



January 7, 2019

SCST No. 170213N
Report No. 1R

Harry Stylli and Nejla Stylli Trust
Attn: Dr. Harry Stylli
9046 La Jolla Shores Lane
La Jolla, California 92604

Subject: GEOTECHNICAL UPDATE
9046 LA JOLLA SHORES LANE
LA JOLLA, CALIFORNIA

- References:
1. Ken Ronchetti Design, 2017, "*Stylli Residence 9046 La Jolla Shores Lane, La Jolla, CA*", 10 Sheets, dated March 20.
 2. EAD, 1999, "Hillside Support Caisson Plan" Sheets 1 and 2, LDR No. 99-0230, dated June 9.
 3. SCS&T, 1992, "*Report of Geotechnical Investigation, Proposed Residential Site, La Jolla Bluffs, Lot 1, 9046 La Jolla Shores Lane, La Jolla, California*", SCS&T No. 9211042, Report 1, dated August 21.
 4. SCS&T, 1993, "*Summary of Preliminary As-built Geology, Field Observations and Tests for Relative Compaction, Proposed Potiker Residence, 9046 La Jolla Shores Lane, La Jolla, California*", SCS&T No. 9211042, Report No. 13-R
 5. SCS&T, 1999, "*Assessment of Temporary Bluff Stability, Potiker Residence, 9046 La Jolla Shores Way, La Jolla, California*" SCS&T No. 9911042.1, dated March 8.
 6. SCS&T, 1999, "*Summary Report of Slope Stabilization Measures, 9046 La Jolla Shores Lane, La Jolla, California, Volumes I and II*", SCS&T No. 9911041.1 dated July 8.

Dear Dr. Stylli:

In response to your authorization, we have prepared this report to update the geotechnical conditions at the site as they relate to the proposed additions depicted in the architectural plans by Ken Ronchetti Design (Reference 1). This revised report is in response to a meeting with Mr. James Quinn of the City of San Diego on June 6, 2018 and additional searches of City of San Diego records for development of the site. As discussed with Mr. Quinn, this report is not meant to address all City draft review comments, but rather to present a geologic evaluation of the site appropriate for the residential additions outside of the previously established Setback from Top of Bluff.

INTRODUCTION

The residence was built between 1993 and 1994. The structure is supported by deep foundations. In 1999, a landslide/topple occurred in the rear yard which is located at the top of a roughly 270-foot-high coastal bluff. The residence was protected from additional failure by the



construction of a shear pin wall and grade beam that underlies the existing glass wall along the western edge of the patio (Reference 2).

SITE DESCRIPTION

The site is located at 9046 La Jolla Shores Lane in La Jolla, California (Figure 1). The site is bound to the north by open space, to the east by a single-family residence, to the south by La Jolla Shores Lane and to the west by a single-family residence and a roughly 270-foot-high coastal bluff. The southern portion of the property is occupied by a two-story steel and wood-framed single-family residence (Figure 2). The residence is supported by deep foundations bearing in Scripps Formation.

PROPOSED DEVELOPMENT

The current development plan (Reference 1) will consist of an extension of the garage at grade, a second-floor office addition over the garage, the addition of two cantilevered exterior decks at the second floor and a one-story guest room addition at grade. Grading, other than relatively minor cuts and fills, is not proposed to prepare the improvements. Rather, the improvements are founded at existing grade.

SCOPE OF WORK

Our scope of work consisted of the following:

- Review of the geotechnical data pertinent to the site. This included searches of records at the City of San Diego who provided a box of documents at our request, but the remaining materials contained no geologic as-built data from the 1999 landslide/topple protection work. A second search was performed on December 10, 2018 and no further information was available.
- Review of the proposed improvement plans (Reference 1)
- Conducting a site reconnaissance to evaluate the current geotechnical conditions
- Update of seismic design parameters
- Review of city review comments, meeting with the city reviewers and preparation of this letter

GEOLOGY AND SUBSURFACE CONDITIONS

The proposed additions will be underlain by relatively thin compacted fill overlying Scripps Formation.

Fill: Documented fill is present beneath portions of the site. As-graded maps could not be obtained at the City of San Diego and are not in our files. We do have records that indicate



the fills were compacted in accordance with the recommendations (Reference 4) in the geotechnical report (Reference 2). Fills were placed in scarp areas and around the shear pin wall following the landslide in 1999 (Reference 6). However, these are not in the region of the improvements.

Landslide Debris: Landslide debris underlies the portion of the lot north of the residence and underlies portions of the coastal bluff (Reference 3 and 5). This material does not underlie the improvements.

Scripps Formation: Scripps Formation underlies the residence and the upper portion of the bluff beneath landslide debris. The Scripps Formation consists of moderately to well-cemented conglomerate, sandstone, and claystone.

