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: 2/26/2024

ONSITE SEWAGE DISPOSAL SYSTEM

P 575789

APPROVAL DATE: 3/4/2024 (SP)

PERMIT: REPAIR – Tank Replacement

A Repair

PROPERTY ADDRESS: 4921 Wharff Lane

SUBDIVISION: Cahill Property LOT: 1 TAX ID: 01-162802

CONTRACTOR: Young Septic EMAIL: info@younngseptic.com

CONTRACTOR ADDRESS: 1802 Baltimore Boulevard, Westminster, MD 21157 PHONE: 443-775-7353

PROPERTY OWNER: David Etue EMAIL:

OWNER ADDRESS: 5400 Vantage Point Road, Columbia, MD 21044 PHONE: 202-669-3628

SEPTIC TANK SIZE: 1500g PUMP TANK CAPACITY (g): n/a

Plastic septic tank

DISTRIBUTION SYSTEM: ☒ GRAVITY ☐ PRESSURE DOSED BEDROOMS: 4 LOADING RATE: n/a

TRENCHES:	LINEAR FEET REQUIRED: n/a	INLET DEPTH:
	TRENCH WIDTH:	MAXIMUM BOTTOM DEPTH:
	MINIMUM SPACE BETWEEN TRENCHES:	EFFECTIVE AREA BEGINNING DEPTH:
LOCATION:	To be installed in the location per approved design plan.	
NOTES:	Set new tank per design plan. Pump and collapse old existing tank. Drywell was confirmed to be function per inspection report from Young Septic.	

ISSUED BY: K. Wolf ISSUE DATE: 3/4/2024 EXPIRATION DATE: 3/4/2025

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 n/a

NOTE: THE HCHD DOES NOT WARRANTY ANY SYSTEM AND CANNOT GUARANTEE THE PERFORMANCE OF THIS SYSTEM AS DESIGNED. BY ACCEPTING THIS PERMIT, THE OWNER AND/OR APPLICANT ACKOWLEDGE THAT THE SPECIFICATIONS DETAILED IN THIS DESIGN ARE ONE POSSIBLE OPTION AND THAT THE HCHD WILL REVIEW OTHER PROPOSALS. YOU HAVE THE OPTION TO SEEK THE ADVICE OF A QUALIFIED DESIGN CONSULTANT OR PROFESSIONAL ENGINEER FOR FURTHER GUIADNCE.

NOTE: AN INDIVIDUAL CERTIFIED BY MDE AND THE MANUFACTURER FOR BAT INSTALLATION MUST BE PRESENT AT ALL TIMES DURING BAT INSTALLATION.

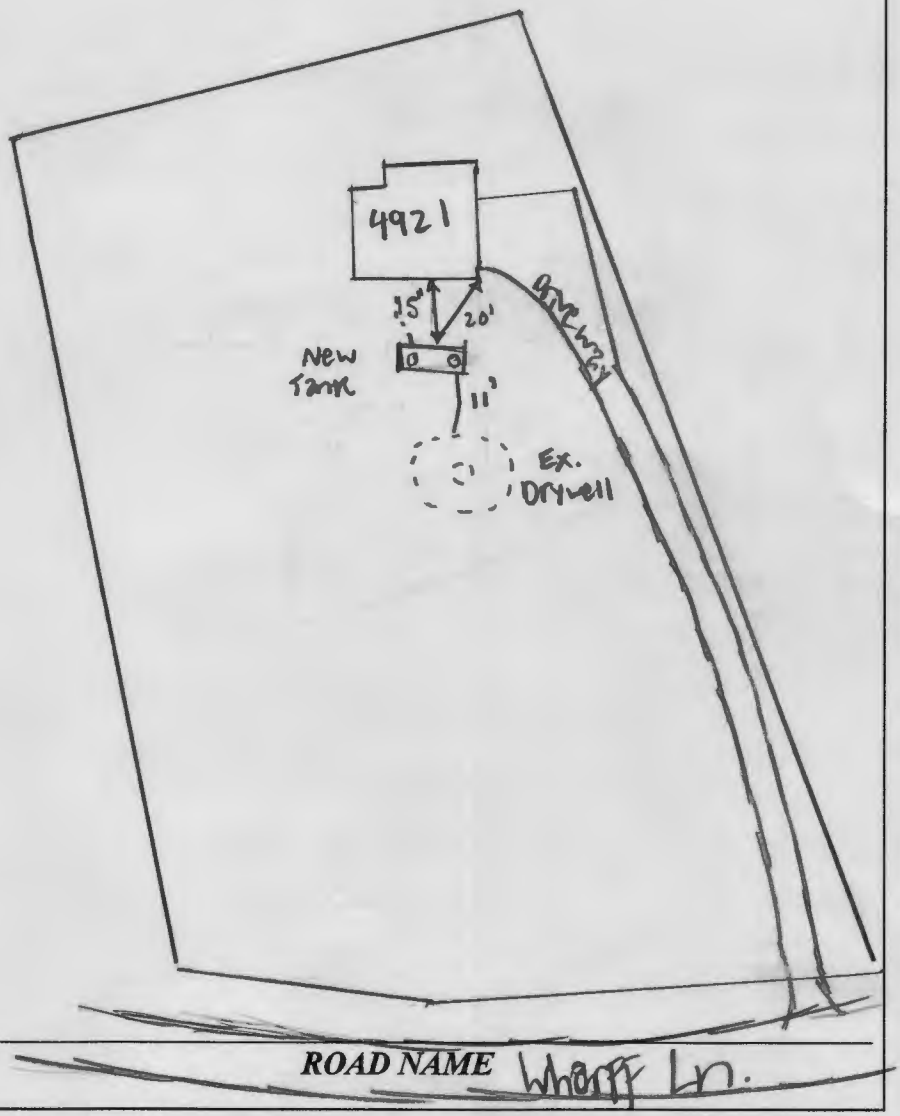
NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA

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.

NOT TO SCALE



ROAD NAME Wharf Ln.

Ex Drywell

TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM

NUMBER OF TRENCHES
TOTAL LENGTH
ABSORPTION AREA
DISTRIBUTION BOX LEVEL
DISTRIBUTION BOX BAFFLE
DISTRIBUTION BOX PORT

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL YES
MANUFACTURER Roth
CAPACITY 1500 GAL
SEAM LOC Mid
TANK LID DEPTH 4.5' - 3'
BAFFLES 6" Front & 9" back
BAFFLE FILTER —
MANHOLE LOC Front & Back
6" PORT LOC —
WATERTIGHT TEST —
SLOTTED YES
DATE ON LID —

PUMP/SEPTIC TANK LEVEL N/A
MANUFACTURER
CAPACITY GAL
SEAM LOC
TANK LID DEPTH
BAFFLES
BAFFLE FILTER
MANHOLE LOC
6" PORT LOC
WATERTIGHT TEST
SLOTTED
DATE ON LID

SEPTIC CONTRACTOR ONSITE INSTALLING SYTEM: Ryan Walsh
SEPTIC CONTRACTOR ONSITE LICENSED WITH THE STATE OF MD: YES/NO

PRE-CONSTRUCTION NOTES:
3/4/2024 - Plans received & Approved SP

CONTROL PANEL DATA

CONTROL PANEL HEIGHT N/A (MIN 30")
INSPECTION DATE N/A
INSPECTION: PASS/FAIL (CIRCLE ONE)

INSTALLATION NOTES:
3/4/2024 - Contractor onsite to install new tank. Tank hole excavated, contractor stated he would compact & level excavation bottom per installation guidelines. SP
Time break @ later time during completion of tank installation guidelines stated grooves needed to be compacted every 6"-12", installer did not want to follow guidelines. Compacted every 3'-4'. SP
Received pics of tank connection to drywell. Contractor stated there's 2" of fall for 11'. SP

