

The Importance of Professional Advocacy

By Angelina V. Stasulis, P.E., S.E.

A successful engineer is, in all likelihood, an unknown engineer. Short of significant failures, the general public is unaware of the time and thought that goes into a good design. Most assume the success of our infrastructure is due to building codes or architects, without any knowledge of the layers of security provided by structural engineers. This lack of awareness has far-reaching consequences for the profession, the most significant of which is a decided undervaluing of structural engineering. Structural engineering, as a profession, needs a marketing plan.

Marketing is not a foreign concept to structural engineers; most of us already do it with clients. Where we fail as a profession is in spreading our message beyond the architect/engineer/contractor (AEC) industry. As a result, structural engineers are poorly compensated for high-risk/responsibility/stress, and society at large fails to recognize these individuals' importance and dedication to public safety. Politicians, uninformed and uneducated about the profession, are easily led astray by inadequate or self-serving advisors regarding policies that affect the engineering community (for example, structural licensure). Even building owners often fail to communicate performance-based requirements, assuming buildings will automatically meet their beyond-the-code requirements (for example, vibration requirements for sensitive equipment). Without an understanding of professional licensure qualifications and necessary knowledge for each distinct discipline of engineering, unqualified individuals may be employed to perform structural design and analysis outside of their area of competence, putting public safety and welfare at risk. All of these things can be mitigated by the profession improving its market position and visibility.

The struggle to be understood is not unique to structural engineers. However, we are miles behind our peers in the AEC industry in terms of public understanding and recognition. Contractors have the benefit of the public directly observing their work and instantly connecting their profession with what they do. Architects usually serve as the project manager for the design team, organizing efforts and communicating directly with the client, which positions them to be the public face of a building project's design team. They create the

final picture that the public sees in media releases, the rendering sign at the job site, and, ultimately, the public's drive-by experiences. While the public does not understand all of the complexities of either of these professions, they do, at least, acknowledge their existence and contribution to building projects.

Structural engineers need to join the game and emphasize the importance of our role in how buildings get built in this public narrative. Most people attribute reliable building safety and performance to "the building code" as if it were a prescriptive, definitive solution for all structures. The public gives little thought to what we do and even less to the fact that it needs to be done at all. We need to highlight the expertise required to effectively apply the provisions of the building code and the need for engineering judgment in cases not explicitly outlined therein, particularly serviceability conditions. We need to explain the importance of regional and project-specific experience, and why prototype plans for a structure in Michigan cannot simply be duplicated for another franchise location in Oregon or Florida. We need to call attention to what we can provide to contractors in terms of construction administration services, like shop drawing review and field fixes, and why these matter. We need to do a better job instilling respect and appreciation for the technical knowledge we bring to the non-technical masses. We need to join the race for public attention or fall victim to the devaluation of our profession as society moves closer to a fully automated world, where critical thought is not just unrequired but is unappreciated.

If we do not spread the word about what we do and why it is important, we enable society as a whole to continue to ignore our contributions. Most current advocacy efforts are focused on too specific an audience to have the broad, general impact we need. Sharing project spotlights via industry publications fosters awareness of what others are doing in the industry, but these articles generally reach a technical audience, not the general public. Science Technology Engineering and Math (STEM) outreach programs cultivate

Ways to Advertise and Market

- Talk to your contractor about including the Structural Engineer of Record (SEOR) on job site rendering signs.
- Provide outreach materials for students and parents that explain structural engineering in more specific terms that others can understand, rather than "design structural elements."
- Write nontechnical, general structural summaries of local projects for newspapers and other local media outlets.
- Have your local Member Organization take a stance on legislation that impacts the profession (licensure, regulations, etc.) and publish your position statement.

an interest in our profession from the next generation but fail to communicate the critical connection between gumdrop and spaghetti structures on shake tables and how structural engineers truly design the structural system of a real building under service loads. Our primary mission as an industry is to design safe and economical structures that effectively realize the vision of the architect and owner. We are better able to deliver on this goal when we are empowered with the support of a public that is educated in both what we do and how we achieve it. ■



NCSEA Communications Committee invites you to participate in the first Member Organization Challenge to inform and educate other industries, professions, and the general public about structural engineering! Your Structural Engineering Association (SEA) can help improve the visibility and recognition of practicing structural engineers with outreach through news articles, videos, blogs, and any other creative content to spread the message about our profession and its critical role in society.

Visit www.ncsea.com/challenge for more information and to start your member organization's submission packet.

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