State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: TONY ANZIANO
Toll Bridge Program Manager

Date: March 29, 2013

File:

From: MALCOLM DOUGHERTY
Director

Subject: **BAY BRIDGE E2 CONNECTOR RODS**

In light of recent developments regarding steel rods associated with shear keys and bearings at E2 of the Self Anchored Suspension bridge, and as per conversations subsequent to discovery of the failing rods, please take the following steps to ensure the safety and successful performance of these appurtenances after completion of construction. It is acknowledged that many, if not all, of the steps iterated here have already begun.

- Put the contractor on notice in writing that they need to demonstrate that they are in compliance with contractual requirements and secure their proposed course of action.
- Initiate and conclude a complete forensic analysis to determine to the greatest extent possible the cause of the failures.
- In addition to material evaluations, determine the forces to which these rods were subjected to at time of failure.
- It is my understanding that rods associated with shear key 1 and 2 were installed in 2008, and the remaining shear key and bearing rods were installed in 2010, and that the failures thus far are all associated with the 96 rods installed in 2008 for shear key 1 and 2. Determine definitively the manufacturers and suppliers involved in delivering the rods to the job site for all rods installed.
- Articulate the testing and compliance certification process employed during construction to fulfill Quality Control/Quality Assurance efforts.
- Subject the broken rods to subsequent testing to help ascertain failure cause.
- Subject representative group of rods installed in 2010 and not yet tensioned to testing to analyze for adequate strength and properties.
- Identify any other components of the bridge that came from the same manufacturer or supplier and re-inspect.
- Once the design and construction team selects a preferred solution, present it to the Toll Bridge Program Oversight Committee (TBPOC) for approval.
- Once approved, develop cost and schedule impacts of implementing solution.

I want to reiterate that safety of the bridge once opened is the paramount and controlling factor in all decision making on this issue. We will ascertain any cost and schedule implications once the best solution consistent with the design life of the bridge and performance expectations are met. Continue to maintain a frequent dialogue with myself and other TBPOC members at all times as you are continuing to evaluate and determine best solution.

c: Brian Kelly, Acting Secretary, Business, Transportation and Housing
Andre Boutros, Executive Director, California Transportation Commision
Steve Heminger, Executive Director, Metropolitan Transportation commission