Turfpro LLC 2/19/2024

PO Box 386, Norwalk, CT 06852

Commissioners,

My name is Yuriy Strus. I am the owner of Turfpro LLC, and we specialize in land development and site work. For ten years I was assistant of head greens keeper at Silvermine Golf Club in Norwalk, CT. I have substantial experience, and equipment to work in tight spaces and with minimal impact on the surroundings, and more importantly sub-soil.

I was asked to assess the site work, with particular regard to the driveway construction at 0 Mountain Road.

Looking at the plan, we realize that access/easement to the site is somewhat challenging and will require a careful approach and planning of all logistics involved. It is obvious that this project will take extra time and funds, yet it is feasible.

The construction of the driveway, I see like a domino effect: you go step by step, starting from the entrance point. Starting with a mini-excavator and dump truck, taking fill away and delivering aggregates, gravel/process, and where necessary installing the I shaped retaining walls, along with culverts. While the staging area is limited, it is possible to store/transfer aggregates that we will need to stay within the foot print of the site and not disturb neighboring parcels.

In general, the test holes did not expose much ledge, but in case we find any, we would clip rock breaker on our equipment and load ledge with smaller excavator. It seems that most of the work can be done with smaller equipment such as, low ground pressure, track skid steer loader and mini excavator. To set the culverts we will need bigger size, zero swing excavator that does not exceed DOT over width regulation of 8'6" in order to go through the tighter areas of the driveway. In a project like this, I do envision a good amount of manual labor, and in order to pave the narrow area we will be using our smaller paving box.

The same applies to the wetland crossing. We will build the road in foot by foot, structure by structure, and will follow town and state regulation for construction and erosion control.

To sum it up, I see the parcel as challenging, yet buildable.

Thank you,

Yuriy Strus

FAIRFIELD COUNTY ENGINEERING, LLC

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February 9, 2024

Please see the following in response to comments made by the public and commissioners at the February 8, 2024 Wetlands Commission meeting, and the Engineering department's letter dated February 16, 2024.

Temporary construction easements are not needed, as there are no proposed structures or grading off the accessway.

The proposed retaining walls are to be built with concrete block and therefore will not require any formwork or over digging. There is no drain pipe behind the wall, so the rear of the wall can be placed within an inch of the property line if necessary. Weep holes will be placed at 8 foot intervals.

Along the lengths where the rear of the wall is within one foot of the property line there will be no stone placed behind the wall. The proposed footings are robust and ample to provide a stable wall, given the proposed walls 2 to 3 foot height.

The tree stumps can be ground and removed to the property line where necessary. A stump grinding contractor has provided a statement affirming this.

A small paving box can be used to place the asphalt in the choke point, and spread by hand where necessary. The proposed driveway is at grade at the choke point and will not require excavation, fill or grading at that point. The rest of the accessway widens to where paving is not an issue.

Given the details above, the applicant has provided reasons as to why temporary easements are not needed. The town has simply expressed an opinion that they are, with no reason provided as to why, that can be responded to.

The consultant claimed to observe a soil type (gravel or sand) other than shown on the test hole data. As the holes were completely backfilled at the time of their visit, it is puzzling how this determination can be made. Regardless, the purpose of the holes was to determine the restrictive layers at specific locations, not chronicle soil type.

Test holes were dug at the exact locations of each of the proposed concrete gallery sets, validating the required 24" vertical clearance to ledge and the design. Out of 19 holes dug in the accessway and main lot, 15 had ledge 48" or deeper; some found no ledge to a depth of 5 or 6 feet.

The comment that infiltrators can only be used in certain types of soils is false. Having designed and seen built hundreds of retention systems, they are placed in all types of soils. The relevant qualities are depth to restrictive layer(s) and percolation rates, not color or granularity of the soil.

Again, the Town of Wilton has *no prohibition* in placing infiltrators in Hydrologic Group "D" soil. This is also a moot point as the majority of the soil on the site is Group "B", per the USDA Natural Resources Conservation Service (NRCS) website. Having reviewed the analyses for the accessway and the main lot, Engineering tacitly agrees.

