



**SAS Superstructure**

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 21-Nov-14

Time 11:07 PM

**Daily Diary Report by Bid Item**

Contract No.: 04-0120F4

Diary #: 651 Const Calendar Day: 79 Date: 22-Aug-2012 Wednesday

Inspector Name: Bruce, Matt Title: Transportation Engineer

Inspection Type: Intermittent

Shift Hours: 07:00 am 05:30 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 50 - 60 12 PM 60 - 70 4PM 60 - 70

Precipitation 0.00"

Condition Overcast in the AM to mostly sunny in the PM

Working Day  If no, explain:

**Diary:**

Dispute

**Work description.**

- Completed analyzing the measurements taken on Monday and Tuesday of the following:

- 1.) Relationship of the actual distance between Lower Housing (Bearing and Shear Key) anchor rods holes, to the anchor rod hole blockout in the E2 concrete cap beam, to the 1.781 O/S line on the concrete placed by ABF surveyors.
- 2.) Parallelism measurement between the 1.781 O/S line on the concrete placed by ABF surveyors to the OBG punchmarks placed in China.
- 3.) Transverse Upper Housing measurements of the Shear Keys and Bearings

These measurements are being done at the request of TY-Lin designers Hyat Tazir and Dan Turner to primarily assess the current location of the Shear Keys and Bearings at the E2 cap beam in the longitudinal direction.

After analyzing the measurements mentioned above it was found that the average center to center distance between the lower housing anchor rod holes and the anchor rod hole blockouts in the E2 cap beam was 241mm +/- 15mm. Submittal 2419R00 specifies a longitudinal lateral movement or axial compression after load transfer of 295mm. The average edge to edge hole distance was measured at 288mm +/- 15mm.

My plan for intermittent checking of the axial camber during load transfer is to use the surveyed chalk lines on top of the E2 concrete cap beam as described by ABF in Submittal 2419R00 as points of reference. This line will not only be used to rough check lower and upper housing alignment, but to track the axial compression of the OBG during load transfer. I need help darkening the existing chalk lines placed last year as they are fading. Before the anchor rods are stressed and grouted the Upper and Lower housing will be surveyed with the total station and possibly the scanner in addition to using local measurements.

In my opinion it is prudent for the contractor to wait until the bridge has exhibited all movement due to load transfer prior to fastening anchor rods in the OBG and to the E2 cap beam. Alignment of the anchor rod holes in the OBG and E2 will only be one component of the Upper and Lower Housing check. These components also MUST NOT have any pre-rotation to behave as designed prior to connecting to E2 and the OBG.

- Attended a meeting with TY-Lin designers Hyat Tazir, Paul Chau, and SAS RE Bill Casey regarding east end surveys related to the Hinge A pipe beams at 10:00am. It was decided to provide TY-Lin additional



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points for the laser scan data (SAS pipe sleeves). We also discussed the issues with the Shear Key and Bearing anchor rod holes related to the axial camber of the bridge after load transfer.

- Escorted Paul and Hyat to the OBG east end at 11:20am to review the additional points discussed in the meeting.

- Went to the tower to observe the tower head erection operations and more importantly check that the two mini prisms used to monitor the tower deflection during load transfer were not disturbed. Also checked on possible locations on top of the tower head to place points for future surveys.

### Attachment



Standing at the top of the north tower head looking down and to the east at the main span cables coming out of the tower saddle.



Standing at the top of the north tower head looking west.



Standing at the top of the north tower head looking southwest.



Standing at the top of the north tower head looking down at the possible location to place a survey point.