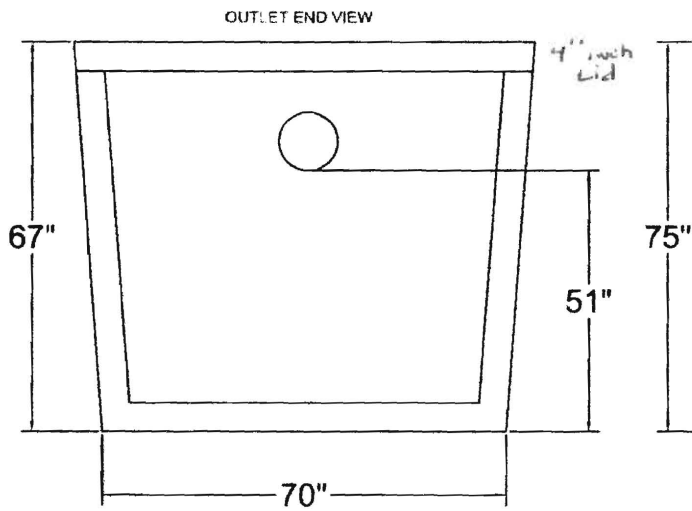
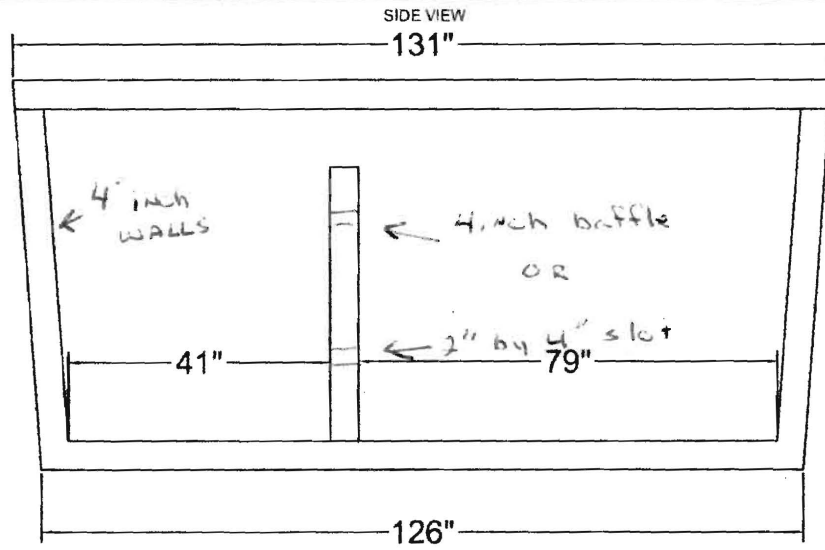
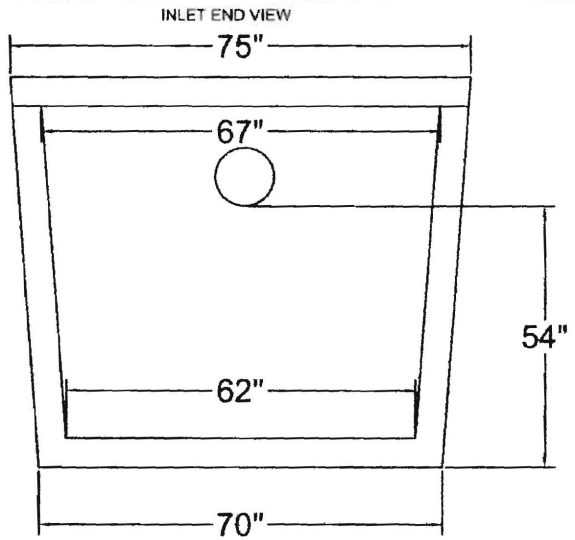
Sincerely,



Dustin M. Lavelle, Prof. L.S.  
Vice President



Reg No. 21701 Exp. 6/11/2019



General Notes

psi Rating of Excess.

Flange with 4" or 6"

TANK WALLS ARE 4" THICK WITH EITHER 4" BY 2" SLOT OR 4" Baffles

| No. | Revisions/Notes | Date |
|-----|-----------------|------|
|     |                 |      |

For Name and Address:  
**BABYLON VAULT CO.**  
 925 WAKEFIELD VALLEY RD.  
 NEW WINDSOR, MD. 21116  
 # (410) 848-0393

Project Name and Address

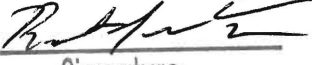
1500 T.S W/C

| Project | Date |
|---------|------|
|         |      |
|         |      |
|         |      |

**LAVELLE** & ASSOCIATES,  
INCORPORATED  
SURVEYORS · PLANNERS · CONSULTANTS

October 27, 2017

Robert Freemon  
Howard County Health Department  
Bureau of Environmental Health  
8390 Stanford Boulevard  
Columbia, Maryland 21045

Approved Septic System Plan  
Howard County Health Department  
  
Signature 11/6/17  
Date

RE: **Majorie's Green, Lot 2**  
**OSDS Report**

Dear Mr. Freemonr:

This letter is a point-by-point response to your email and comments dated 10/20/17.

In response to your email:

- The Silt fence has been revised.
- Calculations have been added to the plan.

*Comment: A "Plan View" of the septic tank and its dimensions must be added to the plan. This section must include the tanks manufacturer and tank size.*

**Response: A "Plan View" of the septic tank was not available to be included upon the preparation of this plan, the builder will supply a copy of the plan view. Inverts are shown on the Septic System Profile.**

*Comment: Replacement well sites need to be added to the plan in case the existing well fails. These can be added in as two separate well sites or as one well box (must be 1,000sqft). These sites must be labeled as alt or replacement wells. If designers are pinched for space sometimes they will prefer the well box. If alternate well sites are used they must be 50' apart from other wells. These alt/replacement well sites are treated the same as existing well sites (100' arch, 30' arch, setbacks, etc...).*

**Response: A 1,000sf replacement well box has been added to the plan.**

*Comment: The neighboring well needs to have a 100' well arch.*

**Response: Added.**

*Comment: Perc hole locations and elevations must be shown on the plan. Perc holes must be labeled to with their corresponding ID's to be able to identify them each individually. Perc holes must also be labeled as to which holes passed and which holes failed (if any).*

**Response: Added.**

✓ *Comment: The well statement in the "Septic System Notes" must include the tag number and who field located it. The tag number must also be shown on the plan.*

**Response: Added.**

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✓ *Comment: The sewage disposal area (SDA) must be labeled with its sqft.*

**Response: Added. Area has been hatched and referenced in the legend as "Private Sewage Disposal Area (See Note #12). Note #12 identifies the area as at least 10,000 SF and lists more relevant information on the SDA.**

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✓ *Comment: There are conflicting statements concerning the dose (58.3gals vs. 83.3gals) in the "Plan View" of the pump tank.*

**Response: The Plan View has been corrected.**

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✓ *Comment: The calculations involving the number of gals per 1 day of emergency storage in the "Plan View" section needs to be checked.*

**Response: The Plan View has been corrected.**

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✓ *Comment: The calculations involving static head need to be checked as they are affecting the total dynamic head calculations. The pump graph will need to be changed as the calculations are changed.*

**Response: Static head, TDH, Pump Curve, and Calculations have been revised**

Please find below the Septic System Design for this project:

**1) Septic System Trench Design**

- Initial System:
  - Application Rate: 1.2
  - Effective Area Beginning Depth: 4.0'
  - Bottom Maximum Depth: 8.0'
  - Trench Effective Depth: 4.0'
- Replacement System #1
  - Application Rate: 1.2
  - Effective Area Beginning Depth: 4.0'
  - Bottom Maximum Depth: 8.0'
  - Trench Effective Depth: 4.0'
- Replacement System #2
  - Application Rate: 1.2
  - Effective Area Beginning Depth: 4.0'
  - Bottom Maximum Depth: 8.0'
  - Trench Effective Depth: 4.0'
- Design Flow:
  - 4 Bedrooms at 150 gpd
    - $4 \times 150 \text{ gpd} = 600 \text{ gpd}$
- Square Footage of Drain Field Required
  - Design Flow (600 gpd) / Application Rate (1.2) = 500 sf
- Sidewall Reduction Credit:
  - Initial System:
    - Trench Width (W) = 3'
    - Trench Effective Depth (D) = 4.0'
    - $[(W+2) / (W+1+2D)] \times 100 = [(3'+2)/(3'+1+2(4'))] \times 100 = 41.7\%$
  - Replacement System #1:
    - Trench Width (W) = 3'
    - Trench Effective Depth (D) = 4.0'
    - $[(W+2) / (W+1+2D)] \times 100 = [(3'+2)/(3'+1+2(4'))] \times 100 = 41.7\%$
  - Replacement System #2:
    - Trench Width (W) = 3'
    - Trench Effective Depth (D) = 4.0'
    - $[(W+2) / (W+1+2D)] \times 100 = [(3'+2)/(3'+1+2(4'))] \times 100 = 41.7\%$
- Linear Length of Trench Required:
  - Initial System
    - Drain field Square Footage (500) x Sidewall Reduction Credit (41.7%) / Trench Width (3') = 69.5'
  - Replacement System #1
    - Drain field Square Footage (375) x Sidewall Reduction Credit (41.7%) / Trench Width (3') = 69.5'

- Replacement System #2
    - Drain field Square Footage (375) x Sidewall Reduction Credit (41.7%) / Trench Width (3') = 69.5'
- Linear Length of Trench Provided
  - Initial System:
    - Provided: 70'
      - a. One trench 70 LF
  - Replacement System #1:
    - Provided: 70'
      - One trench 70 LF
  - Replacement System #2:
    - Provided: 70'
      - One trench 70 LF

## 2) Dose Tank Design

- Design Flow: 600 GPD
- Diameter of Force Main: 2.0"
- Material: Schedule 40 PVC
- Dose Calculations:
  - Design Flow: 600 GPD
  - Length of Force main:
    - 2.0" force main = 150.9'
  - Volume of force main:
    - 150.9' x 17.4 gallons per 100' = 26.3 gallons
  - Minimum dose is the greater of:
    - Volume of force main: 26.3 gallons
    - OR
    - 1/6<sup>th</sup> the design flow: 1/6 x 600 gallons = 100 gallons
    - Therefore, use 100 gallons for dose min.

