

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: 4/22/14

ONSITE SEWAGE DISPOSAL SYSTEM

P 546324

INSTALLATION APPROVAL DATE: 5/28/14

PERMIT CONSTRUCTION

A _____

PROPERTY ADDRESS: 14904 Meriwether Drive

SUBDIVISION: Meriwether Farm LOT: 29 TAX ID: _____

CONTRACTOR: Fogle's Septic Clean Inc. EMAIL: kurt@foglesinc.com

CONTRACTOR ADDRESS: 580 Obrecht Road, Sykesville, MD 21784 PHONE: 410-795-5670

PROPERTY OWNER: _____ EMAIL: _____

OWNER ADDRESS: Toll MD VIII LP PHONE: _____

7164 Columbia Gateway Drive, Columbia, MD 21046

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

PUMP CHAMBER CAPACITY (GALLONS): _____ PUMP SIZE: _____

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

DISTRIBUTION SYSTEM: GRAVITY FED LOW PRESSURE DOSED

TRENCHES:	LINEAR FEET REQUIRED: <u>See Bat Plan 120'</u>	INLET DEPTH: <u>See Bat Plan 2'</u>
	TRENCH WIDTH: <u>See Bat Plan 3'</u>	MAXIMUM BOTTOM DEPTH: <u>See Bat Plan 5'</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:	Set BAT unit per plan. <u>3x40'</u> <u>(120)</u> Set distribution box per plan. Install trenches per plan.	

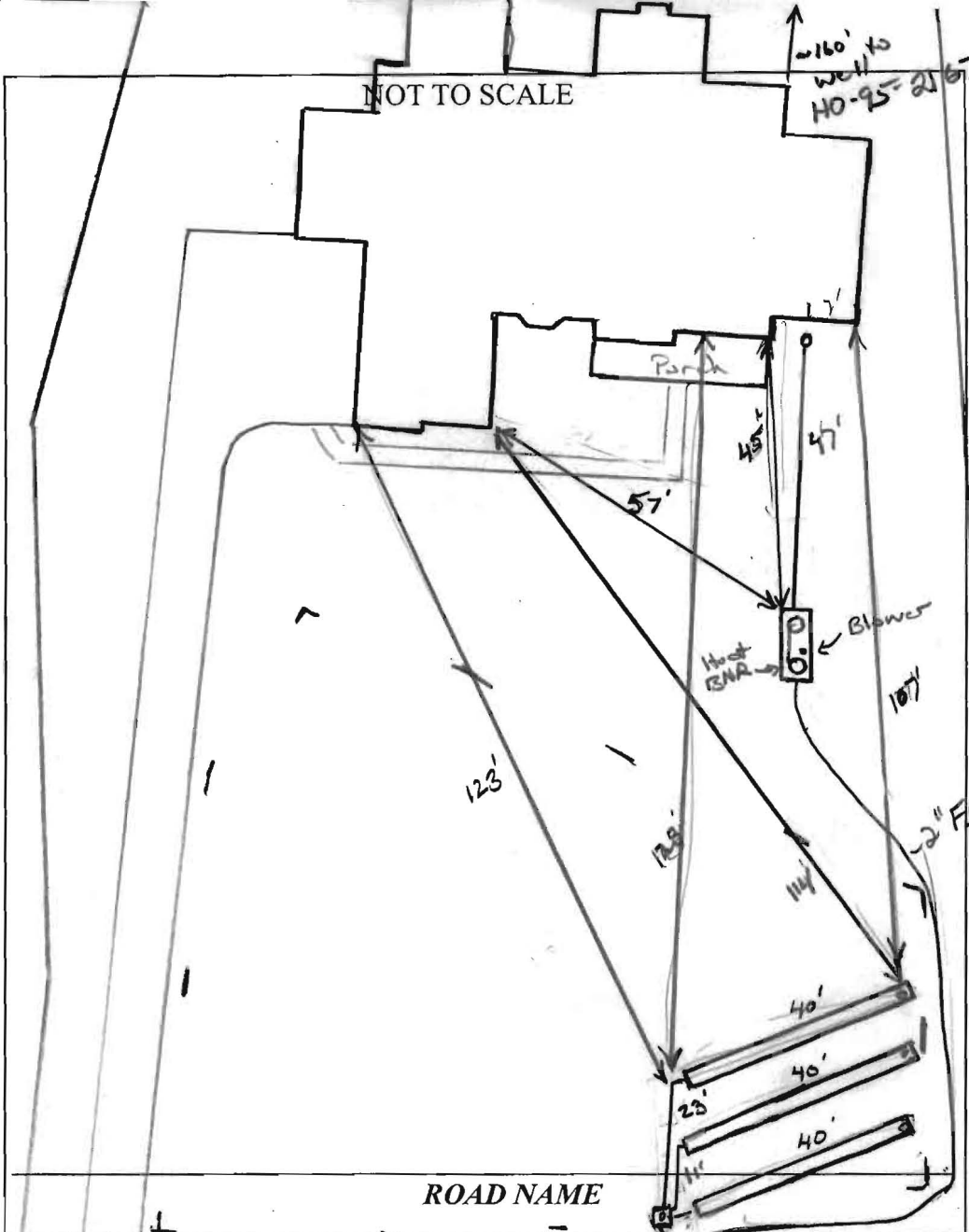
ISSUED BY: Jeff Williams ISSUE DATE: _____ EXPIRATION DATE: _____

- 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.



TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
3	2'	5'
NUMBER OF TRENCHES		3
TOTAL LENGTH		120'
ABSORPTION AREA		360' + SW
DISTRIBUTION BOX LEVEL		Yes
DISTRIBUTION BOX BAFFLE		90° bend
DISTRIBUTION BOX PORT		Yes

SEPTIC TANK DATA	
SEPTIC TANK 1 LEVEL	Yes
MANUFACTURER	Mayer Bros
CAPACITY	H-600 BNR GAL
SEAM LOC	Top
TANK LID DEPTH	2'
BAFFLES	Yes
BAFFLE FILTER	-
MANHOLE LOC	Front/Rear
6" PORT LOC	none
WATERTIGHT TEST	-
SLOTTED	Yes
DATE ON LID	N/A

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:

5/6/14 set BAT unit per approved plans. Set Dbox top, high part of SRA @ start of top trench. contour shot in field. Laid out 3 x 40' trenches running across septic area towards Lot 30. Call for inspection (KW)

INSTALLATION:

5/7/14 Heavy rains kept work to a minimum. Top 2 trenches installed. OK to continue (KW) 5/8/14 Trenches complete. No one on-site. Dbox not. No Tank or F.M. installed. OK to cast trench (KW) 5/13/14 BAT unit set. Internal components installed. F.M. installed to D box. Need House connection and BAT start-up + pump test. far final approval (KW) 5/28/14 Start-up from Hot received. (KW)

FINAL INSPECTOR *[Signature]*

DATE OF APPROVAL 5/28/14



MAYER BROS., INC.

Precast Concrete Products

6264 Race Rd. Elkridge, MD 21075

Letter of Satisfaction Hoot System Installation

Address of Property: 14904 Meriwether
Glenslg, MD 21737

Date of Final Inspection: 5/28/14

Installer: Fogle's

Hoot Technician/Inspector: Mike Sample

I hereby certify that the Hoot system installed at the property listed above has been installed according to proper Hoot installation practices. I have also verified the startup of the system and it is in proper working order.

