Appendix E.4 KPFF Report Regarding Feasibility of Building Subterranean on Campus Side

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June 8, 2015

Ms. Wendy Lockwood
Sirius Environmental
1478 North Altadena Drive
Pasadena, CA 91107

Re: Harvard-Westlake School Parking Structure
Project Site Review
KPFF Job #109046.04

Dear Wendy:

The purpose of this analysis is to provide our professional assessment from a civil engineering perspective of the feasibility of constructing a subterranean parking structure on the Harvard-Westlake campus in Los Angeles, California. The project site reviewed is located in an existing surface parking lot east of Coldwater Canyon Avenue of the Harvard-Westlake campus. See attached Exhibit 1. Conclusions are based on available information and experience with similar projects.

Current NavigateLA documents show an abandoned City of Los Angeles Department of Water and Power (LADWP) 62-inch water line and an active City of Los Angeles 24-inch reinforced concrete pipe (RCP) storm drain in the vicinity of the project site. See attached Exhibit 2. From the locations shown in the records, it is anticipated that the construction of the structure would have minimal impact to these utilities.

Our review included an evaluation of the existing watershed tributary to the study project site. Historical flooding of the site area has been confirmed by Harvard-Westlake staff. Based on our review of available contour information, the project study site appears to be located at a low point, or in a sump, of an estimated 140-acre watershed. Los Angeles City and County codes require that new construction within a sump be designed to discharge a 50-year storm event calculated using the County of Los Angeles Department of Public Works Hydraulic and Hydrology manuals.

Using the code required method, it is estimated that the potential runoff from a 50-year storm would be approximately 440 cubic feet per second. Reviewing the current Los Angeles County and City storm drain infrastructure for this area, it appears that the only existing storm drain infrastructure located in this area is the aforementioned 24 inch storm drain. The capacity of the existing 24 inch drain is less than 20 cubic feet per second using the Manning Formula and the slopes indicated in the City of Los Angeles storm drain plans D-7113. The 440 cubic feet per second of water could not be conveyed through the existing 24 inch pipe. This could result in severe flooding of the area and is not allowed by code. It is important to note that a sump condition only exists on the east site of Coldwater Canyon Avenue. The hill on the west side of the street is not in a sump.

If Harvard-Westlake attempts to build a subterranean parking structure at the project site, major storm water infrastructure improvements would be required on campus and within Coldwater Canyon Avenue. These improvements could include but are not limited to large inlet structures and large storm drain pipes. Pipe sizes could be in the range of 60 to 84 inches in diameter. These pipes and inlet structures would need to be installed on the project site and within Coldwater Canyon Avenue.

Installation of a large storm drain pipe in Coldwater Canyon Avenue is not feasible due to the existing utility infrastructure already occupying the street (i.e. there is not sufficient space within Coldwater Canyon to install the required infrastructure). Even if space was available to install the large storm drain within the street limits, the construction efforts could affect existing utilities because of their close proximity. The existing utilities in this area of Coldwater Canyon, based on LADWP plan D56515-T-1 include a recently installed 60-inch LADWP water line, three-inch gas line, six-inch water line, 51-inch water line, eight-inch sewer, and PT&T telephone infrastructure, among others. It would be important to maintain existing utilities services during construction process. For this reason, it is not feasible to install the large storm drain infrastructure in the adjacent street. In addition the magnitude of the storm drain infrastructure required to mitigate the flow differential on site makes the construction of a subterranean parking structure on the study project site infeasible.

Sincerely,

Doug Conlon, PE
Associate

Attachment

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Exhibit 1

NavigateLA

Storm Drains
Freeways and Streets
Maps and Indices
Landbase
Boundaries

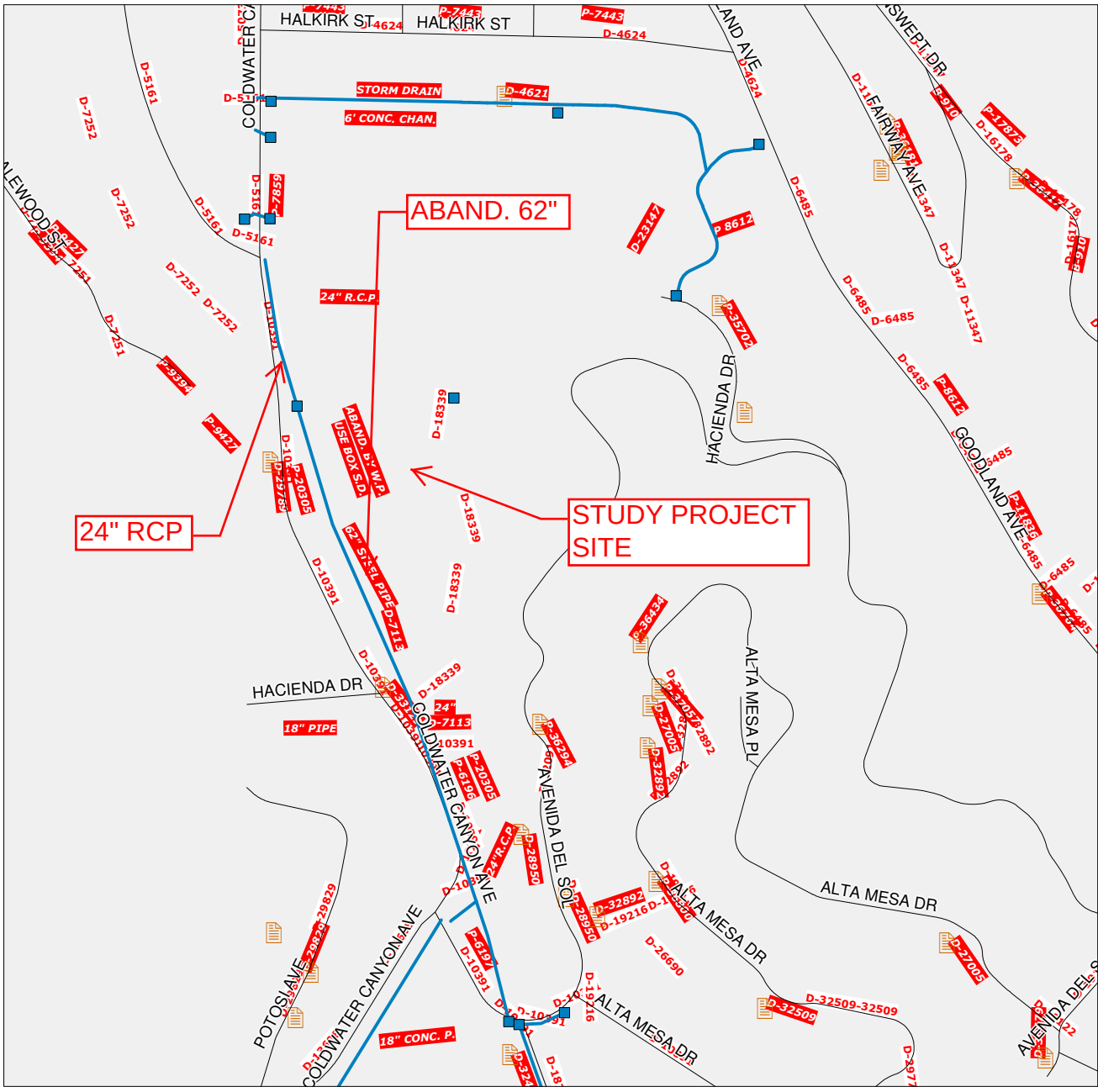

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EXHIBIT 1
DATE: 09-13-2013

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