

# To Peer Review or Plan Review, That is the Question

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The author has posted an Appendix and several tables referenced in this article on a password protected site.

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In response to my recent article in the January 2007 issue of STRUCTURE® on *Peer Review Guidelines*, I have received a number of comments. Most comments dealt with the issue of either incorrect or personal preferences when it came to interpretations of the Code by the plan reviewer. In addition, some readers expressed concerns about plan reviewers exceeding their authority by commenting on issues outside of the Code. Most comments of this nature were from practicing engineers on the west coast, where mandatory plan reviews are more prevalent than on the east coast.

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Most of my own problems with plan reviewers were that they were unlicensed, rather than whether they knew anything about the building codes or not. I have, however, experienced situations in which a plan reviewer interpreted recommendations of a Guide (e.g. ACI 302R) as if they were equivalent to adopted Code requirements (e.g. ACI 318).

My experience dealing with unlicensed plan reviewers, along with my knowledge of the regulations in California, which essentially mandate that all persons involved in the act of reviewing plans must be licensed, led me to conduct a survey of all of the U.S. engineering boards to determine the status of licensing requirements for plan reviewers. The survey, the results of which are included in the Appendix website referenced in my previous article, indicated that of the 49 state boards contacted, only 4 require that plan reviewers be licensed, 17 specifically exempt plan reviewers, 19 had not ruled one way or the other, and 9 did not reply. This survey indicates that the lack of

licensing of plan reviewers in the majority of the country may be an even bigger problem than the concerns expressed by the designers from the west coast.

Another comment that I received indicated that a plan review should not be considered the same as a peer review. I agree that there are distinct differences between plan reviews and peer reviews. However, plan reviews were included in the definitions of peer reviews because they are in fact essentially reviews conducted by one's peers (hopefully). In addition, problems experienced by many designers with plan reviewers are very similar to those encountered as a part of a peer review. Furthermore, the similarities between plan reviews and mandatory project specific peer reviews (PSPR) is why plan reviews were not categorized by themselves or with any of the other types of peer reviews defined in the article.

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Other than the fact that there was a need to define the different types of reviews first before our community could start to have an intelligent discussion about the issues, the real point of the article is the need to establish guidelines so that the problems experienced by design professionals can be addressed. However, by categorizing the different types of reviews that occur in our industry via the definitions, a guideline standard could target each individual type of review, one at a time; in other words, divide and conquer. In my opinion, any new guidelines should target voluntary PSPR's initially, as these types of peer reviews are currently the least regulated.

If a practical guideline or standard can be developed and becomes accepted by all of the project stakeholders – engineers, owners, building officials, architects, attorneys, etc. – then we do not have to live in fear of the improper use

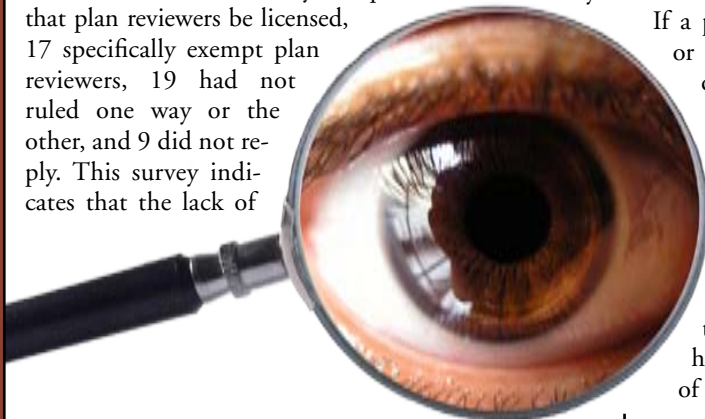
or application of a plan or peer review. With an established document in place, no different in acceptance than ASCE 7, situations in which inappropriate code interpretations and personal preferences are applied as a part of a plan or peer review could no longer occur without violating these same standards.

A guideline or standard for independent structural project peer reviews should include:

- 1) Refined definitions for the different types of peer reviews.
- 2) Guidelines for the purpose and scope of project specific peer reviews.
- 3) Criteria for the qualification, selection, liability and sources of compensation of the peer reviewer.
- 4) Criteria and objectives for the extent of peer reviews.
- 5) Establishment of which documents are to be reviewed as a part of a peer review.
- 6) Options for the methodology and thoroughness of a peer review.
- 7) Delineation of the intent and acceptable exceptions to the scope of a peer review.
- 8) Relevant checklists for various types of peer reviews.
- 9) Methods for the proper formatting and presentation of the findings of a peer review for the purposes of publishing a standard report.
- 10) Mechanisms for the resolution of peer review disputes.

The anticipated public benefits of a guideline or standard for independent structural project peer reviews would include:

- 1) Improved public safety. Peer reviews provide a mechanism by which harm that could have resulted to the occupants of a structure or the general public is avoided by discovering and assuring the correction of:
  - a) Calculation and/or design errors. These types of errors are particularly common in today's environment of fast track project schedules.
  - b) Mistakes and/or blunders by inexperienced designers.



These types of errors are particularly common in marketplace conditions in which the lowest fee is given preference over proper experience.

- 2) Establishment of uniform methods of conducting peer reviews that can be referenced by governmental agencies and code officials.
- 3) Prevention of environments in which adversarial confrontations can occur during a peer review between engineers to the detriment of the public image of the profession.
- 4) Prevention of situations in which reviewers use the peer review process as a marketing opportunity to the detriment of a fellow professional engineer.

In conclusion, PSPR's will continue to occur in our industry, whether they are mandated by a governmental agency, dictated by state law or happen voluntarily at the request of an owner, attorney or other interested stakeholder

in the project. Review standards have already been created by most of these same various agencies. What does not exist, however, is a standard that can be referenced by all of the parties involved with a voluntary PSPR.

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Filling the void left by this lack of a PSPR standard can only be accomplished by one of the primary structural engineering professional organizations such as SEI, CASE or NCSEA. ASCE has tried to fill this void by producing ASCE 22-97 (*Independent Project Peer Review*); unfortunately, this document was never published. Recent attempts to resurrect this same document for review and updating by a proposed new SEI Standards Committee have been unsuccessful. The fact

is, we will never see a standard produced by our community until those that oppose peer reviews and those that favor them, or at least have come to accept them as a necessary evil, can come together as a single group and realize that it is in everyone's best interest to do so.■

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