



Consulting
Engineers
and Scientists

June 19, 2013

Project 111.01095.008

Mr. Chris Moretti
Gershman Brown Crowley, Inc.
14 Breakneck Hill Road, Suite 101
Lincoln, Rhode Island 02865

RE: Clarification of Test Pit Log Information
Proposed CVS Pharmacy/Store No. 10129
Washington and Swanton Streets
Winchester, Massachusetts

Dear Mr. Moretti:

Ransom Consulting, Inc. (Ransom) has prepared this letter to clarify the discussion regarding information presented in test pit logs for the proposed CVS Pharmacy, Store No. 10129, in Winchester, Massachusetts (the Site). During the June 11, 2013 Zoning Board of Appeals (ZBA) meeting in Winchester, a member of the ZBA questioned the interpretation of the seasonal high groundwater levels in the area just north/northeast of the proposed infiltration basin, based on the test pit log for the test pit designated TP-103. In the test pit log for TP-103 (see attached), the presence of mottling (i.e., discoloration caused by oxidation) in the soil is noted between 3 feet and 4 feet 2 inches below the ground surface (bgs). However, as noted in the log, this mottling was observed in fill material and is not associated with the seasonal high groundwater table in the native soils. To explain, it is likely in this setting that fill material was brought to the Site from another location and placed on top of native soil for construction purposes. Mottling in the fill material is therefore not indicative of historic high groundwater conditions at the Site. The mottling in the fill material may be a remnant from when the fill material resided at its original location offsite, or may be caused by a small lense of low permeability material within the fill that temporarily restricts water from infiltrating through the fill, causing a localized "perched" condition, which may result in mottling but is not representative of the seasonal high groundwater table beneath the Site.

As explained in a previous letter prepared by Ransom on May 30, 2013 titled "Seasonally High Groundwater Elevation Evaluation", our interpretation of the seasonal high groundwater beneath the Site, including the area of the proposed subsurface infiltration basin, was based on information presented in test pit and boring logs, along with water level measurements collected from monitoring wells installed throughout the Site. In the evaluation of test pit data, observations of mottling in the native soil may be indicative of historically high groundwater levels at a particular location (e.g., mottling at 11 to 12 feet bgs was observed in the native soil encountered in TP-104). However, mottling in fill material noted at TP-103 is not indicative of high water table conditions. The mottling observed in TP-104 was the highest indication of seasonal high groundwater table conditions in native soil on this Site. Ransom's estimate of the seasonal high groundwater table elevation beneath the proposed infiltration basin (35.8 feet) is therefore a conservative value supported by the test pit data and Site water level measurements.

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Mr. Chris Moretti
Gershman Brown Crowley, Inc.

Please feel free to contact us with additional questions or comments regarding this project.

Sincerely,

RANSOM CONSULTING, INC.



Michael D. Abbott, P.E., C.G.
Senior Engineer & Geologist



Brian Pettingill
2013.06.19 13:34:26 -04'00'

Brian R. Pettingill, P.G.
Senior Project Manager/CVS Program Manager

MDA/HED/BRP:jsh
Attachments

ATTACHMENT A

Test Pit Log TP-104

Clarification of Test Pit Log Information
Proposed CVS Pharmacy/Store No. 10129
Washington and Swanton Streets
Winchester, Massachusetts

Project: Proposed CVS Pharmacy/Store No. 10129		Project No.: 111.01095	
Location: 10 – 12 Swanton Street, Winchester, MA		Ground Elevation: 46.13'	
Client: Gershman Brown Crowley, Inc.		Datum: NE corner of concrete sidewalk in front of dry cleaner building, El 46.85'	
Contractor: Cyn Environmental Services		Operator: David	
Equipment: Excavator		Samples Collected <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Capacity/Reach:		Time Started: AM Time Completed: PM	
Weather: Sun, windy, 25-35°F			
Logged by: BAB		Date: 1/19/13	
Checked by: DRB		Date: 1/23/13	
TEST PIT INFORMATION			
Depth of Stratum Change	Sample No. and Type	Sample Depth Feet	Soil Description
0"-4"			Asphalt
4"-1'0"			Sub base material
1"-1'6"			Brown, fine to medium SAND, little fine to coarse gravel, little cobbles, little silt, moist (10YR 4/3, Loamy Sand). FILL
1'6"-2'0"			Dark brown, fine to medium SAND, little silt, trace fine to medium gravel, trace glass, moist (5Y 3/1, Loam). FILL
2'-3'			Orange-brown, fine to medium SAND, little silt, trace fine gravel, moist (7.5YR 4/4, Sandy Loam). FILL
3'-4'2"			Gray, fine SAND and SILT, red –brown mottles, moist (2.5Y 6/2 Silt Loam, 7.5YR 5/6mottles associated with fill material not seasonal high groundwater) FILL
4'2"-4'9"			Brown, fine to coarse SAND, little fine gravel, trace silt, moist (10YR 4/3, Sand). FILL
4'9"-12'	TP103, S1, grab	10'-11'	Gray-brown, fine to coarse SAND, little fine to coarse gravel, little cobbles, little silt, moist (10YR 5/3, becoming 10YR 4/3 at 12', Loamy Sand). NATIVE GLACIAL TILL
Test Pit Dimensions (ft) Length = 16 Width = 8 Depth = 12 Depth to Groundwater (ft) = Not Encountered			Remarks: 1) Sample submitted for laboratory testing. 2) Test pit backfilled with excavated material. 3) Ground elevation measured with level and stadia rod relative to Site bench mark of 46.85'.