

## Code Compliance Strategies



Successful strategies for improving  
compliance with building energy codes

## Design Professional Accountability

Fall 2011



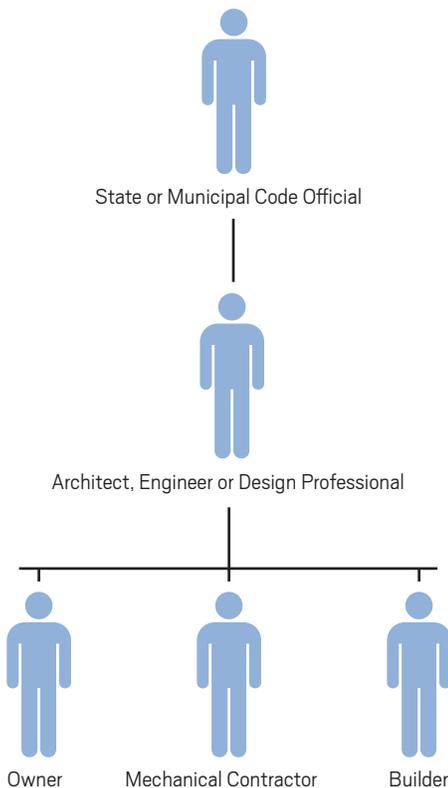


Figure 1: Licensed design professionals are the link between stakeholders involved in the construction process and the state or municipal code official.

**T**he design professional accountability compliance model recognizes that jurisdictions have limited resources and that design professionals are the most appropriate individuals for ensuring that projects are built in compliance both with their designs and with applicable building codes.

## Strategy Overview

In this compliance model, licensed design professionals—in addition to ensuring that building plans meet local building codes—are required to complete a statement of compliance indicating that the final construction of a building is in accordance with the approved plans. Architects, engineers, and other design professionals are therefore obliged to be actively involved in the construction process. Licensing of design professionals is a matter of public safety, and this code enforcement strategy simply holds these professionals accountable for their work.

## Supervision

Under this approach, construction must be supervised by a state-registered architect or engineer. However, installation of heating, ventilating, air conditioning, and illumination systems may be supervised by a state-registered designer. The supervision of construction is a professional service consisting of a 2-4 hour visit each week and is independent from the supervision of construction by a contractor.<sup>1</sup> All construction requiring a licensed design professional for plan submittal must fulfill these compliance requirements.



**Plan Review** Design professional must sign and seal building plans



**Construction** Registered onsite supervising professional must be retained from project start to project completion



**Final Inspection** Registered onsite supervising professional files compliance statement

Figure 2: Licensed design professionals' involvement in the plan review and inspection process

## Compliance Statement

The person responsible for supervision carries the additional responsibility of certifying that construction is in substantial compliance with approved plans and specifications. Multiple statements of compliance may be submitted if several professionals are responsible for the building design (lighting, building, and mechanical codes). The written compliance statement<sup>ii</sup> is submitted prior to initial occupancy, certifying that construction has been performed in compliance with the approved plans and specifications. The compliance statement should provide a section where non-compliant items may be addressed.

## Requirements for Implementation

- A state or local statute or administrative code to require the compliance statement.
- A Statement of Compliance form<sup>iii</sup> that is written in a manner acceptable to members of the relevant professions (i.e. architects, engineers, and designers).
- Mandatory training (and possibly continuing education courses) to inform architects, engineers, and other design professionals of their new responsibilities and ramifications for non-compliance.
- Quality assurance mechanism, such as randomized inspections by city or state officials.
- Consequences, such as suspension or revocation of licenses, for improper or false completion of a compliance statement (should be incorporated into the authorizing statute).

## Implementation Options

- The architect responsible for stamping plans may be different from the architect who completes the compliance statement. For instance, due to insurance and liability issues, large architecture firms may have a few insured principals who can seal drawings, and will therefore have another architect working on the project provide field presence and inform the principals of compliance.
- Engineers and architects who are from a different state or are distant from the project site may contract a licensed design professional located closer to the building site to supervise construction.
- Larger firms may opt to employ a field architect to oversee and administer construction.

