

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: 11/16/16 **ONSITE SEWAGE DISPOSAL SYSTEM** P 559842
 APPROVAL DATE: 5/8/17 **PERMIT: CONSTRUCTION** A _____
 PROPERTY ADDRESS: 12710 Milo Court
 SUBDIVISION: Terrapin Creek LOT: 14 TAX ID: 03-596037
 CONTRACTOR: WTC Contractors EMAIL: _____
 CONTRACTOR ADDRESS: 3033 Salem Bottom Road, Westminster, MD 21157 PHONE: 443-458-7024

CONTRACTOR CERTIFIED FOR BAT INSTALLATION: MDE MANUFACTURER.

PROPERTY OWNER: LDG Inc. EMAIL: _____
 OWNER ADDRESS: 8601 Georgia Avenue, Silver Spring, MD 20110 PHONE: 301-585-7000

BAT UNIT MODEL: Norweco TNTLP-500 PUMP SIZE: _____ PUMP TANK CAPACITY: _____

OPERATION & MAINTENANCE AGREEMENT DATE SIGNED: 8/10/16 DATE RECORDED: 8/10/16

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 5 APPLICATION RATE: 0.8

TRENCHES:	LINEAR FEET REQUIRED: <u>260</u>	INLET DEPTH: <u>4</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>8</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>5</u>

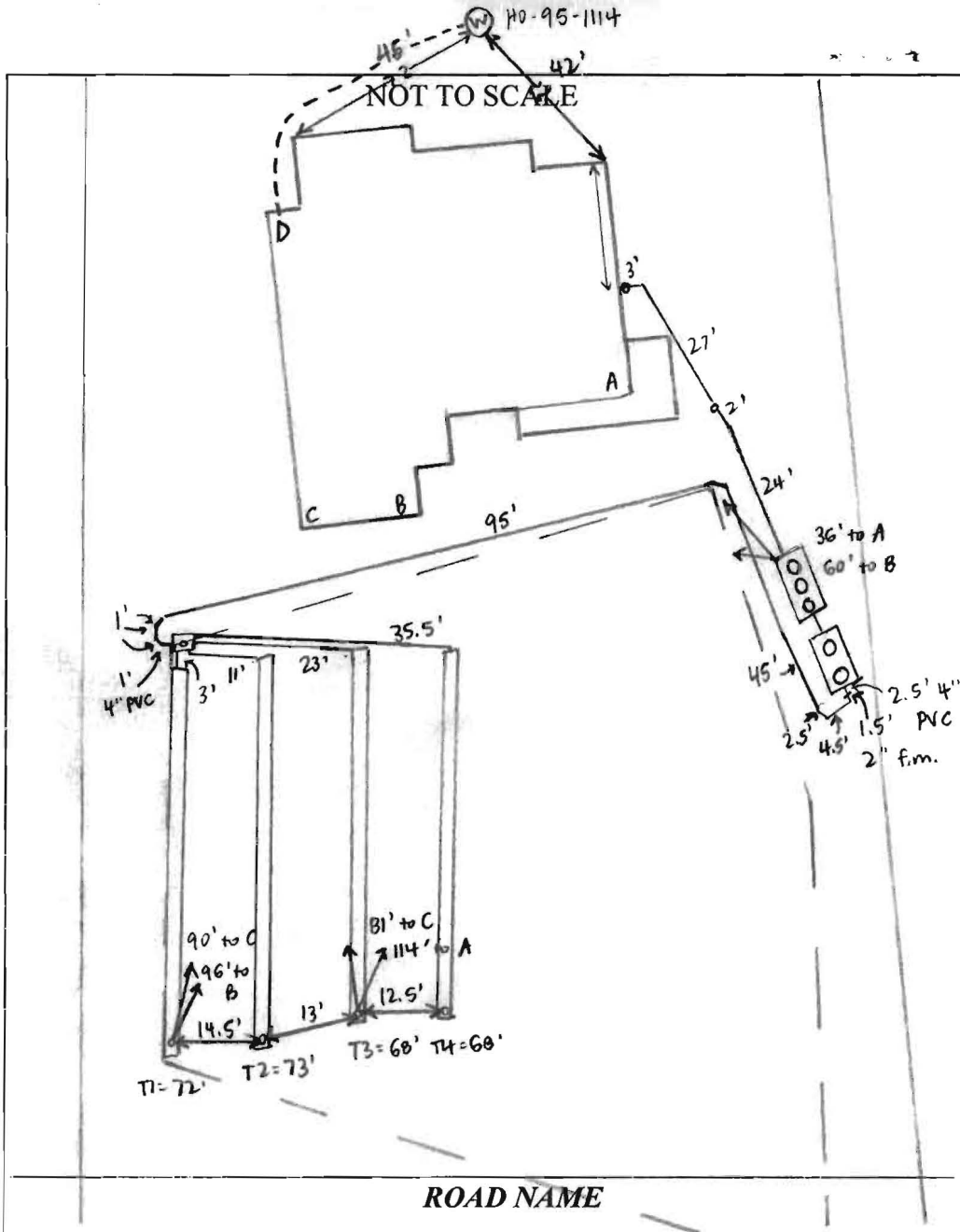
LOCATION: **PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.**

NOTES:

ISSUED BY: Robert Freemon ISSUE DATE: 11/16/16 EXPIRATION DATE: 11/16/17

- 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
 ELECTRICAL PERMIT ISSUED E 16003653
- 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.**



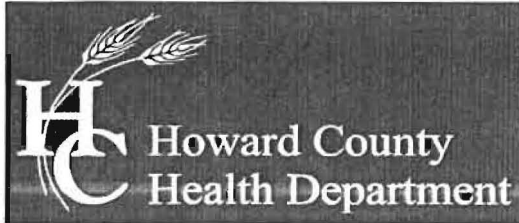
TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
3'	4'	8'
NUMBER OF TRENCHES		4
TOTAL LENGTH		281'
ABSORPTION AREA		843' + SIDEWALL
DISTRIBUTION BOX LEVEL		YES
DISTRIBUTION BOX BAFFLE		YES
DISTRIBUTION BOX PORT		YES

SEPTIC TANK DATA	
SEPTIC TANK I LEVEL	YES
MANUFACTURER	BACKRIVER/NORWEGO
CAPACITY	1300 GAL
SEAM LOC	TOP
TANK LID DEPTH	2.5'
BAFFLES	NO
BAFFLE FILTER	NO
MANHOLE LOC	FRONT, MID, REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	NO
DATE ON LID	8-19-16 (STAMP)

PUMP/SEPTIC TANK LEVEL	
MANUFACTURER	BABYLON
CAPACITY	1500 GAL
SEAM LOC	TOP
TANK LID DEPTH	2.5'
BAFFLES	NO
BAFFLE FILTER	NO
MANHOLE LOC	FRONT - REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	NO
DATE ON LID	10-22-16
PUMP	1/2 hp

