



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

ENGINEER'S DAILY REPORT

LAN Engineering Consultant

REPORT NO.	DATE		
355 (7-day)	December 03, 2007	<i>RL</i>	<i>ML</i> T W T F S S (DAY)
NORMAL WORK HOUR:	WEATHER:		
START: 7:00AM STOP: 3:30PM	CLOUDY/OVERCAST		
LOCATION :			
Construction Field Office :	333 Burma Road, Oakland 94607		
Working Drawing Campus Office :	375 Burma Road, Oakland 94607		

04-SF-80-13.2/13.9
Contract No. 04-0120F4
{SAS Superstructure}

Caltrans Supervisor:
Gary Lai
Senior Bridge Engineer

Office Work:

❖ **Submittal Status Meeting (Caltrans – T.L.LIN – PB)**

- The status of the submittals were discussed and updated.
- Submittals #383, #388 and #415 are being held for a coordination meeting on Friday.
- MEP submittals # 174, 175 and 176 are being held for a possible change in the contract for service points at tower elevation 89M.

❖ **Worked on the OBG Penetration Charts.**

- Worked with PB on the shear plate submittals on the Eastbound OBG. Updated the penetration charts.
- Worked on the OBG Penetration charts.

❖ **Meeting @ Mission Bay Office per request by Bill Shedd.**

Subject : SFOBB Coordination Meeting.

- Discussed the proposal for relocation of service equipment into the tower structure at 89M. The final decision by maintenance was to go with the proposal to place the equipment in the tower structure.
- Discussed the Cable lighting issues and Maintenance/Design was indicating that there is a fixture in Canada that they are looking at that could replace the existing submitted ones by the contractor. I pointed out that there are many factors involved using other types of fixtures. Mounting is a key issue that is not being considered. I believe that the fixture is being re-evaluated for modifications that would make it acceptable.



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❖ **Tower Marker Light Submittal.**

- Per request from Anne Lee (Electrical Sub-Contractor) I had a phone conversation with the distributor for the Tideland Company (Jody Sturtze) 713-425-1447.
- The submitted marker light is not UL Listed and they do not have a UL Listed 4-lamp changer marker light. Jody discussed some alternatives and indicated that she will send the technical information to me for evaluation.

❖ **Conduit attachment to Bridge Structure – Adhesive alternative.**

- Contacted the Translab Lisa Dobeck to determine if there is an approved adhesive material used for attachment of conduit or piping supports to metal bridge structure.
- Sent a recommendation to Bill Shedd covering the request by the electrical contractor verbal request for attachment of conduit supports to bridge structure with adhesive bond.

❖ **FAA Obstruction Light Design – Fixture Recommendation.**

- Sent a package to Bill Shedd covering the proposed use of LED instead of the specified incandescent light fixtures.

Any questions or comments you can reach me at (916) 919-7158. My E-Mail address is Mike.Travis@LANEngineering.com or Michael_Travis@dot.ca.gov

END OF REPORT

ATTACHMENTS :

1. Email to Tideland representative covering the tower Marker light.
2. Email about the proposal to use an adhesive for attachment of conduit supports.
3. Email about proposal to use LED FAA Obstruction Fixtures.

SIGNATURE

Name	TITLE
Michael F. Travis	Electrical Engineer – LAN Engineering

Attachment #1 (1/1)



"Jody Sturtze"
<jody@tidelandsignal.com>
12/03/2007 12:34 PM

To <mike.travis@lanengineering.com>
cc <michael.travis@dot.ca.gov>
bcc
Subject FW: 3758 ML-300`

History:  This message has been replied to.

I hope this comes through this time!

Jody Sturtze
713-681-6101

From: Jody Sturtze
Sent: Monday, December 03, 2007 2:32 PM
To: 'mike.travis@dot.ca.gov'
Cc: 'alee@bleyco.com'
Subject: 3758 ML-300`

Good afternoon Mr. Travis –

Thanks for talking with me on the phone. I am sending you the brochure for the ML-300 lantern, the TF-3B MicroPower OMNIBUS II flasher/lampchanger and the manual for the TF-3B MicroPower OMNIBUS II.

I spoke with our QA department – on a UL listed lantern, for a Class I Div 2 hazardous location, you can't go over 2.03A – this is directly related to that heat/sparking issue I spoke to you about. So, the TF-3B would be limited to a 2.03A lamp to be classed as a UL listed lantern.

The candela output of this flasher/lampchanger in the ML-300, fixed intensity is 1050 candela or approximately 9.4 nautical miles.

The other version we have UL approval for is with our Dual RETRO LED light source. It's candela output in the ML-300, fixed intensity is 289 candela or about 7 nautical miles.

