



## WHY COMMISSION YOUR HEALTHCARE FACILITY?

By: Charles Caramanna, PE, CPMP, CCP, Jay Appleton, PE, CHC, and Jeff Riggs, CCP

Commissioning is a process that is integrated with the design, construction, and post-occupancy phases of both new construction and renovation of existing facilities. The overarching purpose of commissioning in the development of a new or renovated facility is to ensure that the design intent is consistent with the owner's project requirements; that building systems are provided, installed, and perform in accordance with the design intent; and that operations and maintenance staff are properly trained to operate and maintain the completed facility. Commissioning is performed by specially trained and credentialed professionals who serve the owner as independent, third-party consultants, separate from the project's design and construction teams.

While "green" building standards were an early driver that motivated owners to include commissioning in the development process, consistent, documented reductions of ongoing operating and maintenance costs directly linked to the implementation of commissioning have been responsible for a strong trend to include this process as a standard component of development, particularly with regard to large institutional and commercial buildings. In the realm of healthcare facility construction and renovation, a robust commissioning process is essential to mitigating risk related to patient safety, and to providing pleasant, healthy environments for the administration of patient care and healing. The Joint Commission recognized the value of this process, and uses commissioning guidelines promulgated in energy and construction codes to determine accreditation of hospitals.

Health Facility Commissioning (HFCx) should be considered an imperative component of the development process, since failure of any critical system within the facility could lead to loss of life. In healthcare facilities, building systems are significantly more complex than most other building types. Interconnectedness and redundancy of systems is of paramount importance in ensuring safety and environmental quality, and there is no margin for error in design, construction, or performance. Establishment of an appropriate HFCx scope at the inception of any construction or renovation project is the best way to ensure that the building commissioning process provides maximum benefit.

While patient safety and provision of an environment that supports and enhances delivery of care are of utmost

importance, there are additional benefits to a well-planned and executed HFCx process. It is documented that diligent planning, design, and review of appropriate building systems (typically including a building automation system), coordinated between the design team and commissioning agent, will result in measurable reduction of environmental pollution. Comprehensive evaluation of systems and envelope design, monitoring of construction, and proper training of operating and maintenance staff also contribute significantly to reduction of facility operating and maintenance costs.

As reported in a case study published by the American Society for Healthcare Engineering (ASHE), operating and maintenance savings of more than \$5 million were realized over five years by UF Health Shands Vista Rehab (85,000 SF) and UF Health Shands South Tower Cancer Hospital (500,000 SF) in Gainesville, Fla., as a result of the integration of building automation and a comprehensive HFCx program. This is just one example of commissioning success; ASHE has documented similar results in healthcare facilities nationwide.

Inclusion of HFCx from the very beginning of a healthcare facility development program adds to the quality of planning and design and the realization of owner's project requirements. It brings confidence that construction of the facility and the installation and calibration of building systems will result in a high-performing building. And it ensures that the facility O&M staff will knowledgeably and confidently manage the building in a manner that optimizes reliability and efficiency.

A prudent commissioning process reaps multiple benefits for patients, visitors, medical staff, and owners, and positions the healthcare facility as one that is safe, comfortable, energy efficient, and environmentally friendly.

*This article originally appeared in The Chronicle, a Southern New Jersey Development Council publication, Fall 2016.*

### About the Authors

GREYHAWK Principal/Operations Manager Charles Caramanna, Project Executive Jay Appleton, and Commissioning Manager Jeffery Riggs each has over 30 years of design and construction management experience. Contact them at [ccaramanna@greyhawk.com](mailto:ccaramanna@greyhawk.com), [jappleton@greyhawk.com](mailto:jappleton@greyhawk.com), and [jriggs@greyhawk.com](mailto:jriggs@greyhawk.com).