

Planning for Effective Project Closeout

Adapted from an article by Douglas C. Hartman, FAIA, in *The Architect's Handbook of Professional Practice Update 2003*

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SUMMARY

A successful project closeout benefits all involved: the architect, the owner, and the contractor. Douglas C. Hartman, FAIA, demonstrates the importance of an effective closeout and identifies steps that must be taken for an orderly closeout process.

WHAT DEFINES PROJECT CLOSEOUT?

Successful project closeout means different things to each participant. To the contractor, it means resolving the punch list, reconciling the job cost, and collecting the final payment. To the architect, it is the satisfaction of seeing the design result in a completed project that substantially conforms to the construction documents and functions as intended to meet the client's needs. To the owner, however, closeout can bring nervous anticipation and anxiety as the operation and ownership of the facility are transferred into their hands.

To appreciate the importance of the project-closeout phase, here are three examples of seemingly minor omissions that can balloon into significant issues.

Don't forget the final completion date. The certificate of substantial completion (AIA Document G704™ – 2000, Certificate of Substantial Completion) specifies a date and time when the owner will take occupancy of a project. If the architect fails to fill in this information and the owner signs the document without noticing the omission, the date on which all project warranties commence is not identified. Moreover, the lack of a specific date on which the owner's obligations for operation, maintenance, security, insurance, and utilities are to commence creates a possible gap between the contractor's and owner's insurance coverage.

Don't forget any change orders. AIA Document A201™ – 1997, General Conditions of the Contract for Construction requires that when the cost of the work is more or less than a specified allowance, the architect will prepare and execute a final change order to adjust the contract sum accordingly. If the work costs less than the specified allowance, the architect fails to issue a change order, the contractor

issues a final payment application matching the specified allowance (above the actual cost of the work), and the owner pays the amount without verifying it, then the architect faces a possible claim alleging improper certification of the final application for payment.

Remember maintenance training. In one case, the owner's staff did not get appropriate training for a complex HVAC system and failed to deenergize critical electrical systems before the HVAC was shut down. The resulting damage to the HVAC system required fabrication of new equipment, which took more than a month. The owner was forced to obtain expensive temporary cooling equipment until the problem was resolved. (Although training is not an architect's obligation under the AIA Contract Documents, this example illustrates that it could be a value-added service.)

INTEGRATING CLOSEOUT INTO THE PROJECT DELIVERY PROCESS

Consider project closeout before the owner-architect agreement is signed. Convincing the owner to retain the architect during the construction administration (CA) phase not only makes good sense but is also mandated by law in many states that deem closeout to be an integral part of an architect's services. Nonetheless, the inclusion of CA in design services can be a hard sell. Due to the serious legal implications associated with certifying substantial completion, it is not advisable for architects to agree to issue a certificate unless they visit the site during construction, review submittals and substitutions, and have the authority to reject nonconforming work.

Confirm and document decisions about project closeout procedures during the design phase. It is just as important to determine the owner's closeout documentation needs as it is to determine an owner's bonding and insurance requirements. These are some of the questions that can reveal client expectations:

- Is there a need for multiple substantial completion certificates?

- Does the owner wish to be involved in administering punch lists?
- What amount of retainage is preferred, and what formula will be used to determine how it will be released?
- Is there a surety involved that may require notification when retainage is released?
- What are the owner's preferences for submission of record documents: electronic files (i.e., changes are input electronically), reproducible copies of hard-copy markups, or hard-copy markups only?
- What is the preferred extent of record documents? Are only drawings required, or should record specifications (including a list of materials), record submittals, or color boards and material samples also be included?
- How should warranties and certifications be organized?
- What are the owner's preferences for demonstration and training? Find out what level of demonstration and training is needed for each specific system. What follow-up mechanical services are required at the first seasonal change?
- Does the owner wish the architect to include building commissioning services?
- What are the owner's preferences for operation and maintenance manuals? How many copies are required? How should the manuals be organized?
- What are the owner's preferences for maintenance materials? What products should be included?