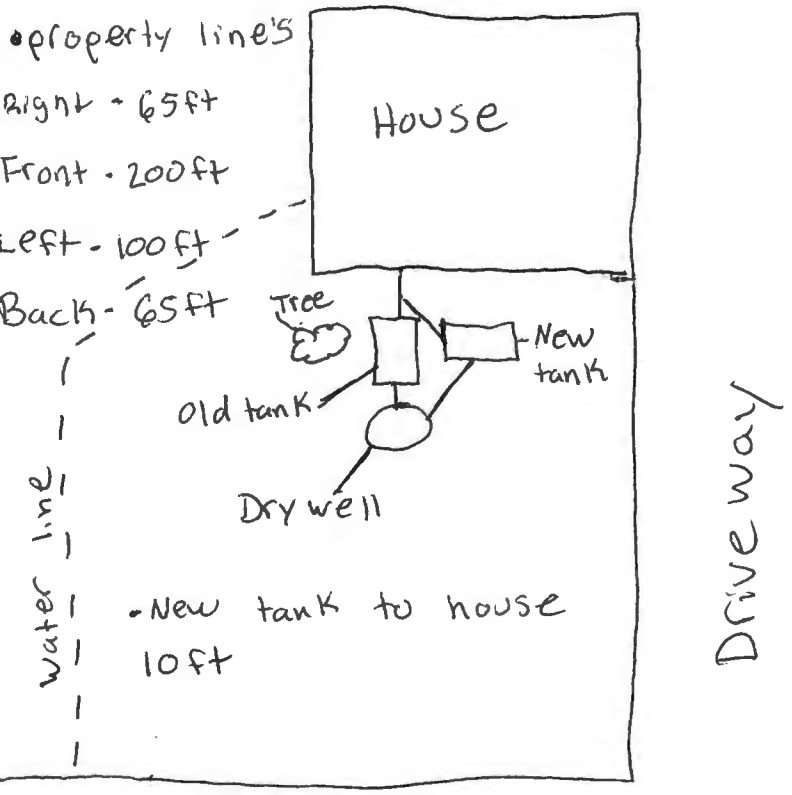
FINAL INSPECTOR S. Page DATE OF APPROVAL 3/4/2024

YOUNG SEPTIC SERVICES
1802 BALTIMORE BOULEVARD
WESTMINSTER, MD 21157
INFO@YOUNGSEPTIC.COM
(443)775-7353

4921 Wharff Lane
Ellicott City MD 21043

- Reason for tank replacement is old tank leaking

- New 1500 plastic tank 'Roth'
- Existing tank pumped & crushed
- No neighboring wells with in 100ft
- Tank is 4ft in the ground
  - inlet 4 1/2 ft
  - out let 3ft
- 4 Bedrooms
- David Etue
  (202) 669-3628
  (property owner)

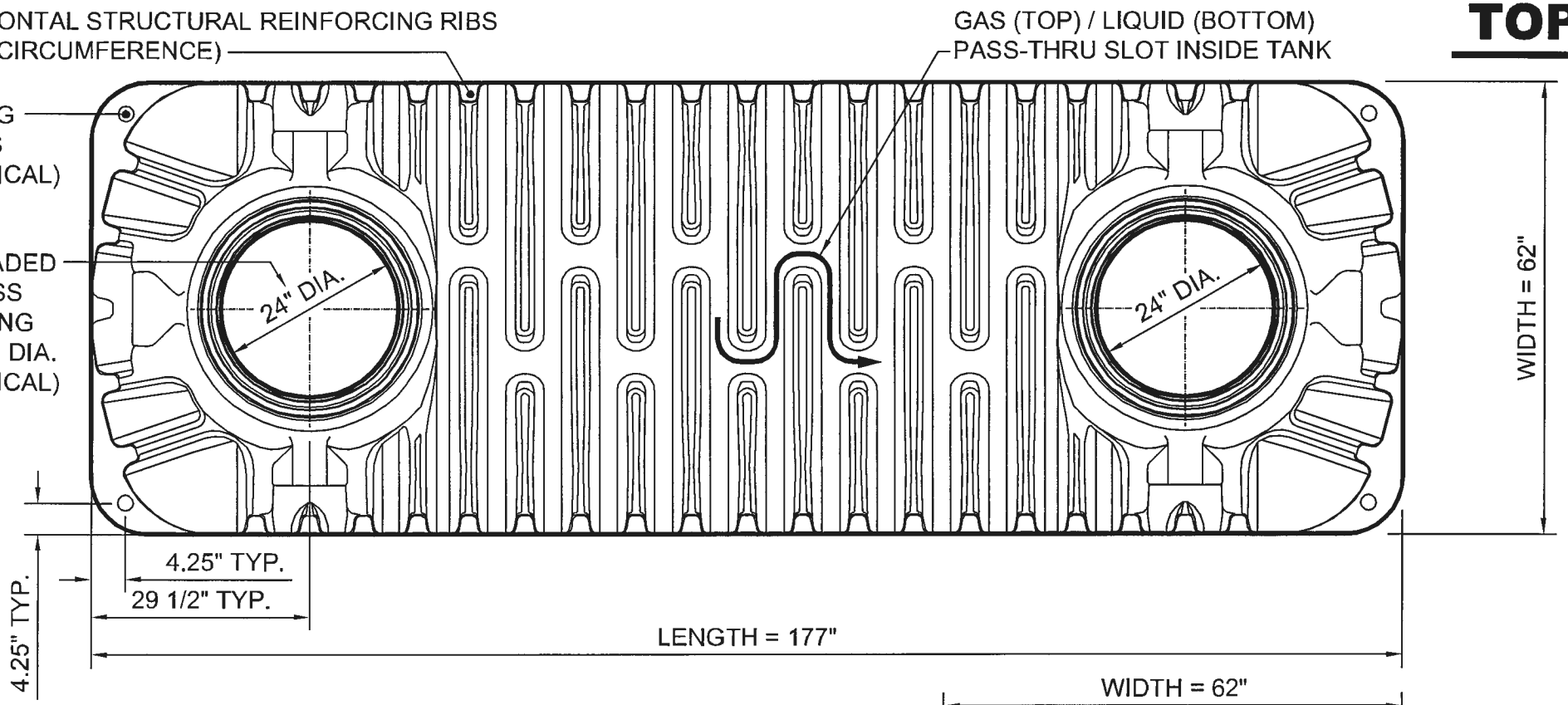


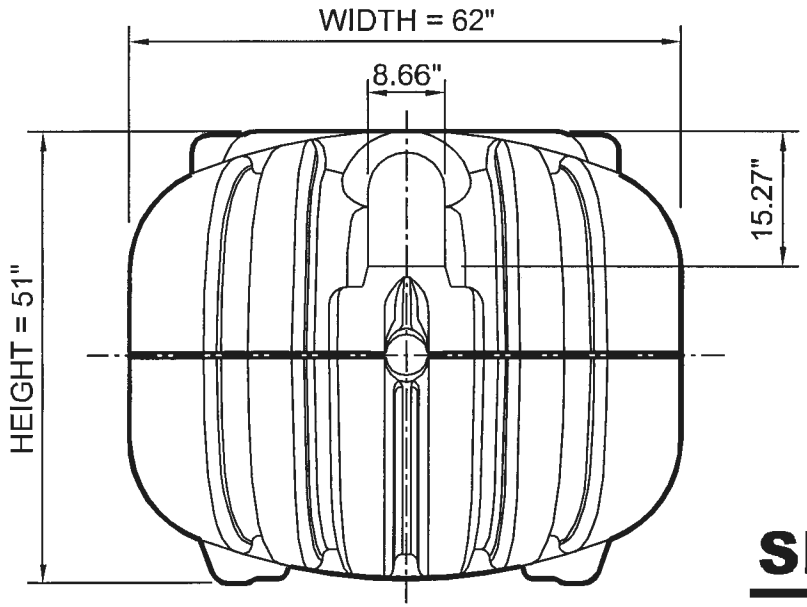
Wharff Lane

Approved Septic System Plan
Howard County Health Department
Signature
3/4/2024
Date

FILE INQUIRY NOTES

DATE	RESULTS OF REVIEW FOR FILE
2/23/2024	met w/ Randy Young in office. Discussed
	in detail what we need on the site plan. I also
	explained we need a proper inspection report since
	it is listed as a transfer. I mentioned also to
	Randy about digging 4' below the bottom of the
	ex. seepage pit (initials)