Engineering has also specifically stated the requirement for a 24" vertical separation from ledge to retention system in their commentary letter dated February 7, 2024. *That is the standard in the Town of Wilton*.

The comment that the proposed retention system "doesn't provide infiltration" is broadly false. Again, having designed and seen hundreds of these types of systems installed and functioning, the design as proposed *is* the way stormwater runoff is properly mitigated to meet MS4 and the Town of Wilton requirements in my professional opinion. Again, Engineering has seen and reviewed these plans multiple times and has had no objection so broad and basic as that.

It was mentioned that a representative from Engineering had to be present at the soil tests. This is also false. That is not a requirement – nor provided – in the Town of Wilton. This is the normal practice in all towns in lower Fairfield County, with the exception of Westport. (Even there I have personally experienced occasions where there was no personnel available to witness, and the soil test occured without the project being held up.) It is generally understood that a Professional Engineer has no reason or interest in mis-reporting soil test hole results.

The manufacturer of the box culvert confirms that a cut off wall is not needed for their installation. The 12" stone base is their specification.

The manufacturer also verifies that the box culverts weigh 13,000 pounds, not 17,000 pounds as claimed. A contractor confirms that several models of mini excavators can easily maneuver in the accessway and can lift, carry and place these units.

The box culverts are the most minimal feasible way to provide a vehicular crossing of the wetlands. A bridge is not only cost prohibitive, but not possible to construct in this setting. To be less invasive than the box culverts, there could be no abutment or pier in the wetlands. The excavation and activity needed to construct such structure(s) would be more disruptive than the placing of nine units of box culvert. To do this the bridge must span 160 feet, and thus need 160 foot long structural members. Such long objects require a crane to lift into place, and there is no room for a machine that large in the accessway. It is likely additional trees would have to be removed just to move it into position, even if the accessway were wide enough.

The only other possibility is to place the driveway on an earthen berm, with a few pipes acting as the culvert. This would require far more fill and disturbance in the wetland and near the vernal pool than the box culverts, and not allow the opening space for animal migration that the box culverts do.

It was suggested that the drainage had to connect to existing drainage infrastructure and that the water "had to have a place to go to". There is no drainage infrastructure to connect to within a reasonable distance. This would also be diametrically opposed to the Town and MS4 goal of retaining and treating stormwater runoff on site.

The treatment train of deep sump catchbasins and infiltrators provides 92.5% TSS (Total Suspended Solids) removal from the runoff. Again, this is a widely accepted practice or fact in all towns in the area. This exceeds the Town of Wilton requirement of 80% TSS removal.

It was commented that the galleries would be full and not retaining [further] water when the overflow backs up to the catchbasin grates, as designed. We are stating what occurs during an *overflow* condition, which, of course occurs when the galleries are *full*. This obviously happens towards the end of large (25 Year) storms. The point is that the system as designed is *more* conservative than the HydroCAD model shows. The grates are the best location for the *overflow* to occur.

(It should also be noted that the HydroCAD model assumes no exfiltration at all. This is very conservative; the percolation tests on the main lot revealed a 1"/10 minute percolation rate.)

The gallery sets that are in the narrowest area of the accessway are in an area of excavation and not fill. They are proposed *below* the existing grade (i.e. not "mounded") and don't pose a great risk of bleedout to the lower property. Their proximity to property lines is unavoidable and not able to be further mitigated given the nature of the accessway and the Town's Stormwater management requirements. Should the Town waive or lessen the requirement perhaps some of the sets could be reduced in size or eliminated.

There has been concern over heavy machinery on the porous asphalt. Again, this is a proposed driveway to a single family residence. It will not be seeing heavy traffic, only standard cars, SUVs and an occasional delivery truck. The daily traffic volume count will be in the single digits, not hundreds. Porous asphalt is used on single family residences in many towns. The Town of Greenwich encourages it, and I have seen several approved there; two on projects that I performed drainage design, and one in Westport. I have also seen porous asphalt on entire commercial parking lots, not just the parking areas.

It is true that it requires maintenance, but so do all other drainage items; catchabsins, manholes and regular asphalt. To ensure the maintenance of the drainage items, municipalities can require a Maintenance and Operations plan be mentioned and filed in the Land Records. That could be done in this case.

