

05-38193

Bureau of Environmental Health
7178 Gateway Drive Columbia, MD 21046
(410) 313-2640 Fax (410) 313-2648
TDD (410) 313-2323 Toll Free 1-866-313-6300
website: www.hchealth.org

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

RECEIPT DATE: 6-6-14

ONSITE SEWAGE DISPOSAL SYSTEM

P 541390

INSTALLATION APPROVAL DATE: 6/20/14

PERMIT CONSTRUCTION

A

PROPERTY ADDRESS: 7506 Lairds Way

SUBDIVISION: Flamewood LOT: 7 TAX ID:

CONTRACTOR: Mauck Construction EMAIL:

CONTRACTOR ADDRESS: 11938 Lime Kiln Road, Fulton, MD 20759 PHONE: 410-313-6891

PROPERTY OWNER: Brandon Almauro EMAIL:

OWNER ADDRESS: 1356 Beverly Road Suite 300, McLean, VA 22101 PHONE:

BAT UNIT MODEL: Hoot BNR 600 Ecopod P75 BAT UNIT SIZE: 600 GPD

PUMP CHAMBER CAPACITY (GALLONS): PUMP SIZE:

NUMBER OF BEDROOMS: 5 HOUSE SQ. FT. APPLICATION RATE:

DISTRIBUTION SYSTEM: GRAVITY FED [X] LOW PRESSURE DOSED []

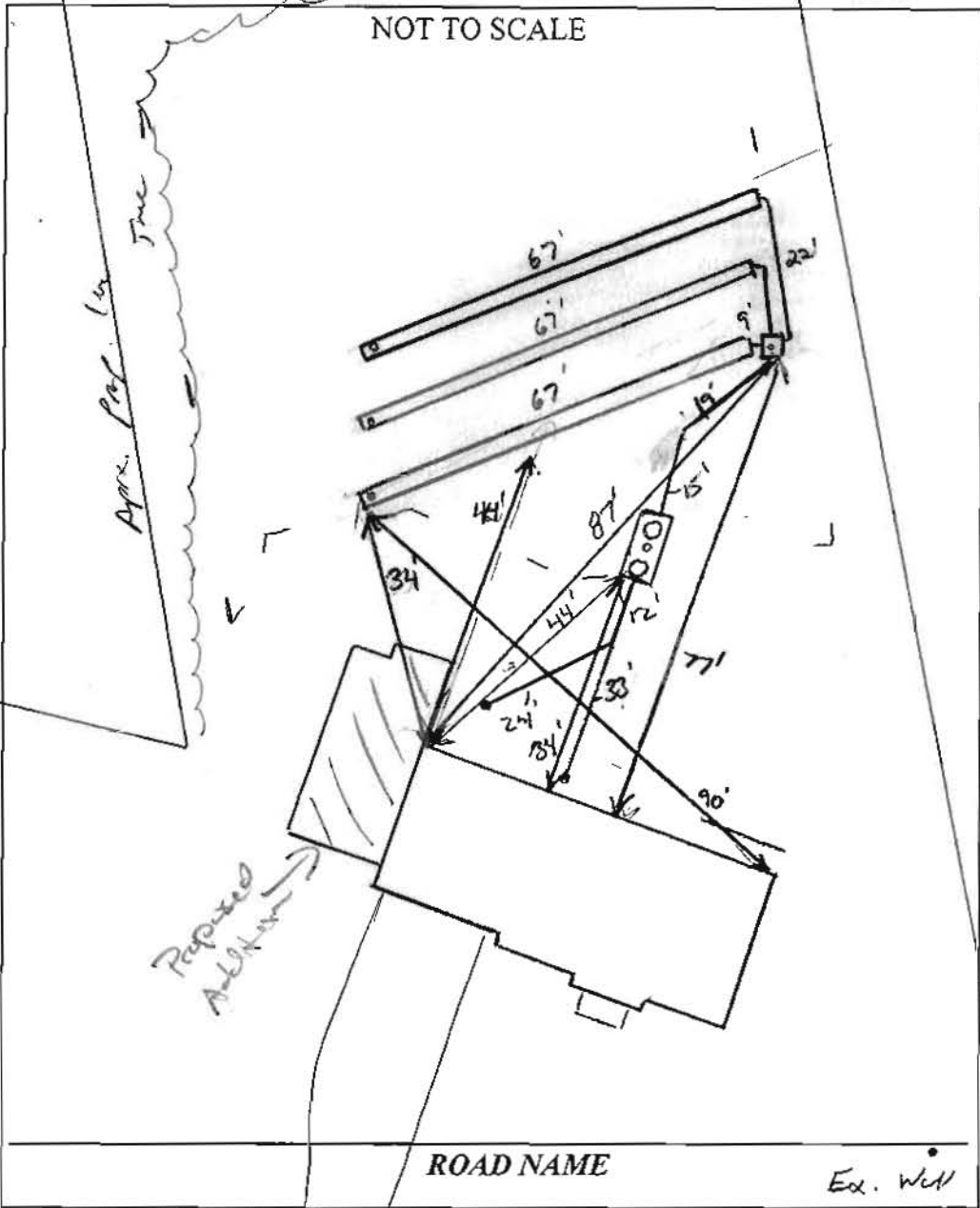
Table with 2 columns: Field (TRENCHES, LOCATION, NOTES) and Description/Value (See BAT Plan, PER APPROVED SITE PLAN, Set BAT unit per plan, etc.)

ISSUED BY: Robert Bricker ISSUE DATE: 6-6-14 EXPIRATION DATE: 6-6-15

- 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

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



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
3'	4'	8'
NUMBER OF TRENCHES		3
TOTAL LENGTH		200'
ABSORPTION AREA		600' x 30'
DISTRIBUTION BOX LEVEL		Level 1
DISTRIBUTION BOX BAFFLE		Yes
DISTRIBUTION BOX PORT		Yes

SEPTIC TANK DATA	
SEPTIC TANK I LEVEL	Yes
MANUFACTURER	Babylon
CAPACITY	E75 GAL
SEAM LOC	Top
TANK LID DEPTH	3'
BAFFLES	Yes
BAFFLE FILTER	—
MANHOLE LOC	Front/Rear
6" PORT LOC	Center
WATERTIGHT TEST	—
SLOTTED	Yes
DATE ON LID	—
PUMP/SEPTIC TANK LEVEL	
MANUFACTURER	—
CAPACITY	— GAL
SEAM LOC	—
TANK LID DEPTH	—
BAFFLES	—
BAFFLE FILTER	—
MANHOLE LOC	—
6" PORT LOC	—
WATERTIGHT TEST	—
SLOTTED	—
DATE ON LID	—

PRE-CONSTRUCTION:

6/16/14 Contour shot in field. Point very close to BAT plan. Existing records show existing trench running off old dry well. Had contractor dig up to locate, trench found. Trenching laid out. To conserve area, top trench will run thru old trench. Told contractor must excavate out all stone 5' either side of new proposed trench. Trenches to run per BAT site plan (see)

INSTALLATION:

6/17/14 site visit (pm) Contractor finished trenches. Old trench was excavated nearby. Soil tested consistent w/ pre-data. Contractor had "waves" generated in trenches. Suspect to be Non-woven. Need BAT and plumbing installed for final approval (see) 6/20/14 Pictures and as-built provided most of trenches covered spots w/ contractor. BAT start-up received. System approval.

FINAL INSPECTOR K. Wolf DATE OF APPROVAL 6/20/14

Bricker, Robert

From: Bricker, Robert
Sent: Thursday, May 08, 2014 2:07 PM
To: 'Paul Sill'
Subject: 7506 Laird's Way BAT Plan
Attachments: 7506 Laird's Way.pdf

Paul, The coefficient for trench reduction, and the total trench length were miscalculated for this proposal. I am attaching a PDF of the markup I made. 194 feet of trench is needed.

- 1) It seems to work well by adding a 60-foot trench uphill of the proposed trenches (which each can now be reduced to 67 feet length).
- 2) The Distribution Box is always placed at the beginning of the 'top' trench. Represent the placement, width and length of the two replacement trenches (3' x 97') accurately.
- 3) Label each trench with the estimated Invert elevation.

Robert Bricker, CPSS, REHS/R.S., L.E.H.S.
Environmental Sanitarian II
Bureau of Environmental Health
Well and Septic Program, Development Coordination Section
8930 Stanford Blvd.
Columbia, MD 21045

Desk, 410-313-2691; FAX, 41-313-2648

e3 Environmental LLC

302-725-0706 www.e3onsite.com

ECOPOD-N Completion Statement

Permit # D-546390

Installation Information

Owners Name	Brandon Almagro	# of Bedrooms / GPD	750
Street	7506 Hairs Way	Repair	<input type="checkbox"/> Additions
City	Clarksville	New Construction	<input checked="" type="checkbox"/>
State	MD		
Zip	21029		

Installation Company

Company	JTM Contracting	Installed Date	6/19/14
Certified Installer	Ronnie Heaps	Startup Date	6/20/14
Street	425 Obercht Rd		
City	Sykesville		
State	MD		
Zip	21784		

ECOPOD-N

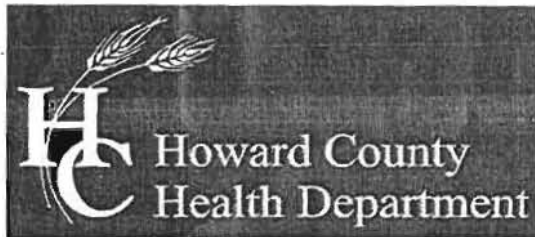
Model #		Serial #
E50	<input type="checkbox"/>	
E60	<input type="checkbox"/>	
E75	<input checked="" type="checkbox"/>	E75N-01071CA
E100	<input type="checkbox"/>	
E150	<input type="checkbox"/>	

Blower Voltage	Good
Blower Running Amps	Good
Inches of water over media with blower turned off	2 inches
Vent Installed	yes
Tanks and Risers Water tight	yes
Alarm Functional	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 Koontz
 Printed Name Steven R Koontz

Date 6/20/14



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7178 Columbia Gateway Drive, Columbia, MD 21046-2147
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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 29th day of June, 2014, among BRANDON ALMAGRO, 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 7506 LAIRDS WAY, in the 05 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 15216 Folio 460

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.

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.

