

Commissioning

Commissioning is not a new concept. The term actually dates back to shipbuilding: a commissioned ship is one that is deemed ready for service. However, a ship must pass several milestones before setting sail. Similar to ships, buildings should undergo the same functional testing, or sea trials, before occupancy.

The primary goal of commissioning is to ensure a building's systems are operating the way the engineer designed it, the owner intended, and in the most cost efficient way.

As commissioning became more popular, and now required by Florida Statute and the Standard Building Code, it is that much more important to learn about the benefits commissioning can provide an owner, design professional, legal counsel, and facility personnel.



USS South Dakota undergoing sea trials

Benefits of Commissioning

- ◇ Improved building occupant productivity
- ◇ Lower utility bills through energy savings
- ◇ Increased occupant and owner satisfaction
- ◇ Enhanced environmental/health conditions and occupant comfort
- ◇ Improved system and equipment function
- ◇ Improved building operation and maintenance
- ◇ Increased occupant safety
- ◇ Better building documentation
- ◇ Significant extension of equipment/systems life cycle

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Building Commissioning



ECBCx





For the Building Owner

Your company has made the decision for a large capital investment with a structural life of at least 50 years. A significant event for any company. Industry sources indicate that on average the operating costs of a commissioned building range from 8% to 20% below that of a non-commissioned building. Government Services Administration (GSA) required commissioning over a decade ago; it is only recently that many states, including Florida, have made it mandatory for many types of buildings.

You always want to be sure that your building systems keep running smoothly and efficiently. Both for your employees to work at their best and for your clients and customers to be comfortable.

While a majority of our role is quality control, we are also part diplomat. By communicating effectively and speaking everyone's language we help avoid mistakes and mitigate problems.

For the Design Professional

The Commissioning agent act as a second set of eyes to spot potential design opportunities. They assure the equipment is supplied, installed and operated as designed by the engineer. The Commissioning agent also assures control sequences are programmed as designed by the engineer and operates correctly.

Building Code Compliance

Specifically, the Commissioning agent prepares for the owner and for the benefit of the design engineer:

Commissioning Plan (C408.2.1)
Preliminary Commissioning Report (C408.2.4)
Final Commissioning Report (C408.2.5.4)

Design Stage Reviews

The Commissioning Agent's (CxA's) review ensures clarity and completeness with an eye toward commissioning process activities (benchmarks, standards, performance targets, etc.). The CxA may suggest changes to improve efficiency, operation & maintenance and equipment reliability. Making changes in the Design Stage, rather than after installation begins, saves money and time.

The CxA provides two focused reviews of the design documents. It is recommended that these reviews occur at 50% and 90% design stages.

Issues Log

All comments and issues identified by the CxA must be recorded in a formal Issues Log which serves as a vehicle to track, critically review and resolve all Commissioning related issues. The Log is sufficiently detailed so as to provide clarity and point of reference for the engineer's use. The Log is maintained by the CxA and becomes part of the final Commissioning Record.



For the Legal Counsel

Federal Code & Florida Statute

The U.S. Government thru the offices of the GSA implemented commissioning over a decade ago. Its purpose was to both protect the capital investment of public funds and to provide for a positive work environment for the Federal government's several million employees.

The State of Florida legislature amended Chapter 553.900 and the Florida Building Code was subsequently updated to implement the new statute in the Energy Conservation Chapter, Section C408 System Commissioning for all new construction public or private designed with Mechanical systems and service water heater systems in building where the total mechanical equipment capacity is greater than 40 tons.

Third Party Protection

Commissioning agents provide a 3rd party layer of protection to the owner, tying together the design process, and the construction of the building, and post construction operation and maintenance.

Contract Documents

The Design Stage is the Commissioning Team's opportunity to assure the building systems and assemblies as designed, function according to user expectations. The specific tests and procedures designed to verify performance of the system and assemblies are provided to the legal counsel to be incorporated into the contract documents for the owner's protection.