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Code consulting: Protecting buildings from hazardous materials is confusing - by Andy Shanahan

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As a code consultant, one of the most frequently asked about subjects is hazardous material compliance because there is often confusion about how to protect a building from the hazards associated with flammable, combustible, and other hazardous materials. This is, in part, because the Massachusetts State Building Code and Massachusetts Comprehensive Fire Safety Code have separate, and sometimes conflicting, strategies for how to protect these types of materials.

Hazardous materials can require enhanced fire-resistive-rated construction. They can also require improvements to the mechanical, electrical, and plumbing systems and the fire alarm and fire protection systems. Without properly addressing the hazardous materials, these improvements can be missed, resulting in permit comments and costly redesigns.

Navigating these conflicting standards requires an understanding of the chemicals in the space and their proposed quantities. Without this information, the design team cannot accommodate fire protection and life safety-related upgrades that may be required because of the hazards.

An under-utilized tool to assist the design team is the hazardous materials inventory statement. This is a required document by 780 CMR, Section 414.1.3. This report must be prepared by a “qualified person” (a person with expertise in the code) and outline the chemicals, classification, quantity, and the building’s proposed protection methods from such hazards. This is required by 780 CMR for any building containing hazardous materials – not just if they are in great enough quantity to require mitigation.”

Hazardous material compliance requires experience in many different areas – ranging from chemistry and lab safety to code compliance and architecture. We have experts on our team that can help address hazardous materials early on in the design process, helping to make informed decisions about the space. We can also help to develop a flexible design – one that can handle the variable challenges facilities may face in the coming weeks, months, and years.

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