



SAS Superstructure

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 21-Nov-14

Time 10:56 PM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 716 Const Calendar Day: 161 Date: 12-Nov-2012 Monday
Inspector Name: Bruce, Matt Title: Transportation Engineer
Inspection Type: Intermittent
Shift Hours: 07:00 pm 03:30 am Break: 00:30 Over Time:
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 50 - 60 12 PM 50 - 60 4PM 50 - 60
Precipitation 0.00" Condition Partly overcast

Working Day [ ] If no, explain:

Diary:

Dispute

Work description.

- Prepared for measuring the Hinge A pipe beam alignment along the E-Line. This task included gathering the necessary tools and documents related for this measurement.

[ ]

- ABF ironworkers began their shift at 8:00pm Monday November 12th and worked 10hrs until 6:30am Tuesday morning November the 13th. Myself, Parviz Jalali and Bob Brignano were present at the start of the shift. As mentioned yesterday PJ was responsible for inspecting the Lead + Steel shim installation, Bob was onsite until 11:00pm to resolve any issues with the Contractor since he was the most knowledgable about the operation. I am predominately responsible for checking the alignment of Hinge A pipe beams when the Contractor is completed.

The first task of the shift was to adjust the North E-Line Hinge A pipe beam which began at 8:00pm. While ABF ironworkers were adjusting the pipe beam, the Caltrans SMART level was left on top of the stainless steel section east of Diaphragm D and observed. The pipe beam vertical angle went from 0.7 degrees to 0.6 degrees and finally to 0.8 degrees during the jacking operation. When the jacking was completed the last vertical angle measured was at 0.8 degrees. The South E-Line Hinge A pipe beam vertical angle was checked at 0.8 degrees prior to jacking the North pipe beam. This was the same vertical angle measured last night. Caltrans measurements were taken from 8:15pm to 10:45pm where the steel temperature inside of the Skyway Diaphragm D was 54F. The concrete temperature inside of the Skyway taken on the north stem wall at E3E-5W measured 56F.

The following are the results of measurements taken on the Hinge A pipe beams along the E-Line after the North pipe beam was adjusted:

Horizontal Skew:
-----

East end, side-to-side distance of the pipe beam on the stainless steel section = 2647mm

West end of Diaphragm C, side-to-side distance on the stainless steel section = 2646mm

Delta = 1mm (tolerance = 15mm)

ABF engineer Andre Markarian agreed with this measurement for the horizontal distance.

Vertical Angle:

## Daily Diary Report by Bid Item

Job Name: 04-0120F4

Inspector Name Bruce, Matt

Diary #: 716

Date: 12-Nov-2012 Monday

-----  
South Pipe Beam - on top dead center of the stainless steel section east of diaphragm D = 0.8 degrees tilted up on the west end

North Pipe Beam - on top dead center of the stainless steel section east of diaphragm D = 0.8 degrees tilted up on the west end

ABF engineer Andre Markarian's SMART level showed an angle of 1.1 degrees tilted up on the west end for both pipe beams. His measurements were taken on the bottom of the pipe beam. For our measurement, the top dead center of the pipe was marked transversely using a level before placing the SMART level in the longitudinal direction on the stainless steel section of the pipe.

Longitudinal Offset:  
-----

South pipe beam needs to go East 32mm to align the pipe beam stiffeners with the stiffeners of Diaphragm A in the SAS

North pipe beam needs to go East 23mm to align the pipe beam stiffeners with the stiffeners of Diaphragm A in the SAS

ABF is aware that the pipe beams will need to be adjusted in the longitudinal direction but did not measure the dimension during this shift. The longitudinal measurement done by myself and Bob was taken from the pipe beam stiffener plates and the diaphragm stiffener plates at location A to a laser reference line. The final longitudinal offset check will include Diaphragm B as this is the most critical location.

Basically in so many words, calculations, and or numbers the E-Line pipe beams were measured to be parallel to one another, at the same gradient, and need to be adjusted in the longitudinal direction. I plan on conducting another round of measurements after all shims have been installed in the SAS and Skyway just before grouting.

After jacking operations of the North E-Line Hinge A pipe beam were completed ABF crews commenced installing shims in Skyway diaphragms C and D. Shim installation took the rest of the shift to complete in these locations due to the bearing adjustments. See PJ's diary for more details on this task, ABF labor, and equipment.

### Attachment



Vertical angle of 0.8 degrees tilted on the west end of the South E-Line Hinge A pipe beam while the North pipe was being jacked into position.



Intermediate angle of 0.7 and 0.6 degrees tilted on the west end of the North E-Line Hinge A pipe beam observed during jacking operations.

## Daily Diary Report by Bid Item

Job Name: 04-0120F4

Inspector Name Bruce, Matt

Diary #: 716

Date: 12-Nov-2012 Monday



The gap between the Hinge A pipe beam and the bearings looking east from Diaphragm A after jacking operations of the North pipe beam.



Intermediate angle of 0.7 degrees tilted on the west end of the North E-Line Hinge A pipe beam observed during jacking operations.