TANK SPECIFICATIONS

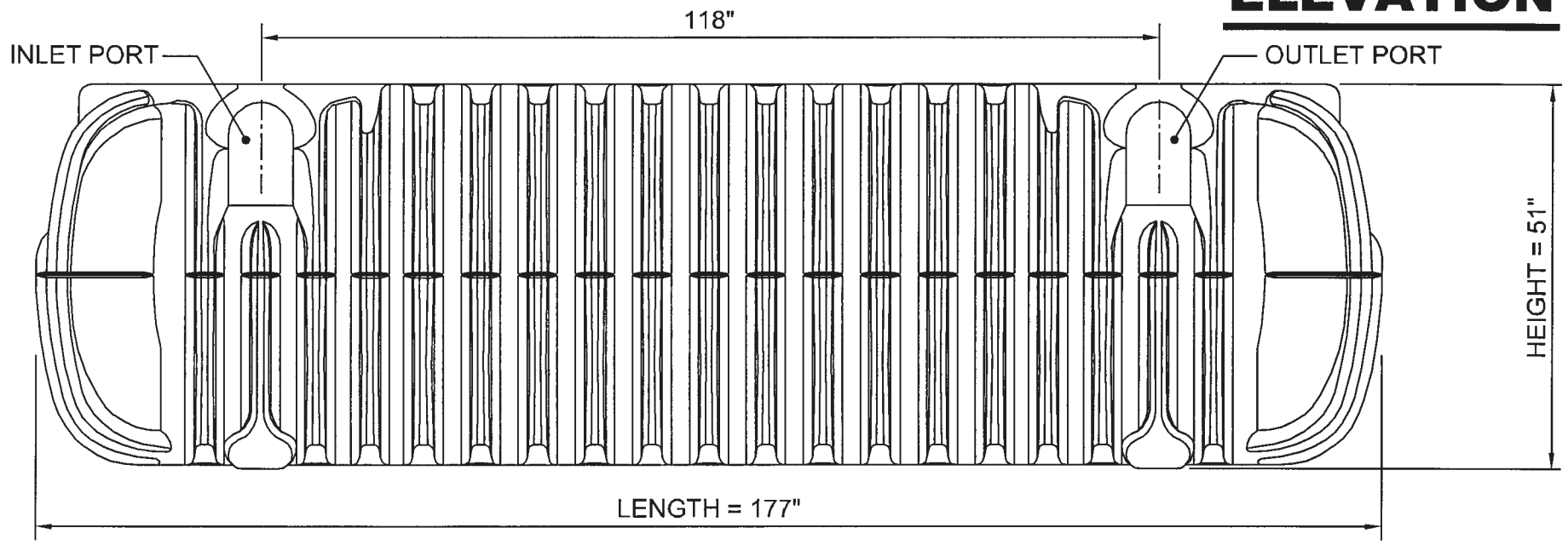
DESIGN CAPACITY		TOTAL CAPACITY		WEIGHT
GALLONS	LITERS	GALLONS	LITERS	POUNDS
1500	5678	1771	6692	640

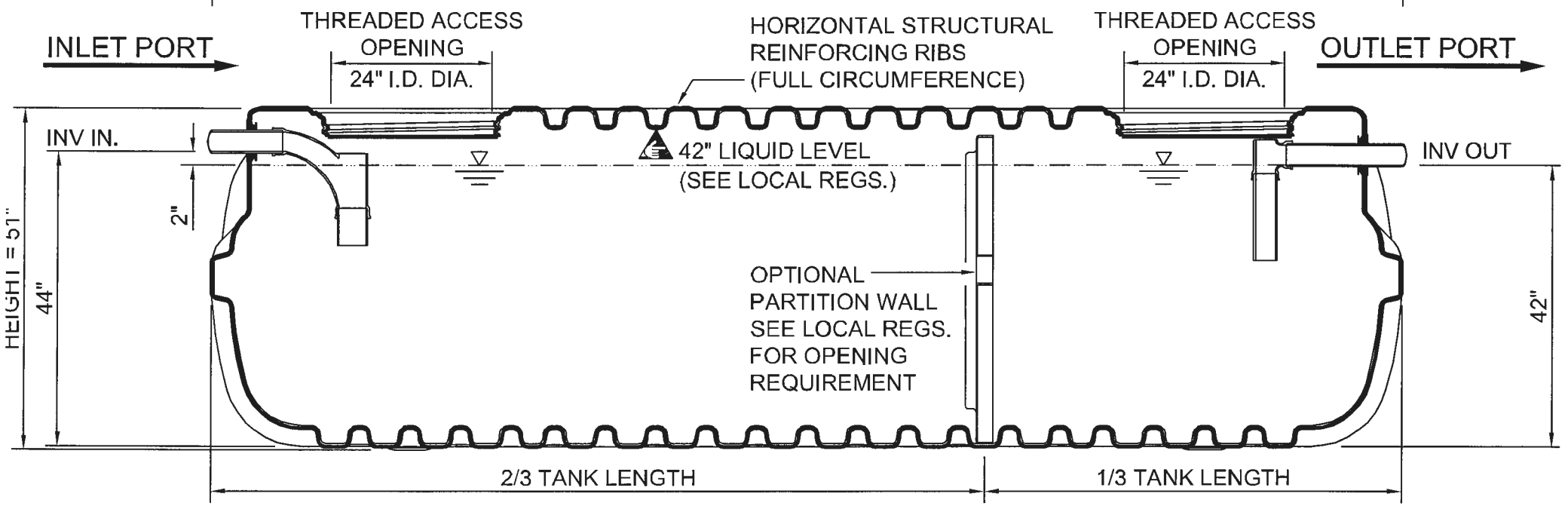
DWG SCALE: 1:1
PLOT SCALE: 1:2
SHEET #: 1 OF 3

ROTH MultiTanK®
1500 GALLON / MODEL RMT-1500

ROTH GLOBAL PLASTIC
One General Motors Driv
Syracuse N.Y. 1320
Call Toll Free 866.943.725
www.fralo.n

ELEVATION





42" LIQUID LEVEL

SECTION

DWG SCALE: 1:1
LOT SCALE: 1:2
SHEET #: 2 OF 3

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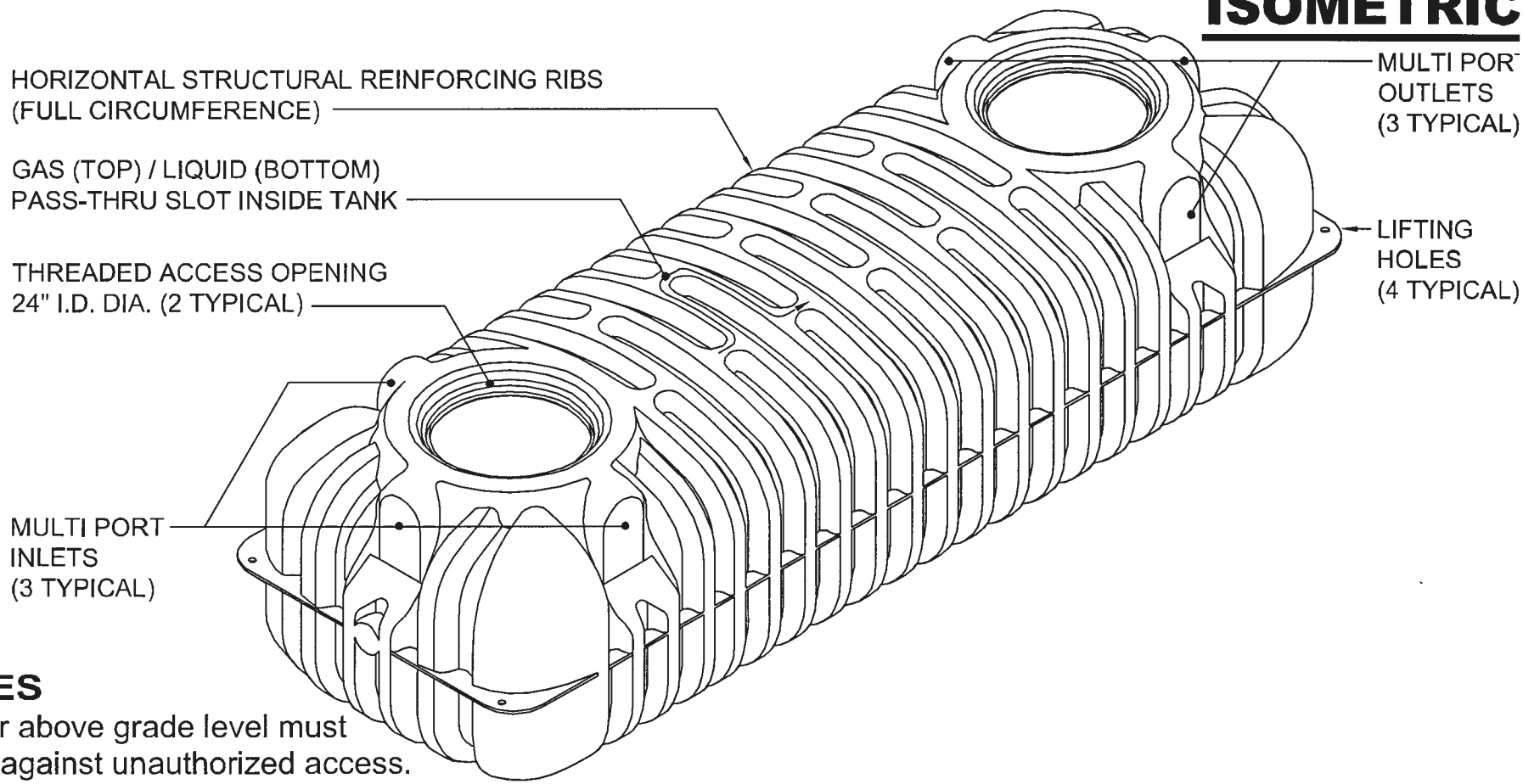
ISOMETRIC