PRE-CONSTRUCTION:
 11/16/16 Met WTC on site for layout. BAT stake present, not all SDA corners are staked. WTC okay to set tanks, need SDA corners staked before trench layout. (SC) 12/19/16 Met WTC on site for layout. All SDA + tank stakes present. Tanks would have 3.5' cover as staked - move away from house + out of fill to reduce cover. Workers in upper SDA can't layout trenches. (SC) 12/20/16 On site for layout of trenches. All SDA stakes present except W corner - measured SDA edge + triangulated off house to find point. (SC) 12/20/16 Pump tank set. WTC digging hole for pump tank. (SC) 12/20/16 Pump tank set. WTC starting to dig force main. (SC) 12/21/16 WTC digging T2. Large boulders @ 25' from start, >50% rock 4-8' @ 35'. Rock vein also hit @ starts of T3 + T4 (open @ ends). (SC) 12/22/16 WTC finished T2, no rock hit after yesterday. Open at ends, 3' wide + 3.5' to stone. Started digging T1 - no rock yet, 8' bottom. (SC) 12/22/16 T1 finished + left open at end. 3' wide, 3.5-4' to stone. No rock while digging T1. Need BAT startup certification and pump + alarm. (SC) 1/19/17 BAT startup certification received. (SC) Pump + alarm test. Pump + alarm on breakers set and confirmed work. Visual on D. Box c/o system works.

FINAL INSPECTOR [Signature] DATE OF APPROVAL 5/8/17



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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 10th day of August, 2016, among Catonsville Homes, L.L.C., 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 12710 Milo Court, Sykesville, MD 21784 (Lot 14), in the 03 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 01988 Folio 00258.

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 Norweco Singulair TNT 600.

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.

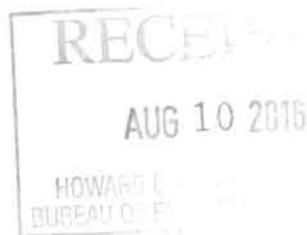
H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.

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.

Beet Nufan 8/10/2016
Howard County Health Department
CATONSVILLE HOMES, LLC



[Signature] 8/8/16
Owner #1 Signature Date
ROBERT A. SCRANTON

Owner #2 Signature Date

Owner #1 Print Name

Owner #2 Print Name

D. Gandhi 7/30/16
Buyer #1 Signature Date

B Gandhi 7/30/2016
Buyer #2 Signature Date

D. GANDHI
Buyer #1 Print Name

B GANDHI
Buyer #2 Print Name

**CATONSVILLE HOMES, LLC
OPERATING MAINTENANCE AGREEMENTS**

8/10/2016

- | | | | |
|----|-----------------------------------|------------------|----------------|
| 1. | TC4-Mallampati-Devonshire | | O&M |
| | 2015 Terrapin Creek Road 2 | B16000079 | 8/10/16 |
| 2. | TCA-Gladstein-Ashland | | O&M |
| | 12707 Milo Court 21784 | B16000971 | 8/10/16 |
| 3. | TC10-Apte-Devonshire | | O&M |
| | 12726 Milo Court 21784 | B16001641 | 8/10/16 |
| 4. | TC6-Mehta-Charleston II | | O&M |
| | 12721 Milo Court 21784 | B16001946 | 8/10/16 |
| 5. | TC17-Shah-Charleston II | | O&M |
| | 2026 Terrapin Creek Road 2 | B16002635 | 8/10/16 |
| 6. | TC2-Challagulla-Devonshire | | O&M |
| | 2007 Terrapin Creek Road 2 | B16002795 | 8/10/16 |
| 7. | TC14-Gandhi-Devonshire | | O&M |
| | 12710 Milo Court 21784 | B16003009 | 8/10/16 |

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

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

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LR - Agreement Recording Fee
      1x 20.00 20.00
Grantor/Grantee Name: catonsville homes
Reference/Control #: 69

LR - Agreement Surcharge
      1x 40.00 40.00
LR - Agreement Recording Fee
      1x 20.00 20.00
Grantor/Grantee Name: catonsville homes
Reference/Control #: 70

LR - Agreement Surcharge
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LR - Agreement Recording Fee
      1x 20.00 20.00
Grantor/Grantee Name: catonsville homes
Reference/Control #: 71

LR - Agreement Surcharge
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LR - Agreement Recording Fee
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Grantor/Grantee Name: catonsville homes
Reference/Control #: 72

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LR - Agreement Recording Fee
      1x 20.00 20.00
Grantor/Grantee Name: catonsville homes
Reference/Control #: 73

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LR - Agreement Recording Fee
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Grantor/Grantee Name: catonsville homes
Reference/Control #: 74

LR - Agreement Surcharge
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LR - Agreement Recording Fee
      1x 20.00 20.00
Grantor/Grantee Name: catonsville homes
Reference/Control #: 75

LR - Agreement Surcharge
      1x 40.00 40.00
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SubTotal: 420.00
Total: 420.00
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REV-Check-BOA 420.00
Number : 23140
=====

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08/10/2016 14:15 CC13-SB
#6702903 /496/109
Thank you for visiting us today~

LETTER OF TRANSMITTAL

AGENCY CLIENT FILE BILLING COORESPONDANCE OTHER

VanMar Associates, Inc.

Engineers ~ Surveyors ~ Planners
310 South Main Street, P.O.Box 328, Mt. Airy, MD 21771
301-829-2890 301-831-5015 301-695-0600
410-549-2751 (FAX) 301-831-5603

TO :

Mr. Robert Freemon
Howard County Health Department
Bureau of Environmental Health
8930 Stanford Blvd.
Columbia, Maryland 21045

DATE: August 12, 2016

PROJECT: Terrapin Creek, Lot 14

VanMar # B45428

ENCLOSED:

COPIES	DATE	DESCRIPTION
1	8/12/2016	Cover letter to Mr. Robert Freemon, Lot 14 Site Plan for BAT Installation, Terrapin Creek
3	8/12/2016	Plot Plan Site Plan for BAT Technology, Lot 14 Terrapin Creek Plat 22661 - 22664

