



December 21, 2017

Clover Construction Management West Corporation (Clover)
348 Harris Hill Road
Williamsville, New York 14221

Attention: Mark Branaman

Subject: Karst Survey Letter
Tucker Station Senior Housing
1408 & 1412 Tucker Station Road
Louisville, Kentucky
GEM Project G-5091

Dear Mr. Branaman:

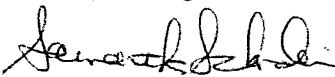
GEM Engineering, Inc. (GEM) conducted a karst survey for the referenced site in accordance with Clover PO No. TSKD1215171, dated December 15, 2017, and GEM Proposal No. GP-6465, Revision I, dated December 14, 2017. The karst survey was conducted in general accordance with Chapter 4 Part 9 (Development on Karst Terrain, dated July 2008) of the most recent Louisville-Jefferson County Land Development Code (LDC). The karst survey included the following elements: a reconnaissance of site conditions for the karst geologic features specifically defined in the LDC; a review of current and historical aerial photographs; a review of soil survey information; a review of geologic maps; and a review of topographic maps.

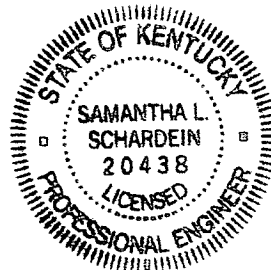
The geologic formation underlying the vast majority of the site (Laurel Dolomite) is designated with a medium karst potential. The far southeastern corner is underlain by the Osgood Formation and Brassfield Dolomite, which are designated as non-karst. The karst potential level is based on the tendency for the site to develop or have karst features as shown on the Kentucky Geological Survey Geologic Information Service Karst Potential Map and is not necessarily indicative of the actual presence or absence of existing karst activity at the site.


No karst-related features were identified on the site in the documents reviewed, including historical aerial photos, geologic maps, topographic maps or soil survey information. In addition, no karst-related features were observed on the property during the site reconnaissance conducted on December 21, 2017.

We appreciate the opportunity to serve as your geotechnical consultants. If we can answer any questions concerning this report, please contact the writers.

Sincerely,
GEM Engineering, Inc.


Samantha Schardein, P. E.
Senior Engineer
Kentucky License No. 20438




G. T. Vandeveld, P. E.
Chief Engineer
Kentucky License No. 14708