[Signature] 5/24/2014
Owner Date

[Signature] 5-29-2014
Owner Date

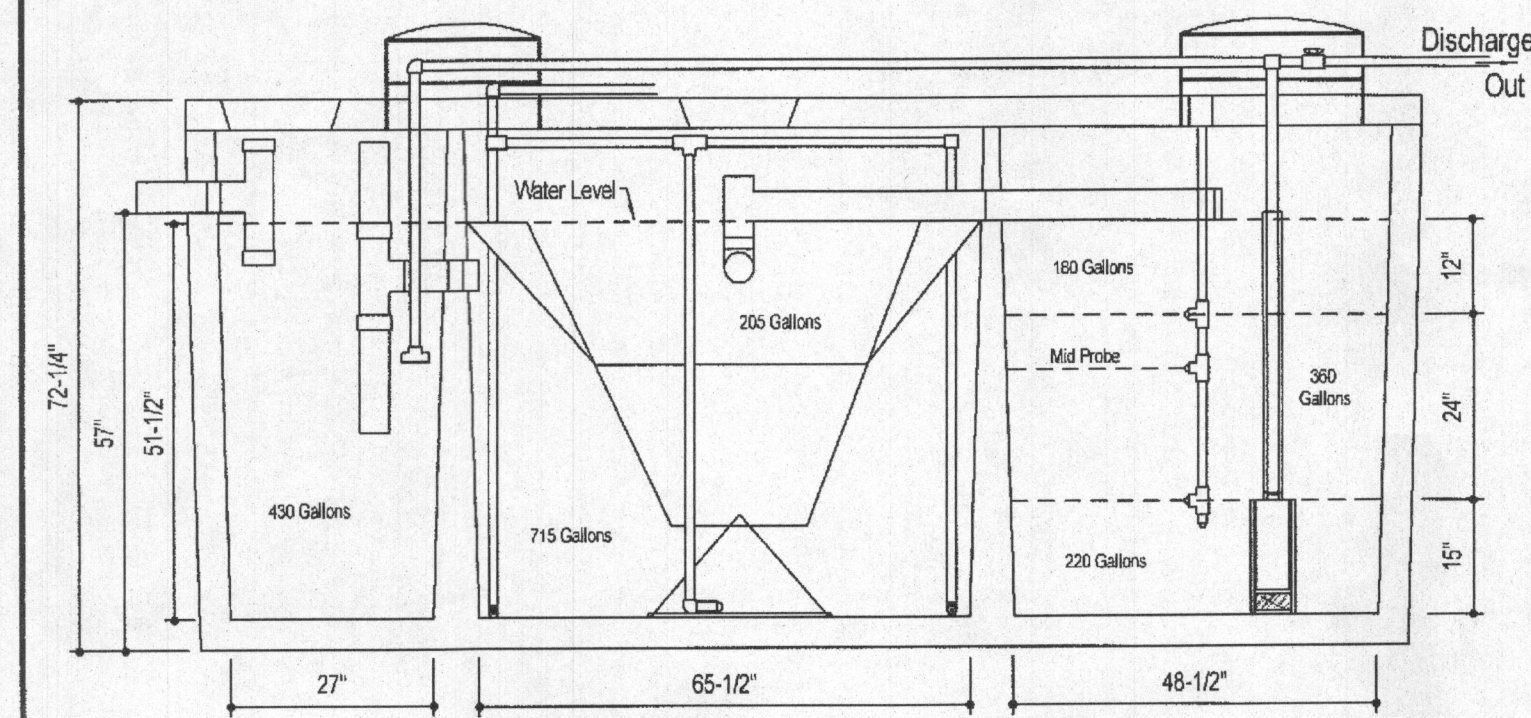
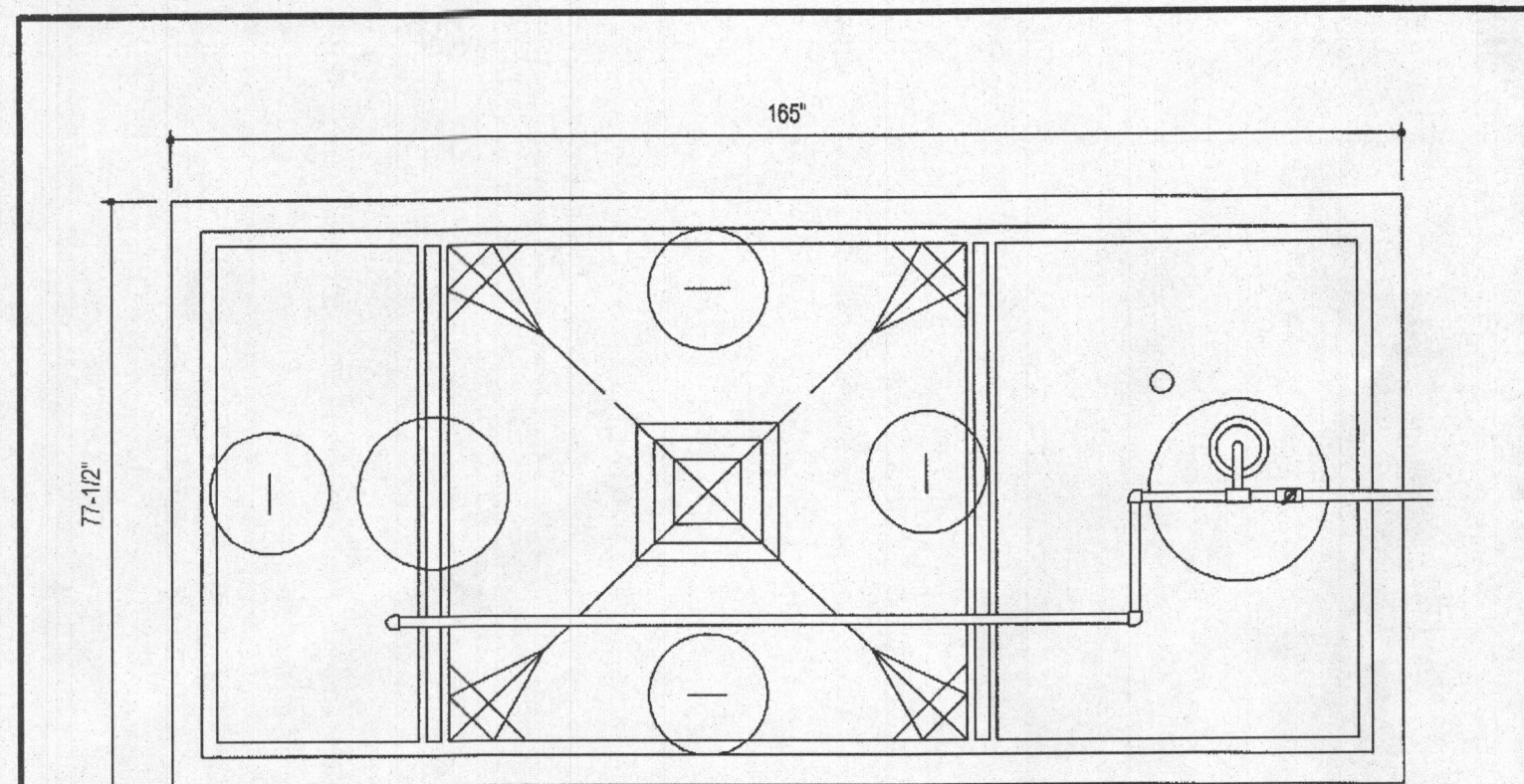
[Signature] 6/3/2014
Howard County Health Department

Attached PDF is O&M Agreement for installation of BAT denitrification units. We need to have a copy of this document when it is recorded. We prefer to have that copy of the recorded document prior to release of the installation permit. As the recording process requires about ten business days, we will release the installation permit if we have a copy of the receipt from Land Records indicating that the signed document has been submitted for recording.

The process follows this sequence:

The 'owner' completes and signs the O&M Agreement and submits it at the Bureau of Environmental Health desk for signature by the Approving Authority (re: our Bureau Director). Obtaining this signature usually only takes a few minutes.

Then, the person recording the document goes to the Howard County Finance Office (3430 Courthouse Drive; George Howard Building) (?maybe a check of tax payments?) for clearance that the document can be recorded. From the Finance Office, the person goes to Land Records and submits the signed agreement for recording. The receipt for payment of fees to Land Records (to record the document) may then be brought to the Bureau of Environmental Health to obtain release of the installation permit.



DESIGN DATA & GENERAL NOTES

- 1) Concrete strength Fc=4,000 p.s.i. @ 28 days. Density = 150 pcf.
- 2) Cement - Portland Type III per ASTM C 150-92.
- 3) Admixtures & plasticizers per ASTM C 260-88 & C 494-92.
- 4) Reinforcing per ASTM A186. Min. 1-1/2" cover.

Mayer Brothers, Inc.

6264 Race Road
Elkridge, Maryland 21075
Tel: 410.796.1434
Fax: 410.796.1438
www.mayerbroscast.com

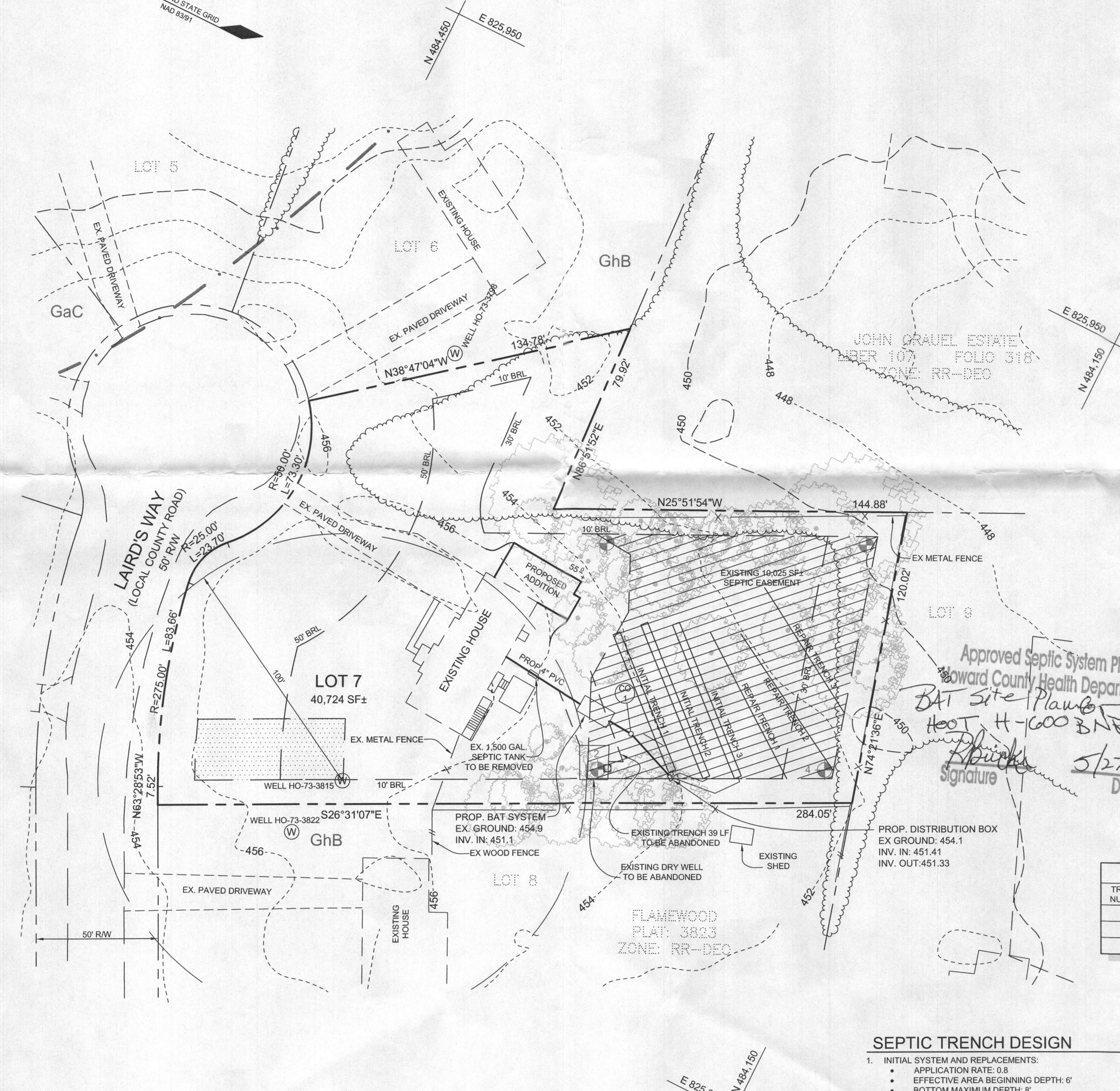
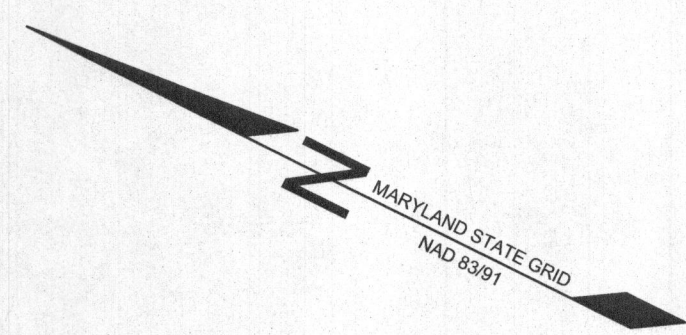


