

17-Jan-2008

ABF-CAL-LTR-000420

Mr. Gary Pursell
Resident Engineer
California Department of Transportation
333 Burma Road,
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**PROJECT: San Francisco Oakland Bay SAS Bridge Superstructure
Caltrans Contract No. 04-0120F4
ABF Job No. 660110**

**SUBJECT: Objection to Caltran's Merit Determination of Supplemental Notice of Potential Claim
No. 5**

RE: CALTRANS LETTER NO. 05.03.01-0001074 DATED January 02, 2008

Gentlemen:

American Bridge / Fluor Enterprises, A Joint Venture (ABFJV) is in receipt of the above referenced letter wherein the Department determines that NOPC 5 has no merit. ABFJV objects to the determination.

ABFJV submitted ABF-RFI-000876R0 and ABF-RFI-000944R0 to the Department. These RFI's identified design deficiencies on PWS Cable Geometry near Pier E2 and from PP111 to PP 118. On November 1, 2007 ABFJV requested that a Contract Change Order be issued by the Department because, as a result of the deficient Design, Plans and Specifications, ABFJV is performing, and will in the future perform, Extra Work, the cost of which is not covered by any of the various items for which there is a Bid Price.

In April 2007 the Department provided ABFJV revised information, correcting erroneous details shown on the Plans that allowed ABFJV to complete its cable erection analysis. Notwithstanding the fact that the Department recognized and corrected the erroneous information provided ABFJV, the Department continued to maintain that "The plans are complete and of sufficient detail to provide for the cable erection and construction of the bridge." This statement, disputed by ABFJV, appears to be the basis for the Department's refusal to issue a Contract Change Order to ABFJV regarding this matter.

ABFJV recognized problems regarding the cable engineering soon after ABFJV's two cable engineering firms, Ammann & Whitney and Flint & Neill Partners, commenced work on the preliminary cable engineering in November 2006. In early January 2007, these two engineering firms determined that they were unable to replicate the moment diagrams using the information shown on the Plans. Both engineering firms spent several months trying to find a source of the discrepancy. Finally, after they could not resolve the matter, it was brought to the attention of the Department and its Design Engineer (TY Lin/Moffatt JV) on February 15, 2007.

Because the Design Engineer insisted that the Plans provided were accurate, ABFJV and the two engineering firms continued to search for the source of the discrepancy. After numerous meetings in-house and in the Working Drawing Campus the Department's Design Engineer provided revised, corrected suspender loads and moment diagrams on April 23, 2007. Once these correct loads were provided, ABFJV was able to complete the

ABF-CAL-LTR-000420

Page 2

preliminary erection analysis necessary to verify that the computer models developed would duplicate the information indicated on the Plans.

In August 2007, after the erection analysis models were complete, based upon various design constraints established by the Department, it was discovered that the "free-cable position" established on Sheet 978 of 1204 does not exist. Instead, the main cable interferes with the East Bound and West Bound box girders near PP116 and the East Bound suspender bracket at PP110. This information was conveyed to the Department on August 17, 2007.

Because the full design constraint information had not been previously provided by the Department, this was the first time the Contractor recognized the existence of a conflict. A "free cable" occupies a unique place in space between saddles that can only be determined by reverse engineering the completed structure. The bridge must be analyzed in its completed state, using the weight of the bridge, the specified roadway profile, the specified moments, the specified maximum suspender loads, the specified cable force and the calculated suspender lengths. The suspender forces and weight of cable bands are removed from the cable, and the saddles are allowed to re-align themselves to account for equal tension in the cable (to prevent the cable from slipping through the saddles). Only then can the actual "free cable position" be calculated.

The definition and common usage of the term "free cable" in the suspension bridge construction and engineering industry identifies the condition during cable construction when the cable hangs freely, suspended in a natural catenary between the saddles. The cable must be in a free-hanging position prior to the commencement of the subsequent cable erection operation. ABFJV is unaware of any major suspension bridge that has been constructed where the design did not provide for a free-hanging cable between saddles. The conflict between the cable in its "free hanging" state and the OBG deck differs materially from conditions encountered in the construction of a suspension bridge.

Special Provision 10-1.60, Cable System, Subsection Erection, PWS Cables, reinforces the points made in the previous paragraph by stating: "The sag of the first erected strand shall be adjusted in each span to the proper bare-cable sag." Bare-cable sag is properly interpreted as the sag caused by the self-weight of the cable between saddles, without external forces being applied. If another result was intended, then another approach should have been specified.

A substantial portion of the damages incurred by ABFJV will be the remediation of the conflict in order to achieve a "free hanging" cable. The lack of a "free hanging" cable is such a significant deviation from industry custom and practice that ABFJV could not have anticipated that these remediation costs would be incurred. ABFJV relied upon the fact that upon completion of the furnishing, fabricating, and erecting the shop prefabricated parallel wire strands (PWS) cable system, in accordance with the details shown on the Plans, the provisions in Section 55, "Steel Structures" and the Special Provisions that the cable would be "free hanging" as indicated on Sheet 978 of 1204 of the Plans.

