

January 24, 2013

Project No. D50541

Mr. Eric Dausman Sutro Tower, Inc. 1 La Avanzada Street San Francisco, CA 94131-1124

**SUBJECT:** Sutro Tower

1 La Avenzada Street San Francisco, CA

Routine Inspection of Leg A, North Face and Stack A

Dear Mr. Dausman:

We have completed our inspection of Leg A, the North Face Trusses, the Strands, the Base of all legs and Stack A above the 6<sup>th</sup> level. The routine inspection was performed on December 10, 11 and 27, 2012. The Stack was inspected on January 19, 2013.

# Purpose

The purpose of the inspection was to check the structural portions of the tower and the attached equipment, etc. for distress due to corrosion, structural overload and/or other signs of distress or potential deterioration.

## **Scope and Procedures**

The survey was performed in general accordance with the recommended approach for a Routine Inspection as described in the Inspection Procedures which were recently revised to include the appurtenant items and Stack A. The undersigned and staff engineers Reyes Rios performed the inspection of the Tower and Chad Hill also assisted in the inspection of Stack C. The strands were inspected by naked eye and binocular (8X).

The inspection included visual observations and recording by entry on the data sheets for each portion of the tower being inspected. A specific photograph was taken for the individual conditions. The data sheets and the photographs are coordinated.

# **Inspection Limitations**

We inspected the tower from the interior of the leg and horizontal trusses. No attempt was made to inspect from the exterior of the trusses and legs other than what could be seen by naked eye and binocular. These methods allow us to see most of each surface and connection, however there are still areas that are not visible.

## **Locations Not Visible during Routine Inspection**

The exterior surfaces of all three legs and all the trusses at Levels 2-4 were not visible enough from the interior or the ground to locate and indentify or quantify the conditions in these areas. STI and its independent professional engineer should consult and determine any inspection protocol which may be appropriate.

#### Results

The individual results are shown on the data sheets, location sketches and photographs. The general results were as follows:

- 1. No structural members or appurtenant items were noted with distorted or distressed conditions indicating structural overload.
- 2. Most of the distress noted was corroded fasteners. Either the nut (usually) or the head of the bolt, or both, were corroded. The great majority of the fasteners were not corroded to the point of producing flaking buildup. However, the corroded fasteners should be cleaned and repainted. If during the cleaning significant loss of metal is found, that is, if the flats of the nut or heads are rounded at the junction of the flats due to corrosion, the fastener should be replaced.
- 3. We noted some appurtenant items, including corroded electrical boxes and conduit, pipe clamps and missing or loose bolts that need to be addressed.
- 4. As with the Leg A from the Base to Level 4, the Stack had been recently painted and there were few items noted.
- 5. The skin showed no signs of structural distress.
- 6. The strands did not have any visible distress however we did note what might be holidays or light paint coverage in some areas.
- 7. The bases of all three legs showed no significant observable distress. Corrosion was visible on some welds and fasteners at the base plates.

This concludes our report of the routine inspection of Leg A, the North Face Trusses and Stack A of Sutro Tower.

If you have any questions, please contact the undersigned.

Sincerely,

**CEL Consulting** 

K. C. Dewell, Senior Engineer Civil Engineer No. 29110

Enclosures: Inspection Forms and Photographs

Cc: Ron Hamburger



# Inspection Summary - Year 2012

# Description of Inspection:

- Routine inspection of Leg A
- Routine inspection of horizontal levels on North face
- Routine inspection of strands on North face
- Routine inspection of strand anchors on Leg A
- Routine inspection of base all legs

Special or In-Depth Inspections:

Summary of Results: PUSTT FASTENERS, ELEC. BEXECONDUIT

(MISSING BOLT @ HANDRAIL, Z LOOSE BOLTE

NO STIZUETURAL DISTREES

Summary of Recommendations:

SEE REPORT TEXT

# Checklist:

- Has a severe event occurred since the previous inspection?

  Yes No
- Have action items and recommendations from previous inspections been addressed in the scope of work?
- Has the inspection log for future years been revised to account for scope of work and findings of this inspection?

Signature:	KC Vinell	
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Date:	1-24-13	