**600 GPD BNR SYSTEM
H-600 BNR
with 750 GALLON PUMP CHAMBER**

Dwg. No. Hoot Form #1 No Scale March 19, 2009

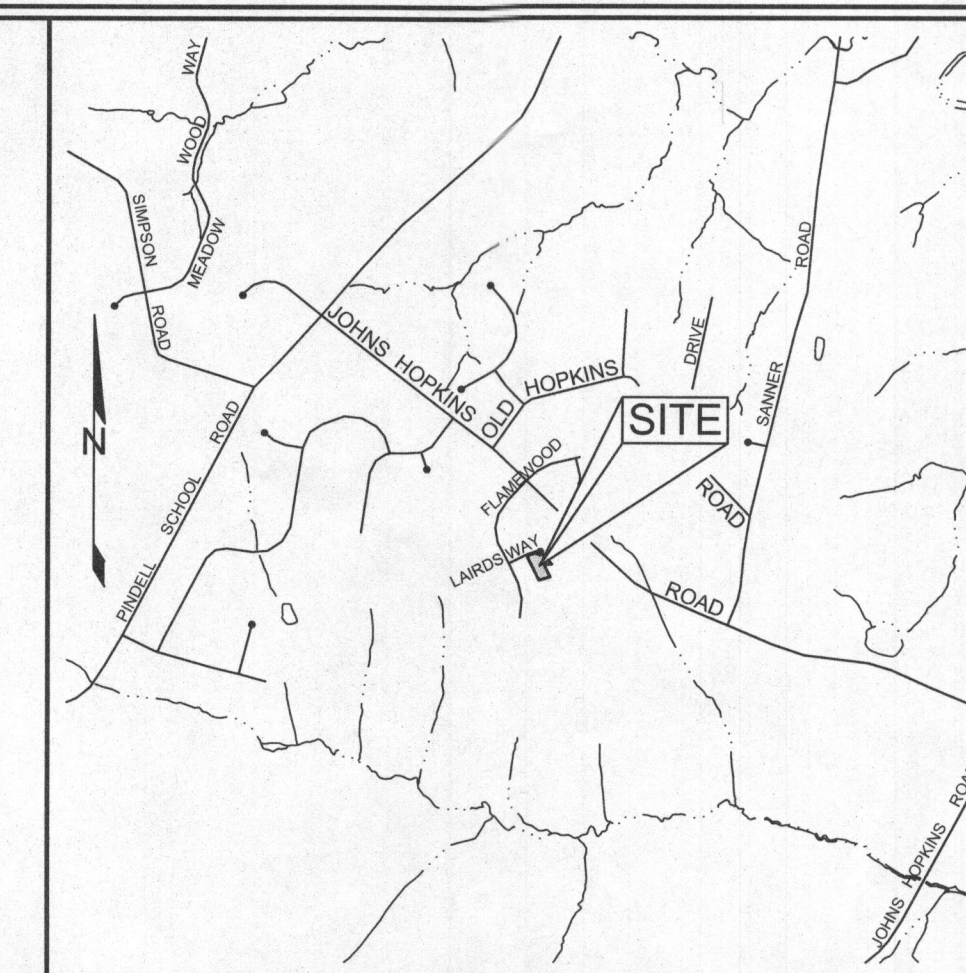
BAT NOTES

1. ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
2. THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 5'.
3. THE BLOWER MAY NOT BE LOCATED MORE THAN 50' FROM THE TANK BASED ON THE MANUFACTURER'S SPECIFICATIONS.
4. THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
5. THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
6. 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 SYSTEM INSTALLED.
7. ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
8. AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY.
9. THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING TREELINE
- PROPOSED SPOT ELEVATION
- PERCOLATION TEST HOLE, PASSED
- SOIL BOUNDARY
- EXISTING TREE
- PROPOSED WELL AREA
- EXISTING CLEAN OUT



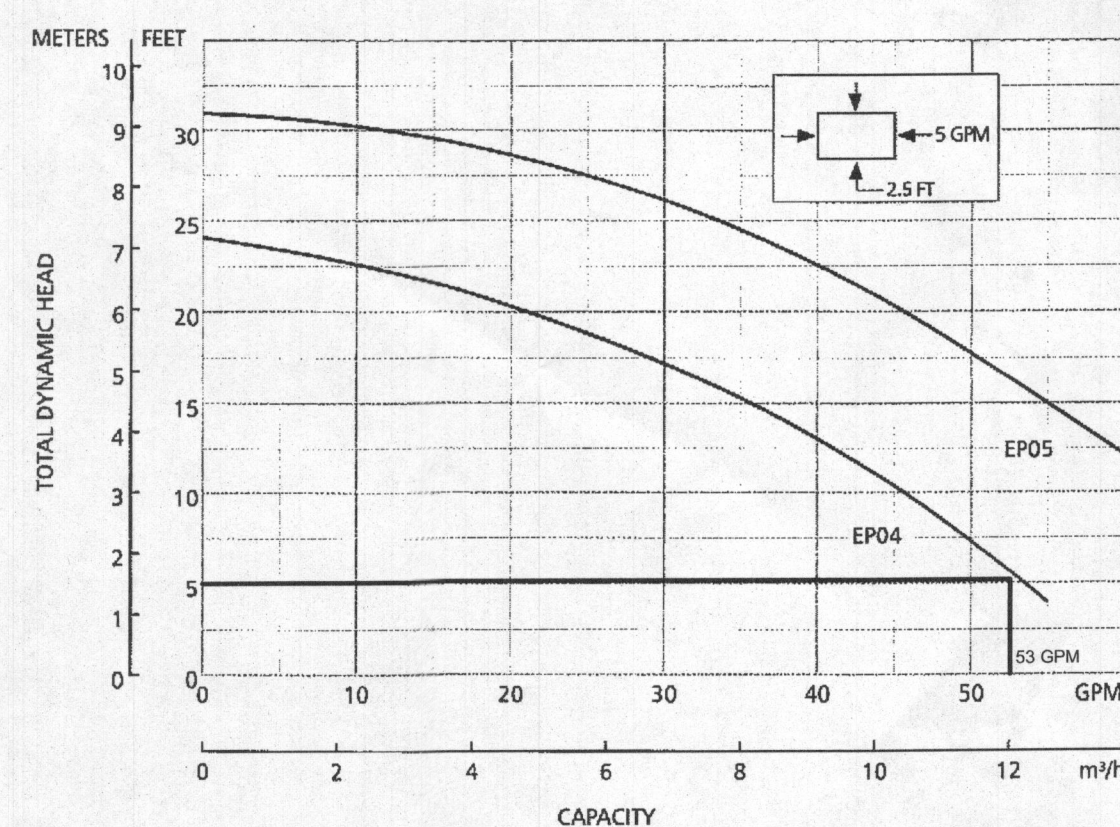
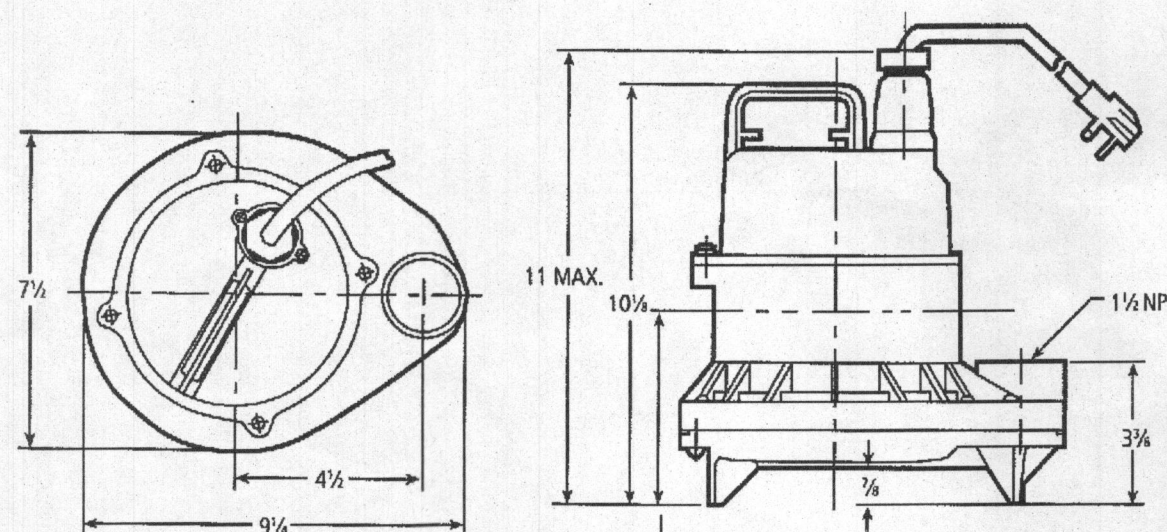
VICINITY MAP
SCALE: 1"=200'

PUMP NOTES:

1. HEAD CALCULATIONS:
STATIC HEAD = 4.5' USE 5.0'
TOTAL DYNAMIC HEAD = 4.5' USE 5.0'
2. PUMP CALCULATION:
FLOW RATE: 53 GPM
DOSE: 106 GALLONS
RUN TIME: 2 MINUTES

Goulds Pumps

EP04 & EP05 Series Model 3871
Submersible Effluent Pumps



PERFORMANCE RATINGS

Total Head (ft. of water)	Gallons Per Minute	
	EP04	EP05
5	53	-
10	46	62
15	36	55
20	21	46
25	0	33
30	-	11

SEPTIC TRENCH DESIGN

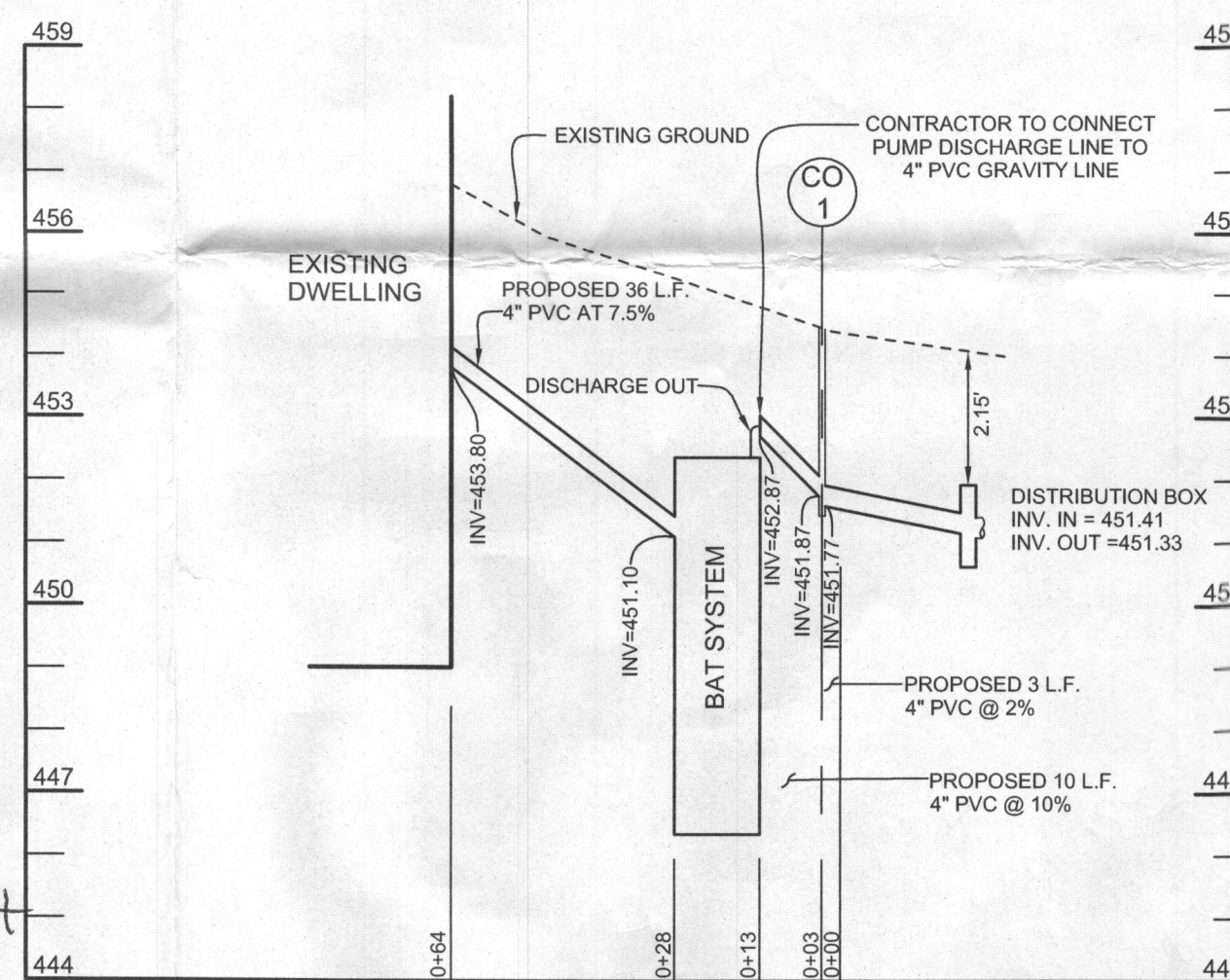
1. INITIAL SYSTEM AND REPLACEMENTS:
 - APPLICATION RATE: 0.8
 - EFFECTIVE AREA BEGINNING DEPTH: 6'
 - BOTTOM MAXIMUM DEPTH: 8'
2. DESIGN FLOW:
 - 5 BEDROOMS AT 150 GPD
 - 5x150 GPD = 750 GPD
3. SQUARE FOOTAGE OF DRAINFIELD REQUIRED:
 - DESIGN FLOW (750 GPD) / APPLICATION RATE (0.8) = 937.5
4. SIDEWALL REDUCTION CREDIT:
 - TRENCH WIDTH (W) = 3'
 - TRENCH DEPTH (D) = 2'
 - (W+2) / (W+1+2D) x 100 = 62%
5. LINEAR LENGTH OF TRENCH REQUIRED:
 - DRAINFIELD SQUARE FOOTAGE (937.5) x SIDEWALL REDUCTION PERCENTAGE (62%) / TRENCH WIDTH (3') = 193.75'
6. LINEAR LENGTH OF TRENCH PROVIDED = 194'

