



Howard County
Health Department

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: 6-9-14

ONSITE SEWAGE DISPOSAL SYSTEM

P 546394

INSTALLATION

APPROVAL DATE: 7/28/14 (Kme)

PERMIT

A _____

CONSTRUCTION

PROPERTY ADDRESS: 14323 Roxbury Meadow Drive

SUBDIVISION: Clarks Meadow

LOT: 22 TAX ID: _____

CONTRACTOR: Hatfield's Equipment

EMAIL: ken@hatfieldsequipment.com

CONTRACTOR ADDRESS: P.O. BOX 519 Annapolis Junction, MD 21701

PHONE: 301-490-4289

PROPERTY OWNER: DH LAND LLC

EMAIL: _____

OWNER ADDRESS: 5034 Dorsey Hall Drive Suite 102, Ellicott City, MD 21042

PHONE: _____

BAT UNIT MODEL: Norweco ✓

BAT UNIT SIZE: 600GPD

PUMP CHAMBER CAPACITY (GALLONS): 1500 ✓

PUMP SIZE: _____

NUMBER OF BEDROOMS: 4 ✓

HOUSE SQ. FT. _____

APPLICATION RATE: 1.2

DISTRIBUTION SYSTEM: GRAVITY FED ☒

LOW PRESSURE DOSED ☐

TRENCHES:	LINEAR FEET REQUIRED: <u>SEE BAT PLAN 200'</u>	INLET DEPTH: <u>SEE BAT PLAN 3.5'</u>
	TRENCH WIDTH: <u>SEE BAT PLAN 2'</u>	MAXIMUM BOTTOM DEPTH: <u>SEE BAT PLAN 8'</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>SEE BAT PLAN</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>SEE BAT PLAN</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:	Pump and alarm test required for final approval of septic system installation permit. Set BAT unit & pump tank upgrade of SWM Inlet and at least 25 feet away from Inlet. Pump & Alarm Test required for final approval of septic system installation.	

ISSUED BY: Robert Bricker

ISSUE DATE: 6-9-14

EXPIRATION DATE: 6-9-15

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 DOWNGRADE 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

See Separate Sheet
For As-Built

ROAD NAME

TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
2	3.5'	8'
NUMBER OF TRENCHES		4
TOTAL LENGTH		200
ABSORPTION AREA		400'± SW
DISTRIBUTION BOX LEVEL		Yes
DISTRIBUTION BOX BAFFLE		90° bend
DISTRIBUTION BOX PORT		Yes

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL	
MANUFACTURER	Back River
CAPACITY	Norman GAL
SEAM LOC	Top
TANK LID DEPTH	2'
BAFFLES	no
BAFFLE FILTER	—
MANHOLE LOC	Front/Center/Rear
6" PORT LOC	none
WATERTIGHT TEST	—
SLOTTED	Yes
DATE ON LID	—

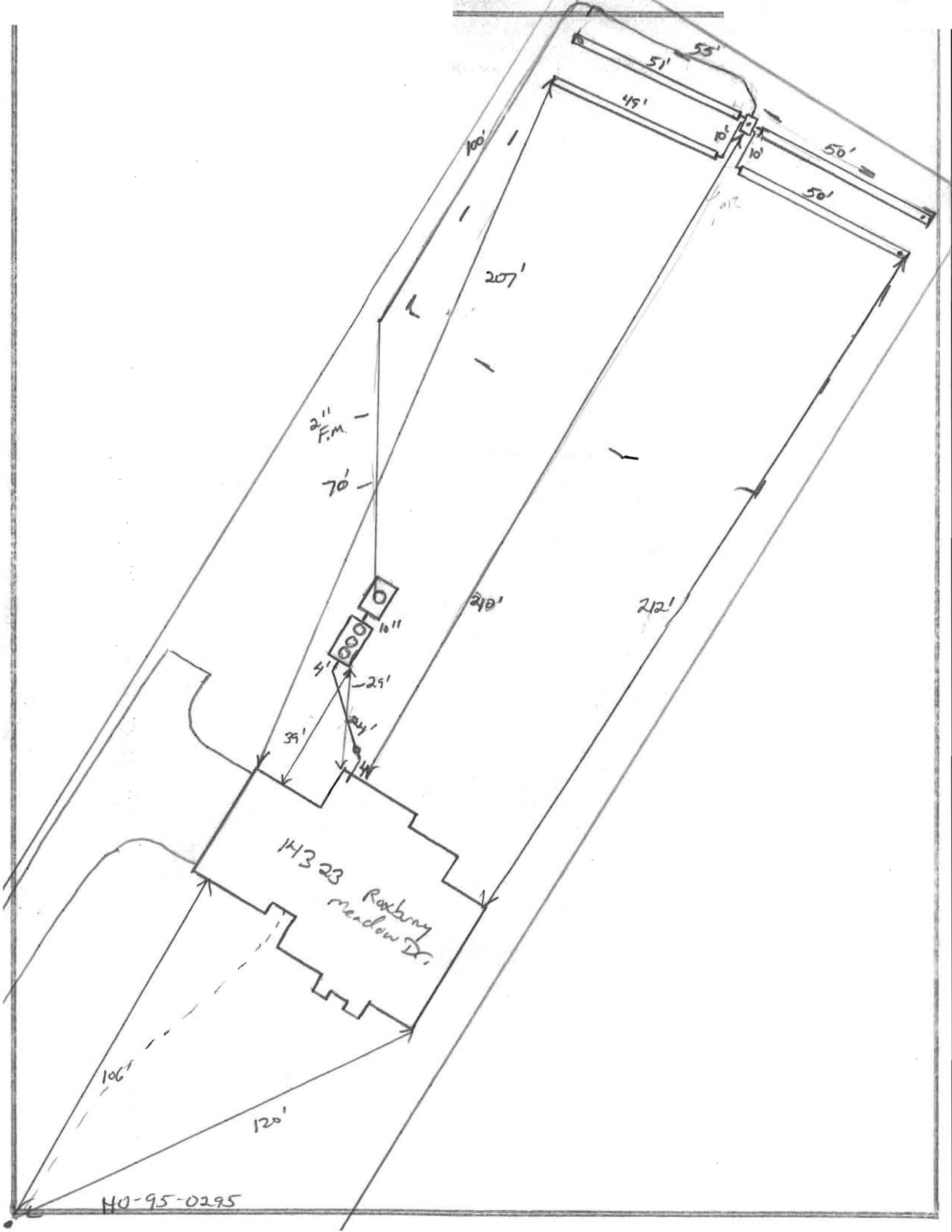
PUMP/SEPTIC TANK LEVEL	
MANUFACTURER	MO Concrete
CAPACITY	1500 GAL
SEAM LOC	Top
TANK LID DEPTH	2.5'
BAFFLES	no
BAFFLE FILTER	—
MANHOLE LOC	Rear
6" PORT LOC	—
WATERTIGHT TEST	—
SLOTTED	no
DATE ON LID	—

