



SAS Superstructure

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 21-Nov-14

Time 10:47 PM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 402 Const Calendar Day: 975 Date: 10-May-2012 Thursday

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 [checked] If no, explain:

Diary:

Dispute

General Comments

ITEM 60 ERECT STRUCTURAL STEEL (BRIDGE)(SADDLE):
WEST DEVIATION SADDLES HOUSING COVER PLATES:



ABF ironworker crew consisting of Jim Benninghove, Ryan Evanchik, Tony Miranda, Mike Portillo, Mike Draper, Ryan Nash, and Jonathan Canites are working at the W2 area. Note that Anthony (AJ) Smaller previously with this ironworker crew is now working with a different ironworker crew at the south mainspan cable compaction. Also assisting work at W2 part time is operator Vernon Hubbard with the 888 crane on top of W2 at the W-Line. It is a 10 hour shift for this crew, except for Ryan Nash and Johnathan Canites working on CCO 240, who only work an 8 hour shift.

ABF ironworker Mike Portillo with a hand tap chasing threads, continues to clean the drill and tap holes in the north west deviation saddle where the housing cover plates will be attached. After he completes this work at the north west deviation saddle, he moves to the south west deviation saddle to chase threads there. He spends most of the day chasing the threads of the drill and tap holes, and only at the end of the day works on other saddle housing cover plate erection work.

Today's main work is a test fit erection of the north west deviation saddle. This test fit is item work but it also has a CCO 185 (see below) component/implication for erecting the plates as a template for field drilling and tapping of holes in the saddle base plate. After yesterday's erection of the first 2 plates at the lower end of the saddle was not successful, ABF tries again this morning with these 2 plates in a different order and using different holes to see if they can get some of the holes to line up. They are still not successful in lining up the drill and tap holes in the saddle with the holes in the cover plates.

Between approximately 1100 and 1200, I have a few discussions with ABF engineer Levi Gatsos about options for slotting or over-sizing holes in the housing cover plates. The holes for the M16 SS bolts into saddle drill and tap holes are through shop drilled standard oversized holes in the housing cover plates that are 20mm diameter. Levi and I discuss the options of slotting holes only on one side or over-sizing all holes, with no initial preference by either of us for these options. If holes are slotted or oversized, plate washers would be needed to cover the holes. We also discuss the possibility of using standard fender washers with a larger outside diameter. Note that these housing plate to saddle bolt connections are not high strength bolt connections - stainless steel cap screws are used at a sealing spacing requirement with a sealing strip of neoprene between the saddle and the plates (what would be the faying surface in a high strength bolt connection).

During a conversation with ABF engineer Levi Gatsos around 1130, he says that the ironworkers want to oversize all the holes by reaming, not selectively enlarge only some holes that do not line up. Then after

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Date: 10-May-2012 Thursday

all holes are made larger, the hope is that the plates will easily line up and they don't need to mark certain holes for reaming or slotting. I agree with over-sizing all the holes on the radial lines that connect to shop drilled and tapped holes in the saddle ribs. The holes on the top edge of the housing cover plates are to be used as a template for field drilling and tapping holes in the saddle (CCO 185), and I do not want these holes enlarged because it is not necessary since the saddle drill and tap holes will be added in the field. Levi initially wants to oversize these holes too so that the ironworkers can mark the drill and tap locations in the saddle with the first 2 plates now erected (with some holes on the radial lines aligned with the holes in the saddle ribs) rather than taking the plates off the saddle, over-sizing the holes, fitting them up again, and then marking field drill and tap locations. Levi's concern is the possibility that enlarging the holes takes a few iterations, meaning that they do not get started marking holes for drilling and tapping until later, getting a later start on this CCO 185 drilling and tapping of holes in the saddle base plate. I tell him that I do not agree with enlarging the holes in the top edge of the housing cover plates where saddle drill and tap holes will be added in the field. I acknowledge that some holes on that top edge for the existing 1/2" drill and tap holes used for the grout formwork may need to be oversized on a case-by-case basis if those holes do not line up. The over-sizing of the holes and use of plate/fender washers will be addressed later in an RFI to obtain formal concurrence for this modification to the plates.

