



AIA Best Practices:

Managing quality in the design development phase

Project phase checklist series

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Summary

This checklist is intended to assist project teams in meeting their design development obligations. This checklist is organized in three primary parts: general objectives of phase, phase task checklist and deliverables for phase. The phase task checklist is further organized by subgroup tasks. In developing a checklist for general applicability, it is necessary to decide upon some frame of reference; this one assumes a medium to large commercial project.

General objectives of phase

It is critical that project teams establish general objectives for design development. The starting point should be the contract; refer to the specific project agreement as well as AIA B100 series documents. The general objectives are intended to be clear, concise and shared with the entire project team, including the client.

Design development documents are for the most part an interim development phase of the construction documents, but are also an end in themselves. The architect and greater design team need to be aware of how a client intends to utilize design development documents. These documents may be part of approval processes, such as foundation building permit or full building permit. Design development documents are also submitted for owner approval, which could extend to parties other than those generally representing the owner in routine communication, such as a board of directors or lending institutions. For clients, the documents clearly illustrate the buildings systems and materials and generally how they coordinate.

Design development drawings generally are the basis of an estimate of the cost of the work, which would generally be a trade breakdown estimate. Design development documents are also a significant milestone toward the completion of construction documents.

Phase task checklist

The body of the checklist is a more extensive tabulation of specific tasks organized under the following headings:

- Management/quality management/schedules
- Program/construction costs/regulatory requirements

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- Performance criteria
- Civil/site design
- Design/architecture
- Structural
- MEP/FP
- Other consultants

These tasks are still somewhat general and focused primarily on tracking the completeness or status of specific project-related tasks. This checklist is not sufficient to address very specific or technical tasks associated with a project. It is primarily designed to assist the project manager or project architect and associated team members for a project.

There are action items within this checklist suggesting a development of design development that is consistent with AIA B101-2007, but greater specificity is also associated with many action items. There are also action items that suggest a fairly high standard of quality and completeness; and it ought to be noted that this checklist exceeds the scope of work defined in AIA B101- 2007. One example is that “the plans are graphically complete except for minor coordination.” Another is that “complete typical wall sections at $\frac{1}{2}$ ” or $\frac{3}{4}$ ” scale with notes and dimensions” and “representative larger scale partial details at $1\frac{1}{2}$ ” or 3” scale.”

These task items are more a function of a development of the documents in an efficient manner and to address issues of quality management. A firm or project team can easily modify the standards set within this template to be consistent with the firm’s standard of practice and to address project-specific requirements. These tasks are general and suggestive.

Deliverables for phase

It is often the case that clients do not have a sufficiently clear idea of what the design development documents will be until they are delivered. Architects are often in a similar position, not clearly knowing what they will receive from their consultants until after they receive the documents.

This is not acceptable. To help avoid this, consider developing clearly stated deliverables after the design development phase commences that are consistent with the general objectives of the phase and the specific phase tasks. This portion of the checklist can also be shared with the owner and appropriate members of the design team so that the expectations are clearly articulated.

Conclusion

This quality management phase checklist is one in a series intended to address typical phases for medium to large projects. The phase checklists include:

- Pre-design services/site analysis (pending)
- [Schematic design](#)
- [Design development](#)
- Construction documents (pending)
- Bidding or negotiation (pending)
- Construction contract administration (pending)
- Post-construction administration (pending)

Each checklist is designed to be easily manageable by controlling the length. This means that they are not sufficient to serve as detailed technical task checklists addressing the various details of the documents.

About the contributor

Michael J. Lough, AIA, is a principal of Integral Consulting, a Quality Management and Technical Services consulting practice. The practice focuses on Peer Reviews, exterior envelope services and other technical services designed to assist firms and project teams in improving the successful implementation and execution of architectural projects. Clients include architects, owners, development management companies and contractors.

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