Sincerely,

W. Michael Dyer
Name of Inspector
Mayer Bros., Inc.

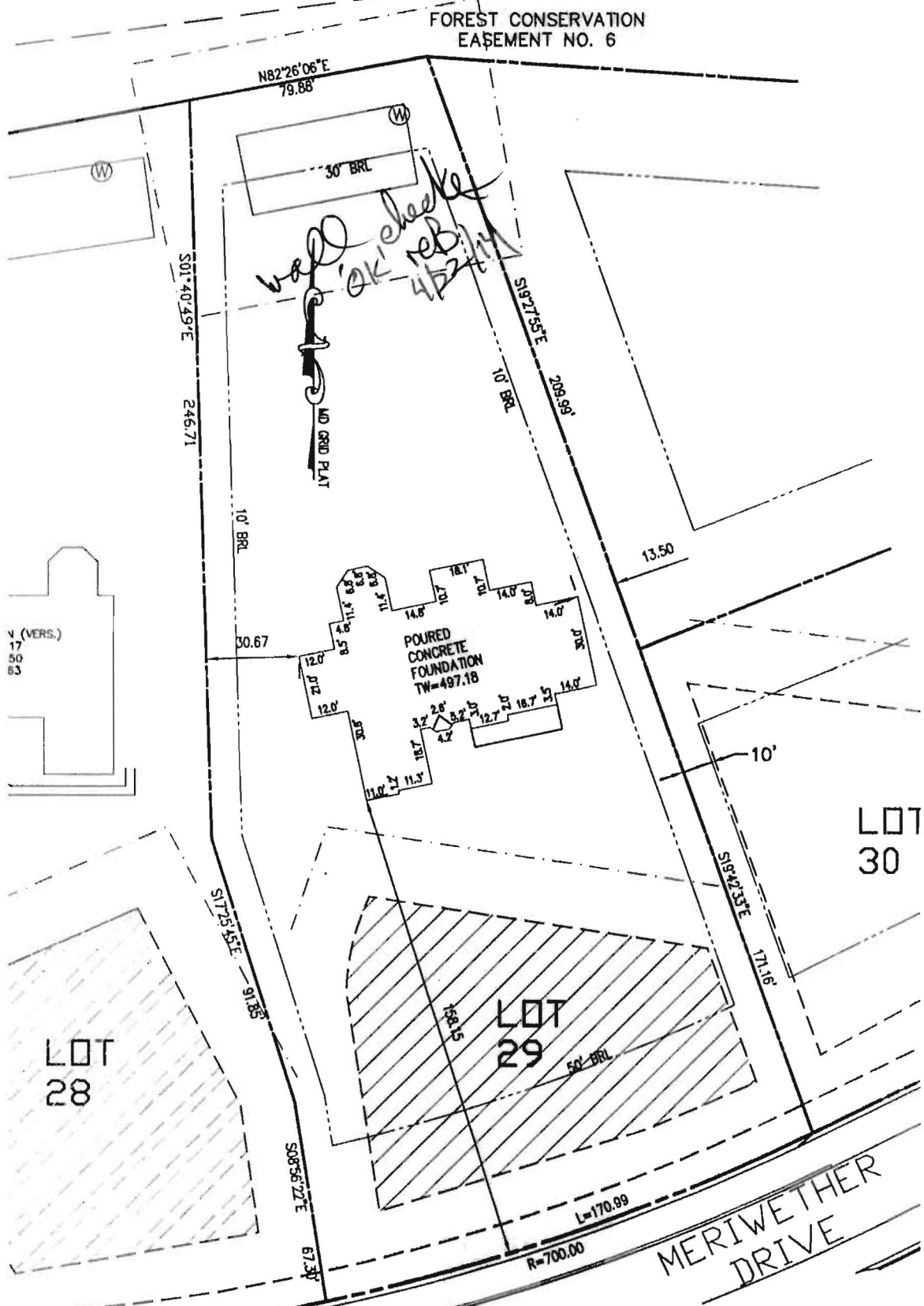
PH: 410-796-1434

FX: 410-796-1438

WBE
NPCA Certified Plant

mayerbro@connext.net
www.mayerbrosprecast.com

Grease Interceptors, Grease Solutions, Aerobic Treatment Units, Septic Tanks, Holding Tanks, Storm Water Structures, Hydroceptors, Bench Barrier, Water Meter Vaults, Sectional Valve Vaults, Top Slabs, Curb Heads, Curb Bumpers, PermEntry Basement Entries, Scapewell Window Wells, Custom Precast Products



BUILDING SETBACKS (B.R.L.'s) SHOWN HEREON PER SITE DEVELOPEMENT PLAN SETBACK DISTANCES SHOWN HEREON AS "±" HAVE AN ACCURACY OF ±0.1' FOOT.

ADDRESS: 14904 MERIWETHER DRIVE
GLENELG, MD 21737

SURVEYOR'S CERTIFICATE

THIS WALLCHECK WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT. THIS PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS, RIGHT-OF-WAYS, COVENANTS, AND RESTRICTIONS, ETC. OF RECORD, SOME OR ALL OF WHICH MAY OR MAY NOT BE SHOWN AND/OR REFERENCED HEREON. BEARINGS AND DISTANCES OF THE PROPERTY BOUNDARY LINES SHOWN HEREON ARE PER AVAILABLE RECORDS AND HAVE NOT BEEN FIELD VERIFIED. THIS IS NOT A "LOCATION DRAWING" AND IS NOT TO BE USED FOR SETTLEMENT PURPOSES.

