



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

Facebook: www.facebook.com/hocohealth

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

RECEIPT DATE: 2/3/2015

ONSITE SEWAGE DISPOSAL SYSTEM

P 555731

INSTALLATION
APPROVAL DATE: _____

PERMIT CONSTRUCTION

A _____

PROPERTY ADDRESS: 8601 Reservoir Road

SUBDIVISION: Munro Property

LOT: 4

TAX ID: 05-361109

CONTRACTOR: Bill Ingram/Farm and Home Excavating

EMAIL: _____

CONTRACTOR ADDRESS: 901 Driver Road, Marriottsville, MD 21104

PHONE: 410-442-2139

PROPERTY OWNER: Donald and Rosamond Munro

EMAIL: _____

OWNER ADDRESS: 8601 Reservoir Road, Fulton, MD 20759

PHONE: _____

BAT UNIT MODEL: ECOPOD E60-N

PUMP SIZE: 0.4 HP

PUMP TANK CAPACITY: 1000

DISTRIBUTION SYSTEM: ☒ GRAVITY

☐ LOW PRESSURE DOSED

NUMBER OF BEDROOMS: 4

TRENCHES:	LINEAR FEET REQUIRED: <u>118'</u>	INLET DEPTH: <u>15' 2'</u>
	TRENCH WIDTH: <u>3'</u>	MAXIMUM BOTTOM DEPTH: <u>8' 3.5</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10'</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>1.5"</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	Install BAT unit per plan. Ecopod unit must be fully installed with inspections approved by Health Department and start-up certificate received from manufacturer by March 13, 2015 or this permit will be null and void. <i>2x59' Trenches</i>	

ISSUED BY: Hank Oswald

ISSUE DATE: 2/23/2015

EXPIRATION DATE: 3/13/2015

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 SEPTIC 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

NOTE: AN INDIVIDUAL CERTIFIED BY MDE AND THE MANUFACTURER FOR BAT INSTALLATION MUST BE PRESENT AT ALL TIMES DURING BAT INSTALLATION.

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

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

PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.

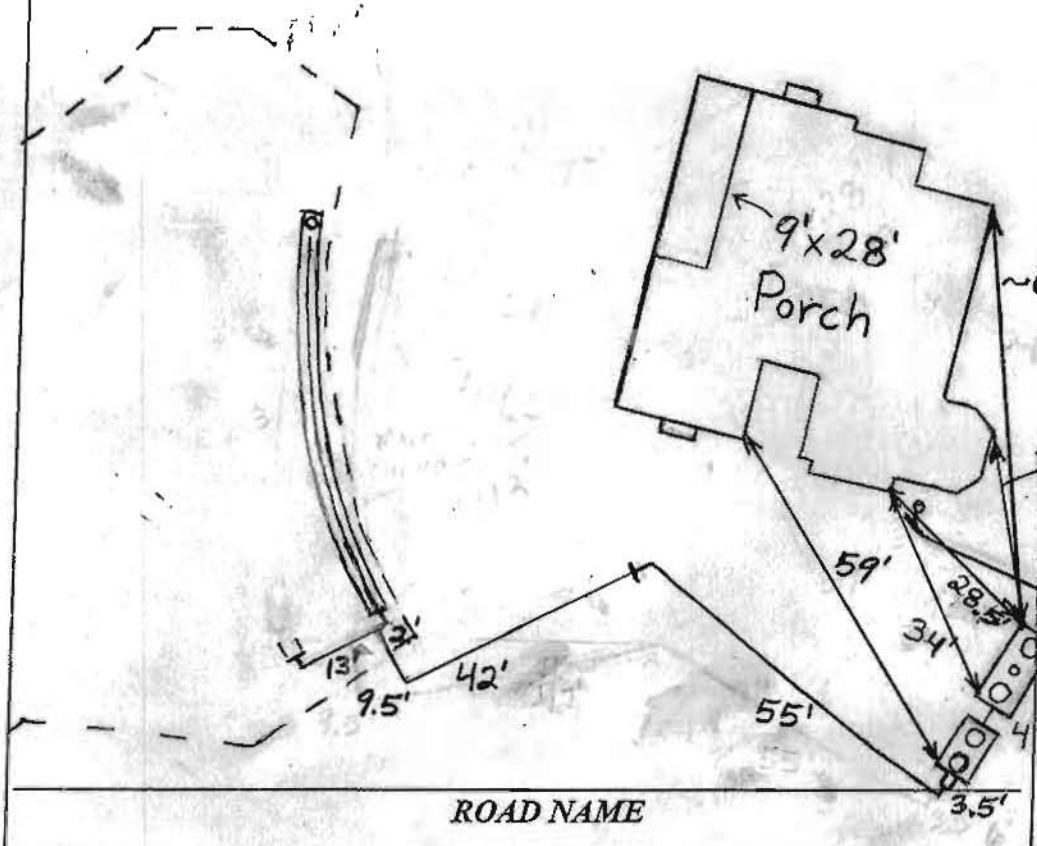
CALL 410-313-1771 TO SCHEDULE INSPECTIONS.

NOT TO SCALE

20.5'

TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
3'	2'	3.5'
NUMBER OF TRENCHES 2		
TOTAL LENGTH 125'		
ABSORPTION AREA 375+Sidewall		
DISTRIBUTION BOX LEVEL N/A		
DISTRIBUTION BOX BAFFLE N/A		
DISTRIBUTION BOX PORT N/A		

SEPTIC TANK DATA	
SEPTIC TANK 1 LEVEL	Yes
MANUFACTURER	Ecopod Babylon
CAPACITY	2000 GAL
SEAM LOC	Top
TANK LID DEPTH	0.5'-1.5'
BAFFLES	Yes
BAFFLE FILTER	N/A
MANHOLE LOC	Front+Rear
6" PORT LOC	Middle
WATERTIGHT TEST	No
SLOTTED	N/A
DATE ON LID	1/14/2015
PUMP/SEPTIC TANK LEVEL	Yes
MANUFACTURER	Babylon
CAPACITY	1000 GAL
SEAM LOC	Top
TANK LID DEPTH	1.5'-2.5'
BAFFLES	Front
BAFFLE FILTER	No
MANHOLE LOC	Front+Rear
6" PORT LOC	None
WATERTIGHT TEST	No
SLOTTED	No
DATE ON LID	11/18/2014



PRE-CONSTRUCTION:

2/24/2015 Trenches laid out on contour. Install system similar to plan. Keep tanks 20' from house. (BB)

INSTALLATION: 2/25/2015 Tanks installed and connected to house. (BB)

2/27/2015 Trenches almost finished. Saw O.K. to cover trenches without start-up if necessary. Rain expected. (BB)

3/2/15 Pump test of laterals given. Measured 42" + in lower lateral and 40" in upper lateral 1/4 HP myers pump used (SRM4) Contractor throttled back almost 1/4 turn! System complete. Need start-up from manufacturer. (Kew)

MEMBER N. C. B. V. A.

MEMBER P. C. B. V. A.

Babylon

VAULT

SINCE 1930

PHONE:
410-848-0393
FAX:
410-848-3551

Burial Vaults - Septic Tanks

925 WAKEFIELD VALLEY ROAD
NEW WINDSOR, MD 21776

Five Year Initial Service Policy On Site Wastewater Treatment System

Brand Name: <u>Ecopod</u>	Model Number: <u>Ecopod 60</u>
Purchase Date: <u>2/25/15</u>	Serial Number: <u>E60N1022600A</u>

INITIAL POLICY:

A five (5) year service policy shall be furnished to the user by the Installer.

This policy is included in the original purchase price and shall provide the following:

1. An inspection/service call every six months which includes inspections, adjustment and servicing of the mechanical and electrical component parts as necessary to ensure proper function for the first year. And once a year thereafter.
2. An effluent quality inspection every six months consisting of a visual check for color, turbidity, scum overflow, and an examination for odors for the first year. And then once a year thereafter.
3. A sample shall be pulled from the aeration tank once a year as described in the "Solids Removal" Section to determine if there is an excess of solids in the treatment plant. If the test results determine if there is an excess of solids in the treatment plant. If the test results determine a need for solids removal, the user will bear the cost and responsibility for doing so.
4. If any improper operation is observed which cannot be corrected at that time, the user shall be notified immediately in writing of the conditions and the estimated date of correction.