REMARKS: Hi Robert, submitted for your approval

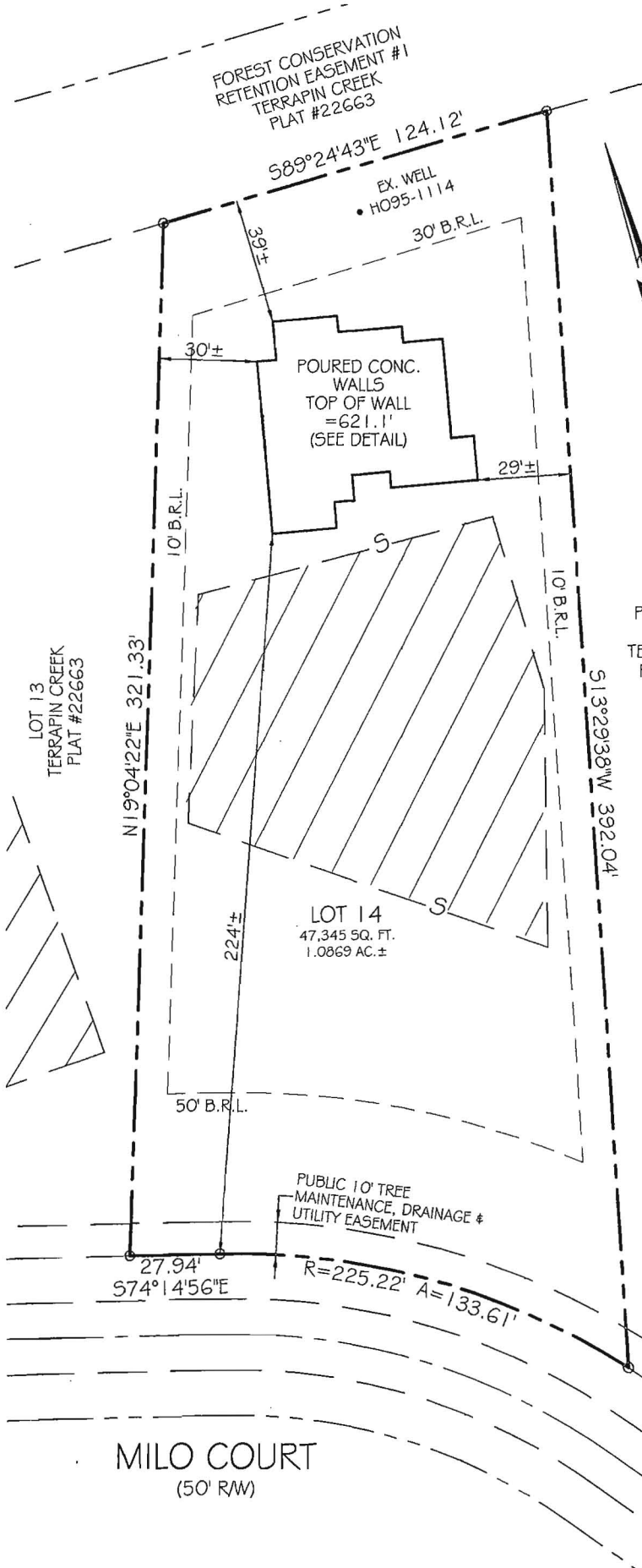
COPIES TO (ADDRESS): Catonsville Builders, Inc., 11175 Stratfield Court, Marriottsville, Maryland 21104

SUBMITTED BY: mag-M

G:eng.B45428.BAT plan sub. H.D.8.12.2016

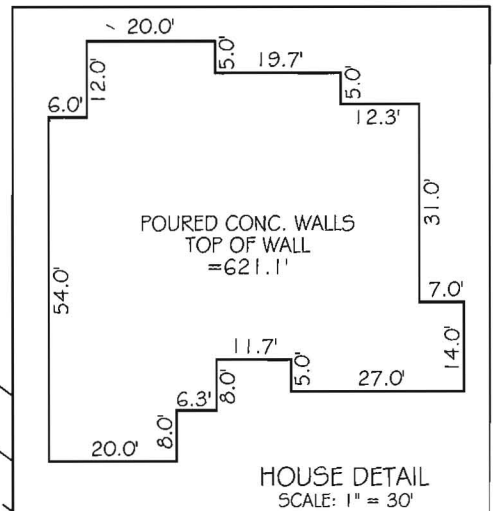
NOTES:

- 1) FOUNDATION AND FOOTINGS ARE IN PLACE AS SHOWN HEREON.
- 2) BUILDING TIES ARE ±0.5' UNLESS OTHERWISE NOTED.
- 3) TOP OF WALL = 621.1'



BUILDABLE
PRESERVATION
PARCEL 'A'
TERRAPIN CREEK
PLAT #22663

*Wall Check
OK
RAE 10/18/16*



PROFESSIONAL CERTIFICATION:

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21097, EXPIRATION DATE JULY 26, 2016, IN ACCORDANCE WITH COMAR 09.13.06.12.

Thomas L. Frazier
 STATE OF MARYLAND
 THOMAS L. FRAZIER
 For VanMar Associates, Inc. Date *9/26/16*
 Thomas L. Frazier, Jr., Prof. Land Surveyor

WALL CHECK DRAWING
LOT 14
TERRAPIN CREEK

PLAT No. 22663
 12710 MILO COURT
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50' SEPTEMBER, 2016

I CERTIFY THIS PLAT TO BE CORRECT; IT IS THE RESULT OF AN ACTUAL FIELD SURVEY, BASED ON DATA FOUND AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND, AS REFERENCED HEREON.

REFERENCE	JOB NO.
PLAT NO. 22663	B4-5428



VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street Mount Airy, Maryland 21771
 (301) 829-2890 (301) 831-5015 (410) 549-2751
 © Copyright, Latest Date Shown

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 12710 Milo Ct., Sykesville, MD 21784 December 19, 2016 was installed according to the manufacture's specifications.

Installer: Walter Coon

Property Owner: Catonsville Homes, LLC

Permit #

THIS CERTIFICATION IS FOR INSTALLATION ONLY. THE 5-YEAR OPERATIONS & MAINTENANCE AGREEMENT FROM DATE OF INSTALLATION WILL ONLY GO INTO EFFECT AFTER BACK RIVER PRE-CAST, LLC RECEIVES FINAL AND FULL PAYMENT FOR THE SYSTEM.



MATTHEW GECKLE
Vice-President

August 8, 2016

RE: 12710 Milk Court
Sykesville, MD 21784
Lot 14 Terrapin Creek

Mr. Robert Freemon
Howard County Health Department
Well and Septic Program
8930 Stanford Blvd.
Columbia, MD 21045

8/31/16
Approved
M. J. Janni
OK 8'

Dear Mr. Freemon:

As owners of the above reference Lot, we are requesting a waiver of the 20-ft. setback requirement from the proposed house to the Sewage Disposal Area. The Site Plan for our proposed house sites the house 30-ft. from the well and two Alternative wells. However, due to the limitations of the lot and the approved Sewage Disposal Area the house cannot be placed 20-ft. from the Sewage Disposal Area. We are requesting wavier based on the following:

- There is limited space on the lot to meet all the required setbacks. The Sewage Disposal Area will be 10-ft. from the garage and porch. Both do not have basement foundation. The garage is a pad foundation and the porch is on footers. The Sewage Disposal Area is more than 20-feet from the house basement.
- The ground elevation of the Sewage Disposal Area is lower than the first floor elevations of the proposed house. The Sewage Disposal Area contours are down grade (flow away) from the house.