[Signature] 21328 11/19/13
SIGNATURE: MICHAEL JOE BOYCE MD. LIC NO. DATE

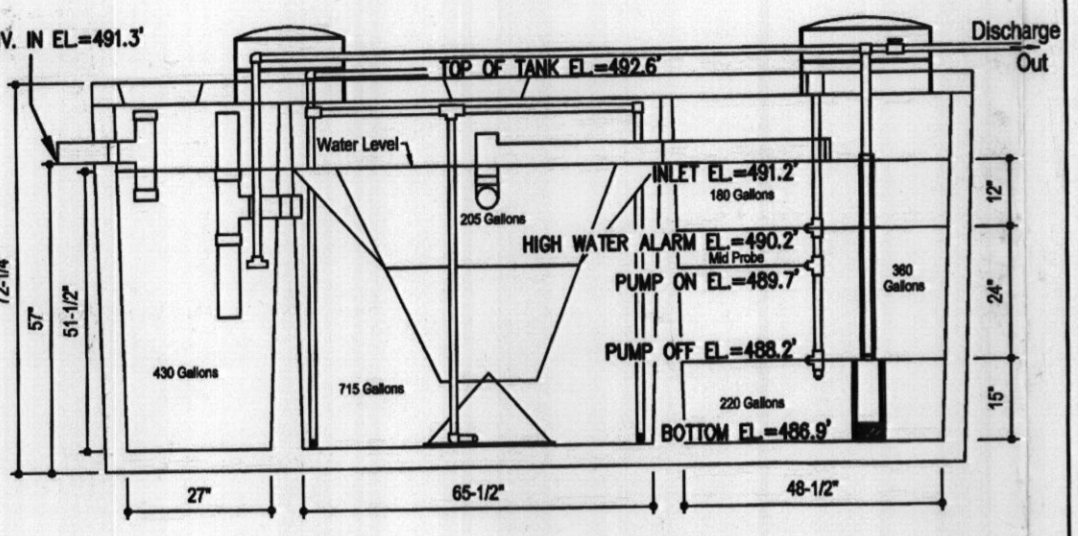
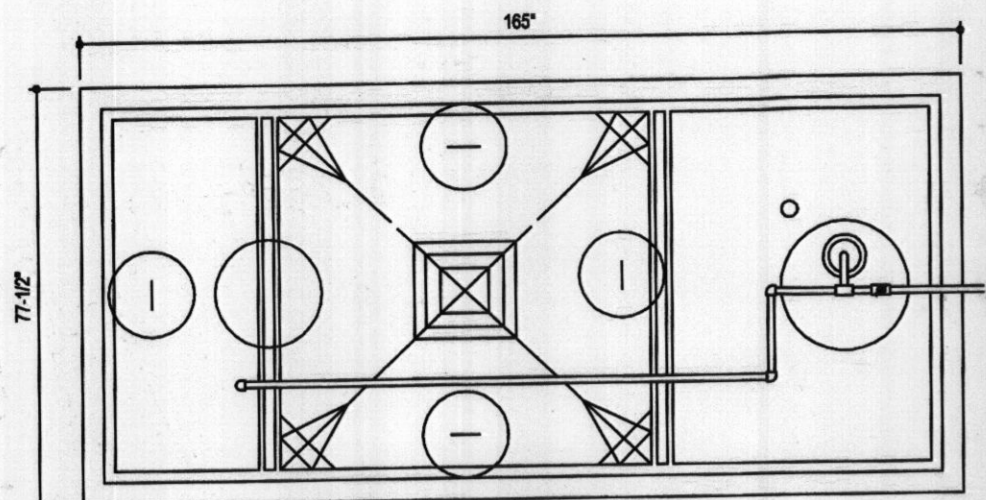
WALL CHECK
LOT #29
MERIWETHER FARMS
LIBER 12124, FOLIO 0120
PLAT No. 21765, ET SEQ
FOURTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



ESE Land Planning
Engineering
Land Surveying

ESE Consultants Inc.
7164 Columbia Gateway Dr.
Suite 203
Columbia, MD 21046
TEL: 410-872-9105
FAX: 410-872-4870