WARNING

TANK NOTES

1. Access at or above grade level must be secured against unauthorized access.
2. Tank is not rated for vehicular traffic loading.
3. All resin used is compliant with ASTM D 1248 as required by CSA B66 and IAPMO / ANSI Z1000-2007.
4. Tank material of construction is HMW-HDPE.
5. Primary dimensions are in inches
6. Minimum tank wall thickness is 1/4".
7. Labeling will include: manufacturer name, liquid capacity, date, maximum burial depth, and model number.
8. Riser cover contains the following: 6" x 3" warning: "Danger - Do not enter - Poison Gas" - written in English, French & Spanish.
9. Maximum burial depth from manufacturer is 36" unless specifically instructed otherwise by the factory.
10. Models RMT-750, RMT-1060, RMT-1250 and RMT-1500 are all certified to CSA and IAPMO standards.
11. Models RMT-500, RMT-900 and RMT-1000E are compliant with CSA and IAPMO standards.

NOTES

DWG SCALE: 1:1
SHEET SCALE: 1:2
SHEET #: 3 OF 3

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3. BURIED STRUCTURE OVERVIEW

3.1 Rigid vs. Flexible Structures

The soil (backfill) interaction between a Roth tank is exactly opposite of that with rigid buried structures such as precast concrete tanks. When a precast tank is buried, the rigid walls are designed to not move in response to the pressures they experience. If the walls of the rigid structure move they will crack which may lead to premature failure of the vessel. In this situation, the soils exert active pressures on the walls of the rigid structure as they "act" upon the structure, attempting to deform the walls inward. The rigid concrete tank is passive in response to the soil force.

In flexible buried structures such as large diameter corrugated culvert pipe and the Roth tank the roles of the vessel and the backfilled material are reversed. In the case of a Roth tank, the vessel is backfilled and compacted according to the installation instruction which induces an arching effect in the roof of the tank, similar to the effect of the post-mold fixturing in Photograph 2.3.4. Once the tank has been properly backfilled and bedded with compacted fill now pushing against the sidewalls, the tank is ready to be covered. Upon experiencing the top loading forces (cover) the tank will attempt to transmit those forces through the arched walls of the tank and squat in response to the load. A properly installed tank will push against the compacted fill along the sidewalls to accommodate this movement. The compacted backfill now serves to restrain the tank in position by not allowing this movement to take place. In this case, the vessel is now "acting" on the soil and the soil becomes the passive participant in the process. At this point the tank is "locked" into position and excessive movement/ deformation is all but impossible.

3.2 Composite Structures

The phenomenon described above is, in reality, quite simple and is known as a composite structure. That is to say that the tank relies upon the installed condition to achieve its full structural integrity. The tank acts in concert with the soil to form a structure that, when properly installed, is actually stronger than the tank itself without the supporting soil structure. Other examples of composite structures would be the rebar used in concrete septic tanks, fiberglass filaments in fiberglass tanks and the plywood and roof truss system used in the construction of many wood frame structures.

3.3 Soil Compaction

The importance of the selection, proper placement and compaction of the tank bedding, haunch fill and sidewall (backfill) material cannot be overemphasized and is critical to the structural integrity and longevity of the tank.

In the simplest definition, soil compaction is simply mechanically increasing the density of the material being compacted to provide greater load bearing capacity. Compaction, in addition to the increased load bearing, provides stability, reduces swelling/shrinking and reduces the settling of the soils being placed.

Clays and other cohesive soil mixtures do not respond well to compaction and are difficult to work with. Clays and clay-like soils are not permitted for any portion of the installation (bedding, haunch support or sidewall backfill) and the use of such material will **void the warranty**.

An excellent guide to soil compaction, compaction equipment, soil classifications and other very useful information was developed by Multiquip Inc., of Fresno California - a distributor of earth moving Equipment. This information may be found at www.multiquip.com/multiquip/pdfs/product-brochures/Soil-compaction-2004-handbook.pdf

4. INSTALLATION TRAINING MATERIAL

4.1 Installation Seminar

The following installation seminar is comprised of photos and instructions from test installations, actual field installations and factory-staged demonstrations and tests. It is intended to show a wide variety of techniques, materials, and installation guides and is not intended or presented as a single "ideal" installation as we recognize that each and every installation has its challenges and that no single site is likely ever ideal. The intent is to provide you with as broad of an overview as possible so that you may adopt local codes, materials, equipment and practices to achieve the desired results of a successful installation!

There are four basic thoughts to keep in mind when installing Roth tanks.

1. Empty
2. Bed
3. Haunch
4. Compact

By remembering these 4 key steps...**EMPTY, BED, HAUNCH, COMPACT,** you will be ensured a quality installation every time. Following are the basics:

1. EMPTY. The tank should be empty throughout the entire installation process. Adding water is potentially detrimental to the installation as it will create internal pressure working against the compacted backfill described above.

2. BED. Create a firm and uniform compacted bed for the belly of the tank to rest on. The compacted bed should prevent the belly from pushing down into the excavation after water is ultimately introduced to the tank. A compacted bed will eliminate or minimize settlement which can distort piping connections.

3. HAUNCH. Due to the curved shape of the tank, the haunches of the tank need to have fill worked under them to cradle the tank. The haunches are defined as the curved area of the tank where the vertical sidewall transitions into the horizontal belly of the tank. Since it is nearly impossible to compact this material under the haunches, the use of pea gravel, crushed stone or other material that is compacted when placed is required. Care must be taken to work the material under the tank and between the ribs.

4. COMPACT. Now that the tank is completely "cradled" on the compacted bed and the haunches, backfilling can begin up the sidewalls. Adding materials in 6"-12" lifts (layers) and compacting with a jumping jack, plate tamper or hand tamper is required to provide the sidewall restraint necessary to "lock" the tank into position. Native material may be used providing it is compactable and free of clay. **NO CLAY IS PERMITTED FOR BACKFILL!**

It should also be noted that the instructions for installing Roth tanks are virtually identical to the instructions published in the Best Practices Manual of the National Precast Concrete Association.

In addition to the installation instructions inside every tank that leaves the factory, the following sticker is placed on the inlet end of every tank as a helpful reminder.

IMPORTANT!

FAILURE TO INSTALL TANK PROPERLY WILL *VOID THE WARRANTY*

*** DO NOT FILL TANK WITH WATER BEFORE BACKFILL**

*** BED TANK ON COMPACTED BASE**

*** SUPPORT HAUNCH WITH GRANULAR MATERIAL (SAND, GRAVEL, PEA STONE OR SIMILAR)**

*** COMPACT BACKFILL IN 6" LIFTS**

*** DO NOT BACKFILL WITH ANY CLAY**

CALL FACTORY AT 866.943.7256 WITH QUESTIONS

4. INSTALLATION TRAINING MATERIAL

Photo 4.1.1-Drilling of inlet and outlet holes

Drill the inlet and outlet holes utilizing a standard 5" hole saw. The inlet and outlet ends have been pre-offset at the factory to provide the required amount of fall between the inlet and outlet inverts. All tanks have two pilot hole dimples located at each end of the tank and one hole on each side providing the option for three inlet locations (End, Right Side, Left Side) and the same for the outlet locations. The "A" dimples will provide a 40" liquid level (suitable for most States and Provinces) and the "B" dimples will provide a 42" liquid level.

For most States and Provinces, you will center the pilot bit on the "A" dimples **at each end of the tank.** DO NOT USE DIFFERENT COMBINATIONS OF "A" and "B" dimples. This will result in an improperly configured tank that may not allow proper flow through the tank.

