



January 14, 2019  
Mr. Kendall Cogan  
4141 Bardstown LLC  
PO Box 5895  
Louisville, Kentucky 40255

Reference: **4141 Bardstown Road – Site Karst and Hydric Soil Evaluation**  
4141 Bardstown Road  
Louisville, Jefferson County, Kentucky 40218  
ECS Project No. 61:1913

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Dear Mr. Cogan:

ECS Southeast, LLP (ECS) conducted a karst and hydric soil evaluation for the referenced site in accordance with ECS Proposal No. 61:P1331, dated January 3, 2019.

The karst evaluation included the following elements: a visual reconnaissance indications of hydric soils and karst topography and; 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 reportedly underlying the site is mainly Alluvium with a small area of Louisville Limestone formation at northeastern portion of the site. The Alluvium formation is designated as "Non-karst" and Louisville Limestone as "Medium" karst potential. The karst potential 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 karst activity at the site. According to the KGS Potential Classification definitions, formations designated as a "Non-karst" and "Medium" karst potential are where karst features are rare or absent, and where development of karst features is variable and dependent on site-specific conditions, respectively.

No karst-related features (e.g., sinkholes, springs, sinking streams, caves, etc.) were identified on the site or in the documents reviewed, including the historical aerial photos, geologic maps, topographic maps or soil survey information. In addition, no karst-related features were identified during the site reconnaissance conducted on January 8, 2019 by Bashir Hasanzadeh of ECS.

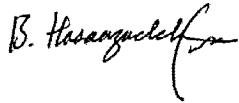
The Louisville/Jefferson County Information Consortium (LOJIC) maps identifies the site as potential wetland (hydric soil). The existing drainage system along east and south edges of the property is shown on LOJIC maps as Jefferson Streams (USGS BlueLine). Also, northern edges of the property is inside Jefferson Potential Wetlands (Hydric Soil) map. Please refer to attachment obtained from LOJIC website.

During the site reconnaissance conducted on January 8, 2019 by Bashir Hasanzadeh of ECS, no signs of hydric soils were observed beyond the boundaries of existing drainage (USGS BlueLine) on the property.

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We appreciate the opportunity to serve as your geotechnical consultants for this project. We look forward to future association with you on this and other projects.

Respectfully submitted,  
**ECS Southeast, LLP**



Bashir Hasanzadeh, Ph.D.  
Project Engineer



Michael C. Ronayne, P. E.  
Chief Engineer

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