

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge Program

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September 04, 2009

Contract No. 04-0120F4
04-SF-80-13.2 / 13.9
Self-Anchored Suspension Bridge
Letter No. 05.03.08-000024

Michael Flowers
Project Executive
American Bridge/Fluor, A JV
375 Burma Road
Oakland, CA 94607

Dear Michael Flowers,

Transverse and Longitudinal Linear Indications in Tower Shafts

Transverse and longitudinal linear indications have been found in the Tower Shafts. (Please see the attached spreadsheets.) Based on the workmanship that produced transverse cracks in the OBGs, the Department has checked some of tower welds using magnetic particle testing. This "over checking" began with accessible tower diaphragm locations on Monday August 31, 2009. ABF was verbally notified of initial findings at the weekly Tower meeting on Tuesday, September 1, 2009. Those findings showed a total of 47 transverse linear indications in welds at the three locations checked: East Shaft Lift 2 diaphragm at elevation 53m, and West shaft Lift 1 diaphragms at elevations 43m and 47.6m. In addition, 22 longitudinal linear indications were also found at those locations but were not discussed at the September 1 meeting, as data was not yet compiled. Since the Department has only completed an initial survey of the towers, further exploration will be necessary to determine the extent of the tower cracking.

In order to minimize schedule impacts and to determine the nature of these indications, the Department believes it would be prudent for ABF to immediately investigate the tower shafts and determine the extent and nature of these indications. At the September 1 meeting, the Department discussed with ABF the use of a grinder to determine if the indications found are transverse cracks or start/stop indications, as transverse cracks are an indication of poor workmanship.

It was brought to the Department's attention on September 3, 2009, that the North shaft, Lift 1 was moved into the blast shop for painting. At that point the Department notified ABF that 11 transverse and 8 longitudinal linear weld indications had been found in the diaphragms at elevations 9m and 13m the previous day. You're reminded that magnetic particle testing cannot be performed over painted surfaces.

The Department is concerned that indications have been found in fillet welds and PJP welds using FCAW and SMAW processes. Please provide the Department with a plan of action to demonstrate that the welds already completed and approved are in fact sound.

If you would like to discuss this further or have any questions, please contact Doug Coe.

Sincerely,

GARY PURSELL
Resident Engineer