Violations of Warranty including shutting off the electric current to the system for more than 24 hours, disconnecting the alarm system, restricting ventilation to the aerator, overloading the system above its rated capacity, or introducing excessive amounts of harmful matter into the system, or any other form of unusual abuse.

**THIS POLICY DOES NOT INCLUDE PUMPING
SLUDGE FROM UNIT IF NECESSARY**

PERMITTING AUTHORITY:

SYSTEM OWNER:

INSTALLATION LOCATION:

DISTRIBUTOR:

8601 Reservoir Rd
Fulton, MD 20759

Babylon Vault Company Inc.
925 Wakefield Valley Rd.
New Windsor, MD 21776

INSTALLER:

SERVICE COMPANY:

Farm + Home Excavating
901 Diner Road
Marysville, MD 21104

Steven R. Koenig
Service Operators License Number: _____

I agree to abide by the service policy as stated above: _____

Witness: _____

e3 Environmental LLC

302-258-0706 www.e3onsite.com

ECOPOD-N Completion Statement

Installation Information

Owners Name

Street

City

State

Zip

8601 Reservoir Rd.

Fulton

MD

20759

of Bedrooms / GPD

4

Repair

New Construction

☐

☒

Installation Company

Company

Certified Installer

Street

City

State

Zip

Farm + Home Excavating

901 Driver Road

manassasville

MD

21104

Installed Date

2/25/15

Startup Date

3/2/15

ECOPOD-N

Model #

E50

E60

E75

E100

E150

☐

☒

☐

☐

☐

Serial #

E6CNO3260CA

Blower Voltage

Blower Running Amps

Inches of water over

media with blower

turned off

Vent Installed

Tanks and Risers Water

tight

Alarm Functional

Good

Good

2 inchs

yes

yes

yes

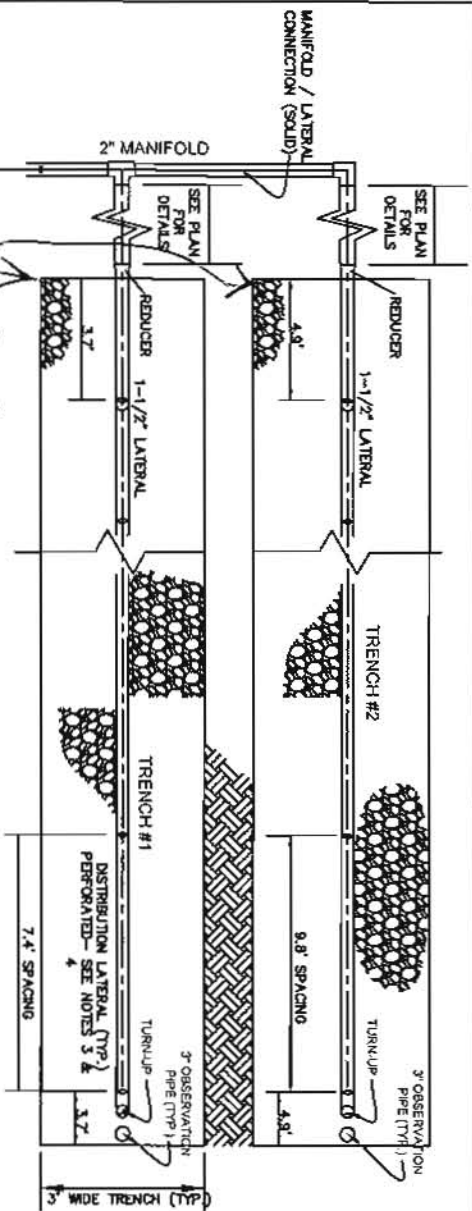
I hereby certify that the ECOPOD-N wastewater treatment system has been installed and started up in accordance with the construction permit and is in compliance with the manufacturers recommendations

Company Babylon Vault Co.

Signature Steven R Koortz

Printed Name Steven R Koortz

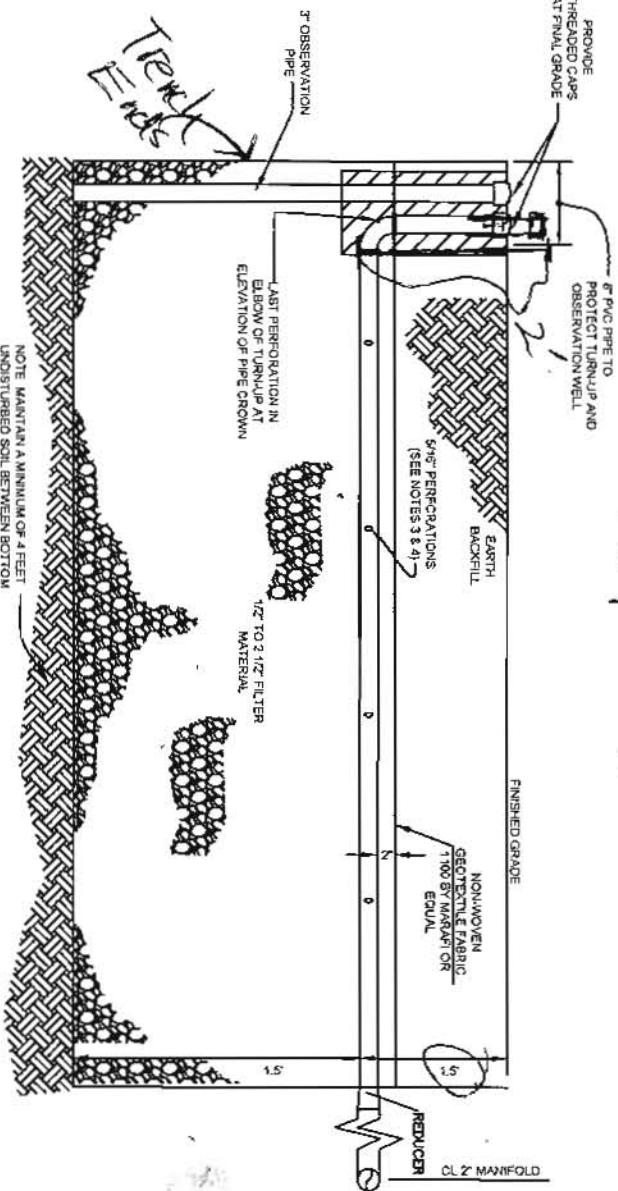
Date 3/6/15



DOSING FIELD TRENCH DETAIL

NOT TO SCALE

CB per SS/PS



NOTE: MAINTAIN A MINIMUM OF 4 FEET UNDISTURBED SOIL BETWEEN BOTTOM OF TRENCH AND TOP OF GROUND WATER ELEVATION.

DISTRIBUTION LATERAL PROFILE DOSING FIELDS

NOT TO SCALE

NOTES:

1. CONTRACTOR TO BUILD / INSTALL 3" WIDE DISPOSAL TRENCHES.
2. DISTRIBUTION LATERALS TO BE INSTALLED ON LEVEL GRADE. BOTTOM OF TRENCH TO BE EXCAVATED ON LEVEL GRADE.
3. CONTRACTOR TO DRILL HOLES IN DISTRIBUTION LATERALS AS SHOWN.
4. INSTALL PIPE HOLES DOWNWARD.
5. THE LAST HOLE IN THE LATERALS MUST BE LOCATED AT THE CROWN OF THE INVERT.



