



**Howard County
Health Department**

Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

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

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

www.hchealth.org

Facebook: www.facebook.com/hocohealth

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

RECEIPT DATE: 5-27-20 **ONSITE SEWAGE DISPOSAL SYSTEM**

P 527852-A

APPROVAL DATE: 8/15/2020 **PERMIT: CONSTRUCTION**

A _____

PROPERTY ADDRESS: 1009 HIGH STEPPER TRAIL, SYKESVILLE, MD 21784

SUBDIVISION: WALKER MEADOWS LOT: 2 TAX ID: 03-601560

CONTRACTOR: SOUTH CARROLL BACKHOE EMAIL: SCBACKHOE@COMCAST.NET

CONTRACTOR ADDRESS: 4410 Salem Bottom Road, Westminster, MD 21157 PHONE: 410-596-3618

CONTRACTOR CERTIFIED FOR BAT INSTALLATION: MDE MANUFACTURER:

PROPERTY OWNER: NVR, INC. EMAIL: janastas@nvrinc.com

OWNER ADDRESS: 9720 PATUXENT WOODS DRIVE, COLUMBIA, MD 21046 PHONE: (410)379-5956

BAT UNIT MODEL: HOOT 600 BNR PUMP SIZE: 0.3 Hp PUMP TANK CAPACITY: 1500

OPERATION & MAINTENANCE AGREEMENT DATE SIGNED: 6/11/2020 DATE RECORDED: 8/11/2020

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 6 APPLICATION RATE: 1.2

TRENCHES:	LINEAR FEET REQUIRED: <u>167</u>	INLET DEPTH: <u>2.0</u>
	TRENCH WIDTH: <u>2</u>	MAXIMUM BOTTOM DEPTH: <u>5.0</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>2.0</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:		

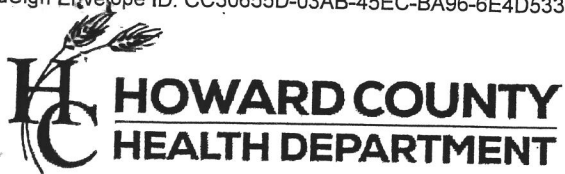
ISSUED BY: R BRICKER ISSUE DATE: 6-1-20 EXPIRATION DATE: 5-27-21

- 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 20002447
- 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.



Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
410.313.2648 - Fax
1.866.313.6300 - Toll Free

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 19th June day of April, 2020, among Isaac Brooks/NVHomes, 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 1009 High Stepper Trail, Sykesville, MD 21784, in the 03 Election District of Howard County, Maryland, and the deed and subdivision plat of the property is recorded among the Land Records of Howard County, Maryland, Tax Map # 009, Block #, Parcel # 0066, Deed Reference # 24974-79 and Tax Account # 601560 ("the Property").

WHEREAS, The Property 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 November 24, 2016. The pre-treatment device being installed is

Hoot 600

NOW, THEREFORE, the parties hereto agree as follows:

A. Owner hereby grants to the County the right to enter upon the land with prior notice for access to the system to make periodic inspect provide any information and data in Owner's possession reasonable County.

B. Owner acknowledges and agrees that neither the County nor any either officially or individually, underwrites the operation of any s

C. The Owner will devote reasonable care and effort to the operati system in perpetuity or until a public sewer connection is made so not the result of poor maintenance, faulty operation, or neglect.

D. The Owner agrees to enter into a contract reasonably acceptabl with a private entity to operate and maintain on a regularly schedu advanced pre-treatment system. The owner shall supply a copy of when it is renewed or altered.

E. This agreement shall run with the land and upon Owner's takin bind the Owner, their heirs, successors, and assigns to the provisio

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

6095 Marshalee Drive
Suite 120
Elkridge, MD 21075
410-313-5850

LR - Agreement Recording Fee 1x 20.00 20.00

Name: Li
Ref: 37

LR - Agreement Surcharge 1x 40.00 40.00
LR - Agreement Recording Fee 1x 20.00 20.00

Name: brooks
Ref: 38

LR - Agreement Surcharge 1x 40.00 40.00

SubTotal: 120.00
Total: 120.00

CRD-Credit 120.00
Credit Card Confirmation : 046854

08/11/2020 13:15 CC13-LP
#13961523/497/109
Thank you for visiting us today~

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 Property that the system shall require maintenance or other attention. Upon taking title to the Property, 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 this agreement on the date indicated above.

