

BUILDING COMMISSIONING:

Helping Your Facility Achieve an On-Time Arrival

By Gene Sieve, PE, LEED® AP

Building owners in the public and private sectors are increasingly turning to building commissioning to help get their facilities into operation with as few warranty-period problems as possible. These owners recognize that construction deficiencies, which traditionally go unnoticed, can be minimized through the execution of a commissioning process.

In the mid-1990s, the construction industry developed formalized processes to use in the commissioning of buildings and building systems. Commissioning, as defined by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), is the process of verifying and documenting that the facility and all of its systems and assemblies are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.

The commissioning approach includes a holistic process that spans from pre-design planning to post-construction operation. It can be thought of as a checks-and-balances system. The steps include:

- Clearly document the owner's project requirements (OPR).
- Confirm that the construction documents' intent meets the OPR.
- Evaluate construction to confirm that long-term maintenance and operations aspects of equipment and systems are accommodated.
- Verify proper coordination among systems, assemblies and all contractors, subcontractors, vendors and manufacturers of furnished equipment and assemblies.
- Systematically verify and document that systems and assemblies perform according to the OPR.
- Verify that operation and maintenance personnel and occupants are properly trained.
- Establish performance baselines for building systems to be used by the building owner for ongoing performance measurement.

As the construction industry continues to realize the value of commissioning, an interest in a more inclusive validation of facility construction and performance is developing. Fueled by sustainability initiatives such as the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) program, the commissioning of facility components such as the building envelope (walls, windows, roof assemblies, etc.) are being requested by building owners. Owners are learning that even the most optimized, trouble-free HVAC systems do not provide the value of efficient operation if the building envelope is not constructed with the same level of quality.

Burns & McDonnell's Commissioning Services Group has assisted many building owners in getting their facilities ready for occupancy and operation. The formalized performance validation process provides a driver for project completion and gives owners an assurance that building systems can provide better, more trouble-free operation at the onset of occupancy.



Building commissioning saves costly delays and limits potential problems.