**SILL
ENGINEERING
GROUP, LLC**

2000 North Ridge Road, Suite 100
Baltimore City, Maryland 21043
Phone: 410.331.5180
Fax: 410.331.5183
Email: info@silleng.com
Civil Engineering for Land Development

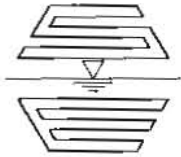
PROFESSIONAL ENGINEER'S SEAL: I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND, LICENSE NO. 2002, EXPIRATION DATE: APRIL 20, 2015

OWNER:

DONALD J. MUNRO
3914 HUNTINGTON ST. NW
WASHINGTON, D.C. 20015
(202) 879-3222

ADDENDUM

SITE PLAN FOR B.A.T. INSTALLATION
A-537287
8601 RESERVOIR ROAD
MUNRO PROPERTY, LOT 4
TITLE DEEDS: 3704/328 AND 3835/76
TAX MAP 45, GRID 12, PARCEL 9 & PD PARCEL 50
5TH ELECTION DISTRICT, HOWARD COUNTY, MD
NOT TO SCALE DATE: 2/12/2015



3300 North Ridge Road, Suite 160
Ellicott City, MD 21043
Website: www.sillengineering.com

Office: 443-325-7682
Fax: 443-325-7685
Email: info@sillengineering.com
Civil Engineering for Land Development

SILL ENGINEERING GROUP, LLC

Munro Property
Lot 4
8601 Reservoir Road

Plot Plan
Low Pressure Dosing System Report

'OK' MB 2/12/15

February 02, 2015

Prepared For:

Shanaberger & Lane
8726 Town & Country Boulevard
Ellicott City, Maryland 21043



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. 32025, Expiration Date: June 20, 2015

Project #14-053

Munro Property
Lot 4
8601 Reservoir Road
February 02, 2015

OK
red

Pressure Network Design

- Design Flow: 600 gpd
- The absorption beds in the Initial System are each 59.0' long and the distribution network is an End Feed Network.
- For Perforation Size, Number, and Spacing see Pressure Distribution table.
- Diameter of lateral = 1.5"
- Spacing between laterals = 13'
- Number of laterals = 2
- Diameter of force main = 2.0"
- Diameter of manifold = 2.0"
- Material: Schedule 40 PVC

Septic System Trench Design Specifications

- Initial System And Replacements:
 - Application Rate: 1.2
 - Effective Area Beginning Depth: 1.5'
 - Bottom Maximum Depth: 3.0'
- 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:
 - Trench Width (W) = 3'
 - Trench Effective Depth (D) = 1.5'
 - $(W+2) / (W+1+2D) \times 100 = 71\%$
- Linear Length of Trench Required:
 - Drain field Square Footage (500) x Sidewall Reduction Credit (71%) / Trench Width (3') = 118'
- Linear Length of Trench Provided = 118
 - Two trenches 59.0 lf each

Pumping System Design

- Dose Calculations:
 - Design Flow: 600 gpd
 - Length of force main and manifold
 - 2.0" force main = 111.2'
 - 2.0" manifold = 43.2'
 - Volume of force main:
 - $111.2' \times 17.4 \text{ gallons per } 100' = 19.3 \text{ gallons}$

MB
OK

- Volume of manifold:
 - $43.2' \times 17.4 \text{ gallons per } 100' = 7.5 \text{ gallons}$
- Length of 1.5" laterals: $59.0' \times 2 = 118.0'$
- Volume of laterals:
 - $118.0' \times 10.6 \text{ gallons per } 100' = 12.5 \text{ gallons}$
- Minimum dose is the greater of:
 - Volume of force main and manifold + (5 x Volume of the laterals):
 $19.3 + 7.5 \text{ gallons} + (5 \times 12.5 \text{ gallons}) = 89.3 \text{ gallons}$
 - Or
 - $1/6^{\text{th}}$ the design flow:
 - $1/6 \times 600 \text{ gallons} = 100.0 \text{ gallons}$

Use 100 gallons for dose

- Pump Design:
 - Pump flow required: 27 gpm (see Pressure Distribution table for initial system)
 - Dose amount: 100 gallons
 - Pump run time: 3.7 minutes
 - Static head (see profile for detail): 6.33' use 6.5'
 - Friction head calculation (Table 4.3):

Pipe size	1.5"	2.0"
1/4 Bend (90°)	-	1 @ 8.0' = 7.0'
1/8 Bend (45°)	-	5 @ 4.0' = 20.0'
1/16 Bend (22.5°)	2 @ 2.0' = 4.0'	2 @ 2.0' = 4.0'
1/32 Bend (11.25°)	-	-
Gate Valve	-	1 @ 1.3' = 1.3'
Standard Tee	-	-
Run Tee	-	1 @ 2.0' = 2.0'
Cross	-	-
Reducer	-	2 @ 1.4' = 2.8'
Couplings	4 @ 1.5' = 6.0'	7 @ 2.0' = 14.0'
Total Equivalent Length of pipe	10.0'	51.1'

- Flow at 2.0" pipe = 27 gpm
 - Friction loss per 100' (Table 4.4) of 2.0" schedule 40 plastic pipe: 1.28
 - Total equivalent length of 2.0" FM, manifold and appurtenances =
 $111.2' + 43.2' + 51.1' = 205.5'$
 - Friction loss in 2.0" pipe = $205.5'/100 \times 1.28 = 2.63'$
- Flow at 1.5" pipe = 13.5 gpm
 - Friction loss per 100' (Table 4.4) of 1.5" schedule 40 plastic pipe: 1.25
 - Total equivalent length of 1.5" laterals and appurtenances = $118' + 10.0' = 128.0'$
 - Friction loss in 1.5" pipe = $128.0'/100 \times 1.25 = 1.6'$
- Total Friction Head = $2.63' + 1.6' = 4.23'$

Munro Property
Lot 4
8601 Reservoir Road
February 02, 2015

OK
rdb

- Total Dynamic Head = Static head + Distal Head + Friction head
- $6.5' + 2.0' + 4.23' = 12.73'$ use 13'

- Pump Chamber Design:

- For pump tank dimensions and detail, see plans.
- Pump chamber elevations:

Proposed grade at top of tank (at inlet): 380.80

Top of pump tank: 378.95

Pump chamber invert in: 377.95

High Water Alarm: 375.83

Pump On: 375.33

Pump Off: 374.95

Bottom inside slab of tank: 373.45

> 2.12

74.47 ft³ or 55 gal

- Pump Chamber volumes:

Invert In to Pump On: 92.04 cf or 689 gallons

Pump On to Pump Off: 13.35 cf or 100 gallons

- Design based on:

- Ecopod-N Series E60-N or equivalent
- Meyers SRM4 series pump or equivalent

PRESSURE DISTRIBUTION

Munro Property, Lot 4
8601 Reservoir Road

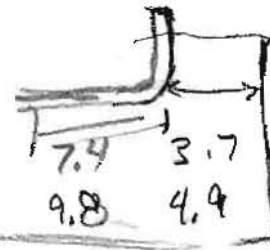
Lateral No.	Ex. Grd Elev. (ft)	Invert Elev. (ft)	Trench Bottom Elev. (ft)	Lateral Length (ft)	Head (ft)	Orifice Diameter (in)	Orifice Flow Rate (gpm)	Orifice Spacing (ft)	Number of Orifices	Trench Flow Rate (gpm)	Zone
1	381.0	379.5	378.0	59.0	2.0	5/16	1.63	7.4	8	13.04	3.44 Initial
2	379.2	377.7	376.2	59.0	3.8	5/16	2.30 2.24	9.8	6	13.80 13.80	
										26.48 - 26.84	

