



SAS Superstructure

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 21-Nov-14

Time 11:32 PM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 477 Const Calendar Day: 856 Date: 12-Jan-2012 Thursday

Inspector Name: Bruce, Matt Title: Transportation Engineer

Inspection Type: Continuous

Shift Hours: 07:00 am 05:30 pm Break: 00:30 Over Time: 01:00

Federal ID:

Location:

Reviewer: Schmitt, Alex Approved Date: Status: Submit

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature 7 AM 40 - 50 12 PM 50 - 60 4PM 50 - 60
Precipitation 0.00" Condition Partly cloudy

Working Day If no, explain:

Diary:

Dispute

Work description.

- The tasks completed today by the Alta Vista surveyors included the following:
 - 1.) Dave and Chris attended the weekly SAS Safety Tailgate meeting at 8:00am.
 - 2.) Chris used the robotic feature in the Trimble total station to set the local coordinates surveyed yesterday of the 24 points on the W-Line YBITS bridge using control point TWL270 to the SFOBB bridge datum.
 - 3.) Both surveying consultants also continued to process today's surveying data.
 - 4.) Dave attended the SMR (Structural Material Representative) meeting from 10:30am to 1:30pm.
 - The following is the hours worked by the Alta Vista consultants today:
 - Dave Garrett (survey party chief) = 8hrs
 - Chris Ferrucci (instrumentman) = 8hrs
 - Erol Schaller (rodman) = off (gone all week to take the CWI test)
 - Processed the GPS data for the 24 points measured (3 on the ABF brass disks) and set (21 on the PK nails) and gave the information to Dave. The GPS data will be used for analysis and be compared to the numbers that Chris measures today with the Trimble total station.
 - Observed the operation to form/place cable strand No. 3 at the west loop. See Roman Granados, John Lyons, and Victor Altamirano's diaries for additional details on the operation, labor, and equipment. I relieved Victor at 8:30am and was responsible for inspecting the operation at the W2E west deviation saddle. John was responsible for inspecting cable strand no. 3 placement at the W2W west deviation saddle. The ironworkers were reforming cable strand no. 3 at the W2E west deviation saddle until 10:30am. At this time the ABF ironworkers proceeded to place cable strand no. 3 into the W2E west deviation saddle. The cable strand was placed up to the 4th floating post starting from the bottom working towards the tower. At this stage Victor returned at 12:50pm and I went to go mark the sidespan surveyed midpoints with ABF rodman Steve Smith.
- The decision to pull the cable strand out of the W2E west deviation saddle was made by upper management. The condition of the strand wires in the saddle is unacceptable and needs to improve. The general issue is crossing of strand wires which increases the chance for broken wires when subjected to loading. Corrosion is not as big a concern for the crossing of wires in this area due to the fact it will be adequately enclosed from the weather.
- After marking the sidespan midpoints I returned to inspect cable strand no.3 installation at the W2E west deviation saddle with Victor. At 4:30pm myself and Alex went to go inspect/investigate whether the west



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loop adjustment of cable strand no. 3 was being done. Approximately at 5:00pm while ABF was adjusting cable strand no. 3, a gusset plate failed in tension and shear at the north sidespan catwalk anchorage.

I was near the W2W cable strand adjuster and Alex was near the top of the north scaffolds when the accident occurred. See the photos below and Alex Schmitt's diary for more details of the accident. Alex informed Brian Boal of the accident at the end of shift. The operation was being conducted by ABF engineer Zach Lauria and superintendent Scott Smith. Also after discussing the accident with Victor, he informed us as that the crew was still installing cable strand no. 3 at the W2E saddle when this accident happened. Victor also said that cable strand no. 3 appeared to move abruptly during the accident toward the upper 1/3 of the saddle. Placement of the cable strand at this location was not completed at the end of the day. Before adjusting begins all of the cable strand should be in the saddle troughs.