DATE: 11/19/13 SCALE: 1"=50' FILE: LOT-29 WC
CHK'D: M.J.B. JOB#: 3184 DRAWN: JLN

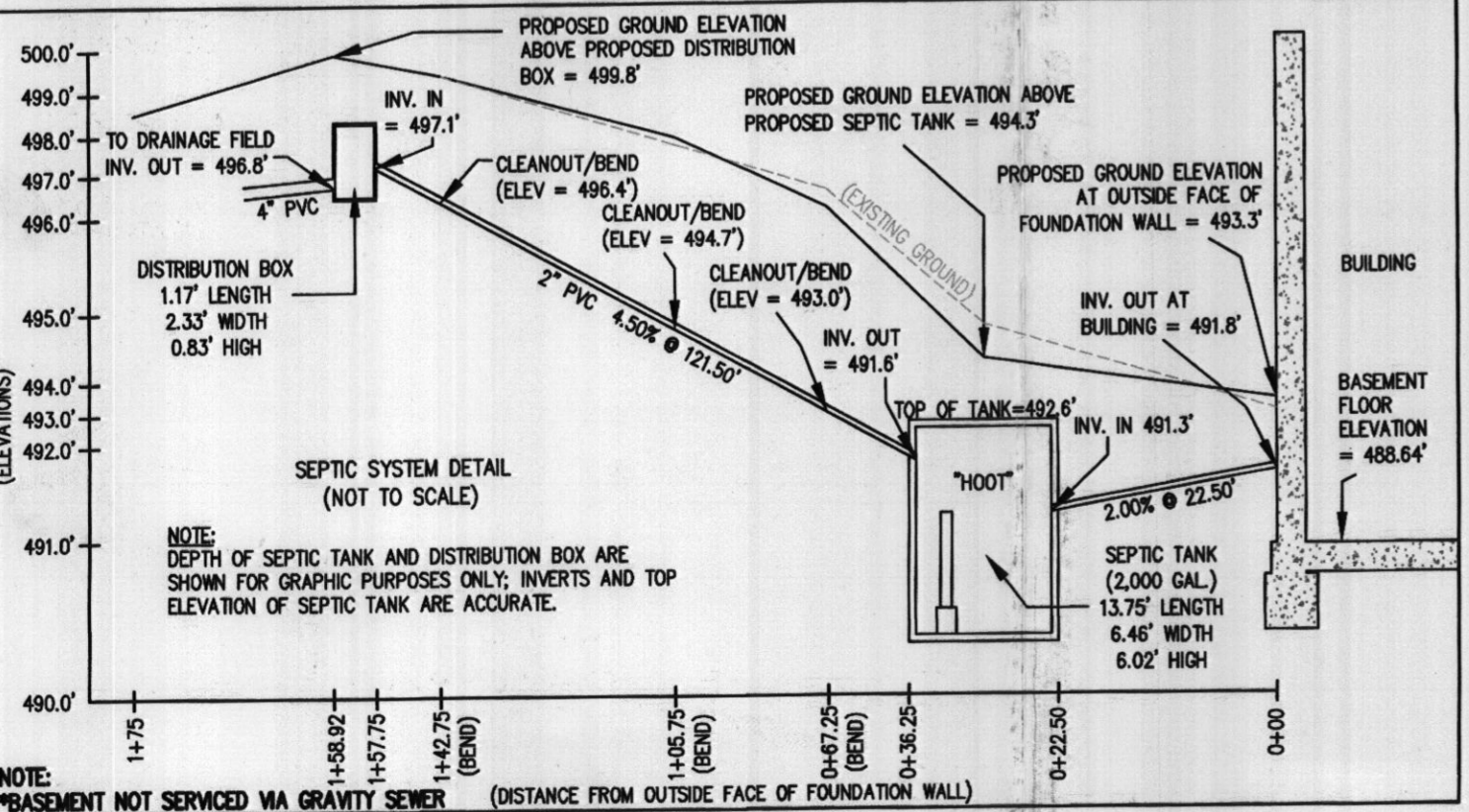
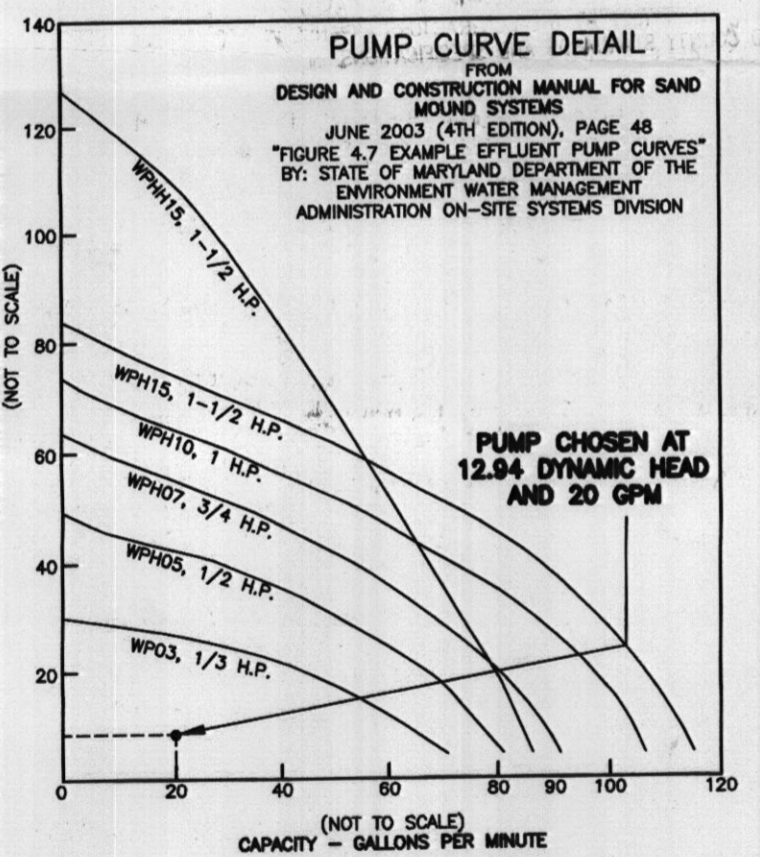


DESIGN DATA & GENERAL NOTES
 1. Concrete strength F=4,000 p.s.i. @ 28 days. Density = 150 pcf.
 2. Cement - Portland Type III per ASTM C 150-02.
 3. Admixtures & plasticizers per ASTM C 260-06 & C 484-02.
 4. Reinforcing per ASTM A105. Min. 1-1/2" cover.

Mayer Brothers, Inc.
 684 Race Road
 Elkridge, Maryland 21075
 Tel. 410.796.1434
 Fax. 410.796.1438
 www.mayerbroscast.com

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

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



HOUSE OPTIONS:
 TYPE: HAMPTON (CAROLINA)
 EXPANDED FAMILY ROOM/GREAT ROOM
 CONSERVATORY ELITE ADDITION
 ADD'L 1' TO HEIGHT OF BASEMENT FOUNDATION
 BAY WINDOWS (OFF OF STUDY)
 ADD'L ONE CAR FRONT ENTRY GARAGE
 BEDROOM SUITES ABOVE ELITE ADDITION
 NAPLES SUNROOM ADDITION

OPTION No. 023
 OPTION No. 039
 OPTION No. 070
 OPTION No. 156
 OPTION No. 506
 OPTION No. 521
 OPTION No. 529

LEGEND:
 ● PERC TEST LOCATION
 ○ WELL LOCATION
 -LOD- LIMITS OF DISTURBANCE
 TW TOP OF WALL
 GF GROUND FLOOR/FIRST FLOOR
 BF BASEMENT FLOOR
 BRL BUILDING RESTRICTION LINE

PUMPING SYSTEM DATA:
 LENGTH OF FORCE MAIN: 121.50' @ 2" DIA. PIPE
 STATIC HEAD = 8.80'
 FRICTION HEAD = 4.14'
 DYNAMIC HEAD = 12.94'
 FLOW = 20 GPM
 DOSE = 100 GALLONS (MINIMUM)
 PUMP TYPE PER PUMP CURVE CHART = WP03, 1/3 H.P.