TOTALS

118

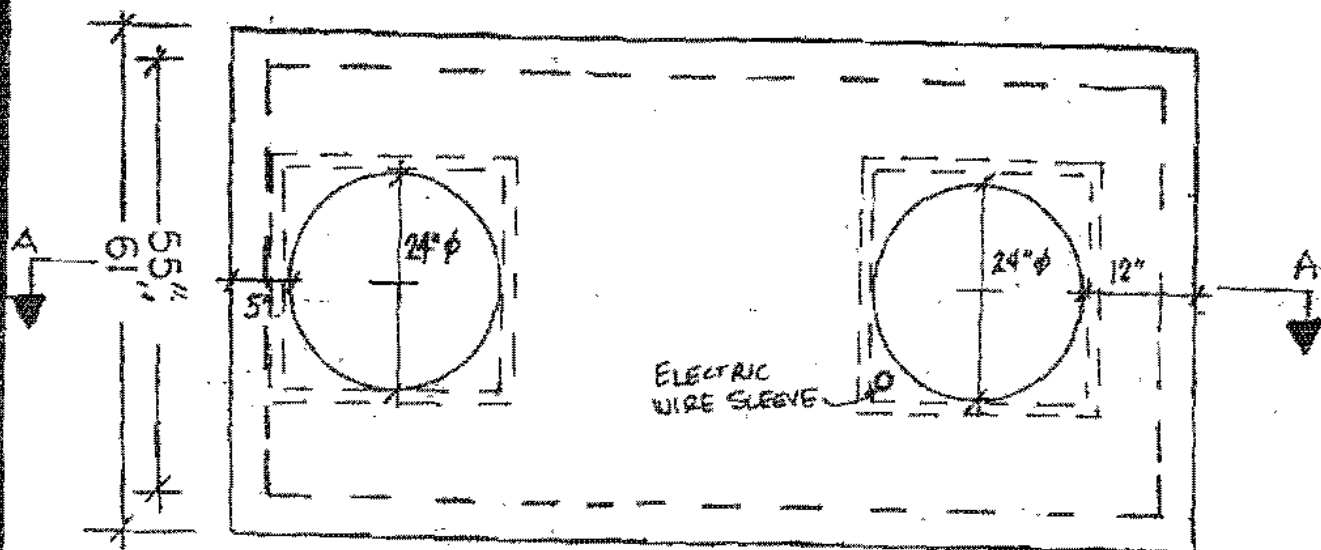
26.84
Use 27 gpm

Invert depth = 1.5
Trench depth = 3

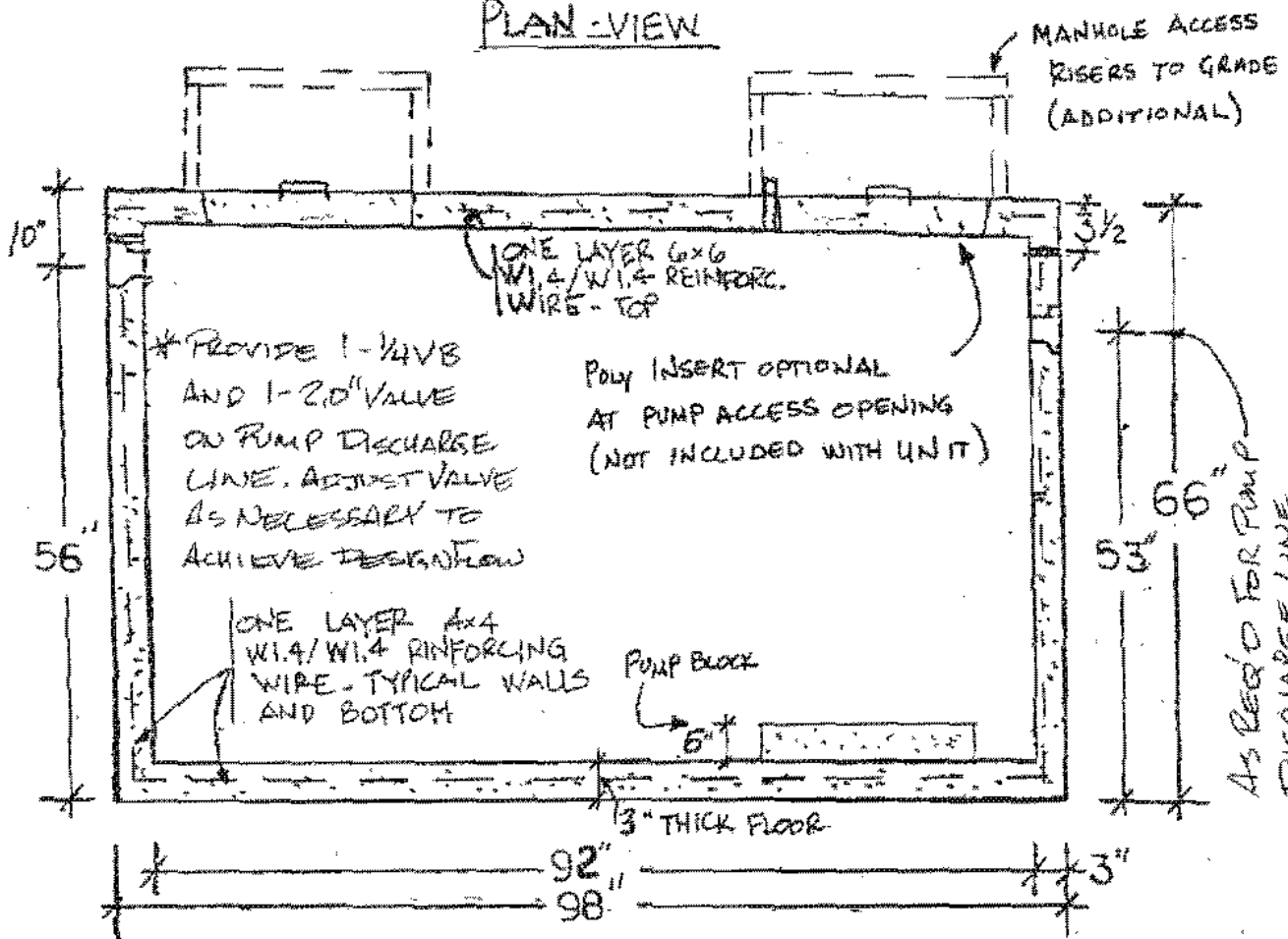


OK
2/8

NOTE: PORTLAND TYPE I/II
4000 PSI CONCRETE.



PLAN - VIEW



SECTION: A-A

NOTE: This product is not designed,
manufactured, or recommended to be
installed under a vehicle traffic area.

C. R. Semler, Inc.
11664 Marlerville Road
Smithsburg MD

1000 GALLON - SINGLE COMPARTMENT
TOP SEAM PUMP CHAMBER
Scale: NIS.

2-24-89
Page-

MYERS® SRM4 SERIES

The Myers SRM4 series residential sewage pumps are considered by industry pros to be extremely reliable. The specially designed recessed impeller allows 2" solids to easily pass through without jamming. The cast iron housing and volute case handle the harshest conditions and will provide years of service. Automatic and manual operation models available.

APPLICATIONS

Sewage, high-capacity sump, effluent

SPECIFICATIONS

Capacities – 95 GPM (360 LPM)
Shut-off Head – 19' (5.8 m)
Solids Handling – 2" (50.8 mm)
Liquids Handling – Septic effluent and sewage
Intermittent Liquid Temperature – Up to 140°F (60°C)
Motor/Electrical Data – 4/10 HP, permanent split capacitor type, 115V, 12A, 1Ø, 60Hz; 230V, 6A, 1Ø, 60Hz
Acceptable pH Range – 5-9
Discharge, NPT – 2" (50.8 mm)
Housing – Heavy cast iron
Power Cord – 10' (20' optional)
Impeller – Recessed, thermoplastic
Volute Case – Cast iron
Shaft Seal – Type 11A, carbon and ceramic



FEATURES

Versatile Applications

Effective and efficient performance in septic tank sewage, effluent and high-capacity sump applications

Handles the Heat

High-endurance, oil-cooled motor for continuous bearing lubrication and critical heat dissipation

Powerful Torque

High-torque, permanent split capacitor (PSC) motor; no starting switches or relays to wear out

Motor Protection

Long-life carbon/ceramic seal provides extra protection against water leaks

Excess Heat Detection

Internal heat sensor provides overload protection; automatically resets when motor cools to a safe operating temperature

Free-flow Design

Recessed impeller design also improves the free flow of solids up to 2"

Longer Bearing Life

Recessed impeller reduces radial bearing loads, increasing bearing life

Automatic and Manual

Automatic tethered or vertical switch models (with piggyback plug), or manual operation models

