ULARA
UPPER LOS ANGELES RIVER AREA WATERMASTER
Richard C. Slade - Watermaster

ularawatermaster.com
14051 Burbank Blvd, Suite 300
Sherman Oaks, CA 91401
818-506-0418 PHONE
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March 10, 2020

Autumn Waggoner
VCA Engineers, Inc.
(Sent via email: Autumn.waggoner@vcaeng.com)

Job No. 500-LAS04

Re: Potential Stormwater Infiltration Project
Proposed Public Property Redevelopment
16730 Chatsworth Street
Granada Hills, California 91344

Dear Ms. Waggoner:

Provided herein is a brief discussion of the information and reports that you have provided our office regarding your plans for the possible infiltration of stormwater that is to be collected and incorporated into the Low Impact Development (LID) improvements for the proposed public property redevelopment project, located within the City of Los Angeles (City), at the address 16730 Chatsworth Street, in the Granada Hills area of the San Fernando Valley. We understand the project, which has an area of ±29,000 square feet, is situated at the southeastern corner of the intersection of Petit Avenue and Chatsworth Street. As such, this redevelopment overlies a portion of the San Fernando Groundwater Basin, the largest of the four groundwater basins in the Superior Court-adjudicated Upper Los Angeles River Area (ULARA). Also provided herein, as ULARA Watermaster, is my opinion regarding the potential impact to local groundwater quality that might result from the proposed infiltration of stormwater that is to be captured by the Low Impact Development (LID) improvements that you have recommended for your project.

In regard to stormwater infiltration, the California Regional Water Quality Control Board – Los Angeles Region (LARWQCB) promulgated its National Pollutant Discharge Elimination System (NPDES) permit process in 1990 to help minimize the impacts of stormwater and urban runoff on the receiving water bodies in its sphere of influence (i.e., the Los Angeles River and the Pacific Ocean). The goal of their NPDES process was to minimize the impacts on the river, and ultimately to the ocean, by reducing the volume and improving the quality of surface water runoff from storm events. Because your proposed redevelopment is located within the ULARA

watershed boundary, all local rainfall and surface water runoff from this site would normally drain into the Los Angeles River and eventually to the ocean.

Several years after the implementation of the NPDES process, the City of Los Angeles, Department of Public Works, Bureau of Sanitation – Watershed Protection Division (LAWPD), promulgated a series of guidelines intended to increase the capture and onsite infiltration of stormwater at all proposed developments and redevelopments throughout the City. These guidelines established the requirements and limitations for utilizing onsite stormwater infiltration and also specified an order of preference (via a set of Best Management Practices—BMPs) for providing LID improvements at each development and/or redevelopment site in the City.

The specific order of the BMP preference list was established by the LAWPD to collect and provide basic "treatment" of onsite stormwater runoff, and to help increase the amount of infiltration (i.e., deep percolation) from the initial ¾-inch of rainfall from each storm event at all new development and redevelopment sites in the City. The end result is intended to reduce the volumes of contaminated stormwater runoff that enter the storm drain system (from each new storm event) and simultaneously help reduce the volume and enhance the quality of the runoff that enters the Los Angeles River and ultimately the Pacific Ocean. Turbidity and potential urban-derived contaminants in the captured runoff could be reduced by the "treatment" effects of the various stormwater infiltration systems proposed via the BMPs. From a hydrogeologic perspective, and in the opinion of this Watermaster, whenever and wherever (with certain exceptions) deep percolation (infiltration) of stormwater can be appropriately enhanced, then recharge to the underlying groundwater reservoir (in this case, the San Fernando Groundwater Basin) can be beneficially increased.

For this proposed redevelopment, you sent the following for Watermaster review:

a. An email, received by the Watermaster's office on February 20, 2020, in response to the Watermaster's Data Request Memorandum. Your email and attachments provided responses to most of the items identified in the Watermaster's Memorandum. Note that a copy of that Data Request Memorandum is being routinely provided by LAWPD personnel to LID applicants upon their initial visit to the LAWPD office in downtown Los Angeles.
b. A set of CAD-type drawings, prepared by VCA Engineers, Inc. (VCA), which contained: a site plan; a grading plan; and a LID plan. The LID plan shows the proposed locations of a couple of catch basins, several slot drains, and an infiltration basin within the boundaries of the project. We understand that these proposed facilities are to be components of your stormwater infiltration system.

