



17 July 2019

Mr. Eric Dausman
General Manager
Sutro Tower Inc.
1 La Avanzada Street
San Francisco, CA 94131

Project 067199.11 – Condition Assessment of Sutro Tower, 2019 Inspections
2018 Maintenance and Inspection Program

Dear Mr. Dausman:

At your request, Simpson Gumpertz & Heger Inc. (SGH) provided oversight and engineering support for tower condition assessment and repair work performed in 2018. Under agreement with the City of San Francisco (the “Standard Conditions”), Sutro Tower performs annual inspections of 1/3 of the tower, consisting of one of the three legs and the horizontal framing on one face, each year. In accordance with the inspection protocol, these inspections are typically rotated such that the entire tower is inspected over a three-year period.

On a five-year schedule, the inspection agreement calls for an in-depth inspection to identify problems which may not be readily detectable with a visual review in the annual inspection, such as evaluation of guy wire tension and inspection of welds of tower leg columns to their base plates.

In a meeting with the neighborhood liaisons in March 2014, it was agreed that the 2014 inspections would encompass two tower legs and two tower faces. Thus, we are now one year ahead of schedule in performing these inspections. Accordingly, the inspections performed in 2018 are those originally scheduled for 2019 and include: Leg B, Mast B, the east facing trusses, and, the attachment of appurtenances to these portions of the Tower.

SGH provided Electronics Research, Inc. (ERI) and Sutro Tower inspection protocols and a series of standard forms for recording observations. ERI used a slightly modified version of this form, containing all required information, and accompanying commentary and photographs documenting their observations. ERI’s observations are documented in a report entitled: Field Inspection Report S Stack B, SE Leg B & East Truss Levels 2-6, dated 8 March 2019.

We reviewed these reports and performed on-site observations of conditions reported therein as needed to clarify the conditions reported. We also performed calculations as necessary to determine if corrective action is required for items reported as structural damage. Table 1 below summarizes the significant observations noted by ERI as requiring additional engineering evaluation and our recommendations for corrective actions as required.

Table 1: Summary of Exception Items Evaluation

No.	Location	Description	Action Required
23	Column "a" level 5.3-5.4	Bolt not tightened	Tighten or replace bolt
34	Column "b" level 5.0	Bolt not tightened	Tighten or replace bolt
124	Leg "Z" face, level 2.38-3.0	Diagonal brace slightly bent	No action required
297	Leg "X" face, level 1.5-1.6	Diagonal brace slightly bent	No action required
345	Level 6, panel 6.3, Inner Upper	Missing bolt	Install new bolt
347	Level 6, panel 6.4, Inner Upper	Missing bolt	Install new bolt
348	Level 6, Panel 6.5, Inner Upper	Missing bolt	Install new bolt
349	Level 6, Panel 6.5, Outer Upper	Missing bolt	Install new bolt
351	Level 6 Panel 6.4, Outer Upper	Missing bolt	Install new bolt
353	Outer, Panel 6.5-6.5	Space plate undersize	Replace plate with new
359	Level 6, Panel 6.17-18, Inner Lower	Chord slightly bent	No action required
366	Level 6, Panel 6.14-15, Inner Lower	Chord slightly bent	No action required
375	Level 6, Panel 6.15, vertical	Vertical slightly bent	No action required
376	Level 6, Panel 6.23, vertical	Vertical slightly bent	No action required
518	Diagonal cables damper	Dampers poor condition	Replace

In addition to the items listed in Table 1 above, ERI identified numerous locations where rust is starting to form on bolt heads and nuts, or on the sides of steel members or gussets. None of these conditions appear particularly severe, however, they should be addressed by removal of rust and recoating as part of routine tower maintenance.

Sincerely yours,

Ronald O. Hamburger, S.E.

Senior Principal

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