



SAS Superstructure

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 22-Nov-14

Time 6:52 AM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 1225 Const Calendar Day: 798 Date: 11-Aug-2014 Monday

Inspector Name: Brignano, Bob Title: Transportation Engineer

Inspection Type:

Shift Hours: Break: 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 12 PM 4PM
Precipitation Condition overcast am, clear pm

Working Day [checked] If no, explain:

Diary:

Dispute

General Comments

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:



ABF Engineer Kelvin Chen is working part time in the field and office on CCO 314.

There is work in the field on TR's 18 & 19. Crews at the Pier 7 warehouse area are working an 8-hour shift 0600 through 1430, while other crews on the jobsite are working an 8-hour shift 0600 through 1430, a 10-hour shift 0600 through 1630, or a 12-hour shift 0600 through 1830. Working on CCO 314 operations are Ironworker Jared Garrett (0600~1100 ~ 5 hrs), Ironworker Ricky Damboise (~0630~0830 ~ 2 hrs), Ironworker Paul Fambrini (~0930~1030 ~ 1 hr), Operator John Sabatino (~0630~0645 & ~0800~0815 ~ 0.5 hrs), and Laborer Carlos (Pedro) Garcia (~0830~0930 ~ 1 hr). The non-CCO 314 operations elsewhere at the Pier 7 warehouse area at other times in the day are not covered by this diary.

As with the previous work positioning the couplers in the test rigs on 7/31/2014, the face/end of the couplers are about 1" to 1-1/4" from the inside face of the end plate - the per plan dimension is 20mm (~ 3/4") "clear" (which means minimum) and the similar dimensions in TR's 12 & 13 were slightly greater than 1" (or 1"+) to error on the side of more than the clear dimension. With the couplers being properly positioned and the rods rotated correctly, the south end plates can be erected.

At the start of the day, the end plate is erected at the south end of TR 18 without boltup other than a few bolts to hang it safely in the right place. Then, the end plate is erected at the south end of TR 19 without boltup other than a few bolts to safely hang it in the right place. These end plates are installed with the extendable forklift extending under the tents without removing the tents. After erection of both end plates, the A325 bolt assemblies are installed in both end plates and the bolts are tensioned with an air impact gun by the turn of the nut method (snug + half turn). Tensioning of the A325 bolt assemblies at the south end plates of TR's 18 & 19 is complete by about 0730.

After completion of the end plate installation at TR's 18 & 19, the spherical washers and spherical nuts are installed on the test rods. The nuts are set on the test rods in the same position/stickout as previously installed - 97mm stickout at TR 18 and 99mm stickout at TR 19.

Starting ~0745, ABF moves the south traffic plates over the ends of the test rigs. This work is done by the 2 ironworkers with assistance for the later part of the work from the operator. They do this work with the extendable forklift and without moving the tents out of the way. Some of the work is done with the extendable forklift boom under the tents and some of it is done with forks under the plates to push the plates. Work is completed first at TR 19 and then at TR 18. This traffic plate work is done by ~0815. Then the ironworkers reinstall the wire ropes over the traffic plates, connecting to the k-rail. Then, the

Daily Diary Report by Bid Item

Job Name: 04-0120F4

Inspector Name Brignano, Bob

Diary #: 1225 Date: 11-Aug-2014 Monday

ironworker with the laborer installs the end tarps at the tents starting ~0830 and complete ~0930.

VGO continues work today on site at TR's 18 & 19, for the final instrumentation installation and the test rig exercising/zeroing/snugging operation. From VGO, Dave Van Dyke and Pamela Wallace arrive on site at 0800. VGO monitored the data over the weekend (and including this morning before arriving on site) for issues and report this morning that there are no drift issues with the strain gauges. VGO installs the displacement transducers at TR 18 starting ~0800 with it being complete ~0830. VGO installs the displacement transducers at TR 19 starting ~0830 with it being complete ~0900. This work includes calibration checks of the installed systems. VGO installs the ambient air thermocouple inside the tent at ~0930. Exercising, zeroing, and snug tightening steps are between ~0940 and ~1010. VGO then does more checks of the data and produces data reports. They are complete with all the work that can be done on site by ~1130 and leave the site. VGO flies back to Oregon this afternoon and will continue to monitor the data for drift over the next week prior to the scheduled tensioning date next week.

For the jack/gauge exercising, zeroing, snug tightening, and tensioning steps at the 2 test rigs, the DJV and CT-METS are not present. The DJV has only witnessed some of these steps and the AE monitoring installation is not complete and not necessary for these steps. Two ABF ironworkers are present to operate the hydraulic pump and tighten the nut, with VGO present to monitor the loads being used to guide the operations.

The first jack/gauge exercising, zeroing, and snug tightening is at TR 18 (Dry 2008 Rod, ID S1-A7, Bottom). This work starts at 0942. At 700 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 97 kips. The hydraulic pressure per the dial gauge is increased to 1,500 psi with the primary strain gauges giving a force of 200 kips. This is the first of three exercising steps to approximately 200 kips. The hydraulic fluid is then bled to approximately zero pressure, but a few kips do remain in the rod. The hydraulic pressure per the dial gauge is increased to 1,500 psi with the primary strain gauges giving a force of 202 kips. This is the second of three exercising steps to ~200 kips. The hydraulic fluid is then bled to approximately zero pressure, but a few kips do remain in the rod. The hydraulic pressure per the dial gauge is increased to 1,500 psi with the primary strain gauges giving a force of 202 kips. This is the third of three exercising steps to ~200 kips. The hydraulic fluid is then bled to approximately zero pressure, but a few kips do remain in the rod. Then, the zeroing procedures start. Both the jacking rod nut against the test rig end plate and the jacking rod nut against the jacking beam are backed off so that there is no tension locked in the jacking rod as part of the zeroing procedure for VGO's strain gauges. Then, VGO performs the zeroing procedure for the strain gauges with the computer. Then, the jacking rod nut against end plate is hand tightened by an ironworker. Then, VGO performs the zeroing procedure for the displacement transducers with the computer. Then the other jacking rod nut against the jacking beam is hand tightened, so the next jacking step will not waste jack stroke – note that there is still plenty of jack stroke in this equipment. Then, the rod is tensioned to a snug tight load (aim ~ 0.10 Fu). The hydraulic pressure per the dial gauge is increased to 600 psi and the primary strain gauges give a force of 80 kips. There is no waiting before tightening the nut because an AE check is not required, so there is no opportunity for bleed loss. The nut is tightened (using a plate wrench, but without much force applied). The hydraulic fluid is then bled to zero. The load per the primary strain gauges after the seating of the nut is 72 kips (8 kip seating loss) for a load of 0.09 Fu.