## 3) Pump Design

- Pump Flow required: 28 GPM
- Dose Amount: 100 gallons
- Pump Run Time: 3.6 minutes

4) Calculate Friction Loss in delivery pipe

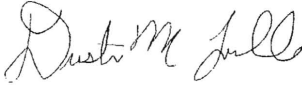
| FITTINGS                        | EQUIVALENT LENGTH (FT.) |
|---------------------------------|-------------------------|
| Fitting                         | 2.0" Force Main         |
| 1/4 Bend (90°)                  | -                       |
| 1/8 Bend (45°)                  | 3 @ 2.00' = 6.00'       |
| 1/16 Bend (22.5°)               | -                       |
| 1/32 Bend (11.25°)              | -                       |
| Gate Valve                      | 1 @ 1.30' = 1.30'       |
| Standard Tee                    | -                       |
| Run Tee                         | -                       |
| Cross                           | -                       |
| Reducer                         | -                       |
| Couplings                       | 4 @ 2.00' = 8.00'       |
| Quick Connect/Disconnect        | 1 @ 1.35' = 1.35'       |
| Total Equivalent Length of pipe | 16.65'                  |

- Flow at 2.0" pipe = 28 gpm
- Friction loss per 100' (Table 4.4) of 2.0" schedule 40 plastic pipe: 1.10
  - Total equivalent length of 2.0" Force Main and appurtenances = 150.9' + 16.65' = 167.55'
  - Friction loss in 2.0" pipe =  $167.55/100 \times 1.10 = 1.84'$
- Total Friction Head = 1.84'
- Total Dynamic Head = Static Head + Friction Head
  - $7.61 + 1.84' = 9.45'$  use 9.5'
- Pump Chamber Design
  - For pump tank dimensions and detail, see plans.
  - Pump chamber elevations:
    - Pump grade at top of tank (at inlet): 547.74'
    - Top of Pump Tank: 544.74'
    - Interior Top of pump tank: 544.41'
    - Pump chamber invert in: 543.66'
    - High Water Alarm: 541.20'
    - Pump On: 540.70'
    - Pump Off: 540.41'
    - Bottom inside slab of tank: 538.57'
  - Pump Chamber Volumes:
    - Pump On to Pump Off: 13.37 cf (100 gallons +/-)
    - Interior Top of pump tank to High Water Alarm: 147.12 cf or 1,100.49 gallons
  - Design based on:
    - C.R. Semler, Inc. 1500 Gallon Pump Tank
    - Goulds WE03L series pump or equivalent

NOTE: CALCULATIONS & TANK / PUMP SPECIFICATIONS PROVIDED BY J M  
CARLISLE / MANUFACTURER.

Please let me know if you have any comments or questions!

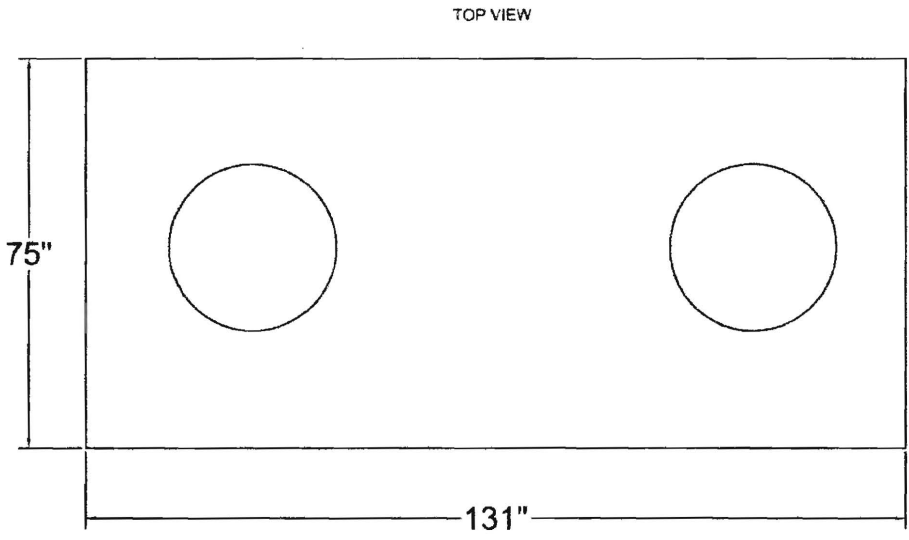
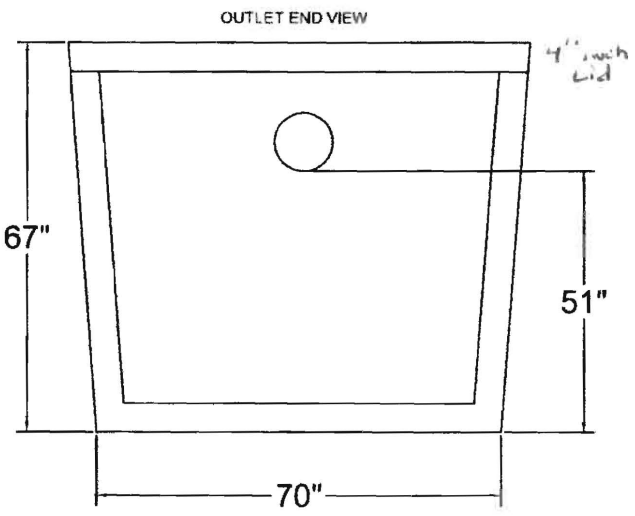
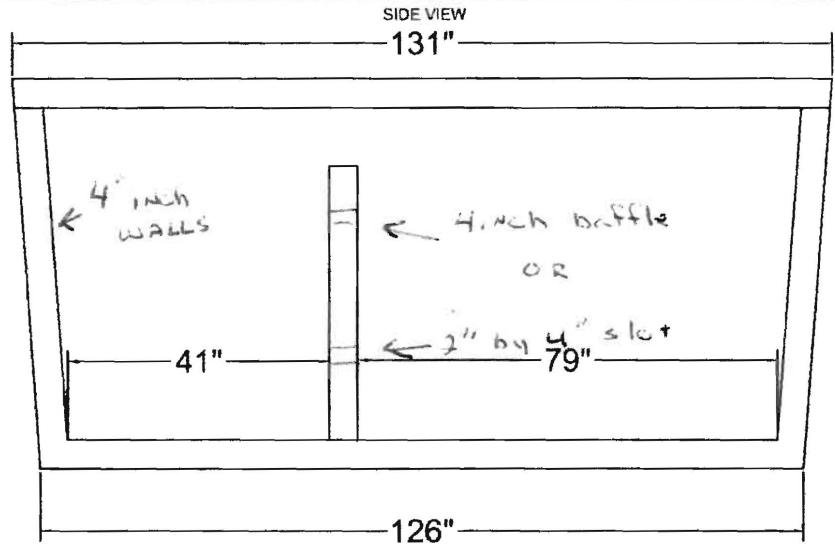
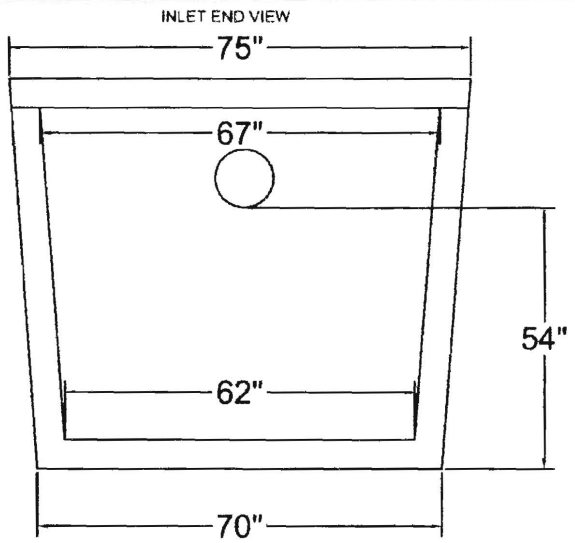
Sincerely,



Dustin M. Lavelle, Prof. L.S.  
Vice President



Reg No. 21701 Exp. 6/11/2019



General Notes

psi Rating of 600psi

Flange either 4" or 6"

TANK WALLS ARE 4" THICK WITH EITHER 4" BY 2" SLOT OR 4" Baffle

| No. | Revisions/Issues | Date |
|-----|------------------|------|
|     |                  |      |

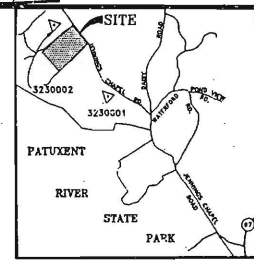
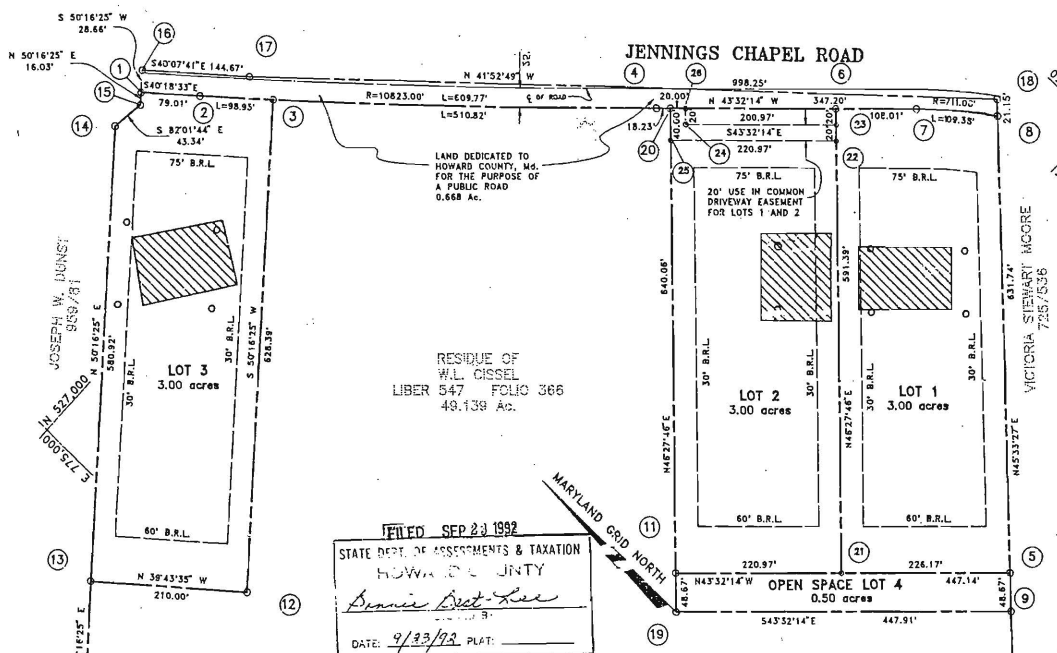
For Name and Address  
**BABYLON VAULT CO.**  
 925 WAKEFIELD VALLEY RD  
 NEW WINDSOR, MD. 21176  
 # (410) 548-0393

Project Name and Address

1500 T.S W/C

| Project | Date |
|---------|------|
|         |      |

| COORDINATE SCHEDULE |             |             |
|---------------------|-------------|-------------|
| NO.                 | NORTH       | EAST        |
| 1                   | 527250.6745 | 775400.8412 |
| 2                   | 527140.4353 | 775451.9528 |
| 3                   | 527065.2616 | 775516.3103 |
| 4                   | 526686.7914 | 775859.3069 |
| 5                   | 525942.0473 | 773751.1480 |
| 6                   | 526513.3907 | 774024.0722 |
| 7                   | 526435.0936 | 776098.4701 |
| 8                   | 526350.3276 | 776167.4311 |
| 9                   | 525907.8963 | 775716.3972 |
| 10                  | 526266.2116 | 775443.1461 |
| 11                  | 526663.6458 | 775033.0148 |
| 12                  | 526825.1579 | 774896.7992 |
| 13                  | 527196.4367 | 775345.5878 |
| 14                  | 527190.4266 | 775388.5091 |
| 15                  | 527218.9889 | 775422.8604 |
| 16                  | 527108.3726 | 775516.1206 |
| 17                  | 526365.1342 | 776182.5286 |
| 18                  | 526232.6881 | 775407.8656 |
| 19                  | 526735.5778 | 775871.8624 |
| 20                  | 526106.0244 | 775595.3339 |
| 21                  | 526485.8376 | 775995.0751 |
| 22                  | 526499.6141 | 776009.5737 |
| 23                  | 526645.3028 | 775871.1403 |
| 24                  | 526646.0248 | 775842.8553 |
| 25                  | 526659.0793 | 775885.6389 |



**GENERAL NOTES**

- 1) Tax Map 20, Parcel: 88
- 2) Deed References: 547/368
- 3) Coordinates based on NAD 27, Maryland coordinate system as Projected by Howard County Geodetic control stations No. 3230002 and 3230001.
- 4) Subject property zoned - R - per 8-20-85 Comprehensive Zoning Plan.
- 5) O - Designates Iron pin set.
- 6) The lots shown herein comply with the minimum ownership width and lots required by the Department of Environment.
- 7) This area designated private sewage easement of a minimum of 10,000 sq. ft. as required by the Department of Environment for individual sewage disposal. Improvements of any nature in this area are restricted until public sewerage is available and satisfying any residential structure constructed on these building sites. These easements shall become null and void upon connection to a public sewerage system. The County Health Officer shall have the authority to grant variances for encroachments into the private sewer easement. Recordation of a modified sewage easement shall not be necessary.
- 8) All percolation test holes shown herein have been field located and shown thus O.
- 9) This plot is based on a field run monumented boundary survey performed on or about Dec. 23, 1970 by Claude M. Skinner Professional Engineer and Land Surveyor.
- 10) B.R.L. Denotes Building Restriction Lines.
- 11) WP-92-93 from section 16.102.B.3 of the Howard County Subdivision Regulations was approved by the Planning Director on December 25, 1991 to waive the platting of the Parcel residue.
- 12) Open Space Lot 4 to be owned by a Community Association.
- 13) Articles of Incorporation of Marjorie's Green Homeowners' Association, Inc. were filed for record with the State Department of Assessments and Taxation on September 8, 1992. Res: 92-09-0008.