Bel Nijon 6/17/2020
Howard County Health Department

[Signature] 6/11/2020
Owner #1 Signature Date

Jimmy Anaskis
Owner #1 Print Name

DocuSigned by:
Isaac Brooks 4/25/2020
3E20E8E61379490...
Buyer #1 Signature Date

Isaac Brooks
Buyer #1 Print Name

Owner #2 Signature Date

Owner #2 Print Name

Buyer #2 Signature Date

Buyer #2 Print Name



MAYER BROS., INC.

Precast Concrete Products
6264 Race Rd. Elkridge, MD 21075

Letter of Satisfaction Hoot System Installation

Address of Property: 1009 High Stepper Trail
Sykesville, MD. 21784

Date of Final Inspection: 8/19/20

Installer: South Carroll Backhoe Service

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,

H. Michel Angelo

Name of Inspector
Mayer Bros., Inc.

PH: 410-796-1434

FX: 410-796-1438

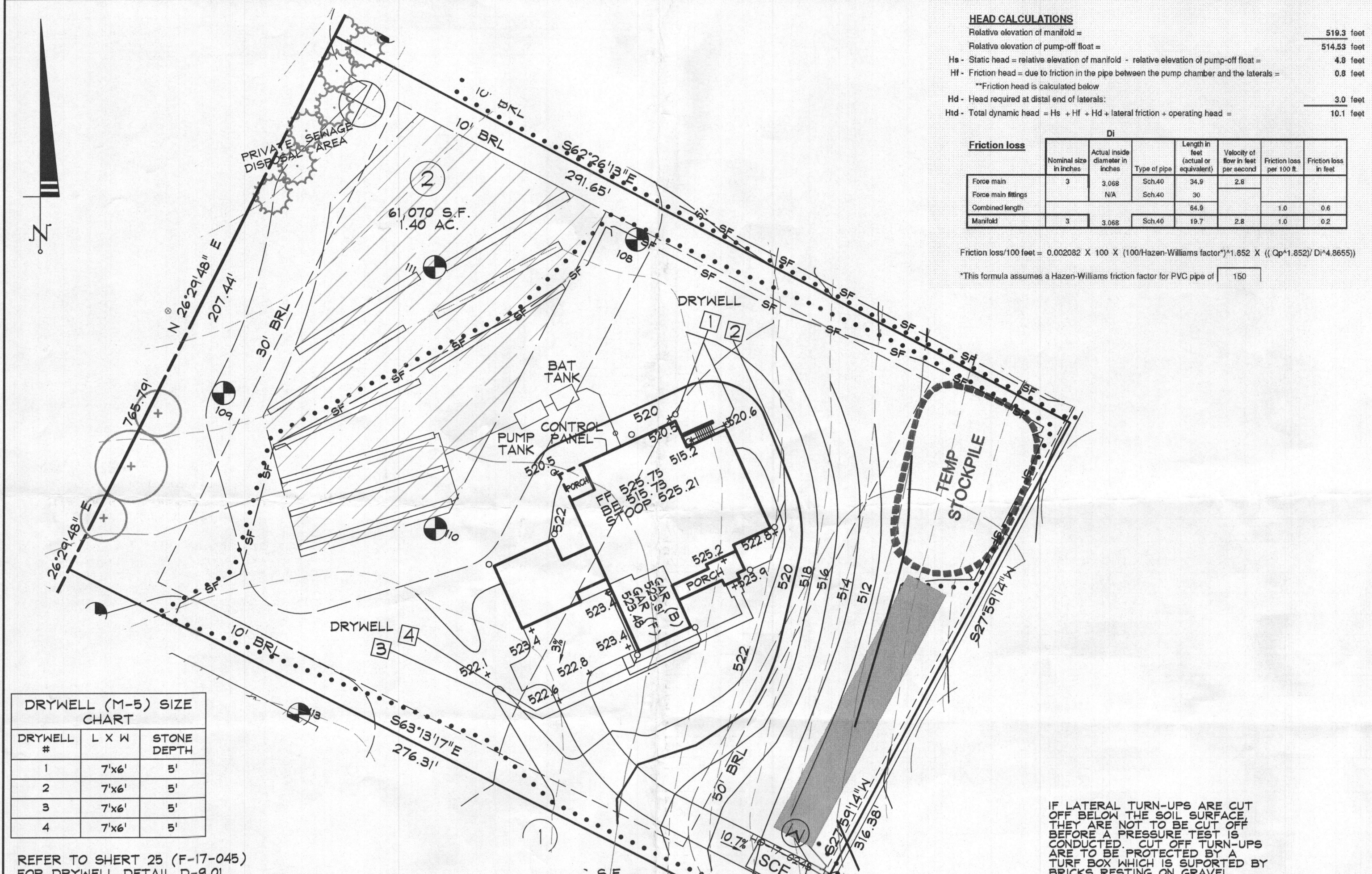
WBE

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,
Custom Precast Products

FILE INQUIRY NOTES

DATE	RESULTS OF REVIEW FOR FILE
	Diehl Property, Lot 2 Proposed Lot #2
<p>* Any septic system drain field installed in the area of this lot must have low-pressure distribution (LPD) design or an approved alternative design.</p>	
<p>R Bieker 6/5/14</p>	
<p>9/28/15</p>	<p>Septic System must include a BAT unit Trench Bottom area limited to 5-ft depth</p>
<p>R Bieker</p>	



