Thoughts on an Emerging Standard of Care Regarding Climate Change

BY JOSH M. LEAVITT, ESQ.

In February 2021, the National Society of Professional Engineers, one of the nation's leading engineering organizations, adopted its Position Statement on Sustainability. It states: "Because sustainable communities—communities that meet the needs of the present without compromising the ability of future generations to meet their own needs—are critical to public health, safety and welfare, it is the position of NSPE that licensed Professional Engineers must be engaged in creating, maintaining and renewing sustainable communities."

As this publication has reported, while climate change and severe weather events become the norm, professional engineers are increasingly adapting their designs to improve public safety. Increasing numbers strongly agree that professional engineers should not only promote sustainable design and green infrastructure, but also should be involved in addressing climate change issues, according to NSPE's 2020 *Engineering Outlook & Salary Survey*.

NSPE's position and the prevailing attitudes of its members are more building blocks in what some might say is changing the standard of care. Climate change advocates are already stating that design professionals and others in the construction and engineering industry must adapt to climate change and consider climate change issues in connection with the services they deliver. If that attitude represents a new standard of care, then the ramifications could be profound.

The concept of a standard of care is not new to architects and engineers. It's expressly built into most of their contracts. Consider for example section 2.1 of the American Institute of Architects standard form B104 owner architect agreement, which provides: "The Architect shall provide the professional services set forth in this Agreement consistent with the professional skill and care ordinarily provided by architects practicing in the same or similar locality under the same or similar circumstances. The Architect shall perform its services as expeditiously as is consistent with such professional skill and care and the orderly progress of the Project."

The AIA language reflects the reality that most American courts imply a professional standard of care into the contracts of design professionals unless the contract provides otherwise, either in a warranty or a clause calling for an elevated standard of care.

The professional duty for design professionals to consider weather data is also not new. Design professionals do that every day. What is different now is (1) the weather data that they need to consider reflects drastic new conditions that could in both the long term and short-term impact their client's projects, and (2) the science of detecting, applying, and analyzing that data is changing.

As Rich Sorkin, a leading expert on the economic impacts of climate change, recently explained in *Risk Management*: "Out-of-date assumptions need to be updated. Severe events are happening more frequently and with greater impact already and continuing to get worse at an accelerating rate. The science and data to update assumptions is vastly further ahead of what most decision makers are choosing to use today."

Sorkin further explains: "Ten years ago, physical risk from climate change wasn't on any large global corporation's agenda. There was essentially no meaningful, easy to use, trusted source for understanding and addressing risks beyond using insurance prices as a proxy for current year risk. With a decade of emissions, and inevitable further increases due to the 30-year long failure of the global policy environment and new technologies to materially impact emissions, physical risk has increased and continues to do so. The continued use of current year (and often out of date) assumptions of physical risk for assets with design lives of 25 to 75 years is egregiously irresponsible. As recently as five years ago most professionals could get away with 'the weather excuse' that weather was an unpredictable act of god."

Sorkin observes that following several events like the February freeze in Texas, that led to resignations of board members and executives, "it is increasingly clear that the weather and climate excuses are no longer shields for reputation or liability." He points out that especially with leading companies offering resiliency services, many based on his company's analytics, "there is no excuse for any professional anywhere on the planet to be behind on this issue." No doubt, his warnings should be heeded by design professionals.

Naysayers might argue that a standard of care is not measured by considering state of the art developments or the thought leadership of a few industry players. They might say, rather as the AIA document itself provides, the standard of care is measured by what services are "ordinarily provided by architects practicing in the same or similar locality under the same or similar circumstances."

Keeping such objections in mind, let's take that deep dive and look at what's going on in the industry. What we see, in fact, are significant changes. For example, despite lack of intergovernmental coordination on climate change issues, building codes are nevertheless beginning to change. Several governmental bodies have implemented sea level rise specific codes. Various state governments, such as New York and New Jersey, have passed carbon emission standards. Local government agencies, such as the California Coastal Commission and the San Francisco Bay Conservation and Development, have passed rules regarding sea level rise. With the new administration there is also movement at the federal level.