After the shift I emailed the photos of accident in this diary to Brian Boal and discussed/showed the photos to Bill Casey, Roman, Alex, Bob, Saman, Doug, and Warren. Bill wanted a list and photos of all the accidents related to the cable work compiled so he could meet and discuss the safety/engineering issues with ABF supervisors. Alex agreed to compile the list of accidents related to cable works and all of us would give Alex photos to supplement the list.

- ABF rodman Steve Smith and myself marked the perimeter of cable strand No. 1 at the midpoint cross section of both sidespans. This was done with Steve since he placed a mark on the south sidespan which wasn't distinctly marked on the cable strand. Therefore I wanted him to show me where he placed his final mark. To reiterate this was done to have a clear reference line for measuring the out to out distance between the cable strand that needs to be adjusted and cable strand No.1. This task was started at 1:45pm and ended at 2:40pm.

Attachment



Operation to place cable strand no. 3 at the W2W west deviation saddle which is a dramatically different approach than the W2E west deviation saddle.



Failed weld where the gusset plate was connected to the north catwalk anchorage beam.

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The marked surveyed midpoint on the south sidespan which will be used for measuring the cable adjustment heights.



Location where the failure occurred at the north sidespan catwalk anchorage. Notice the hole in the wood and the rig to the left.



Cable strand no.3 placed in the W2E west deviation saddle trough where the strand wires are still not ideal.



View of where the gusset plate was connected prior to the accident and adjacent gusset plates.



ABF ironworkers placing cable strand no.3 into the W2E west deviation saddle.



Condition of cable strand no. 3 wires coming out of the W2W west deviation saddle trough after the strand has been placed which is not ideal.

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The marked surveyed midpoint on the north sidespan which will be used for measuring the cable adjustment heights.



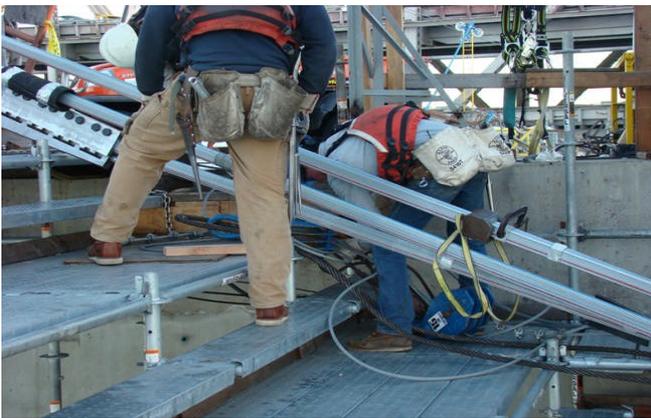
Reforming cable strand no. 3 at the W2E west deviation saddle since the strand was removed from the saddle trough due to the unacceptable placement.



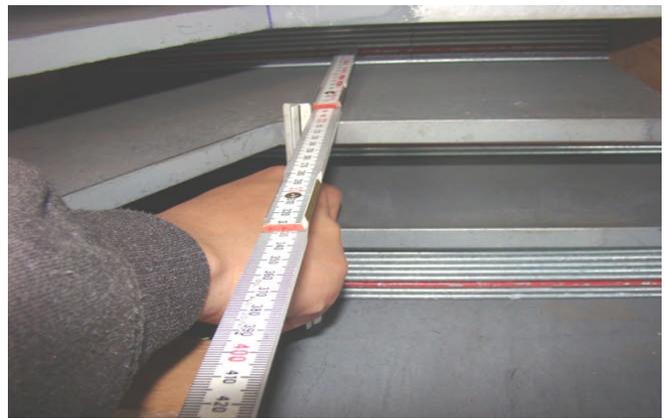
ABF ironworkers reforming the cable strand no. 3 at the W2E west deviation saddle by using the knife plates, cable form and timber mallet.



Gusset plate that failed with the welds seen on the right of the plate.



Location where the gusset plate landed after failing and being hurttled in the air.



Measuring cable strand no. 3 at the W2E saddle with Victor as a way to try and determine whether or not the strand wires are crossing.

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Placing cable strand no. 3 at the W2E west deviation saddle for the second time.