PRE-CONSTRUCTION:

6/18/14 BAT unit and pump tank not staked. Pulled off house drawing and located. Set per BAT plan. Run pipeline on outside of SRA as shown. Install 4x50' trenches running in both directions D box in middle. Trenches to be 2' wide. Inlet @ 3' bottom @ 8' (RW)

INSTALLATION:

6/30/14 Contractor working on trenches. looks good. Stone clear. Not using transit. must use transit to install trenches. (RW)
7/1/14 Tanks set. BAC install. F.M. installed up to D box. Had contractor remove baffle in D box and install 45° bend. OK to cover all work. Need BAT start-up and pump/alarm test of system (RW)
7/2/14. BAT start-up verification received. Need pump test of system 7/28/14 start-up of BAT unit verified. Pump test of system successful. Told contractor electrician need to place alarm w/ back up battery or keep separate from other supplied power sources.
FINAL INSPECTOR K. Hall DATE OF APPROVAL 7/28/14



HO-95-0295

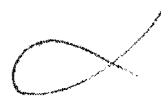
Back River Pre-Cast, LLC

PO BOX 329
Glyndon, MD 21071
Phone # 410-833-3394
Fax # 410-833-4116

Letter of Certification

This is to certify that the Norweco Singulair TNT 600 GPD Septic Tank installed at 14323 Roxbury Meadow Dr., Glenwood, MD 21738 July 1, 2014 was installed according to the manufacture's specifications.

Installer: Jeff Reiter



MATTHEW GECKLE

Vice-President



Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
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 22ND day of May, 2014, among Paul A. and Tricia A. Boyce, 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 14323 Roxbury Meadow Drive, Glenwood, Md. 21738, in the 4th 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 15027 Folio 00312.

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.

Paul A. Boyce 5/20/14
Owner Date
Paul A. Boyce

Trecia A. Boyce 5/20/14
Owner Date
Trecia A. Boyce

Bea Nylan 5/22/14
Howard County Health Department

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: Boyce
Reference/Control #: 75

