

# Design Professional Accountability

## Goals

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

## Strategy Overview

Licensed design professionals—in addition to ensuring that building plans meet state 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 such regulations, construction must be supervised by a state-registered architect or engineer. However, installation of heating, ventilating, air conditioning, and illumination systems may alternatively be supervised by a state-registered designer. This is a professional service that is distinguished from superintending of construction by a contractor,<sup>1</sup> consisting of a 2-4 hour visit each week. All construction requiring a licensed design professional for plan approval is responsible for fulfilling these compliance requirements.

## Compliance Statement

The person responsible for supervision carries the additional responsibility of ensuring that construction and installation is in substantial compliance with approved plans and specifications. Multiple statements of compliance may be submitted if several professionals are responsible for the building

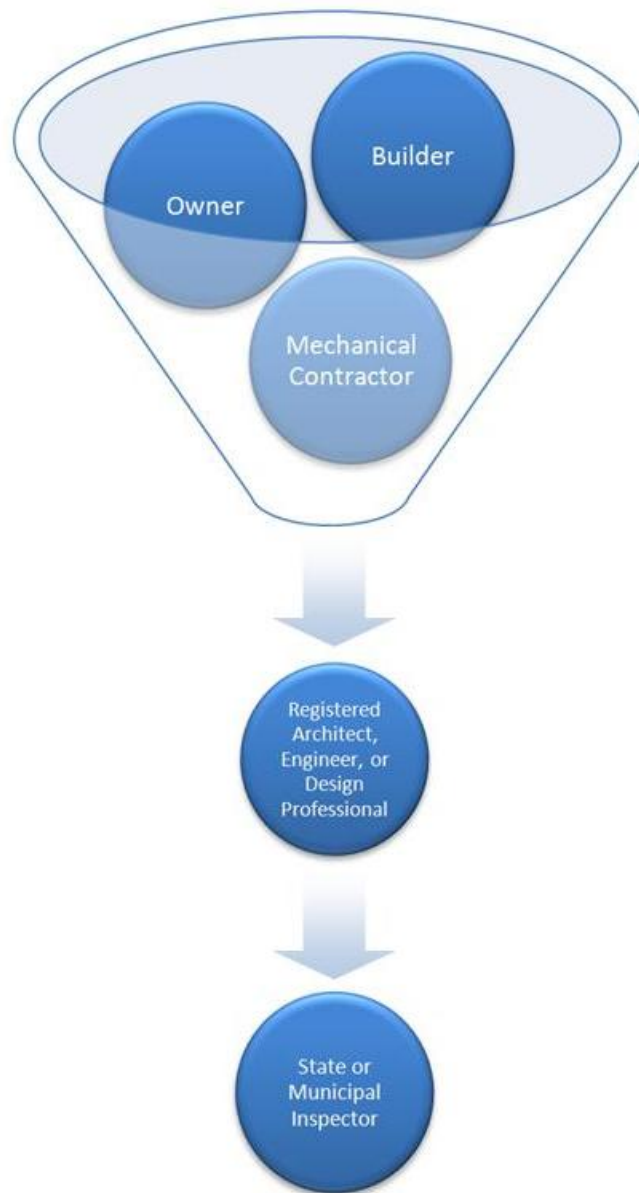


Figure 1: Licensed design professionals are the link between stakeholders involved in the construction process and the state or municipal inspector

design (lighting, building, and HVAC codes). The written compliance statement<sup>ii</sup> is submitted following the final inspection and prior to initial occupancy certifying that construction has been performed in compliance with the approved plans and specifications. To eliminate objectivity, the compliance statement may provide a section where non-compliant items may be addressed.