ABF's ironworkers begin over-sizing holes on the 2 radial lines on the saddle housing plates and they do not oversize holes on the top edge of the housing cover plates where drill and tap holes will be added to the saddle in the field. The holes for the M16 SS bolts into saddle drill and tap holes are through holes in the housing cover plates that are standard oversized 20mm diameter that ABF are reaming to larger oversized 24mm diameter holes with a 15/16" bit. This reaming is by ironworker Ryan Evanchik and Mike Draper. The reaming is with two air tools (reaming bit in an impact gun) run off the main air line ABF has running down the bridge.

After reaming holes in the first plates starting just before lunch, the first plate at the north west deviation saddle is fitup at the bottom end of the saddle at around 1300. With the reamed holes, the plate fits up and aligns with the drilled and tapped holes in the saddle ribs on both radial lines of the plates. After the first few plates have their holes reamed and fitup of the first plate is complete, only one ironworker (Mike Draper) continues with reaming holes and the other ironworkers (Jim Benninghove, Ryan Evanchik, Tony Miranda) work on erecting the plates. The third of seven plates is erected by 1415. The seventh of seven plates is erected at 1600.

After completing the fitup of the housing cover plates at the north west deviation saddle after 1600, ABF moves and arranges the housing cover plates for the south west deviation saddle. They do not begin reaming holes or fitup of plates for the south west deviation saddle. The ironworkers are working a 10 hour shift today, and leave at 1700 to get back to Pier 7 by 1730.

ITEM 60 ERECT STRUCTURAL STEEL (BRIDGE)(SADDLE): DISCUSSION WITH LEVI GATSOS ON VARIOUS ISSUES:

>The first neoprene for the housing cover plates is expected to arrive Monday of next week (5/14/2012), and that is when ABF can begin permanent erection of the housing cover plates. They can fitup/erect the plates over the trough for the first time, and they can take off the housing cover plates (if CCO 185 drilling and taping is complete), add neoprene, and permanently erect these plates. Not all of the neoprene will arrive at once and it is expected to arrive over several days.

>For attaching the housing cover plates, ABF ordered the stainless steel M16 bolts, fender washers, and lock washers from Bay Bolt today and expect to have the material in a few days. The fender washers are to cover the larger oversized 24mm diameter holes for the M16 bolts. Approval of fender washers instead of plate washers is pending an RFI to obtain formal concurrence for this modification to the plates. I request that ABF provide certificates of compliance and material certifications for this material. Note that these housing plate to saddle bolt connections are not high strength bolt connections - stainless steel cap screws are used at a sealing spacing requirement with a sealing strip of neoprene between the saddle and the plates (what would be the faying surface in a high strength bolt connection).

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>After ABF pulls off the housing cover plates from the test fitup, there is paint repair work that is necessary on the upper parts of the saddles which will be covered up when the permanent erection of the housing cover plates happens. ABF plans to have CCC come to the area and do all necessary paint repair to the upper saddle and the troughs/divider plates.

>After the housing cover plates are taken off from the test fitup, the reamed holes need to be cleaned up. The holes were not de-burred and some of the reamed holes were at an angle. ABF will use a die grinder to clean the interior of the reamed holes. I tell ABF engineer Levi Gatsos and ABF ironworker foreman Jim Benninghove to add organic zinc in the reamed holes.

>In the saddle upper ribs, there are some holes used for erection lugs need to be plugged/sealed with bolts.

>In saddle ribs between the saddle ribs that the saddle housing cover plates attach, there are some extra drill and tap holes. These extra drill and tap holes do not attach to any permanent work, and Levi and I do not know why these holes are in the saddle. I tell Levi to seal these unpainted upper holes (can collect water) with caulking material, similar to what was done with some abandoned drill and tap holes in the tower saddle.