c. A soils report, *Geotechnical Engineering Report: Granada Hills Pool Replacement Project*, prepared by the City of Los Angeles, Department of Public Works, Bureau of Engineering, Geotechnical Engineering Group (LAGEO) and dated August 22, 2017. In addition, two supplemental soils reports were also provided, *Supplemental Geotechnical Report: Granada Hills Pool Replacement Project*, and *Supplemental Geotechnical Report No. 2: Granada Hills Pool Replacement Project*. Both of these were prepared by LAGEO and are dated October 25, 2018 and February 18, 2020, respectively. The reports described the earth materials encountered beneath the subject site in six soil borings that were drilled and sampled to a maximum depth of approximately 31.5 feet below ground surface (bgs). It should be noted that groundwater was not encountered during the drilling of these soil borings in June 2017. Infiltration rates for the onsite earth materials were tested to a depth of approximately 10.5 feet bgs in the soil borings drilled for the infiltration test.

Please note that no one from my office conducted a site visit to the subject LID property and that the information presented in this review was provided by the applicant and/or obtained from a cursory review of a few regulatory agency websites and basic sources of referenced information. Among the key items noted during our review of the available documents are the following:

1. The subject property development is situated at the southeastern corner of the intersection of Petit Avenue and Chatsworth Street. A Google Earth Pro® satellite image dated November 19, 2018 shows the subject property was developed with a public park and recreational facilities at that time.
2. The subject property is bordered by residential properties to the east and south, by Petit Avenue to the west, and by Chatsworth Street to the north.
3. A check of the online Geotracker database maintained by the California State Water Resources Control Board (SWRCB) shows that within 1,000 feet of the subject LID project, there are: no "open" leaking underground storage tank (LUST) sites; no "open" California Department of Toxic Substances Control (DTSC) sites; no "open" military cleanup sites, or; no "open" cleanup program sites.
4. As shown in the CAD-type drawings provided by VCA, stormwater will be collected from rainfall that flows as sheet flow across non-permeable paved areas at the property, and from rain that falls directly onto the roof of the proposed redevelopments. The collected stormwater is to be directed to one of several slot drains and/or the catch basins, and thereafter, it will be directed to the infiltration basin (i.e., the infiltration system). Stormwater directed to the infiltration system would reportedly be able to infiltrate into the subsurface (i.e., made available for deep percolation). The proposed infiltration system is to be constructed in the eastern portion of the proposed redevelopment.

It should be noted that the purpose of this LID stormwater infiltration review letter from the Watermaster's office is not in any way to evaluate and/or opine on the technical feasibility of the infiltration of stormwater at the site, but rather only to assess the concept of infiltration (and recharge) at the site strictly in regard to its potential impact on local groundwater quality. Thus, the Watermaster has no opinion regarding the potential for, or the technical feasibility of, the collected stormwater to be infiltrated into the earth materials beneath the subject property.

Further, your eventual LID permit from the LAWPD will require the property owner (and all successors) to provide for ongoing operation and maintenance in perpetuity for all of the onsite LID facilities. The Watermaster considers this issue of ongoing maintenance of your proposed LID facilities to be critical to the long-term protection of the groundwater quality in the San Fernando Basin.

Based on our review of your documents, and assuming that the final stormwater collection system and infiltration systems are constructed as proposed and properly maintained in the future, then the Watermaster has no objection to the infiltration component of your current LID, in relation to the local groundwater quality. If the project and/or your LID and/or your infiltration system is revised in the future and differs from that which has been generally characterized herein, the Watermaster would then need to review those revised plans.

Respectfully submitted,

Richard C. Slade
ULARA Watermaster

1 ULARA APPROVAL
SCALE: NOT TO SCALE

CITY OF LOS ANGELES
CALIFORNIA

SOILS REPORT APPROVAL LETTER

March 23, 2020

LOG # 112389
SOILS/GEOLOGY FILE - 2

Department of Recreation and Parks
1149 S. Broadway, 8th floor
Los Angeles, Ca 90015

TRACT: SUBDIVISION NO. 1 OF THE PROPERTY OF THE PORTER LAND AND WATER COMPANY (M R 31-3/6)
LOT(S): 2 SEC 18 T2N R15W
LOCATION: 16730 W CHATSWORTH ST

CURRENT REFERENCE REPORT/LETTER(S)	REPORT No.	DATE OF DOCUMENT	PREPARED BY
Addendum Report	17-074	02/18/2020	City of LA-GEO

PREVIOUS REFERENCE REPORT/LETTER(S)	REPORT No.	DATE OF DOCUMENT	PREPARED BY
Dept. Approval Letter	105775	11/14/2018	LADBS
Addendum Report	17-074	10/25/2018	City of LA-GEO
Dept. Approval Letter	100428	11/09/2017	LADBS
Soils Report	17-074	08/22/2017	City of LA-GEO
Laboratory Test Report	A8950-06-12	07/31/2017	Geocon West, Inc.