DOSE CALCULATIONS:
 THE MINIMUM DOSE MUST BE NO LESS THAN ONE SIXTH (1/6) THE DESIGN FLOW
 DESIGN FLOW = 600 GPD
 (1/6) X (600 GPD) = 100 GALLONS
 MINIMUM DOSE = 100 GALLONS

DYNAMIC HEAD CALCULATIONS:
 INV. IN @ DISTRIBUTION BOX = 497.1'
 INV. @ TANK PUMP OFF FLOAT = 488.3'
 (INV. IN AT DISTRIBUTION BOX (-) ELEV. OF PUMP OFF SWITCH)
 STATIC HEAD = 8.80'
 FRICTION HEAD LOSS IN 2" DIA. PIPE = 4.14'
 (STATIC HEAD + FRICTION HEAD)
 TOTAL DYNAMIC HEAD = 12.94'

FLOW CALCULATIONS:
 PER STANDARD HOOT 600BNR "BLASTER EB20" PUMP:
 THE SPECIFICATIONS SHOW IT PUMPS 20 GPM AT A HEAD OF 100'.
 100 GALLONS (MIN. DOSE) @ 20 GPM = 5 MINUTE PUMP TIME

PUMP HORSEPOWER CALCULATIONS:
 FLOW X TOTAL DYNAMIC HEAD X SPECIFIC GRAVITY ÷ 3960 X EFFICIENCY
 (SPECIFIC GRAVITY H2O @ 68F IS 1)
 (USE 0.4 FOR EFFICIENCY, AS THIS IS COMMON FOR EFFLUENT PUMPS)
 20 X 12.94 X 1 ÷ 3960 X 0.4 = 258.8 ÷ 1,584.0 = 0.16
 USE PUMP CHART - PUMP = WP03, 1/3 H.P.

Approved Septic System Plan
 Howard County Health Department
 Signature: [Signature] Date: 4/14



SEPTIC SYSTEM/BEST AVAILABLE TECHNOLOGY (BAT) NOTES:

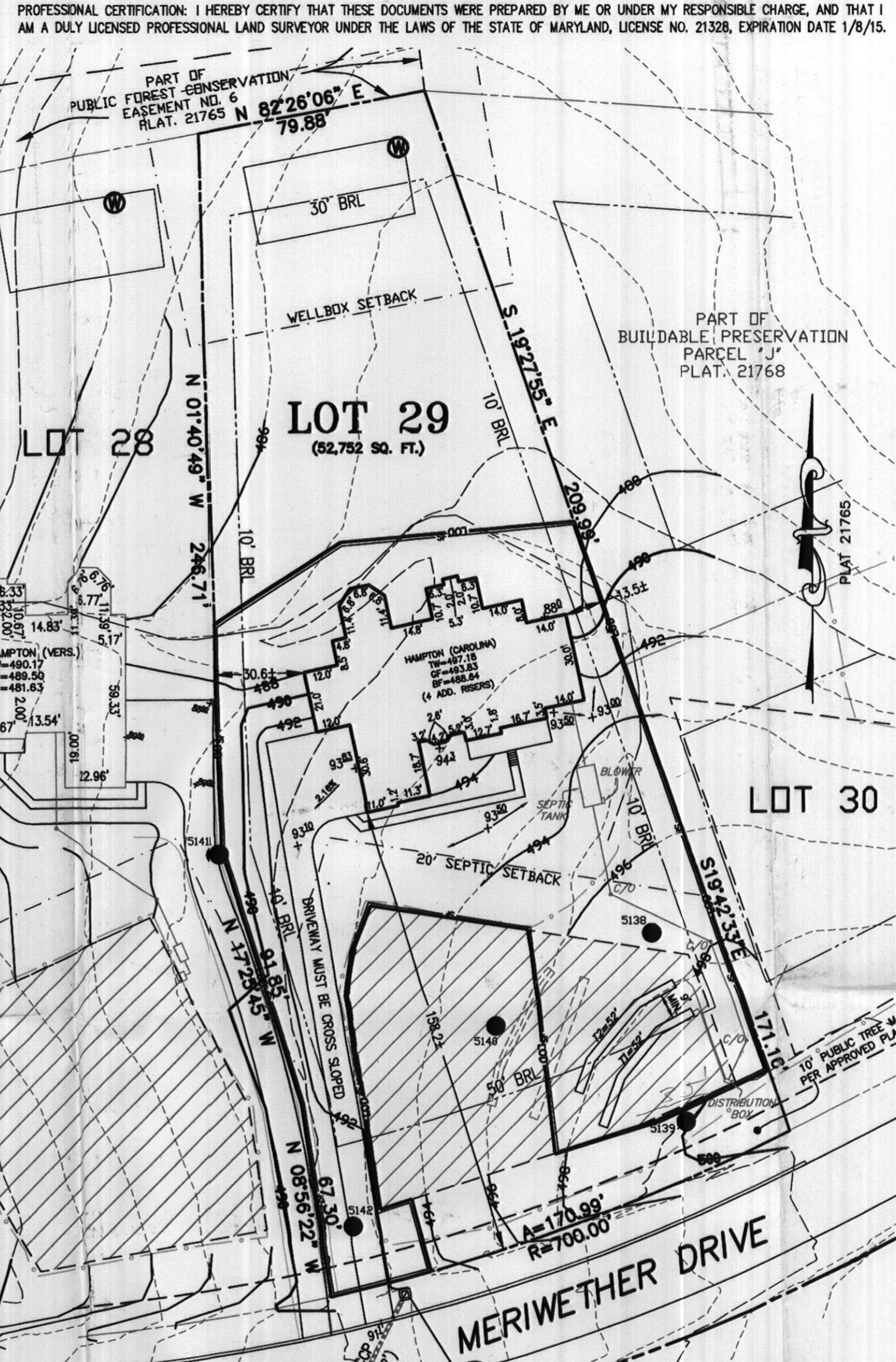
- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 3 FEET COVER.
- THE BLOWER MAY NOT BE LOCATED MORE THAN 100 FEET 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 BAT 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.

