



Depression Adjacent to Route 352 near Anne Drive/Bow Tree Drive East Goshen Township, Chester County

The Pennsylvania Department of Transportation performed excavation of a depression on the west side of Route 352 just south of the intersection of Anne Drive/Bow Tree Drive in East Goshen Township, Chester County, on Wednesday, December 23, 2020.

The subsidence adjacent to the southbound shoulder of Route 352 appears to be caused by the presence of silty clay at a depth of 2.3 feet below the road grade. This conclusion was reached based on careful excavation of a 7-foot-by-11-foot test pit (TP-1) roughly centered on the location of the depression. In addition to the silty clay, a tree stump was excavated from the test pit. Decay of the stump may also have contributed to the subsidence at this location. During the excavation, surface water was observed running along the top of the silty clay layer. Perched surface water can also potentially contribute to subsidence. Additionally, there was no evidence of subsidence or distress on the adjacent roadway.

The result of the investigation found that moving surface water and a decaying tree stump were likely the causes of the depression. In the department's professional view, the subsidence was not a risk to the safety and stability of the state roadway.

Any questions can be directed to Sarah McInnes, P.E., PennDOT District 6 Geotechnical Engineer at (610) 205-6544 or Paula Callahan, P.G., PennDOT District 6 Geologist at (610) 205-6543.







pennsylvania
 DEPARTMENT OF TRANSPORTATION

ENGINEER'S TEST PIT LOG

Sheet 1 of 2

Test Pit No: **TP-.1**

Project Information
 ECMS# **CR 352**
 District **6**
 County: **Chester**
 SR/Sect.: **352**
 Seg./Off.:
 Baseline:
 Station/Offset: **1**
 Coordinates:
 N
 E
 Latitude
 Longitude

Pit Dimension
 Ground Elevation (ft.): **2.0**
 Depth: **2.7**
 Width: **7'**
 Length: **7'**
 Water Level Reading ∇ 0 hr. ∇ 24 hr.
 Depth: **NR 0 hr. NR 24 hr. 1.3'**

Field Logged By:
 Inspector: **Paula Callahan**
 Cert. Number: **020-013**
 Drilling Company: **PennDOT**
 Equipment: **Small size excavator**
 Excavation Date: **12-23-2020**
 Backfill Date: **12-23-2020**

PG/PE Seal, Signature and Date

Final Log Checked By:
 Name:
 Date:

NOTE: All graphical plots are for information only.

DEPTH (ft.)	GRAPHIC	MATERIAL DESCRIPTION	ASTHOSUS	DEPTH (ft.)	BAG SAMPLE NUMBER	POCKET PEN. (lbf.)	TORVANE (lbf.)
0		START 1' below ROAD GRADE		0			
1.3		SILT, dark brown, topsoil, wet		1.3			
2.7		SURFACE, PERCHED water on top of SILT, clay layer		2			
		SILT, light brown, some clay, moist + tree stump		3			
		Same		4			
		2.7' BOTTOM OF TEST PIT		5			
		Ease of Excavation = easy with moderate casting due to water seeping in		6			
				7			
				8			
				9			
10				10			

WATER level of monitoring well = 7.0'
 29' from edge of hole
 BOTTOM OF HOLE = 3.3' 3-60
 FROM GRADE

PENNDOT TEST PIT LOG - PENNDOT GINT 12-18-2013 PM 6:07 - 12/19/13 13:47 - SUB-BUREAU OF CONSTRUCTION & MATERIALS/PROJECTS/FILE TO PRINT BLANK FORMS - FULL SOIL LEGEND - 12-19-2013 GPJ

