



SAS Superstructure

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 22-Nov-14

Time 6:50 AM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 1246 Const Calendar Day: 819 Date: 01-Sep-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 clear

Working Day If no, explain:

Diary:

Dispute

General Comments

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:



The status of the 2 test rigs in this current phase of the Townsend Test (Test IV) is as follows:

Rod 18 (Dry 2008 Rod, ID S1-A7, Bottom): Tensioned to 0.75 Fu Today

Rod 19 (Dry 2008 Rod, ID S2-H6, Bottom): Tensioned to 0.75 Fu Today

ABF Engineer Kelvin Chen is working part time in the field and office on CCO 314. ABF superintendent John Perine's last day on the job was last week (Friday 8/29/2014) and new ABF superintendent James (Fish) Sturgeon is not at work; no ABF superintendent is present for today's work, but Sturgeon is on call. ABF's safety manager is not at work, but ABF safety staff Barry Rathman is available offsite and is on call for today's work in the event of any safety issues.

There is work in the field for the scheduled jacking step at TR's 18 & 19. There is no other work by ABF today on site, with work today specifically because of CCO 314. Today is the Labor Day Holiday. The jacking step is not scheduled to happen until after the morning break (which starts at 0900), so that the morning data reports can be produced and evaluated and to keep the load step durations consistent. Ironworker Foreman Jared Garret (temporary foreman for the day) and Ironworker Jonathan Canites start work at 0600 and are done after 1000 – by union agreement they are paid 6 hours after working more than 4 hours. Today is a holiday, so the work is paid at 2.0x OT – Double Time (DT).

VGO is on site today for the jacking step at TR's 18 & 19. From VGO, Dave Van Dyke starts work on site at ~0800. He works on the morning data reports before this morning's scheduled tensioning step. VGO is present for live data display during the jacking step at the test rigs. Then, VGO works on the data reports from the jacking step at the test rigs. VGO leaves the site ~1000. Dave flies from the Bay Area to Oregon this afternoon. Remotely, at the end of the day, VGO produces and sends the pm data reports.

In the morning, prior to the jacking step, the ironworkers are working on other CCO operations. They start the day by removing the nuts at the concrete anchors for the test rigs no longer in use. These are the anchors at the test rig feet. There are 3 pairs of feet at the long test rigs and 2 pairs of feet at the short test rigs, with 4 threaded rods per test rig foot. They start by working at TR's 14-17 (originally TR's 1-4) and finish by working at TR's 5-9. The only locations where the nuts still need to be removed from concrete anchors is at TR's 18 & 19 (formerly TR's 12 & 13 and 10 & 11) with rods currently under load.

After working on the concrete anchors at the test rigs not currently in use, the ironworkers move some material in the warehouse area. A pallet with CCO 376 jacking hardware (3-1/2" diameter - 2 rods, 2 couplers, 2 nuts, 2 washers) is moved from the bolt barn to the CT storage fenced area of the warehouse.



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Job Name: 04-0120F4

Inspector Name Brignano, Bob

Diary #: 1246 Date: 01-Sep-2014 Monday

Two pallets with eight 300-ton jacks are moved from one area of the warehouse to the CT storage fenced area of the warehouse – a total of twelve 300-ton jacks were purchased by CCO 142 with 4 currently in use at TR's 18 & 19.

For the jacking step at the 2 test rigs, present from the DJV is Hayat Tazir. Present from CT-METS for AE is Saied Khan (communicate with Mistras personnel offsite). Two ABF ironworkers are present to operate the hydraulic pump, tighten the nut, and deal with any issues that may come up during the jacking operation, with VGO present to monitor the loads being used to guide the operations.

Test Rig #18 (Dry 2008 Rod, ID S1-A7, Bottom) Jacking Step:

This is the 8th jacking step and the rod is being jacked to 0.75 Fu. The post-seating of the nut target is 626.850 +10/-0 kips. The expected hydraulic pressure at this locked off force is 4,500 psi. Based on the previous jacking step (8/30/2014 - 0.70 Fu), the expected seating loss is at least 44 kips (plus some expected bleed loss during AE check), so the initial jacking target is ~675~685 kips. The tension on the rod at the start of the operation is 583 kips (the 0.70 Fu load left on the rod 2 days ago was 586 kips for a delta of -3 kips), with this tension difference possibly due to thermal differences between 8/30/2014 and today). Jacking is started at 0924. At 4,500 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 622 kips. The hydraulic pressure is increased to 5,100 psi and the primary strain gauges give a force of 681 kips. The AE is checked with the ok given at 0927. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 678 kips (bleed loss = 3 kips). After bleeding off the jacks, the primary strain gauges give a force of 633 kips (seating loss = 45 kips). The force is within the specified tolerance.

Test Rig #19 (Dry 2008 Rod, ID S2-H6, Bottom) Jacking Step:

This is the 8th jacking step and the rod is being jacked to 0.75 Fu. The post-seating of the nut target is 626.850 +10/-0 kips. The expected hydraulic pressure at this locked off force is 4,500 psi. Based on the previous jacking step (8/30/2014 - 0.70 Fu), the expected seating loss is at least 42-44 kips (plus some expected bleed loss during AE check), so the initial jacking target is ~675~685 kips. The tension on the rod at the start of the operation is 585 kips (the 0.70 Fu load left on the rod 2 days ago was 590 kips for a delta of -5 kips), with this tension difference possibly due to thermal differences between 8/30/2014 and today). Jacking is started at 0930. At 4,500 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 619 kips. The hydraulic pressure is increased to 5,150 psi and the primary strain gauges give a force of 685 kips. The AE is checked with the ok given at 0933. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 681 kips (bleed loss = 4 kips). After bleeding off the jacks, the primary strain gauges give a force of 636.3 kips (seating loss = 45 kips). The force is within the specified tolerance, but it is at the top end of that tolerance, within 1 kip of the maximum tension for this step. The force of 636.3 kips is after letting it settle for about a minute, and typically the force drops even more over the next few minutes, but the changes is still on the order of a fraction of kip – the final tension is approximately 636 kips and is below the maximum load of 636.850 kips.

A 40kW generator – MQ Power 40 – ABF ID 002051 is used briefly for the jacking operations 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 briefly for the jacking operations and is on idle/standby at the test rig work area the remainder of the day. A Kubota Cart is used by the ironworkers. A Hyster 80 forklift (ABF ID 002306) and extendable forklift (Gradall 544D - ABF ID 002005) are used by the ironworkers at various times. The only ABF compressor at Pier 7 is at the mechanic's shop and is red tagged, so ABF uses a compressor in the CCC yard – Atlas Copco 375 CFM compressor.

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)



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Monday

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:

Ironworker Foreman Jared Garrett - 6 hrs DT

Ironworker Jonathan Canites - 6 hrs DT

Engineer Kelvin Chen - 2 hrs

Hyster 80 Forklift - 1 hr OT

Extendable Forklift - 1 hr OT

40 kW Generator - 0.5 hr OT

12x12 timber - 600 LF (accidentally omitted from form)

See the attached Extra Work Order - Signed with ABF for CCO 314 work

INSPECTOR OT REMARK:

Office and Field 10 hours: Today is the Labor Day Holiday. I am at work 0600 and 1630 for the scheduled test rod tensioning step in the field and for other office work. ABF works in the field and I am in the field between 0600 and ~1000+. I am then in the office for various work related to A354 Grade BD bolts and rods, including reviewing the A354 Grade BD report (last draft is from last week, and it still needs updating, with comments requested by a few days from now). ABF's shift is 0600 to 1030 (but paid 6 hours per union agreement), and my shift and OT hours are 0600 to 1630.