



## CASE STUDY

# Loyola University Medical Center Expansion and Upgrade, MAYWOOD, IL



### BIOTECH/HEALTHCARE

### HOSPITALS

**OPERATING COMPANY:**

Gibson Electric & Technology Solutions

**CLIENT:**

Loyola University

**ARCHITECTS:**

Hellmuth, Obata + Kassabaum, Inc.; Pratt Design Studio

**ENGINEER:**

KJWW Engineering Consultants

**GENERAL CONTRACTOR:**

Pepper Construction

**ELECTRICAL CONTRACTOR:**

Gibson Electric & Technology Solutions

**PROJECT DURATION:**

Approximately 3 years

**CONTRACT AMOUNT:**

Over \$14.3 million

**TECHNICAL SOLUTIONS**

Relationships

Quality Service

VALUE ENGINEERING

Experience

Project Schedule & Coordination

EXPERTISE

- New Construction
- Retrofit
- Electrical Services
- Mechanical Services
- Facilities Services
- Consulting Services

**VALUE DELIVERED**

Safe, reliable electrical power systems for a world-class, state-of-the-art academic medical center; improved patient care, comfort and outcomes; minimal disruption to daily hospital routines; leading-edge life safety, communications, fire and security systems; dependable emergency power supply; expanded healthcare for Chicago's western suburb.

**OBJECTIVES**

To expand its existing facilities and upgrade its cardiovascular heart program.

**SOLUTIONS**

Gibson Electric & Technology Solutions provided single-source electrical contracting services for the construction of a new, five-level hospital addition as well as an extensive upgrade of the existing six-level institution, its energy building and utility tunnels. The company's scope of work called for installation of three independent power distribution systems – the main normal 12-kilovolt system, and emergency and life safety systems, each rated at 120/208/277/480 volts. The company also installed the facility's uninterruptible power supply system, consisting of two 160-kilovolt ampere and three 300-kilovolt ampere systems. Additional electrical system components included a 2,000-kilowatt generator, nine switchboards, one 5,000-ampere paralleling switchboard, 80 panelboards, 12 transformers and more than 60 motor connections.

In patient care areas, laboratories and other spaces, Gibson experts installed nearly 10,000 receptacles, switches, lighting fixtures and other electrical devices, connecting them with more than 100 miles of conduit and 375 miles of wire and cable.



**Gibson**  
Electric & Technology Solutions  
An EMCOR Company

3100 Woodcreek Drive  
Downers Grove, IL 60515-5427  
T 630.288.3800 (Main) • T 630.288.3801 (Night)  
F 630.743.2100 (Electric) • F 630.743.2101 (Technology)  
www.gibsonelec.com

# Loyola University Medical Center Expansion and Upgrade, MAYWOOD, IL

## SOLUTIONS continued

To further enhance patient care, Gibson installed the new facility's operating and specialty room surgical lighting booms; medical equipment raceways, duct and vendor low-voltage cabling; and medical gas master and area alarms. The company's technicians also put in the the voice/data copper and fiber backbone, as well as the nurse call, public address, intercom, fire alarm and voice evacuation systems.

Gibson completed the project by installing a variety of other systems and devices, including: interior lighting and shade controls, card access and security systems, a CCTV (closed-circuit television) system, WiFi capabilities, electric pipe freeze protection, pneumatic tube power and low-voltage control, parking lot lighting and gate systems, and lightning protection. By project's end, the Gibson team and its subcontractors had spent more than 125,000 man-hours to bring the project to its successful completion.

**Other information:** The multi-year project was organized into four phases. The first focused on the hospital's new, six-level, 179,000-square-foot addition. During this phase, Gibson delivered power, lighting, HVAC and communications to six floors of patient rooms and nurses' stations, as well as 12 operating rooms, 10 IP/EP catheterization labs, and one MRI (magnetic resonance imaging) room, as well as sterile processing rooms, pre- and post operation rooms, and a range of other facilities. The three subsequent phases focused on the first and second levels of the existing building. This work involved demolition, reconstruction and rewiring of patient care specialty rooms, nurses' stations, operating room control facilities and other areas.

One of Gibson Electric's major challenges on this project was to ensure non-disruptive project delivery. This was seldom easy. For example, as part of its work on the existing building, Gibson had to demolish a number of electrical closets to make space for new patient-care rooms. However, these closets serviced occupied patient rooms that had to have continuous power. This meant demolition activities had to be carefully planned and continuously reviewed. Yet, in spite of obstacles like these, the Gibson team completed its work without interrupting the hospital's daily routines.

In December, 2008, the project won a "Best of 2008" award from Midwest Construction magazine as the best large healthcare construction project in the Midwest.

## BACKGROUND

Loyola University Health System (Loyola) is a nationally recognized leader in providing health care and conducting groundbreaking research to treat heart disease, cancer, organ transplantation and neurological disorders. At the system's core is the Loyola University Medical Center, one of the nation's leading academic medical centers. An 801-licensed-bed institution, it includes the Loyola University Medical Center campus in Maywood and its Cardinal Bernardin Cancer Center, the Ronald McDonald Children's Hospital of Loyola, the Burn/Trauma Center, and the Center for Heart & Vascular Medicine.



*Gibson is an ISO 9001:2000 certified firm specializing in the design, installation and maintenance of distribution systems for power, data transmission, and cabling. Based in Downers Grove, Illinois, we are a premier leader in the electrical and telecommunications industry in the Chicagoland area and beyond.*

This document contains confidential and proprietary information and is intended solely for the internal business use of EMCOR Group, Inc. and its subsidiaries ("EMCOR"). The download, reproduction, or use of this document (in whole or in part) by anyone other than an EMCOR employee is not permitted and the distribution or display of this document (in whole or in part) to anyone other than an EMCOR employee is not permitted without the prior written consent of the Marketing and Communications Department of EMCOR Group, Inc. This document should be returned to EMCOR immediately upon request.

Copyright 2009, EMCOR Group, Inc., All Rights Reserved