



23 June 2021

Mr. Richard Tam, S.E.
Building Plans Engineer Supervisor
City and County of San Francisco
Department of Building Inspection
Plan Review Services Division
49 South Van Ness Ave., 5th Floor
San Francisco, CA 94103

Project 147041.10 – Perimeter Pile Upgrade, 301 Mission Street, San Francisco, CA

Re: Monitoring Report

Dear Mr. Tam:

This letter transmits the following monitoring reports for your information:

- Slate Geotechnical Consultants – Monitoring Report 00A dated 11 February 2021
- Slate Geotechnical Consultants – Monitoring Report 001 dated 10 May 2021
- Slate Geotechnical Consultants – Monitoring Report 002 dated 17 May 2021
- Slate Geotechnical Consultants – Monitoring Report 003 dated 24 May 2021
- Slate Geotechnical Consultants – Monitoring Report 004 dated 31 May 2021
- Slate Geotechnical Consultants – Monitoring Report 005 dated 07 June 2021
- Slate Geotechnical Consultants – Monitoring Report 006 dated 17 June 2021
- Slate Geotechnical Consultants – Indicator Pile Installation Report, 14 May 2021
- John A. Egan, PE, GE – Memo: Discussion of Monitoring Program Results through 14 June 2021, dated 18 June 2021

Slate Report 00A, dated 11 February 2021 establishes the benchmark conditions for the pre-construction state of site and building settlement. As noted in the Egan memo, included as an attachment hereto, many of the settlement markers and building-mounted prisms have been in place since 2009, and provide a continuous history since that time of building behavior. The February 11 report also includes benchmark data on piezometers and extensometers installed specifically for the purpose of construction and post-construction period monitoring.

Construction Progress

Installation of a first indicator pile, immediately to the west of the building, along Fremont Street, initiated in early February 2021. As reported in Slate Geotechnical Consultants, 14 May report, the contractor was unable to maintain the rock socket in an open condition sufficiently long to allow placement of instrumentation, reinforcing and grout. The contractor proposed an alternative installation method, using a cased rock socket, which was used to install a second indicator pile, nearby, and which was successfully tested on 19 April 2021.

Installation of production piles initiated on 12 May 2021 with the installation along Fremont Street, of the 36 in. diameter outer casings, to a depth of 100 ft. At the present time, installation of these casings along Fremont Street completed this week and continuation of this work along Beale is scheduled to start. Installation of the 24 in. diameter inner casings and rock sockets is scheduled to start the week of 28 June 2021.

Monitoring Summary

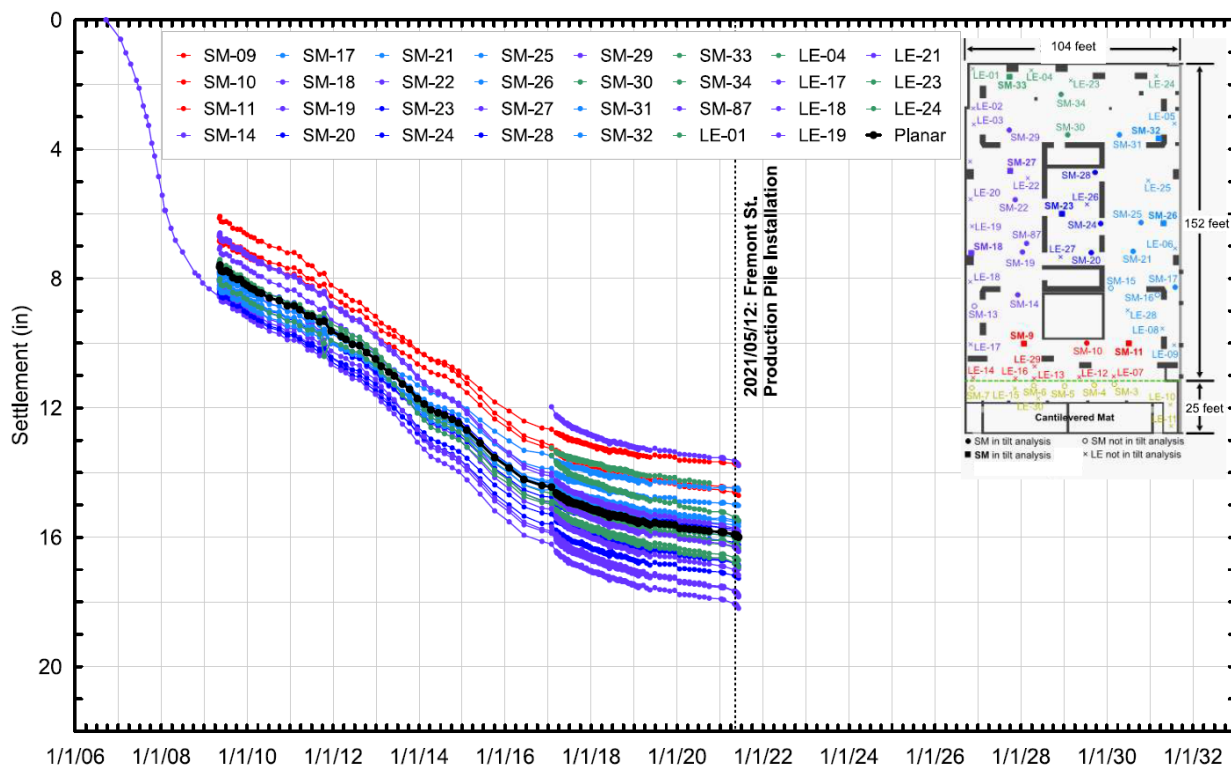


Figure 1 - Settlement History (Slate 17 June 2021)

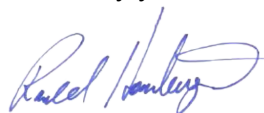
Figure 1, above, extracted from Slate Monitoring Report 006 shows the building settlement history as measured by a series of settlement markers mounted in the tower's basement. Also shown on this figure is an interpolated plot of planar building settlement. This plot shows that on average, building settlement (as indicated by the planar interpolation) has remained relatively stable throughout the construction period to date, and in line with prior months behavior. However, beginning in early May of this year, and coinciding approximately with installation of the 36 in. casings, somewhat increased settlement has occurred along the building's west side. Along with

this settlement, increased tilting of the building roof towards the west has also occurred. As explained in the attached 18 June memo from John Egan, we interpret this behavior as resulting from disturbance and compaction of the Colma Sands, associated with production pile installation along Fremont Street. We anticipate that now that this installation is complete, the west side of the building will return to historic settlement rates. We do not anticipate that installation of the 24 in. diameter casings and rock sockets will affect this, as installation of the 24-inch casings will not disturb the Colma formation.

As reported by Slate, as of 17 June, the building roof had tilted approximately 2-1/2 in. further to the west, since initiation of construction in November 2020, with total tilt to the west, as of 17 June, being approximately 17 in. Egan projects that total settlement to the west, now that installation of the 36 in. casings along Fremont Street is complete may be about 18 in. Future monitoring reports should confirm this. The projected tilting is well within the settlement cases analyzed by us to investigate the building's safety under future settlement and does not present a structural concern.

We will continue to send additional monitoring reports as we receive them.

Sincerely yours,



Ronald O. Hamburger, SE
Senior Principal
CA License No. S2951

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Encl.

cc: EDRT
Phil Lovett, MSD
Kristin Gonsar, MSD
Matt Dutrow, AB&B