Viewpoint Development LLC
Mr. Chris Livoni
1635 Pacific Ranch Drive
Encinitas, CA 92024

July 18, 2022
NOVA Project No. 2021073

Subject: Infiltration Feasibility Condition Letter
Viewpoint Old Town Apartments
4620 Pacific Highway, San Diego, California

References: NOVA Services, Inc., 2022. *Report Geotechnical Investigation, Viewpoint Old Town Apartments, 4620 Pacific Highway, San Diego, California*, NOVA Project No. 2021069, July 18, 2022.

carrierjohnson + culture (CJC), 2022, *Viewpoint Old Town, 46220 Pacific Hwy, San Diego, CA 92110,* 38 Sheets, Plot Date 3/31/2022.

City San Diego, 2021, Stormwater Standards Manual, Effective Date: May 2021.

City of San Diego. 2008, Seismic Safety Study, Grid 20, dated April 3.

Dear Mr. Livoni,

The intent of this letter is to provide the findings of an assessment by NOVA Services, Inc. (NOVA) of the infiltration conditions and related feasibility for permanent stormwater Best Management Practices ('stormwater BMPs') for drainage management areas (DMAs) at the above-referenced site.

The assessment has been prepared by NOVA for the Viewpoint Old Town Apartments. NOVA is retained by Viewpoint Development as Geotechnical Engineer-of-Record (GEOR) for the project.

The assessment provides an analysis of the infiltration feasibility in accordance with the criteria detailed in Section C.1.1 Simple Feasibility Criteria of the referenced City of San Diego BMP Design Manual (San Diego 2021). Based on these criteria, it is NOVA's opinion that this site should be considered to have a 'no-infiltration' condition.

EXISTING GEOLOGIC AND GEOTECHNICAL CONDITIONS

Section C.1 of the BMP Manual states that if one of the standard setbacks listed cannot be achieved, the DMA may classify as a 'no infiltration condition'. Consideration of the existing fill thickness across the site and the location of the proposed BMPs, preclude the implementation of infiltration for the proposed BMPs.

As reported in NOVA 2022 and presented in Figure 1, the entire site is mapped on the regional geologic map as “af” a deep layer of undocumented artificial fill. Based on our subsurface investigation, this layer is approximately 15 feet deep. The BMP manual states that full and partial infiltration BMPs should not be placed within existing fill soils greater than 5 feet thick.

