

# CASE STUDY

**Owner:**

Shands Healthcare  
Cancer Hospital

**Contact:**

Mr. Koven Smith  
Hospital Engineer

**Phone:**

(352) 395-0088

**Schedule:**

2006 — 2009

**Budget:**

\$378 million construction  
cost



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## Shands Healthcare Cancer Hospital University of Florida, Gainesville, FL

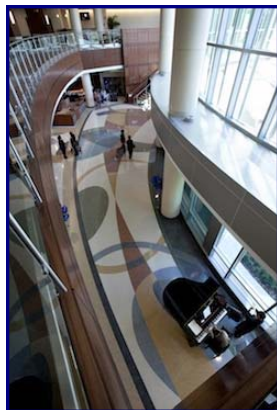
Making buildings work. **Better.**



EMC was the commissioning agent during the design, construction, and warranty phases for this 473,000 sf, 200-bed hospital that includes a 600-car parking structure and central plant.

The building includes surgery, intensive/critical care units, emergency department, pharmacy, full kitchen/dining, food court, outpatient services, isolation units, laboratories, administrative areas, central plant, and other areas. EMC commissioned the BAS, chilled waterpumps/piping, local steam/exchanger/pumps/piping, AHUs, ERUs, exhaust fans, emergency power, UPS, smoke control, fire sprinkler, fire alarm, electrical, switchgear, lighting controls, electrical service to distribution panels, security, data/voice, and building envelope.

During the design phase EMC reviewed schematic, DD, and final CD design; prepared commissioning plans; and developed functional testing requirements and commissioning specifications.



During the construction phase, EMC prepared the final commissioning plan, reviewed contractor submittals, reviewed installations, attended constructional coordination meetings to review progress, prepared final pre-functional and functional checklists, observed start-up of major systems, coordinated with the TAB contractor and performed spot checks, performed functional tests, assisted in resolving issues, and ensured that the owners staff was trained on all equipment.

During the warranty phase, EMC will ensure that all warranty items are corrected and will verify seasonal operation.

The project is constructed to meet the **USGBC LEED rating system level of GOLD.**

*Engineering Excellence Since 1976!*

## Company Overview

EMC is dedicated to creating sustainable facilities by optimizing performance through energy modeling and analysis, building automation systems application, advanced mechanical and electrical design, construction management, and building commissioning to achieve lower energy costs, improved comfort, and increased productivity.

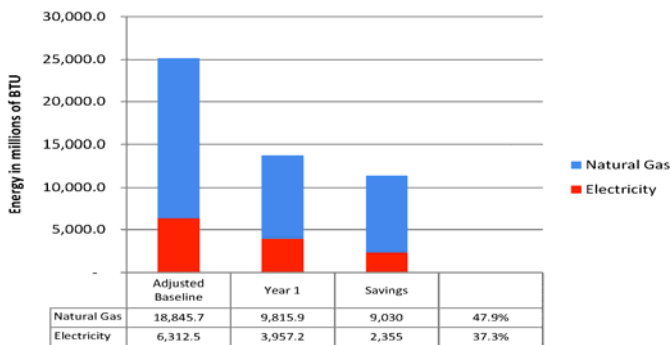
## Experience

Since 1976, EMC has been a leader in delivering high performance building solutions. As a multidiscipline firm, we have strong credentials in mechanical, electrical, and control systems retrofit and modernization and energy engineering and commissioning.

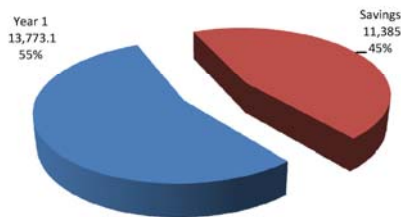
## Where do EMC's experts work?

You'll find us in schools, colleges, hospitals, government facilities, healthcare, and all types of private sector structures from supermarkets to office towers. In fact, EMC's engineers and technicians go wherever new facilities are under construction or existing structures or systems are operating at less than peak performance.

**Manitou Springs School District  
Annual Energy Savings**



**Manitou Springs School District  
Actual Energy Savings**



Whether you need a retrofit or a modernization or a new high performance building, you can rely on EMC to bring engineering excellence to your project.

Imagine reducing operating costs, improving comfort, increasing productivity, and getting your building's problems fixed quickly. EMC's services are the key!

Making buildings work. **Better.**



## Services

### BUILDING COMMISSIONING/RETRO-COMMISSIONING

The commissioning process for new buildings and major renovations, provides facility owners with assurance the facility is functioning to meet their project requirements. Commissioning is the only process that assures a quality outcome. Whether you manage a new or existing facility, it's really difficult to know unless an independent commissioning expert has evaluated your systems. EMC's retro-commissioning services provide low cost, high return operating improvements that reduce operating costs. Think of it as a building "tune-up".

### SUSTAINABLE DESIGN

More organizations are considering Green building systems and renovations. But to go Green--affordably--you need integrated sustainable design. EMC provides energy simulation modeling, daylighting, and high performance systems concepts to meet LEED requirements. We're ready to advise and coordinate and show you how to make the wise choices that deliver real environmental and economic benefit.

### ENERGY ENGINEERING

Energy and how it's used affects quality-of-life and the global environment. Our core business is creating energy systems that optimize energy use. Our energy-engineering services ensure that you meet today's needs while planning for tomorrow's growth. This includes audits, assessments and implementation of energy improvement projects.

### FACILITY DESIGN

Integrated systems design is crucial to facility renovation and modernization, particularly in high performance facilities. EMC understands how to take cutting edge mechanical, electrical, and building automation system technology and integrate it into real world solutions. And we can do it while your facilities stay in operation.

### DESIGN/BUILD

Identifying your facility's energy issues is just half the battle. You then need a retrofit strategy that maintains the building environment and minimizes system downtime through every phases of construction. EMC is skilled at engineer-led, design/build projects, including efforts funded through Energy Savings Performance Contracting.

### TRAINING

Today's building systems are complex. But EMC believes any operations and maintenance team is up to the challenge--if properly trained. We offer an extensive program of live and videotaped training classes and seminars, onsite and hands-on.

### WATER RESOURCES MANAGEMENT

With over 30 years of water resource management experience, EMC staff can assist you in securing a cost-effective, long term water supply; reduce your water demand, and decrease your operational costs. We offer expert services to water suppliers, major water users and industries, and to local/ regional governments.

## OFFICE LOCATIONS

Denver, CO \* Atlanta, GA \* Salt Lake City, UT \* Irvine, CA \* Raleigh, NC \* West Palm Beach, FL

[WWW.EMCENGINEERS.COM](http://WWW.EMCENGINEERS.COM)