APPROVED: FOR HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DIRECTOR DATE

PROFESSIONAL ENGINEER DATE



SEWAGE DISPOSAL SYSTEM DATA (4 BDRM):

PROPOSED INVERT AT FOUNDATION WALL: 491.8'

- HOOT BNR600 SYSTEM
 EX. GRADE OVER TANK: 494.8'
 PROPOSED GRADE OVER TANK: 494.3'
 INVERT IN: 491.3' INVERT OUT: 491.6'
- DISTRIBUTION BOX
 EXISTING GRADE OVER TANK: 499.8'
 PROPOSED GRADE OVER TANK: 499.8'
 INVERT IN: 497.1' INVERT OUT: 496.8'
- TRENCH DESIGN (4 BDRM x 150 GPD/BDRM = 600 GPD)
 600 GPD @ 1.2 APP. RATE = 500 SF
 USE 3" WIDE TRENCH WITH 24" GRAVEL BELOW PIPE
 9" MIN. SPACING BETWEEN TRENCH EDGES
 500 SF ÷ 3" WIDTH = 167 LF x 0.62 = 103.33 LF MIN. TRENCH
 USE 2 52' LONG TRENCHES = 104 LF

BASEMENT NOT SERVICED VIA GRAVITY SEWER

TRENCH DATA:

BOTTOM MAX. DEPTH (5')

TRENCH 1 (T1):
 GROUND ABOVE = 498.0'
 INV. IN = 495.6'
 BOTTOM TRENCH = 493.6'

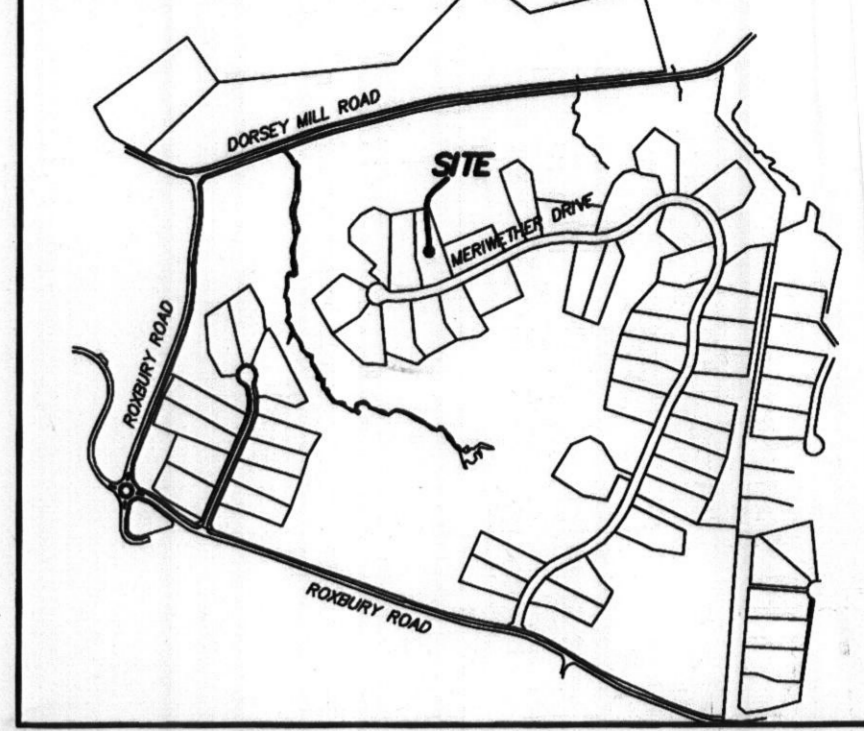
TRENCH 2 (T2):
 GROUND ABOVE = 498.0'
 INV. IN = 495.0'
 BOTTOM TRENCH = 493.0'

