WOODRUFF GEOLOGIC CONSULTING, INC.

29 July 2022

The City of Austin Environmental Commission
Att'n: Mr. Eric Brown, GIT
c/o City of Austin Watershed Protection Department
Austin, Texas 78704

Re: Borders Boat Dock 1 (SP-2021-0084D)

Dear Mr. Brown:

With this letter, I address the issue of "rimrock stability" related to the proposed construction of a boat dock on Lake Austin. The street address for this proposed construction is within the 2400 block of Scenic Drive in West Austin.

This project entails placement of a walkway and stair access from Scenic Drive in such a way that a canyon rimrock remains intact and undisturbed. Construction plans and sections show how load-bearing structures are anchored in rock above the crest of the rimrock, and from that "anchor," the walkway bridges the rimrock. Hence, the rimrock will bear none of the load of the walkway and stairs that descend to the dock at Lake Level.

As a professional geologist with more than 50-years' experience in the Austin area, I conducted a site visit with Michael Linehan, AIA, of Land Strategies, Inc (LSI). At that time, I observed that the top of the rimrock shows no sign of weakness or incipient break-down. Following this site visit, I reviewed lake-level photos provided by Mr. Linehan as well as the Consolidated Site Plan prepared by LSI. I paid special attention to ground elevations near the top of the proposed structure as well as the measured thickness of the rimrock. The top elevation of the proposed bridging structure above mean sea level (msl) is 522 ft 10 inches; the vertical relief of the planned structure is approximately 30 ft.

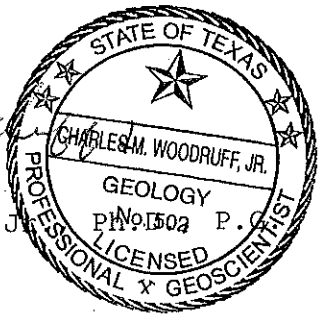
Bedrock at this site is Edwards Limestone. Bureau of Economic Geology mapping (by P.U. Rodda and others, 1970, Geologic Quadrangle Map No. 38) shows the anchor locations to be underlain by Member 4 of the Edwards Limestone. This rock unit is as much as 40 ft thick and is notable for its resistance to erosion and break-down. A full section of Member 4 may not be present, and Member 3 of the Edwards Formation may compose part of the near-vertical face of the rimrock. Member 3 is recognized on the published map (Rodda and others, 1970) as consisting of nodular intervals and interbeds of "marl" (clay admixed with limestone). Such intervals may not be as hard as beds composing Member 4; nonetheless, this rimrock should constitute a stable bedrock face.

In summary, the construction of a cantilevered "bridge" across the rimrock is compatible with the local geologic setting that consists of a near-vertical section of resistant limestone.

Hence, the geologic setting poses no obvious constraints to this project.

If you have questions, I will be glad to address them.

Sincerely yours,



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