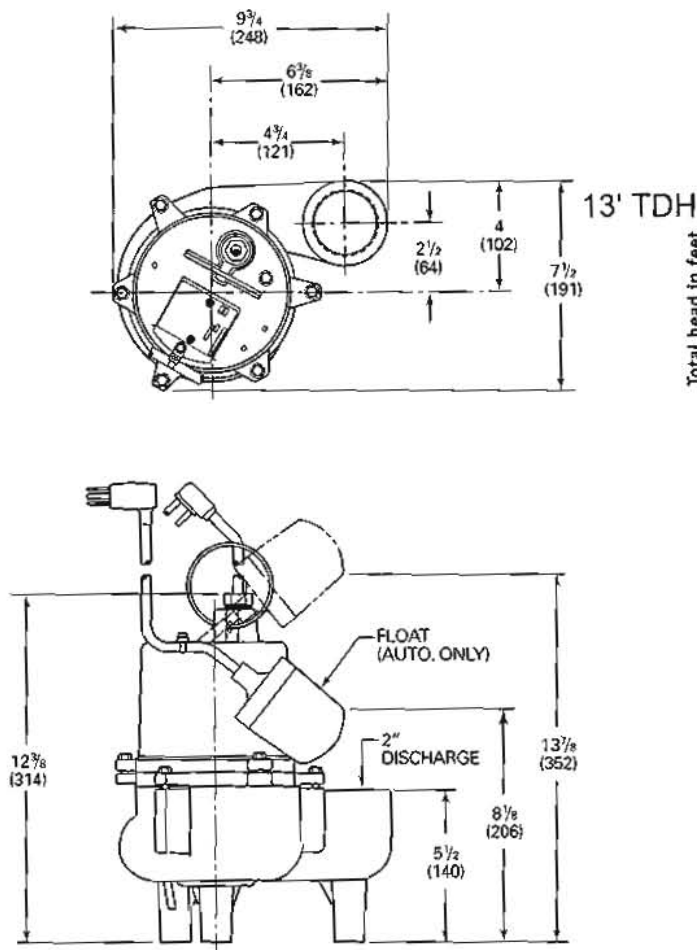
MYERS® SRM4 SERIES

ORDERING INFORMATION

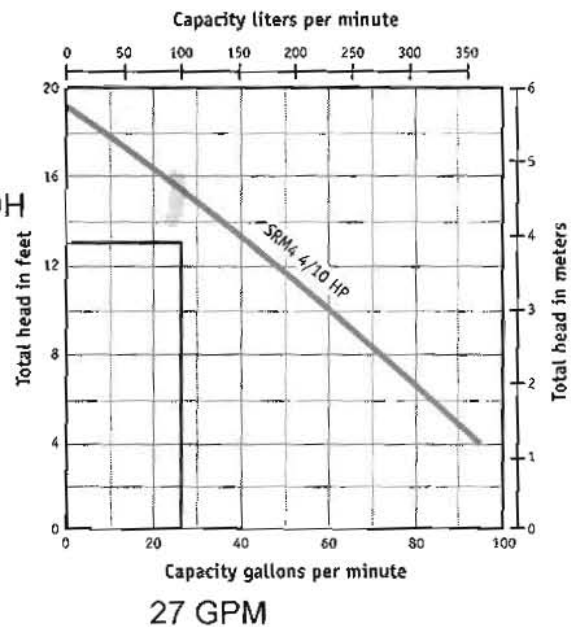
Catalog Number	HP	Volts	Phase/Cycles	Amps	Discharge Size	Switch Type	Cord Length	Approx. Wt. Lbs.
SRM4P-1	4/10	115	1/60	12	2"	Tethered Automatic*	10'	40
SRM4PC-1	4/10	115	1/60	12	2"	Tethered Automatic*	20'	40
SRM4M1C	4/10	115	1/60	12	2"	Manual	20'	39
SRM4PC-2	4/10	230	1/60	6	2"	Tethered Automatic*	20'	40
SRM4M2C	4/10	230	1/60	6	2"	Manual	20'	39
SRM4V-1	4/10	115	1/60	12	2"	Vertical Automatic*	20'	40
SRM4V-2	4/10	230	1/60	6	2"	Vertical Automatic*	20'	40

*Piggyback

DIMENSIONS



PUMP PERFORMANCE



BABYLON VAULT COMPANY

925 Wakefield Valley Road
New Windsor, Maryland 21776
410-848-0393

Purchaser Farm & Home
Address 8601 Reservoir Rd Fulton MD
Delivery Order date Feb 5, 2015
Name of Job MUNRO Property
Tank Size Ecopod 60
Distribution Box 5-hole w/c

RISERS ROUND 24"		RISERS ROUND 30"	
6"		6"	
12"		12"	
LID		LID	
4" Fernco		5 x 4 Fernco	
Resin Paper		Speed Levelers	

REG. LIGHT WEIGHT		SCH 40 PIPE	
4" Solid	4"	Cleanouts 4"	
4" Perforated	6"	Cleanouts 6"	
L's	4" Coupler	Glue Primer	
45°	6" Coupler	Glue	
Y	TR's	22-1/2	
T	L's	T	
22-1/2	45°	Y	

Directions Please give week notice on Del.

Received By _____

Per _____

Hauled By _____

Steven K...
G.M. Babylon Vault.

8601 Reservoir Rd

Clerk of the Circuit Court for
Howard County
Land Records/Licensing

The Thomas Dorsey Building
9250 Bendix Road
Columbia, MD 21045
410-313-5850

=====

LR - Agreement Recording Fee		
	1x 20.00	20.00

Grantor/Grantee Name: Munro
Reference/Control #: 193

LR - Agreement Surcharge

	1x 40.00	40.00
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=====

SubTotal:		60.00
Total:		60.00

=====

REV-Check-BOA		60.00
Number : 15181		

02/23/2015 13:03 CC13-KD
#3879046 /1342/109
~ Thank you for visiting us today ~



Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

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

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

www.hchealth.org

Facebook: www.facebook.com/hocohealth

Twitter: HowardCoHealthDep

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

OPERATION AND MAINTENANCE AGREEMENT
FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM
HAVING AN ADVANCED PRE-TREATMENT SYSTEM

THIS AGREEMENT is made this 20th day of FEBRUARY, 2015, among DONALD J. HANCOCK, hereinafter collectively referred to as "Owner", and the Howard County Health Department hereinafter referred to as the "County".

WHEREAS, Owner is the owner or contract owner of a parcel of land located at 9601 RESERVOIR ROAD, in the 5th Election District of Howard County, Maryland, and the deed to same is recorded or shall be recorded among the Land Records of Howard County, Maryland in Liber 5704 Folio 363.

WHEREAS, The Lot is suitable for the installation of a conventional on-site sewage disposal system with an advanced pre-treatment system, utilizing best available technology to perform nitrogen reduction, in accordance with the Code of Maryland Regulations 26.04.02.07, effective January 1, 2013. The pre-treatment device being installed is VELTA EPOD-N.

NOW, THEREFORE, the parties hereto agree as follows:

- A. Owner hereby grants to the County the right to enter upon the Lot at any reasonable time for access to the system to make periodic inspections and the Owner agrees to provide any information and data in Owner's possession reasonably requested and needed by the County to develop accurate and thorough test results.
- B. Owner acknowledges and agrees that neither the County nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.
- C. The Owner will devote reasonable care and effort to the operation and maintenance of the system in perpetuity or until a public sewer connection is made so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.
- D. The Owner agrees to enter into a contract reasonably acceptable to the Owner and the County with a private entity to operate and maintain on a regularly scheduled basis an approved advanced pre-treatment system. The owner shall supply a copy of the contract to the County when it is renewed or altered.
- E. This agreement shall run with the land and upon Owner's taking title to the Lot shall bind the Owner, their heirs, successors, and assigns to the provisions of the agreement as long as the property is in existence and after installation of the system. Owner further agrees that they shall inform in writing any subsequent purchaser or lessee of the Lot that the system shall require

maintenance or other attention. Upon taking title to the Lot, the Owner agrees to cause this agreement to be recorded in the Land Records of Howard County and assure that it becomes part of the Deed for the subject property in order that prospective buyers may be aware of the special conditions affecting this property.

F. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take any other action which is now or may hereafter be within its authority.

G. This agreement may be voided at any time at the discretion of the County.

H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.

I. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

J. Owner acknowledges and agrees that interior renovations to increase the number of bedrooms or an increase in living space shall not be permitted without approval from the County.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above.

