AIA Best Practices:
Breaking the code: Mastering building regulations

Contributed by Rowland J. Mitchell, AIA, CSI, Excerpted and adapted from The AIA Small Project Forum Journal

Summary

Building codes establish a baseline of standards for the safe design and construction of an edifice. This article offers useful information about building codes and the process involved in researching them along with a list of 10 common mistakes found in plan reviews.

Basic facts about codes

A few basic factors about codes must always be kept in mind.

- Codes, in general, establish minimum standards. They are not absolute. It is our responsibility to go beyond minimum code requirements if, in our professional judgment, it's appropriate to do so.

- Agencies having jurisdiction exist for basically the same reason as registered design professionals—to protect the public health, safety and welfare.

- A project should always be reviewed, permitted, inspected, and certified for occupancy under the same edition of the code. Never pick and choose the best provisions from different code editions. And don't let the reviewing agency do it either.

- In some jurisdictions, two codes may be used. For example, the building department may use the International Building Code and the fire department the International Fire Code. In such cases, the more restrictive provisions must be used.

- Fire underwriters such as IRI or FM may have specific requirements beyond the code for a facility that they insure. Keep in mind that such regulations are primarily designed to minimize the risk of insured loss, whereas the codes are primarily designed to protect people.

The process

At the beginning of a project, establish and document all agencies having jurisdiction and all adopted codes. If a new edition of a code is out, verify with the appropriate agency the timetable for its adoption, as it may be in force when your project applies for the building permit. Because projects are always ongoing, there is usually a grace period during times of code transition. There is no specific time to conduct a code search; various parts of the search should be conducted at different phases as the design is developed and refined:

Schematic design. Establish such basic factors as occupancy types, type of construction, height and area limitations, egress requirements, fire protection systems, and accessibility (in other words, the basic factors that have an impact on the design of the facility).

Design development. Verify factors established in schematic design and confirm additional code factors that directly affect building systems, including (but not limited to) structural loading, fire separations, fire stopping, roof coverings, skylights, and accessibility.

Construction documents. Ensure compliance with specific factors such as design of fire-rated assemblies, opening protectives, interior finish classifications, and so on.

At the end of schematic design or during design development, do a code-compliance plan and meet with the appropriate agencies. This will accomplish two primary things: (a) It will allow feedback from the code official, going a long way toward avoiding big surprises at building permit time, and (b) It will encourage the code official to be part of the design process.

In all cases, document, document, document! Although your documentation may not prevent the agency from making changes, it will convince the owner that you've done your job. This will make procurement of additional fees for code changes (per the standard owner-architect agreement) a much easier task.

Although the code official has the final word, variations providing equivalent life safety are often considered. Always try to understand the spirit of the code being conveyed by the letter of code. Also, if a code official requests something that you feel is not a specific code item, ask the official to cite the code article and paragraph.

The 10 most common mistakes in plan review

Problems in obtaining approval from local building officials can arise from lack of specificity, incorrect interpretation or application, insufficient code compliance analysis, or lack of appropriate application of permitted trade-off provisions. Some mistake areas that most commonly cause delays include:

- Use group

- Construction type

- Area/height limitations

- Occupant loading

- Egress

- Fire ratings/separations

- Opening protectives

- Structural loading

- Fire protection systems

- Accessibility issues

Automatic code adoption is a myth

One final note on local codes: it is a myth that all new editions of model building codes are enforced as soon as they are published. As a general rule, there is no automatic code adoption. Courts have ruled that automatic adoption of model codes can violate due process of the citizens to govern their own laws and ordinances. A city typically does not have the authority to give its power to write laws to a third-party agency such as a code publisher. A municipality can enforce only those building and fire codes that have been legally adopted. Obtain a copy of the adoption ordinance or other authority and locate any modifications. It is the responsibility of the permit applicant to know the applicable laws and to do the appropriate code homework.

About the contributor

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