To get the candela output you mentioned, at around 5800 candela, you have to go with a GMU lantern. The version Anna Lee has submitted includes a 4 place lampchanger with 250 watt quartz halogen lamps with a fixed intensity candela output of 5800 candela or about 12.8 nautical miles. It is a GMU lantern.

Please let me know if you have any further questions. I appreciate your time.

Jody Sturtze
Tideland Signal Corporation
Account Manager
Ph: 713-681-6101
Fax: 713-681-6233

Attachment #2 (1/4)



Michael
Travis/HQ/Caltrans/CAGov
12/03/2007 07:36 AM

To Bill Shedd/D04/Caltrans/CAGov@DOT, Gary J
Lai/D04/Caltrans/CAGov@DOT
cc Lisa Dobeck/HQ/Caltrans/CAGov@DOT
bcc

Subject Fw: SFOBB SAS Construction Project - Conduit attachments
to Metal bridge Deck and inside the bridge

Bill / Gary :

The Electrical Sub-Contractor is still asking about the possible attachment on conduit supports to the bridge using adhesive.

To resolve this issue once and for all I would suggest that we inform the contractor as to the contractual requirements for this type of request.

The following is my suggestion as to a response to the contractor :

The use of any type of supports and fasteners not specifically specified in the contract documents should be submitted for approval.

There is no Caltrans approved adhesive tape, pad, cartridge epoxy for this type of use.

If the contractor wishes to submit an alternative to the contract specifications that is the contractor choice

Note: The submittal of any type of adhesive for attachment the follow are some of the issues would be addressed in the approval evaluation:

Will it adhere to polysiloxane (which is pretty glossy and slick)?

Does the surface need abrading or a primer? An adhesion promoter?

Will it adhere to inorganic zinc (which may oxidize with time)?

Will it adhere to the galvanized fastener?

As indicated below we do not want to open this up to a possible future claim.

No recommendations can be made since Caltrans does not have any approved adhesives that are being used in this type environment and with these specific material.

Any question or comments please let me know.

Michael Travis
SFOBB Construction Offices
Design Campus Building
375 Burma Road
Oakland Ca. 94607
Phone: 510-808-4618

----- Forwarded by Michael Travis/HQ/Caltrans/CAGov on 12/03/2007 07:09 AM -----



Lisa
Dobeck/HQ/Caltrans/CAGov
11/21/2007 04:09 PM

To Michael Travis/HQ/Caltrans/CAGov@DOT
cc Bill Shedd/D04/Caltrans/CAGov@DOT, Gary J
Lai/D04/Caltrans/CAGov@DOT
Subject Re: SFOBB SAS Construction Project - Conduit attachments
to Metal bridge Deck and inside the bridge

To prevent future claims I would recommend that you have the contractor submit a product and then pass it on to me for evaluation. I don't think we would do much testing, maybe just initial adhesion to polysiloxane.

Attachment #2 (2/4)

The important bits are,

Will it adhere to polysiloxane (which is pretty glossy and slick)? Does the surface need abrading or a primer? An adhesion promoter?

Will it adhere to inorganic zinc (which may oxidize with time)?

Will it adhere to the galvanized fastener?

These would apply to the 3M tape info you sent or cartridge epoxy from our QPL, located at http://www.dot.ca.gov/hq/esc/approved_products_list/usmixpropoxy.doc

If Caltrans directs the contractor and it doesn't work we could get a claim and end up paying for it twice.

Unless there are extenuating circumstances that I am not aware of I would recommend that the contractor furnish us with a proposal that we can accept or decline.

Lisa Dobeck

Associate Chemical Testing Engineer

METS, 5900 Folsom Blvd., Sacramento, CA 95819

916-227-7291, fax 916-227-7168

For individuals with sensory disabilities, this document can be made available in Braille, large print, audiocassette or computer disk upon request. To obtain one of these alternate formats, please call (916) 227-8185, TTY 711 or write to Della Moore, Division of Engineering Services, P.O.Box 168041, Mail stop 9 Room 509, Sacramento, CA 95816-8041.

Michael Travis/HQ/Caltrans/CAGov

Michael
Travis/HQ/Caltrans/CAGov
11/20/2007 07:02 AM

To Lisa Dobeck/HQ/Caltrans/CAGov@DOT
cc Bill Shedd/D04/Caltrans/CAGov@DOT, Gary J
Lai/D04/Caltrans/CAGov@DOT
Subject Re: SFOBB SAS Construction Project - Conduit attachments
to Metal bridge Deck and inside the bridge

Lisa,

I will call you today (Tuesday November 20) and try to answer your questions.

I have been told the surface outside the structure will be painted with polysiloxane.

The cradle material will be galvanized.

The inside of the bridge structure might be primed but possibly painted at some point.

I informed the contractor if some type of adhesive is submitted and approved it will probably be on for conduit attachments on a horizontal installation only.