RECONNAISSANCE

A site reconnaissance was performed by a California-Certified Engineering Geologist on April 18, 2017. Based on the reconnaissance, we observed no major cracks in the stucco exterior of the house or in the concrete patio. Reference 1 shows the post-repair bluff top, which is considered a baseline for future measurements. Measurements of the current edge of bluff to the building columns on the west side of the house range from 17 feet to 35 feet. The nearest bluff-edge-to-shear wall measurement was about 3 feet. Using Google Earth images, it appears there may have been a few feet of bluff top retreat due to scarp erosion. There was no evidence of extension or vertical offsets to suggest impending slope failure or creep. A map of the Top of Bluff from our observations and available data is presented in Figure 2.

CBC SEISMIC DESIGN PARAMETERS

A geologic hazard likely to affect the project is ground shaking as a result of a major earthquake on an active fault zone in the vicinity of the subject site. The site coefficients and adjusted maximum considered earthquake spectral response accelerations in accordance with the 2016 California Building Code are presented below:

Site Coordinates: Latitude 32.872546°
Longitude -117.250692°

Site Class: C
Site Coefficients, $F_a = 1.000$
 $F_v = 1.307$

Mapped Spectral Response Acceleration at Short Period, $S_s = 1.270g$
Mapped Spectral Response Acceleration at 1-Second Period, $S_1 = 0.493g$
Design Spectral Acceleration at Short Period, $S_{DS} = 0.847g$
Design Spectral Acceleration at 1-Second Period, $S_{D1} = 0.429g$
Site Peak Ground Acceleration, $PGA_M = 0.571g$



CONCLUSIONS

The proposed additions to be occupied are located well behind of the existing bluff top and (approximately 100 feet) behind setbacks recommended in the original geotechnical report (Reference 3 and Figure 2). Our evaluation indicates that there may have been a few feet of bluff top retreat due to scarp erosion, but the site has otherwise not been observed to have changed since our understanding of the site following the shear pin wall and grade beam construction. Therefore, based on the site conditions and distance to the bluff setbacks, it is our opinion that the proposed additions will not affect the stability of the bluff. If new foundations are needed for the proposed improvements, they will need to consist of deep foundations, constructed in accordance with the design parameters in the original geotechnical report, Reference 3. With the exception of the seismic design parameters summarized above, the foundation design recommendations in Reference 3 are considered applicable.

RECOMMENDATIONS

Plan Review

SCST should review the project structural plans and specifications to ascertain whether the intent of the recommendations contained in this report update and the geotechnical report (Reference 3) as modified herein have been implemented and that no revised recommendations are needed due to changes in the development scheme.

Geotechnical Engineering During Construction

Observations and tests should be performed during construction if additional foundations are needed. If the conditions encountered during construction differ from those anticipated based on the subsurface exploration program (Reference 3), the presence of the geotechnical engineer during construction will enable an evaluation of the exposed conditions and modifications of the recommendations in this report or development of additional recommendations in a timely manner.

CLOSURE

SCST should be advised of changes in the project scope so that the recommendations contained in this letter can be evaluated with respect to the revised plans. Changes in recommendations will be provided in writing. The findings in this letter are valid as of the date of this letter. Changes in the condition of the site can, however, occur with the passage of time, whether they are due to natural processes or work on this or adjacent areas. In addition, changes in the standards of practice and government regulations can occur. Thus, the findings in this report may be invalidated wholly or in part by changes beyond our control. This report



should not be relied upon after a period of two years without a review by us verifying the suitability of the conclusions and recommendations to site conditions at that time.

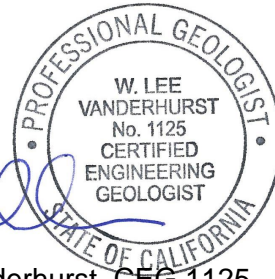
In the performance of our professional services, we comply with that level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions and in the same locality. The client recognizes that subsurface conditions may vary from those encountered at exploratory locations and that our data, interpretations, and recommendations are based solely on the information obtained by us. We will be responsible for those data, interpretations, and recommendations, but shall not be responsible for interpretations by others of the information developed. Our services consist of professional consultation and observation only, and no warranty of any kind whatsoever, express or implied, is made or intended in connection with the work performed or to be performed by us, or by our proposal for consulting or other services, or by our furnishing of oral or written reports or findings. If you have any questions regarding this report or other aspects of the project, do not hesitate to contact the undersigned.

