

**American Society Civil Engineers  
Region9 Representative, Jay H Higgins, P.E.  
California Senate, Transportation and Housing Committee  
Hearing November 28, 2012**

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## **BACKGROUND INFORMATION**

### **ASCE Representative**

- My name is Jay Higgins and I am a Licensed Professional Civil Engineer in state of California and Licensed Professional Engineer in Illinois;
- Member of the American Society of Civil Engineers
- Member of the Construction Management Association of America
- I work for URS Corporation in the Los Angeles office in the Construction Management Division and my area of expertise is in construction dispute resolution;
- I do want to point out that URS is under contract for consultant services with the Toll Bridge Program Oversight Committee; however, I am not involved in this project in any way
- I am here today only as a representative the American Society of Civil Engineers (ASCE), Region 9;
- I am not here to talk about past peer review practices of state agencies
- My opening remarks will be concerning a Civil Engineer's fundamental ethical responsibility and ASCE's policies on the peer review process and conflict of interest
- ASCE has 10 regions world wide
- Nine regions in US; one international
- Region 9 is State of California (only one that is a single state)
- Six Governors and one Director
- Represent approximately 18,000 California civil engineers in public and private practice
- I am the Region 9 Governor for the Los Angeles Section (~ 8,000 ASCE members)

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## **Fundamental Responsibility of a Civil Engineer**

- ASCE, Code of Ethics, Canon 1 states, "Engineers shall hold paramount the safety, health and welfare of the public . . . in the performance of their professional duties  
(Ref. ASCE, Code of Ethics, October 2010)
- Consistent with the legislative intent of the Board of Professional Engineers, Land Surveyors, and Geologists - “. . . [that the] protection of the public shall be paramount".

## **ASCE Policy on Peer Review**

The American Society of Civil Engineers (ASCE) promotes and supports the use of independent and external peer reviews for projects:

- Where performance is critical to the public health, safety, welfare, and the protection of the environment;
- Where reliability of performance under emergency conditions is critical;
- Using innovative materials, techniques, or design methods;
- Lacking redundancy in the design; or
- That have unique construction sequencing or a short/overlapping design - construction schedule.

Peer reviews can be initiated by the owner/client, the design organization, or regulatory agencies. Reviews address a defined scope as set forth by the initiating party. Peer reviews should occur throughout the design process. Peer reviews are performed by independent and external teams not associated with the original design team.

(Ref. ASCE Policy Statement 351 – Peer Review)

I would like to refer the Committee two documents:

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- American Society of Civil Engineers, Manual of Practice No. 73, Quality in the Constructed Project, Chapter 22, Peer Review;
- Engineers Joint Contract Documents Committee, Agreement Between Owner, Design Engineer, and Peer Reviewers for Peer Review of Design, 2011

### **Quality Control and Quality Assurance**

- Construction Management Association of America (CMAA) Definitions
  - Quality Control (QC) - The continuous review, certification, and testing of project components, including persons, systems, materials documents, techniques, and workmanship to determine whether or not such components conform to the plans, specifications, applicable standards, and project requirements
  - Quality Assurance (QA) - The application of planned and systematic methods to verify that quality control procedures are being effectively implemented

(Ref. CMAA 2010 Construction Management Standards of Practice, p-11)
- Quality Audits – could be conducted by Program Manager, outside consultant or Owner’s staff as further verification of QC procedures and QA methods.

### **ASCE Policy on Conflict of Interest**

- ASCE Policy Statement (Excerpts)
  - Policy - The ASCE believes that:
    - The engineer’s judgment and adherence to the ASCE Code of Ethics must be above reproach and beyond the influence of competing interests. Even the appearance of a conflict of interest is to be avoided.
  - Issue

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- Engineering is a learned profession that has a direct impact on the safety, health and welfare of the public. Accordingly, the services provided require high standards of honesty, integrity and fairness.
- ASCE's Code of Ethics recognizes the unique employment aspects of the engineer, regardless of the employer, public or private . . . [and that to] fulfill their duty, engineers must responsibly apply their independent judgment in design and construction matters. This duty to the public supersedes any actual or perceived obligations engineers have to the owners of their projects, their employers, or any organizations to which they belong.

(Ref. ASCE Policy Statement 502 Professional Ethics and Conflict of Interest)