In summary, the limited space of the lot prohibits us from meeting all the required setbacks and we are requesting a waiver of the 20-ft. setback from the house to the Sewage Disposal Area.

Thank you.

D. Gandhin (Buyer)

Owner

B Gandhin (Buyer)

Owner

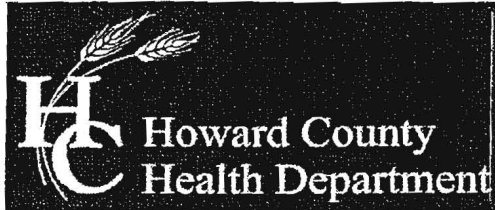
Freemon, Robert

From: Freemon, Robert
Sent: Friday, August 05, 2016 9:33 AM
To: 'ron@vanmar.com'
Subject: 12710 Milo Ct.

Hey Ronald,

I spoke with Jeff about what you said over the phone yesterday. The setback (sec. 3.808, Local Code) from SDA to the house does not differentiate between foundations of the house (garage, patio). Unfortunately it also does meet the requirements for a general waiver as the ground elevation of the SDA is not lower than the floor elevation of the garage. One option is to have the home owner write a letter requesting a specific waiver. It would need to contain what they are asking the waiver to (SDA to House Setback 20ft) and why (limited space to meet all required setbacks, does not meet general waiver requirements) and the home owner's signature at the bottom. If you would prefer to write it up yourself and have the home owner sign it that would be fine. There is no guarantee the waiver will be approved but it is an option. Let me know if you have any questions. Thanks.

*Robert Freemon
Howard County Health Department
8930 Stanford Blvd. Columbia, MD 21045
Well and Septic Program
Phone: 410-313-6357
Email: rfreemon@howardcountymd.gov*



Bureau of Environmental Health

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Twitter: HowardCoHealthDep

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

MEMORANDUM

TO: Vanmar Associates, Inc.
310 South Main Street
Mt. Airy MD 21771

FROM: Robert Freemon *RF*
Well & Septic Program

RE: 12710 Milo Court
Sykesville MD 21784
"BAT Plan Comments"

DATE: 7/27/16

I have reviewed the BAT plan for 12710 Milo Court and have the following comments.

- ✓ The SDA is required to be large enough to fit the initial septic system and two replacements. On the BAT plan there is only the initial and one replacement. The area may need to be enlarged via a revised perc certification plan and may require additional testing, or a house with less bedrooms may be proposed.
- ✓ The pump chosen is larger than required. The plotted point on the chart appears to use 8 meters of head instead of 8 feet of head. Using our calculations for friction head to give a total head of 15', the WE03L pump would be most appropriate.
- ✓ The pump tank does not provide emergency storage equal to 1 day design flow. The pump tank must be large enough to provide at least 900 gallons of storage between the high water alarm float and the inlet invert for a 6 bedroom house.
- ✓ The Norweco 960LP is not a certified BAT Unit recognized by MDE. Norweco BAT units recognized by MDE are TNT500, TNT750 and the TNT1000.
- ✓ The calculations involving friction loss do not take into account the 3-90° angles, 4-45° angles and the Ball Valve. According to our calculations based on MDE's Sand Mound Manual the total friction loss is approximately 7.5'.
- ✓ The setback from an SDA to a house is 20ft. The SDA is less than 20ft from the proposed house.
- ✓ The 2nd alternate well needs to be labeled.

Approval

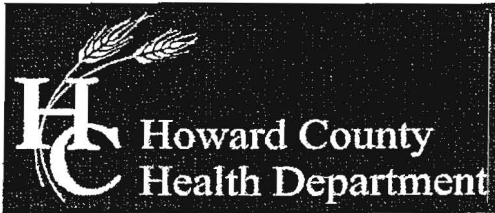
Freemon, Robert

From: Freemon, Robert
Sent: Wednesday, July 27, 2016 8:52 AM
To: 'ron@vanmar.com'
Cc: 'Pam Walter'
Subject: 12710 Milo Court
Attachments: 12710 Milo Court.pdf

Hi Ronald,

I have attached my comments for the BAT Plan concerning 12710 Milo Ct. If you have any questions let me know.

Robert Freemon
Howard County Health Department
8930 Stanford Blvd. Columbia, MD 21045
Well and Septic Program
Phone: 410-313-6357
Email: rfreemon@howardcountymd.gov