Beil Ryan 2/20/2015
Howard County Health Department

[Signature] 2/15/15
Owner #1 Signature Date

Donald J. Munro
Owner #1 Print Name

Owner #2 Signature Date

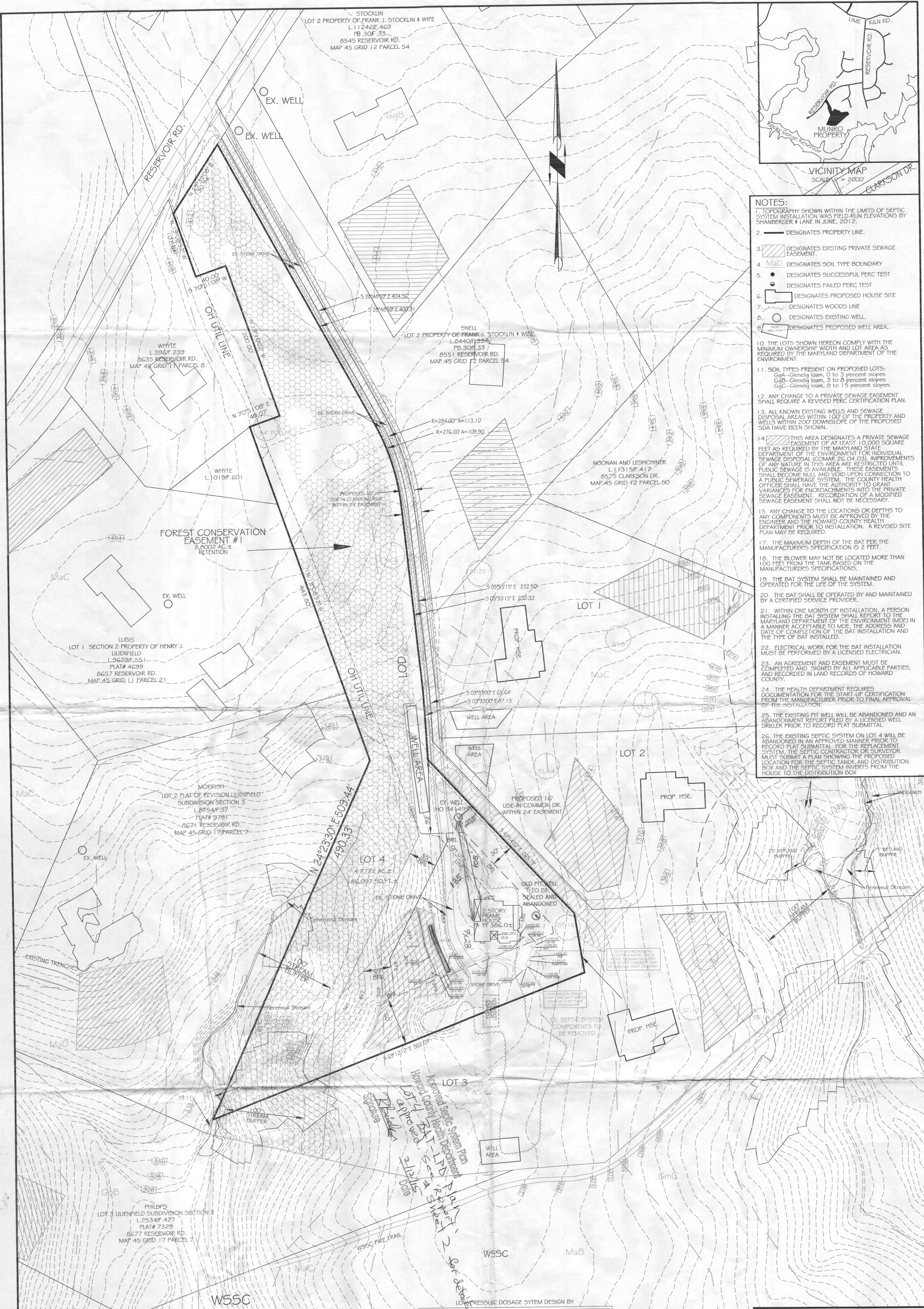
Owner #2 Print Name

Buyer #1 Signature Date

Buyer #1 Print Name

Buyer #2 Signature Date

Buyer #2 Print Name

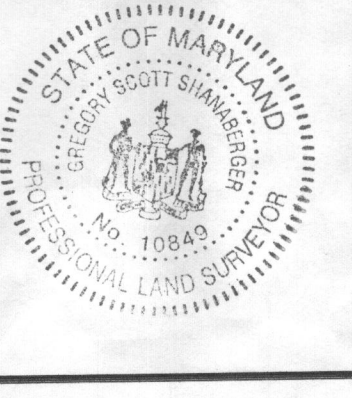


- NOTES:**
1. TOPOGRAPHY SHOWN WITHIN THE LIMITS OF SEPTIC SYSTEM INSTALLATION WAS FIELD-RUN ELEVATIONS BY SHANABERGER & LANE IN JUNE, 2012.
 2. ——— DESIGNATES PROPERTY LINE.
 3. [Hatched Area] DESIGNATES EXISTING PRIVATE SEWAGE EASEMENT.
 4. [Dashed Line] DESIGNATES SOIL TYPE BOUNDARY.
 5. ● DESIGNATES SUCCESSFUL PERC TEST. ○ DESIGNATES FAILED PERC TEST.
 6. [Rectangle] DESIGNATES PROPOSED HOUSE SITE.
 7. [Wavy Line] DESIGNATES WOODS LINE.
 8. ○ DESIGNATES EXISTING WELL.
 9. [Circle with Cross] DESIGNATES PROPOSED WELL AREA.
 10. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND RUN ELEVATIONS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
 11. SOIL TYPES PRESENT ON PROPOSED LOTS:
GgA—Glenelg loam, 0 to 3 percent slopes
GgB—Glenelg loam, 3 to 8 percent slopes
GgC—Glenelg loam, 8 to 15 percent slopes
 12. ANY CHANGE TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERC CERTIFICATION PLAN.
 13. ALL KNOWN EXISTING WELLS AND SEWAGE DISPOSAL AREAS WITHIN 100' OF THE PROPERTY AND WELLS WITHIN 200' DOWNSLOPE OF THE PROPOSED SDA HAVE BEEN SHOWN.
 14. THIS 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 (COMAR 26.04.03). IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.
 15. 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.
 17. THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 10 FEET.
 18. THE BLOWER MUST NOT BE LOCATED MORE THAN 100 FEET FROM THE TANK AND 100 FEET FROM THE MANUFACTURER'S SPECIFICATIONS.
 19. THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
 20. THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
 21. WITHIN ONE MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) IN A MANNER ACCEPTABLE TO MDE, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.
 22. ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
 23. AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN LAND RECORDS OF HOWARD COUNTY.
 24. THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.
 25. THE EXISTING PIT WELL WILL BE ABANDONED AND AN ABANDONMENT REPORT FILED BY A LICENSED WELL DRILLER PRIOR TO RECORD PLAT SUBMITTAL.
 26. THE EXISTING SEPTIC SYSTEM ON LOT 4 WILL BE ABANDONED IN AN APPROVED MANNER PRIOR TO RECORD PLAT SUBMITTAL. FOR THE REPLACEMENT SYSTEM, THE SEPTIC CONTRACTOR OR SURVEYOR MUST SUBMIT A PLAN SHOWING THE PROPOSED LOCATION FOR THE SEPTIC TANK AND DISTRIBUTION BOX AND THE SEPTIC SYSTEM INVERTS FROM THE HOUSE TO THE DISTRIBUTION BOX.

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 201
ELICOTT CITY, MD 21043
(410) 461-9563
(410) 461-9693 fax
home@shanaberg.com

BAT SYSTEM DESIGN
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. 10849, EXPIRATION DATE 4/2/2016.