DRYWELL (M-5) SIZE CHART

DRYWELL #	L X W	STONE DEPTH
1	7'x6'	5'
2	7'x6'	5'
3	7'x6'	5'
4	7'x6'	5'

REFER TO SHEET 25 (F-17-045) FOR DRYWELL DETAIL D-9.01.

IF THE LOCATION OF THE OF THE STANDARD PROBE STAFF IN THE PUMP TANK IS MORE THAN 50' FROM THE CONTROL PANEL, A FLOAT TREE MUST BE INSTALLED TO CONTROL THE RECIRCULATION PUMP INSTEAD OF THE STANDARD PROBE STAFF. CALL MAYER BROS. IN ADVANCE TO ORDER PARTS AND DISCUSS.

PUMP CHAMBER SPECIFICATIONS

- Pump chamber volume (available for storage) = 1500 gallons
- Pump chamber type [Enter "R" for rectangular or "C" for circular]
- L - Interior tank length/diameter = 153 inches
- W - Interior tank width/diameter = 83 inches
- A - Cross-sectional area: For "C", 3.142 X (1/2 L)² For "R", L X W = 9630 sq. inches
- H - Interior tank height (height to inlet unless otherwise approved) = 45 inches
- Vt - Actual (usable) tank volume = A X H / 2.31 (cubic inches per gallon) = 2002.8 gallons
- pr - Pump riser height = 6 inches

DOSE INFORMATION/VOLUME CALCULATIONS

- Vt - Volume in laterals X 5 = 89 gallons
- Vf - Force main and manifold flow back volume = 24.92 gallons
- Vc - Volume of Force Main + Manifold + 5x laterals = 113.92 gallons
- Elevation of inside bottom (floor) of pump chamber = 512.7 feet
- Pump height = 14 inches

STORAGE/PUMP REQUIREMENTS

- Height of storage remaining above high water alarm = H - Ha = 17 inches
- Height of storage above high water alarm required for ONE DAY'S storage = 709.4 gallons
- Height of storage above high water alarm required for a HALF DAY'S storage = 21.6 inches

- [] Configuration is acceptable with a single pump
- [X] Configuration is acceptable with duplex pumps
- [] Pump chamber does not provide adequate storage

[X] END MANIFOLD SPECIFICATIONS

- Pipe Diameter = 3 inches
- Distance between manifold and end of bed (12 inches suggested) = 12 inches
- Number of laterals (allowing for 2 to 4 foot spacing) = 3 laterals
- Distance between laterals = 12 feet

Pipe sizes and diameters

Line item	Flow number (see chart below)	Type of pipe	Nominal size in inches	Actual inside diameter in inches	Volume per 100 feet in gallons	Length of pipe which will flow back to pump chamber	Pipe volume in gallons (see back volume sheet)
Laterals (select diameters from chart)	1	Sch.40	1.5	1.61	10.6	168	N/A
Force main	1	Sch.40	3	3.068	38.4	28	24.9
Manifold	1	Sch.40	3	3.068	38.4	31	35

Volume to be pumped per pump cycle based on pipe volume

- Volume of laterals multiplied by 5 = 89 gallons
- Volume of force main(s) plus manifold which will flow back between pump cycles = 24.92 gallons
- Volume of laterals multiplied by 5 plus flow back = 113.92 gallons
- Minimum Dose (at least 1/8 of design flow) = 129 gallons