FILED SEP 23 1992  
 STATE DEPT. OF ASSESSMENTS & TAXATION  
 HOWARD COUNTY  
 Annie Best Lee  
 DATE: 9/23/92 PLAT:

| CURVE | RADIUS    | LENGTH  | TANGENT | CHORD   | BEARING       | DELTA      |
|-------|-----------|---------|---------|---------|---------------|------------|
| 2 - 1 | 10823.00' | 609.77' | 304.97' | 609.69' | S 41°55'24" E | 051°14'41" |
| 7 - 6 | 711.00'   | 109.36' | 54.86'  | 109.27' | N 39°07'48" W | 06°48'52"  |

**AREA TABULATION**

TOTAL NUMBER OF LOTS TO BE RECORDED: 4  
 TOTAL AREA OF BUILDABLE LOTS TO BE RECORDED: 9.000 Ac.  
 TOTAL AREA OF ROADWAYS TO BE RECORDED INCLUDING WIDENING: 0.668 Ac.  
 TOTAL AREA OF OPEN SPACE TO BE RECORDED: 0.500 Ac.  
 TOTAL AREA OF SUBDIVISION TO BE RECORDED: 10.168 Ac.

Minimum Lot Size Chart

| LOT NO. | GROSS AREA ACRES | PIPESTEM AREA | REMAINING AREA ACRES | 100 YEAR FLOODPLAIN | 25% SLOPES | MINIMUM LOT SIZE |
|---------|------------------|---------------|----------------------|---------------------|------------|------------------|
| 1       | 3.000 Ac.        | 00            | 3.000 Ac.            | 00                  | 00         | 3.000 Ac.        |
| 2       | 3.000 Ac.        | 00            | 3.000 Ac.            | 00                  | 00         | 3.000 Ac.        |
| 3       | 3.000 Ac.        | 00            | 3.000 Ac.            | 00                  | 00         | 3.000 Ac.        |
| 4(O.S.) | 0.500 Ac.        | 00            | 0.500 Ac.            | 00                  | 00         | 0.500 Ac.        |
|         | Ac.              | 00            | Ac.                  | 00                  | 00         | Ac.              |

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT

*James M. Boyd* 9/11/92  
 HOWARD COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Joseph R. Keith* 9/21/92  
 PLANNING DIRECTOR DATE

APPROVED: FOR STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*James M. Boyd* 9/23/92  
 DIRECTOR DATE

**OWNER'S STATEMENT**

We, Willis Lambert Cissel, Jr. and Marjorie S. Cissel, owners of the property shown and described hereon, hereby adopt this plan of subdivision, and in consideration of the approval of this final plat by the Department of Planning and Zoning, establish the minimum building restriction lines and grant unto Howard County, Maryland, its successors and assigns, 1) the right to lay, construct and maintain sewers, drains, water pipes and other municipal utilities and services, in and under all roads and street right-of-ways and the specific easements shown hereon, 2) the right to require dedication for public use, the beds of the streets and/or roads and floodplains and open space where applicable, and for good and other valuable consideration, hereby grant the right and option to Howard County to acquire the fee simple title to the beds of the streets and/or roads and floodplains, storm drainage facilities and open space where applicable, 3) the right to require dedication of waterway and drainage easements for the specific purpose of their construction, repair and maintenance, and 4) that no building or similar structure of any kind shall be erected on or over the said easements and rights-of-way.

Witness my/our hands this 9th day of September, 1992

*Willis Lambert Cissel, Jr.*  
 \_\_\_\_\_  
 WITNESS

**SURVEYOR'S CERTIFICATE**

I hereby certify that the final plat shown hereon is correct; That it is a subdivision of part of the lands conveyed by Howard C. Nicodemus and Mary C. Nicodemus, to Willis Lambert Cissel, Jr. and Marjorie S. Cissel, his wife, by Deed dated December 30, 1970 and recorded in the Land Records of Howard County, Maryland in Liber 547 of Folio 368 and that all Monuments are in place as shown in accordance with the annotated code of Maryland, as amended and monumentation of the boundary survey is in accordance with the Howard County Subdivision Regulations.

*William C. Hortel*  
 William C. Hortel, Professional Land Surveyor, Md. No. 9436  
 \_\_\_\_\_  
 Date

RECORDED AS PLAT ON AMONG THE LAND RECORDS OF HOWARD COUNTY, MD.

**LOTS 1 THRU 4**  
**MARJORIE'S GREEN**

TAX MAP 20  
 TAX MAP PARCEL No. 88  
 EX ZONING R  
 ELECTION DISTRICT 4th  
 HOWARD COUNTY, MARYLAND  
 SCALE: 1"=100'  
 DATE Jan, 1992  
 D. P. & Z. FILE NOs  
 WP-92-93  
 PROJECT No. 91126

**Boander Associates**  
 ENGINEERS • PLANNERS • SURVEYORS  
 3230 BETHANY LANE  
 ELLICOTT CITY, MD. 21042  
 (410) 465-7777 FAX: (410) 465-7966

| POINT | NORTH (feet) | EAST (feet)  | WEST (feet)   | EAST (meters) |
|-------|--------------|--------------|---------------|---------------|
| 243   | 207099.3204  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 244   | 207099.3204  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 245   | 207130.3604  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 246   | 207130.3604  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 247   | 207164.2093  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 248   | 207164.2093  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 249   | 207198.0582  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 250   | 207198.0582  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 251   | 207231.9071  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 252   | 207231.9071  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 253   | 207265.7560  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 254   | 207265.7560  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 255   | 207299.6049  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 256   | 207299.6049  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 257   | 207333.4538  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 258   | 207333.4538  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 259   | 207367.3027  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 260   | 207367.3027  | 1220497.7186 | 179948.281819 | 527.023381819 |
| 261   | 207401.1516  | 1220497.7186 | 179948.281819 | 527.023381819 |
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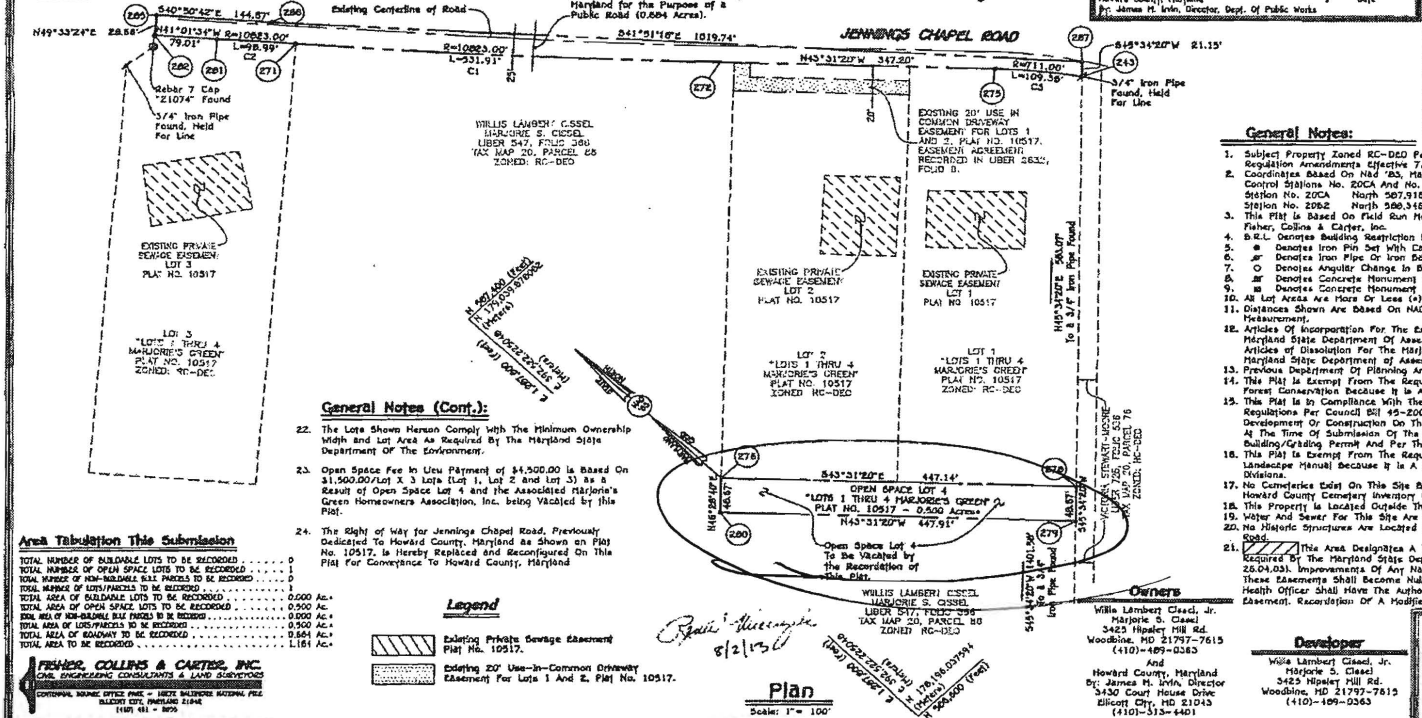
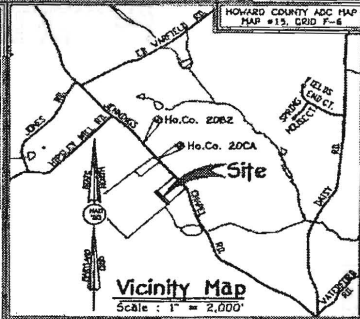
| CURVE | LENGTH | BEARING      | DELTA    | BEARING      | CHORD  |
|-------|--------|--------------|----------|--------------|--------|
| C1    | 144.87 | S44°31'13" E | 2°49'57" | S42°01'24" E | 144.87 |
| C2    | 144.87 | S44°31'13" E | 2°49'57" | S42°01'24" E | 144.87 |
| C3    | 144.87 | S44°31'13" E | 2°49'57" | S42°01'24" E | 144.87 |

WAR PLAT NO. 22486  
RECORDED AUG 02 2013  
P8 # 2.50

Requirements of 85-106, The Real Property Article, Annotated Code of Maryland, 1959 Supplement, Volume 1, Part 1, Section 1-101, are hereby waived by the State of Maryland and the Selling of Markers Act, Maryland Code, Title 88, Chapter 10, Section 10-101.