Scott Shanaberg 2/3/15
G. SCOTT SHANABERGER, PROF. L.S. #10849
LICENSE EXPIRATION DATE 4/2/2016



STATE OF MARYLAND
PROF. M. S. L.
No. 32025
J. A. PROFESSIONAL ENGINEER

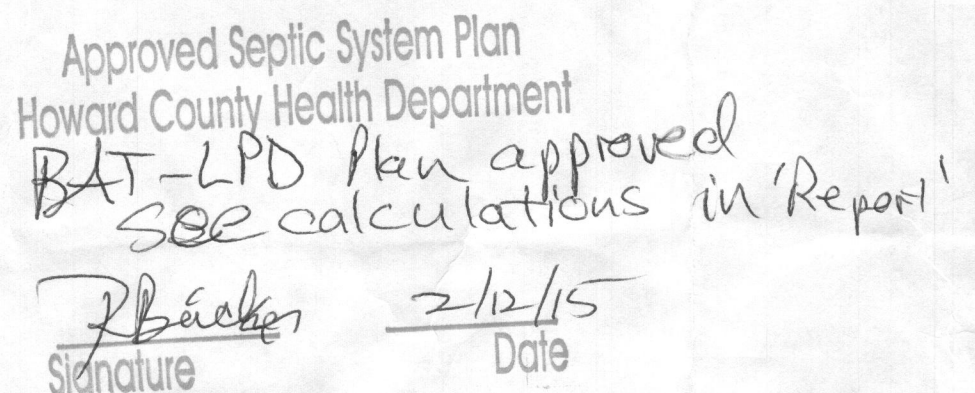
SILL ENGINEERING GROUP, LLC
3000 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682
Fax: 443.325.7685
Email: info@sillengineering.com
Civil Engineering for Land Development

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. 32025, EXPIRATION DATE: JUNE 20, 2015

