

Job Stamp 04-0120F4 SFOBB SAS

Const. Calendar:	617		
Project Work Day No.:	827		
Date	08/21/2008		
Inspectors	Start	01:00	Stop 12:10
Hours			
Shift Hours		00:30	12:30

ASSISTANT RESIDENT ENGINEER'S **CONTRACTOR – ABFJV, Subs Conco and RPS**

Weather: Partly cloudy with warm to mild temperature from 1:00am till 7:00am
 Foggy and overcast with cool temperatures from 7:00am till 10:15am
 Sunny with mild temperature with winds from the west from 10:15am till 12:10pm
 Hi 71F Lo 60F (per weather.com forecast)

Description of Operations @ W2 Cap Beam:

ABF

- Foreman Nigel Lohse directed Conco during the concrete placement regarding vibration, sequence of placing concrete, and curing operations.
- A crew was dedicated to watch the forms during concrete placement to watch for any leaks/blow-outs.
- Removed some of the debris from the soffit such as a water bottle and rebar tags.
- Removed 2"x4" screed guides on the formwork after the concrete was placed.
- Constructed additional handrail on the northwest and southwest ends of pour 3 limits near the west wall.
- Sprayed water on plastic concrete, see comments below.
- Began to mobilize concrete finishing and curing equipment on top of the pour 3 formwork.

Conco

- Placed approximately 558m³ of conventional concrete (Mix design No. 161145) in the pour 3 limits.

Time (military)	Temperature (°F)	Location where temperature was taken	Comments
01:00			Arrived onsite and both concrete pumps were mobilizing.
01:20			Went to the top of the W2 cap beam and began last minute inspection. Noticed a water bottle in the west wall near the jacking saddle blockout forms. I mentioned this to Nigel to which the piledrivers removed the waterbottle. I also notified Nigel that there was a lot of sawdust, woodchips, etc in the west wall that needed to be cleaned. The piledrivers used a hose to try and clean the debris which seemed to unsuccessful. I recommended using a vacuum or blower and he told me none were available.
02:12			First trucks arrived onsite and set up to discharge at both east and west pumps.
02:22			The temperature of the concrete in the wheelbarrows from both east and west pumps obtained by the infrared thermometer was 75.5°F. This temperature of the mercury thermometer was 74.5°F, see photo below for details.
02:33			West pump begins placing concrete in the southwest corner.
02:45	83	Jacking saddle blockout (west pump)	After concrete was placed to the top of the west wall and the west side of the longitudinal diaphragm a reading was taken.
02:54			Confirmed with Seong that the temperature at the hopper of the west pump was 80°F.
03:00	84	Transverse longitudinal diaphragm intersection (west pump)	Recommended to the Conco laborer to vibrate well around the jacking saddle support blocks.
03:10	83	South Transverse diaphragm (west pump)	
03:15			Confirmed with Damon that the temperature at the hopper of the west pump was 82°F.
03:25	87	Southeast corner (east pump)	This temperature was taken after two lifts had been completed, which would explain the possible increase in temperature.
03:40	83	East longitudinal diaphragm (east pump)	

Time (military)	Temperature (°F)	Location where temperature was taken	Comments
04:00		Nigel checked to see if the concrete in the southwest corner where concrete was initially placed and found that it hasn't set or still plastic.	
04:11	81	Jacking saddle west longitudinal diaphragm (west pump)	Confirmed with Seong that the temperature at the hopper of the west pump was 80°F.
04:12	80	Southwest wall (west pump)	
04:30	83	Southwest quadrant northeast corner (west pump)	
04:42	81	North transverse diaphragm (west pump)	
05:08	83	Northeast quadrant near the north bulkhead (east pump)	
05:17	83	Northwest quadrant center (west pump)	
05:27	82	West pump hopper	I went downstairs to calibrate/confirm infrared thermometer measurements.
05:33	81	Northwest quadrant north bulkhead (west pump)	
05:44	82	Northwest wall at the midpoint	
06:00	85	Southwest quadrant south bulkhead (west pump)	
06:06	83	South transverse diaphragm (west pump)	Confirmed with Seong that the temperature at the hopper of the west pump was 81°F.
06:24	84	Near south jacking saddle embedded rods on the north side (west pump)	
06:44	I inspected the north and south bulkheads where CBT-1 through CBT-8 extend past the forms. The ducts appeared to be intact as concrete was placed approximately 2' above the ducts.		
06:52	83	Northwest quadrant in the center (west pump)	
07:15	Conco laborers began to set 2"x4" screed supports for top of concrete lifts (TOCL) 1 through 6.		
07:29	84	Southwest wall (west pump)	
07:51	84	Southeast quadrant west end (east pump)	
07:53	83	South transverse diaphragm north of the manhole (west pump)	
08:09	83	Longitudinal and transverse diaphragm intersection southwest corner (west pump)	
08:15	Conco laborers starting to place the 1 st TOCL from the north end to the south end.		
08:26	82	Northeast corner north bulkhead	Reading taken at the rough finish of the 1 st TOCL
08:38	83	Southeast corner south bulkhead.	Conco laboreres completed the 1 st TOCL
08:47	Under the supervision of Mark MacDonald the Conco laborers began to revibrate the 1 st TOCL.		
08:57	Began smooth finish on the 1 st TOCL and Mark MacDonald was informed by Gil and myself of the language in the specification to revibrate the concrete as late as the concrete will respond again. After me and Gil told MacDonald the spec Nigel asked about the depth of vibration to which we told him it was below the first layer of top mat reinforcing.		

