

AOTB Drainage Solutions—an ongoing project

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My Saga of Uncontrolled Drainage on Cohasset Avenue

I was asked by David Delia, the president of our Property Owners Association, to share a brief description of an ongoing situation involving the management of drainage on our property on Cohasset Avenue, southern Annapolis, Anne Arundel County, in case other property owners around here are having a similar experience.

Manana and I bought and moved into the house at 3533 Cohasset Avenue in August 2017. It is about two blocks away from the Chesapeake Bay, nestled among many great neighbors who have created and maintained a wonderful neighborhood. When we moved in there was no drain along the side of the road in front of our house. The house has a sump pit which receives drainage from three directions around the property and two sump pumps which remove the water constantly to a discharge line.

With the David's help, I am gradually becoming more familiar with the terms used in water drainage control. The ditch the country dug along the road in front of our property is called a swale. Its main purpose is to collect water, and given proper declination, can also help direct it out of the area. Drains are usually more substantial underground structures, i.e., masonry and/or piping.

Initially, my discharge line went to the street where the water was released to flow with other water down Cohasset toward the Bay. However, in early 2019, the country road repair people came into this part of Cohasset and dug a swale on our side of the road and put in culverts under the driveways. They also made it clear to me that we were not permitted to discharge drainage water from our sump

pumps into the street swale. They recommended other ways to discharge the water, principally by building a stretch of “French Drain,” perforated pipe through which to dissipate the water below ground.

I contacted several different plumbers who could do that for us and selected Len the Plumber and their technician Robert Legg. He designed a stretch of French Drain about 85 feet long to extend down the right (south) side of our property which he thought would be enough to dissipate the water. It extended in two directions coming out of our basement and stopped about ten feet from the road to prevent sump water from entering the roadside swale. We accepted the plan, and he dug the drain in one day. This was sometime in July 2019. (Examples of French Drain installation below.) It cost us about \$3,900.00 to install.



Late 2019 it became apparent that the installed French Drain was not able to handle all the water that was flowing out of the sump pump. It appears that water is, in fact, caught by the County’s roadside swale in the front of our property and held there, because there is insufficient declination of the swale at that point (Robert Legg’s assessment). As a result, an increased amount of water is draining down through our property from the County swale and winds up in our sump where it is pumped to the French drain. When there is a lot of rain, as there was in early December, the sump is constantly filling and being discharged to the French Drain which cannot handle it all; I fear the French Drain close to the house may simply be recycling water back to our sump.

Robert created a temporary solution by providing a surface drain line that can be extended into the back yard and moved about. There is also the old line that extends toward the road but stops at a

certain point. In addition, he installed a bifurcated discharge pipe which allows us to direct the water in two directions at the same time. (Pictures below).



Sump in the basement

Temporary Piping Fixture Surface line to back yard

I contacted the AA County Road Maintenance Southern District division who sent a supervisor, Chris Lee, a couple weeks ago. I showed him the situation and the extent that the swale fills with water after one day of rain. (Pictures below). He was familiar with the original work to create the swale and suggested that he send someone out to help increase the declination of the swale to improve the flow of water. He sounded a bit dubious that this would totally solve the drainage problem, doubting that all the water going into the sump is coming from the swale. I also showed him the layout of the French Drain and described the proposal to extend that drain for 80 more feet. He did not comment on that. He promised to give this swale work some priority so that it would be carried out during January. I appreciate their timely visit, just after fresh rain.

Robert had a plan to install an extension to the French Drain which will add another 80 feet to its length toward the back of our property and split it in two directions. But he proposed that we wait to see the effect of the work on the swale to be undertaken by the County. If this extension is still felt needed after the county's swale work, it would be done in February and will cost an additional \$3,000.

I wondered if the French Drain passing close to our house could be replaced with non-perforated pipe to prevent the water from recycling back into our sump.

As of mid-January 2020, I have gone ahead with the extension to the French Drain, which added approximately 50 more feet. It now ends up at and extends along my rear property line for a bit. We also changed the line next to the house to be non-perforated. The sump pumps keep pumping and the water keeps flowing and is now pooling at the back of my property.

I also called the County Road Maintenance people to try to speak to Chris Lee. Instead they initiated a work order to clean my culvert and swale. They came out and did that, and Chris was with them. After some discussion he admitted that they design the swales to hold water, not to function as a drain, although if there is sufficient incline, some water may flow along them. I again described the work and expense I had dealing with the French Drains, and he agreed that a better solution was needed. He will report to his supervisor, who he expects will come out to visit us; however, we have received no further visits.



Rainwater in the Swale December 30, 2019

To be continued.