



SAS Superstructure

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 21-Nov-14

Time 11:29 PM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 507 Const Calendar Day: 892 Date: 17-Feb-2012 Friday
 Inspector Name: Bruce, Matt Title: Transportation Engineer
 Inspection Type: Intermittent
 Shift Hours: 05:00 am 03:30 pm Break: 00:30 Over Time: 02:00
 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.

- John Lyons, Phil Latasa, Sami Dauok, Shewit Semere, Alex Schmitt and myself checked the out to out distance for the cable strands today as Sami's and my measurements are tabulated below. Sami, Shewit, and I were responsible for both the north/south mainspans and west loop today. Similarly John and Phil were responsible for checking the north and south sidespans. Sami assisted me with the measurements and tabulating the data as I took all of the measurements. Shewit was there to observe our operation measuring the cable strand. I used the Maletic gauge (Yellow #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 Connex recording and analyzing the data. When all of the measurements were completed, Alex was responsible for reviewing the measurements with ABF engineer Zach Lauria. See Alex's diary for more details related to the acceptance or rejection of cable strand sag adjustment.

Ambient temperatures were taken with the red temperature gauge. Wind speeds were 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. Please note that today the nearest decimal place was read to indicate that there are slight variations in the ambient and steel temperatures.

The official sunrise time per weather.com for San Francisco today was at 6:57am. The following measurements were taken of the relative sag from cable strand number 1 at the given times below:

// North Mainspan //

Time = 5:10am

Ambient Temperature = 47.3F

Condition = Clear

Wind = NNW @ 2mph

ABF Surveyor(s) = Terry Denis and Mike Bonidici

Caltrans Engineer(s) = Matt Bruce, Shewit Semere, and Sami Dauok

Cable Strand	Steel Temperature (F)	O-O (#1Y) CT (mm)	Theor (mm)	CT Delta (mm)
1	49.0	Baseline or Zero	75	0
38	49.0	181, 180 - Ave = 181	177	+ 4
39	47.8	238, 239 - Ave = 239	234	+ 5
40	48.7	290, 294 - Ave = 292	290	+ 2
41	47.5	355, 355 - Ave = 355	347	+ 8
42	47.8	535	404	+ 131



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43	47.0	527	461	+ 66
44	46.8	560	518	+ 42
45	46.6	608	575	+ 33

Comments: All cable strands were considered to be free-hanging at the time of measurement on the north mainspan. I took all of the measurements while Sami assisted me with setting up the targets, being level, normal to cable, etc. Numbers used for comparison were not informally exchanged amongst Caltrans engineers and ABF surveyors at this location.

// South Mainspan //

Time = 5:40am

Ambient Temperature = 47.2F

Condition = Clear

Wind = NNE @ 1mph

ABF Surveyor(s) = None at this time

Caltrans Engineer(s) = Matt Bruce, Shewit Semere, and Sami Dauok

Cable Strand (mm)	Steel Temperature (F)	O-O (#1Y) CT / ABF (mm)	Theor (mm)	CT Delta
1	48.5	Baseline or Zero	76	
0				
38	47.6	165, 167 - Ave = 166 / 164	173	- 7
39	47.7	229, 230 - Ave = 230 / 230	231	- 1
40	47.6	280, 283 - Ave = 282 / 283	290	- 8
41	47.6	347 / 348	349	- 2
42	47.5	496 / 495	407	+ 89
43	47.5	642 (-61) = 581 / 582	466	+ 115
44	48.4	637 (-61) = 576 / 574	525	+ 51
45	48.8	613 / 612	583	+ 30

Comments: All cable strands were considered to be free-hanging at the time of measurement on the south mainspan. I took all of the measurements while Sami assisted me with setting up the targets, being level, normal to cable, etc. The ABF numbers used for comparison were measured by ABF surveyor Terry Denis. The numbers in parentheses denote that a timber block was used for the measurement. Also for cable strands numbers 43 and 44 the Maletic gauge had to be inverted to take the measurement off of the timber block. Since these two strands were surrounded by other strands the target couldn't be placed on the cable strand due to the blocked line of sight.