PLOT PLAN FOR BAT INSTALLATION
 LOT 29
MERIWETHER FARMS
 LIBER 13779, FOLIO 478
 PLAT No. 21765
 TAX No. 04-593670
 FOURTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 ADDRESS: 14904 MERIWETHER DRIVE
 GLENELG, MARYLAND

ESE Land Planning Engineering Land Surveying

ESE Consultants Inc.
 7164 Columbia Gateway Dr.
 Suite 203
 Columbia, MD 21046
 TEL: 410-872-9105
 FAX: 410-872-4870

DATE: 04/03/14 SCALE: 1"=40' FILE: PP LOT 29
 CHK'D: M.B. JOB NO: 3184 DRAWN: R.C.K.



VICINITY MAP
 1" = 1000'

- GENERAL NOTES:**
- THE SUBJECT PROPERTY IS ZONED RC-DEO PER THE 2/2/04 COMPREHENSIVE ZONING PLAN AND PER COMP-LITE ZONING REGULATIONS DATED 7/28/06.
 - PLAT REFERENCE: PLAT No. 21765.
 - THE EXISTING TOPOGRAPHY WITHIN THE AREA OF PROPOSED WORK IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY ESE. DATED 06/21/12.
 - SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS AND DESIGN DETAILS. PRIOR TO STAKEOUT FOR CONSTRUCTION, IT SHALL BE THE OWNER/BUILDERS RESPONSIBILITY TO PROVIDE ESE CONSULTANTS INC. WITH THE MOST RECENT SET OF HOUSE PLANS.
 - THE CONTRACTOR OR DEVELOPER SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410-313-1881) AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
 - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
 - TOTAL LIMIT OF DISTURBANCE: 27,602 SQ. FT. / 0.63 AC.±
 - STORMWATER MANAGEMENT FOR THIS LOT IS PROVIDED BY PREVIOUSLY APPROVED PLAN F-09-044
 - ANY DAMAGE TO PUBLIC "RIGHT-OF-WAYS" OR PAVED PUBLIC ROADS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
 - DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE CIVIL ENGINEER (ESE) MAY CAUSE THE WORK TO BE UNACCEPTABLE.
 - THE DIMENSIONED DISTANCES SHALL GOVERN IF SCALED AND DIMENSIONED DISTANCES ON THIS PLAN ARE FOUND TO BE IN DISAGREEMENT.
 - THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM LOT AREA AND OWNERSHIP WIDTH AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
 - THESE AREAS DESIGNATE A PRIVATE SEWAGE EASEMENT OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL 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.
 - EXISTING WELLS, SEPTIC SYSTEMS, AND SEWAGE DISPOSAL AREAS WITHIN 100' OF THE PROPERTY AND THOSE WELLS WITHIN 200' DOWN GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS OR SEWAGE DISPOSAL AREAS HAVE BEEN SHOWN.
 - ANY CHANGES TO A PRIVATE SEWAGE AREA SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
 - UPON BUILDING PERMIT REVIEW THE SEPTIC SYSTEMS FOR ALL PROPOSED STRUCTURES AND/OR EXISTING STRUCTURE EXPANSIONS SHALL BE RE-EVALUATED TO DETERMINE SUFFICIENT SYSTEM CAPACITY.
 - THE DEVELOPMENT OF THIS LOT DOES NOT REQUIRE AN ENVIRONMENTAL CONCEPT PLAN SINCE STORMWATER MANAGEMENT WAS PREVIOUSLY APPROVED UNDER F-09-044.
 - A STANDARD SEDIMENT CONTROL PLAN MAY BE USED FOR DEVELOPMENT OF THIS LOT. REFERENCE GRADING PLAN DATED 12/18/13.
 - THE EXISTING WELL(S) SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-95-2167 HAS BEEN FIELD LOCATED BY ESE CONSULTANTS - PROFESSIONAL LAND SURVEYOR(S), AND IS ACCURATELY SHOWN.
 - BUILDING SETBACKS (B.R.L.'s) SHOWN HEREON PER SITE DEVELOPMENT PLAN SETBACK DISTANCES SHOWN HEREON AS "±" HAVE AN ACCURACY OF ±0.1' FOOT.
 - CULVERT FOR DRIVEWAY PER F-09-044.

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE 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, LICENSE NO. 21328, EXPIRATION DATE 1/8/15.