

POHL CONSULTING, LLC

September 17, 2013

Lacy Wilber
Property Manager
Real Property Inc.
1500 Amherst Street
Charlottesville, VA 22903

**RE: Peacock Hill
Road Maintenance Issues**

Dear Mr. Wilber:

I appreciate the opportunity to assist the PHCA with the assessment of drainage problems within the Peacock Hill development. I visited the site with you on August 18, 2013 to review existing conditions for each segment of road. A summary of concerns and observations are provided below along with recommendations for repairs.

GILLIAMS MTN RD AND DRY BRIDGE RD

Stated Concerns and Observations:

- Erosion was noted along the shoulder and within the road-side swale/ditch that drains along the west side of Dry Bridge Rd at the Gilliams Mtn Rd intersection.
- Sediment/gravel was noted along the edge of Gilliams Mtn Rd and appears to be deposited from the eroding swale.

Recommendations for Repair:

- Dry Bridge Rd is a County road that is maintained by VDOT, including the road-side ditches. It is recommended to contact VDOT to request maintenance of the road-side ditch by installing the appropriate rip-rap or other measure to prevent further erosion. VDOT should perform these repairs at no cost to the PHCA.

797 GILLIAMS MTN LANE

Stated Concerns and Observations:

- The driveway at this address is eroding.
- Stormwater is draining from a culvert under Gilliams Mtn Road, in addition to surface runoff downstream of the culvert, and drains across Gilliams Mtn Lane and along the left edge of the driveway.

Recommendations for Repair:

- Several options can be investigate for repair:
 - o Option 1 – Install a culvert upstream of the driveway across (under) Gilliams Mtn Lane to intercept and divert the drainage and route it to the wooded area before it reaches the driveway. This option will require more investigation if considered a viable option.

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- Option 2 – Install a swale along the edge of the driveway to intercept the stormwater once it has crossed the road. This swale would need to be reinforced (i.e. riprap) or otherwise protected (asphalt) to prevent further erosion.
- Option 3 – Pave (with asphalt) the driveway after the eroded area has been repaired.
- Option 4 – Chip-&-spray the driveway after the eroded area has been repaired. This option could potentially continue to erode over the long-term and should be considered a temporary fix that will require continued maintenance. However, this option may be the least, up-front cost to implement.
- Option 5 – Excavate a swale on the opposite side of the road and install a culvert under the road just past the driveway. I recommend investigating this option further.

GOOSENECK LANE

Stated Concerns and Observations:

- Standing water has been reported along the inside corner of the road located across from 50 Goose Neck Lane.
- The outlet of a corrugated culvert was observed; however, the inlet end of the culvert could not be located because of deposited silt/sediment on the same side of the road where standing water was reported.

Recommendations for Repair:

- Uncover upstream end of culvert, restore the drainage swale cross-section to the culvert, reinforce the swale with riprap or other appropriate measure, and clean out culvert.

PEACOCK HILL

Stated Concerns and Observations:

- Standing water has been reported within the travel way at the road “sag” .
- Signs of standing water included deposited sediment/gravel.
- Vegetation and grade along the road edge appears to trap the water within the travel way.
- The road has some repaired potholes and some of these appear to be depressed, trapping water.
- The center of the road appears to be lower than the edge of the road in some locations, which could also trap water.

Recommendations for Repair:

- Grade along the edge of the road to provide positive drainage away from the travel way.
- Slope the shoulder at 6% approximately away from the edge of pavement.
- Revegetate the shoulder by providing seed/straw and stabilization matting as required.
- Remove gravel from the travel way.
- After these measures are completed, continue to observe road drainage to see if additional measures are required. If ponding continues, a layer of asphalt may be required to raise the center of the road to provide positive drainage.

TENNIS COURT ROAD at SHADY LANE

Stated Concerns and Observations:

- Excessive water is reported to drain across the entrance of Tennis Ct. Road.
- It was reported that erosion across/on Tennis Court Road was repaired recently and the road was resurfaced with chip-and-spray.
- Chip-and-spray is starting to erode at the entrance.

Recommendations for Repair:

- Option 1
 - o Pave Tennis Court Road from the edge of Shady Lane to a point where the stormwater can be routed to the woods on the right as one enters the tennis court area.
 - o Install a riprap or other reinforced receiving channel along Tennis Court Lane to convey the stormwater into the wooded area.
- Option 2
 - o Install a stormwater diversion berm, similar to a speed bump, across the entrance of Tennis Court Lane. This option will create a negative driving experience and is not the preferred option in my opinion; however, it would be the least costly.
 - o This option would also require installing a reinforced swale at the outlet of the diversion berm to dissipate the stormwater flow as it leaves the road and enters the wooded area.

SHADY LANE

Stated Concerns and Observations:

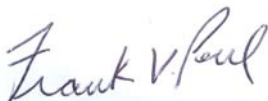
- Standing water has been reported to pond within the travel way.
- The road is crowned and the uphill shoulder appears to trap water. This trapped water can stage high enough until it spills over into the road.

Recommendations for Repair:

- Install a culvert under the road.
- Provide swale on upstream end of culvert to direct stormwater into the culvert.
- Vegetate the swale.
- Confirm if culvert outlet has adequate path to drain without damaging downstream property.
- Downstream drainage easement may be needed for concentrated storm flows (or at least approval from land owner).
- Clean road of gravel and patch potholes.

I suggest obtaining quotes for each of the recommendations listed, at which time I can assist with choosing the most cost effective solution for each location. If you have any questions or comments or would like to review these in more detail, please don't hesitate to let me know.

Sincerely,



Frank V. Pohl, PE, LEED AP
Pohl Consulting, LLC