

**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge Program**

333 Burma Rd.

Oakland, CA 94607

(510) 622-5660, (510) 286-0550 fax

*Flex your power  
Be energy efficient!*

May 16, 2008

Contract No. 04-0120F4  
04-SF-80-13.2 / 13.9  
Self-Anchored Suspension Bridge  
Letter No. 05.03.01-001955

Michael Flowers  
Project Executive  
American Bridge/Fluor, A JV  
375 Burma Road  
Oakland, CA 94607

Dear Michael Flowers,

**Submittal 234, Rev. 7 - Dimension Control Plan for OBG & Crossbeams**

The Department has completed review of Submittal ABF-SUB-000234R07, "Dimension Control Plan for OBG & Crossbeams," dated March 13, 2008. The two revised sheets of this submittal are "Approved as Noted."

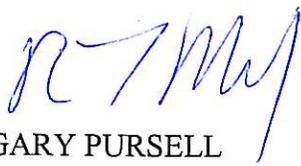
The Department would like to highlight, based on discussions that are ongoing at the Working Drawing Campus and in China, items from the DCP still considered to be either missing, or requiring further clarification. These items include issues where reference to other submittals is made in the DCP, but where information in those submittals is insufficient to verify how the contractually specified tolerances will be achieved. The following is a list of outstanding items:

1. **Control of closed rib location tolerance:** Specifically, what methods the Contractor will use to control the alignment of ribs during the deck panel splicing procedure and during fit-up of adjacent segments. The current procedure, as stated in section 3.9, Revision 6 of the DCP, allows 4mm deviation of stiffeners after panel splicing. This may lead to a maximum misalignment of 8mm when joining adjacent panels. Please note that manual or semi-automatic welding is not approved as a remedy for repairing misalignment of closed ribs.
2. **Deck Plate Diaphragm height:** Currently, the procedure has no trimming allowance or "green" material on the deck diaphragm. The Department is requesting a more detailed procedure to explain the sequence and survey control of the floorbeam height to prevent the need to increase the root gap of the deck plate diaphragm to floorbeam flange fillet weld.
3. **Fit-up of Corner Assembly to OBG:** It is not clear from the submittals received to date how the Contractor will control the tolerance of matching plates between the corner assembly and the OBG segment assembly. Please clarify the sequence and steps to be taken that will ensure proper fit-up of these components. In addition, identify how the internal diaphragm for type 2 closed ribs will align with the external diaphragm and the plates in the corner units.

4. **Fit-up of Crossbeam to OBG:** As with corner assemblies, ZPMC has indicated that adjacent segments not made by match assembly will be survey controlled to match the previously made one. This requires both a survey plan to be outlined (in DVP, for example) and a procedure that explicitly states the fabrication sequence allowing the as-built measurement of one segment to be applied to the future fabrication of the adjacent segment, in the open, throughout the year in all climatic conditions. Please clarify if there are other measures being taken that the Department is not aware of.
5. **Segment to Segment Fit-up:** The general plan for fabricating segments 100mm from the adjacent segment has been approved. However, from discussions it is understood that not all segments will be positioned in this fashion. Submit additional information to explain how the fit-up tolerances of matching plates and stiffeners will be achieved and to provide a specific sequence of fabrication that will allow as-built information to be used to control potential misalignment of adjacent segments.
6. **Rib bending (Sweep) tolerance and maximum offset of discontinuous members:** these tolerances are given in Special Provisions Section 10-1.59 "Steel Structures," subsection, "Shop Welding, Design Details Item G – Dimensional Tolerances." The specific tolerances for alignment of members stated in this section take precedence over the general tolerance for unspecified "members restrained against bending." For which the tolerances are referred to AWS D1.5. The contractor's submittal has made use of the 12:300 allowance for bending members into position from the referenced D1.5 provision in lieu of the tighter tolerances specifically required by contract for specifically identified members such as rib stiffeners and exterior skin plates. The Department has consistently corrected this error in the Contractor's interpretation of the contract. These errors have been red lined and the documents containing them approved as noted. The contractor must comply with these comments if the red lined documents are used in fabrication.
7. **Suspender bracket layout and fabrication tolerances:** Refer to Category A, comment 2 in State letter 05.03.01-001010.

Fabrication of segments has started in ZPMC's shop and the Department has not received the survey data for the jigs. Please submit this information as soon as possible. The Department requests that these issues are given a high priority so as not to impact the successful execution of this work. The Department's representatives, both in Pier 7 and in Shanghai, are available at any time to discuss this matter.

Sincerely,

  
fr GARY PURSELL  
Resident Engineer

Attachment

cc: Rick Morrow, Brian Boal, Stanley Ku, Jason Tom, Ching Chao, Keith Devonport  
file: 05.03.01, 55.0234