7/16/13  
7/16/13  
7/16/13  
7/16/13

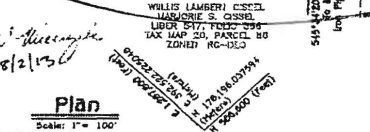
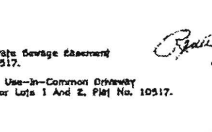
Manjoria S. Green  
Marjorie S. Green  
James H. Wolf, Director, Dept. of Public Works



**Area Tabulation This Submission**

|   |           |
|---|-----------|
| TOTAL NUMBER OF BUILDABLE LOTS TO BE RECORDED     | 0         |
| TOTAL NUMBER OF OPEN SPACE LOTS TO BE RECORDED    | 0         |
| TOTAL NUMBER OF NON-BUILDABLE LOTS TO BE RECORDED | 0         |
| TOTAL NUMBER OF LOTS TO BE RECORDED               | 0         |
| TOTAL AREA OF BUILDABLE LOTS TO BE RECORDED       | 0.000 AC. |
| TOTAL AREA OF OPEN SPACE LOTS TO BE RECORDED      | 0.000 AC. |
| TOTAL AREA OF NON-BUILDABLE LOTS TO BE RECORDED   | 0.000 AC. |
| TOTAL AREA OF LOTS TO BE RECORDED                 | 0.000 AC. |
| TOTAL AREA OF ROADWAY TO BE RECORDED              | 0.064 AC. |
| TOTAL AREA TO BE RECORDED                         | 1.161 AC. |

- General Notes (Cont.):**
- The Lots Shown Herein Comply with the Minimum Open Space Width and Lot Area As Required By The Maryland State Department of the Environment.
  - Open Space Fee In Lieu Payment of \$4,500.00 is Based On \$1,500.00/lot x 3 lots (Lot 1, Lot 2 and Lot 3) as a Result of Open Space Lot 4 and the Associated Marjorie's Green Homeowners Association, Inc. being Vacated by this Plat.
  - The Right of Way for Jennings Chapel Road, Previously Dedicated to Howard County, Maryland as Shown on Plat No. 10517, is Hereby Replaced and Reconfigured On This Plat For Conveyance to Howard County, Maryland



**General Notes:**

- Subject Property Zoned RC-DDD Per 2/02/04 Comprehensive Zoning Plan and The 'Comp Use' Zoning Regulation Amendments Effective 7/28/06.
- Coordinate Based on NAD 83, Maryland Coordinate System as Projected by Howard County Geodetic Control Stations No. 20CA and No. 20B2. Station No. 20CA North 507,916.9949 East 1,267,899.6466 Station No. 20B2 North 508,246.3042 East 1,267,909.9941
- This Plat is Based on Field Run Monumented Boundary Survey Performed On Or About April, 2013 By Fisher, Collins & Carter, Inc.
- D.C.L. Concrete Building Restriction Line.
- Denotes Iron Pin Set With Cap "F.C.C. 106".
- Denotes Iron Pipe Set With Cap "F.C.C. 106".
- Denotes Angular Change in Bearing of Boundary or Right-of-Way.
- Denotes Concrete Monument Set With Cap "F.C.C. 106".
- Denotes Concrete Monument of Stone Found.
- All Lot Areas Are 150% Or Less (1).
- Distances Shown Are Based on NAD '83 Surface Measurement And Not Reduced to NAD '83 Grid Measurement.
- Articles of Incorporation For The Existing Marjorie's Green Homeowners' Association, Inc. Were Filed With Maryland State Department of Assessments and Taxation On September 8, 1992, Receipt No. 173947. Articles of Incorporation For The Marjorie's Green Homeowners' Association, Inc. Were Filed With The Maryland State Department of Assessments and Taxation On May 13, 2013, Receipt No. 0034 99064.
- Previous Department of Planning and Zoning File Nos: W-92-93 And F-92-100.
- This Plat is Exempt From The Requirements of Section 16.102(b)(1) Of The Howard County Code For Forest Conservation Because It is a Plat of Revision and No New Lots Are Being Created.
- This Plat is in Compliance With the Amended Fifth Edition Of The Subdivision And Land Development Regulations Per Council Bill 49-2003 And The Zoning Regulations As Amended By Council Bill 72-2003. Development Or Construction On These Lots Must Comply With Setback And Buffer Regulations in Effect At The Time of Submission of the Site Development Application, Water Pollution Application, Or Building/Grading Permit And For The Comp-Use Zoning Regulations Dated July 28, 2008.
- This Plat is Exempt From The Requirements of Section 16.124 Of The Howard County Code And The Landscape Manual Because It is a Plat of Re-subdivision That Does Not Create Any New Lots/Parcels or Divisions.
- No Cornerstone Set On This Site Based On A Visual Site Visit And Based On An Examination Of The Howard County Corridor Inventory Map.
- This Property is Located Outside The Metropolitan District.
- Water And Sewer For This Site Are Private.
- No Historic Structures Are Located On This Site And The Site is Not Adjacent To A Designated Scenic Road.
- The Area Designates A Private Sewage Easement Of At Least 10,000 Square Feet As Required By The Maryland State Department of the Environment For Individual Sewage Disposal (CSDAR 22.04.03). Improvements of Any Nature In This Area Are Restricted Until Public Sewerage is Available. These Easements Shall Become Null And Void Upon Connection To A Public Sewerage System. The County Health Officer Shall Have The Authority To Grant Variances For Encroachment Into The Private Sewage Easement. Reconfiguration Of A Modified Sewage Easement Shall Not be Necessary.

**Purpose Statement**

The Purpose Of This Plat is To (1) Vacate Existing Open Space Lot 4 and to Merge the 0.00 Acre Back into the Residue Parcel (Parcel 5B) as Shown on a Plat Entitled 'Lots 1 thru 4, Marjorie's Green' recorded among the Land Records of Howard County, Maryland as Plat No. 10517, and (2) Dedicate 0.064 Acre of Land to Howard County, Maryland for the Purpose of a Public Road.

APPROVED: For Private Water and Private Sewerage Systems  
Howard County Health Department.

*Manjoria S. Green* 7/29/13  
Howard County Health Officer Date 2013

*John Emerson* 7/31/13  
Chief, Development Engineering Division Date

*Kot S. Shadrach* 8/1/13  
Director Date

**OWNER'S CERTIFICATE**

WILLIS LAMBERT C&S, AND HOWARD COUNTY, MARYLAND, BY JAMES H. WOLF, DIRECTOR, DEPARTMENT OF PUBLIC WORKS, OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON, HEREBY ADAPT THIS PLAN OF SUBDIVISION, AND IN CONSIDERATION OF THE APPROVAL OF THIS PLAN BY THE DEPARTMENT OF PLANNING AND ZONING, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES AND SETBACK LINES, AND THE LOCATION OF THE SEWER, DRAINAGE, WATER PIPES AND OTHER MUNICIPAL UTILITIES AND SERVICES IN AND UNDER AS ROADS AND STREET RIGHTS-OF-WAY AND THE SPECIFIC EASEMENT AREAS SHOWN HEREON; (2) THE RIGHT TO REQUIRE DEDICATION FOR PUBLIC USE THE DEEDS OF THE SEWER AND/OR ROADS AND FLOODPLAIN AND OPEN SPACE WHERE APPLICABLE AND FOR GOOD AND OTHER VALUABLE CONSIDERATION, HEREBY GRANT THE RIGHT AND OPTION TO HOWARD COUNTY TO ACQUIRE THE FEE SIMPLE TITLE TO THE BEDS OF THE STREETS AND/OR ROADS AND FLOODPLAIN, STORM DRAINAGE FACILITIES AND OPEN SPACE WHERE APPLICABLE; (3) THE RIGHT TO REQUIRE DEDICATION OF WATERWAY AND DRAINAGE EASEMENTS FOR THE SPECIFIC PURPOSE OF THEIR CONSTRUCTION, REPAIR AND MAINTENANCE; AND (4) THAT NO BUILDING OR SIMILAR STRUCTURE OF ANY KIND SHALL BE ERRECTED ON OR OVER THE SAID EASEMENTS AND RIGHTS-OF-WAY, WITNESS MY HAND THIS 16th DAY OF JULY, 2013.

*Willis Lambert C&S*  
Willis Lambert C&S, Jr.  
Manjoria S. Green  
James H. Wolf

**SURVEYOR'S CERTIFICATE**

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE FINAL PLAN SHOWN HEREON IS CORRECT, THAT IT WAS PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND; THAT IT IS A SUBDIVISION OF (1) PART OF THE LANDS CONVEYED BY HOWARD COUNTY, MARYLAND AND PLAT NO. 10517, AND (2) PART OF THE LANDS CONVEYED BY HOWARD COUNTY, MARYLAND BY DEED DATED JUNE 30, 1970 AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN LIBER 547, FOLIO 366; AND (3) ALL OF THE LAND CONVEYED BY WILLIS LAMBERT C&S, JR. AND MARJORIE S. GREEN TO HOWARD COUNTY, MARYLAND BY DEED DATED JUNE 15, 1999 AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN LIBER 4799, FOLIO 326; AND THAT ALL PORTIONS OF THE SUBDIVISION OR WILL BE IN PLACE PRIOR TO THE ACCEPTANCE OF THE PROPOSED SUBDIVISION BY HOWARD COUNTY AS SHOWN, IN ACCORDANCE WITH THE LAWS OF THE STATE OF MARYLAND, AS ANNEXED.

*August W. Gibbs*  
August W. Gibbs, Professional Land Surveyor No. 21514  
Expire Date July 11, 2015

RECORDED AS PLAT NO. \_\_\_\_\_ ON \_\_\_\_\_ AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND.