SEPTIC TRENCH CHART

TRENCH NUMBER	EXISTING GRADE	INVERT	TRENCH BOTTOM	LENGTH	WIDTH
1	454.0	450.0	446.0	60'	3'
2	453.5	449.5	445.5	67'	3'
3	453.1	449.1	445.1	67'	3'

BAT PROFILE VIEW

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



OWNER/DEVELOPER

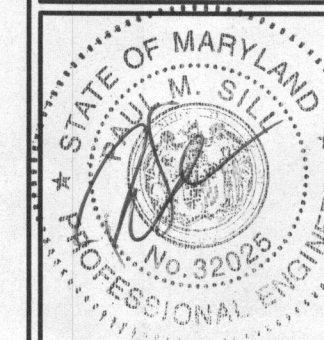
BRANDON ALMAGRO
AND ELBA BATIZ
7506 LAIRDS WAY
CLARKSVILLE MD 21029

SITE PLAN FOR BAT INSTALLATION
7506 LAIRDS WAY
FLAMEWOOD
LOT 7

TAX MAP 41 GRID 15
5TH ELECTION DISTRICT

TAX IDENTIFICATION NO. 381193

PARCEL 415
HOWARD COUNTY, MARYLAND



Sill · Adcock & Associates · LLC
Engineers · Surveyors · Planners
3300 North Ridge Road, Suite 160
Ellicott City, Maryland 21043
Phone: 443.325.7682 Fax: 443.325.7685
Email: info@saaland.com

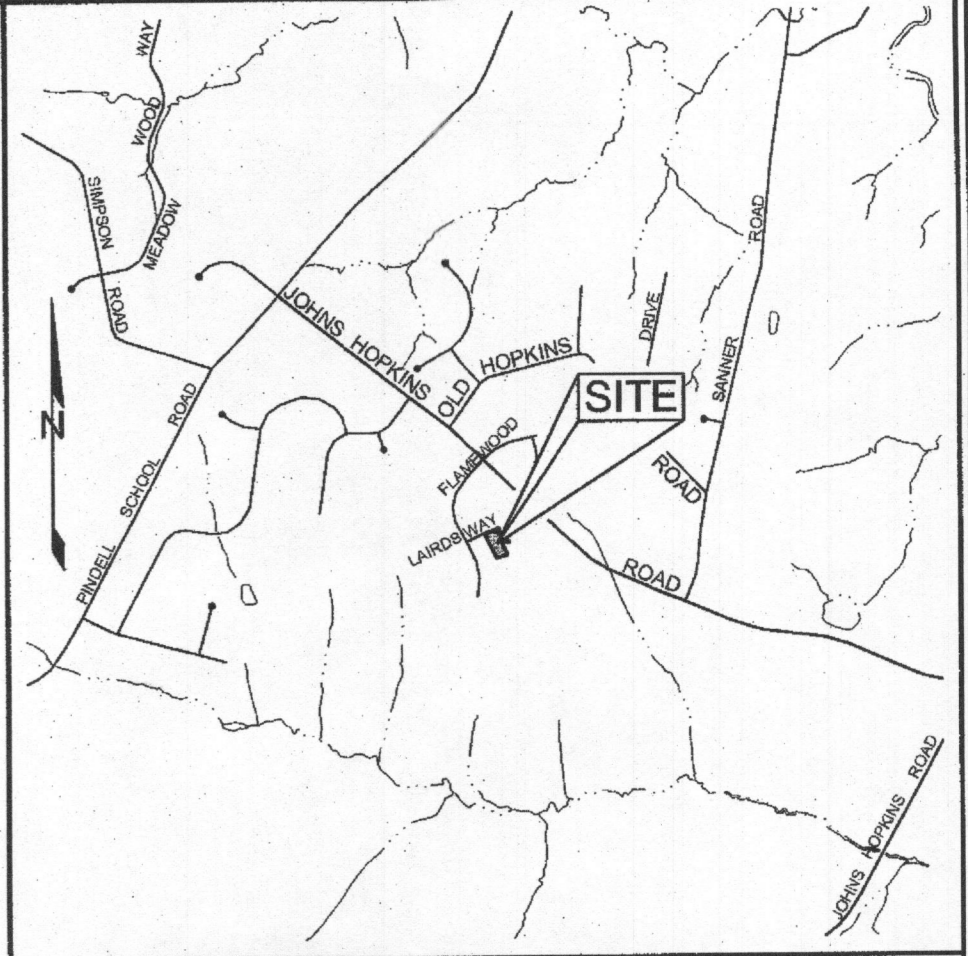
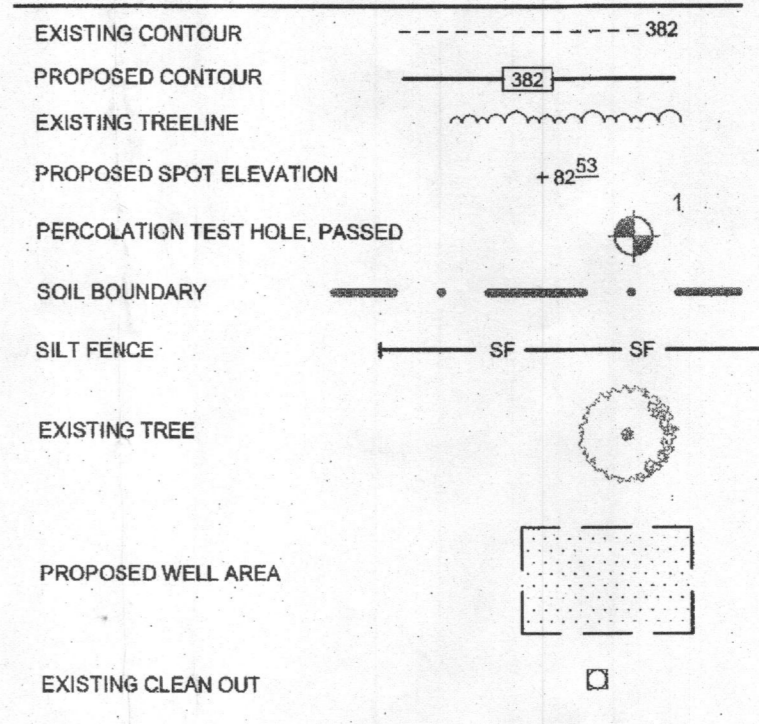
DESIGN BY: PS
DRAWN BY: JT
CHECKED BY: PS
SCALE: AS SHOWN
DATE: MAY 19, 2014
PROJECT #: 13-111
SHEET #: 2 of 2

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

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
GhB	GLENELG-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B	0.20

NOTES:
 1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, WEB SOIL SURVEY.
 2) HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR 'K' GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

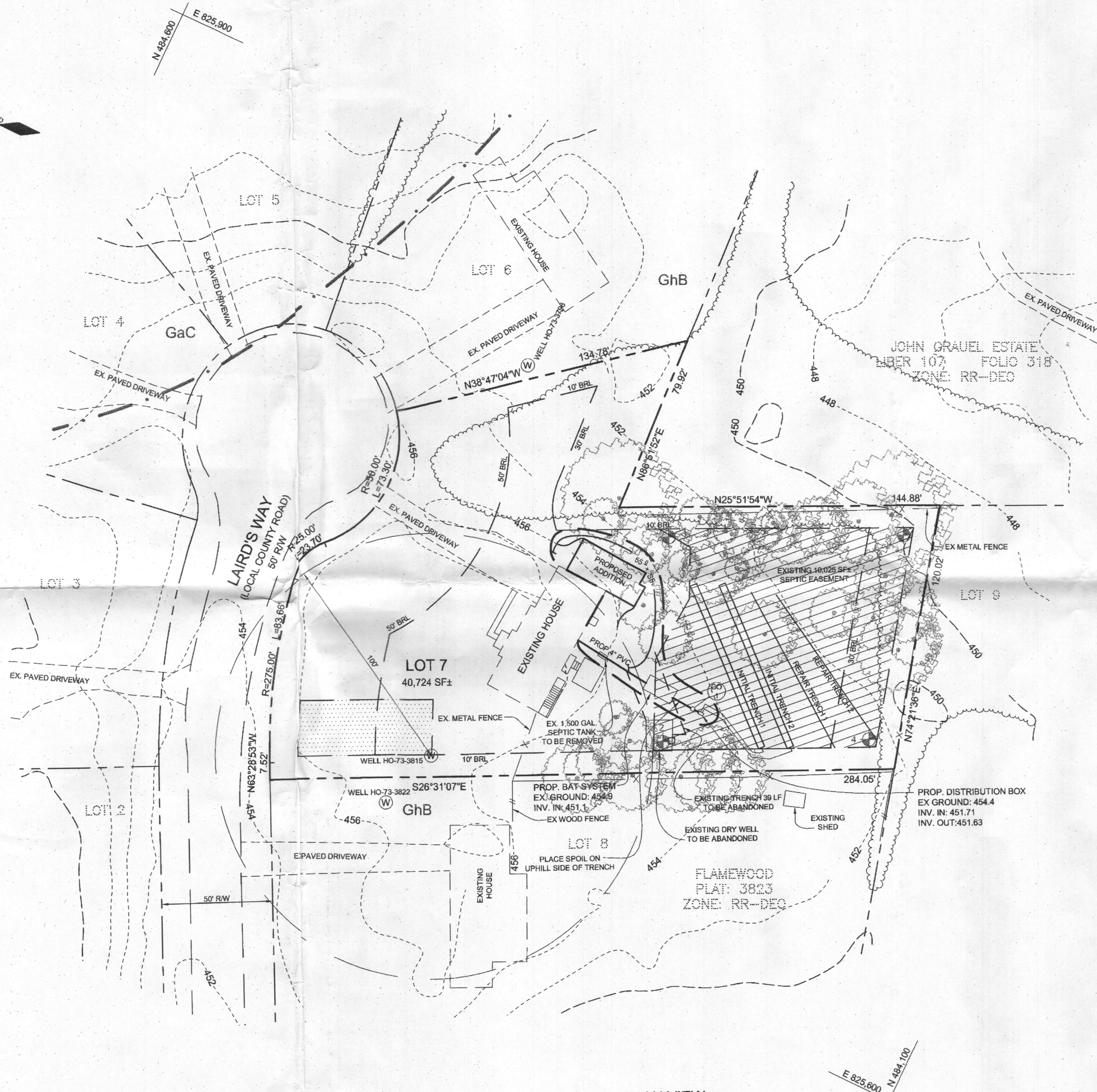
LEGEND



VICINITY MAP
SCALE: 1"=200'