**In Wisconsin, a compliance statement is required for commercial buildings 50,000 cubic feet or larger. The use of volume targets buildings with large thermal envelopes.**

## Benefits

- Engagement with the design professional is upheld throughout the construction and inspection process.
- Design professional accountability reduces some of the burden and acts as a safety net for state and municipal code officials.

## Challenges

- While reducing the burden on building inspectors, having this practice in place might lead to the energy code being overlooked, particularly in a compliance statement that includes additional building items (i.e. safety and structural components). This could be prevented by requiring a compliance statement with a detailed checklist of measures that affect energy efficiency, similar to California's construction phase documentation (CF-6R)<sup>v</sup> or New Hampshire's residential energy code application.<sup>v</sup>
- Architect fees will generally increase as a result of these additional responsibilities.

## Selected Examples

### >> Wisconsin

- Compliance statement required for commercial buildings 50,000 cubic feet or larger.
- The use of volume, as opposed to floor space, allows building officials to target buildings with large thermal envelopes.
- Almost 8,000 buildings (including multifamily) required compliance statements in 2010.
- 16 state plan reviewers are responsible for commercial building inspections, with the support of around 200 local municipal code officials.
- This code compliance method has been in place since 1974.
- According to a U.S. Department of Energy-supported compliance pilot study, buildings obtained a 95% compliance rate with the energy code (IECC 2006) in 2011.<sup>vi</sup>
- Officials receive only a few non-compliance statements annually from licensed design professionals, because the professionals work to avoid this situation, which would delay building occupancy.
- The compliance statement requirement has not raised the insurance premium for Wisconsin design professionals, indicating that the liability of these professionals has not increased either.

>> **Phoenix, Arizona** <sup>vii</sup>

- Allows registered design professional to take responsibility for and certify a project's compliance with building codes, standards, and ordinances.
- Depending on project scope, a permit may be issued in one to five calendar days.
- Design professionals must have been registered in Arizona for at least three years and must successfully complete a training given by the city's Planning and Development Department.
- Design professional self-certification only applies to plans and does not include inspection or certification of compliance for construction.
- For buildings less than 25,000 square feet, a Structural Peer Review Certificate by a city-approved Structural Peer Reviewer is required for projects with a structural scope of work.
- For buildings greater than 25,000 square feet, the city will perform an automatic audit in place of the structural peer review.
- Projects not eligible for design professional self-certification include new high-rise buildings, hillside projects, and institutional and hazardous occupancies.
- Multifamily and townhouse development projects and business, mercantile, factory, storage, and assembly occupancies receive an automatic audit, while other projects receive random audits by the Planning and Development Department.

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## References

- [Wisconsin Commercial Administrative Rule 61.40: Supervision](#)
- [Wisconsin Building, HVAC, Compliance Statement](#)
- [Wisconsin Building Plan Review and Inspection Brochure](#)
- [California Installation Certificates \(see page 2-13 and appendix\)](#)
- [New Hampshire Residential Energy Code Application](#)
- [Wisconsin, MEEA/BECP Code Compliance Pilot Study](#)
- [Self-Certification Program](#)

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The Institute for Market Transformation (IMT), founded in 1996, is a Washington, D.C.-based 501(c)(3) nonprofit organization promoting energy efficiency, green building, and environmental protection in the United States and abroad. The prevailing focus of IMT's work is energy efficiency in buildings. In particular, IMT aims to strengthen market recognition of the link between building energy efficiency and financial value. Our activities include technical and market research, policy and program development, and promotion of best practices and knowledge exchange. IMT is the U.S. hub of the Global Buildings Performance Network. For more information, visit [www.imt.org](http://www.imt.org).

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The Global Buildings Performance Network (GBPN) has a mission to significantly reduce greenhouse gas emissions associated with building energy use by

- Promoting best practices in building energy efficiency and performance
- Offering world class energy efficiency expertise to policy makers and business leaders
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