



ASCE 7 and the Standards Development Process

By Jennifer Goupil, P.E.

The consensus standard *Minimum Design Loads for Buildings and Other Structures* (ASCE 7) is developed and maintained by the Structural Engineering Institute (SEI) of the American Society of Civil Engineers (ASCE). One of 28 standards currently in development by SEI, ASCE 7 is the most widely used; although the process is similar for all SEI standards, ASCE 7 is unique in many ways.

History

The American National Standards Institute (ANSI) published the first consensus standard for structural loads, ANSI A58.1, in 1972. In 1985, ASCE assumed responsibility for developing and disseminating the standard and received accreditation for its Codes and Standards Program from ANSI. This essentially means that ASCE created rules for its consensus process, ANSI agreed that the rules are satisfactory, and ASCE is periodically audited by ANSI to ensure that the rules are being followed. ASCE first developed its *Rules for Standards Committees* in the late 1970s and updates them from time to time; the current version is posted online.

When ASCE assumed responsibility for the minimum loads standard, it created an open committee membership policy and increased participation from the profession. Membership on some of the subcommittees doubled, and a new process was born.

Committee

Although changes have been made since the first edition of ASCE 7 in 1988, the process is essentially the same now as it was then. A subset of the committee, typically a defined subcommittee, develops proposals for changes to the existing provisions, and the main committee vets them.

Currently, a new ASCE 7 committee is formed for each development cycle. Interested participants apply for membership on the main committee, a subcommittee, or both. Members are selected for the main committee in two categories: voting and associate. There are strict balance requirements for the committee composition per the ASCE rules.

The voting membership consists of a group of technical experts from a range of stakeholders.

The total number of voting members is limited to approximately 50 individuals and includes the following balance requirements:

- Consumers (consultants): 20-40%
- Producers (vendors or industry): 20-40%
- General interest (academics or others, including regulatory): 20-40%
- Regulatory (building officials): 5-15%

Regulatory members are identified as a special category, but for balance requirements are included under general interest. The current voting membership includes 22 consumers, 13 producers, and 20 general interest, including 4 regulatory members.

Associate members must meet the same requirements to join as voting members, and have all the same rights with the exception of a counted vote. Associate members can participate in all of the ballots, and their comments must be resolved in the same manner as voting member comments. Voting and associate members combine for a total of 115 participants on the current main committee.

The two membership categories enable the main committee to achieve the necessary participation to validate every ballot while allowing interested parties to participate in the process, even with limited knowledge of the technical issues. Also worth noting is that ASCE membership is not a requirement for joining an ASCE standards committee. The volunteer effort to develop ASCE 7 is unparalleled, with more than 350 main committee and subcommittee members participating.

Process

What does it mean to be a consensus standard? Consensus is a process for group decision making that seeks consent from all participants. This means that all voices are heard and vetted; it does not, however, mean that everyone agrees! Relative to standards development, the consensus process includes balloting by the balanced committee and a public review period.

Within the ASCE 7 committee, development efforts generally begin with the subcommittees. Individual members or small groups begin by developing proposals, which typically are generated from two sources: items unresolved from the previous standard cycle,

or new ideas or information impacting the provisions. Additionally, ASCE 7 employs a “Call for Proposals” period, during which the public can submit proposals to the main committee for consideration.

Once a proposal is generated, it is sent to the full subcommittee to be “balloted,” which is the term used for the evaluation process or voting. Every ballot is open for a finite period of time, and when it closes, any and all comments must be resolved. The original proposal is often modified and then re-balloted until it passes and all comments are resolved. This cycle can take multiple attempts for many proposals, as the consensus process ensures wide participation. Once the proposal passes the subcommittee ballot, it is ready for the main committee to ballot.

This cyclic process continues at a larger scale with the main committee. Comments are given back to the subcommittees to resolve in the same way discussed above. This cycle occurs at the main committee several times until all ballots are passed and all comments are resolved. Proposals not passed by the main committee do not make it into the standard even if passed by the subcommittee.

The last step in the consensus process is public comment. This is a minimum period of 45 days, during which anyone can submit comments to the main committee. As with every previous ballot, every comment must be resolved. Once the public comments are resolved, the standard is ready for publication and adoption into the building code ... which is another process entirely!

Conclusion

ASCE 7 is developed within a six-year cycle by a diverse and dedicated committee of volunteers under highly structured, well-established rules that encourage wide participation by all stakeholders. The next edition of ASCE 7 will be published in 2016. To learn more about ASCE 7 and ASCE/SEI standards development, or to apply for membership on a particular committee, visit www.ASCE.org/SEI. ■

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