

# A/E RISK REVIEW

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## Commissioning Is Here To Stay

*The following material is provided for informational purposes only. Before taking any action that could have legal or other important consequences, speak with a qualified professional who can provide guidance that considers your own unique circumstances.*

Commissioning is becoming an increasingly common feature of today's building projects. This is particularly true for institutional and government projects; and commissioning has become a requirement for LEED green design certification.

Historically, design firms have been divided as to whether the use of building commissioning is good news or bad news. What is not debatable, however, is the fact that commissioning is here to stay. As buildings continue to become smarter and more operationally complex, the need to ensure that these operational systems work to the necessary levels to meet client objectives and current industry standards only increases.

### Commissioning Defined

What exactly is commissioning? Put simply, it is a process used to test, document and verify the proper installation and performance of mechanical, electrical, control and life-safety systems, building envelopes, and other operational aspects of a new or existing facility.

Commissioning typically covers the operational efficiency of HVAC systems, security systems, heating and chilling water systems, humidifiers, smoke and carbon monoxide detectors, fire alarms, electrical systems, emergency power systems, exhaust systems, filtration systems, and so on. Certain types of buildings, such as hospitals, labs, clean rooms, and prisons, will have an extensive list of operational systems that will need to be commissioned. Light industrial buildings may only require an abbreviated testing of basic control

systems -- although even simple projects are incorporating more and more complicated computerization.

Typically, the project owner hires a third-party commissioning agent (often referred to as a CxA) to carry out those responsibilities. (Note, however, that the AIA and others have taken the position that the lead architect can and should perform commissioning services.) The commissioning agent's sole responsibility is to ensure the project meets the quality levels of operations demanded by the owner.

The commissioning agent begins by establishing and documenting the building performance standards of the owner. These standards may cover factors such as energy efficiency, environmental impacts, sustainability and air quality. The agent then applies procedures for measuring and confirming those standards, reviews systems designs, and offers an opinion as to whether the design documents are 1) complete from a systems level perspective and 2) support performance standards. In the construction stage, the agent confirms that systems are properly specified, located and installed.

At substantial project completion, the agent performs functional performance tests to determine whether the performance standards are indeed met by the finished products and building systems. If not, the agent facilitates resolution of the systems deficiencies. Some commissioning agents will only report project deficiencies but will not recommend new designs or equipment specifications. Others, however, may make general suggestions or recommendations for meeting owner standards. It is the owner and lead designer, however, who are responsible for ordering and making any changes to design or equipment specifications. The commissioning agent acts only in an advisory role.

From the project owner's perspective, commissioning is a viable tool to help ensure the new facility performs as expected. Their hope is that the costs involved with hiring an agent and completing the testing processes

will be offset by energy savings, high-efficiency operating systems and a reduction of maintenance and repairs over the life of the building.

From the design professional's perspective, commissioning is an important development from two vantage points. First, architects and engineers will be increasingly required to work with a commissioning agent, often from the beginning to the end of a project. The agent will be evaluating the design, installation and performance of specific aspects of the project and may suggest, as an owner's representative, changes in design, construction or specifications.

Second, a design firm may decide to add commissioning as a billable service to offer to its clients. It may take on the role of commissioning agent and represent the project owner on facilities designed by other lead designers.

### **Dealing with a Commissioning Agent**

When you are the lead designer on a project and the owner has hired a commissioning agent to review the project and help ensure operational standards are met, it is critical to ensure you and your client agreed to what commissioning is, and what it isn't. Make it clear to the owner that commissioning does not guarantee results, such as attaining LEED certification. Also make it clear that commissioning will expand your scope of services in order to perform the added work required by the commissioning agent. Ensure your client understands that any design changes suggested by the commissioning agent and approved by the client will result in added services and costs. Make it clear that you cannot be held responsible for design changes and new specifications ordered by the client per the recommendations its commissioning agent, nor for any damages that could occur to equipment and systems should you be required to participate in testing procedures.

Make sure your client contract reflects the changes to your responsibilities and scope of services that commissioning entails. For instance have your client contract spell out that:

- The identity of the commissioning agent and its scope of services will be made available to the designer in a timely manner.
- All commissioning services will be performed at the client's sole expense.
- The designer shall be compensated for all additional services that result from the commissioning process. This includes the time

spent reviewing and responding to proposed design changes as well as the cost of executing any design changes.

