Daily Diary Report by Bid Item

Contract No.: **04-0120F4**
Diary #: **537** **Const Calendar Day:** 930 **Date:** **26-Mar-2012** **Monday**
Inspector Name: **Bruce, Matt** **Title:** **Transportation Engineer**
Inspection Type: Intermittent
Shift Hours: 04:30 am 05:00 pm **Break:** 00:30 **Over Time:** 04:00
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** Fair

Working Day ☐ If no, explain:

Diary: Dispute ☐

Work description.

- Phil Latasa, Sami Dauok, John Lyons, Damon Brown, and myself checked the out to out distance for the cable strands today as Damon's and my measurements are tabulated below. Damon and I were responsible for both the north/south sidespans today. Similarly Sami and Phil were responsible for checking the north/south mainspans and west-loop. Damon assisted me with the measurements and tabulating the data as I took all of the measurements unless otherwise noted. I used the Victor Tree Gauge (#2) to take the out to out measurements of the cable strands.

All measurements by both crews were reported to John who was stationed in the Caltrans conex recording and analyzing the data. When all of the measurements were completed, John was responsible for reviewing the measurements with ABF engineer Zach Lauria. See John's diary for more details related to the acceptance or rejection of cable strand sag adjustment.

The digital thermometer was used to measure the ambient and steel temperatures. The steel temperature measurements were taken with the digital thermometer placed on the outer cable strand wires. Wind speeds were obtained from weather.com at the time of the measurements.

The official sunrise time per weather.com for San Francisco today was at 7:02am. The following measurements were taken of the relative sag from cable strand number 1 at the given times below:

// North Sidespan //
Time = 5:00am
Ambient Temperature = 46.9F
Condition = Fair
Wind = S @ 5mph
ABF Surveyor(s) = James Allen and Ken Woon
Caltrans Engineer(s) = Matt Bruce and Damon Brown

Cable Strand	Steel Temperature (F)	O-O (#2) CT / ABF (mm)	Theor (mm)	CT Delta (mm)
1	47.3	Baseline or Zero	78	0
110	46.7	503 (-61) = 442 / 434	438	+ 4
111	46.5	630 (-61) = 569 / 574	503	+ 66
112	45.6	721 (-61) = 660 / 664	567	+ 93

Comments: All cable strands were considered to be free-hanging at the time of measurement on the north sidespan. I took all of the measurements while Damon assisted me with setting up the targets, being level,

normal to cable, etc. A timber block was used on cable strand number 1 to obtain measurements where the dimension is in ( ) millimeters. Cable strand number 113 was floated and 114 was in the rollers at the time of the measurements.

// South Sidespan //
Time = 5:25am
Ambient Temperature = 46.5F
Condition = Fair
Wind = SSW @ 5mph
ABF Surveyor(s) = None at this time
Caltrans Engineer(s) = Matt Bruce and Damon Brown

Cable Strand (mm)	Steel Temperature (F)	O-O (#2) CT / ABF (mm)	Theor (mm)	CT Delta
1	47.4	Baseline or Zero	78	0
111	45.8	610 (-61) = 549 / N/A	490	+ 59

Comments: All cable strands were considered to be free-hanging at the time of measurement on the south sidespan. I took all of the measurements while Damon assisted me with setting up the targets, being level, normal to cable, etc. A timber block was used on cable strand number 1 to obtain all of the measurements where the dimension is in ( ) millimeters. Cable strand numbers 112/113 were floated and 114 was in the rollers at the time of the measurements.

// North Sidespan //
Time = 5:55am
Ambient Temperature = 46.0F
Condition = Fair
Wind = S @ 8mph
ABF Surveyor(s) = James Allen and Ken Woon
Caltrans Engineer(s) = Matt Bruce and Damon Brown

Cable Strand (mm)	Steel Temperature (F)	O-O (#2) CT / ABF (mm)	Theor (mm)	CT Delta
1	47.4	Baseline or Zero	78	0
111	46.5	567 (-61) = 506 / 502	503	+ 3
112	44.9	619 (-61) = 558 / 568	567	- 9

Comments: All cable strands remained free-hanging at the time of measurement on the north sidespan. I took all of the measurements while Damon assisted me with setting up the targets, being level, normal to cable, etc. A timber block was used on cable strand number 1 to obtain measurements where the dimension is in ( ) millimeters.

Measurements on the cable strands at this time were done immediately after ABF ironworkers performed a real time or "Live" adjustment on the cable strand. Once the cable strand was adjusted ABF surveyors would take a measurement followed by Caltrans engineers. Numbers amongst the two groups were compared to expedite final buy-off.

// South Sidespan //
Time = 6:25am
Ambient Temperature = 48.5F
Condition = Partly Cloudy
Wind = SSW @ 4mph
ABF Surveyor(s) = James Allen and Ken Woon
Caltrans Engineer(s) = Matt Bruce and Damon Brown

Cable Strand	Steel Temperature (F)	O-O (#2) CT / ABF (mm)	Theor (mm)	CT Delta

(mm)				
1	47.4	Baseline or Zero	78	0
111	45.6	561 (-61) = 500 / 490, 489	490	+ 10

Comments: All cable strands remained free-hanging at the time of measurement on the south sidespan. I took all of the measurements while Damon assisted me with setting up the targets, being level, normal to cable, etc. A timber block was used on cable strand number 1 to obtain all of the measurements where the dimension is in ( ) millimeters.

Measurements on the cable strands at this time were done immediately after ABF ironworkers performed a real time or "Live" adjustment on the cable strand. Once the cable strand was adjusted ABF surveyors would take a measurement followed by Caltrans engineers. Numbers amongst the two groups were compared to expedite final buy-off.

- All of the prescribed measurements were completed at 6:35am and conveyed to Alex. As mentioned in the comments section of the measurement tabulations, live adjustments were performed by ABF ironworkers. An adjustment would be made and then ABF surveyors and Caltrans engineers would measure the cable strand to verify the correct sag adjustment was done before moving on to adjusting another strand. The ironworkers began their shift at 6:00am at the tower saddle and at the east anchorages. See Daryoush Bahar's diary for comments, measurements, labor, and equipment at the tower saddle. See Saman Soheilifard's diary for comments, measurements, labor, and equipment at the east anchorage.

- Attended weekly SAS staff meeting at 8:00am.

- Completed filling out the daily cable strand sag adjustment sheet.

- Spent the majority of the day processing all of the data for the "Suspender Bracket" surveys done March 8-9, 12-13, and 21-22, 2012. The information is time sensitive since cable hauling, placing, and adjusting is nearly complete. Compaction is expected to take a few weeks prior to cable band layout which is indirectly related to the suspender bracket survey. Gave Warren Collins a "bootleg" copy of the suspender bracket station deltas from the theoretical position since the shop drawings didn't incorporate the project grid-ground factor and the construction tolerances placing the brackets at ZPMC's shop.

- Attended the "Cable Compaction" presentation/meeting given by Warren Collins at 1:30pm to 3:30pm.