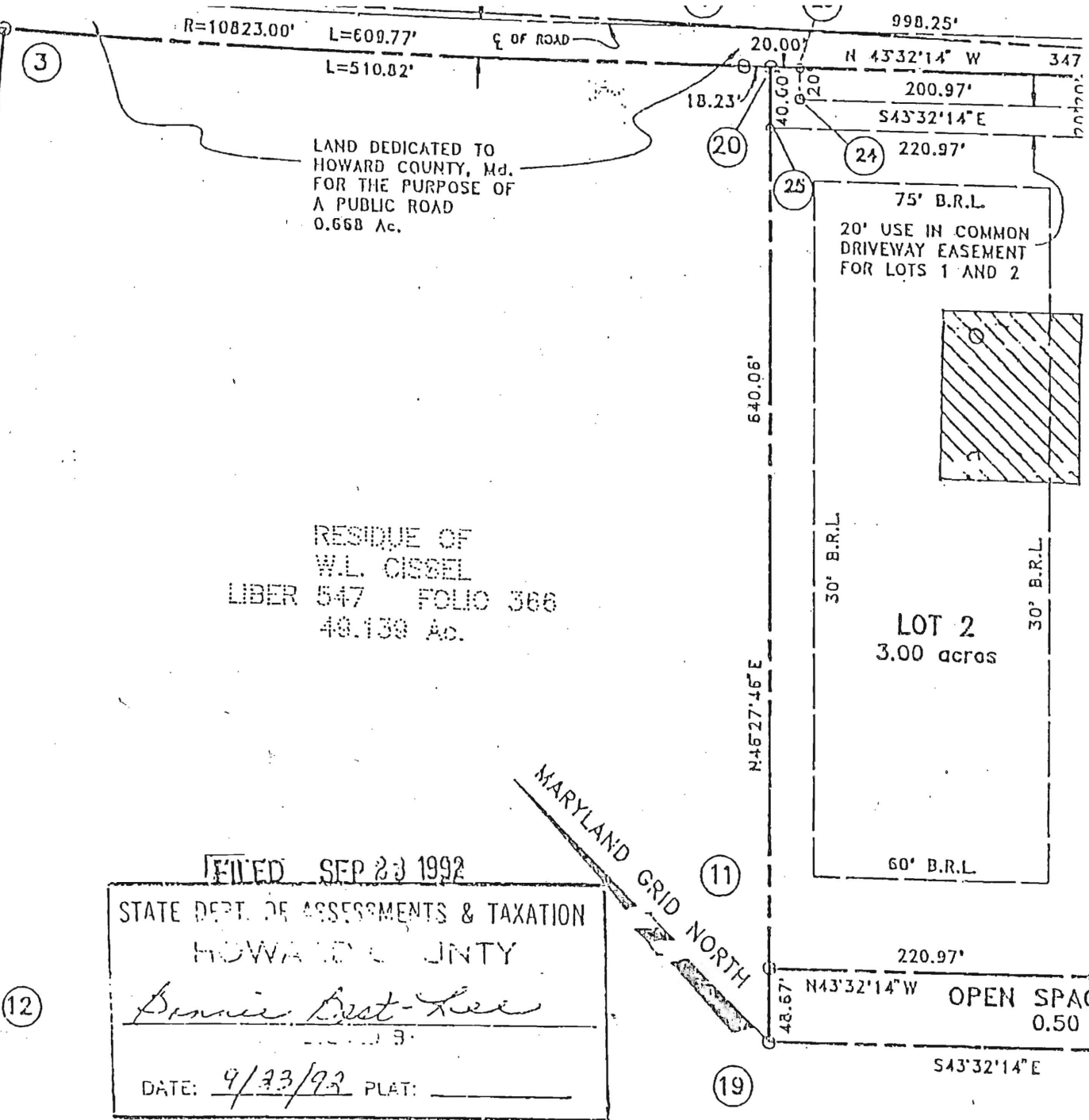
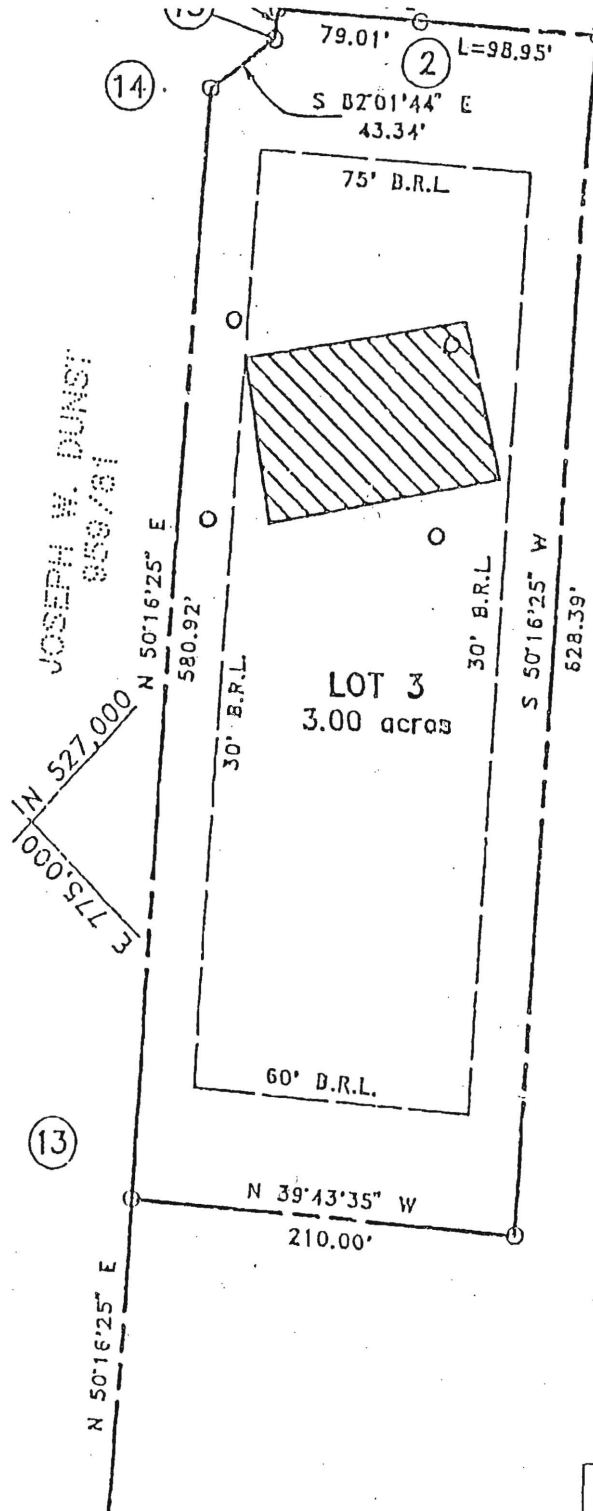
**Plat of Resubdivision To Vacate Marjorie's Green Open Space Lot 4**

(Parcel 5B of Willis Lambert C&S, Jr. and Marjorie S. Green)

Being a Plat to Vacate Open Space Lot 4, As Shown on Plat Entitled 'Lots 1 thru 4, Marjorie's Green' Recorded Among the Land Records of Howard County, Maryland as Plat No. 10517.

Zoned: RC-DDD

The Plat: 20 Parcel P/D 125 Grid: 4  
Fourth Election District - Howard County, Maryland  
Date: July 16, 2013 Scale: As Shown Sheet 1 of 1



FILED SEP 23 1992

STATE DEPT. OF ASSESSMENTS & TAXATION  
HOWARD COUNTY

*Bonnie Best-Lee*

DATE: 9/23/93 PLAT: \_\_\_\_\_

| CURVE DATA CHART |           |         |         |       |         |       |
|------------------|-----------|---------|---------|-------|---------|-------|
| CURVE            | RADIUS    | LENGTH  | TANGENT | CHORD | BEARING | DELTA |
| 2 - 4            | 10823.00' | 609.77' | 304.97' |       |         |       |

**Freemon, Robert**

---

**To:** joan.a.varga@vencore.com  
**Cc:** andrew@wivellhomes.com; jeff@serllc.us  
**Subject:** 3402 Jennings Chapel  
**Attachments:** 3402 3396 Jennings Chapel.pdf; 3402 Jennings Chapel Specs.pdf

Hi,

I have reviewed the building permit for Marjorie's Green Lot 2 and attached are my comments. I have also attached the specifications worksheet for the septic system design. 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>**

## Freemon, Robert

---

**From:** Andrew Wivell <andrew@wivellhomes.com>  
**Sent:** Tuesday, July 11, 2017 4:41 PM  
**To:** Freemon, Robert; joan.a.varga@vencore.com  
**Subject:** RE: 3402 Jennings Chapel

Thanks Robert. I will address this promptly with my Civil Engineer.

Andrew Wivell, Owner  
301-748-5344



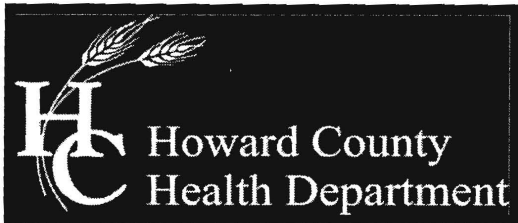
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**From:** Freemon, Robert [<mailto:rfreemon@howardcountymd.gov>]  
**Sent:** Tuesday, July 11, 2017 4:24 PM  
**To:** [joan.a.varga@vencore.com](mailto:joan.a.varga@vencore.com)  
**Cc:** [andrew@wivellhomes.com](mailto:andrew@wivellhomes.com); [jeff@serllc.us](mailto:jeff@serllc.us)  
**Subject:** 3402 Jennings Chapel

Hi,

I have reviewed the building permit for Marjorie's Green Lot 2 and attached are my comments. I have also attached the specifications worksheet for the septic system design. If you have any questions let me know.

**Robert Freemon**  
**Howard County Health Department**  
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**Phone: 410-313-6357**  
**Email: [rfreemon@howardcountymd.gov](mailto:rfreemon@howardcountymd.gov)**  
**<https://www.howardcountymd.gov/Departments/Health/Environmental-Health/Well-and-Septic>**



## Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

Main: 410-313-2640 | Fax: 410-313-2648

TDD 410-313-2323 | Toll Free 1-866-313-6300

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

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

Twitter: HowardCoHealthDep

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

---

### MEMORANDUM

TO: Joan Varga & Allan Rosenberger  
6035 Red Clover Lane  
Clarksville, MD 21029

FROM: Robert Freemon *RF*  
Well & Septic Program

RE: Marjorie's Green, Lot 2  
3402 Jennings Chapel Road  
Woodbine, MD 21797  
*"Before BP Approval"*

DATE: 7/11/17

---

Before building permit B17002425 can be approved the following must be completed.

- An On-Site Sewage Disposal Plan must be created and approved by the Health Dept. with the fee of \$396 paid to the Director of Finance.

## Septic Tank Diagram

- Emergence & storage incorrect
- 90° Bend in pump tank X
- Z Alter well sites ~~for~~ Box
- Perc Hole locations + Elevation Labels with corresponding #
- ✓ - Add Sffit to SDA
- ✓ - Well statement with well tag#  
on plan
- ✓ - Field verified by who
- Silt Fence needs to be moved for tank installation
- ✓ - Add 100' Arch for neighboring well



## Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

Main: 410-313-2640 | Fax: 410-313-2648

TDD 410-313-2323 | Toll Free 1-866-313-6300

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

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

Twitter: [HowardCoHealthDep](https://twitter.com/HowardCoHealthDep)

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

---

### MEMORANDUM

TO: Joan Varga & Allan Rosenberger  
6035 Red Clover Lane  
Clarksville, MD 21029

FROM: Robert Freemon *RF*  
Well & Septic Program

RE: Marjorie's Green, Lot 2  
*3516* ~~3402~~ Jennings Chapel Road  
Woodbine, MD 21797  
"Before BP Approval"