=====

LR - Agreement Surcharge		
	1x	40.00 40.00

=====

SubTotal:		60.00
Total:		60.00

=====

REV-Check-B0A		60.00
Number : 3647		

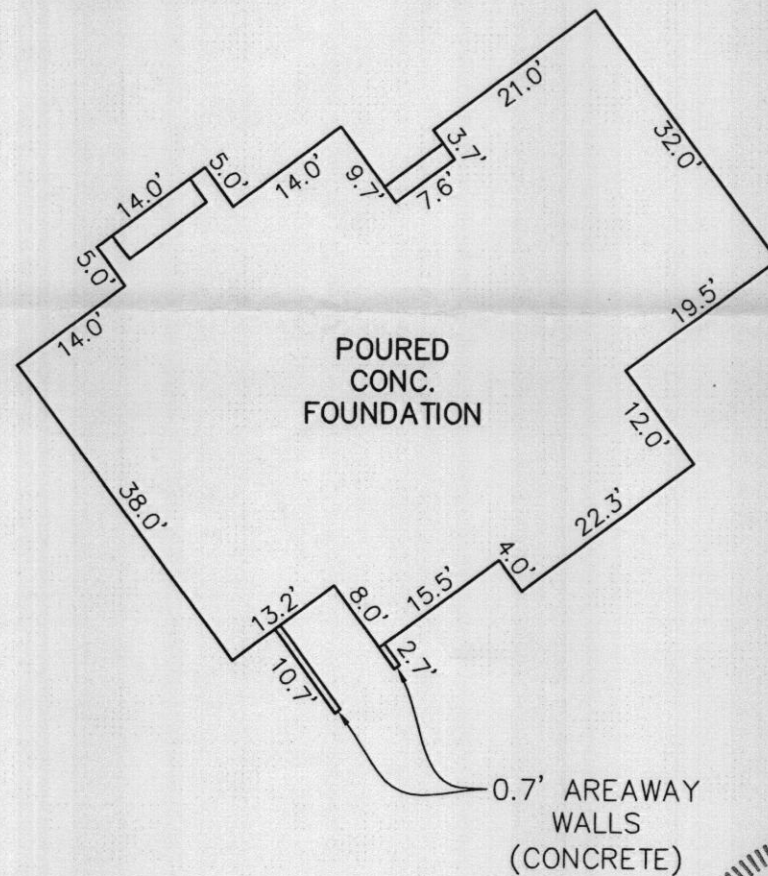
05/22/2014 09:04 CC13-JE
#2819201 /494/109
***** DUPLICATE #001 *****

05/22/2014 09:04 CC13-JE
Thank you for visiting us today

14323 Robby Meadow
Glenwood MI

GENERAL NOTES:

- 1) THIS LOCATION DRAWING IS PREPARED FOR THE BENEFIT OF THE CLIENT SIGNING THE HOUSE LOCATION SURVEY APPROVAL FORM INSOFAR AS IT IS REQUIRED BY A LENDER OR TITLE INSURANCE COMPANY OR ITS AGENTS IN CONNECTION WITH THE CONTEMPLATED TRANSFER, FINANCING OR REFINANCING OF THE PROPERTY SHOWN HEREON. UNLESS INDICATED AS BEING A BOUNDARY SURVEY, THIS LOCATION DRAWING IS NOT INTENDED FOR USE IN THE ESTABLISHMENT OF PROPERTY LINES AND IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATIONS OF FENCES, GARAGES, BUILDINGS OR OTHER EXISTING OR FUTURE IMPROVEMENTS. AS A RESULT, THIS LOCATION DRAWING DOES NOT PROVIDE FOR ACCURATE IDENTIFICATION OF PROPERTY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR SECURING FINANCING FOR RE-FINANCING.
- 2) SUBJECT PROPERTY IS SHOWN IN ZONE C ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP OF HOWARD COUNTY, MARYLAND, COMMUNITY PANEL No. 2400440020B EFFECTIVE DEC. 4, 1986.
- 3) THE OFFSETS FROM BUILDING LINE TO PROPERTY LINE AS SHOWN ON THE PLAT HEREON ARE TO AN ACCURACY OF PLUS OR MINUS 1' (\pm)
- 4) NO TITLE REPORT FURNISHED. SUBJECT TO ALL EASEMENTS, RIGHTS OF WAY AND CONDITIONS OF RECORD.
- 5) THE EXISTING WELL(S) SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-95-0205) HAS BEEN FIELD LOCATED BY FISHER, COLLINS AND CARTER, INC. PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.
- 6) PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROPERTY LINE SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 339, EXPIRATION DATE 10/04/2014.
- 7) BUILDING PERMIT #B-10003537



DETAIL:
1"=20'