Time (military)	Temperature (°F)	Location where temperature was taken	Comments
09:05			Conco laborers starting to place the 2 nd TOCL from the north end to the south end.
09:23			Finished placing the 2 nd TOCL and rough finishing of this section was underway.
09:27			Conco laborers starting to place the 3 rd TOCL from the north end to the south end.
09:29			Under the supervision of Nigel Lohse Conco laborers began to revibrate the 2 nd TOCL.
09:37			Mobilized mechanical troweler on concrete of the northeast corner.
09:46	82	North end of the 3 rd TOCL	
09:50			Finished placing the 3 rd TOCL and rough finishing of this section was underway. I noticed evaporation from the first two TOCL from the east and discussed it with Gil. We informed foreman Nigel Lohse to spray water on the finished surfaces. They agreed to spray water however they had no intention of doing so had we not recommended them to spray the water.
10:05			Conco laborers began to revibrate the 3 rd TOCL.
10:18	91	North end of 1 st TOCL	Taken before water was sprayed on TOCL.
10:19	88	South end of 1 st TOCL	Taken before water was sprayed on TOCL.
10:22			Conco laborers starting to place the 4 th TOCL from the north end to the south end.
10:23	85	Center of 4 th TOCL in between manholes	
10:38	88	North end of 1 st TOCL in same location as reading at 10:18am.	Taken after water was sprayed on TOC. I told Nigel the importance of keeping the concrete surface moist mentioning the temperature change that I recorded with the infrared gun.
10:45			Conco laborers began to revibrate the 4 th TOCL, as the wind started to pick-up & remained steady till noon.
11:00			Conco laborers starting to place the 5 th TOCL from the north end to the south end.
11:14			Conco laborers began to revibrate the 5 th TOCL.
11:22			Conco laborers starting to place the 6 th TOCL from the north end to the south end.
11:42			Finishing work with the mechanical troweler commenced.
11:45			Conco laborers finished placing the 6 th TOCL from the north end to the south end.
12:00			Conco laborers began to revibrate the 6 th TOCL.
12:10			I left the jobsite as curing compound wasn't sprayed on any portion of the concrete and curing mats weren't placed.

* Temperatures were obtained with the Fluke-63 Infrared Thermometer. The Fluke-63 was calibrated the day before and during concrete placement with a mercury thermometer.

Notes:

1. Pamela Gagnier and myself were watching the concrete placement at the forms. My diary is for the concrete placement that I observed. Both of us watched different sections since there was two pumps operating at the same time.
2. The lighting in the morning hours was inadequate in my opinion for inspection and safety.
3. Overall the placement of concrete went well as the flow looked consistent with no segregation and vibration was done proficiently.
4. I heard water going through the hoses during the pour especially when I checked CBT-1 through CBT-8 at the north bulkhead.
5. Noticed Mark MacDonald walking around with an infrared temperature gun. He casually asked me twice while I was taken temperatures (recorded in the table above) during placement.
6. ABF and Conco was told to be cautious of the ducts while placing concrete and vibrating.
7. Temperatures in red and bold was taken on previously placed concrete lifts not next to the hose.