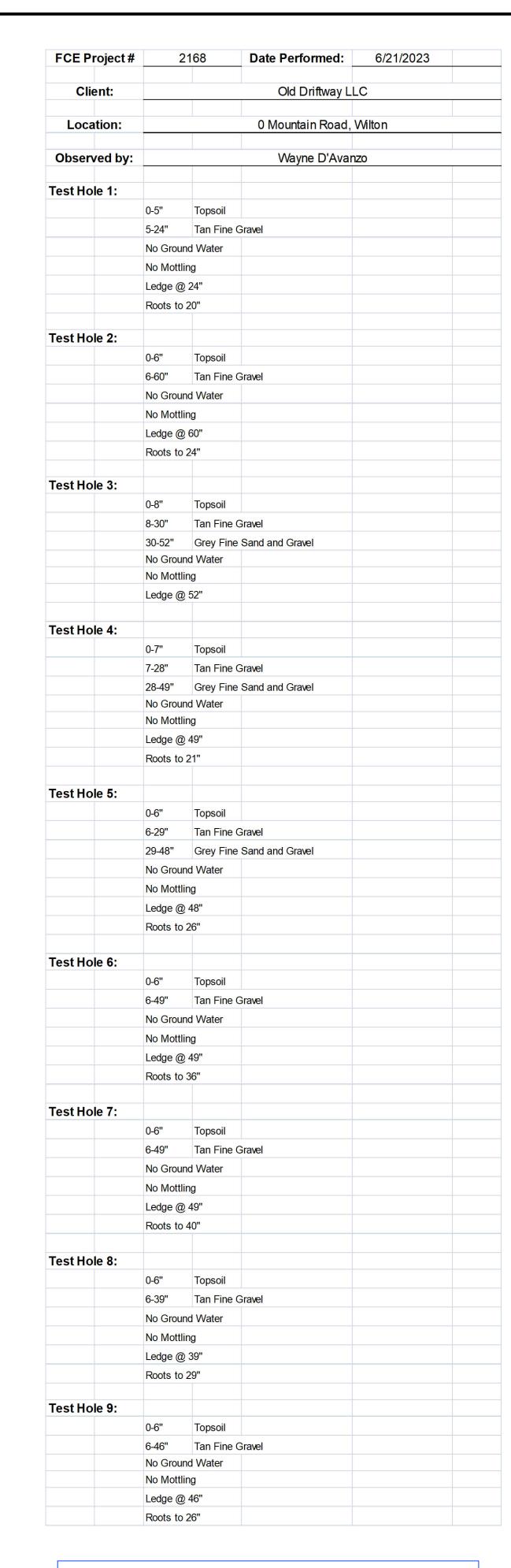
It should be noted that the porous asphalt is proposed only in the area of the wetland and vernal pool, not the entire length of the driveway. In this sensitive area the benefits of the porous asphalt outweigh its negatives.

The box culverts are designed for HL 93 loading (72,000 pound tri axle vehicle). The Fire Marshall has signed off on the driveway.