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

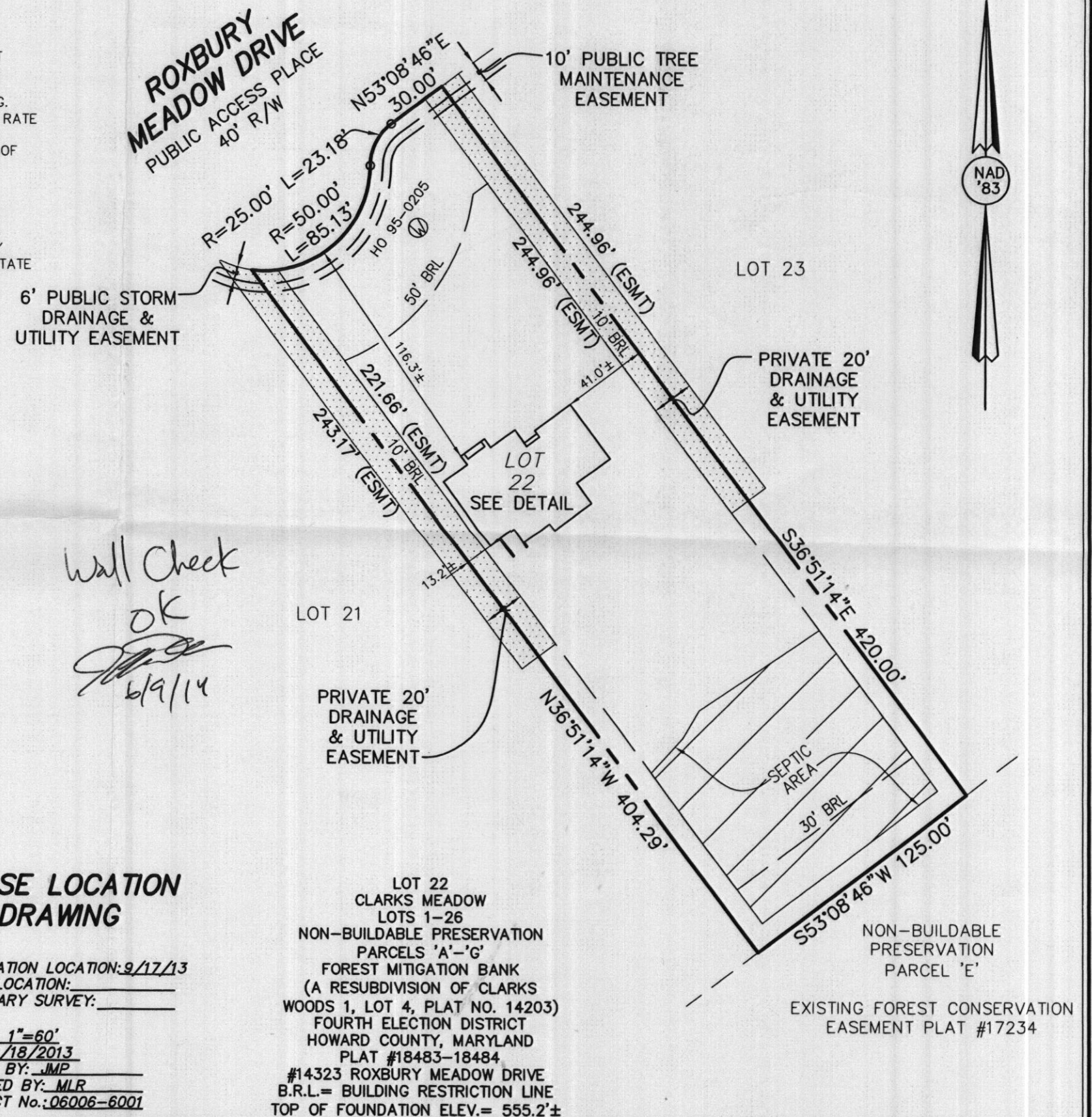
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