HEAD CALCULATIONS

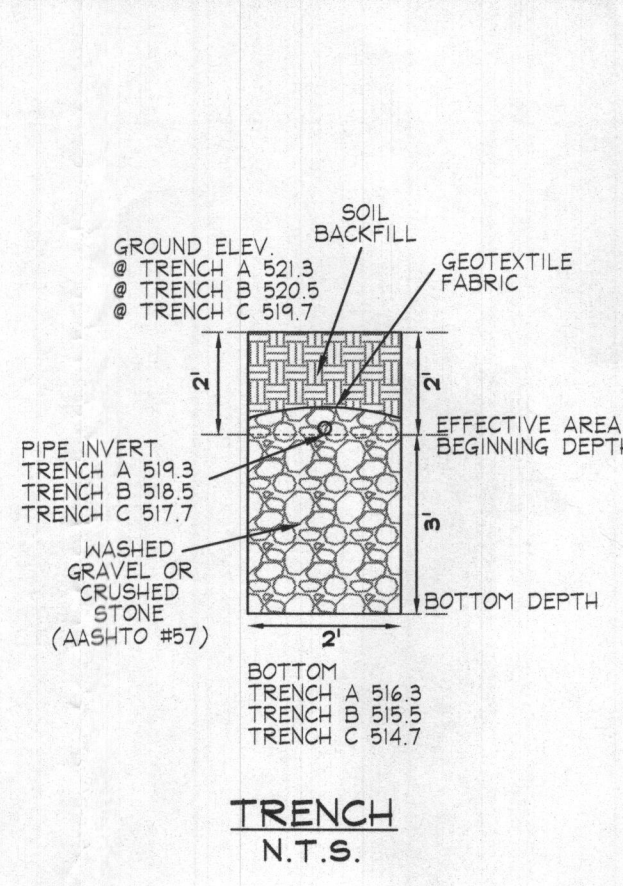
- Relative elevation of manifold = 519.3 feet
- Relative elevation of pump-off float = 514.53 feet
- Hs - Static head = relative elevation of manifold - relative elevation of pump-off float = 4.8 feet
- Hf - Friction head = due to friction in the pipe between the pump chamber and the laterals = 0.8 feet
- **Friction head is calculated below
- Hd - Head required at distal end of laterals = 3.0 feet
- Htd - Total dynamic head = Hs + Hf + Hd + lateral friction + operating head = 10.1 feet

Friction loss

Line item	Nominal size in inches	Actual inside diameter in inches	Type of pipe	Length in feet (actual or total head)	Velocity of flow in feet per second	Friction loss per 100 ft	Friction loss in feet
Force main	3	3.068	Sch.40	30	24.9	2.8	1.6
Force main fittings							0.6
Manifold	3	3.068	Sch.40	19.7	24.9	1.6	0.2

Friction loss/100 feet = 0.00282 X 100 X (100/Hazen-Williams factor)^{1.852} X ((Q/1.485)² / D^{4.8655})

*This formula assumes a Hazen-Williams friction factor for PVC pipe of 150



TRENCH N.T.S.

LOT 2 - RELATIVE DEPTHS

SYSTEM	PIPE INVERT	EFFECTIVE AREA BEGINNING	MAXIMUM TRENCH BOTTOM
INITIAL SYSTEM (A)	2'	2'	5'
INITIAL SYSTEM (B)	2'	2'	5'
INITIAL SYSTEM (C)	2'	2'	5'
1ST REPLACEMENT (A)	2'	2'	5'
1ST REPLACEMENT (B)	2'	2'	5'
1ST REPLACEMENT (C)	2'	2'	5'
2ND REPLACEMENT (A)	2'	2.5'	5'
2ND REPLACEMENT (B)	2'	2.5'	5'
2ND REPLACEMENT (C)	2'	2.5'	5'

LOT 2 - APPROXIMATE ELEVATIONS

SYSTEM	GROUND ELEVATION	INVERT ELEVATION	BOTTOM ELEVATION
INITIAL SYSTEM (A)	521.3	519.3	516.3
INITIAL SYSTEM (B)	520.5	518.5	515.5
INITIAL SYSTEM (C)	519.7	517.7	514.7
1ST REPLACEMENT (A)	518.8	516.8	513.8
1ST REPLACEMENT (B)	518.0	516.0	513.0
1ST REPLACEMENT (C)	517.9	515.9	512.9
2ND REPLACEMENT (A)	517.9	515.9	512.9
2ND REPLACEMENT (B)	517.1	515.1	512.1
2ND REPLACEMENT (C)	517.2	515.2	512.1

LOT 2 - INITIAL SYSTEM LATERALS

LATERAL	ELEV	VARIABLE HEAD	PERF. FLOW RATE	# PERF.	PERF. DIAMETER	LATERAL FLOW RATE	PERF. SPACING	LATERAL LENGTH	TRENCH LENGTH	1/2 PERF. SPACING	DIST FROM MANIFOLD TO 1ST PERF.
A	519.3	3.0	1.28	17	1/4"	21.76	39.52'	54.35	56	1.65'	2.65'
B	518.5	3.8	1.43	14	1/4"	20.02	48.00'	54.00	56	2.00'	2.87'
C	517.7	4.6	1.57	13	1/4"	20.41	51.69'	53.85	56	2.15'	2.87'

SEWAGE DISPOSAL SYSTEM DATA (6 BEDROOM):