Respectfully submitted,

Wayne D'Avanzo, P.E. Principal

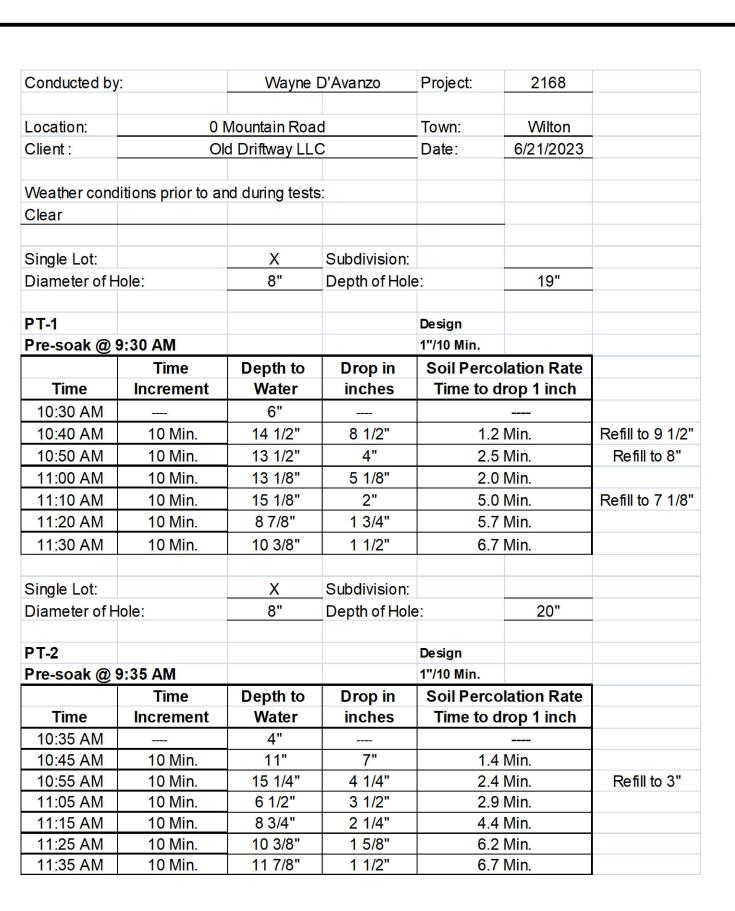
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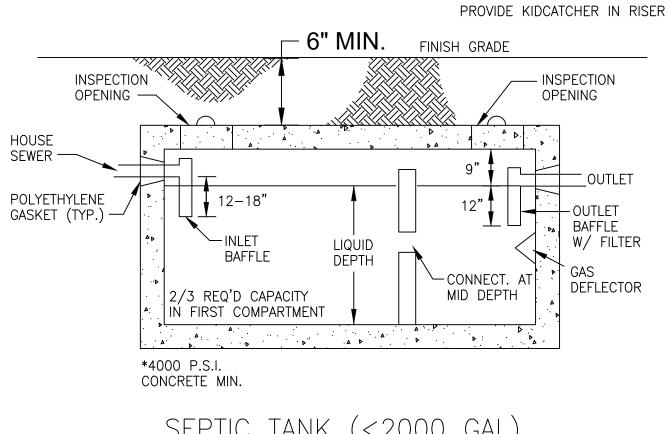


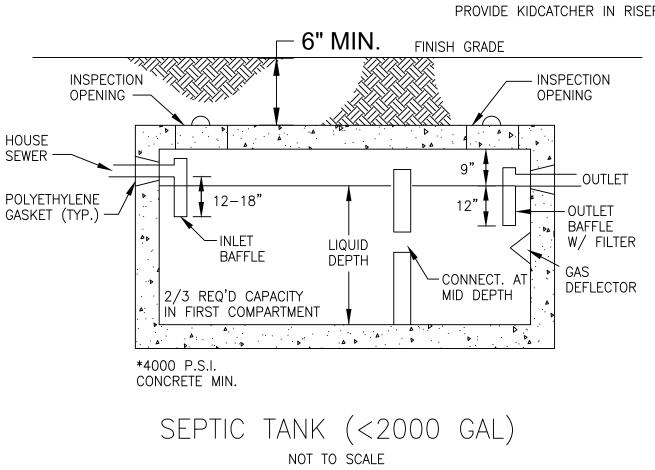


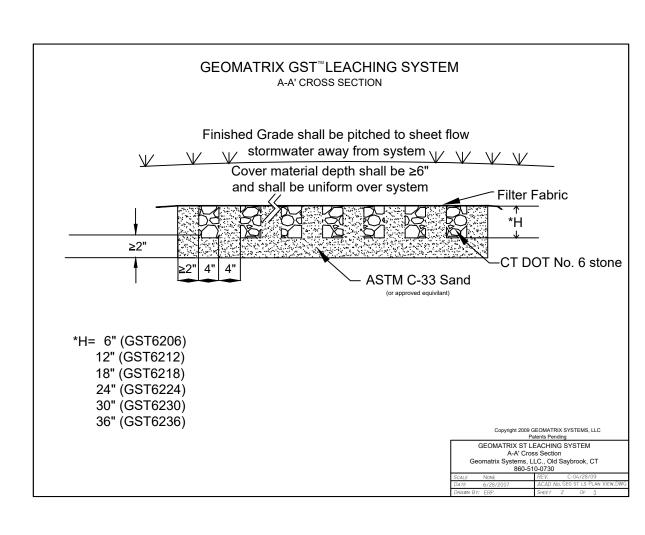
SLOPE LINE A: 3.5'/81.2' 4.3% 553.5 to 550.0 SLOPE LINE B: 3.7'/56.9' 6.5% 553.7 to 550.0 SLOPE LINE C: 5.7'/65.7' 8.7% 553.7 to 548.0