March 2, 1961 9/10/13
PROFESSIONAL LAND SURVEYOR DATE
REG. # 339

HOUSE LOCATION DRAWING

FOUNDATION LOCATION: 9/17/13
FINAL LOCATION: _____
BOUNDARY SURVEY: _____

SCALE: 1"=60'
DATE: 9/18/2013
DRAWN BY: JMP
CHECKED BY: MLR
PROJECT No.: 06006-6001

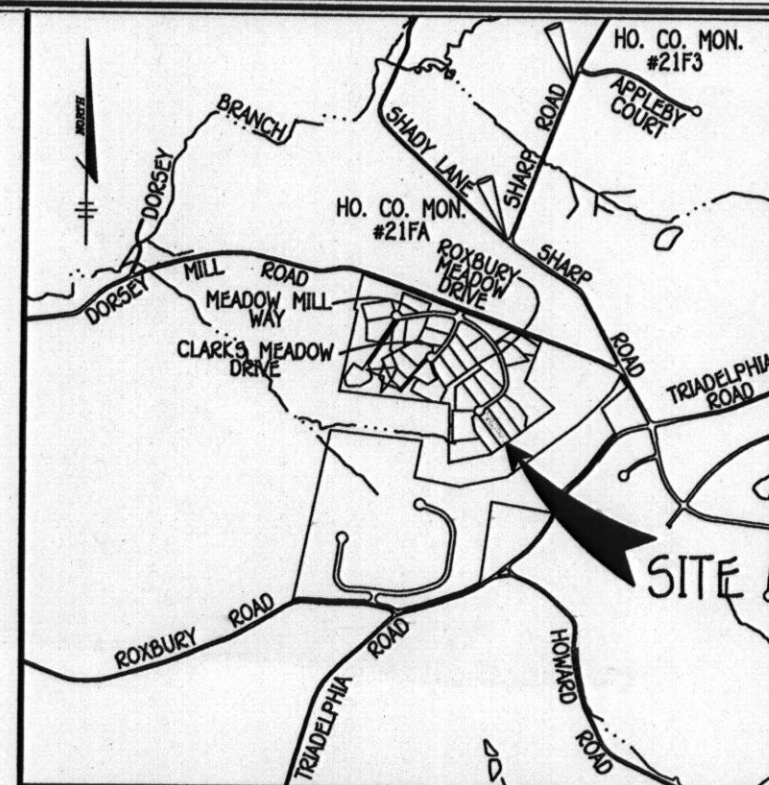


ROXBURY MEADOW DRIVE

40' R/W
PUBLIC ACCESS PLACE

BENCH MARKS

HO. CO. MON. 217A
V8902027.750 E1308457.870 ELEV. 528.916
CONCRETE MONUMENT SET
3.5' FROM NORTHERN EDGE
OF PARKING OF SHADY LANE
49.5' FROM CL. OF SHARP ROAD
AND 86.0' FROM C&P POLE #7.
HO. CO. MON. 217B
N588441.186 E1309075.570 ELEV. 538.305
5.9' FROM EASTERN EDGE
OF PARKING OF SHARP ROAD
APPROX. 0.3 MILES NORTH
OF SHADY LANE, 3.2' FROM
C&P POLE #14 (G&E POLE #48987).



VICINITY MAP

SCALE: 1" = 2000'

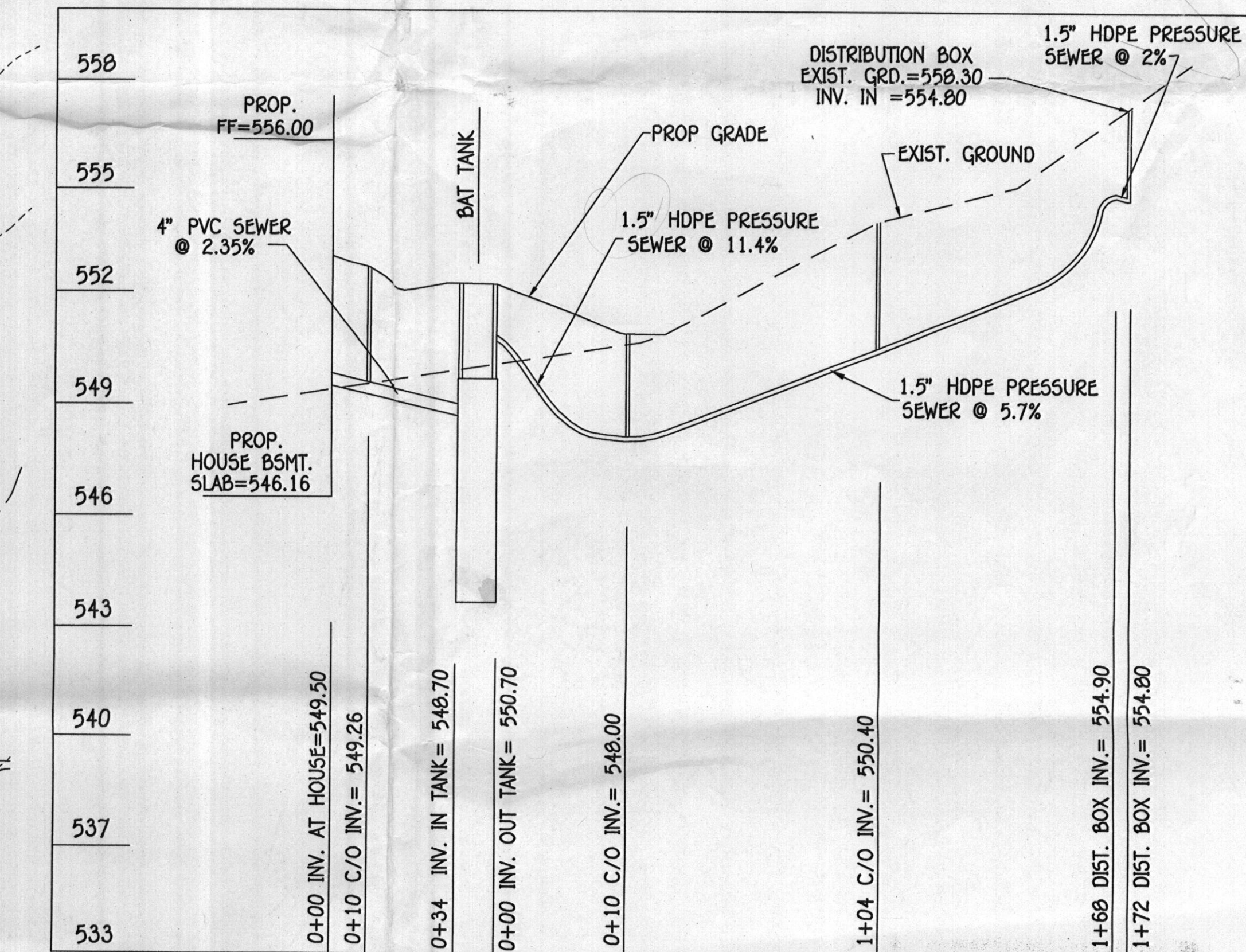
SEWAGE DISPOSAL SYSTEM DATA (4 BEDROOMS)