- Commissioning services will be performed in a timely manner that will not delay the delivery of design services. If delays do occur, any resulting expenses to the designer will be paid by the client.
- Any recommendations made by the commissioning agent that affect project design shall be provided promptly to the designer. The designer will be given sufficient time to review the recommendations and provide a response.
- Any objections by the designer to the commissioning agent's recommendations will be provided in writing to the client. If the client approves the commissioning agent's design changes anyway, the client must agree, to the fullest extent permitted by law, to waive all claims against the designer and indemnify and hold harmless the designer from any liabilities or costs which arise as a result of those design changes being made.

### **Becoming a Commissioning Agent**

Some design firms are recognizing commissioning as an income generating service they can offer to their current and potential clients. It goes without saying, however, that design firms should not take on the responsibilities of commissioning agents without proper education and training. Fortunately, a few design industry associations have certification programs for becoming commissioning agents.

ASHRAE's *Standard 202-2013 -- Commissioning Process for Buildings and Systems* is an excellent place to start on the road to becoming a commissioning agent. *Standard 202-2013* describes how to plan, conduct, and document commissioning and includes samples of documentation, checklists, systems manuals, reports, training plans, and more. ASHRAE has also developed recommended scopes of services, from comprehensive total building commissioning to scopes for specific systems such as HVAC, building envelopes or electrical systems.

The Building Commissioning Association, through its BCxA University, offers a full commissioning curriculum, including a comprehensive certification program. Courses are available through recorded on-demand webinars, interactive "live" webinars, and in-person classroom training. The Building

Commissioning Association has also published "Essential Attributes of Building Commissioning," fundamentals of effective commissioning that all association members agree to abide by.

When offering the services of a commissioning agent, you and your attorney should make sure your client contract stipulates:

- As commissioning agent, you have the right to rely upon the completeness and accuracy of all project-related information provided by your client.
- Your role as commissioning agent is to conduct functional tests and document results for the client. In addition, you may agree to make suggestions or recommendations to help achieve owner objectives; but you shall not order nor execute design changes or equipment specifications. The lead designer shall have the right to review and respond to any of your recommendations. You shall be neither responsible for nor liable for any final design decisions made or approved by the client or lead designer that are incorporated into the project.
- All claims against you arising out of services performed by other parties to the project shall be waived by the client. Likewise, the client shall waive all claims against you for the services you perform as a commissioning agent except for those where you are negligent in your actions or those that are the result of willful misconduct.
- You shall not be responsible for nor liable for construction means, methods, techniques and sequences. A waiver for such liability should be included in your client contract, stating that the contractor remains fully and solely responsible for construction activities.
- You shall not be liable for any errors or omissions contained in any design drawings or specifications prepared by the lead designer or others on the design team. Nor shall you be liable for any errors or omissions in any design changes that are the result of your findings or recommendations to the project owner and carried out by the lead designer or others.
- You shall not be liable for any damages to the project's facilities, systems or equipment that are the result of functional testing conducted by you, the client's contractor, lead designer or others. (It is best to stipulate that the contractor

is responsible for carrying out all functional testing.)

### **Learning to Embrace Commissioning**

Many design firms initially looked at the commissioning process as an intrusion into their design responsibilities, and a "gotcha" exercise by overly-demanding owners. They dreaded the thought of having to answer to the nit-picking of a third party who has the client's ear but not the responsibility for overall project design.

As commissioning evolves and gains a greater foothold, however, many design firms are realizing that commission, when properly applied, offers many benefits as an effective and objective quality-control process. When applied at the beginning of the project, commissioning provides for the early detection of design and construction problems that otherwise may fester and worsen. If inadequacy of an HVAC system is discovered before building occupancy, for example, the cost and time needed to rectify the situation can be dramatically reduced.

Retro-commissioning of existing, renovated buildings is starting to take a foothold as well. While typically not as efficient as commissioning on new construction, it still provides value to clients and helps ensure renovated or replaced building systems will operate to the owner's specifications.

For all types of buildings, old and new, closing the quality-control gaps between design, construction and project start-up promises to reduce project upsets and claims, not increase them. That's why more and more lead designers and contractors are suggesting to owners that commissioning be applied. Complex projects with a number of subconsultants and subcontractors, in particular, can benefit from commissioning. The commissioning agent can test the complete operational system (whereas subs tend to focus only on their individual responsibilities) to make sure the project achieves the desired results.

### **Can We Be of Assistance?**

*We may be able to help you by providing referrals to consultants, and by providing guidance relative to insurance issues, and even to certain preventives, from construction observation through the development and application of sound human resources management policies and procedures. Please call on us for assistance. We're a member of the Professional Liability Agents Network (PLAN). We're here to help.*