Tanks for **Florida, and Oregon** are all **PREDRILLED AT THE FACTORY.**

Tanks for **Arizona, Illinois and Nebraska** should be drilled at the "B" dimple pilot holes.

ALL OTHER STATES AND PROVINCES SHOULD USE THE "A" DIMPLES.

DO NOT ATTEMPT TO CUT THE HOLES WITH ANYTHING OTHER THAN A HOLE SAW! YOU WILL NOT ACHIEVE A WATERTIGHT SEAL ON THE PIPING!

Photo 4.1.2-Tank with rubber grommet

All tanks are provided with two rubber grommets for the inlet and outlet connections. Insert each grommet fully into the 5" hole so that the flange on the grommet is flush with the surface of the tank. Pipe lubricant will be necessary to stab in the pipe from the outside. It is also advantageous to bevel the end of the pipe and to angle the pipe to the side when stabbing it through the grommet. Attempting to push the pipe straight in through the grommet may cause the grommet to disengage from the tank wall.

Photo 4.1.3-Bedding being spread and compacted

Bedding, in this case, manufactured sand or stone dust is added and spread about the bottom of the excavation to create a uniform bed. Other material such as sand, crushed gravel, or other similar material may be used to bed the tank providing it is uniformly spread and compacted.

4. INSTALLATION TRAINING MATERIAL

Photo 4.1.4-Bedding material prepared for setting the tank

The bedding material has been added to the desired elevation, raked and compacted in preparation for setting the tank. Creating a firm compacted bed for the belly of the tank to bear upon is critical in minimizing tank deformation. Over-digging and/or using soft native material for the bedding will cause the tank to push in and deform.

Photo 4.1.5-Support of the haunch

The tank is set in the excavation on the bedding and more material is added to support the haunch of the tank. Note in photo 4.1.5 how it is necessary for the material to flow under the curved portion of the tank as well as into the ribs to provide haunch support.

Photo 4.1.6-Spreading & compacting of backfill material

The backfill material is spread evenly and compacted around the entire tank. Care must be given to see that the material is worked into the corrugations and under the haunch to provide uniform support. Adding large quantities of material along the sides of the tank may cause bridging of the material between the tank and the excavation causing voids. Take care to eliminate any void space and provide continuous support.

4. INSTALLATION TRAINING MATERIAL

Photo 4.1.7-Proper support for vessel

Note that this free-flowing material clearly fills all voids, including the ribs (corrugations) and provides uniform support to the vessel, locking it into position thereby preventing future movement (deformation) of the vessel. **Compaction must follow each lift of backfilling to provide proper restraint of the tank movement.**

Photo 4.1.8-Example of mechanical compaction

Mechanical compaction equipment such as vibratory plate tampers (shown above), jumping jacks or hand tamps may be used to provide compaction to the backfill material. The tank will not be compromised or hurt by mechanical compaction of the material. In certain situations, the installing contractor may perform a "bucket press" on the native material to provide compaction as the fill is brought up around the tank.

Photo 4.1.9-Uniform level distribution of material

Note the uniform and level distribution of compacted material around this tank. Additional backfill material should be added in 6" layers (lifts) uniformly around the vessel.

Photo 4.1.10-Example of backfilling material

Native material may be used as backfill, HOWEVER care must be taken to properly place and work the material into a compacted composition. Many installers find that it is easier to simply bring in all imported material for backfilling. Note the relatively free flowing native material above and the absence of clay, rocks and other unfavorable material.

4. INSTALLATION TRAINING MATERIAL

Photo 4.1.11-Example of evenly and uniform backfilling with native material

In photo 4.1.11, one can clearly see the native material added evenly and uniformly around the tank. This particular backfill was compacted using a simple hand tamp. This material was taken from the excavated fill shown above. Note the compaction of the soil and the absence of clay, rock and debris that could damage the tank.

Failure to properly follow these installation instructions will result in excessive sidewall expansion and tank roof squat. Symptoms of these conditions are lids that are out of level and/or risers that lean toward one another. The tank will not catastrophically fail, however it may cause trouble/interference with the piping system and replacement of the lids. In most cases, the tank can be excavated and properly reinstalled.

Photo 4.1.12-Example of complete backfill

Once backfilling is complete to the top of the tank as shown in photo 4.1.12, no further compaction of the material is required. While the native material above indicates a small presence of clay, the material is generally a sandy clay loam indicating a greater presence of sand than clay. Note how the material is generally free flowing and does not indicate the adhesion properties associated with soils comprised predominantly of clay.

4. INSTALLATION TRAINING MATERIAL

Photo 4.1.13-Example of soil with heavy clay

The soils in photo 4.1.13 exhibit properties of heavy clay as evidenced by the plasticity. These soils are completely unacceptable for backfill material. Note in particular the gray material in the lower right hand corner of the photo.

Photo 4.1.14-Example of final grading

Final grading should encourage water to drain away from the tank. Grading equipment may be run near, but not over the buried vessel.

Photo 4.1.15-Example of careful and uniform backfill of piping system

Gravel, and other similar material, should always be used when backfill around and under piping systems. It is also important to backfill carefully and uniformly around the riser systems to prevent distortion of the riser into an out of round shape.

4. INSTALLATION TRAINING MATERIAL

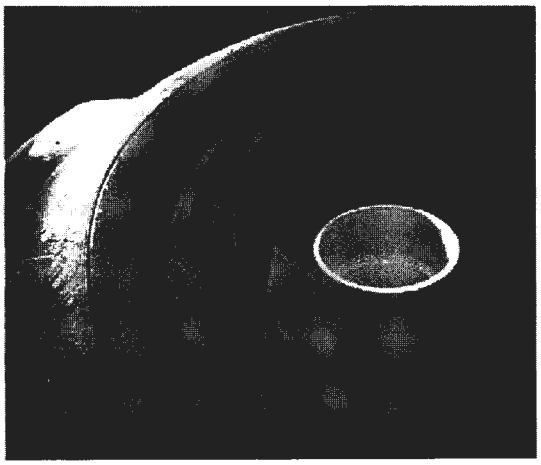


Photo 4.1.16-Pipe located inside the edge of the manway

Insert piping from the outside of the tank utilizing pipe lube or similar lubricant on both the grommet and the pipe to facilitate passage through the grommet. Cut pipe to length such that T-baffles are located just inside the edge of the manway as shown in photo 4.1.16. Do not over-insert piping into the middle of the manway.

4.2 Sealing Riser Joints

The threaded riser system offered by Roth Global Plastics provides a mechanical system of attachment and will not be watertight without taking additional steps to seal the various joints in the system. There are a number of products and measures that may be taken to prevent infiltration depending on the application of the tank and expected exposure to high groundwater or surface water penetration.

While every installation requires a watertight system, some installations are more sensitive than others to incidental infiltration. The most critical applications for ensuring absolute watertightness are:

- Cisterns
- Holding tanks
- STEP applications
- Mound systems
- Time dosed systems
- Other engineered systems or advance treatment units

Roth Global Plastics tanks are all inherently watertight from **exfiltration** due to our manufacturing process. You can be assured that the waste stream will not leak into the groundwater system when using Roth tanks.

A number of sealants are available from Roth depending on the application and expectation of the riser joints being exposed to potential sources of infiltration:

Basic sealing system – Use of closed cell foam gaskets at all joints for use in arid climates or to prevent infiltration due to the occasional exposure to groundwater.
Advanced sealing system – Use of the closed cell foam gaskets at all joints followed by a covering of sealant (ADH100) or butyl mastic is recommended (the closed cell foam gaskets act as a backer where the joints may be non-uniform). When using the ADH100, curing time must be allowed between applications. Approximately two tubes of ADH100 will adequately "caulk" the riser to tank joint and two-three riser to riser joints.
Critical sealing system - Use of foam gaskets and ADH100 followed by a protective cap of butyl mastic applied with a heat gun to ensure full contact with the mating surfaces and providing protection to the sealants underneath. The ADH100 should be fully cured before applying the mastic (10-24 hours).

Photo 4.1.17-Applying the foam gasket

Apply foam gasket uniformly around the edge of the manway. Once the gasket is applied, thread riser section in as tightly as possible.

Photo 4.1.18-Riser and tank joints completely threaded in and gasketed

In the photo 4.1.18, the riser and tank joints are now completely threaded in and gasketed. ADH100 may now be "caulked" over the joints to provide sealing and adhesion of the parts.

When applying butyl mastic over the joints, the butyl is best applied when warm or with the use of an electric heat gun to encourage the butyl to form freely around the joints. Butyl mastic wrap (4" wide) is used over the riser to riser joints and butyl mastic cord (3/4" square) is packed into the riser to tank joint.

