

Delegated Design and Shop Drawings

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Summary

Members are reminded to provide sufficient information on the architectural drawings being submitted for building permit to allow the authorities having jurisdiction (AHJs) to determine compliance with the applicable codes and regulations; in particular with the Building Code.

This bulletin elaborates on the practice of delegated design and the reliance on shop drawings to provide critical design information.

Background

Delegated design is the practice of deferring certain detailed design aspects to someone specializing in the type of work being deferred. Often this person is a professional engineer engaged by a supplier or fabricator. Usually the delegated design is required to be shown on shop drawings bearing the professional seal and signature of the professional engineer who did the design.

Delegated design is commonly used in relation to shoring, stairs, guards, handrails, wood trusses, fire sprinkler systems, curtain walls or glazing for example.

Municipalities are increasingly requesting shop drawings showing the delegated design be submitted before they will issue a building permit. At first glance, this can be disruptive of the normal processes and project work flow. Unless permit application occurs well after contract award (possibly delaying the start of construction), it is unlikely that suppliers or fabricators have been selected. Most suppliers and fabricators are unwilling to commit to the expense of producing shop drawings for a project that they have not been awarded. Further, comments received from the AHJs may require design or contract changes which would require the shop drawings to be redone.

Several building departments have been contacted to gain an understanding of the issues with delegated design from their perspective. The common thread is that the authority reviews the drawings for compliance with the building code and has a responsibility to confirm that the building has been designed to be in compliance with the building code.

In some cases, there is not sufficient information on the permit drawings to determine if the design is in compliance with the building code. A simple note that the delegated design is to meet code and that shop drawings are to be submitted is not sufficient. To determine that the design is in conformance with the building code plans examiners may request the shop drawings up front. The issuance of the permit may be made subject to the submission of acceptable shop drawings for review by the authorities prior to construction.

Suggested Procedure

For building elements relying on delegated design, sufficient information should be provided on the permit set to allow the authority reviewing the drawings to determine that the design intent meets the applicable code requirements. In most cases, it should only be the structurally engineered aspects of the design which are delegated. An exception to this is the hydraulic design of sprinkler systems.

The delegation of design does not change the architect's contractual responsibilities to coordinate the work of the consultants, including any scope which is subject to delegation. The dimensional, relational and connection information required to demonstrate code compliance should be provided on the architectural drawings.

In the case of delegated design, the architectural specifications should include the requirement for shop drawings bearing a professional engineer's seal to be submitted for review by both the consultants and the AHJs prior to any related construction

For example, for handrails this means that the permit drawings would show all aspects of the handrail in plan, section, and elevation, including any extensions or returns. The delegated design portion would be limited to engineering the components to meet the loading and other structural requirements of the building code.

As a second example, roof truss drawings should show the relationship of truss to deck or cladding, how the truss bears on walls or connects to columns, how ducts, equipment, conduit and fixtures are supported from or pass through the truss, and how deflection is accommodated. The sizes of the members of the truss will finally be determined by the delegated design, but sufficient information about the interface of the truss with other building elements should be provided in the architectural drawings to determine that the design intent is in compliance with the Building Code.

Where sufficient information is provided on the architectural drawings, requests to submit shop drawings at the permit stage may be avoided.

The OAA does not provide legal, insurance or accounting advice. Readers are advised to consult their own legal, accounting or insurance representatives to obtain suitable professional advice in those regards.