- PROP. INVERT AT FOUNDATION WALL: 483.90
1. HOOT 600 BNR (MAX. NO. BDRMS.=5)
EX. GRADE OVER TANK: 552.20
PROP. GRADE OVER TANK: 552.20
INVERT INTO TANK: 548.70 INVERT (DISCHARGE ELEV.) OUT TANK: 550.70
- DISTRIBUTION BOX:
EX. GRADE: 558.30
PROP. GRADE: 558.30
INVERT IN: 555.30
- TRENCH DESIGN:
(4 BDRM X 150 GPD/BDRM = 600 GPD)
600 / 0.6 APP. RATE = 1000 SF
USE 3' WIDE TRENCH AND 9' MIN. SPACING BETWEEN TRENCH EDGES.
1000 SF / 3' WIDTH = 333.3 L.F. X 0.50 = 166.7 L.F. MIN. TRENCH
USE 2- 83.5' LONG TRENCHES = 167 L.F.

TRENCH DATA:

- TRENCH 1:
EX. GROUND ABOVE = 558.30
INV. IN = 554.80
BOTTOM TRENCH = 550.30
- TRENCH 2:
EX. GROUND ABOVE = 557.50
INV. IN = 554.00
BOTTOM TRENCH = 549.50

CLARK'S MEADOW
LOT 24
PLAT NO. 18484
ZONED: RC-DEO



SEPTIC SYSTEM PROFILE

SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'

Approved Septic System Plan
Howard County Health Department

Signature: [Signature] Date: 5/14/14

BAT INSTALLATION
SITE PLAN

CLARK'S MEADOW
LOT 22

ZONED: RC-DEO
4TH ELECTION DISTRICT
SCALE: 1" = 30'

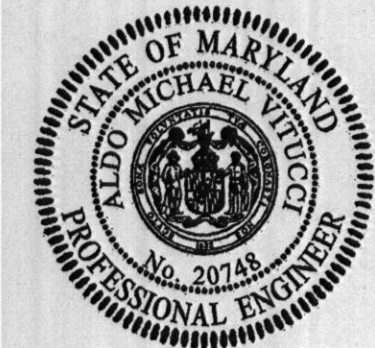
SHEET 1 OF 2

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE IS 2/27/15

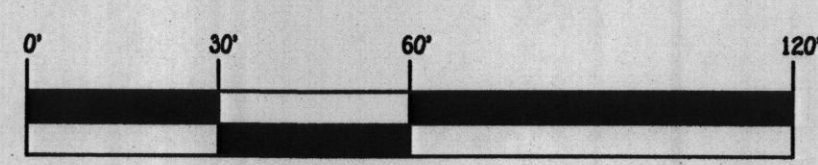
[Signature]
ALDO M. VITTOCI

5/14
DATE



OWNER/BUILDER/DEVELOPER

DOUGLAS HOMES
5034 DORSEY HALL ROAD
ELICOTT CITY, MARYLAND 21042
410-984-2484



SCALE: 1" = 30'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 661-2895

NO.	REVISION	DATE



GOULDS PUMPS
Wastewater



GOULDS PUMPS
Wastewater

APPLICATIONS

Specifically designed for the following uses:

- Effluent systems
- Homes
- Farms
- Heavy duty sump
- Water transfer
- Dewatering

SPECIFICATIONS

- Solids handling capability: 3/4" maximum.
- Capacities: up to 60 GPM.
- Total heads: up to 31 feet.
- Discharge size: 1 1/2" NPT
- Mechanical seal: carbon-rotary/ceramic-stationary, BUNA-N elastomers.
- Temperature: 104° F (40° C) continuous, 140° F (60° C) intermittent.
- Fasteners: 300 series stainless steel.
- Capable of running dry without damage to components.

MOTOR

- EP04 Single phase: 0.4 HP, 115 or 230 V, 60 Hz, 1550 RPM, built in overload with automatic reset.
- EP05 Single phase: 0.5 HP, 115 V or 230V, 60 Hz, 1550 RPM, built in overload with automatic reset.
- Power cord: 10 foot standard length, 16/3 SJTW with three prong grounding plug. Optional 20 foot length, 16/3 SJTW with three prong grounding plug (standard on EP05).
- Fully submerged in high grade turbine oil for lubrication and efficient heat transfer.

Available for automatic and manual operation. Automatic models include Mechanical Float Switch assembled and preset at the factory.