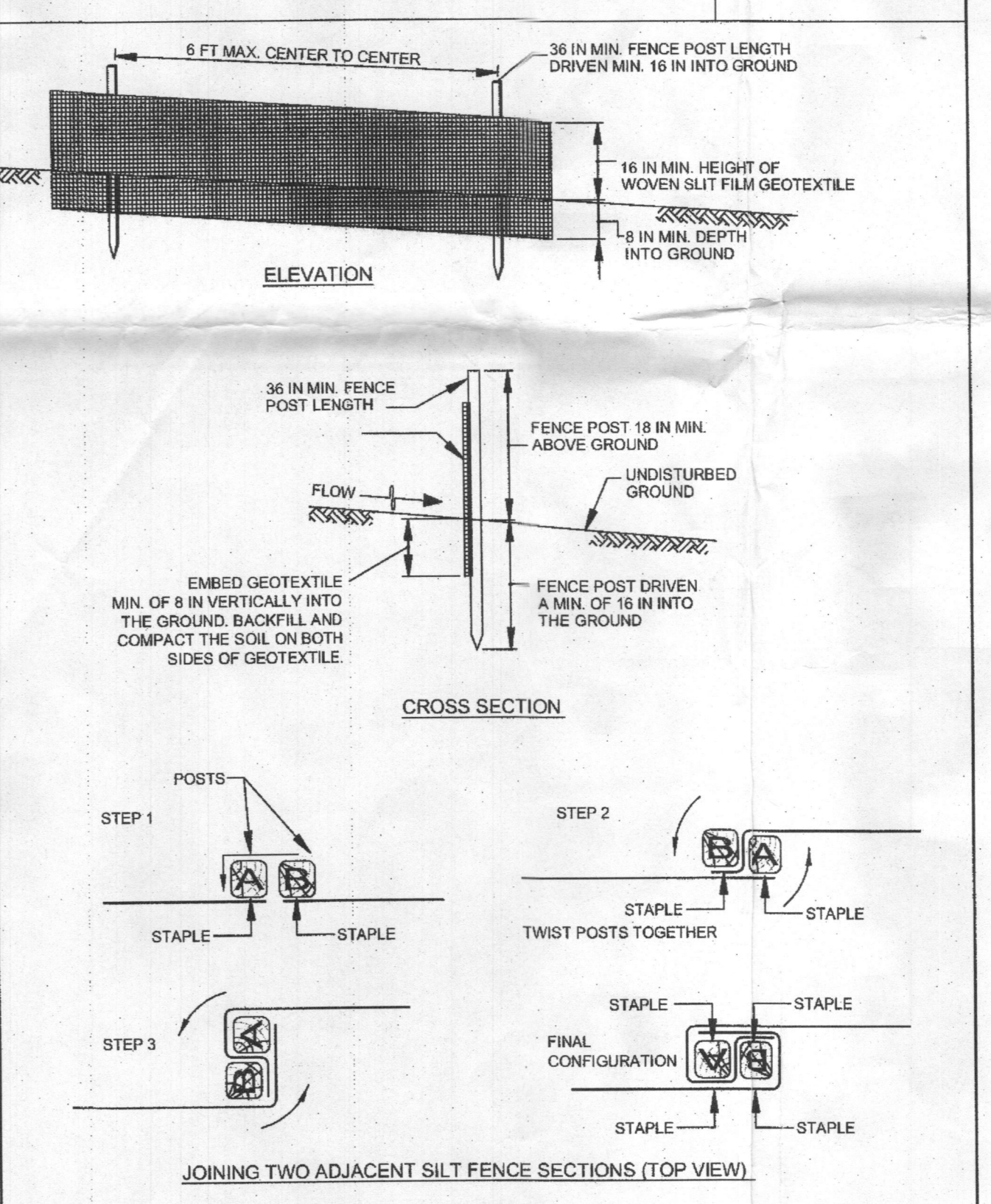
GENERAL NOTES

- SUBJECT PROPERTY ZONED RR-DEO PER 02/02/04 COMPREHENSIVE ZONING PLAN.
- TOTAL AREA OF PROPERTY = 0.93 AC±
- PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
- THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT, OF AT LEAST 10,000 SF 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 SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECREATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.
- THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD FUN BOUNDARY SURVEY PREPARED BY SILL ADCOCK AND ASSOCIATES, LLC ON NOVEMBER 21, 2013.
- THE TOPOGRAPHY SHOWN HEREON HAS BEEN FIELD RUN WITH 2' CONTOUR INTERVALS BY SILL ADCOCK AND ASSOCIATES, LLC ON NOVEMBER 21, 2013. THE EXISTING TOPOGRAPHY SHOWN OUTSIDE THE SITE IS BASED ON HOWARD COUNTY AERIAL TOPOGRAPHY FLOWN IN 2011.
- PROPERTY ADDRESS: 7506 LAIRDS WAY
- REFERENCES: LIBER 15216, FOLIO 460; PLAT #3823
- THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
- ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
- ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWN-GRADE OF EXISTING OR PROPOSED SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS HAVE BEEN FIELD LOCATED. LOCATED WELLS WITHOUT A WELL TAG SHOWN DID NOT HAVE ONE.
- THE EXISTING WELL SHOWN ON THIS PLAN (#73-3815) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
- THE SOIL TYPE WITHIN LOT 7 IS ALL GLENELG-URBAN LAND COMPLEX, HYDROLOGIC SOIL GROUP B (SEE SOIL LEGEND) PER THE NRCS WEB SOIL SURVEY WEBSITE.



PLAN VIEW
SCALE: 1"=30'

DETAIL E-1 SILT FENCE



- CONSTRUCTION SPECIFICATIONS**
- USE WOOD POSTS 1 1/2 X 1 1/2 X 1/4 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
 - USE 3/8 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
 - USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 - EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
 - WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
 - EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
 - REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.
- MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	PLOT PLAN
2	SITE PLAN FOR BAT INSTALLATION

OWNER/DEVELOPER
 BRANDON ALMAGRO
 AND ELBA BATIZ
 7506 LAIRDS WAY
 CLARKSVILLE MD 21029

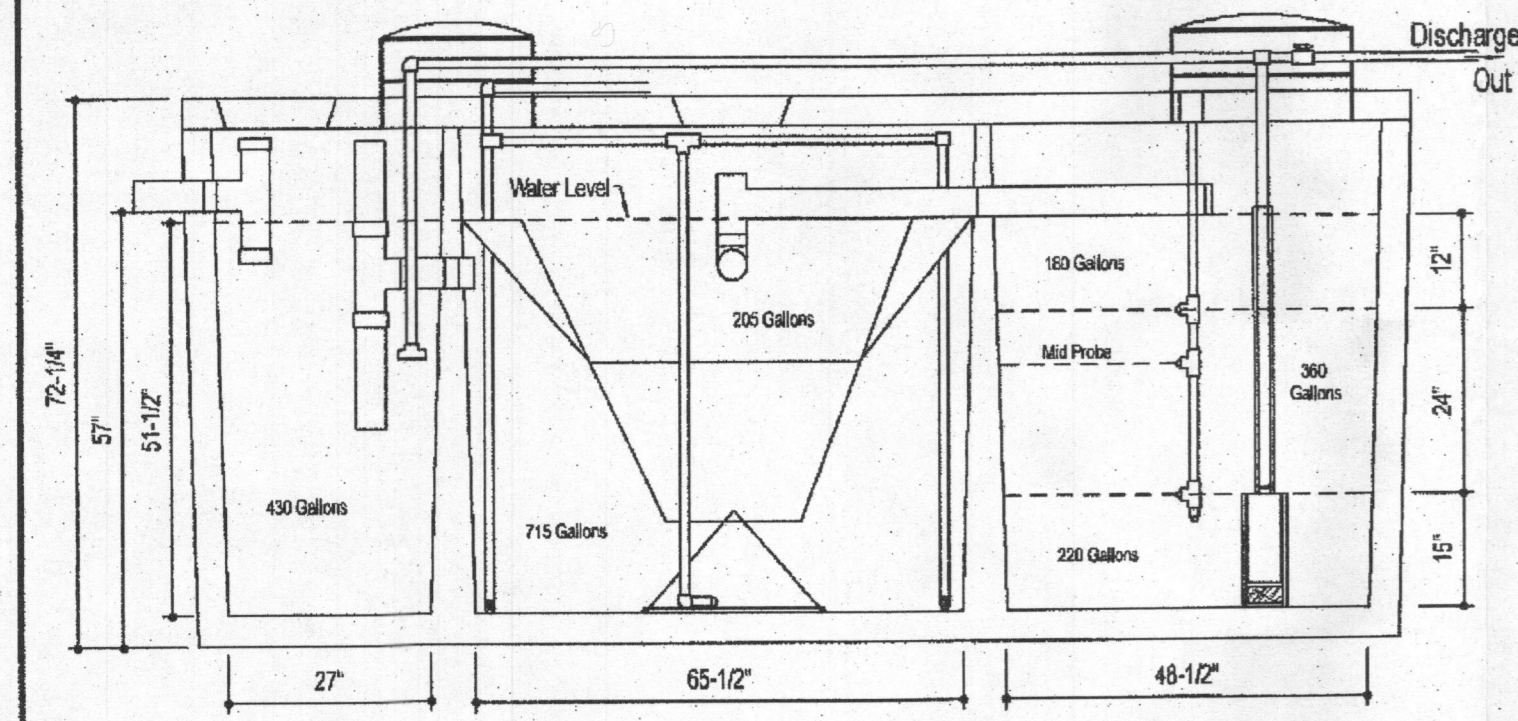
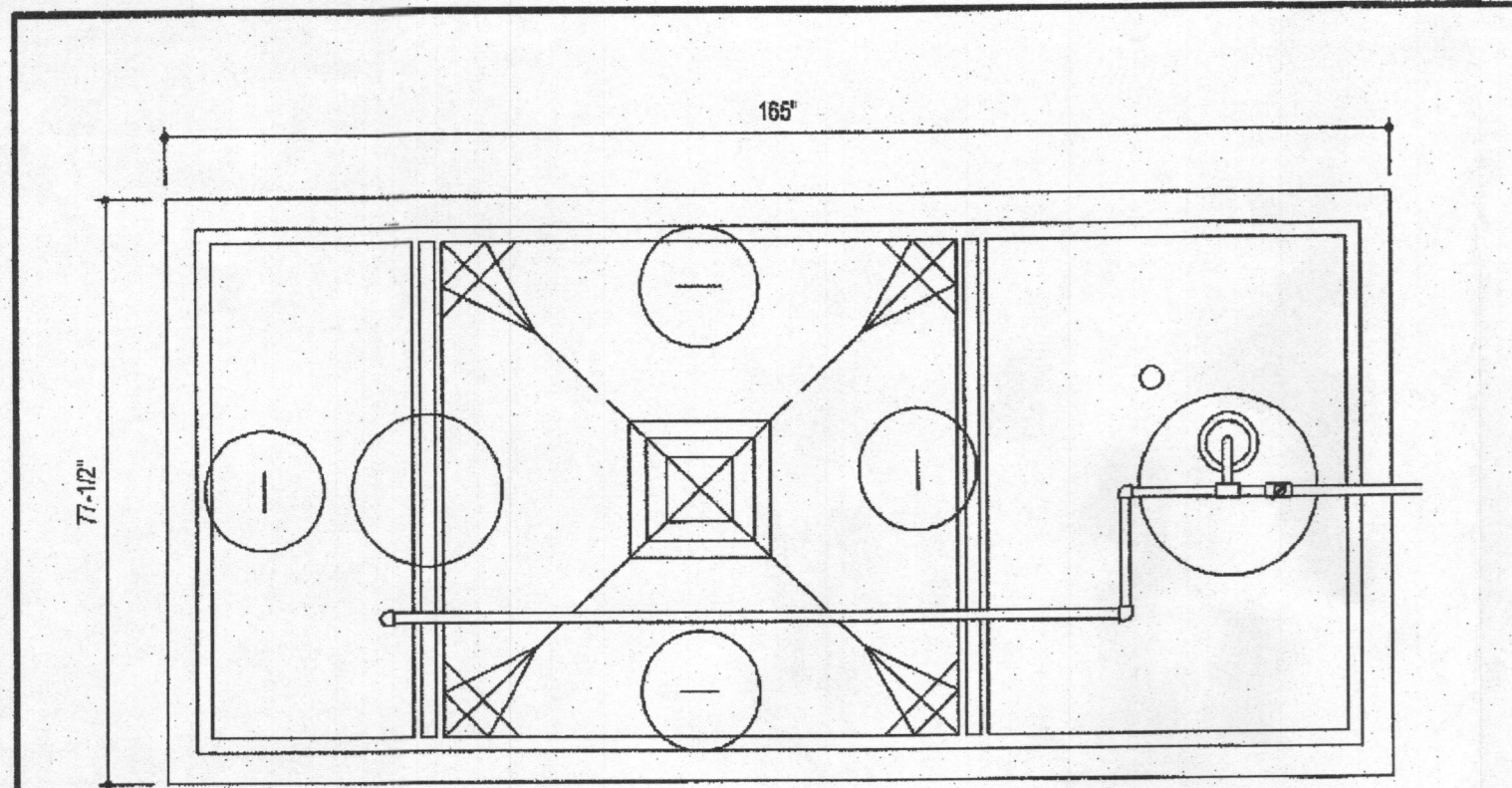
PLOT PLAN
 7506 LAIRDS WAY
 FLAMEWOOD
 LOT 7
 TAX IDENTIFICATION NO. 381193

TAX MAP 41 GRID 15 5TH ELECTION DISTRICT PARCEL 415 HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
 Engineers · Surveyors · Planners
 3300 North Ridge Road, Suite 100
 Ellicott City, Maryland 21043
 Phone: 443.325.7682 Fax: 443.325.7685
 Email: info@sasland.com

DESIGN BY: PS
 DRAWN BY: JT
 CHECKED BY: PS
 SCALE: AS SHOWN
 DATE: APRIL 22, 2014
 PROJECT #: 13-111
 SHEET #: 1 of 2

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



DESIGN DATA & GENERAL NOTES

- Concrete strength f'c=4,000 p.s.i. @ 28 days. Density = 150 p.c.
- Cement - Portland Type III per ASTM C 150-02.
- Admixtures & plasticizers per ASTM C 390-05 & C 454-92.
- Reinforcing per ASTM A165. Min. 1-1/2" cover.