All surfaces should be clean, dry and free of oils to ensure proper adhesion and sealing of the materials no matter what system is used.

In all systems, it is critical that the risers be backfilled carefully so as to maintain roundness. Uneven loading on the risers during backfilling conditions can cause joint separation thereby inviting leaks into the system.

4.3 Anti-buoyancy Solutions

Buoyancy of any buried structure is dependent on four factors, only one of which can be determined by the manufacturer of the vessel, namely:

- Weight of buried vessel
- Minimum weight of liquid in vessel
- Amount of cover
- Level of groundwater relative to vessel

Aside from the weight of the vessel, all other factors are site specific criteria that cannot be calculated by the factory. In fact, one can only assume that the tank is completely empty, that the tank has no cover over top of it and that it is completely submerged. The combination of these three factors actually all occurring at once is not impossible, but it is rather improbable.

Aside from considering the worst case scenario, all anti-buoyancy calculations and countermeasures should be considered a site specific requirement that the system engineer should account for.
While great concern is exhibited over the nearly irrational fear that "all poly tanks will float", the fact of the matter is that concrete tanks will become buoyant under the right set of site specific circumstances as well. **In general, most Roth tanks will be resistant to flotation under worst-case conditions with about 30" of cover.**

4. INSTALLATION TRAINING MATERIAL

It is highly recommended that all tanks be filled with water immediately after installation or immediately after pumping for existing tanks.

Roth tanks can be "anchored" by pouring a concrete apron around the midpoint of the tank using the excavation as a form. This detail is shown below.

ROTH RMT BUOYANCY RESTRAINING COLLAR-HIGH GROUNDWATER CONDITIONS

GENERAL NOTE:

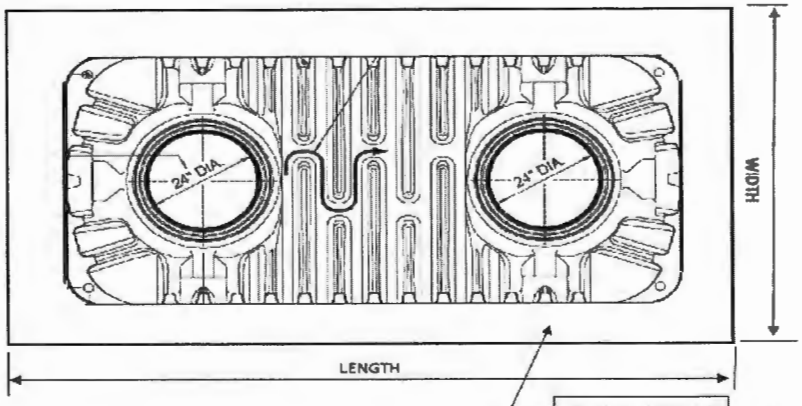
1) THE BUOYANCY RESTRAINING COLLAR DESIGN IS BASED ON BUOYANCY FORCE CALCULATIOINS AVAILABLE ON REQUEST FROM ROTH GLOBAL PLASTICS, INC. ALL FINAL DESIGN PARAMETERS ARE THE RESPONSIBILITY OF THE SYSTEM DESIGNER/INSTALLER.

CONCRETE NOTES:

1) PROVIDE CONCRETE TO OBTAIN THE MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS
2) CONCRETE MATERIALS AND WORKMANSHIP SHALL BE IN ACORDANCE WITH ACI-318-99 (BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE) AND ACI-301-LATEST EDITION (SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS)

REINFORCING STEEL:

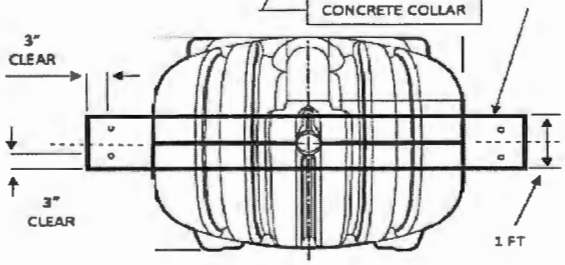
1) ALL STEEL SHALL BE BILLET STEEL CONFORMING TO STANDARDS OF ASTM A615, GRADE 60



CONCRETE COLLAR SPECIFICATIONS

TANK MODEL	RMT-500	RMT-750	RMT-1000E	RMT-1060	RMT-1250	RMT-1500
WIDTH (FT)	7'-0"	7'-0"	7'-6"	7'-6"	7'-6"	7'-6"
LENGTH (FT)	7'-0"	10'-6"	11'-6"	12'-0"	14'-0"	16'-6"
*NOMINAL SAFETY FACTOR	2.90	2.10	2.04	2.09	2.10	2.02
EST CONCRETE VOLUME	0.90	1.17	1.26	1.61	1.71	1.92

*based on installation with one foot of cover fill, density 115#/Ft³



DWG SCALE: 1:1
PLOT SCALE: 1:2
SHEET NO.: 1 OF 1

ROTH RMT
TANK BUOYANCY RESTRAINING SYSTEM

Roth Global Plastics, Inc.
One General Motors Drive
Syracuse, NY 13206
www.roth-usa.com

4. INSTALLATION TRAINING MATERIAL

4.4 Deep Burial Instructions (where allowed by local Code)

Where allowed by State and Local Codes, Roth tanks may be buried with up to 72" of cover. Deep burial applications involve the use of two internal pipe supports of Schedule 40, 4" PVC (supplied by others).

The supports are located inside the edge of each manway and span from floor to roof of tank as shown in the attached photos.

It should be emphasized that the use of the pipe supports places even more emphasis on proper installation so as to avoid point loading of forces generated due to the cover over the tank on the pipe to tank interface alone.

PROPER INSTALLATION PRACTICE MUST BE ADHERED TO. USE OF THE PIPE SUPPORTS TO CUT CORNERS WILL VOID THE WARRANTY AND MAY CAUSE SEVERE DAMAGE TO THE TANK!

Photo 4.1.19-Pipe Supports

The pipe supports are added after the bedding is complete and the tank has been set in the hole. The supports can be added after some backfilling is complete, but should always be added no later than when the backfill reaches the mold part-line (rib at midpoint of tank). Pipe supports are required for any installation with more than 36" of cover, but may be added to any installation with less cover at the installer's discretion.

Photo 4.1.20-Pipe Support Tenons

Four pipe tenons are located in every tank from 900 G and larger. Two tenons are located in the 750 G tank. The 300 and 500 G tanks do not have tenons and do not require pipe supports for deep burial.

The tenons are located just inside the manways and are opposed to one another on the floor and roof of the tank.

The Schedule 40, 4" PVC pipe should be cut approximately 43 1/2". Due to the internal dimensions of every tank varying slightly during the manufacturing process each end should be measured. Depending on the amount of compaction and the state of the backfill, the tank may be slightly "taller" due to the squeezing effects of the fill.

A properly fitted pipe support should be slightly loose after installation, but not so loose that it is easily dislodged. The installation of the support is accomplished by fitting the upper end of the pipe over the roof tenon and then sliding the lower end of the pipe over the floor tenon with a pry bar, shovel or other device in a "shoehorn" type manner.

After installing the pipe supports, continue with normal installation procedures.

YOUNG SEPTIC SERVICES
1802 BALTIMORE BOULEVARD
WESTMINSTER, MD 21157
INFO@YOUNGSEPTIC.COM
(443)775-7353

MDE Recommended
OSDS Inspection Report Form
For Property Transfers in Maryland

General Information			
Property Address	4921 Wharff Lane Ellicott City, MD 21043		
County	Howard	Date and Time of Inspection 2/28/2024	
Inspector Name	Randy B Young		info@youngseptic.com

General Property Information			
1.	Were records available? No		
2.	Year Primary Structure Built: 1971		
3.	Dwelling purpose: Residential		
4.	Age of tank: 53	Age of absorption system: 53	
5.	Is dwelling currently occupied? Yes	If Vacant, how long?	
6.	Number of bedrooms: 4		
7.	Date of last pumping of treatment tank: Unknow		
8.	List any known repairs made to system: Unknow		

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(443)775-7353

System Evaluation

Yes	No	N/A		
✓			Tank located? ☑ Front ☐ Rear ☐ Left ☐ Right	Distance from house:
	✓		Hydraulic load test conducted? Leaking tank	
✓			Located, accessed, and opened the tank cover?	Approximate depth of tank: 3
	✓		Effluent Filter present?	
✓			Inlet Baffle Type: ☑ Concrete ☐ PVC ☐ Cast Iron ☐ Other	
✓			Outlet Baffle Type: ☑ Concrete ☐ PVC ☐ Cast Iron ☐ Other	
✓			Riser Type: ☐ Corrugated ☐ Concrete ☐ Cast Iron ☑ PVC ☐ Other	
✓			Riser Lid Type: ☐ Green Safety Lid ☐ Concrete ☐ Cast Iron ☑ PVC ☐ Other	
		✓	Was the distribution box located?	
	✓		Normal liquid level? (If no, explain) Leaking tank	Solids depth: 0
✓			Is well 100 ft from septic? If not, what distance? Public	
✓			Was the soil absorption system located? Drywell	
	✓		Absorption system probed?	
	✓		Indications of previous high level?	
		✓	Dosing or pump tank, ejector or grinder pump checked?	