DATE: 7/11/17

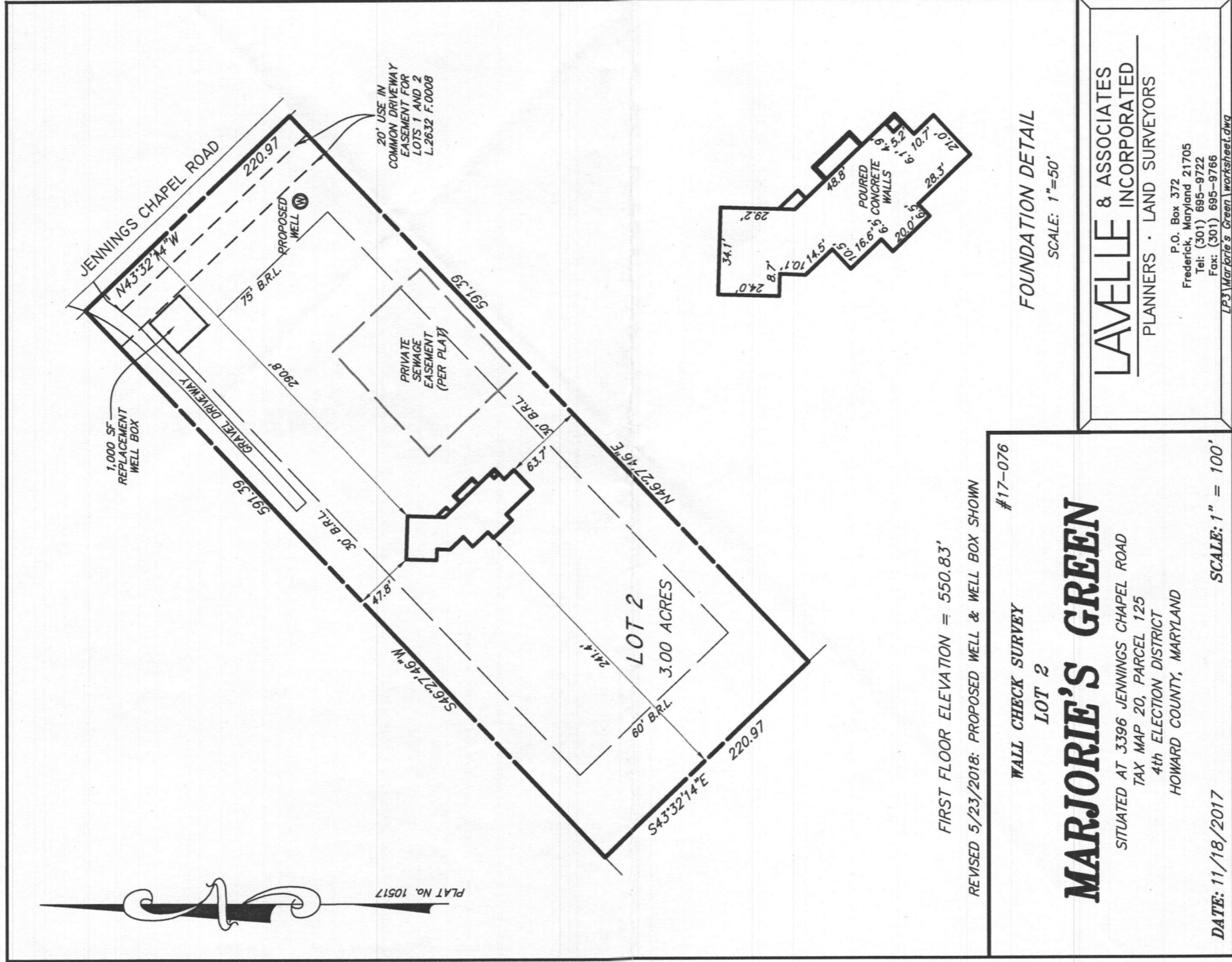
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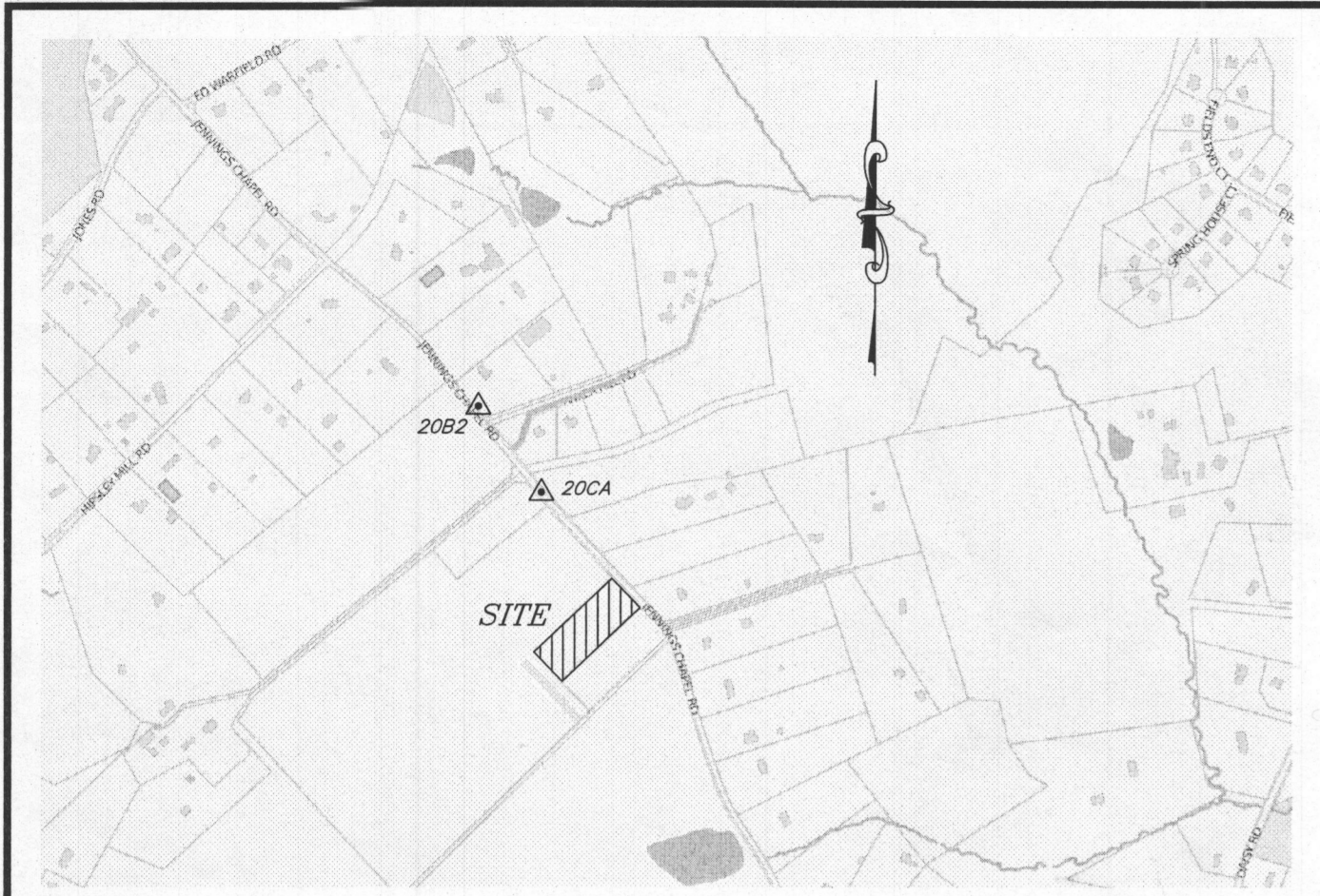
Before building permit B17002425 can be approved the following must be completed.

- An On-Site Sewage Disposal Plan must be created and approved by the Health Dept. with the fee of \$396 paid to the Director of Finance for the septic permit. Once the plan has been approved and the fee has been paid the septic permit may be picked up by the septic contractor. The new septic system must be installed and inspected prior to Health Dept. approval of the building permit.

Wall Check  
OK

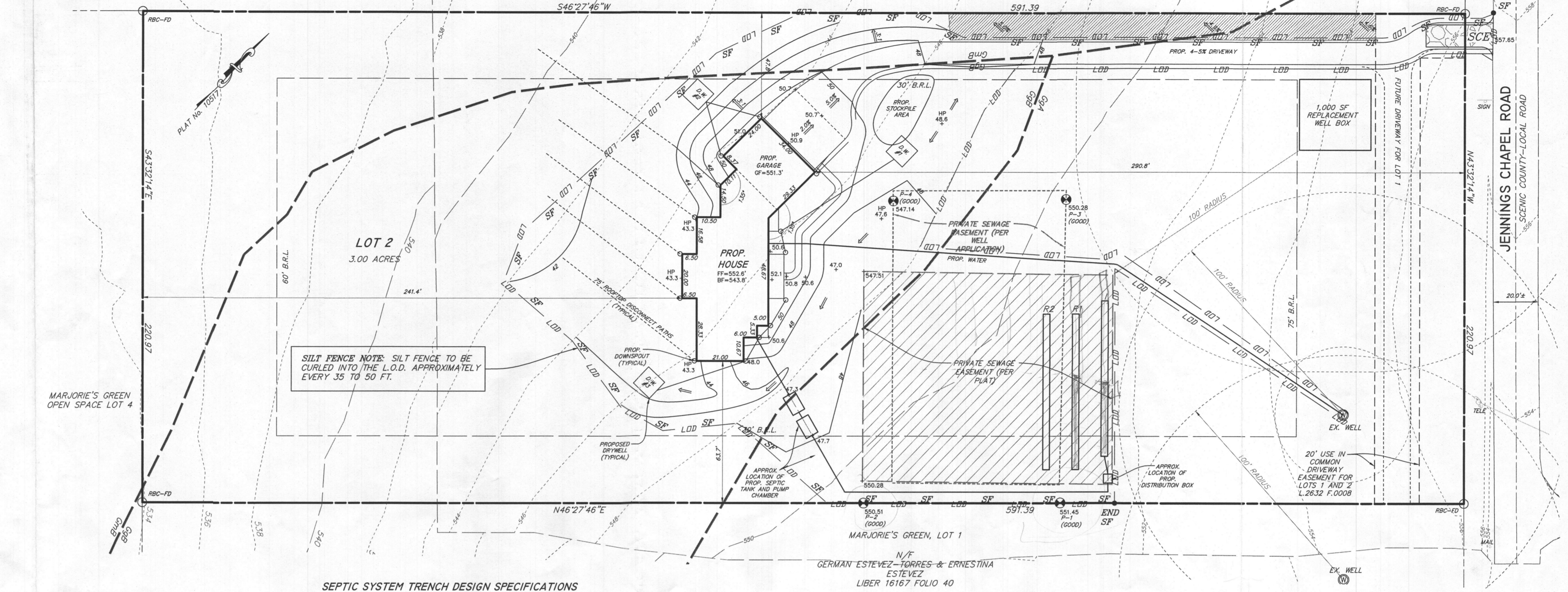
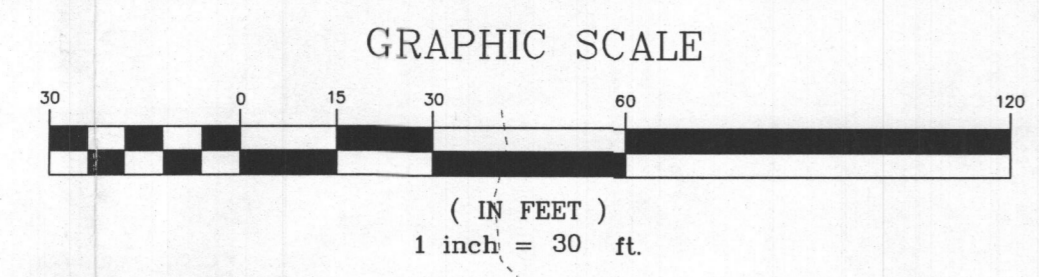
RAF 5/24/2018





VICINITY MAP  
SCALE: 1" = 1,000'  
(ADC MAP 15, F-6)