- Sami, Shewit, and myself completed measurements at both the north and south mainspans at 5:59am. All numbers were reported to Alex Schmitt and we proceeded to take measurements at the west-loop since Phil and John were taking their time on measuring the sidespans given the disputes at this location in previous days.

// North West-Loop //

Time = 6:15am

Ambient Temperature = 48.6F

Condition = Clear

Wind = N @ 0 mph

ABF Engineer(s) or Surveyor(s) = None at this time

Caltrans Engineer(s) = Matt Bruce, Shewit Semere, and Sami Dauok

Cable Strand	Steel Temperature (F)	O-O (#1Y) CT (mm)	Theor (mm)	CT Delta (mm)
1	50.0	Baseline or Zero	80	0
45	49.8	822 (-114) = 708	717	- 9

Comments: All cable strands were considered to be free-hanging at the time of measurement on the north

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west-loop. I took all of the measurements while Sami assisted me with setting up the targets, being level, normal to cable, etc. I recorded the data while the measurements were being taken. The () denotes that a block was used with the block width or height dimension in millimeters.

// South West-Loop //

Time = 6:25am

Ambient Temperature = 50.0F

Condition = Clear

Wind = N @ 0 mph

ABF Engineer(s) or Surveyor(s) = None at this time

Caltrans Engineer(s) = Matt Bruce, Shewit Semere, and Sami Dauok

Cable Strand	Steel Temperature (F)	O-O (#1Y) CT (mm)	Theor (mm)	CT Delta (mm)
1	49.7	Baseline or Zero	80	0
45	50.1	830 (-114) = 716	717	- 1

Comments: All cable strands were considered to be free-hanging at the time of measurement on the south west-loop. I took all of the measurements while Sami assisted me with setting up the targets, being level, normal to cable, etc. I recorded the data while the measurements were being taken. The () denotes that a block was used with the block width or height dimension in millimeters.

- All of the measurements that I took today were conveyed to Alex prior to 6:30am. Approximately at or around 7:20am I proceeded to assist with checking cable strand number 38 at the north sidespan. See John Lyons, Alex Schmitt, and Phil Latasa's diaries for more details regarding nature and comments related to the issue with this particular cable strand. Similar to yesterday I merely came to this location to offer my opinion and to take a check shot.

// North Sidespan //

Time = 7:20am

ABF Engineer(s) or Surveyor(s) = Terry Denis and Mike Bonidici

Caltrans Engineer(s) = Matt Bruce, Shewit Semere, Phil Latasa, and John Lyons

Cable Strand	O-O (#1Y) CT (mm)	Theor (mm)	CT Delta (mm)
1	Baseline or Zero	80	0
38	189, 198 - Ave = 194 (-61) = 133	156	- 23

Comments: The () denotes that a block was used with the block width or height dimension in millimeters. Similar to yesterday it was not possible to be level and clear cable strand number 29 to measure cable strand number 38. See John and Phil's diaries for the ambient and steel temperatures, etc.

- Attended weekly OBG staff meeting at 8:30am.

- Continued to develop a plan for surveying the suspender brackets on the OBG.

- Warren Collins and myself ordered a metric steel tape which is calibrated to 68F (20C) from ESC salesman/surveyor Mario Menesini. This tape is intended to be used for the layout of the cable bands along the top of the cable.

- Emailed the results of the calibration done yesterday of the "Cable Strand Gauge Calibration Verification" to pertinent people related to the cable strand adjustment.

- Gave Victor Maletic the cable strand sag adjustment gauge (#1 Yellow) for repair/retrofit of the laser components.

- Worked on compiling my measurements and gave the daily cable strand sag adjustment sheets to Alex.



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- Reviewed previous daily cable strand sag adjustment sheets for Michelle Chui regarding accuracy and clarification.

Attachment



Measuring the out-to-out distance between cable strand number 1 to 39 on the north mainspan with the Maletic gauge (#1 Yellow) looking west.