- INVERT @ FOUNDATION WALL: 517.3 (BASEMENT PUMP REQUIRED)
- HOOT 600 BNR SYSTEM W/ 1,500 GALLON PUMP CHAMBER EX. GRADE OVER BAT TANK: 519.5 PROP. GRADE OVER BAT TANK: 519.3 INVERT: 516.7
- TRENCH DESIGN (6 BDRM x 150 GPD/BDRM = 900 GPD)

2ND REPLACEMENT SYSTEM

- INITIAL SYSTEM & 1ST REPLACEMENT SYSTEM 900 GPD / 1.2 GPD/SF (APP. RATE) = 750 SF USE 2' WIDE TRENCH W/ 36" OF GRAVEL BELOW PIPE 750 SF / 2' WIDTH = 375 LF x 0.44 = 167 LF MIN. TRENCH
- 2ND REPLACEMENT SYSTEM 900 GPD / 1.2 GPD/SF (APP. RATE) = 750 SF USE 3' WIDE TRENCH W/ 30" OF GRAVEL BELOW PIPE 750 SF / 3' WIDTH = 250 LF x 0.56 = 140 LF MIN. TRENCH
- 10' MIN SPACING BETWEEN TRENCH ENDS

- USE 3 - 56" LONG TRENCHES FOR INITIAL SYSTEM
- USE 3 - 56" LONG TRENCHES FOR FIRST REPLACEMENT SYSTEM
- USE 3 - 50" LONG TRENCHES FOR SECOND REPLACEMENT SYSTEM

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.
- THE BLOWER MAY NOT BE LOCATED MORE THAN 10 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 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.
- THE WELL HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN.
- ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE PROPERTY BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.