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WESTMINSTER, MD 21157
INFO@YOUNGSEPTIC.COM
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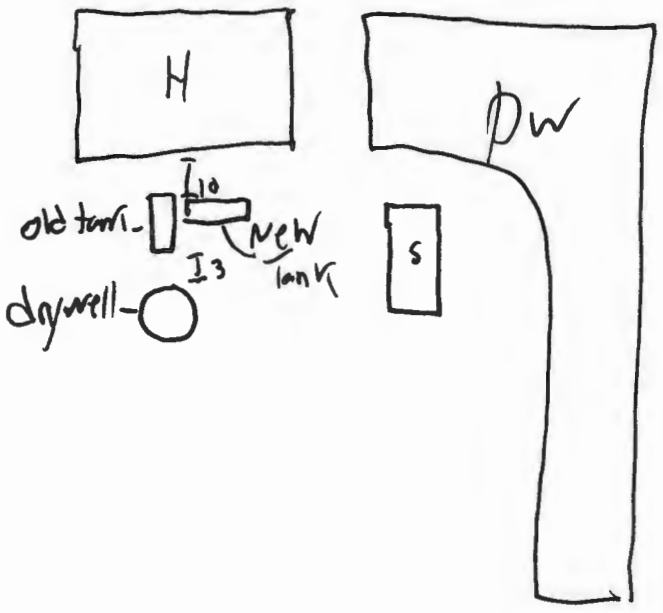
System Diagram

Key
H = House
ST = Septic Tank
C = Cleanout
PC = Pump Chamber
M = Sand Mound
AT = Absorption Trench
SP = Seepage Pit
DR = Driveway
D = Distribution Box



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System Components

Septic Tank	Concrete	Gallons	1000	Distribution Box		Seepage Trenches:	
Aerobic Tank		GPD		Sand Filter		Seepage Pit:	1
Cesspool		Gallons		Pump		Mound:	

Inspection Photos

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(443)775-7353

Inspection Findings & Comments

System Component	Condition	Comments
Septic Tank / Pre-Treatment Unit	☐ Acceptable ☐ Acceptable with Concerns ☑ Unacceptable ☐ Needs further Evaluation ☐ N/A	• leaking tank, New 1500 gallon tank is needed
Pump Tank	☐ Acceptable ☐ Acceptable with Concerns ☐ Unacceptable ☐ Needs further Evaluation ☑ N/A	•
Distribution Box	☐ Acceptable ☐ Acceptable with Concerns ☐ Unacceptable ☐ Needs further Evaluation ☑ N/A	•
Soil Absorption System	☑ Acceptable ☐ Acceptable with Concerns ☐ Unacceptable ☐ Needs further Evaluation	• Drywell is Empty

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	☐ N/A	
Conveyance System: (i.e., Piping)	☑ Acceptable ☐ Acceptable with Concerns ☐ Unacceptable ☐ Needs further Evaluation ☐ N/A	•
Other: _____	☐ Acceptable ☐ Acceptable with Concerns ☐ Unacceptable ☐ Needs further Evaluation ☐ N/A	•

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The recipient of this report should discuss any deficiencies found by this inspection with the Inspector.

DISCLAIMERS

Based upon the observable conditions, documented inspection procedures conducted, and experience within the septic/onsite wastewater technology industry, this submitted Inspection Report represents the present condition of the septic or onsite system. It is further stated that I have not been retained to provide a warranty, guarantee, or certification of the components and functioning of the system for any period of time into the future, because of the numerous factors (usage, soil characteristics, existence of previous failures, length of vacancy in the house, excessive dry or wet weather conditions, etc.) that may affect the proper operation of a septic system, as well as the inability of our Company to supervise or monitor the use or maintenance of the system.

I attest that the information contained herein, and my assessment is honest, thorough, and to my knowledge, correct. Furthermore, I have completed the MDE Onsite Systems Inspection, Practices and Procedures Course and have fully applied the standards of practice taught in the course during inspection.

MDE Certified Inspector Signature: Randy Young

Wolf, Kevin

From: Knight, Zack
Sent: Friday, February 23, 2024 8:55 AM
To: Wolf, Kevin
Subject: RE: 4921 Wharff Lane | Tax ID 01-162802

Good morning Kevin,

Public sewer is not currently available to this property, and there are no capital improvements planned to provide sewer. Although this property is in the Metro District it would require a lengthy capital project to be completed in order to provide public sewer to this parcel. Let me know if you need any other information.

Thanks – Zack

Zack Knight
410.313.6125 (direct)
315.378.6087 (cell)

From: Wolf, Kevin <KWolf@howardcountymd.gov>
Sent: Thursday, February 22, 2024 11:26 AM
To: Knight, Zack <zknight@howardcountymd.gov>
Subject: 4921 Wharff Lane | Tax ID 01-162802

Hey Zack,
I have a request in to replace a septic tank out at the above property address. I was wondering if public sewer was available or could be available for them to connect.

Thanks,

Kevin M. Wolf, LEHS, REHS/RS
Groundwater Mgmt. Sec. Supervisor
Well & Septic Program
Howard County Health Department
8930 Stanford Blvd.
Columbia, MD 21045
410-313-2645 (Office)
410-313-2648 (Fax)
www.hchealth.org
kwolf@howardcountymd.gov

 twitter.com/HoCoHealth

 facebook.com/HoCoHealth

 instagram.com/hocohealth

HOWARD COUNTY HEALTH DEPARTMENT

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

INFORMATION FORM - SEPTIC SYSTEM REPAIR/UPGRADE

Reason for Request:

- [x] Failing System (Leaking Tank)
- [ ] System relocation for proposed addition
- [ ] System upgrade for proposed addition
- [ ] Inadequate treatment zone
- [ ] Collapsed septic tank
- [ ] Collapsed drywell

Has the septic tank been pumped within the last month?

___Yes Date pumped:_____
X No

Was a visual inspection of the septic tank and/or drain fields conducted?

X Yes Explain observation: Leaking Tank
___No

Existing system design

- [ ] Drywell
- [x] Trench
- [ ] Mound
- [ ] Unknown
- [ ] Other: _____

Was a visual inspection of the sewage line conducted?

X Yes
___No

Blockage Leading to the field

___Yes Explain _____
X No

Is discharge surfacing on the ground?

___Yes
X No

Additional Comments:

_____

_____

_____

*For REPAIRS, are the owners proposing, or do they plan to add in the future any additions or modifications to the property, i.e. pools, living space additions, garages, etc? This information must be disclosed at the time of this application. The Health Department will not be able to accommodate requests in the field for property modifications unrelated to the repair request. Such requests may require an additional fee, testing, and submittal of a Percolation Certification Plan, if the property does not meet current Code and Regulations.

Septic Contractor: Young Septic Contractor's Phone: 443-775-7353

Contractor's Address: 1808 Baltimore Blvd, Westminster MD 21157

Property Address: 4921 Wharff Lane, Ellicott City County File: -

Subdivision: Cahill Property Lot: 1 Year Built: 1971

Owner's Name: John Keller Existing bedrooms: 5

Name of previous owners: _____ Existing bedrooms: 5

_____ Proposed bedrooms: 5

*A Sanitarian will be in contact within three business days, depending upon the urgency of the situation, to coordinate the scheduling/review of the repair or upgrade.

Prior to scheduling inspections, scaled plans should be submitted to clarify the nature of the addition.