>ABF will not be stressing the saddle tie rods soon because the rented Hydratight equipment does not have the right threaded insert for the thread on these rods (see diary notes from yesterday). ABF removes the rented Hydratight equipment from the site this afternoon and will return it to where they rented it. They do not know when they will get equipment with the correct threads so that these saddle tie rods can be stressed. The initial plan was to stress the saddle tie rods before erecting the housing cover plates, but that is not necessary because the upper housing saddle cover plates only cover the heads of the saddle tie rods and the nuts (the stressing end) remain exposed at the bottom of the saddle.

CCO 185 WEST DEVIATION SADDLES HOUSING COVER PLATES:

See the above Item 60 Erect Structural Steel (Bridge)(Saddle): West Deviation Saddles Housing Cover Plates remarks regarding the housing cover plates fitup that is necessary to mark the locations for the drill and tap hole locations in the saddle base plate. This is CCO 185 (previously was in CCO 37S1 but moved) and is per the response to ABF-RFI-002264R00. ABF's initial plan is to use the housing cover plates fitup as a template to mark the hole locations, remove the plates, and then drill and tap the holes. Later in the day, ABF decides to leave the housing cover plates in place after the fitup and use them as a template for drilling and tapping the holes. ABF only works on the item work fitup check work and does not begin the CCO 185 work to mark or drill and tap the holes in the saddle base plate.

CCO 240 SADDLE DIVIDER PLATE BLOCKING; TOWER SADDLE:

Laborers Jose Avila and Victor Hernandez are working part of the day at the tower saddle to epoxy the CCO 240 Saddle Divider Plate Blocking. Note that there was some previous epoxy work yesterday at this location by the laborers and also earlier in the week by ironworkers during the blocking installation. The work is to place an epoxy bead on 3 edges, both sides (both divider plates adjacent to the blocking), of each timber block installed between the divider plates in the saddle. The epoxy being used is a gel epoxy that works for overhead application without running, so that it does not run down beyond the application limits onto the strand.

These laborers are also working at this tower saddle location on item work to add access to the area with wood ladders from the walkways to the north and south of the saddle and to cover the open area between the 2 saddle troughs.

I visit the tower saddle with the DJV Designer George Baker 1015 to 1045 to examine the CCO 240

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Saddle Divider Plate Blocking. He takes photos for the DJV's records and has no comments on the blocking.

CCO 240 SADDLE DIVIDER PLATE BLOCKING; WEST DEVIATION & JACKING SADDLES:

Ironworkers Ryan Nash and Johnathan Canites work all day the epoxy for the west loop (WDS's and WJS) CCO 240 Saddle Divider Plate Blocking. Note that they only work an 8 hour day. They start at the north west deviation saddle, complete work there, move to the jacking saddle, complete work there, and move to the south west deviation saddle, which they do not complete today. The work is to place an epoxy bead on 3 edges, top and bottom, of each timber or steel block installed between the divider plates in the saddles. The epoxy being used is a gel epoxy that works for overhead application without running.

I visit the west loop (WDS's and WJS) saddles with the DJV Designer George Baker around 1100 to examine the epoxy application at the CCO 240 Saddle Divider Plate Blocking. He takes photos for the DJV's records and has no comments on the blocking or epoxy.

CCO 240 AGREED EXTRA WORK ORDER WITH ABF (TOWER SADDLE AND WEST DEVIATION & JACKING SADDLES):

The signed Extra Work Order with ABF is for the following:

Laborer Foreman Jose Avila - 4 hours Reg, 2 hours OT

Laborer Victor Hernandez - 4 hours

Ironworker Ryan Nash - 8 hours

Ironworker Jonathan Canites - 8 hours

See the attached Extra Work Order - Signed with ABF for CCO 240 work

INSPECTOR OT REMARK:

2 hours OT: Work in the field on CCO 240 Saddle Divider Plate Blocking (tower only) and Item 60 Erect Structural Steel (Bridge)(Saddle) test fit of the west deviation saddle housing cover plates is a 10 hour shift.