Goolds Water Technology

Wastewater

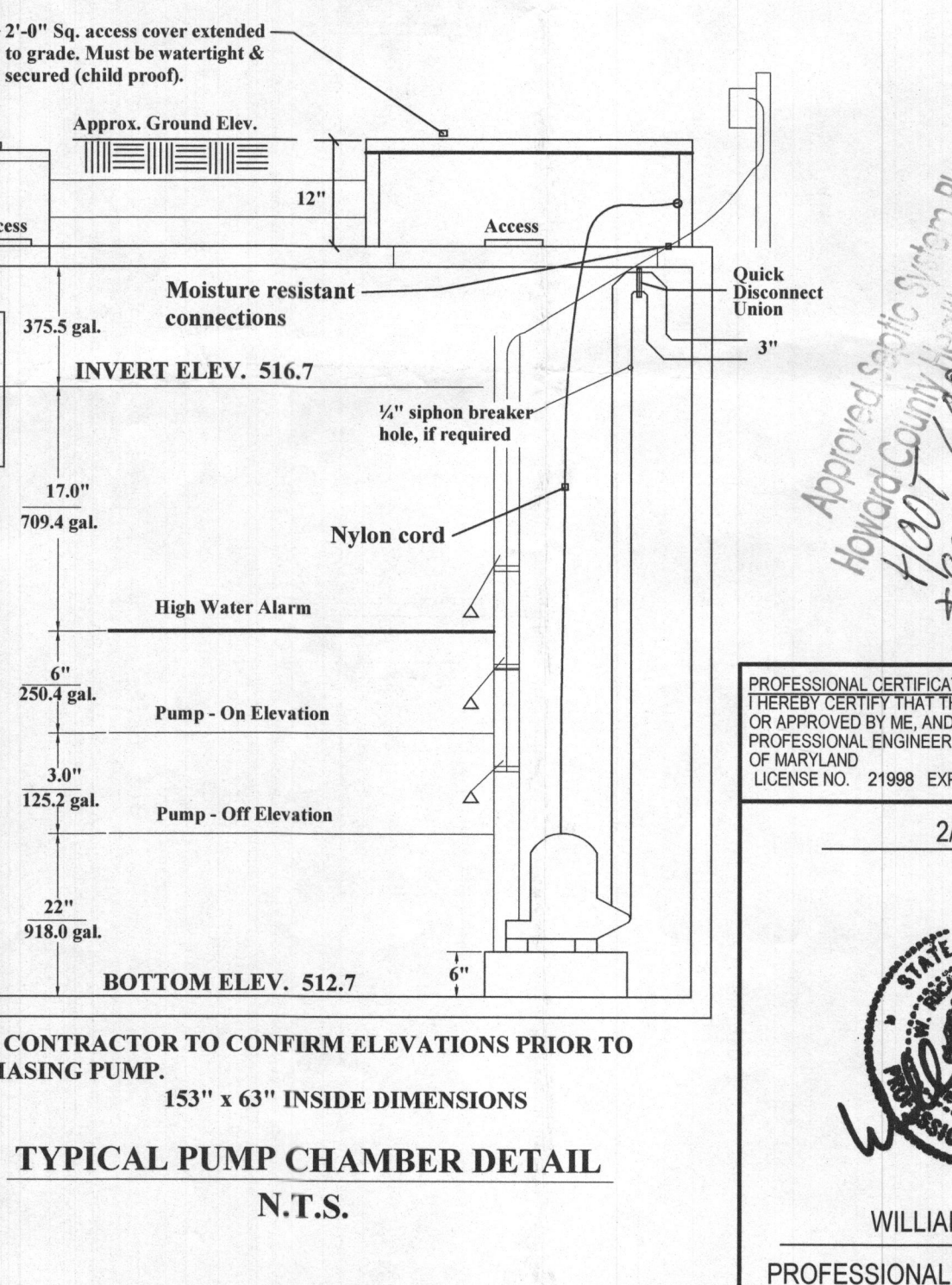
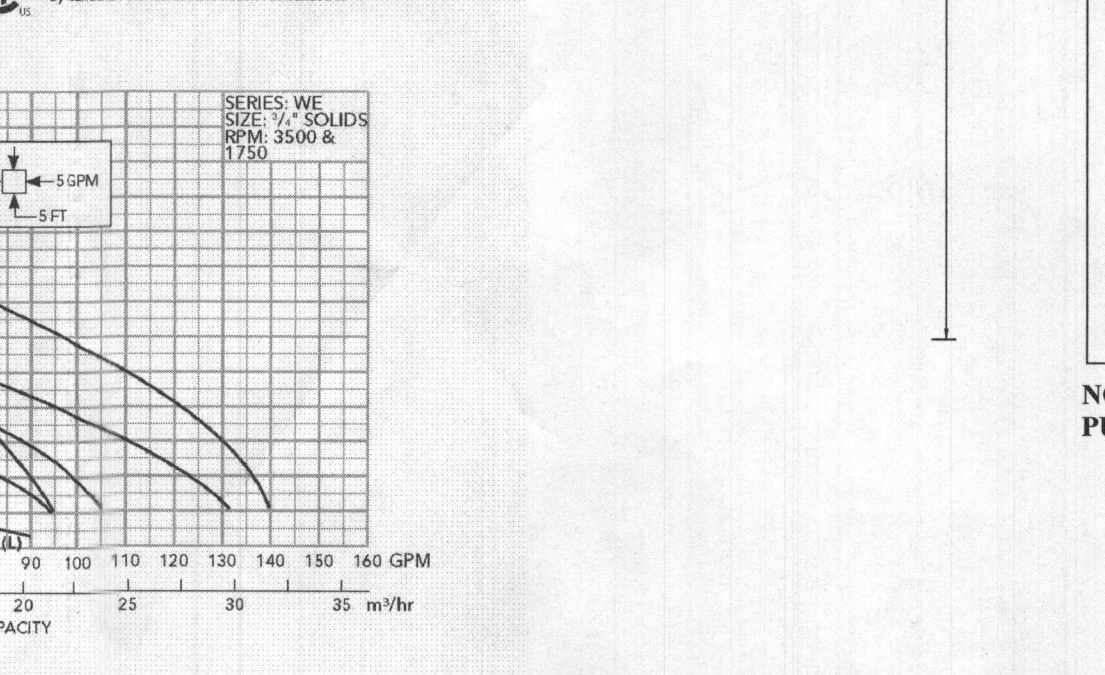
APPLICATIONS
Specifically designed for the following uses:
• Homes, Farms, Trailer Courts, Motels, Schools, Hospitals, Industry, Etc. Water Systems

SPECIFICATIONS
• Solids handling capabilities: 3" maximum.
• Discharge size: 2" NPT.
• Capacities up to 140 GPM.
• Total heads up to 120 feet TDH.
• Pump
• Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.
• Class II insulation on 1-1/2 HP models.
• Class F insulation on 2 HP models.
• Single phase (60 Hz):
• Capacitor start motors for maximum starting torque.
• Built-in overload with automatic reset.