Respectfully Submitted
SCST, LLC

Emil Rudolph, PE, GE 2767
Principal Engineer



W. Lee Vanderhurst, CEG 1125
Principal Geologist



WLV:ER:hu

Attachments: Figure 1 - Site Vicinity Map
Figure 2 - Geotechnical Map

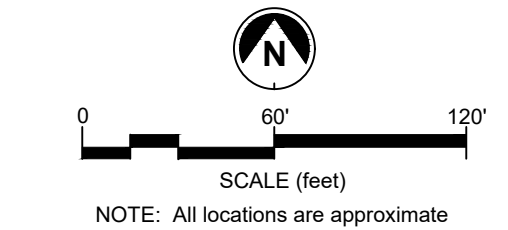
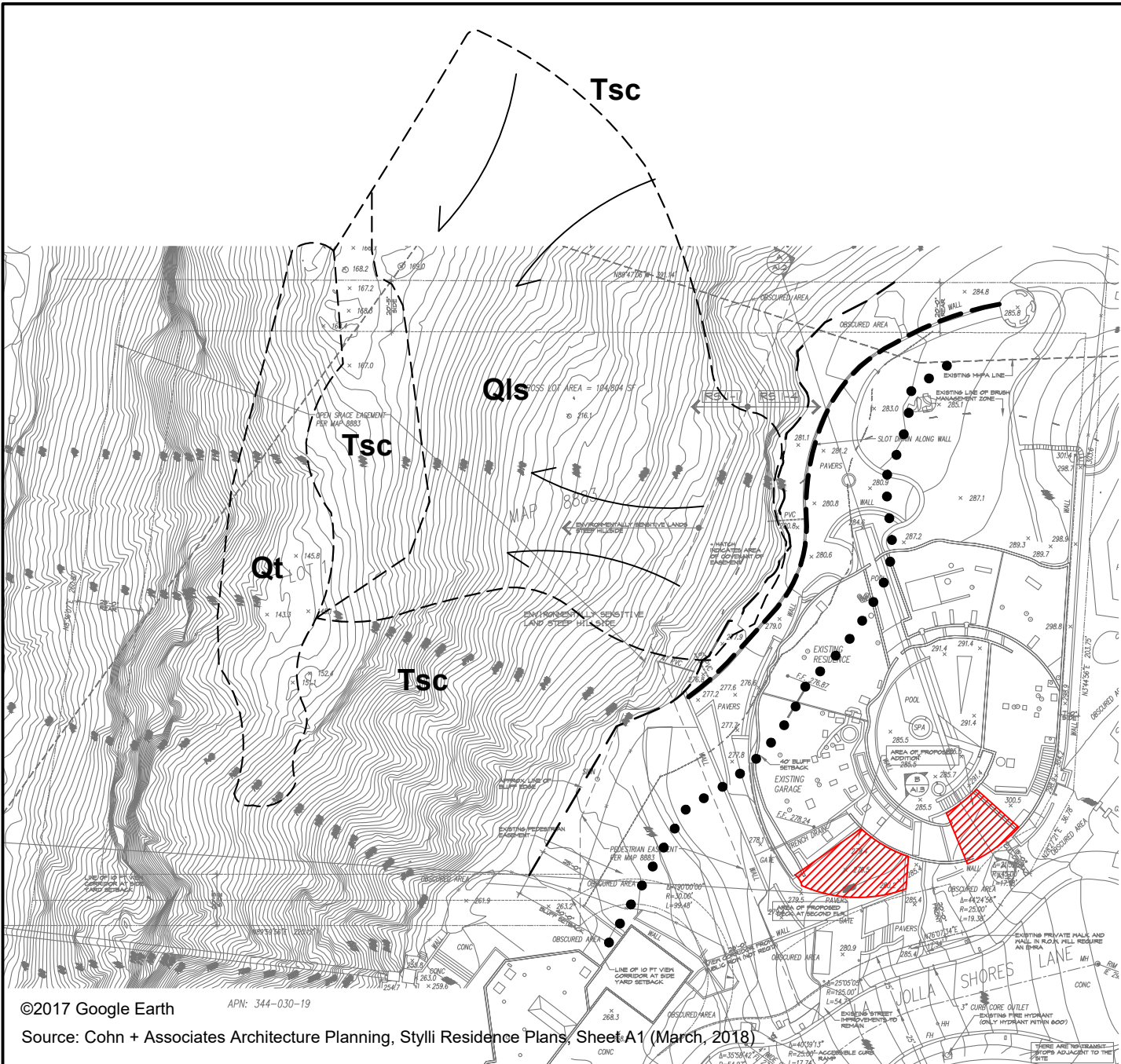
(1) Addressee via e-mail: Harry.Stylli@progenity.com
(1) Mr. Gary Cohn via e-mail: gary@cohn-arch.com









SITE VICINITY MAP
 9046 La Jolla Shores Lane
 La Jolla, California

Date: December, 2018
 By: MAW/NNW
 Job No.: 170213N-01R


Figure:
1



SCST LEGEND:

-  Proposed Development
-  Shear Pin Wall
-  Landslide
-  Geologic Contact
- Qt** Talus
- Qls** Landslide Debris
-  Top of Bluff
- Tsc** Scripps Formation
-  40' Bluff Top Setback (SCST 1992)

©2017 Google Earth APN: 344-030-19
 Source: Cohn + Associates Architecture Planning, Stylli Residence Plans, Sheet A1 (March, 2018)



SCST, LLC

GEOTECHNICAL MAP
 9046 La Jolla Shores Lane
 La Jolla, California

Date: December, 2018
 By: MAW/NNW/DTC
 Job No.: 170213N-01R

Figure:
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