The Grading Division of the Department of Building and Safety has reviewed the referenced report that provide recommendations for the proposed infiltration system and exterior slab. The Department previously conditionally approved the above referenced reports dated 08/22/2017 and 10/25/2018 for the proposed swimming pool, shade structure, pool equipment building, concrete ramp, a lifeguard room addition, PV panels and security light poles in a letter dated 11/14/2018, Log #105775. Foundation recommendations are provided on page 2 of the 10/25/2018 report.

The referenced reports are acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis ( ) refer to applicable sections of the 2020 City of LA Building Code. P/BC numbers refer the applicable Information Bulletin. Information Bulletins can be accessed on the internet at LADBS.ORG.)

1. All conditions of the above referenced Department approval letter(s) shall apply except as specifically modified herein.
2. Slabs placed on approved compacted fill shall be at least 3½ inches thick and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way.

3. Concrete floor slabs placed on expansive soil shall be placed on a 4-inch fill of coarse aggregate or on a moisture barrier membrane. The slabs shall be at least 3½ inches thick and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way.
4. The infiltration facility design and construction shall comply with the minimum requirements specified in the Information Bulletin P/BC 2014-118.
5. The infiltration system shall be constructed at the location shown on the drawing attached to the current report.
6. The construction of the infiltration system shall be provided under the inspection and approval of the soils engineer.
7. An overflow outlet shall be provided to conduct water to the street in the event that the infiltration system capacity is exceeded. (P/BC 2014-118)
8. Approval for the proposed infiltration system from the Bureau of Sanitation, Department of Public Works shall be secured.
9. A minimum distance of 10 feet (in any direction) shall be provided from adjacent proposed/existing footings to the discharge of the proposed infiltration system. A minimum distance of 10 feet horizontally shall be provided from private property lines to the proposed infiltration system.

DAN RYAN EVANGELISTA
Structural Engineering Associate III

Log No. 112389
213-482-0480

cc: City of LA-GEO, Project Consultant
VN District Office

2 SOILS APPROVAL LETTER
SCALE: NOT TO SCALE

BUREAU OF ENGINEERING
OFFICIAL RECORD

ENGINEERING
CITY OF LOS ANGELES
BUREAU OF ENGINEERING

NO.	REVISION DESCRIPTION	DATE	BY

BUILDING NO. -
INDEX NO. RP-300118

REGISTERED PROFESSIONAL ENGINEER
VIRGILIO C. AOANAN
No. C36079
Exp. 6/30/20
CIVIL
STATE OF CALIFORNIA

DEPARTMENT OF PUBLIC WORKS
GARY LEE MOORE, PE, ENV SP
CITY ENGINEER
ARCHITECTURAL DIVISION

		DATE:
ARCHITECT/ENGINEER:	VIRGILIO AOANAN LIC. NO.: C36079	03/03/2020
DESIGNED BY:	VIRGILIO AOANAN	03/03/2020
DRAWN BY:	AUTUMN WAGGONER	03/03/2020
CHECKED BY:	VIRGILIO AOANAN	03/03/2020
APPROVED BY:	VIRGILIO AOANAN	03/03/2020

VERTICAL CONTROL:
HORIZONTAL CONTROL:
SHEET TITLE: MISCELLANEOUS DETAILS
PROJECT: GRANADA HILLS POOL AND BATHHOUSE REPLACEMENT PROJECT
ADDRESS: 16730 CHATSWORTH STREET GRANADA HILLS, CA 91344

CITY OF LOS ANGELES

VCA ENGINEERS, INC.
1041 S. Garfield Avenue, Suite 210, Alhambra, CA 91801
Tel. 323.729.6098 Fax. 323.729.6043

BID SET
PROJECT ISSUE DATE: 06/22/21

WORK ORDER NO. #E170517
PLAN FILE NO. #308
DRAWING NO. C506
SHEET 17 OF 19 SHEETS

PLOTTED: 09/18/2019 1:00:00 PM

SHEET ISSUE DATE: 01 January, 2000
REVISION DATES (DESIGN STAGE ONLY)