As Sorkin told Congress during his testimony in 2019 and again in his company's recent input to hearings on the topic of climate risk: "Jupiter [Sorkin's firm] has consistently recommended that the federal government consider requiring the

incorporation of future conditions into the design and construction of any physical asset it owns, funds, subsidizes, or regulates. Undertaking this step alone would represent enormous progress, especially for national security, government-sponsored enterprises (GSEs), and critical infrastructure sectors." He points out that a recent executive order issued by President Biden advances exactly this issue. He says, "Just as the world's largest banks and other financial institutions are well into preparing to respond to increased regulatory review of their risks during the hold period of their loans, design, engineering and construction firms must prepare for new rules as well."

Toward that end, NSPE is not the only engineering organization recognizing the new order. One significant example is the American Society of Civil Engineers, which in 2018 issued a climate change policy that states:

- Civil engineers are responsible for the planning, design, construction, operations, and maintenance of physical infrastructure.
- Most infrastructure typically has long service lives (50 to 100 years) and are expected to remain functional, durable and safe during that time. These facilities are exposed to and often are vulnerable to the effects of extreme climate and weather events.
- Engineering practices and standards associated with these facilities must be revised and enhanced to address climate change to ensure they continue to provide acceptably low risks of failures and to reduce vulnerability to failure in functionality, durability and safety over their service lives.

ASCE established an Adaptation Committee to conduct research and development related to a changing climate and its effects on the safety, health, and welfare of the public as it interfaces with civil engineering infrastructure that may lead to the establishment of "appropriate standards." ASCE has since published its Manual of Practice 140, which provides guidance for and contributes to the developing or enhancing of methods for infrastructure analysis and design in a world in which risk profiles are changing and can be projected with varying degrees of uncertainty.

Other industry participants, such as insurance companies, have been studying climate and engineering firms are implementing changes in how they do business. Many engineering firms now have their own climate change specialists. In addition, they have opened entire arms of their businesses to deliver resiliency services. One such leading firm is AECOM.

AECOM's Vice President and Chief Engineer Antoine AbiDarghim explains: "As part of the standard of care it is the responsibility of every professional to provide their client with an awareness with regards to climate change and the future implications and outcomes and their effect on their current projects and plans. The codes may or may not require certain aspects of climate change to be accounted for, but these do not cover all aspects and the clients/owners shall be made fully aware of that so that they can make appropriate decisions. This is our professional responsibility in upholding that standard of care."

As a lawyer, I ask: What does all this mean for the liability of those who fall behind? It means that one day, in the not-too-distant future, a court is going to hold a design professional liable for failure to adapt to climate change. Several oil companies and other high-profile targets are already defending such claims. Ironically, a consequence of industry pronouncements, such as those from NSPE, ASCE, and others, intended or not, is that they may hasten some of these legal developments.

Given the uncertainty of where the current standard of care lies on the spectrum of an emerging standard of care, prudence is in order. This means an engineer should think carefully about his or her scope of work. If an engineer is designing an industrial plant in a traditional hurricane or wildfire area, which is expected to be functioning for 50 years, then the engineer needs to think about vulnerabilities over that time span. If the engineer takes on a project of that nature, then the engineer must also consider whether he or she has the capacity and resources to access and analyze the requisite data. Maybe the engineer needs a consultant. It is better to come to this realization early at the contracting and estimating stage to be sure the cost of such a consultant is included in the engineer's pricing and scope, or alternatively that the engineer's contract specifically excludes such price and scope entirely.

Finally, and this is not a political point because the data is the data, industry participants can either ignore these changes or adapt to them. Some firms, such as AECOM, have not only adapted, but also have embraced them and offer resiliency services of their own. Others have not been so quick to adapt. But one thing is certain: If engineers take the ostrich's head-in-the-sand approach and fail to adapt to the data, their competitors, courts, and legal antagonists will do it for them!

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