- GENERAL NOTES**
- EXISTING ZONING: RC-DEO - RURAL RESIDENTIAL
  - MAJOR WATERSHED: PATUENT RIVER
  - HORIZONTAL DATUM: NAD 27; MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS No. 3230002 AND 3230001, PER PLAT No. 10517, VERTICAL DATUM: NAD88
  - TOPOGRAPHY SHOWN INSIDE OF LIMITS WAS FIELD LOCATED BY LAVELLE & ASSOCIATES INC.
  - TOPOGRAPHY SHOWN OUTSIDE OF LIMITS IS FROM HOWARD COUNTY INTERACTIVE MAP OS, LAYER "CONTOURS 2004", AND VARIES SLIGHTLY (1% VERTICAL DIFFERENCE) FROM THE FIELD RUN TOPOGRAPHY SHOWN.
  - SEPTIC AREA SHOWN PER PLAT.
  - NO WETLANDS, STREAMS, FLOODPLAINS, FORESTS, STEEP SLOPES OR ASSOCIATED BUFFERS EXIST WHICH MAY AFFECT THE CONSTRUCTION OF THE PROPOSED DWELLING ON LOT 2.
  - THIS LOT IS EXEMPT FROM THE REQUIREMENTS FOR FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16.1022(b)(2)(i) OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WITH FILING OF A DECLARATION OF INTENT WITH THE OWNERS BUILDING PERMIT.
  - THIS LOT WILL UTILIZE THE CUSTOM SEDIMENT AND EROSION PLAN SINCE THE LIMIT OF DISTURBANCE EXCEEDS THE 30,000 SQUARE FEET THRESHOLD.
  - STORMWATER MANAGEMENT FOR THIS PROPOSAL IS PROVIDED WITH THE APPROVAL OF THE SIMPLIFIED ENVIRONMENTAL CONCEPT PLAN.
  - SOILS LEGEND: THE SITE CONSISTS OF:
    - GyA - GLENELG LOAM (0-3 PERCENT SLOPES),
    - GyB - GLENELG LOAM (3-8 PERCENT SLOPES), &
    - GmB - GLENVILLE SILT LOAM (3-8 PERCENT SLOPES) SOILS.
    - GyA & GyB ARE BOTH ARE HYDROLOGIC SOIL GROUP B SOILS AND GmB IS A HYDROLOGIC SOIL GROUP C/D SOIL.
  - CALCULATIONS & TANK / PUMP SPECIFICATIONS PROVIDED BY J.M. CARULSE.
  - THE PRIVATE SEWAGE DISPOSAL AREA, OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL (COMAR 26.04.03) IS SHOWN. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE AREAS SHALL BECOME HULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH DEPARTMENT OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE AREA. RECORDATION OF A MODIFIED SEWAGE AREA SHALL NOT BE NECESSARY.



**SEPTIC SYSTEM TRENCH DESIGN SPECIFICATIONS**

- SEPTIC SYSTEM NOTES**
- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
  - THE MAXIMUM EARTH COVER OVER THE TANK IS 3 FEET. GREATER EARTH COVER WILL REQUIRE A HEAVY LOAD BEARING TANK.
  - ELECTRICAL WORK FOR THE INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
  - THE WELL HAS BEEN FIELD LOCATED BY LAVELLE & ASSOC. INC., IS ACCURATELY SHOWN, AND HAS A TAG NUMBER OF "10-15-0006".
  - 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.
  - PUMP DOSE: 83.3 GALLONS, PUMP RUN TIME 3.0 MINUTES.
  - TOTAL DYNAMIC HEAD: STATIC HEAD + FRICTION HEAD 6.5' + 1.84' = 8.34' USE 8.0'
  - PUMP TO BE A GOULD WEQL (1/3 HP) SERIES PUMP OR EQUIVALENT.

- INITIAL SYSTEM:**
- APPLICATION RATE: 1.2
  - EFFECTIVE AREA BEGINNING DEPTH: 4.0'
  - BOTTOM MAXIMUM DEPTH: 6.0'
  - TRENCH EFFECTIVE DEPTH: 4.0'
  - DESIGN FLOW: 4 BEDROOMS AT 150 GPD = 4 x 150 GPD = 600 GPD
  - SQUARE FOOTAGE OF DRAIN FIELD REQUIRED: 5000' x SIDEWALL REDUCTION CREDIT (41.7%) / TRENCH WIDTH (3') = 69.5'
  - LINEAR LENGTH OF TRENCH PROVIDED = 70'
  - ONE TRENCH AT 70'
  - EX. GRADE: TRENCH R1: 551.66'
  - INVERT: TRENCH R1: 547.76'
- REPLACEMENT SYSTEM #1:**
- APPLICATION RATE: 1.2
  - EFFECTIVE AREA BEGINNING DEPTH: 4.0'
  - BOTTOM MAXIMUM DEPTH: 6.0'
  - TRENCH EFFECTIVE DEPTH: 4.0'
  - DESIGN FLOW: 4 BEDROOMS AT 150 GPD = 4 x 150 GPD = 600 GPD
  - SQUARE FOOTAGE OF DRAIN FIELD REQUIRED: 5000' x SIDEWALL REDUCTION CREDIT (41.7%) / TRENCH WIDTH (3') = 69.5'
  - LINEAR LENGTH OF TRENCH PROVIDED = 70'
  - ONE TRENCH AT 70'
  - EX. GRADE: TRENCH R1: 551.44'
  - INVERT: TRENCH R1: 547.76'
- REPLACEMENT SYSTEM #2:**
- APPLICATION RATE: 1.2
  - EFFECTIVE AREA BEGINNING DEPTH: 4.0'
  - BOTTOM MAXIMUM DEPTH: 6.0'
  - TRENCH EFFECTIVE DEPTH: 4.0'
  - DESIGN FLOW: 4 BEDROOMS AT 150 GPD = 4 x 150 GPD = 600 GPD
  - SQUARE FOOTAGE OF DRAIN FIELD REQUIRED: 5000' x SIDEWALL REDUCTION CREDIT (41.7%) / TRENCH WIDTH (3') = 69.5'
  - LINEAR LENGTH OF TRENCH PROVIDED = 70'
  - ONE TRENCH AT 70'
  - EX. GRADE: TRENCH R2: 551.28'
  - INVERT: TRENCH R2: 547.40'

**SEPTIC SYSTEM CALCULATIONS**

**Dose Tank Design**  
Design Flow: 600 GPD  
Diameter of Force Main: 2.0"  
Material: Schedule 40 PVC  
Dose Calculation:  
Design Flow: 600 GPD  
Length of Force Main:  
2.0" force main = 150.9'  
Volume of force main:  
50.9' x 17.4 gallons per 100' = 26.3 gallons  
Minimum dose is the greater of:  
Volume of force main: 26.3 gallons  
1/6th the design flow: 1/6 x 600 gallons = 100 gal.  
Therefore, use 100 gallons for dose min.

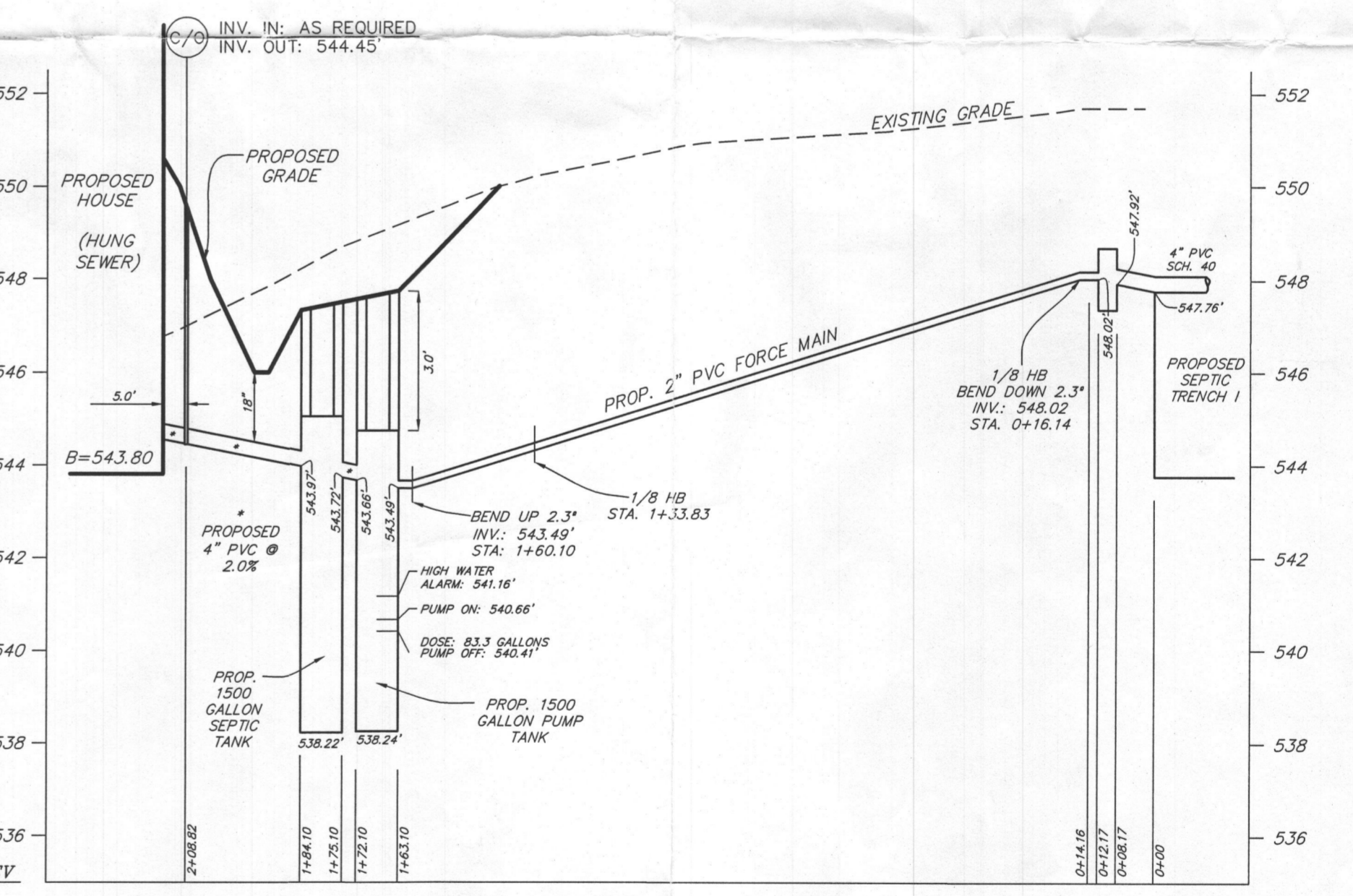
**Pump Design**  
Pump Flow required: 28 GPM  
Dose Amount: 100 gallons  
Pump Run Time: 3.6 minutes

**Calculate Friction Loss in delivery pipe**  
1/8" BEND (45°): 3 @ 2.00' = 6.00'  
GATE VALVE: 1 @ 1.30' = 1.30'  
COUPLINGS: 4 @ 2.00' = 8.00'  
QUICK CONNECT/DISCONNECT: 1 @ 1.35' = 1.35'  
TOTAL EQUIVALENT LENGTH OF PIPE = 16.65'