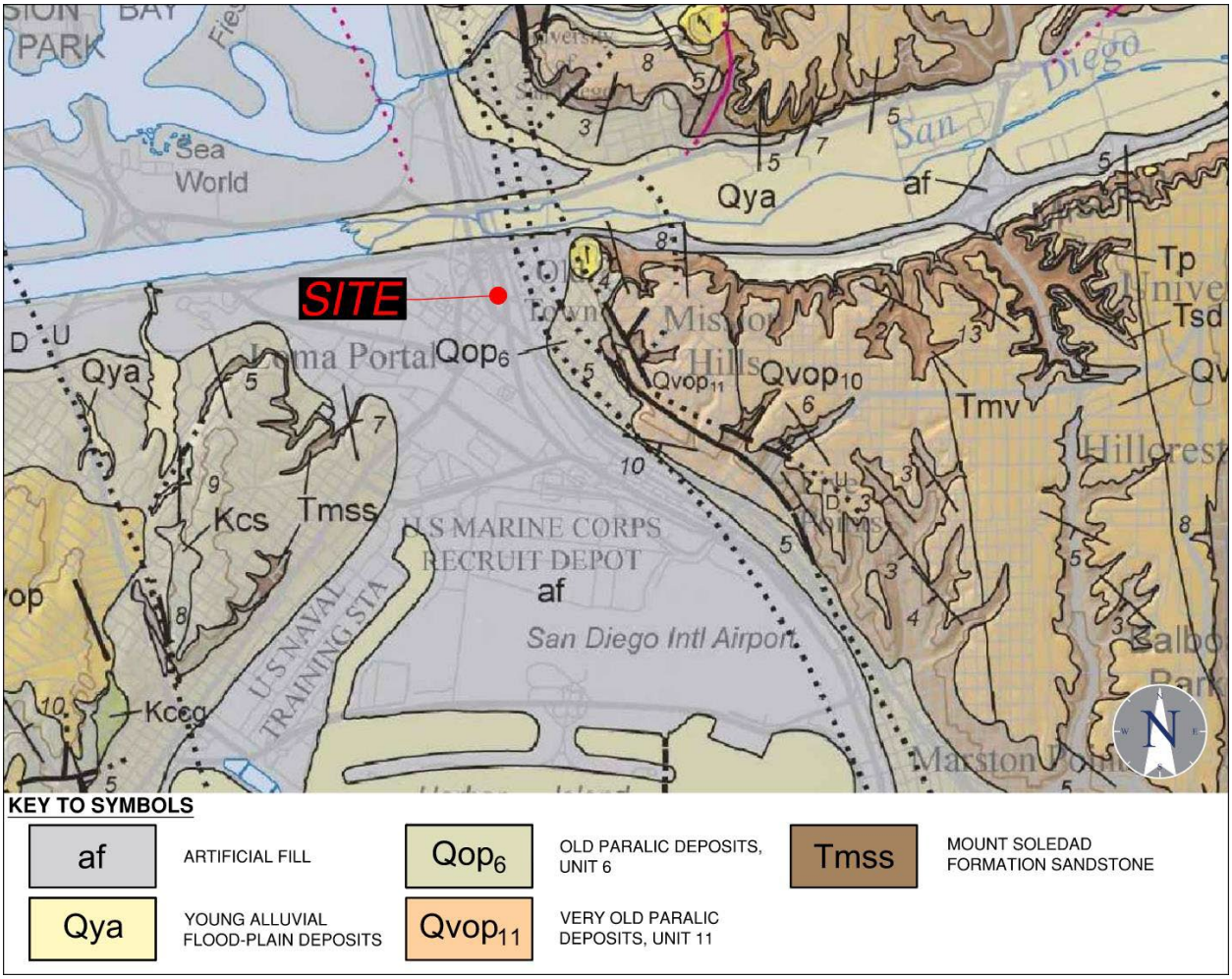


Figure 1. Regional Geology Map (Kennedy and Tan, 2008)

In addition, groundwater was measured at elevation +0.3 feet mean sea level- 9.7 feet below the existing ground surface. If infiltration were to be allowed, the infiltration surface would be far less than the recommended 10 feet of vertical separation between the infiltration surface and groundwater.

Finally, as shown in Figure 2, this site is mapped by the City of San Diego Seismic Safety Study as an area highly susceptible to liquefaction. NOVA has provided a liquefaction analysis on the site and determined that ground improvements or deep foundations are necessary to mitigate settlement caused by liquefaction.

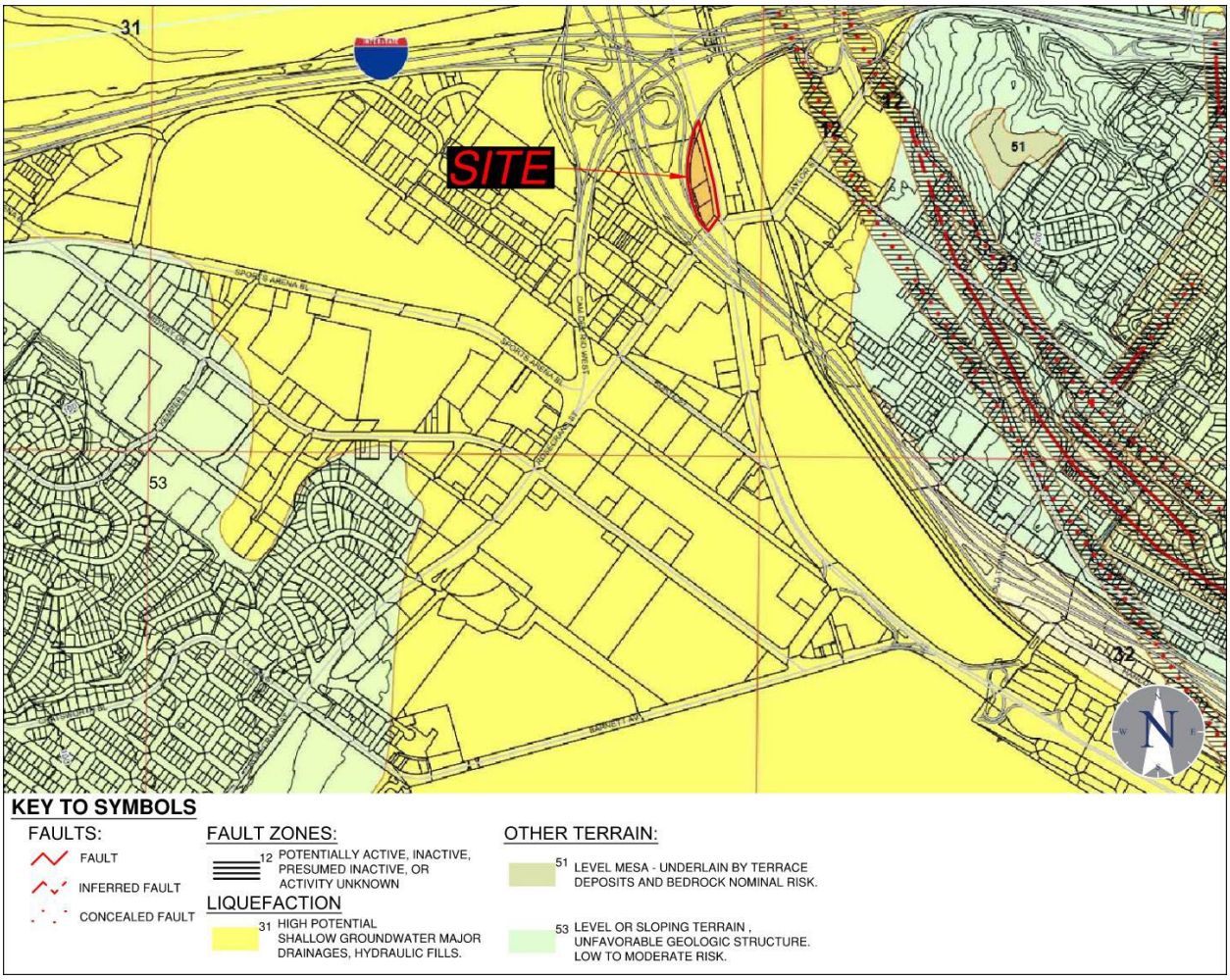


Figure 2. Site Location on City of San Diego Seismic Safety Study Map
(source: City of San Diego, 2008)