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

MEMORANDUM

TO: Vanmar Associates, Inc.
310 South Main Street
Mt. Airy MD 21771

FROM: Robert Freeman *RF*
Well & Septic Program

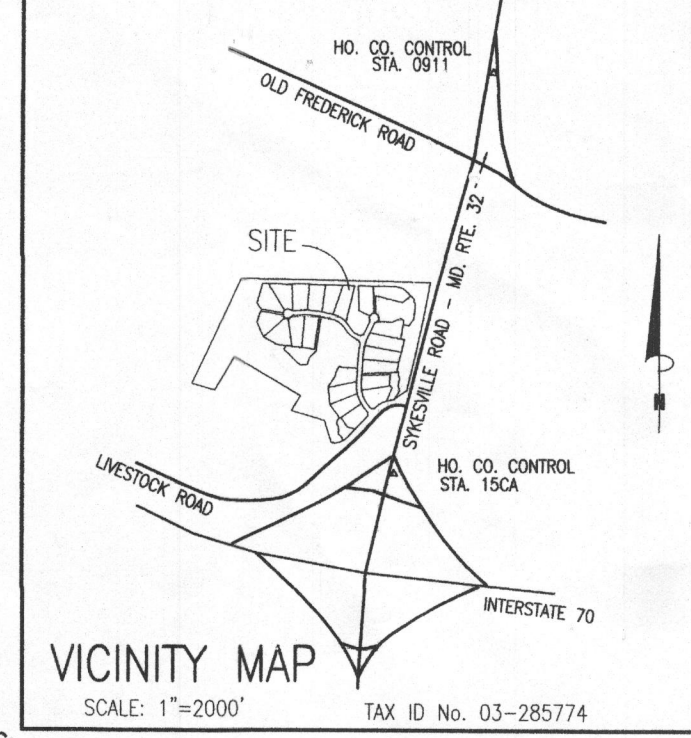
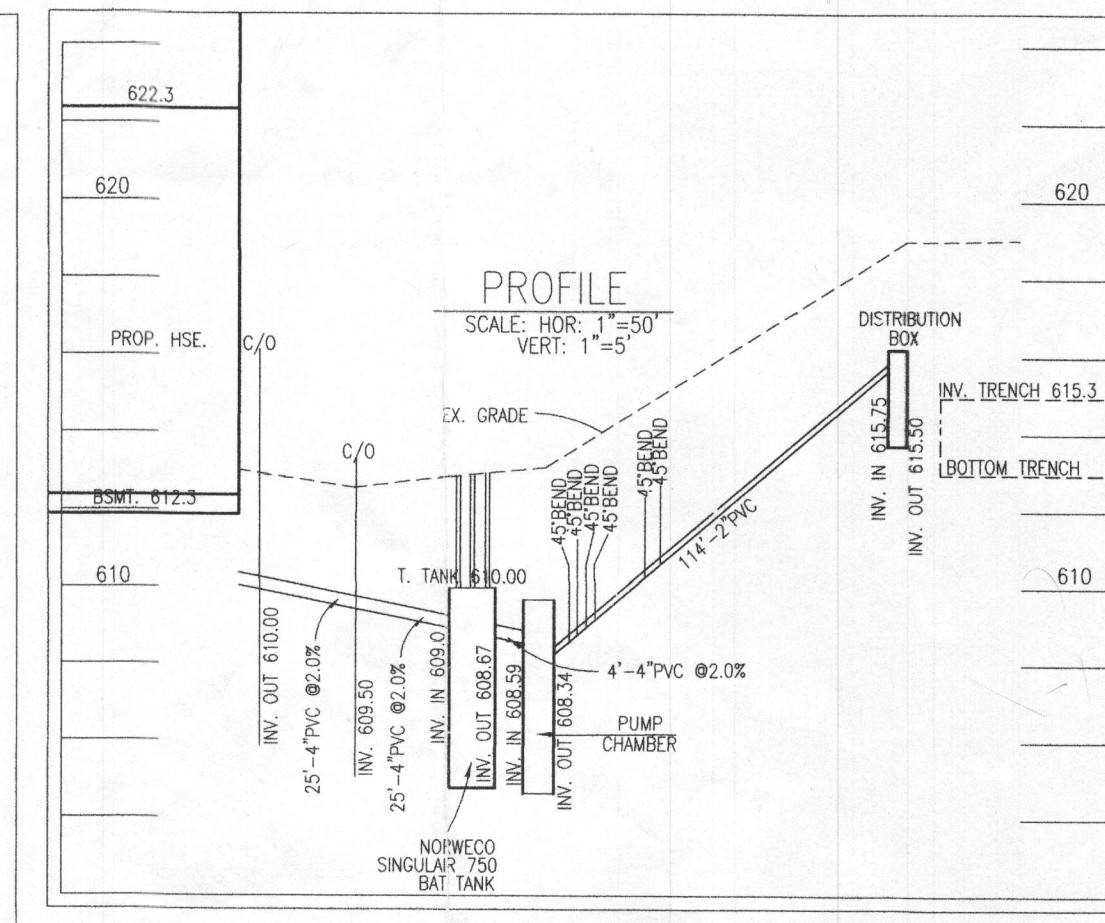
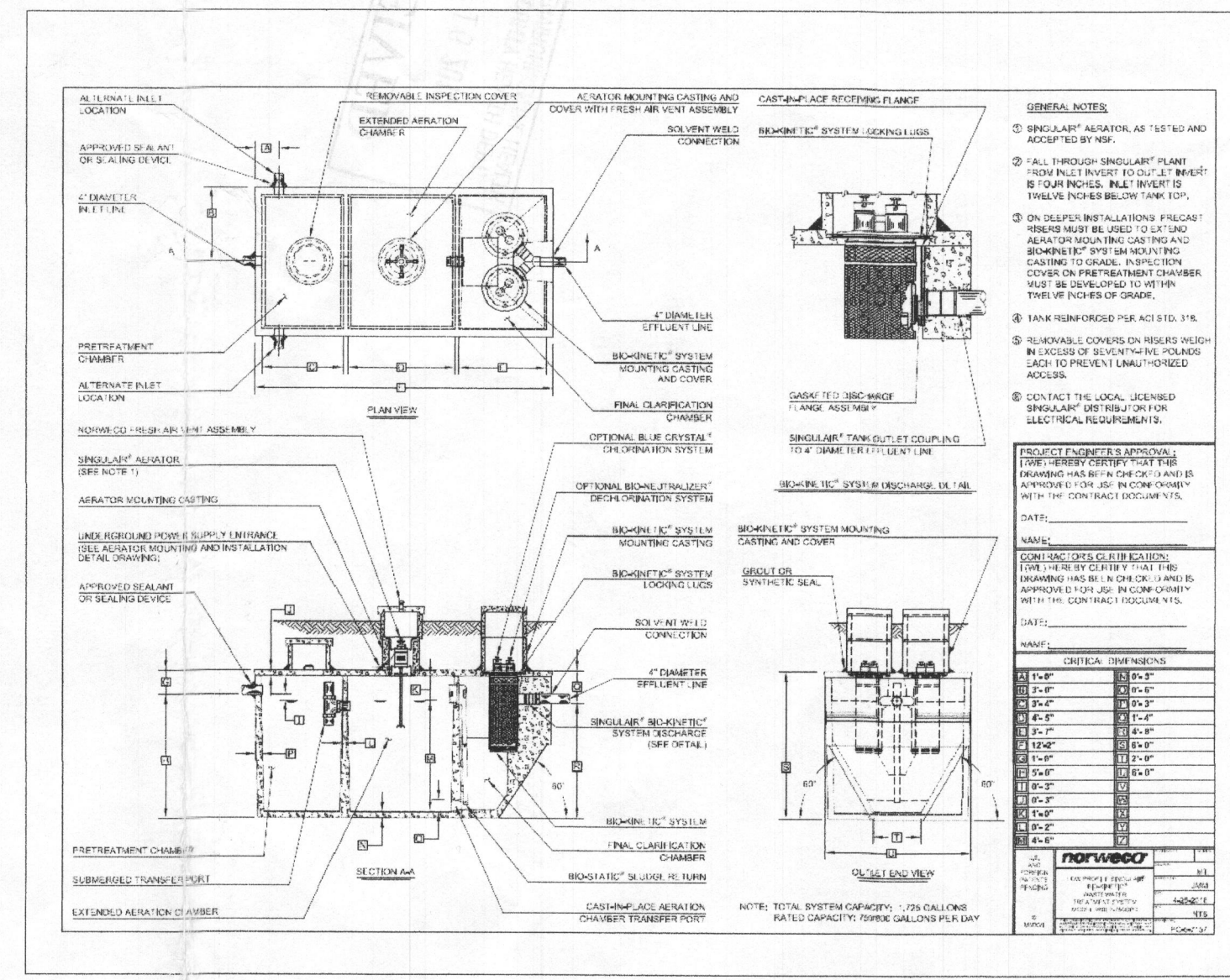
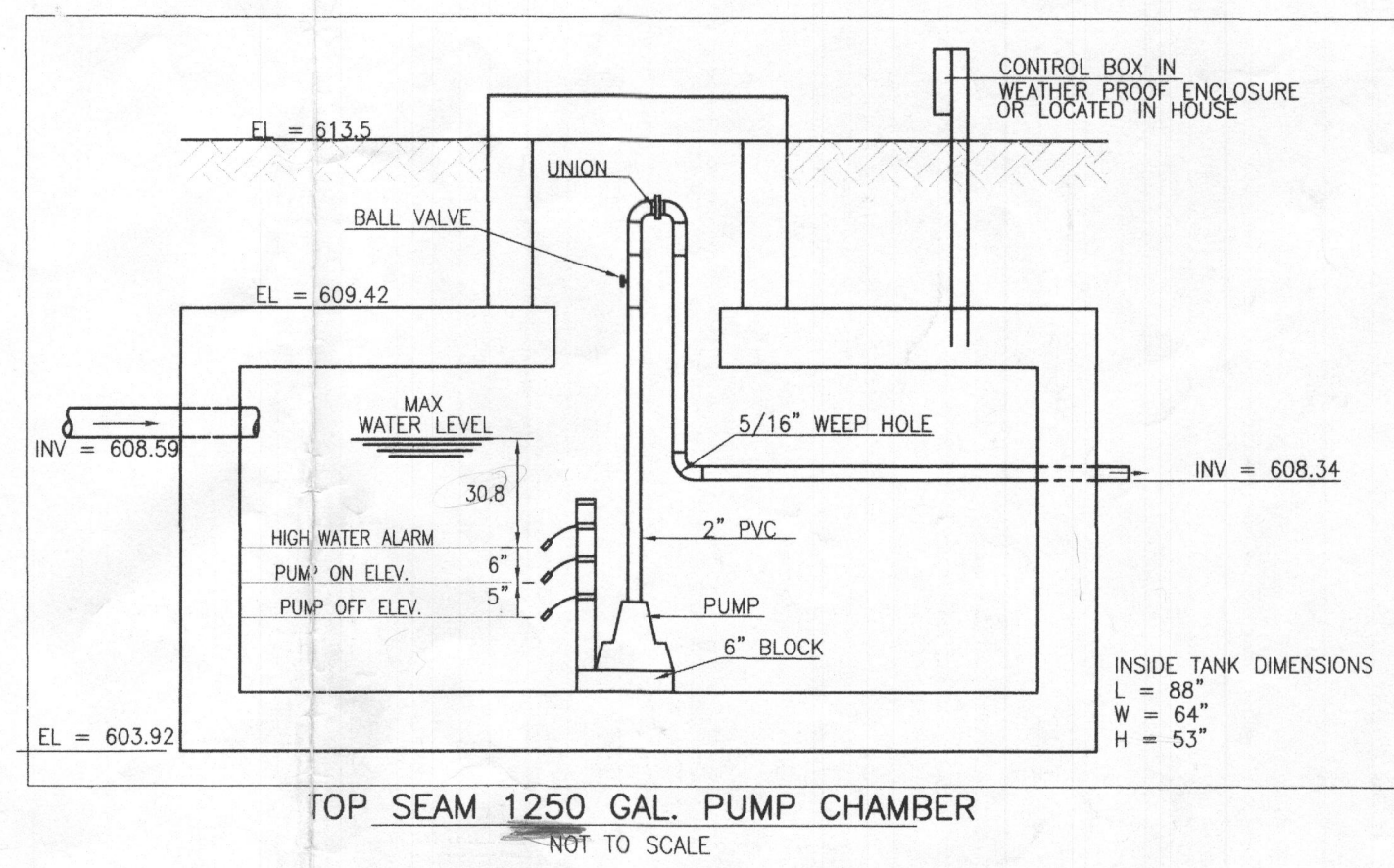
RE: 12710 Milo Court
Sykesville MD 21784
"BAT Plan Comments"