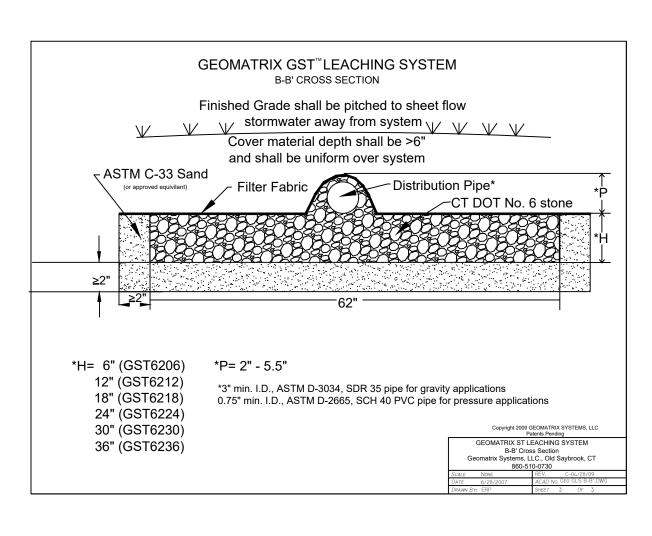
AVG. SLOPE 6.50%

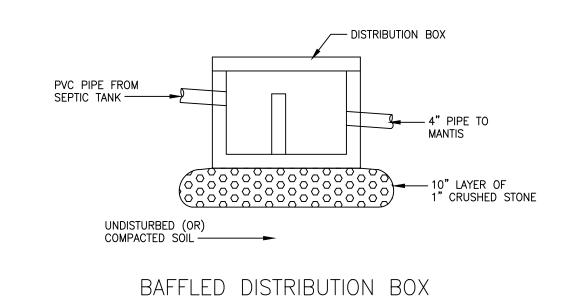




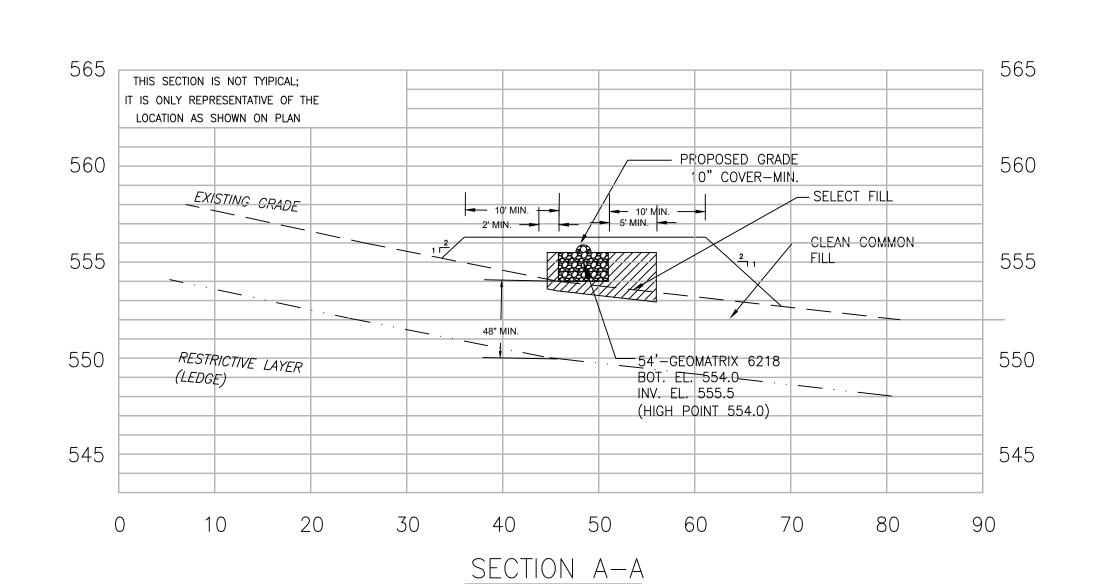






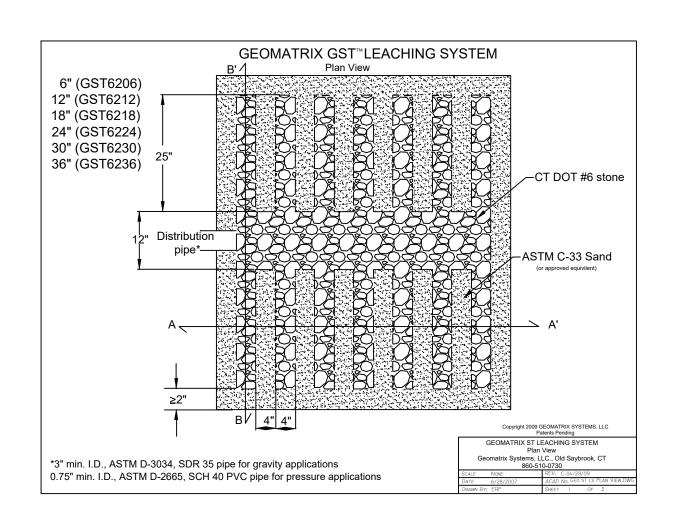


NOT TO SCALE

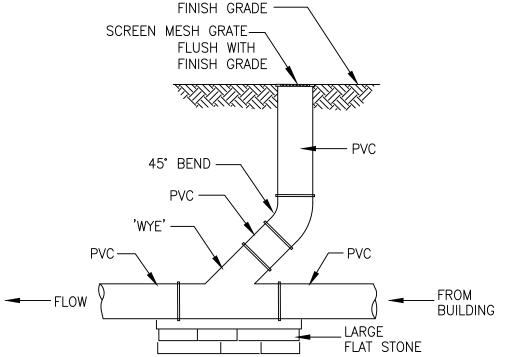


SCALE- H: 1"-10'

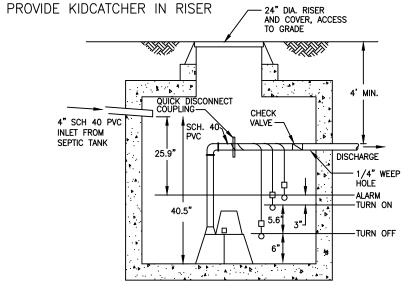
V: 1"-5'





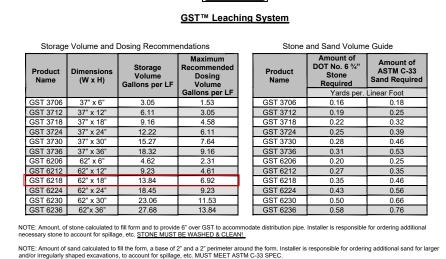


TYPICAL CLEANOUT NOT TO SCALE



1000 GALLON PUMP CHAMBER NOT TO SCALE

54' OF GEOMATRIX GST 6218 CAPACITY = 747.4 GALLONS MAX. DOSE FOR 54' OF GEOMATRIX GST 6218 = 373.7 GALLONS/CYCLE DOSE PROPOSED = 150 GALLONS PER CYCLE PUMP CHAMBER CAPACITY = APPROX. 26.6 GALLONS/INCH DEPTH PUMP 6" OFF BOTTOM = 159 GALLONS; CYCLE = 5.6" = 150 GALLONS; 691 GALLONS RESERVE 3 BEDROOMS X 150 GALLONS/DAY + 3 (75) = 675 GALLLONS LIBERTY 290 SERIES PUMP DELIVERS APPROX. 30 GALLONS/MIN.



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