It is necessary that project plans must be detailed and arranged in such a manner that a contractor can build the work. Contractors are not required or expected to perform rigorous engineering analysis to verify that plan details are faultless. Both California state statutes and court decisions require the Department to provide ABFJV with complete and accurate Contract Documents. Any Extra Work required to correct deficiencies arising from inadequate Plans or Specifications must be paid for by the Department as either a breach of the

ABF-CAL-LTR-000420

Page 3

implied warranty that the contract documents are complete and accurate, or as a breach of a statutory duty to provide such contract documents.

California Public Contract Code, Section 10120

“Before entering into any contract for a project, the department shall prepare full, complete, and accurate plans and specification and estimates of cost, giving such directions as will enable any competent mechanic or other builder to carry them out.”

California Public Contract Code, Section 1104

“No local public entity, charter city, or charter county shall require a bidder to assume responsibility for the completeness and accuracy of architectural or engineering plans and specifications on public works projects... The review by the contractor shall be confined to the contractor’s capacity as a contractor, and not as a licensed design professional.”

Standard Specification, 4-1.01 Intent of Plans and Specifications

“The intent of the plans and specifications is to prescribe the details for the construction and completion of the work which the Contractor undertakes to perform in accordance with the terms of the contract. Where the plans or specifications describe portions of the work in general terms, but not in complete detail, it is understood that only the best general practice is to prevail ...”

Standard Specification, 5-1.02 Plans and Working Drawings

“The contract plans furnished consist of general drawings and show such details as are necessary to give a comprehensive idea of the construction contemplated. All authorized alterations affecting the requirements and information given on the contract plans shall be in writing.”

It is well established construction case law that “A contractor of public works who, acting reasonably, is misled by incorrect plans and specifications issued by the public authorities as the basis for bids and who, as a result, submits a bid which is lower than he would have otherwise made may recover in a contract action for extra work or expenses necessitated by the conditions being other than as represented.”

In defense of its attempted avoidance of liability for deficient Plans and Specifications the Department advises that Note 1 on Sheet 978/1204, “These movements are for information only, and shall be recalculated by the Contractor and approved by the Engineer” clearly indicates that Sheet 978/1204 is schematic and informational only and thus subject to verification and further development by the Contractor and submittal to the Engineer for review and approval. This statement is not accurate for the reasons set forth as follows:

- Note 1 does not clearly indicate that sheet 978/1204 is schematic.
- Note 1 strictly pertains to cable movements, not the free hanging cable position.
- The PWS cable system fabrication and installation Specifications are quite detailed. The Department designates particular components, dimensions, material types and qualities and for this reason the Specification cannot be determined to be a “performance” specification.

ABF-CAL-LTR-000420

Page 4

- Contractors are not required to seek expert advice when evaluating contract documents, but they are expected to utilize their own skills as experienced and prudent contractors to detect patent flaws or ambiguities. The flaws contained on Sheet 978/1204 are not patent and could not have been reasonably determined to be inaccurate.
- The California courts have determined that “General disclaimers of warranty will not absolve a public body from responsibility for positive and material misrepresentations contained in plans and upon which contractor had right to rely” and “where plans and specifications induce contractor to reasonably believe that certain indicated conditions actually exist and may be relied upon in submitting a bid, the contractor is entitled to recover the value of extra work made necessary by existence of different conditions.
- The Department cannot require ABFJV to assume responsibility for the completeness and accuracy of the Plans and Specification (California Public Contract Code, Section 1104)

In the above referenced letter the Department states “The Department understands ABF was aware of the potential conflict and interference between the cable and box girder prior to bid. Accordingly, it is presumed the bid includes consideration of such conflict and interference.” This statement is not correct. ABFJV was not aware of the potential interference and conflict between the free-hanging cable and box girder until the conflict was discovered in August 2007. ABFJV’s bid did NOT include “consideration of such conflict and interference”.

The Department’s statement provided in the preceding paragraph is the first admission from the Department that it actually knew of the interference and conflict during the bid stage of the Contract. The Department having knowledge of the cable conflict and interference during the bid stage had a duty to divulge this information to bidders and its failure to do so was a breach of this duty. It is basic contract law that one party to a business transaction is under a duty to disclose to the other party before the transaction is consummated those matters known to that party which he knows to be necessary to prevent a partial statement of the facts by him from being misleading to the other party. The vague language contained on Sheet 978/1204, “These movements are for information only, and shall be recalculated by the Contractor...” is not sufficient to absolve the Department of its duty to disclose pertinent facts, known only by the Department at the time, to the bidders.

For the reason set forth above, in compliance with Special Provision, 5-1.12, Dispute Review Board, ABFJV objects to the Department’s findings. If you have any questions, please contact our office.

Sincerely,

AMERICAN BRIDGE/FLUOR ENTERPRISES, INC. A JOINT VENTURE

<<< ORIGINAL SIGNED >>>

Michael Flowers
Project Director
MF/PW/ag

File: 01.07, 02.01