Print out a copy of Real Property Data via Dept. of Taxation website_____Indexed file found_____

If soil/site conditions are limited and sewer and/or Metro District status is not conducive to connection, the Sanitarian may recommend pursuit of Emergency Sewer Extension or Emergency Metro District Inclusion. The Owner should contact the Bureau of Utilities for details.

No permit is to be issued nor inspection to be scheduled without prior fee collection at the office unless an emergency exists.

The contractor is to notify the office of the emergency as soon as possible.

2/2020

RECEIPT

Howard County, MD
HOWARD COUNTY HEALTH DEPARTMENT
ASCEND ONE BUILDING
Columbia, MD 21045
8930 STANFORD BLVD

Application: WS-SP-APP-24-00032
Application Type: EnvHealth/Well and Septic/Sewage Disposal System/Application
Address: 4921 Wharff LN, Ellicott City, MD 21042

Receipt No. 8918

Payment Method	Ref Number	Amount Paid	Payment Date	Cashier ID	Received	Comments
Check	1576	$288.00	02/16/2024	ATAYLOR		

Owner Info.: John Keller
4921 Wharff Lane
Ellicott City, MD 21042

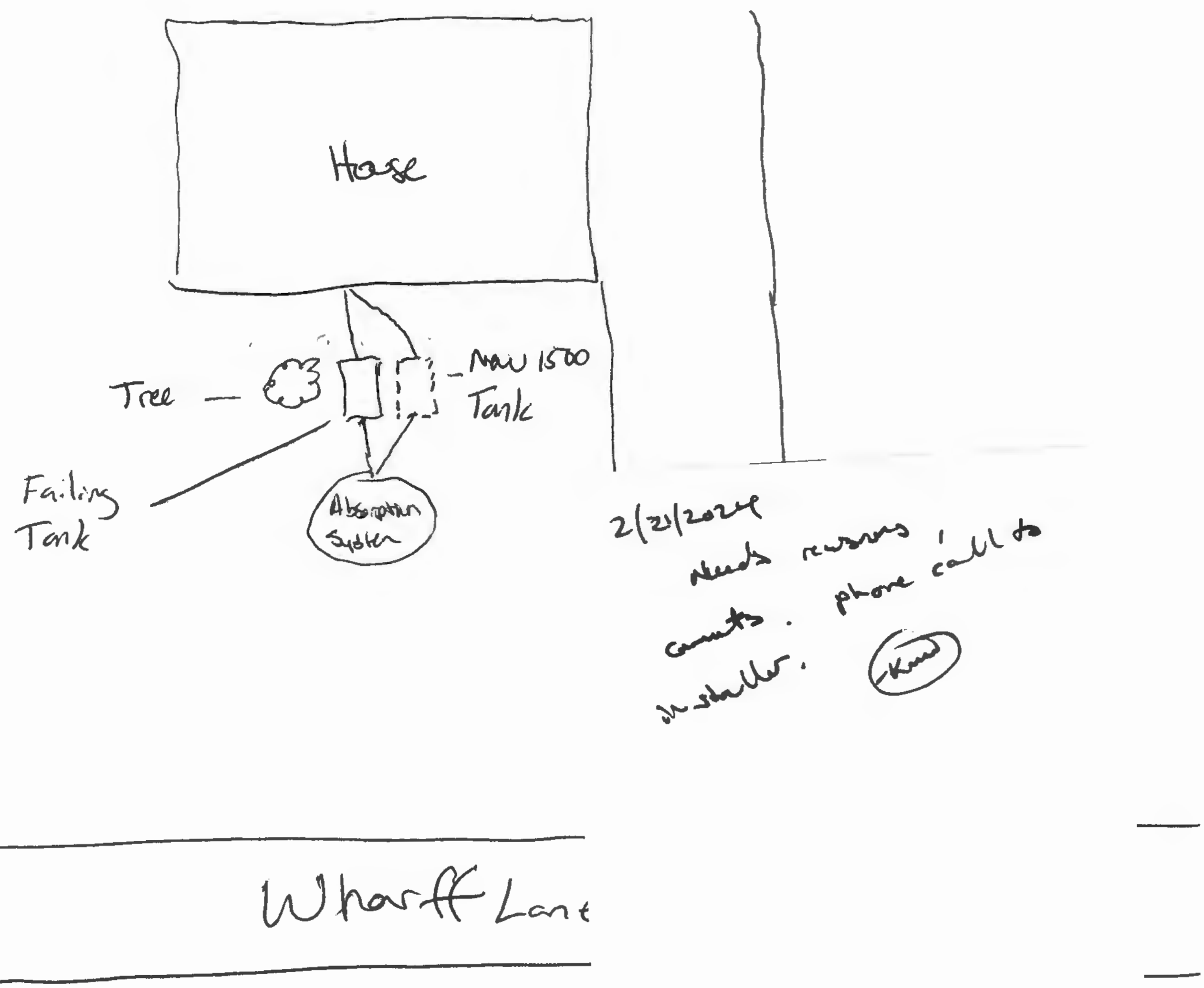
Work Description:

YOUNG SEPTIC SERVICES
SEPTIC SERVICES
POWERED BY: ATLANTIC BLUE

YOUNG SEPTIC SERVICES
1802 BALTIMORE BOULEVARD
WESTMINSTER, MD 21157
INFO@YOUNGSEPTIC.COM
(443)775-7353

4921 Wharff Lane
Ellicott City MD 21043

- ☆ New 1500 plastic Tank
- ☆ Existing Tank Pumped/Crushed
- ☆ No Neighboring Wells w/in 100'



2/21/2024
Needs revisions, comments. phone call to installer.
[illegible]

Real Property Data Search ( )
Search Result for HOWARD COUNTY

View Map **View GroundRent Redemption** **View GroundRent Registration**

Special Tax Recapture: None

Account Identifier: **District -** 01 **Account Number -** 162802

Owner Information

Owner Name:	ETUE RONALD D ETUE PAMELA WINKELMAN	**Use:** **Principal Residence:**	RESIDENTIAL NO
Mailing Address:	5400 VANTAGE POINT RD APT 707 COLUMBIA MD 21044-2663	**Deed Reference:**	/03310/ 00466

Location & Structure Information

Premises Address:	4921 NE WHARFF LN ELLICOTT CITY 21043-0000	**Legal Description:**	LOT 1 69,264 SQ 4921 WHARFF LN CAHILL PROPERTY

Map:	Grid:	Parcel:	Neighborhood:	Subdivision:	Section:	Block:	Lot:	Assessment Year:	Plat No:	11161
0031	0010	0473	1010101.14	1001			1	2024	Plat Ref:	

Town: None

Primary Structure Built	Above Grade Living Area	Finished Basement Area	Property Land Area	County Use
1971	2,608 SF	400 SF	1.5900 AC	

Stories	Basement	Type	Exterior	Quality	Full/Half Bath	Garage	Last Notice of Major Improvements
2 1/2	YES	STANDARD UNIT	FRAME	/5	2 full/ 1 half	1 Attached	

Value Information

	Base Value	Value As of 01/01/2024	Phase-in Assessments As of 07/01/2023	Phase-in Assessments As of 07/01/2024
Land:	211,900	237,100		
Improvements	303,800	402,200		
Total:	515,700	639,300	515,700	556,900
Preferential Land:	0	0		

Transfer Information

Seller: CAHILL MAURICE E	**Date:** 08/01/1994	**Price:** $225,000
Type: ARMS LENGTH IMPROVED	**Deed1:** /03310/ 00466	**Deed2:**
Seller: MARRIOTT RICHARD S & WF	**Date:** 08/06/1984	**Price:** $158,000
Type: ARMS LENGTH IMPROVED	**Deed1:** /01272/ 00744	**Deed2:**
Seller:	**Date:**	**Price:**
Type:	**Deed1:**	**Deed2:**

Exemption Information

Partial Exempt Assessments:	Class	07/01/2023	07/01/2024
County:	000	0.00	
State:	000	0.00	
Municipal:	000	0.00|0.00	0.00|0.00

Special Tax Recapture: None

Homestead Application Information

Homestead Application Status: No Application

Homeowners' Tax Credit Application Information

Homeowners' Tax Credit Application Status: No Application **Date:**


WHARFF LN
2845-008
2844-08-062
4873
4896
4939

HOWARD COUNTY HEALTH DEPARTMENT

75789

DATE 2/10/24

Received From Young Septic

PHONE # 443-715-1357

For Septic Repair - 4921 Wharff Lane

☐ CASH
☑ CHECK
NO. 1516

Two Hundred Eighty Eight 00/100 Dollars

$ 288.00

Received By