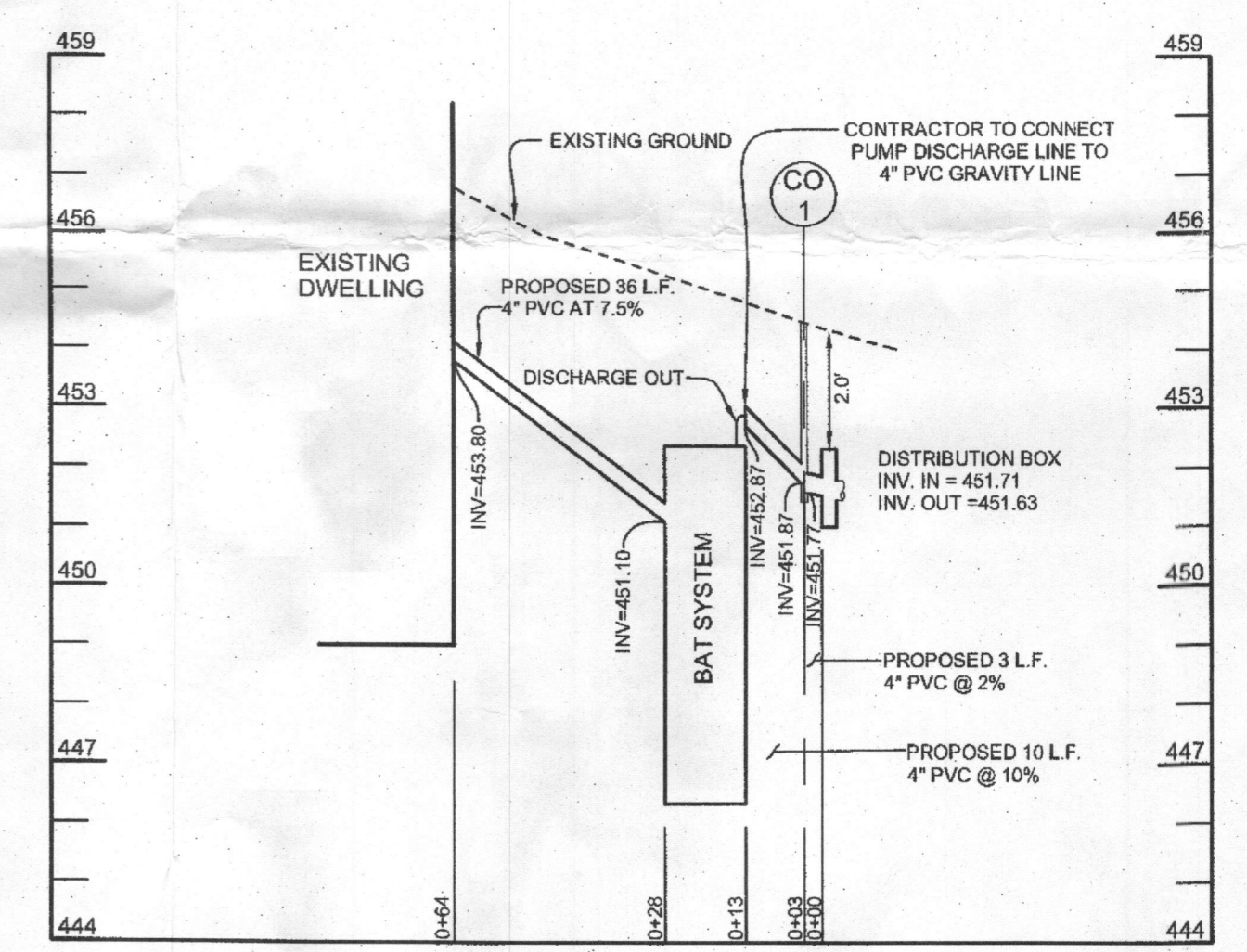
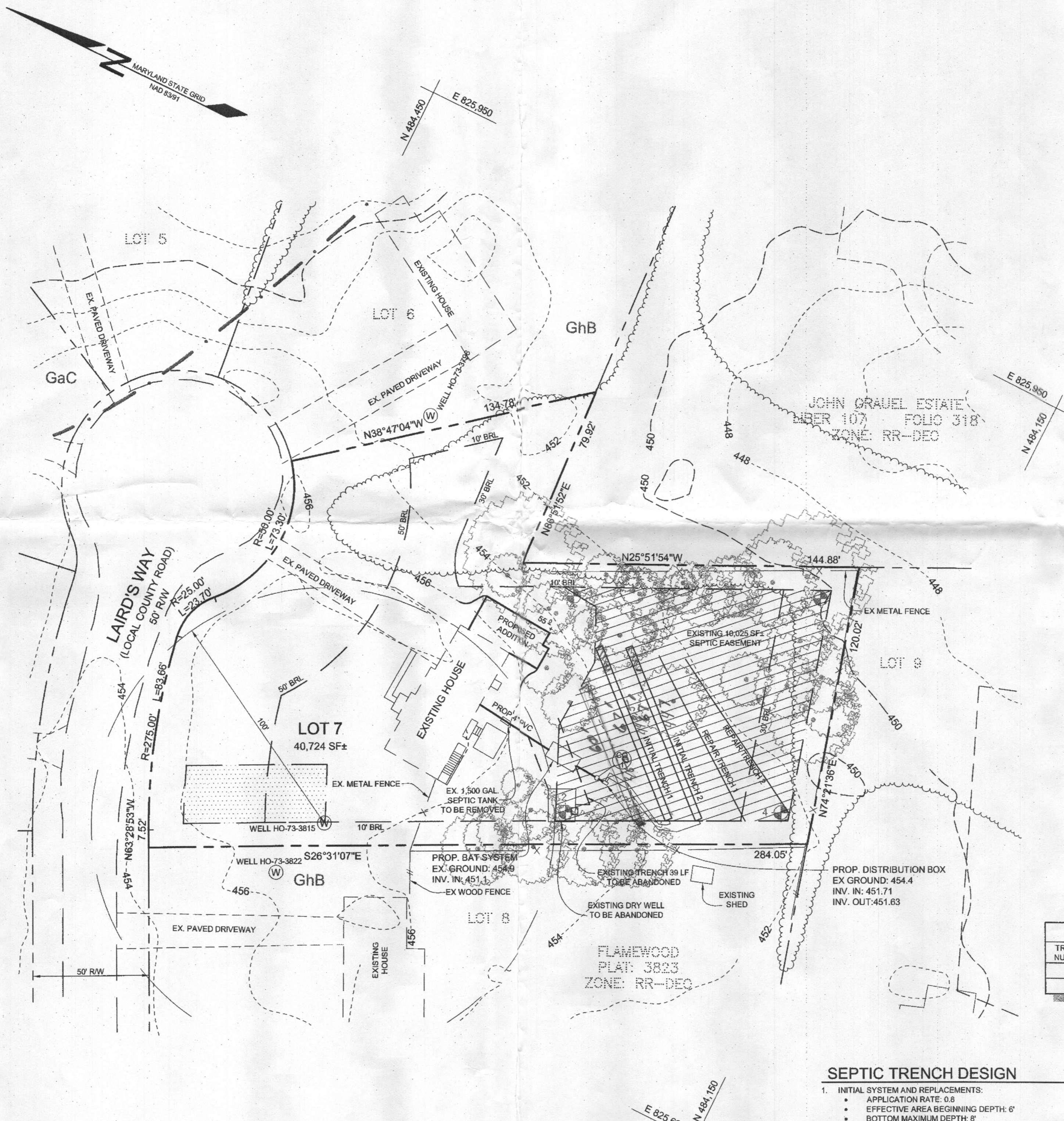
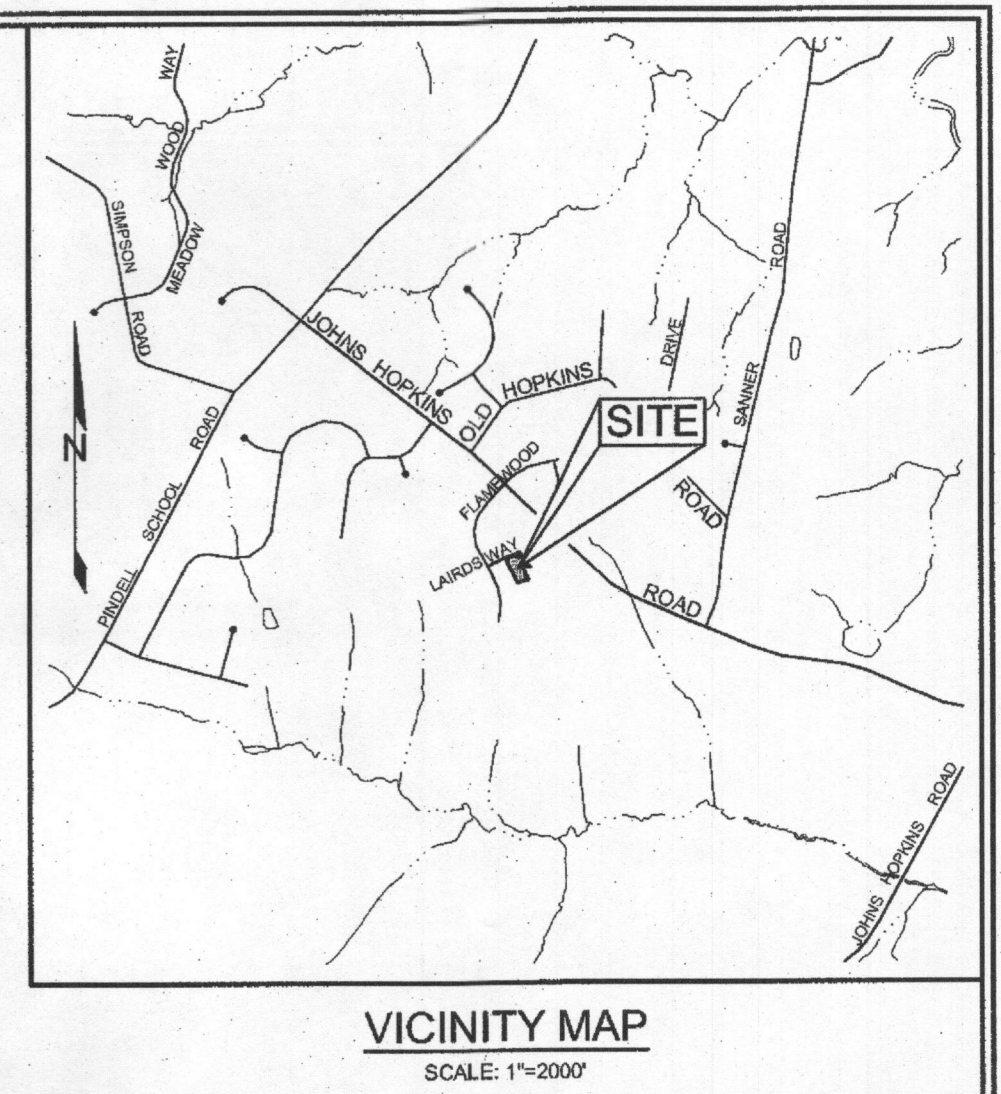
Mayer Brothers, Inc.
 6364 Race Road
 Elkridge, Maryland 21075
 Tel. 410.798.1404
 Fax. 410.798.1433
 www.maybrothers.com

**600 GPD BNR SYSTEM
 H-600 BNR
 with 750 GALLON PUMP CHAMBER**

Dwg. No. Hoot Form #1 No Scale March 19, 2009

- BAT 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 DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 5'.
 - THE BLOWER MAY NOT BE LOCATED MORE THAN 50' FROM THE TANK BASED ON THE MANUFACTURER'S SPECIFICATIONS.
 - THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM.
 - THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
 - 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 SYSTEM INSTALLED.
 - ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
 - AN AGREEMENT AND EASEMENT MUST BE COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY.
 - THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.