DATE: 7/27/16

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- ✓ The pump chosen is larger than required. The plotted point on the chart appears to use 8 meters of head instead of 8 feet of head. Using our calculations for friction head to give a total head of 15', the WE03L pump would be most appropriate.
- ✓ The pump tank does not provide emergency storage equal to 1 day design flow. The pump tank must be large enough to provide at least 900 gallons of storage between the high water alarm float and the inlet invert for a 6 bedroom house.
- ✓ The Norweco 960LP is not a certified BAT Unit recognized by MDE. Norweco BAT units recognized by MDE are TNT500, TNT750 and the TNT1000.
- ✓ The calculations involving friction loss do not take into account the 3-90° angles, 4-45° angles and the Ball Valve. According to our calculations based on MDE's Sand Mound Manual the total friction loss is approximately 7.5'.
- ✓ The setback from an SDA to a house is 20ft. The SDA is less than 20ft from the proposed house.
- ✓ The 2nd alternate well needs to be labeled.

Approved



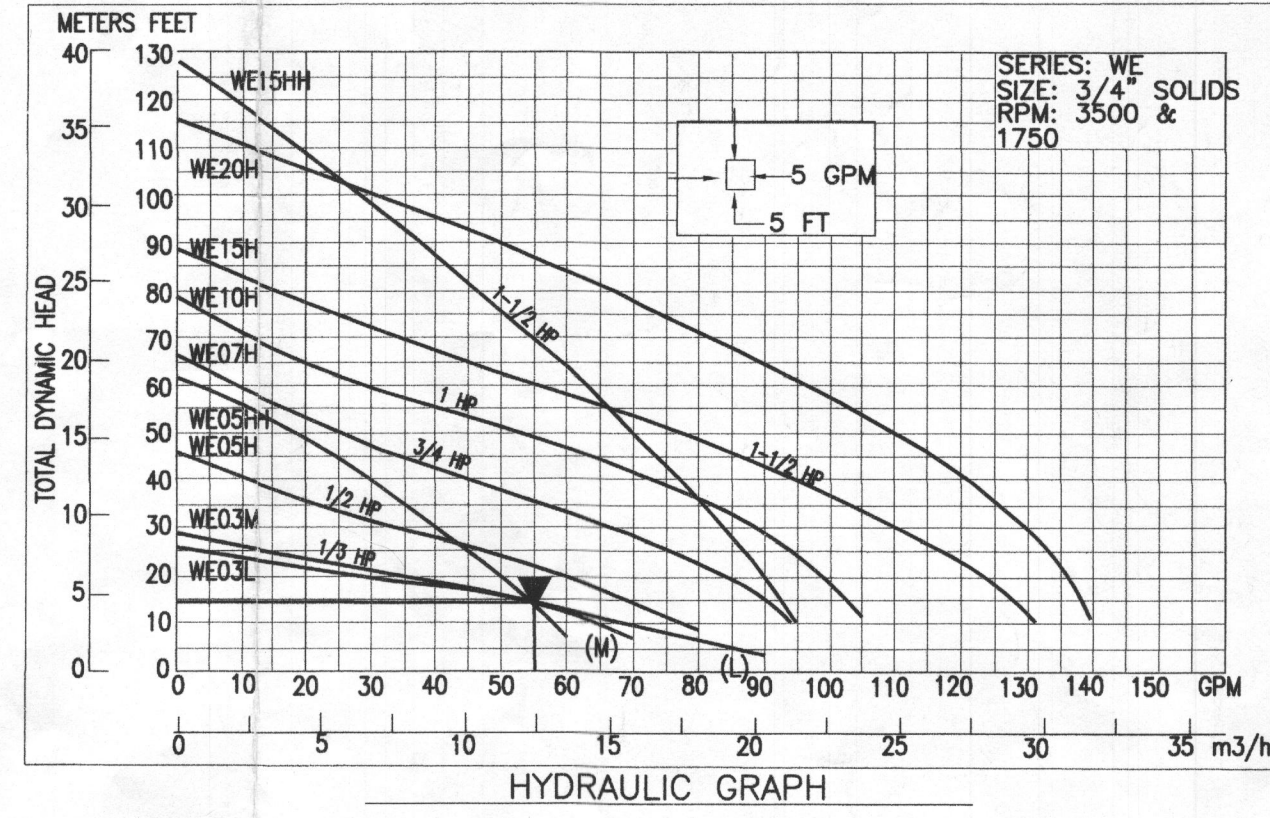
- GENERAL NOTES:**
- TOPOGRAPHY & PLANIMETRIC FEATURES SHOWN HEREON TAKEN FROM COPYRIGHTED GIS DATA FROM HOWARD COUNTY, SUPPLEMENTED WITH FIELD LOCATIONS BY VANMAR ASSOCIATES, INC. CONTOUR INTERVAL IS 2 FEET. VERTICAL DATUM IS NAVD83.
 - THE EXISTING WELLS SHOWN ON THIS PLAN HAVE BEEN FIELD LOCATED BY VANMAR ASSOCIATES OR TAKEN FROM AVAILABLE RECORDS AND ACCURATELY SHOWN.
 - ZONING DISTRICT: RC-DEO
 - LIMIT OF DISTURBANCE (LOD) = 19,500 SQ.FT.
 - THERE ARE NO STREAMS, PONDS, FLOODPLAINS OR WETLANDS ON THIS LOT.
 - STORM WATER MANAGEMENT FOR THIS LOT IS PROVIDED BY EXISTING TERRAPIN CREEK STORM WATER MANAGEMENT FACILITIES PROVIDED FOR AND CONSTRUCTED BY THE DEVELOPER UNDER PLAN F-07-086.
 - DRIVEWAY CULVERT DESIGNED BY DEVELOPER UNDER PLAN F-07-086.

- SEPTIC SYSTEM DESIGN DESIGN**
- INITIAL NUMBER OF BEDROOMS = 5
 APPLICATION RATE = 0.8 GPD / sq.ft.
 DESIGN FLOW: 150 GPD X 5 BEDROOMS = 750 GPD
 750 GPD / 0.8 GPD/sq.ft. = 937.5 sq.ft.
 937.5 sq.ft. / 3 ft. WIDE TRENCH = 312.5 LF TRENCH
 312.5 LF TRENCH X 0.83 REDUCTION CREDIT = 260 LF TRENCH
- TRENCH 1 (T1) EX. GRD=619.3 - INV. TRENCH=615.3 - B. TRENCH=613.3
 TRENCH 2 (T2) EX. GRD=618.7 - INV. TRENCH=614.7 - B. TRENCH=612.7
 TRENCH 3 (T3) EX. GRD=618.2 - INV. TRENCH=614.2 - B. TRENCH=612.2
 TRENCH 4 (T4) EX. GRD=617.7 - INV. TRENCH=613.7 - B. TRENCH=611.7
- 1st REPLACEMENT
 APPLICATION RATE = 0.8 GPD / sq.ft.
 DESIGN FLOW: 150 GPD X 5 BEDROOMS = 750 GPD
 750 GPD / 0.8 GPD/sq.ft. = 937.5 sq.ft.
 937.5 sq.ft. / 3 ft. WIDE TRENCH = 312.5 LF TRENCH
 312.5 LF TRENCH X 0.63 REDUCTION CREDIT = 197 LF TRENCH
- 2nd REPLACEMENT
 APPLICATION RATE = 0.8 GPD / sq.ft.
 DESIGN FLOW: 150 GPD X 5 BEDROOMS = 750 GPD
 750 GPD / 0.8 GPD/sq.ft. = 937.5 sq.ft.
 937.5 sq.ft. / 3 ft. WIDE TRENCH = 312.5 LF TRENCH
 312.5 LF TRENCH X 0.45 REDUCTION CREDIT = 141 LF TRENCH

24hr. Storage above High H₂O Alarm.