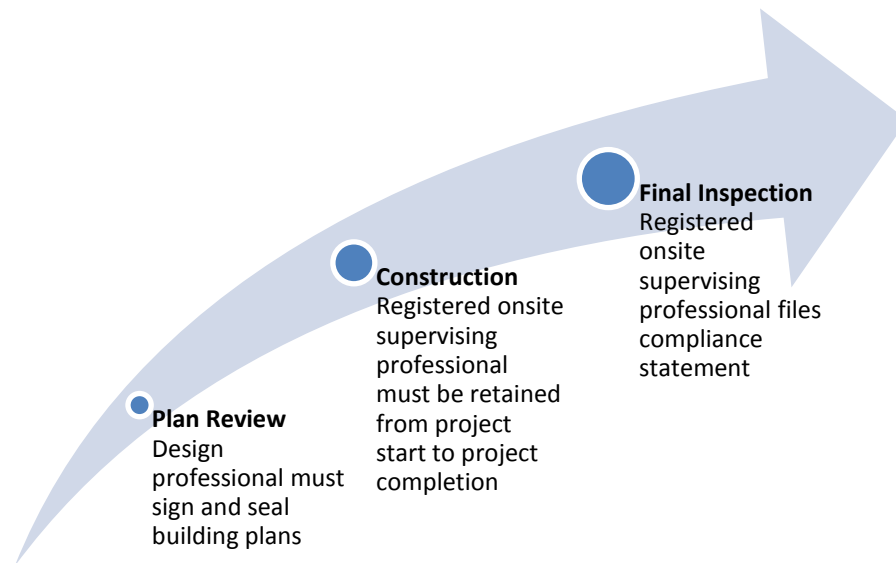


Figure 2: Licensed design professionals' involvement in the plan review and inspection process<sup>iii</sup>

## Requirements for Implementation

- Statement of Compliance form<sup>ii</sup> that is written in a manner acceptable to the profession (i.e. AIA, ASHRAE, and Developers)
- State or local statute to authorize the compliance statement
- Required 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 completion of a compliance statement

## 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 as few as two insured principals that may sign compliance statements and seal drawings, and may therefore have another architect working on the project provide field presence and inform the principals of compliance.
- Engineers and architects from a different state or that 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.

## Benefits

- Engagement with the design professional is upheld throughout the construction and inspection process.
- Architect and engineer accountability minimizes some of the responsibility and acts as a safety net for state and municipal building inspectors
- When compared to the International Building Code's alternative—Chapter 17 Special Inspections and Tests—the cost of compliance statement requirements and supervision responsibilities is lower than the cost of special inspections and tests under Chapter 17. Additionally, the compliance statement can cover more aspects of construction.

## Challenges

- While minimizing responsibility to building inspectors, the energy code could be overlooked with this practice in place, 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>iv</sup>, or New Hampshire's residential energy code application<sup>v</sup>.
- Architect fees will increase as a result of these additional responsibilities.

## Case Studies<sup>vi, vii</sup>

### Wisconsin: Implementation

- Compliance statement required for commercial buildings 50,000 cubic feet or larger.
- About 4000 buildings fell into this building category in 2010.
- 13 inspectors are responsible for commercial building inspections, with the support of around 200 local municipality inspectors.
- This code compliance method has been implemented since the late 1960's.
- The threshold for buildings subject to a compliance statement is 50,000 ft<sup>3</sup>. The use of volume, as opposed to floor space, allows building officials to target buildings with large thermal envelopes.
- According to a DOE-supported compliance pilot study, buildings were 95% in compliance with the energy code (IECC 2006) in 2011.
- Architect and engineering fees are typically 3-4% of the project cost, which compensates for the additional work required for filing a compliance statement.
- Officials had never received a noncompliant statement from a licensed design professional at the time of this writing.
- Anecdote: In 1991, a large high density storage warehouse caught fire as a result of collapsing. A jury panel found the structural designer—who signed the compliance statement—to be partially responsible for the damage, owing the warehouse owner and its insurers \$31 million (51% of the total reward). Source: Insurance Journal.
- The compliance statement requirement does not effect the insurance premium for Wisconsin design professionals, indicating that the liability of these professionals does not increase either.

### Wisconsin: Challenges

- Professional Engineer (PE) certification requirements do not specify a discipline (i.e. mechanical, electrical, civil). This could be a concern given that portions of the building code are not an expertise covered in some engineering disciplines.
- Additional training to inform licensed design professionals of their compliance enforcement responsibilities is not required.
- The compliance statement takes the place of the International Building Code's Chapter 17 Special Inspection and Test requirements, and has been successful as a result of the high quality of contractors in the state.

## Acknowledgments

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## Resources and References

- <sup>i</sup> [Wisconsin Commercial Administrative Rule 61.40: Supervision](#)
- <sup>ii</sup> [Wisconsin Building, HVAC, Compliance Statement](#)
- <sup>iii</sup> [Wisconsin Building Plan Review and Inspection Brochure](#)
- <sup>iv</sup> [California Installation Certificates](#) (see page 2-13 and appendix)
- <sup>v</sup> [New Hampshire Residential Energy Code Application](#)
- <sup>vi</sup> [Wisconsin MEEA/BECP Code Compliance Pilot Study](#)
- <sup>vii</sup> [Wisconsin Jury Says Quad/Graphics and Insurer Entitled to \\$63 Million](#)