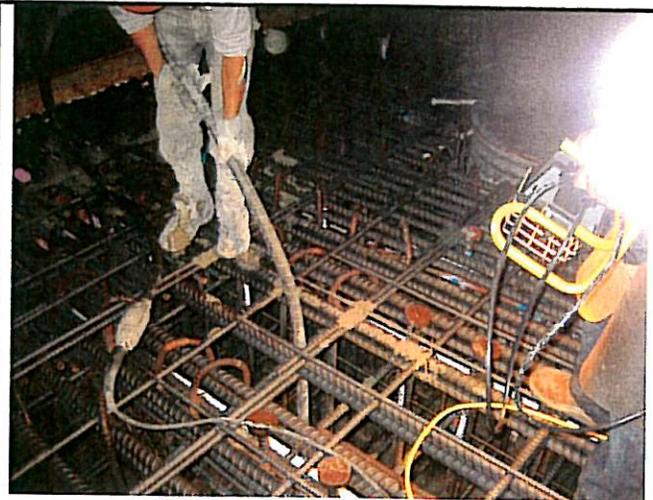
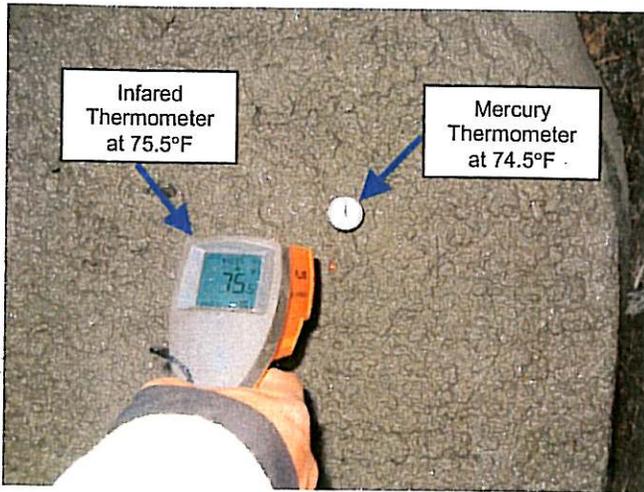
RPS

- Had one ironworker before and during the concrete placement to address any issues. There were no issues related to ironwork or ducts to my knowledge.

Inspector:

Matt Bruce Matt Bruce Transportation Engineer (D)

EA	04-0120F4
Co-Rte-KP (PM)	SF-080-13.2/13.9 (8.2/8.7)
Structure Rep.	Rick Morrow

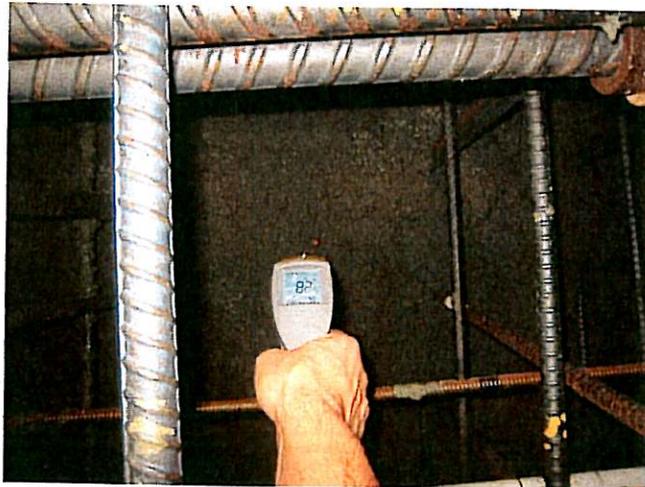


File Name:	Aug-21-2008 W2 Cap 006
Date:	08-21-08
By Int:	M Bruce

Description: Temperatures of concrete taken from the first trucks set up near both the east and west pumps. The temperature differential as seen in the photo above was approximately 1°F

File Name:	Aug-21-2008 W2 Cap 011
Date:	08-21-08
By Int:	M Bruce

Description: Conco laborer seen vibrating concrete near the north manhole, west side of the W2 cap beam. As mentioned above the lighting was not adequate as the ironworker onsite helped carry a floodlight around.