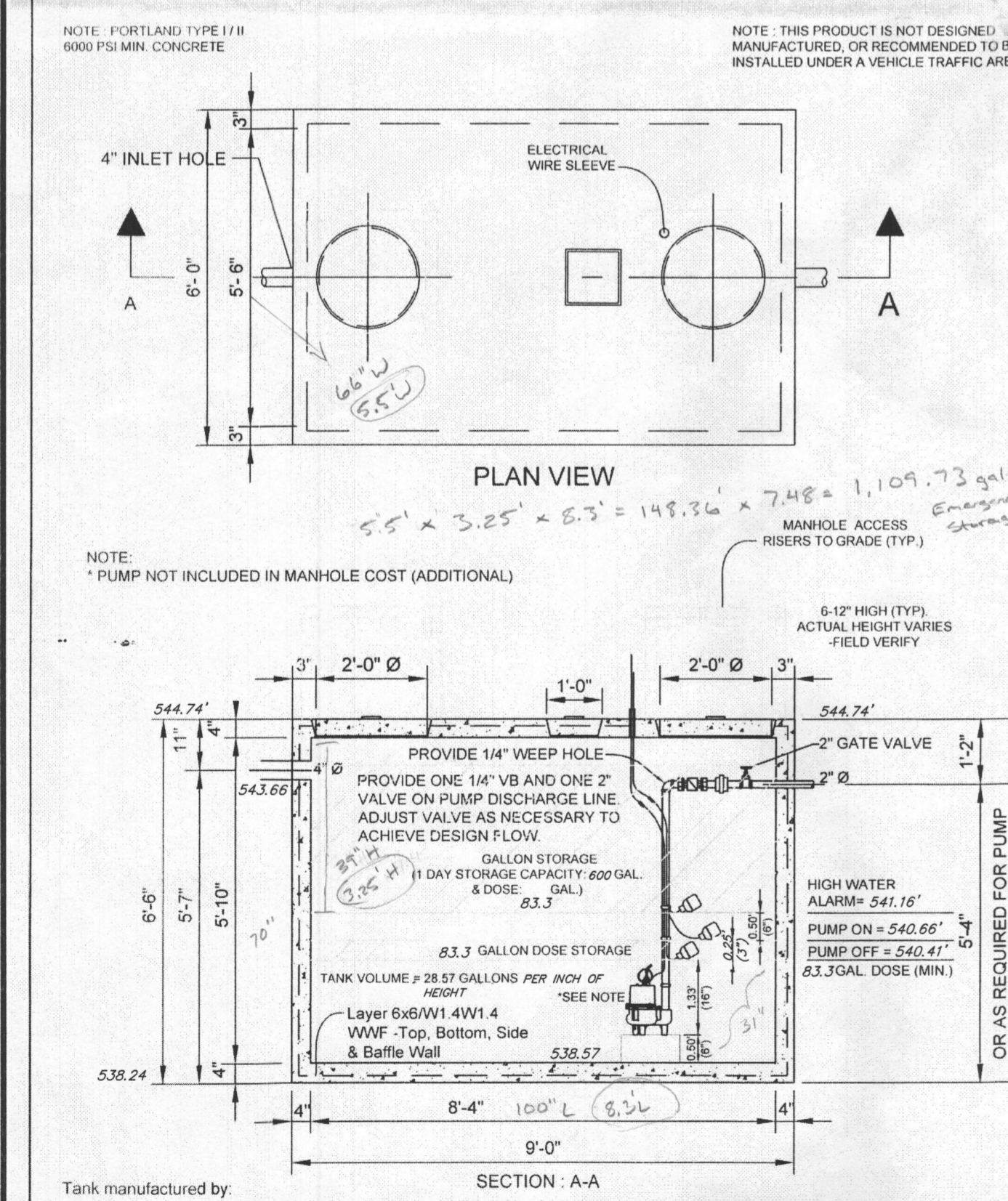
**Flow at 2.0" pipe = 28 gpm**  
Friction loss per 100' (Table 4.4) of 2.0" schedule 40 plastic pipe: 1.10  
Total equivalent length of 2.0" Force Main and appurtenances = 150.9' + 16.65' = 167.55'  
Friction loss in 2.0" pipe = 167.55/100 x 1.10 = 1.84'  
Total Friction Head = 1.84'  
Total Dynamic Head = Static Head + Friction Head  
7.61 + 1.84 = 9.45' use 9.5'

**Pump Chamber Design**  
For pump tank dimensions and detail, see plans.  
Pump chamber elevations:  
Pump grade at top of tank (at inlet): 547.74'  
Top of Pump Tank: 544.74'  
Interior Top of pump tank: 544.41'  
Pump chamber invert in: 543.66'  
High Water Alarm: 541.20'  
Pumps On: 540.70'  
Pump Off: 540.41'  
Bottom inside slab of tank: 538.57'

**Pump Chamber Volumes:**  
Pump On to Pump Off: 13.37 cf (100 gallons +/-)  
Interior Top of pump tank to High Water Alarm: 147.12 cf or 1,100.49 gallons  
Design based on:  
C.R. Semler, Inc. 1500 Gallon Pump Tank  
Goulds WEQL series pump or equivalent  
NOTE: CALCULATIONS & TANK / PUMP SPECIFICATIONS PROVIDED BY J.M. CARULSE / MANUFACTURER.



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



**PLAN VIEW**  
5'5" x 3'25" x 5'3" = 149.36' x 7.48' = 1,109.73 sq ft  
MANHOLE ACCESS RISERS TO GRADE (TYP.)

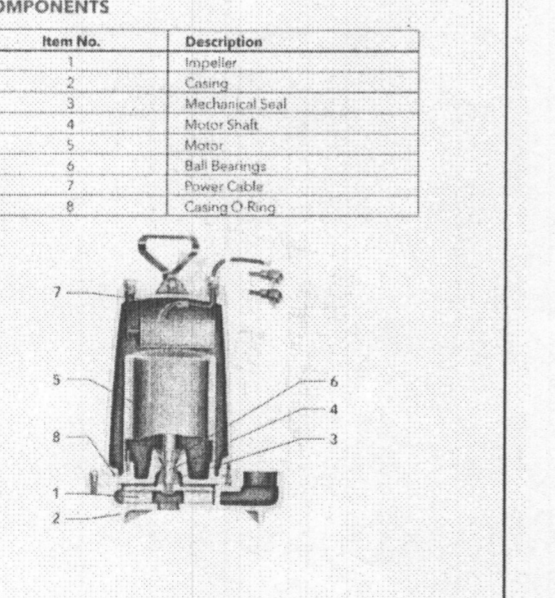
Tank manufactured by:  
**C. R. Semler, Inc.**  
Smithsburg, MD.  
1-301-824-2780

**1500 GALLON TOP SEAM PUMP CHAMBER SINGLE COMPARTMENT**

12-28-89  
REV. 6-94

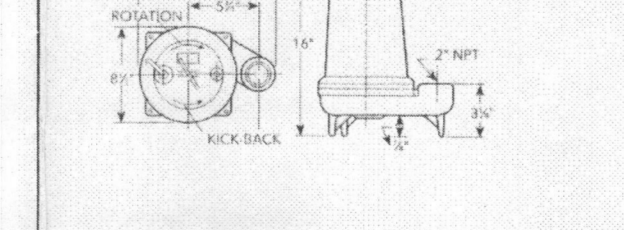
**PERFORMANCE RATINGS** (gallons per minute)

| Order No. | 1700 | 1750 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
|-----------|------|------|------|------|------|------|------|------|------|
| 1         | 1700 | 1750 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
| 2         | 1700 | 1750 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
| 3         | 1700 | 1750 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
| 4         | 1700 | 1750 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
| 5         | 1700 | 1750 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
| 6         | 1700 | 1750 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
| 7         | 1700 | 1750 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
| 8         | 1700 | 1750 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
| 9         | 1700 | 1750 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
| 10        | 1700 | 1750 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |



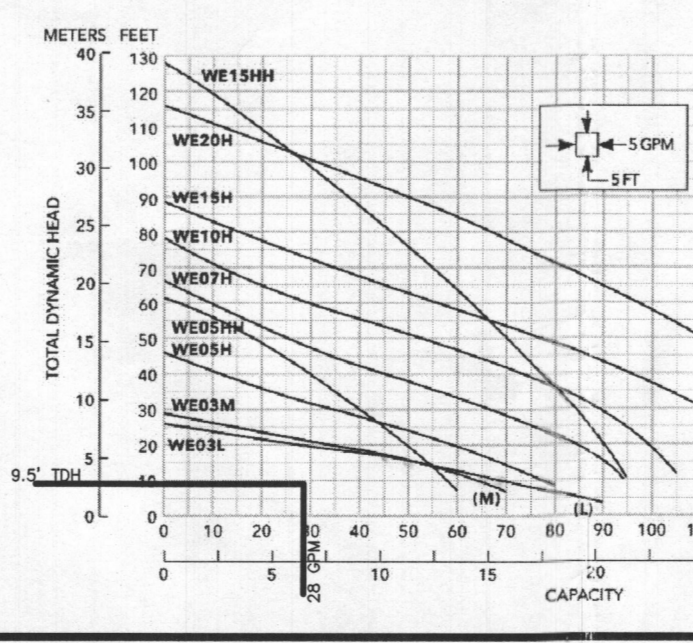
**COMPONENTS**

| Item No. | Description |
|----------|-------------|
| 1        | Pump        |
| 2        | Float Valve |
| 3        | Manhole     |
| 4        | Manhole     |
| 5        | Manhole     |
| 6        | Manhole     |
| 7        | Phase Cable |
| 8        | Control Box |



**xylem**  
Let's Solve Water

Xylem, Inc.  
8889 East Bay Street, Suite A  
Seneca Falls, NY 13158  
Phone: (585) 325-5218  
Fax: (585) 322-5877  
www.gouldssemler.com  
Goulds Semler is a registered trademark of Goulds Semler, Inc. and Goulds Semler Systems.  
© 2012 Xylem, Inc. 04/12/12



**LEGEND**

- PROPERTY BOUNDARY LINE
- BUILDING RESTRICTION LINE (BRL)
- EASEMENT LINE
- ADJOINING PROPERTY BOUNDARY LINE
- LIMITS OF DISTURBED AREA
- SILT FENCE
- SOILS LINE
- NON-ROOFTOP DISCONNECT AREA
- PRIVATE SEWAGE DISPOSAL AREA (SEE NOTE #12)

**OWNERS:**  
JOAN VARGA & ALLAN ROSENBERGER  
6035 RED CLOVER LANE  
CLARKSVILLE, MD 21029

**DEVELOPER:**  
WVLL HOMES  
10025 FOUR POINTS ROAD  
ROCKY RIDGE, MD 21178  
(301) 748-5344

**PROFESSIONALS' REVIEW STATEMENT**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21701, EXPIRATION DATE 06-11-2019, AND

**DUSTIN M. LAVELLE**  
REG. No. 21701, EXP. 6/11/2019

10/27/2017  
DATE

REVISED 10/27/2017 - REVISED PER HEALTH DEPARTMENT COMMENTS

Approved Septic System Plan  
Howard County Health Department  
Signature: [Signature]  
Date: 11/9/17

**LAVELLE & ASSOCIATES INCORPORATED**  
PLANNERS • SURVEYORS  
P.O. Box 372, Frederick, Maryland 21705  
TEL: (301) 695-9722, FAX: (301) 695-9786

RC-DEO  
MARJORIE'S GREEN, LOT 2  
SITUATED AT 3396 JENNINGS CHAPEL ROAD  
4TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

FIELD DATE: 5/23/2017  
DRAWING DATE: 5/31/2017  
SCALE: 1" = 30'  
PROJ. No. 17-076  
FILE: LP3\Marjorie's Green\worksheets.dwg  
DRAWN: DML  
PAGE 1 OF 1