MODEL INFORMATION

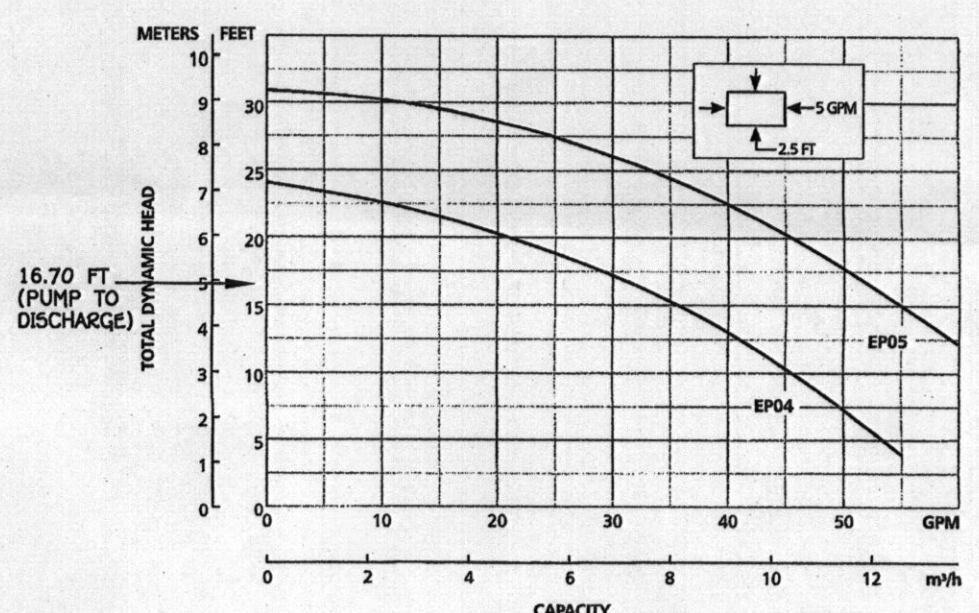
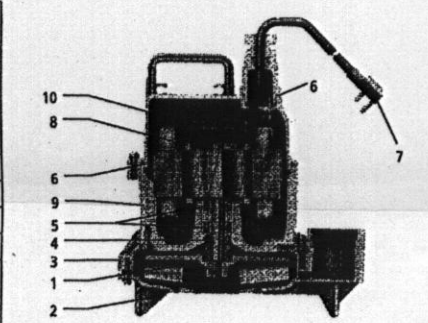
Order No.	HP	Volts	Amps	Minimum Circuit Breaker	Phase	Float Switch Style	Cost Length	Discharge Connection	Minimum On Level	Minimum Off Level	Minimum Basin Diameter	Maximum Solids Size	Shipping Weight Bag
EP0411						Plug / No Switch	10'	1 1/2"	Manual	Manual	15"		20 / 9.1
EP0411A						Plugback / Wide-Angle	10'	1 1/2"	Manual	Manual	15"		21 / 9.5
EP0411F	115	12	20			Plug / No Switch	20'	1 1/2"	Manual	Manual	15"		20 / 9.1
EP0411AC						Plugback / Wide-Angle	20'	1 1/2"	Manual	Manual	15"		21 / 9.5
EP0412	230	6	10		1	Plug / No Switch	10'	1 1/2"	Manual	Manual	15"	1/2"	20 / 9.1
EP0412F						Plug / No Switch	20'	1 1/2"	Manual	Manual	15"		20 / 9.1
EP0511F						Plug / No Switch	20'	1 1/2"	Manual	Manual	15"		22 / 10
EP0511AC	115	13	20			Plugback / Wide-Angle	20'	1 1/2"	Manual	Manual	15"		23 / 10.4
EP0512F	230	6.5	10			Plug / No Switch	20'	1 1/2"	Manual	Manual	15"		22 / 10

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	—

COMPONENTS

Item No.	Description
1	Impeller
2	Base
3	Pump Casing
4	Mechanical Seal
5	Ball Bearings
6	O-Rings
7	Power Cord
8	Oil Filled Motor
9	Motor Housing/ Stator Assembly
10	Motor Cover



SEPTIC SYSTEM ELEVATIONS

A= 552.20
B= 548.70 (INV. INTO TANK)
C= 543.68
D= 544.01
E= 545.26
F= 547.26
G= 548.26
H= 2.50' (7" MIN.)
I= 550.70 (INV. OUT OF TANK)