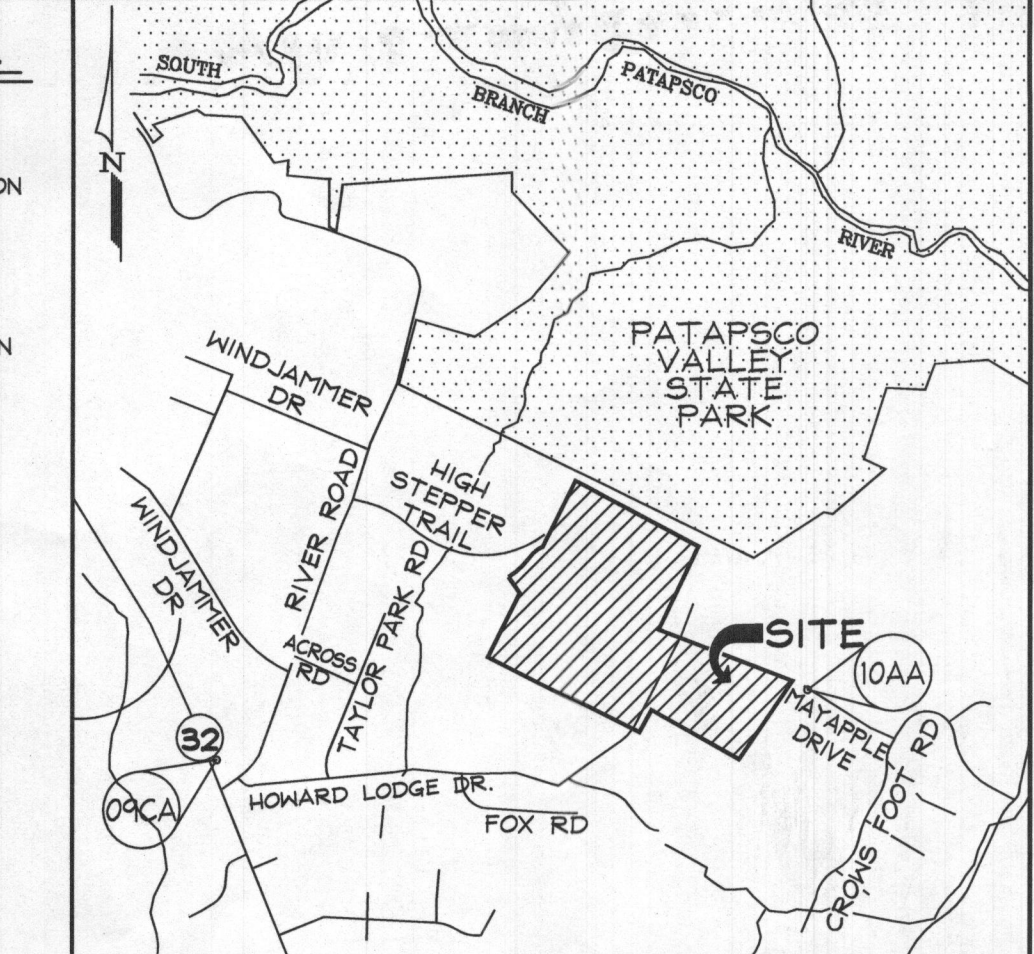
MOTORS
• Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.
• Class II insulation on 1-1/2 HP models.
• Class F insulation on 2 HP models.

AGENCY LISTINGS
By Name: 10, 778 and 158, 222-108 Standard. By County: Standard Association #635549