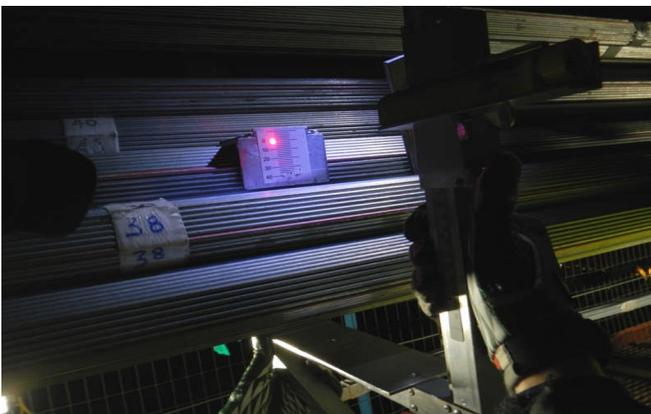
Observing the ABF surveyors take measurements on cable strand 38 on the north sidespan with the tree calipers.



Measuring the out-to-out distance between cable strand number 1 to either 42 or 43 while inverting the gauge on the south mainspan looking south.



Measuring the out-to-out distance between cable strand number 1 to either 42 or 43 while inverting the gauge on the south mainspan looking south.



Measuring the out-to-out distance between cable strand number 1 to 39 on the north mainspan with the Maletic gauge (#1 Yellow) looking south.



Hauling wheel used near the east face of the W2W west deviation saddle.

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Measuring the out-to-out distance between cable strand number 1 to 38 (using a block on cable strand 1) on the north sidespan looking west.



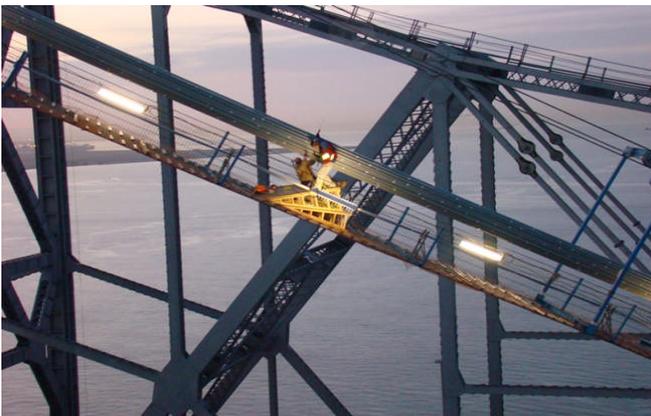
Measuring the out-to-out distance between cable strand number 1 to 39 on the north mainspan with the Maletic gauge (#1 Yellow) looking south.



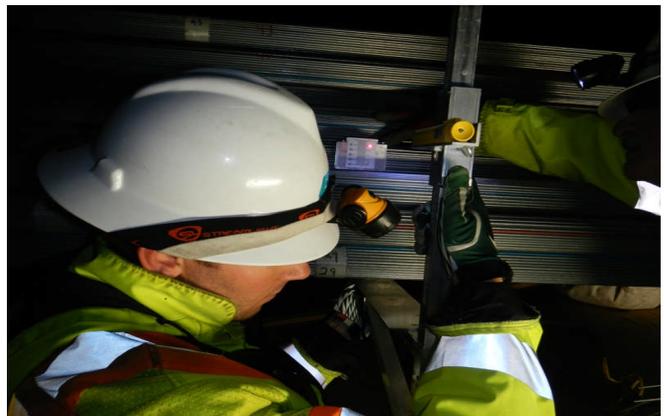
Temporary access bridge from W2 to the YBITS bridge being used for the Hinge K work along the W-Line.



Sunrise from the east seen from the north sidespan catwalk during the remeasure of cable strand number 38.



Observing the ABF surveyors take measurements on cable strands on the south sidespan with the tree calipers.



Measuring the out-to-out distance between cable strand number 1 to 40 on the south mainspan with the Maletic gauge (#1 Yellow) looking north.