INFILTRATION FEASIBILITY CRITERIA FROM C.1.1

The following text reproduces the discussion points from Appendix C.1.1 in the referenced City of San Diego BMP Design Manual (San Diego 2021) for an infiltration feasibility condition letter. The discussion points from San Diego 2021 are reproduced below in italics, following which a response is provided by NOVA.

- *The phase of the project in which the geotechnical engineer first analyzed the site for infiltration feasibility.*

  The project is currently in the planning phase of the site's development.

- *Results of previous geotechnical analyses conducted in the project area, if any.*

  NOVA is not aware of previous geotechnical investigations at this site.

- *The development status of the site prior to the project application (i.e., new development with raw ungraded land, or redevelopment with existing graded conditions).*

  The approximately 1.75-acre site is comprised of APN's 442-740-03-00, 442-740-06-00, 442-740-07-00, nominally located at 4620 Pacific Highway in San Diego. The site is bounded on the east by Pacific Highway. The arcuate-shaped connector between Interstate 5 North to Interstate 8 East bounds the site to the north and west, with Rosecrans Street to the south.

  The site is level, ranging from an elevation of +10 feet mean sea level (msl) on the north side of the site to +11 feet msl on the southern portion of the site. The site is currently occupied by the single-level Perry's Cafe and a surrounding asphalt parking lot. A 4-foot to 6-foot tall retaining wall bounds the site along the Caltrans I-5/I-8 connector.

  Available historic photography indicates that the grading for the existing restaurant building and parking lot was completed between 1962 and 1964.

- *The history of design discussions for the project footprint, resulting in the final design determination.*

  NOVA has not been involved in design discussions pertaining to the project footprint. The footprint appears to maximize the available area for use as apartment units and the associated parking.

- *Full/partial infiltration BMP standard setbacks to underground utilities, structures, retaining walls, fill slopes, and natural slopes applicable to the DMA that prevent full/partial infiltration.*

  As discussed previously, based on the BMP Manual, full and partial BMPs should not be sited within existing fill soils greater than 5 feet thick. As may be seen by a review of Figure 1 and boring logs in NOVA 2022, the site is covered by fill soils greater than 5 feet in thickness.

- *The physical impairments (i.e., fire road egress, public safety considerations, etc.) that prevent full/partial infiltration.*

  The addition of stormwater into liquefiable soils is a risk to public safety.

- *The consideration of site design alternatives to achieve partial/full infiltration within the BMP.*

  Based on high groundwater, deep fills, and liquefiable soils, stormwater infiltration should not be performed at this site. There are no viable design alternatives, as these conditions are uniform across the site.

- *The extent site design BMP requirements were included in the overall design.*

  The Site Development Plan indicates that four DMAs are included in this project. Three are roof filtration systems and one is hardscape (CJC, 2022).

- *Conclusion of recommendation from the geotechnical engineer regarding the DMA's infiltration condition.*

  In conclusion, given the deep fill condition, the shallow groundwater, and the liquefiable nature of the soils, it is NOVA's opinion that the risk of geologic or geotechnical hazards cannot be reasonably mitigated to an acceptable level at the site.

- *An Exhibit for all applicable DMAs that clearly labels:*
  - *Proposed development areas and development type.*
  - *All applicable features and setbacks that prevent partial or full infiltration, including underground utilities, structures, retaining walls, fill slopes, natural slopes, and existing fill materials greater than 5 feet.*
  - *Potential locations for structural BMPs.*
  - *Areas where full/partial infiltration BMPs cannot be proposed*.

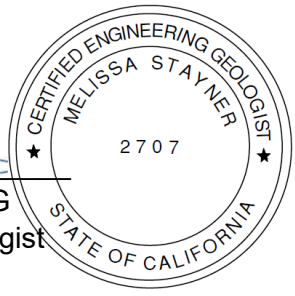
  See Plate 1 within NOVA 2022 for development areas and a cross-section of the proposed development. The development is five stories of residential apartments over one at-grade podium level with a partial subterranean parking level. Fill between 15 to 16 feet is mapped below the site, groundwater is located less than 10 feet below ground surface and the soils are liquefiable, therefore infiltration BMPs may not be proposed anywhere at this site.

CLOSURE

NOVA appreciates the opportunity to be of service to Viewpoint Development on this project. Should you have any questions regarding this letter or other matters, please contact the undersigned at 858.292.7575 x 413.

Sincerely,
NOVA Services, Inc.

John F. O'Brien, PE, GE
Principal Engineer



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