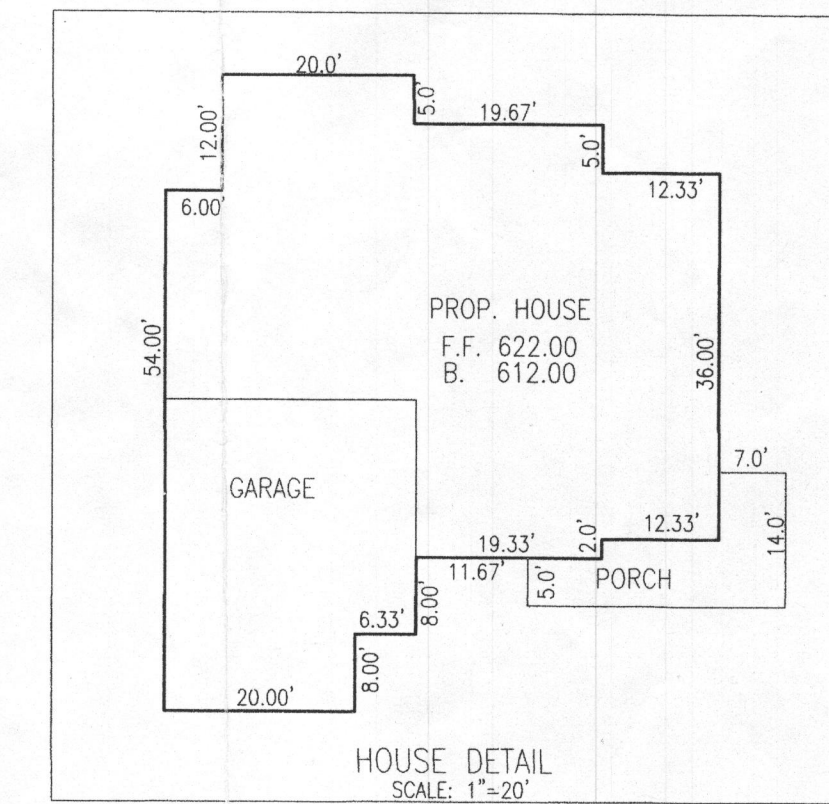
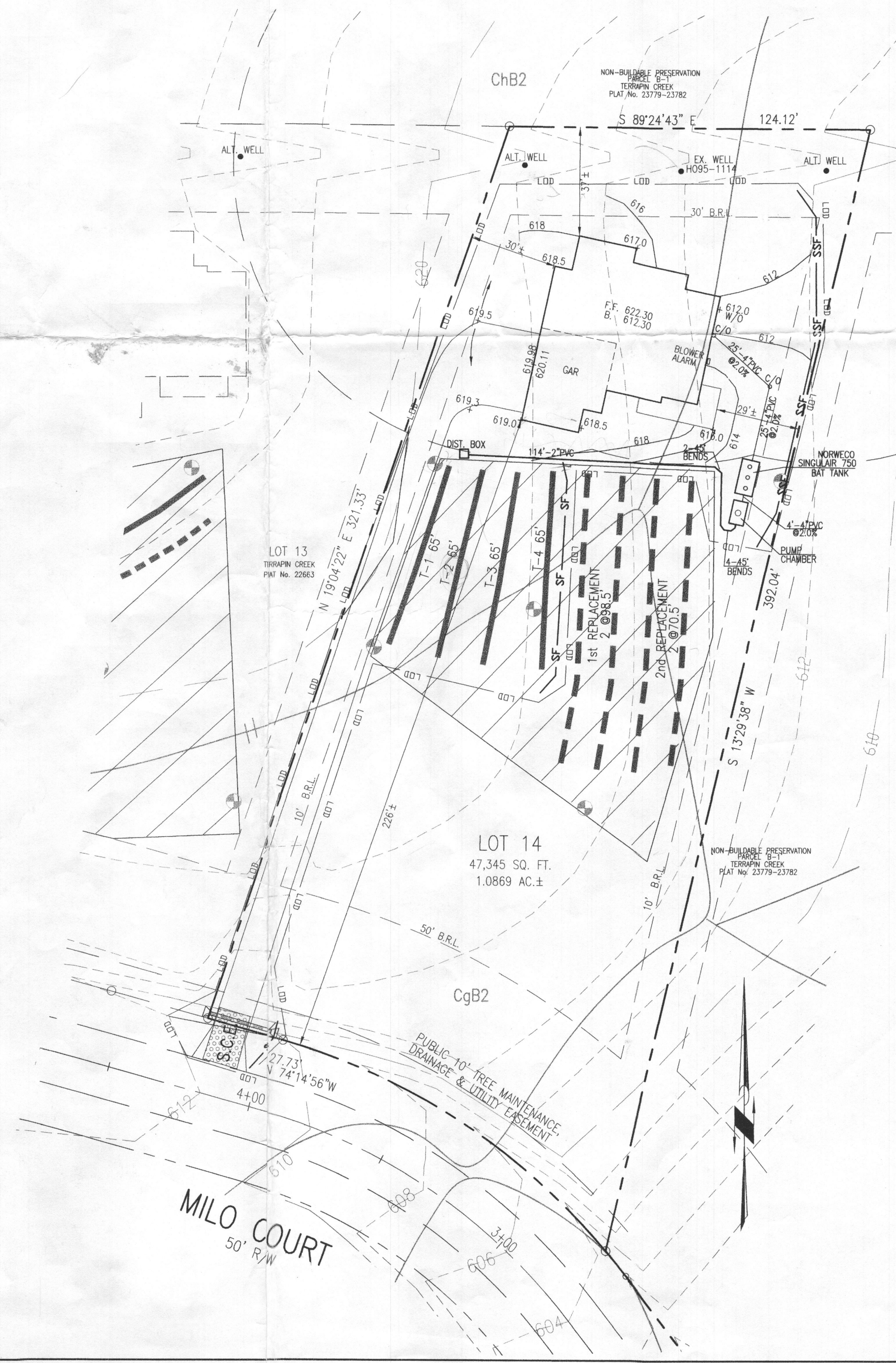
750g
 H₂O level
 13.5g
 6"
 ? Dose

Dose Volume = 100g 40gpm (2.5mins)



TOTAL DESIGN HEAD (TDH) COMPUTATION		LPS PUMP CHART	
STATIC HEAD (615.75-604.67)	11.08'	1250 GAL. PUMP CHAMBER TANK	
FRICTION HE. PIPE 2.84x(117+50.3')/100	3.32	SOULDS WE-03E	
FITTINGS: 6-45' 6x4' = 24		MAX. PUMP FLOW RATE = 55 GPM	
DISCONNECT: 1-90° 3x10 = 30		PIPE = 2" PLASTIC	
BALL VALVE: 1.3x1 = 1.3		PIPE LENGTH = 114 FEET	
		ELEV. DIFF. = 11.08 FEET	
TOTAL DESIGN HEAD (TDH)	14.40	TDH = 14.40 FEET	

Approved Septic System Plan
 Howard County Health Department
 Signature: *Ronald E. Thompson* Date: 9/2/16



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. 138617, Expiration Date: 9-18-17.

DEVELOPER'S CERTIFICATE:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR EROSION AND SEDIMENT CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER: _____ DATE: _____

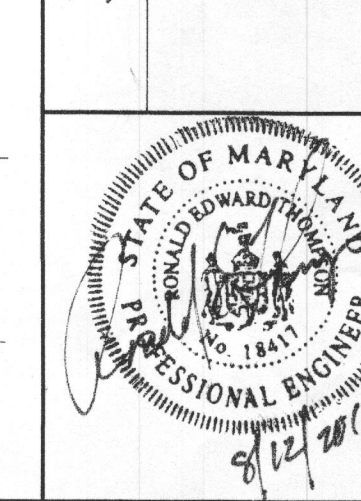
ENGINEER'S CERTIFICATE:
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT AND THE 2011 MARYLAND STANDARDS & SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

Ronald E. Thompson 8/12/2016
 RONALD E. THOMPSON, P.E. DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE: _____

DATE: 8/12/16
 REVISIONS: 01



OWNER:
 LDG INC
 LEE PLAZA, SUITE 200
 8601 GEORGIA AVENUE
 SILVER SPRING, MD. 20910
 301-585-7000

DEVELOPER:
 CATONVILLE HOMES
 11175 STRATHFIELD CT.
 MARRIOTTVILLE, MD. 21104
 410-442-2211

PLOT PLAN
 SITE PLAN FOR BAT TECHNOLOGY
 LOT 14
 TERRAPIN CREEK
 PLAT 22664
 TAX ID No. 03-285774
 12710 MILO COURT
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: 1" = 30' JUNE, 2016

VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street Mount Airy, Maryland 21771
 (301) 808-2800 (301) 831-5015 (410) 548-2751
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