I will call you today.

Michael Travis
SFOBB Construction Offices
Design Campus Building
375 Burma Road
Oakland Ca. 94607
Phone: 510-808-4618

Lisa Dobeck/HQ/Caltrans/CAGov



Lisa

Attachment #2 (3/4)



Dobeck/HQ/Caltrans/CAGov

11/19/2007 01:38 PM

To Michael Travis/HQ/Caltrans/CAGov@DOT

cc Bill Shedd/D04/Caltrans/CAGov@DOT, Gary J
Lai/D04/Caltrans/CAGov@DOT

Subject Re: SFOBB SAS Construction Project - Conduit attachments
to Metal bridge Deck and inside the bridge 

I have not heard back from 3M on what we had talked about. I have given up on hearing back from them about it and have moved on. Is the substrate to be glued to painted with polysiloxane or solvent borne inorganic zinc? Is the conduit cradle galvanized? If not, what is it? Once you get back to me about this I will take a look at the tape documentation you sent and pick something that might work. As for testing, I will have to think how to go about it. Will this application be exposed to the weather or is it enclosed, inside the bridge?

Lisa Dobeck
Associate Chemical Testing Engineer
METS, 5900 Folsom Blvd., Sacramento, CA 95819
916-227-7291, fax 916-227-7168

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Michael Travis/HQ/Caltrans/CAGov

Michael
Travis/HQ/Caltrans/CAGov

11/17/2007 11:56 AM

To Lisa Dobeck/HQ/Caltrans/CAGov@DOT

cc Gary J Lai/D04/Caltrans/CAGov@DOT, Bill
Shedd/D04/Caltrans/CAGov@DOT

Subject SFOBB SAS Construction Project - Conduit attachments to
Metal bridge Deck and inside the bridge

Lisa,

I talked to you a while back about the Bay Bridge Project and the possibility of using an adhesive to secure conduit support stut or cradles to the deck. In our conversation you had mentioned that 3M had a product the might work but you have not been able to test yet.

The contractor wants to submit some type adhesive that will work so we do not have to weld or bolt to the bridge. Attached is a copy of the contract plans showing the locations where conduit will be installed on the bridge surface.



Conduit Attachment Locations on Project.pdf

I have also attached the 3M product that I believe we were talking about.

Attachment #2 (4/4)



Design Guide Metal Fabrication.pdf Surface Prepration.pdf Tech Data.pdf

Since there are so many type listed and to expedite the process of submitting the type, I am sending you the information on all types.

Can you please review the list and suggest the type or types that would most likely work in this contract.

The contractor will submit for approval the type or types for this project that is suggested.

Then you will be able to perform the testing required to determine if the product is acceptable.

Any question of comments please let me know.

Michael Travis
SFOBB Construction Offices
Design Campus Building
375 Burma Road
Oakland Ca. 94607
Phone: 510-808-4618

Attachment #3 (1/1)



Michael
Travis/HQ/Caltrans/CAGov
12/03/2007 07:06 AM

To Bill Shedd/D04/Caltrans/CAGov@DOT, Gary J
Lai/D04/Caltrans/CAGov@DOT
cc SAS - Caltrans
bcc Takaki@pbworld.com
Subject FAA Obstruction Lights - Recommendation

Bill,

As you know we are having a problem with the submittal for the L864 FAA Light fixture that was submitted by the contractor.

The fixture is not approved by the FAA or is listed on the FAA certified list.

I contacted a manufacturer that I had worked with on the Vincent Thomas Bridge which manufactures LED Fixtures.

His company is listed in the FAA certified listing and I believe he has a fixture that would be a better type of fixture for the bridge.

Attached is all the technical manuals for the fixture.

After talking to him he indicated that he would send me a fixture to evaluate if I want one.

I told him that I would have to talk to Caltrans construction office to get a OK for that.

He also sent me the manuals for the L810 obstruction lights for the cable locations.

Again he indicated that he would send a fixture so we can evaluate it is we would like one.

As for the maintenance on these fixture the following information covers the lamp maintenance of these type of fixtures:

Estimated lamp life as given to the FAA is 50,000 hours to 70% lumen maintenance, meaning that at 50,000 hours LEDs operate at 70% of their initial rated output. We are above the FAA light output specification by a good margin calculated such that at 50,000 hours our lamp is still well within FAA specification. I think we are good for conservative 70-80,000+ hours, which at 12-hours per day and flashing (50% duty cycle) gives you 30-years.

The L810 fixture would be half of the L864 since it will be burning on a (100%) duty cycle. I still say 15 years is a good deal for Maintenance.

Let me know if you want me to do anything on this issue.

Michael Travis
SFOBB Construction Offices
Design Campus Building
375 Burma Road
Oakland Ca. 94607
Phone: 510-808-4618