File Name:	Aug-21-2008 W2 Cap 017
Date:	08-21-08
By Int:	M Bruce

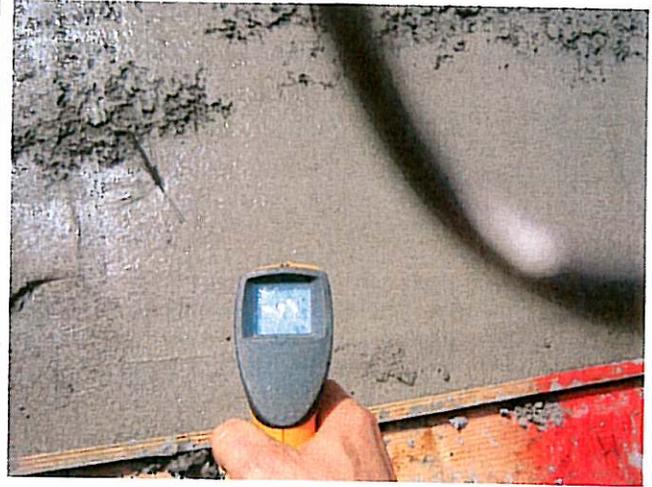
Description: Temperature taken at 3:40am in the east longitudinal diaphragm as concrete was just placed in this section.



File Name:	Aug-21-2008 W2 Cap 027
Date:	08-21-08
By Int:	M Bruce

Description: Conco laborers seen vibrating the first TOCL (top of concrete layer) near the east forms. Mark MacDonald is seen in the photo directing the laborers to vibrate the last lift approximately 15 minutes after the concrete was placed.

EA	04-0120F4
Co-Rte-KP (PM)	SF-080-13.2/13.9 (8.2/8.7)
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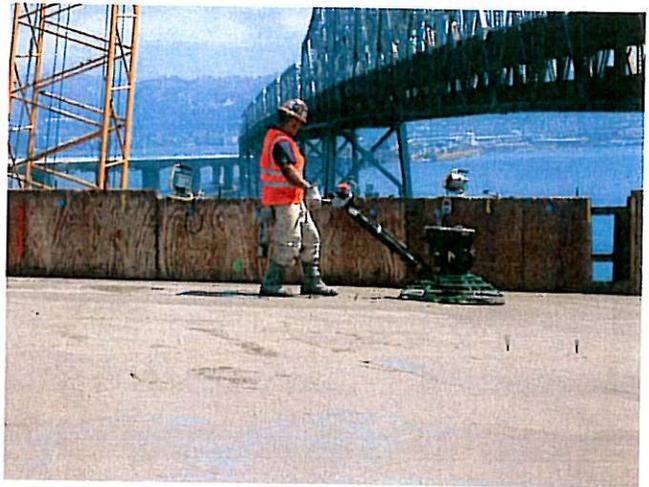
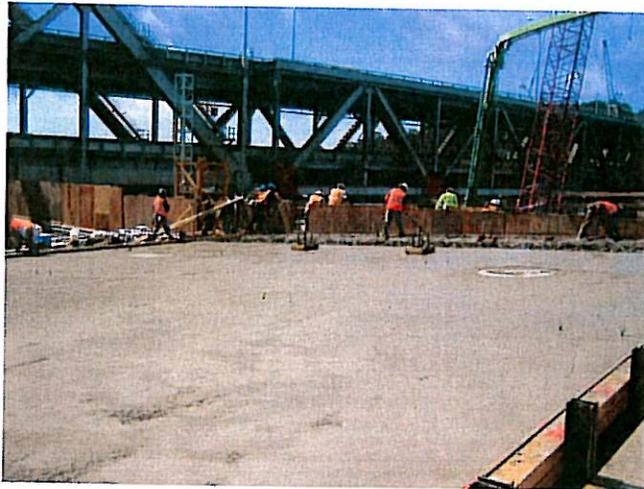


File Name:	Aug-21-2008 W2 Cap 031
Date:	08-21-08
By Int:	M Bruce

Description: Photo of the 3rd TOCL rough finished at 9:45am.

File Name:	Aug-21-2008 W2 Cap 033
Date:	08-21-08
By Int:	M Bruce

Description: Temperature of 91.5°F taken on north end of the 1st TOCL at 10:18am prior to water being sprayed on the surface.



File Name:	Aug-21-2008 W2 Cap 034
Date:	08-21-08
By Int:	M Bruce

Description: Final top of concrete layer on the west end of the W2 cap beam. Water spray was being applied intermittently and no curing compound was applied while finishing operations commenced.

File Name:	Aug-21-2008 W2 Cap 035
Date:	08-21-08
By Int:	M Bruce

Description: Mechanical trowel work done on the east end of the W2 cap beam while the concrete wasn't completely set.