The second jack/gauge exercising, zeroing, and snug tightening is at TR 19 (Dry 2008 Rod, ID S2-H6, Bottom). This work starts at 0958. At 700 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 89 kips. The hydraulic pressure per the dial gauge is increased to 1,500 psi with the primary strain gauges giving a force of 188 kips. The hydraulic pressure per the dial gauge is increased to 1,600 psi with the primary strain gauges giving a force of 201 kips. This is the first of three exercising steps to approximately 200 kips. The hydraulic fluid is then bled to approximately zero pressure, but a few kips do remain in the rod. The hydraulic pressure per the dial gauge is increased to 1,600 psi with the primary strain gauges giving a force of 201 kips. This is the second of three exercising steps to ~200 kips. The hydraulic fluid is then bled to approximately zero pressure, but a few kips do remain in the rod. The hydraulic pressure per the dial gauge is increased to 1,600 psi with the primary strain gauges giving a force of 202 kips. This is the third of three exercising steps to ~200 kips. The hydraulic fluid is then bled to approximately zero pressure, but a few kips do remain in the rod. Then, the



Daily Diary Report by Bid Item

Job Name: 04-0120F4

Inspector Name Brignano, Bob

Diary #: 1225 Date: 11-Aug-2014 Monday

zeroing procedures start. Both the jacking rod nut against the test rig end plate and the jacking rod nut against the jacking beam are backed off so that there is no tension locked in the jacking rod as part of the zeroing procedure for VGO's strain gauges. Then, VGO performs the zeroing procedure for the strain gauges with the computer. Then, the jacking rod nut against end plate is hand tightened by an ironworker. Then, VGO performs the zeroing procedure for the displacement transducers with the computer. Then the other jacking rod nut against the jacking beam is hand tightened, so the next jacking step will not waste jack stroke – note that there is still plenty of jack stroke in this equipment. Then, the rod is tensioned to a snug tight load (aim ~ 0.10 Fu). The hydraulic pressure per the dial gauge is increased to 650 psi and the primary strain gauges give a force of 77 kips. There is no waiting before tightening the nut because an AE check is not required, so there is no opportunity for bleed loss. The nut is tightened (using a plate wrench, but without much force applied). The hydraulic fluid is then bled to zero. The load per the primary strain gauges after the seating of the nut is 66 kips (11 kip seating loss) for a load of 0.08 Fu.

After the work is complete at the test rigs with the exercising, zeroing, and snug tightening, the ironworkers start work to reinstall the parts of the fence to the south of the test rigs that were removed for the forklift access last week to partially dismantle the test rigs for VGO to remove and reinstall the strain gauges. The fence is to enclose the test rigs for security and primarily for safety to keep people out while the rods are under load. Work is complete on the fence ~1030. Then there is some more cleanup work and putting away the tools until the lunch break. After the lunch break, there is no more work at the test rigs by ABF.

A 7kW generator – Whisperwatt 7000 – ABF ID 002343 is on idle/standby at the test rig work. A 40kW generator – MQ Power 40 – ABF ID 002051 is used for the test rig exercising/zeroing/snugging operation and is on idle/standby at the test rig work area the remainder of the day. A Hydraulic Pump for running the jacks is used for the test rig exercising/zeroing/snugging operation and is on idle/standby at the test rig work area the remainder of the day. The extendable forklift (Gradall 544D - ABF ID 002005) is used briefly at the test rigs at different times. A Kubota Cart is used by the laborer, and one or two Kubota Carts are used by the ironworkers at different times. A compressor - IR 185 ABF ID 002039 - is brought to the test rig site ~0700, used for end plate bolting, and is removed from the test rig site ~0815.

Note that there is k-rail at this work area. All the remaining k-rail at the CCO 314 test rig site is State owned. There are 20 pieces of 10' bought k-rail. Of the 20 pieces, 16 are installed in test rigs and 4 are spare/extra k-rail that are set aside.

To elevate k-rail and sandbags, crane mats (built from 12x12's) and timber blocking (12x12's) are used. The crane mat and 12x12's quantities are as follows:

1 each 4'x20' crane mat (1 x 80 LF)
1 each 5'x19' crane mat (1 x 95 LF)
2 each 5'x20' crane mats (2 x 100 LF)
2 each 5'x16' crane mat (2 x 80 LF)
~64 LF additional 12x12's
Total 12x12's quantity = 599 LF ~ 600 LF

The agreed extra work with ABF is as follows:

Laborer Carlos (Pedro) Garcia - 1 hr
Ironworker Jared Garrett - 5 hrs
Ironworker Ricky Damboise - 2 hr
Ironworker Paul Fambrini - 1 hr
Operator John Sabatino - 0.5 hrs
Kubota Cart - 1 hr
Extendable Forklift - 2 hr