



SAS Superstructure

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 21-Nov-14

Time 11:26 PM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 524 Const Calendar Day: 912 Date: 08-Mar-2012 Thursday

Inspector Name: Bruce, Matt Title: Transportation Engineer

Inspection Type: Intermittent

Shift Hours: 01:00 am 12:00 am Break: 11:00 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 60 - 70

Precipitation 0.00"

Condition Mostly sunny to clear

Working Day If no, explain:

Diary:

Dispute

Work description.

- Phil Latasa, Sami Dauok, Alex Schmitt, Damon Brown, Daryoush Bahar, and myself checked the out to out distance for the cable strands today as Damon's and my measurements are tabulated below. Damon, Daryoush, and I were responsible for both the north/south sidespans today. Similarly Sami and Phil were responsible for checking the north/south mainspans. Damon, and Daryoush assisted me with the measurements and tabulating the data as I took all of the measurements unless otherwise noted. I used the Maletic gauge (#1) to take the out to out measurements of the cable strands.

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

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

The official sunrise time per weather.com for San Francisco today was at 6:30am. The following measurements were taken of the relative sag from cable strand number 1 at the given times below:

// North Sidespan //

Time = 1:29am

Ambient Temperature = 48.8F

Condition = Clear

Wind = N @ 3mph

ABF Surveyor(s) = None at this time

Caltrans Engineer(s) = Matt Bruce, Daryoush Bahar, and Damon Brown

| Cable Strand (mm) | Steel Temperature (F) | O-O (#1) CT (mm) | Theor (mm) | CT Delta |
|-------------------|-----------------------|----------------------------------|------------|----------|
| 1 | 49.2 | Baseline or Zero | 78 | 0 |
| 76 | 48.5 | 447, 445 - Ave = 446 (-61) = 385 | 362 | + 23 |
| 77 | 48.3 | 512, 512 - Ave = 512 (-61) = 451 | 427 | + 24 |
| 78 | 48.2 | 579, 579 - Ave = 579 (-61) = 518 | 491 | + 27 |
| 79 | 48.7 | 642, 643 - Ave = 643 (-61) = 582 | 556 | + 26 |
| 80 | 48.5 | 730, 730 - Ave = 730 (-61) = 669 | 621 | + 48 |



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| | | | | |
|----|------|----------------------------------|-----|------|
| 81 | 48.3 | 837, 842 - Ave = 840 (-61) = 779 | 686 | + 93 |
| 82 | 48.0 | 895, 896 - Ave = 896 (-61) = 835 | 751 | + 84 |

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 and Daryoush 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 83 was floated and 84 was in the rollers.

// South Sidespan //

Time = 2:36am

Ambient Temperature = 47.4F

Condition = Clear

Wind = N @ 0mph

ABF Surveyor(s) = James Allen and Ken Woon

Caltrans Engineer(s) = Matt Bruce, Daryoush Bahar, and Damon Brown

| Cable Strand (mm) | Steel Temperature (F) | O-O (#1) CT (mm) | Theor (mm) | CT Delta |
|-------------------|-----------------------|------------------|------------|----------|
| 1 | 50.5 | Baseline or Zero | 78 | 0 |
| 80 | 48.0 | 783 (-62) = 721 | 621 | + 100 |
| 81 | 47.6 | 833 (-62) = 771 | 688 | + 83 |
| 82 | 47.7 | 908 (-62) = 846 | 755 | + 91 |

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 Daryoush and Damon assisted me with setting up the targets, being level, normal to cable, etc. ABF laborers fixed a timber block to cable strand number 1 just prior to the ABF surveyors and Caltrans engineers taking measurements at this location. Plastic straps were used to fix the timber block to the strand. The timber block was used on cable strand number 1 to obtain all of the measurements where the dimension is in () millimeters. It should be noted that plastic straps made it difficult to obtain proper bearing on the timber block with the Maletic gauge (#1) flat plate.

- Measurements at the south sidespan were completed at 3:00am. At this time Daryoush and Damon proceeded to take measurements at the west loops. I set up backsight targets on control points WPP8.5C and TWL270 for the west jacking saddle check. This was done since the "Preliminary" measurements were taken prior to ABF ironworkers starting the "Live Adjusting" shift at 4:00am.

// North Sidespan //

Time = 4:40am

Ambient Temperature = 46.2F

Condition = Clear

Wind = N @ 1mph

ABF Surveyor(s) = James Allen and Ken Woon

Caltrans Engineer(s) = Matt Bruce, Daryoush Bahar, and Damon Brown

| Cable Strand (mm) | Steel Temperature (F) | O-O (#1) CT / ABF (mm) | Theor (mm) | CT Delta |
|-------------------|-----------------------|------------------------|------------|----------|
| 1 | 48.5 | Baseline or Zero | 78 | 0 |
| 76 | 46.5 | 431 (-61) = 370 / 368 | 362 | + 8 |
| 77 | 46.0 | 499 (-61) = 438 / 437 | 427 | + 11 |
| 78 | 48.3 | 549 (-61) = 488 / 488 | 491 | - 3 |
| 79 | 46.4 | 623 (-61) = 562 / 559 | 556 | + 6 |
| 80 | 46.5 | 680 (-61) = 619 / 623 | 621 | - 2 |
| 81 | 46.5 | 755 (-61) = 694 / 699 | 686 | + 8 |
| 81 | 46.5 | 741 (-61) = 680 / 680 | 686 | - 6 |
| 82 | 45.8 | 810 (-61) = 749 / 753 | 751 | - 2 |



Daily Diary Report by Bid Item

Job Name: 04-0120F4

Inspector Name Bruce, Matt

Diary #: 524

Date: 08-Mar-2012 Thursday

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 and Daryoush 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 83 was floated and 84 was in the rollers.