- LEGEND**
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - EXISTING TREELINE
 - PROPOSED SPOT ELEVATION
 - PERCOLATION TEST HOLE, PASSED
 - SOIL BOUNDARY
 - EXISTING TREE
 - PROPOSED WELL AREA
 - EXISTING CLEAN OUT



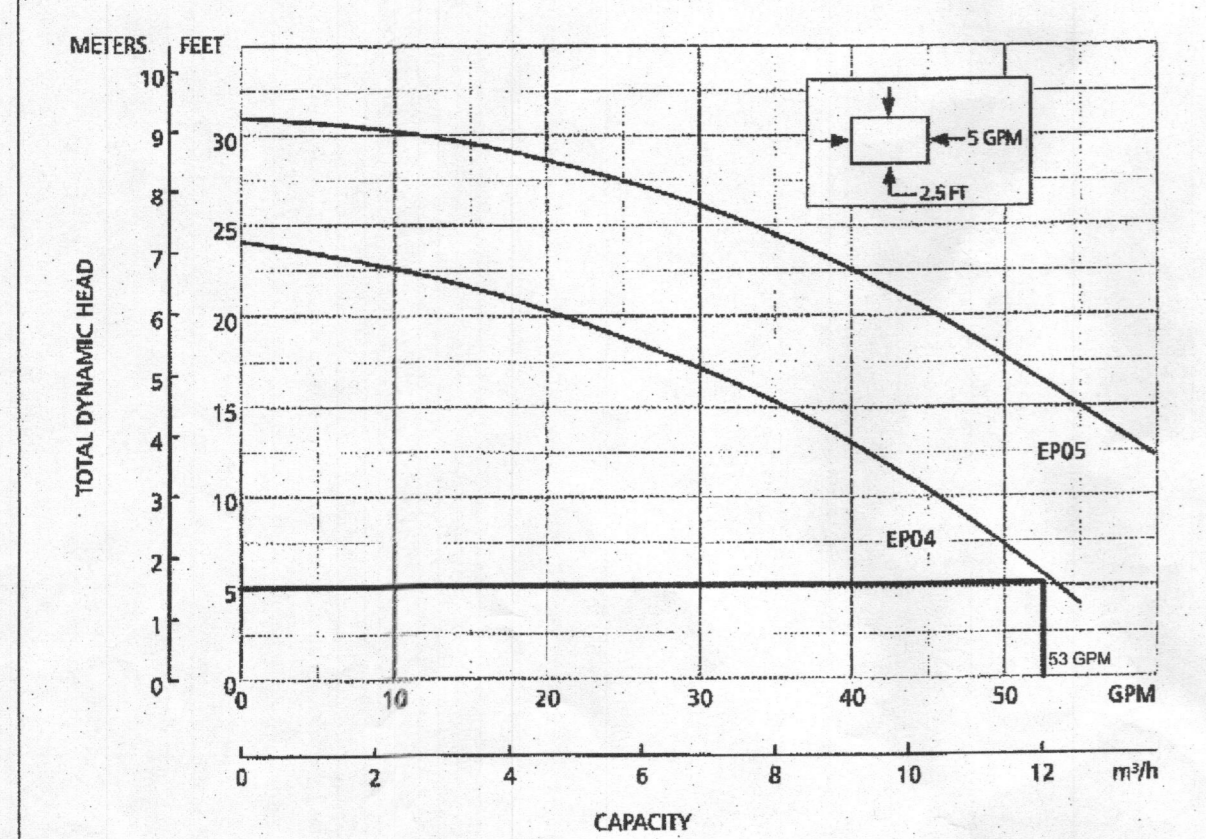
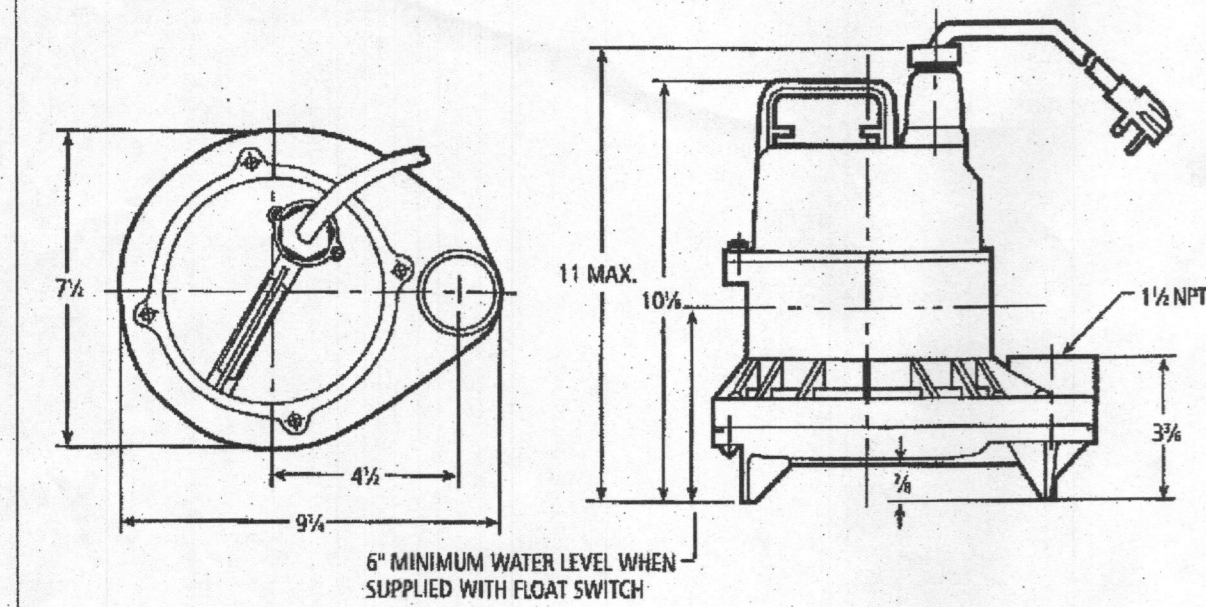
SEPTIC TRENCH CHART

TRENCH NUMBER	EXISTING GRADE	INVERT	TRENCH BOTTOM	LENGTH	WIDTH
1	453.5	447.5	445.5	79'	3'
2	453.1	447.1	445.1	79'	3'

OWNER/DEVELOPER
 BRANDON ALMAGRO
 AND ELBA BATIZ
 7506 LAIRDS WAY
 CLARKSVILLE MD 21029

- PUMP NOTES:**
- HEAD CALCULATIONS:
 STATIC HEAD= 4.5' USE 5.0'
 TOTAL DYNAMIC HEAD = 4.5' USE 5.0'
 - PUMP CALCULATION:
 FLOW RATE: 53 GPM
 DOSE: 106 GALLONS
 RUN TIME: 2 MINUTES

Goulds Pumps
 EP04 & EP05 Series Model 3871
 Submersible Effluent Pumps



PERFORMANCE RATINGS

Total Head (ft. of water)	Gallons Per Minute	EP04	EP05
5	53	-	-
10	46	62	-
15	36	55	-
20	21	46	-
25	0	33	-
30	-	11	-

- SEPTIC TRENCH DESIGN**
- INITIAL SYSTEM AND REPLACEMENTS:
 • APPLICATION RATE: 0.8
 • EFFECTIVE AREA BEGINNING DEPTH: 6'
 • BOTTOM MAXIMUM DEPTH: 8'
 - DESIGN FLOW:
 • 5 BEDROOMS AT 150 GPD
 • 6x150 GPD = 750 GPD
 - SQUARE FOOTAGE OF DRAINFIELD REQUIRED:
 • DESIGN FLOW (750 GPD) / APPLICATION RATE (0.8) = 937.5
 - SIDEWALL REDUCTION CREDIT:
 • TRENCH WIDTH (W) = 3'
 • TRENCH DEPTH (D) = 2'
 • (W+2) / (W+1+2D) x 100 = 62%
 - LINEAR LENGTH OF TRENCH REQUIRED:
 • DRAINFIELD SQUARE FOOTAGE (937.5) x SIDEWALL REDUCTION PERCENTAGE (60%) / TRENCH WIDTH (3') = 156.25'
 - LINEAR LENGTH OF TRENCH PROVIDED = 156'