AIA Document D200™ – 1995, Project Checklist provides an opportunity to plan for closeout early in the project delivery process. It contains references to closeout in Section 7, Construction Contract Administration, and Section 8, Post-Construction Services. It can serve as a checklist of tasks to be decided with the owner and as a permanent record of the owner's, contractor's, and architect's actions and decisions.

Project closeout tasks continue during the construction document phase as the specific requirements agreed to by the owner and architect begin to be incorporated into the design development and construction document project manuals. AIA Document A201™ – 1997 is a good

starting point for identifying contract closeout requirements.

The provisions in these contracts identify the following responsibilities for each party:

Contractor

- Inspects the project and prepares the punch list (outstanding items to be completed or corrected)
- Submits notice of substantial completion
- Completes punch list items as stipulated in the certificate of substantial completion
- Submits required closeout documents
- Submits notice of final completion and final application for payment
- Compiles lien waivers from subcontractors and suppliers

Architect

- Reviews the contractor's punch list and supplements it as needed
- Inspects the project to determine substantial completion
- Confirms owner-accepted nonconforming work
- Prepares and issues a certificate of substantial completion with attached punch lists, if appropriate, and notes any owner-accepted nonconforming work
- Reviews closeout materials to determine contract compliance for submittals
- Prepares final change order
- Inspects project to determine final completion
- Processes final application for payment

Owner

- Accepts project as stipulated in certificate of substantial completion
- Makes final payment

These required actions may be further amplified in the Division 1—General Requirements sections of the specifications, expanded to include requirements for the following:

- Punch lists
- Insurance changeover requirements
- Startup of systems
- Testing, adjusting, and balancing of systems

- Systems demonstration
- Operation and maintenance manuals
- Project record documents
- Spare parts and maintenance materials
- Attic stock materials
- Warranties, workmanship bonds, maintenance service agreements, and final certifications
- Final pest-control inspection and warranty
- Final construction completion photographs
- Property surveys
- Delivery of tools and extra materials to the owner
- Changeover of permanent locks and delivery of keys to the owner

IMPLEMENTATION AND ENFORCEMENT

It may become necessary to encourage the contractor to focus on closeout procedures by enforcing early penalties for failure to comply with contract requirements. Penalties can take several forms:

- Withholding a portion of periodic payments for failure to keep record documents current
- Withholding a portion of periodic payments for nonconforming work
- Refusing to release retainage until closeout documents, testing and adjusting, demonstration and training, operation and maintenance manuals, spare parts and maintenance manuals, and warranties and bonds are submitted
- Assessing the contractor for the architect's time and expenses when substantial completion inspections are requested before the work is ready

A project closeout conference conducted before substantial completion can help keep everyone focused. Such a conference can be appended to a regularly scheduled progress meeting and should include a review of all contract closeout requirements, timing requirements for each, and an identification of the party responsible for preparing, conducting, or submitting the specific requirement. A project closeout checklist that identifies the required closeout documents and activities can be distributed to the attendees at this time.

LESSONS LEARNED

It is important to consider closeout responsibilities before signing the contract, and it is a best practice to integrate closeout into CA. For a successful closeout, the owner, architect, and contractor should be satisfied and their interests should be met.

RESOURCES

More Best Practices

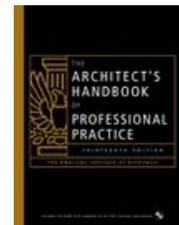
The following AIA Best Practices provide additional information related to this topic:

- 11.04.01 Quality Control: A Construction Contract Administration Checklist
- 11.04.02 Administering Changes and Change Orders
- 11.04.05 The RFI's Role in the Construction Process

For More Information on This Topic

See "Contract Administration," by Patrick Mays, AIA, in *The Architect's Handbook of Professional Practice, 13th edition*, Chapter 18, page 603. See also "Effective Project Closeouts," by Douglas C. Hartman, FAIA, in *The Architect's Handbook of Professional Practice Update 2003*, page 91.

See also the 14th edition of the *Handbook*, which can be ordered from the AIA Bookstore by calling 800-242-3837 (option 4) or by email at bookstore@aia.org.



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- Practice
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