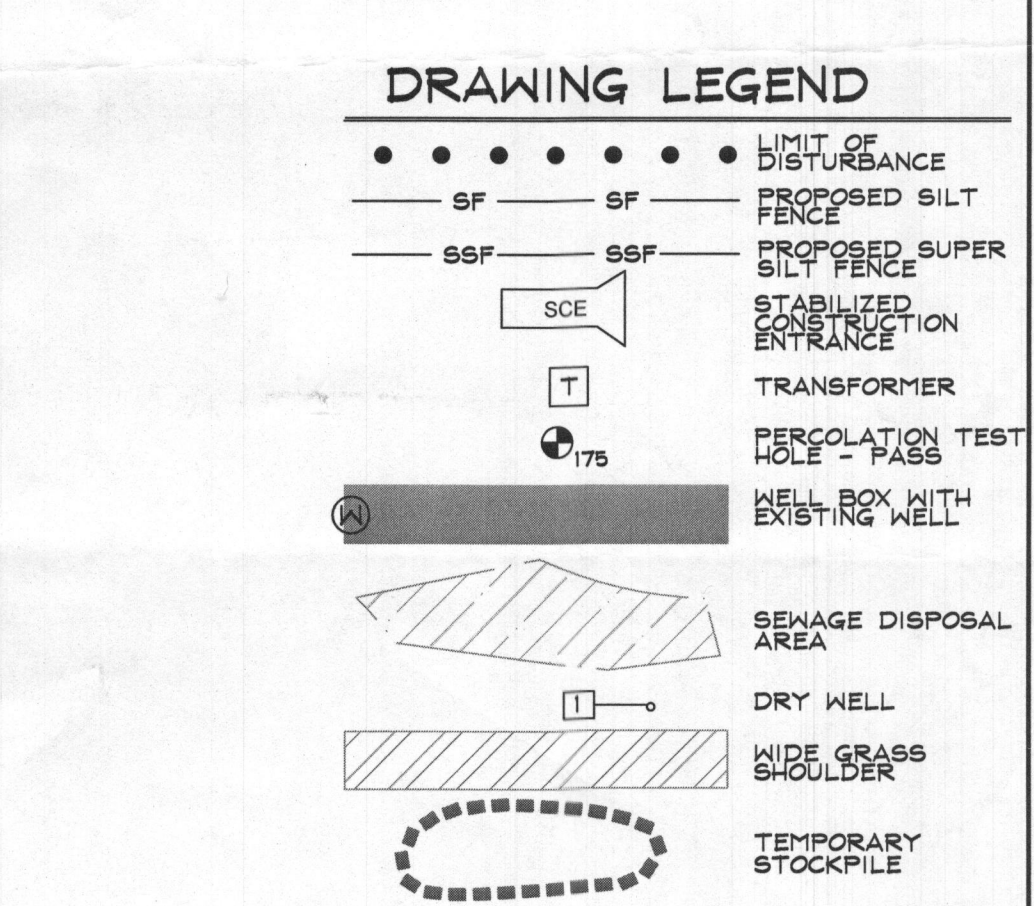
Three phase (60 Hz):
• Class 10 overload protection must be provided in separately or feeder circuit.
• STOW power cords all have bare lead cord ends.
• Designed for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.
• Bearings: Upper and lower heavy duty ball bearing construction.
• Power Cable: Severe duty rated, oil and water resistant. Epoxy seal on motor and provides secondary moisture barrier in case of outer jacket damage and to prevent oil leaking. Standard cord is 20'. Optional lengths are available.
• O-ring: Assures positive sealing against contaminants and oil leakage.



TYPICAL PUMP CHAMBER DETAIL N.T.S.



VICINITY MAP SCALE: 1"=200'



DATA SOURCES:

EX. BOUNDARY SHOWN PER BOUNDARY SURVEY BY SHANBERGER AND LANE DATED JUNE 2014. TOPOGRAPHY SHOWN PER AERIAL PHOTOGRAMMETRY AND FIELD SURVEY TOPOGRAPHY DATED 5/14/14. APPROXIMATE ADJACENT PLATS, HEALTH DEPARTMENT RECORDS AND FIELD OBSERVATION SHOWN PER FIELD INVESTIGATION BY ECO-SCIENCE SOLUTIONS CONDUCTED ON OR ABOUT JUNE, 2014.

DDC Development Design Consultants

Planners
Surveyors
Engineers
Landscape Architects

192 East Main Street
Westminster, MD 21157
410.386.0560
410.386.0564 (Fax)
DDC@DDCinc.us
www.DDCinc.us

OWNER: ESC WALKER MEADOWS, L.C. 5074 DORSEY HALL DR. SUITE 205 ELLICOTT CITY, MD 21042 410-720-3021

DEVELOPER: NV HOMES 8720 PATUXENT WOODS DRIVE COLUMBIA, MD 21046 410-379-3391

SITE ADDRESS: SE RIVER ROAD SYKESVILLE, MD 21784

WALKER MEADOWS
A RESUBDIVISION OF LOT 2 OF THE DIEHL PROPERTY (PLAT #637)
LOTS 1-34 & BUILDABLE PRESERVATION PARCEL A & NON-BUILDABLE PRESERVATION PARCEL B-K, NON-BUILDABLE BULK PARCELS L-M
1009 HIGH STEPPER TRAIL
LOT 2 SITE PLAN FOR BAT INSTALLATION

5TH COUNCIL DISTRICT 3RD ELECTION DISTRICT HOWARD COUNTY, MD

REVISIONS

NO.	DESCRIPTION OF CHANGES	DRN	REV	DATE

CO. FILE #: F-17-045 DES. BY: LJC
TAX ACC. #: 03-601577 DRN. BY: LJC
TAX MAP: 9 CHK. BY: WRD
BLOCK / GRID: 6 DATE: 2/26/20
PARCEL #: 66 DDC JOB#: 12064.3
ZONE / USE: RR-DEO SHEET NUMBER: 1 of 1
DWG. SCALE: 1" = 30'

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. 21998 EXPIRATION DATE: 6/8/20

2/26/20 DATE

STATE OF MARYLAND
WILLIAM R. DEMARCO
PROFESSIONAL ENGINEER NO. 21998