SITE PLAN FOR BAT INSTALLATION
 7506 LAIRDS WAY
 FLAMEWOOD
 LOT 7

TAX MAP 41 GRID 15
 5TH ELECTION DISTRICT

TAX IDENTIFICATION NO. 381193
 HOWARD COUNTY, MARYLAND

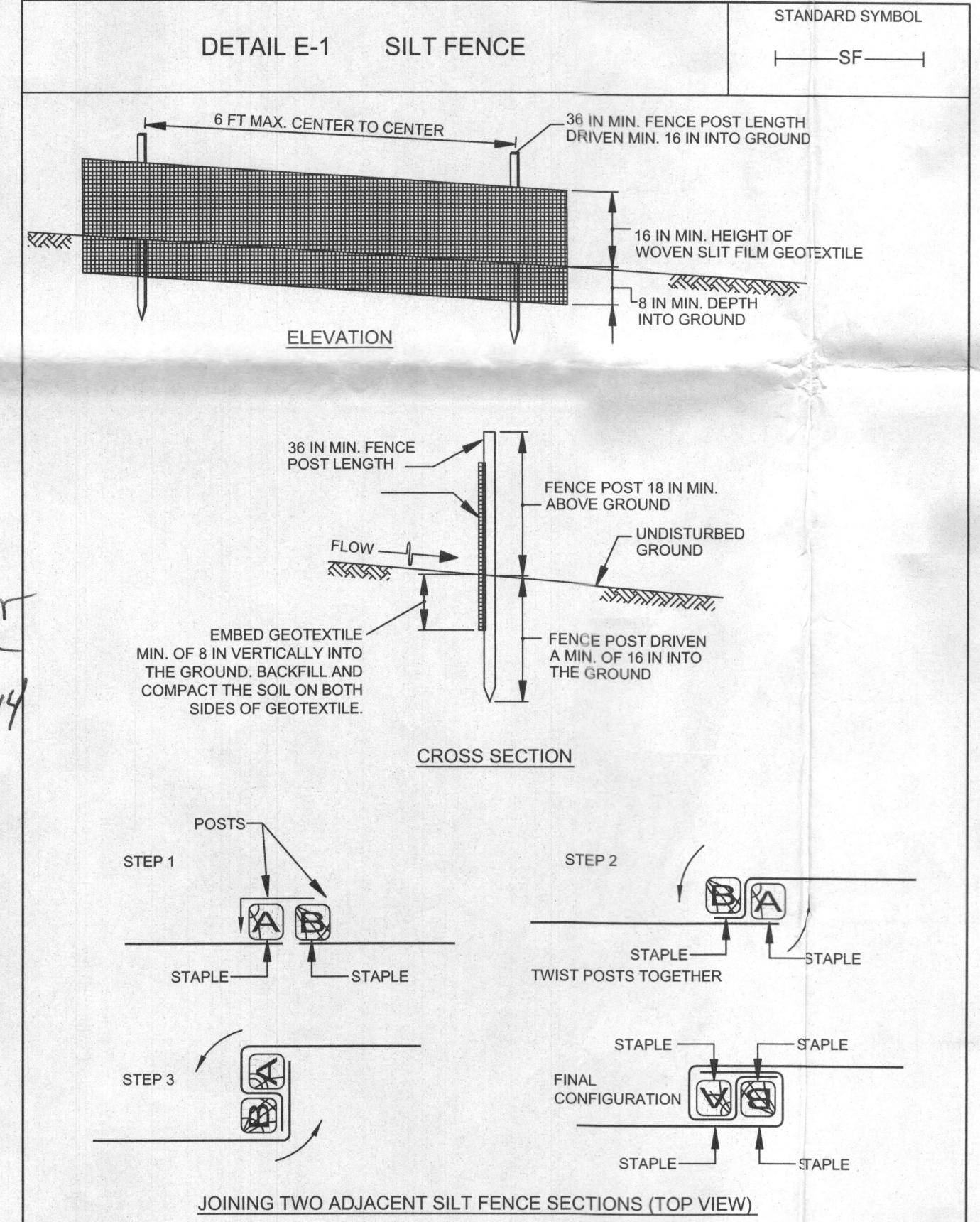
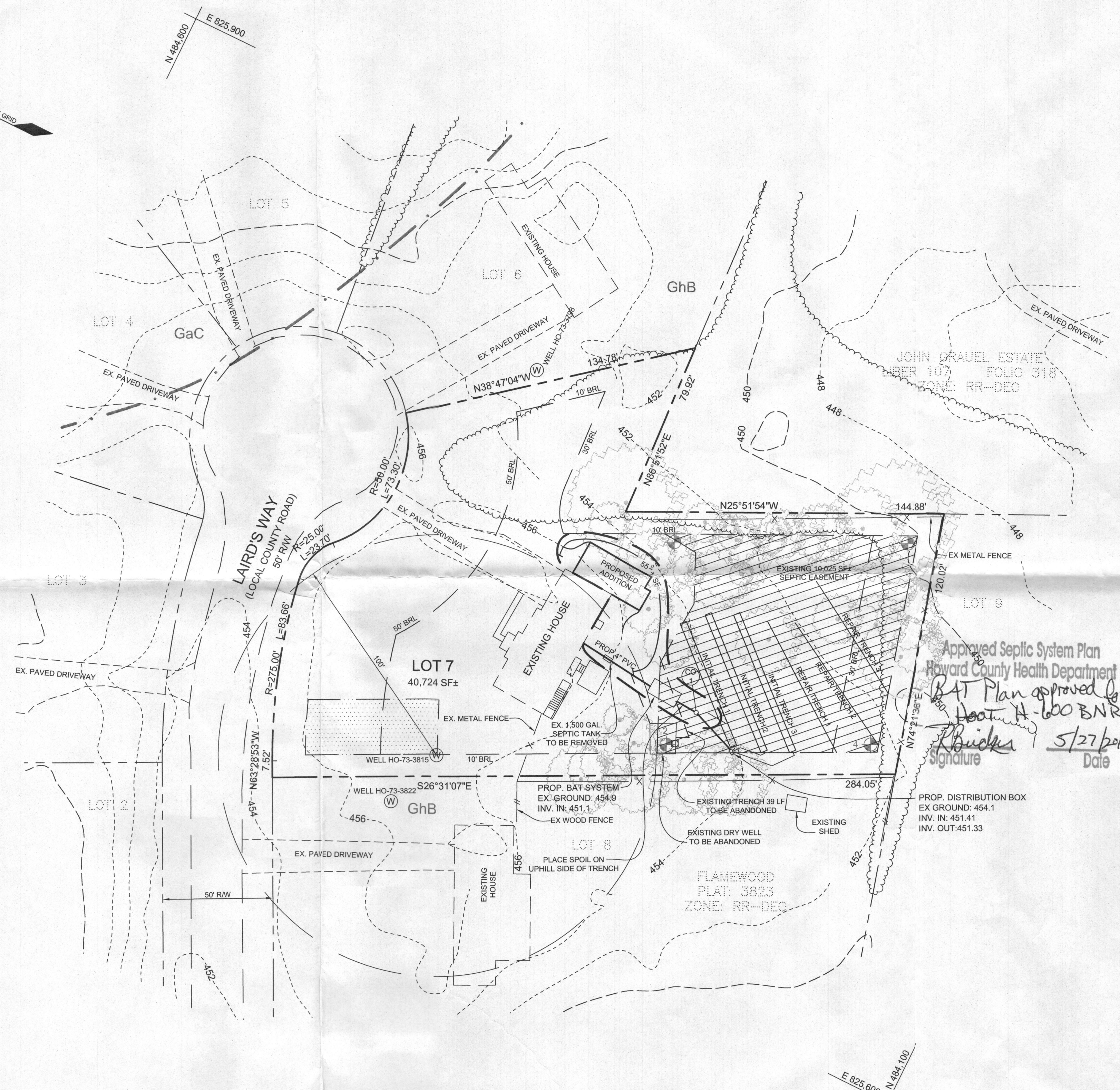
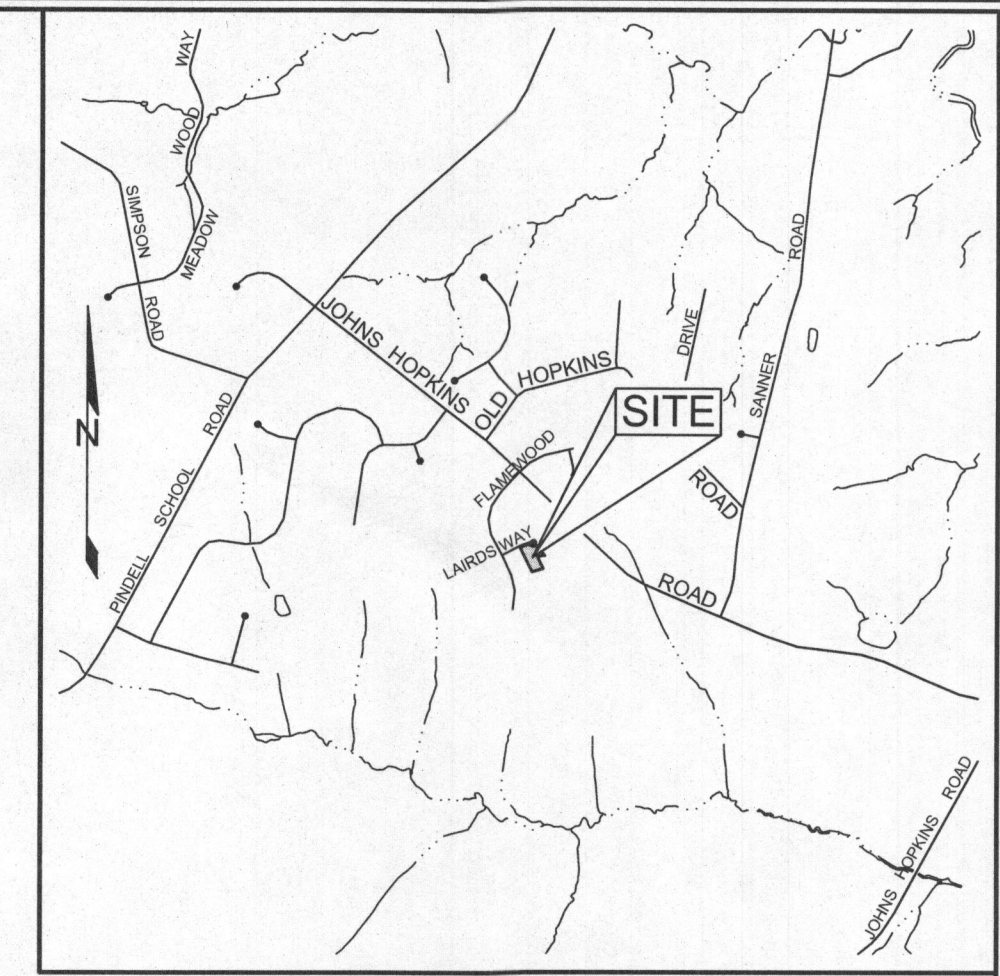
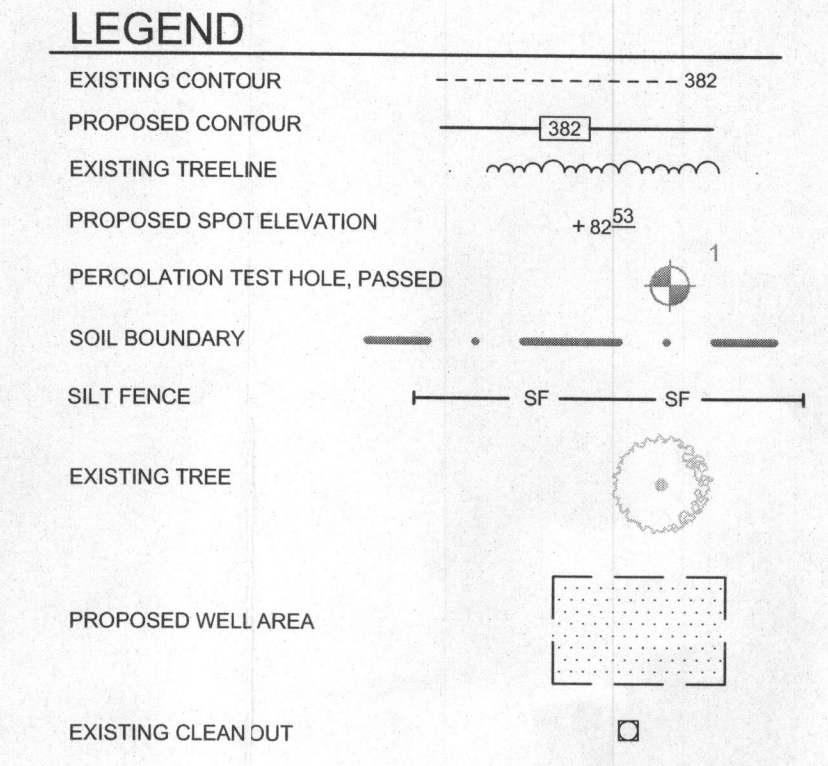
Sill · Adcock & Associates · LLC
 Engineers · Surveyors · Planners
 3300 North Ridge Road, Suite 160
 Ellicott City, Maryland 21043
 Phone: 443.325.7682 Fax: 443.325.7685
 Email: info@silladcock.com

DESIGN BY: PS
 DRAWN BY: JT
 CHECKED BY: PS
 SCALE: AS SHOWN
 DATE: APRIL 22, 2014
 PROJECT #: 13-111
 SHEET #: 2 of 2

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SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
GhB	GLENELG-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B	0.20

NOTES:
 1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, WEB SOIL SURVEY.
 2) HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR 'K' GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.



- CONSTRUCTION SPECIFICATIONS**
- USE WOOD POSTS 1 1/2 X 1 1/2 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
 - USE 3/8 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APT.
 - USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
 - PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
 - EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
 - WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
 - EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
 - REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

- GENERAL NOTES**
- SUBJECT PROPERTY ZONED RR-DEO PER 02/02/04 COMPREHENSIVE ZONING PLAN.
 - TOTAL AREA OF PROPERTY = 0.93 AC ±
 - PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
 - THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT, OF AT LEAST 10,000 SF 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 SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.
 - THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY PREPARED BY SILL ADCOCK AND ASSOCIATES, LLC ON NOVEMBER 21, 2013.
 - THE TOPOGRAPHY SHOWN HEREON HAS BEEN FIELD RUN WITH 2' CONTOUR INTERVALS BY SILL ADCOCK AND ASSOCIATES, LLC ON NOVEMBER 21, 2013. THE EXISTING TOPOGRAPHY SHOWN OUTSIDE THE SITE IS BASED ON HOWARD COUNTY AERIAL TOPOGRAPHY FLOWN IN 2011.
 - PROPERTY ADDRESS: 7506 LAIRDS WAY
 - REFERENCES: LIBER 15216, FOLIO 460, PLAT #3823
 - THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
 - ANY CHANGES TO A PRIVATE SEWAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
 - ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWN GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS AND SEWAGE DISPOSAL EASEMENTS HAVE BEEN FIELD LOCATED. LOCATED WELLS WITHOUT A WELL TAG SHOWN DID NOT HAVE ONE.
 - THE EXISTING WELL SHOWN ON THIS PLAN (#73-3815) HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
 - THE SOIL TYPE WITHIN LOT 7 IS ALL GLENELG-URBAN LAND COMPLEX, HYDROLOGIC SOIL GROUP B (SEE SOIL LEGEND) PER THE NRCS WEB SOIL SURVEY WEBSITE.

SHEET INDEX

SHEET NO.	DESCRIPTION
1	PLOT PLAN
2	SITE PLAN FOR BAT INSTALLATION

OWNER/DEVELOPER
 BRANDON ALMAGRO AND ELBA BATIZ
 7506 LAIRDS WAY
 CLARKSVILLE MD 21029

PLOT PLAN
 7506 LAIRDS WAY
 FLEMWOOD
 LOT 7
 TAX IDENTIFICATION NO. 381193
 TAX MAP 41 GRID 15 5TH ELECTION DISTRICT
 PARCEL 415 HOWARD COUNTY, MARYLAND

Sill · Adcock & Associates · LLC
 Engineers · Surveyors · Planners
 3300 North Ridge Road, Suite 160
 Ellicott City, Maryland 21043
 Phone: 443.325.7682 Fax: 443.325.7685
 Email: info@saland.com

DESIGN BY: PS
 DRAWN BY: JT
 CHECKED BY: PS
 SCALE: AS SHOWN
 DATE: MAY 19, 2014
 PROJECT #: 13-111
 SHEET #: 1 of 2

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