OWNER/DEVELOPER
DONALD J. MUNRO
3914 HUNTINGTON ST. NW
WASHINGTON, D.C. 20015
(202) 879-3922

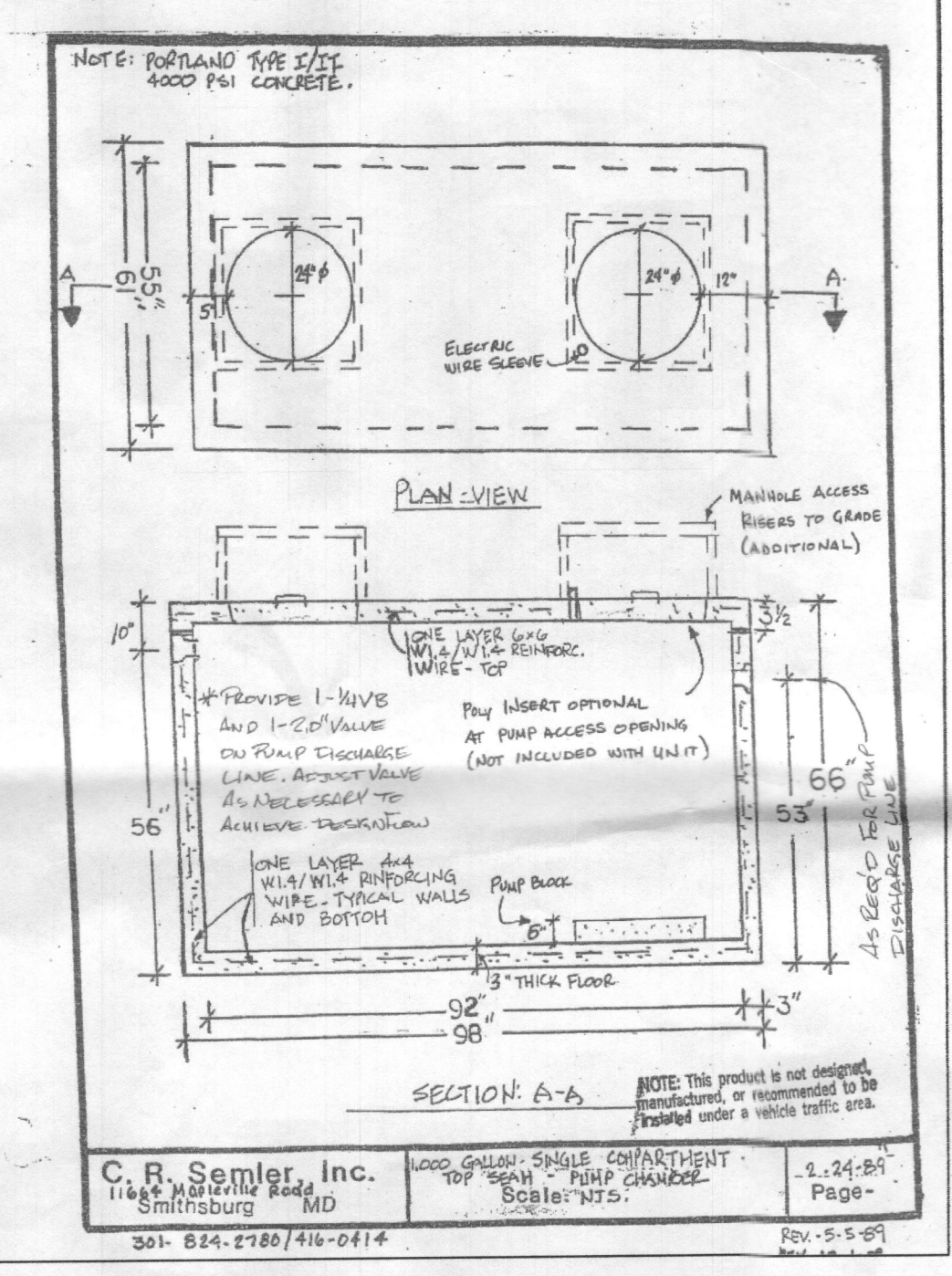
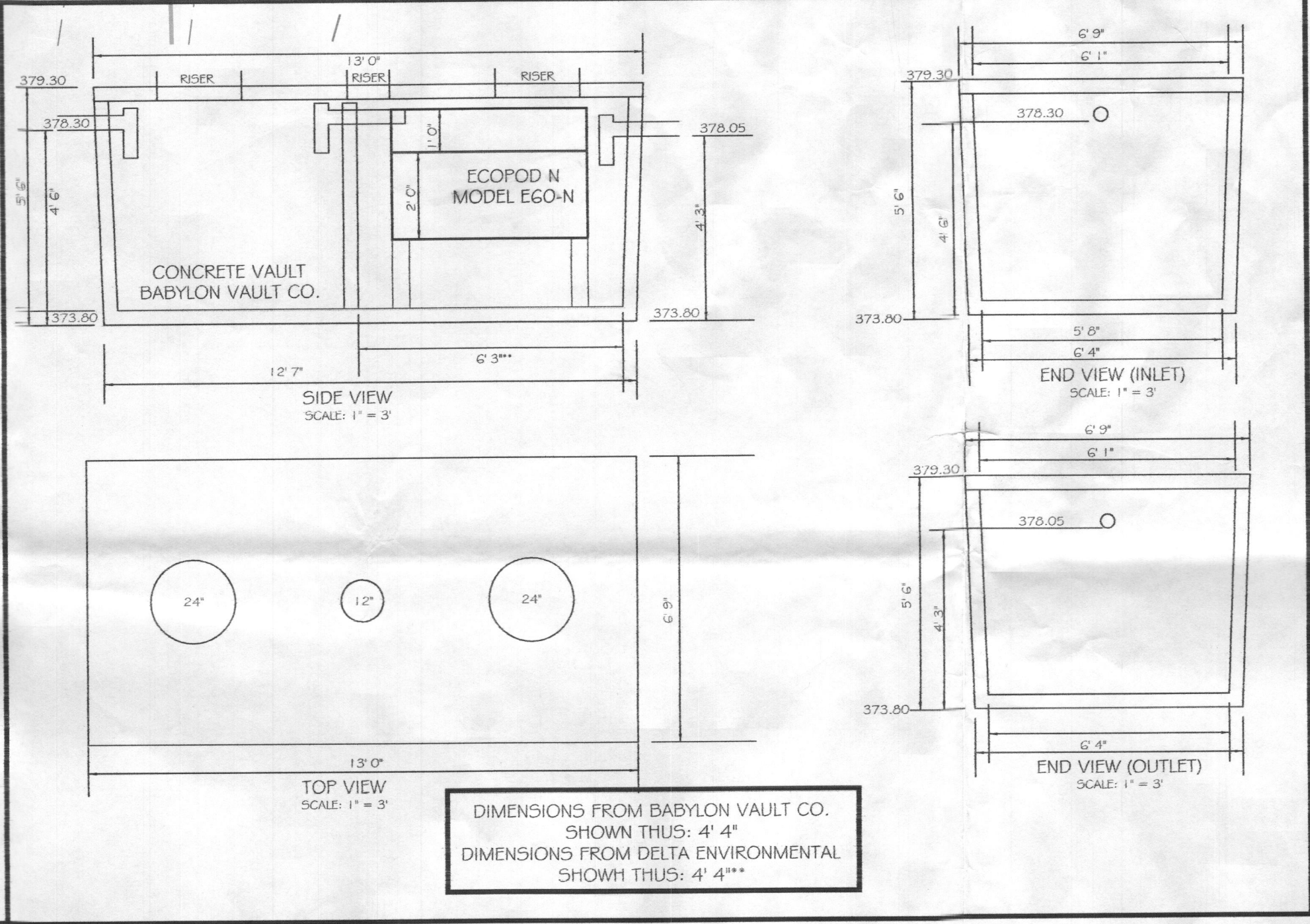
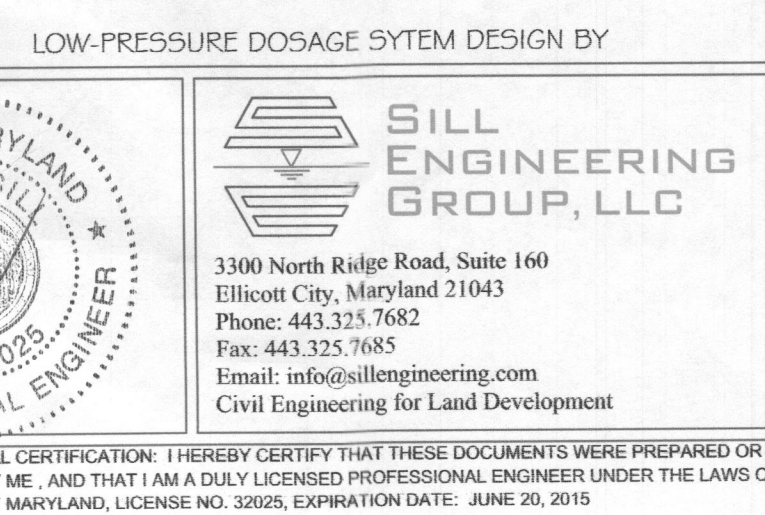
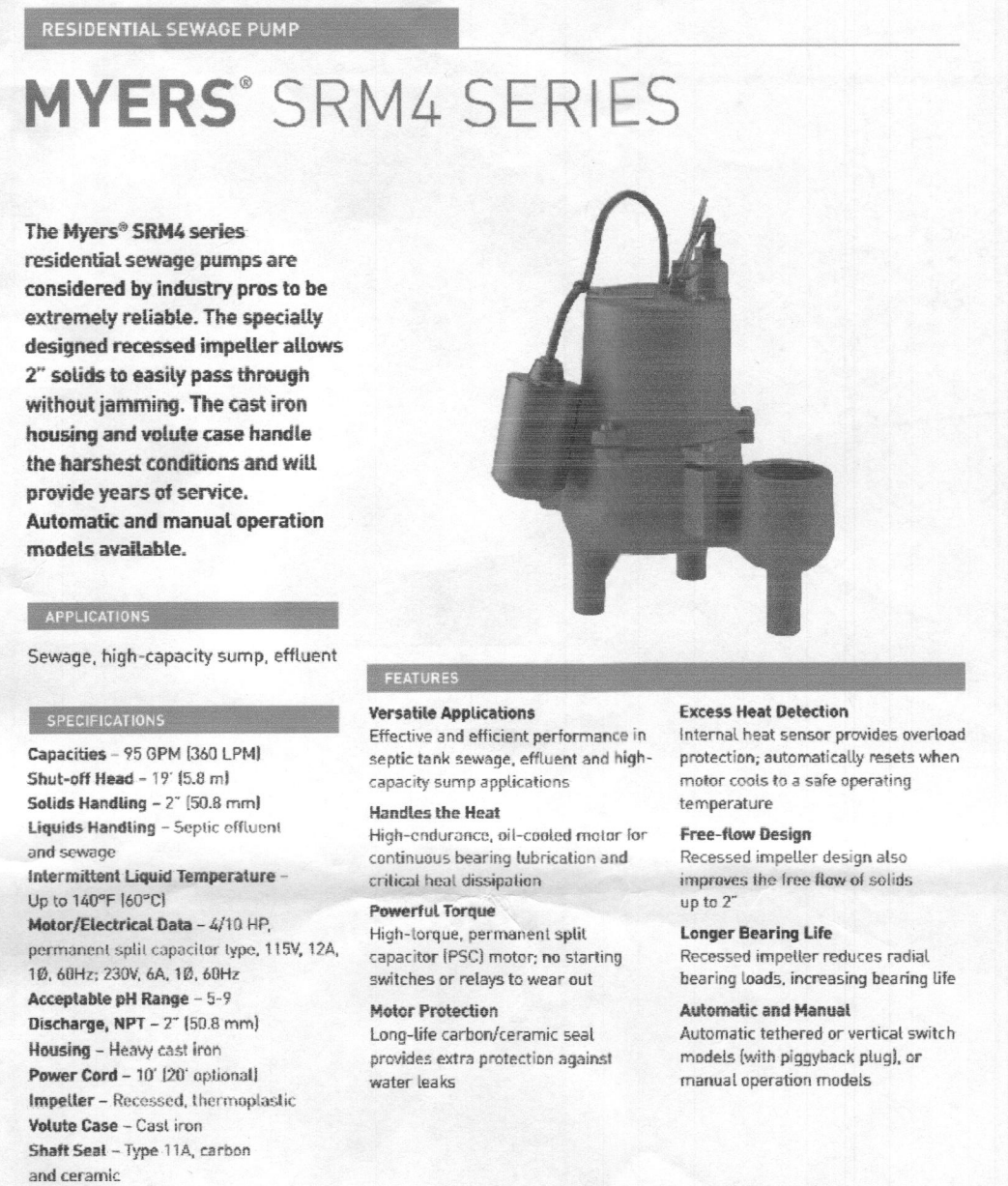
SITE PLAN FOR B.A.T. INSTALLATION
A-537287
8601 RESERVOIR ROAD
MUNRO PROPERTY, LOT 4
SHEET 1 OF 2

TITLE DEEDS: 3704/323 AND 3835/76
TAX MAP 45, GRID 12, PARCEL 9 & P/O PARCEL 50
5TH ELECTION DISTRICT, HOWARD COUNTY, MD.
SCALE: 1" = 20' DATE: 1/31/2015



NOTES:

1. CONTRACTOR TO BUILD / INSTALL 3' WIDE DISPOSAL TRENCHES.
2. DISTRIBUTION LATERALS TO BE INSTALLED ON LEVEL GRADE. BOTTOM OF TRENCH TO BE EXCAVATED ON LEVEL GRADE.
3. CONTRACTOR TO DRILL HOLES IN DISTRIBUTION LATERALS AS SHOWN BELOW. INSTALL PIPE HOLES DOWNWARD.
4. THE LAST HOLE IN THE LATERALS MUST BE LOCATED AT THE CROWN OF THE INVERT.



OWNER
DONALD J. MUNRO
3914 HUNTINGTON ST., NW
WASHINGTON, D.C. 20015
(202) 879-3922

SITE PLAN FOR B.A.T INSTALLATION
A-537287
8601 RESERVOIR ROAD
MUNRO PROPERTY, LOT 4
SHEET 2 OF 2
TITLE DEEDS: 3704/323 AND 3835/76
TAX MAP 45, GRID 12, PARCEL 9 & P/O PARCEL 50
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