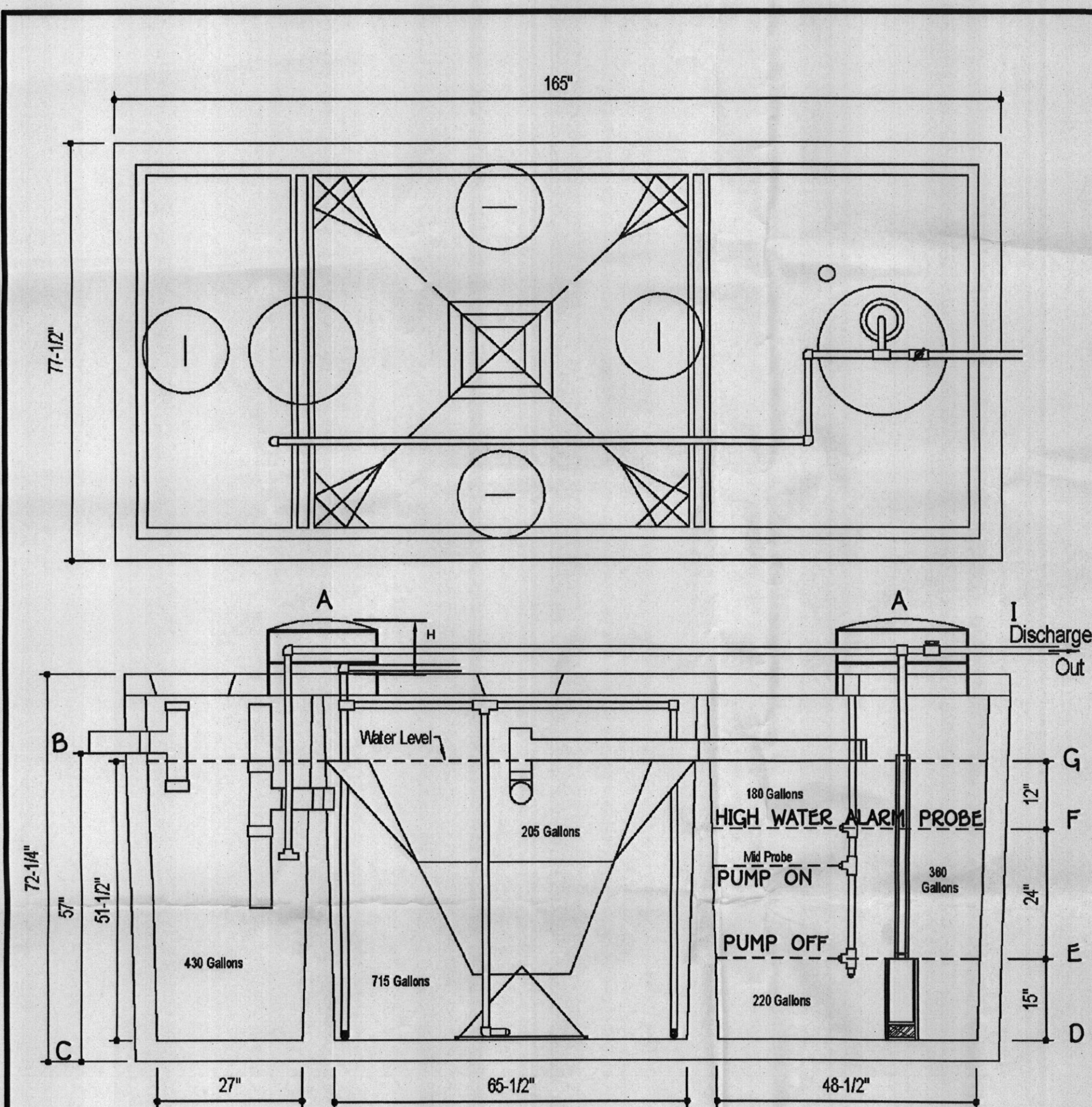
FFE = 556.00
BSE = 546.16
INV. OUT OF HOUSE = 554.0
INV. INTO DISTRIBUTION BOX = 554.80
TOP OF TANK = 549.70
DOSE VOLUME = 60 GAL.
TIME PER DOSE = 2 MIN.

NOTE:

THE PROPOSED HOUSE IS TO HAVE 4 BEDROOMS.

DYNAMIC HEAD CALCULATIONS

INVERT AT DISTRIBUTION BOX = 554.80
FRICTION HEAD LOSS VERTICALLY FROM TANK TO DISTRIBUTION BOX = 9.90 FT.
FRICTIONAL LOSS IN 183 L.F. OF 1.5 INCH PVC = 7.30 FT.
TOTAL DYNAMIC HEAD = 17.20 FT.



DESIGN DATA & GENERAL NOTES

- [1] Concrete strength f'_{cm} = 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 260-98 & C 494-92.
- [4] Reinforcing per ASTM A185. Min. 1-1/2" cover.

Mayer Brothers, Inc.

6384 Race Road
Elkridge, Maryland 21075
Tel. 410.796.1434
Fax. 410.796.1438
www.mayerbrothersprecast.com



600 GPD BNR SYSTEM
H-600 BNR

with 750 GALLON PUMP CHAMBER

Dwg. No. Hoot Form #1

No Scale

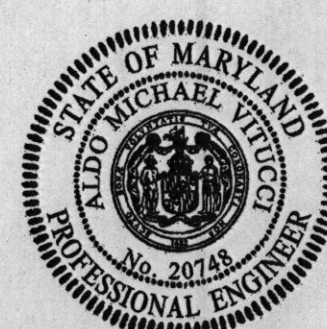
March 13, 2009

PROFESSIONAL CERTIFICATION

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Aldo M. Vitucci

DATE



OWNER/BUILDER/DEVELOPER

DOUGLAS HOMES
5034 DORSEY HALL ROAD
ELLICOTT CITY, MARYLAND 21042
410-964-2484

BAT INSTALLATION
SITE PLAN
CLARK'S MEADOW
LOT 22

ZONED: RC-DEO PLAT NO.: 15703
4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: APRIL, 2014

SHEET 2 OF 2