ABF laborers also fixed a timber block to cable strand number 1 at this location. It was determined that the timber block placed by ABF laborers was too difficult and not efficient when using the Maletic gauge #1, therefore we used our own timber block given the conditional restraints.

The measurements taken at this time were done while ABF ironworkers performed a real time 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. There were two live adjustments performed on cable strand number 81.

// South Sidespan //

Time = 6:00am

Ambient Temperature = 46.1F

Condition = Clear

Wind = N @ 1mph

ABF Surveyor(s) = James Allen and Ken Woon

Caltrans Engineer(s) = Matt Bruce, Daryoush Bahar, and Damon Brown

| Cable Strand (mm) | Steel Temperature (F) | O-O (#1) CT / ABF (mm) | Theor (mm) | CT Delta |
|-------------------|-----------------------|------------------------|------------|----------|
| 1 | 48.5 | Baseline or Zero | 78 | 0 |
| 80 | 46.0 | 684 (-61) = 623 / 627 | 621 | + 2 |
| 81 | 46.0 | 745 (-61) = 684 / 688 | 688 | - 4 |
| 82 | 46.0 | 817 (-61) = 756 / 761 | 755 | + 1 |

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 Daryoush and Damon assisted me with setting up the targets, being level, normal to cable, etc. As done on the north sidespan the ABF ironworkers performed a real time adjustments on the south sidespan cable strands prior to measuring.

- All of the prescribed measurements were completed at 6:25am 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 4:00am at the tower saddle and at the east anchorages. See Roman Granados's diary for comments, labor, and equipment at the tower saddle. See Bob Brignano's diary for comments, labor, and equipment at the east anchorage.

- As soon as the measurements were completed for the PWS sag adjustments myself, Damon, and Daryoush proceeded to survey the jacking saddle. I set up the total station on the YBITS W-Line bridge near the south barrier. The coordinates for the resected point were obtained from WPP8.5C and TWL270. The corner cube prism was used to improve the accuracy of the shots taken on the west jacking saddle. The following points on the west jacking saddle shot were 2A, 5A, 6A (3 of 6 total). The west jacking saddle appeared not to have moved since installation comparing with theoretical values. Due to the shift starting at 7:00am at the west loop the ironworkers were in the process of floating and placing cable strand number 83. The survey was stopped after these three points were shot for safety and access at the jacking saddle with the ironworkers working in the vicinity. ABF engineer Levi Gatsos and superintendent Scott Smith confronted myself, Damon and Daryoush. We acknowledged the fact that the ironworkers had work in that area that took precedence over our survey. We emphasized that work would not be held up for our survey contrary to their interactions and approach with us, which were false pretenses.

Daily Diary Report by Bid Item

Job Name: 04-0120F4

Inspector Name Bruce, Matt

Diary #: 524

Date: 08-Mar-2012 Thursday

- At or around 7:48am while myself and Damon were walking back to the Skyway to drive back to the Pier 7 office for the safety meeting we heard a loud noise on the W-Line OBG near the tower. ABF had dropped cable strand number 88. I was the first to announce the incident over the SAS talk group on the radio as myself and Damon were close to the accident, see the photo below for more details. We waited until Bob and Roman came to the scene to address the issue with ABF. To my knowledge nobody was hurt in the incident. See Roman and Bob's diaries for more details.
- Attended weekly SAS Safety Tailgate meeting at 8:00am at Pier 7.
- Completed filling out the daily cable strand sag adjustment sheet.
- Prepared for surveying the suspender brackets tonight along the E-Line OBG.
- Shot suspender brackets along the E-line OBG and a few on the W-Line OBG with the assistance of Damon Brown. Preparation for the survey started at 10:00pm and the survey went into the following day. See tomorrow's diary for additional details regarding this survey. The suspender brackets from panel point 12 to 110 were shot along the E-Line OBG as were panel points 64 and 84 along the W-Line OBG.
- Myself and Damon started our shift at 1:00am today and stopped at 11:30am (10hrs) to rest for the night survey. We then came back at 10:00am (2hrs to midnight) to survey the suspender brackets till 3:30am the following morning on Friday March 9th.

Attachment



Photo from my location when ABF dropped cable strand number 88 on the W-Line OBG at 7:48am.



Cable strand number 88 after it was dropped on the W-Line OBG looking north from the E-Line OBG near the tower.



Cable strand number 88 after it was dropped on the W-Line OBG



Daily Diary Report by Bid Item

Job Name: 04-0120F4 Inspector Name Bruce, Matt

Diary #: 524 Date: 08-Mar-2012 Thursday

looking west from the W-Line OBG near the tower.



Timber block fixed by ABF laborers on cable strand number 1 on the south sidespan today.