

Client: Provena Covenant Medical Center, Urbana Campus
Architect: The Wischmeyer Architects, St. Louis, MO
Construction manager: McCarthy, St. Louis, MO



1



2



3



4



Completed entry lobby

Structural Division - HDC Engineering, LLC PROJECT PROFILE

Provena Covenant Medical Center Formerly Covenant Medical Center Additions and Alterations

Urbana, Illinois

Range of Services

- Structural consultant
- Structural planning; preliminary design; design development; seismic design
- Construction documents; construction administration; observation; coordination

Project Overview

This project involved the vertical expansion of the existing two story Intensive Care Unit adjacent to the six story patient wing. The vertical expansion was accomplished as a steel frame with composite steel floors, composed of metal deck and lightweight concrete to minimize weight. This was set atop the existing cast-in-place concrete frame, which was analyzed for its ability to handle the weight of the additional two stories. To meet existing codes the existing unbraced concrete frame had to be upgraded to a braced frame by means of X-bracing and/or V-bracing to accommodate wind and seismic forces (illustrated in image 2 and 4). The steel framework, its rise above the existing ICU building, its bracing and completion are shown in images 1 to 4.

The entry lobby is a focal point of the Hospital and a creative bit of engineering to accomplish and field coordinate. Shop drawing review was critical. The four pictures below illustrate some of the detailing and the completed image.

integrating
STRUCTURAL
design
focused on
quality