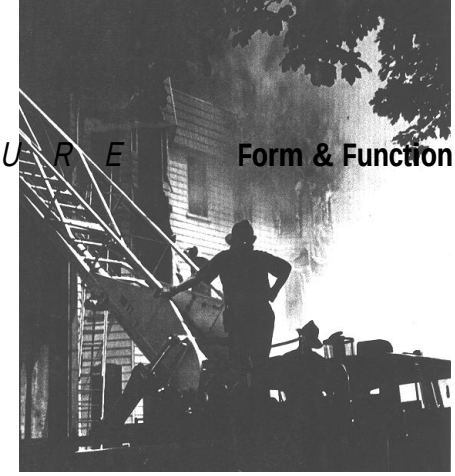

This fire was deliberately set in building slated to be demolished, in order to learn about how fires spread and how various materials perform in them. USG products and systems were extensively tested in this actual fire.

Building codes—Life in the safe lane

by J. J. Lieske, Technical Marketing Manager, Systems & Codes, United States Gypsum Company

Building codes are a fact of life. Without them our lives would be at serious risk.

What are building codes? They are minimum standards developed to regulate construction so as to protect the public health, safety and welfare. In most cases, building codes are performance oriented rather than product specific. That is, they prescribe the performance or end result you hope to attain rather than defining what product to use. Besides building codes, there are plumbing codes, mechanical codes, gas codes, electrical codes—all working together to protect us in the buildings we occupy.

There are three code bodies that promulgate model building codes, which are subsequently adopted by local municipalities: The International Conference of Building Officials (ICBO), Whittier, Calif., (Uniform Building Code); The Building Officials and Code Administrators International, Inc. (BOCA), Country Club Hills, Ill., (BOCA National Building Code); and the Southern Building Code Congress International (SBCCI), Birmingham, Ala., (Standard Building Code).

Another major code organization is the Council of American Building Officials (CABO), Falls Church, Va. CABO has membership from the three model code groups and administrates the One and Two-Family Dwelling Code and the Model Energy Code.

Some states, such as New York and Wisconsin, and some cities, such as Chicago, New York and Los Angeles, have their own codes. But most states and cities adopt one of the three model codes in total or in part, at which time it becomes the law of that jurisdiction.

Building codes are developed through a consensus process at public hearings. Proposed changes are submitted by anyone interested in revising existing code language. Testimony is presented for and against the change and the new wording is voted on by the code body membership. Changes are incorporated into the code, which is published on a three-year cycle. USG is a member of all the model code bodies.

Since 1993 the three model codes have been published in a common code format. This enables users to more easily understand the three codes and their requirements. This format could be the forerunner to a future code covering the entire United States.

Building codes help regulate various aspects of construction, including: Types of construction based building types; heights and areas of buildings; requirements for occupancies; fire resistance of the building components; special provisions for high rise construction; regulations for products such as steel, concrete, wood, gypsum, etc.; interior finishes; means of egress; and accessibility.

Products specified in the code must meet standards developed by a consensus process, such as ASTM and ANSI. This ensures that the products or methods of installation used on a job meet the stringent requirements developed by the code process. All USG products are developed and continually tested to meet the applicable standards outlined in the code. Specific products are also third-party-inspected by Underwriters Laboratories, Inc., to assure the specifier and user of consistent product performance.

How do companies promote their proprietary products and/or systems within the context of the building code? Each model code contains a section which allows the use of "alternate materials." The local building official, who is the final authority of code enforcement in a jurisdiction, must be satisfied that the alternate materials meet the intent of the code. To ease this procedure, companies may apply for recognition of their products or systems via a Research or Evaluation Report. These reports cover the fire-resistance, structural, weatherability, sound transmission, etc., aspects of the product and must be supported by tests to prove performance.

USG has, over the years, used this method extensively to prove the performance of its products and systems and their compliance to the code. Code Research Reports have been issued on the following products and systems:

- Regular and Resilient Gypsum Construction
- SHEETROCK brand Water-Resistant Gypsum Panels
- SHEETROCK brand Exterior Gypsum Ceiling Panels
- THERMAFIBER Insulation Products
- USG Fire Wall/Party Wall
- Gypsum Drywall and Plaster Systems
- USG Area Separation Wall
- USG Shaft Wall Partition System
- DUROCK Cement Board
- DUROCK Exterior Cement Board Systems
- SHEETROCK brand Interior Gypsum Ceiling Board
- DUROCK and USG Exterior Insulation and Finish System (EIFS)

These reports provide the architect, builder, contractor or supplier assurance that the products/systems have been reviewed by the appropriate code body staffs and that they meet the standards and requirements defined within the codes as well as meet the intent of the code. While costly to maintain, these reports are further evidence of USG's commitment to meeting industry standards and code requirements. Copies of these reports are available upon request by construction industry professionals by writing to: United States Gypsum Company, 125 South Franklin Street, Chicago, IL 60606-4678—Attention Dept. 147-3.

USG also works with code bodies and testing organizations to establish new standards or create criteria for evaluating new system technologies. An example of this is THERMAFIBER Life-Safety Fire-Containment Systems. USG has been working with Underwriters Laboratories, Inc., to establish criteria for fire-containment in exterior curtain wall construction.

As new products and systems are developed by USG, they will be tested to prove conformance to existing standards. And with subsequent recognition by a code research report the construction industry is assured of quality products, acceptable to use without hesitation because they meet applicable code requirements. □