

# CHILDREN'S HOSPITAL OF PITTSBURGH OF UPMC



**Project:** Children's Hospital of Pittsburgh of UPMC

**Budget:** \$185 million

**The Challenge:** Building 1 million SF of innovative healthcare space in less than three years, while responding to an additional owner revised fit-out, emerging technology needs and LEED certification.

**The Result:** One of the nation's most technologically advanced, leading pediatric hospitals is delivered without a schedule extension to see its first young patient.

**The Bottom Line:** Experience. Whether your project is big or small, there's just no substitute for it.

For more than three decades, PJ Dick has enjoyed a long-standing and trusted relationship with UPMC Health System and Oxford Development Company, having constructed multiple projects throughout Western Pennsylvania for both entities.

In December of 2005, UPMC awarded a contract to PJ Dick to serve as General Contractor of its new Children's Hospital Clinical Services Building – one of the nation's top ten pediatric hospitals and the centerpiece of a multi-phased 1.5 million SF development amidst a 10-acre urban campus. Recognizing the benefit of teaming with a national healthcare builder, PJ Dick partnered with Barton Malow of Southfield, Michigan. Together the companies strived for a common goal: to successfully deliver one of the nation's most technologically-advanced, leading pediatric hospital facilities, on time.

Due to PJ Dick's initial in-field success with partners such as Oxford (Program Manager), Astorino (Project Architect) and subcontractors, UPMC subsequently added owner revised work to the project, including the fit-out of shell spaces, as well as upgrades to existing

and new space in support of state-of-the-art equipment requirements and new technologies.

This additional work was appended to the project, whose budget ultimately totaled \$185 million, without a schedule extension to see the first patient. PJ Dick's ability to meet this goal was a significant accomplishment.

"I was pleased with PJ Dick's progress scrutiny and daily field oversight of the schedule without sacrifice to the project's quality," noted Scott Pollock, Oxford's Vice President of Development. "Overall, PJ Dick's efforts and management were impressive in terms of project communications, procedures and documentation."

As a result of satisfactory efforts as a General Contractor on Children's Hospital, the PJ Dick/Barton Malow joint venture was ultimately awarded the Construction Management contract for UPMC East, a \$134 million UPMC Hospital currently under construction in Monroeville, Pennsylvania.

Throughout the project duration, the Children's Hospital Project Team (comprised of PJ Dick staff, project engineers, construction administrators, specialty designers and engineering consultants) processed Requests for Information, in addition to countless submittals and change issues.

**"Great partnerships, teamwork and communications form the essence of any PJ Dick project ..."**

"Great partnerships, teamwork, and communications form the essence of any PJ Dick project," noted PJ Dick Regional Operations Manager, Frank Babik. "In this instance, emerging technology developments demanded frequent coordination meetings with subcontractors and vendors in order to ensure the precise implementation of time-sensitive, information." As the local-lead General Contractor, PJ Dick

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capitalized on its relationships with Western Pennsylvania subcontractors and suppliers, enabling local firms to play a significant role in the state-of-the-art hospital project. PJ Dick also relied on the local unions and skilled labor to ensure that the project would be a priority to the trades and be staffed with only the finest craftsmen. Maintaining a sufficient labor force was never an issue on a project with up to 500 craftsmen on site.

PJ Dick also led the value-added safety effort that required a full-time safety engineer and mandatory drug testing for all on-site employees, resulting in very low Owner Controlled Insurance Program costs, significant insurance savings for UPMC and minimum injury occurrence rates for a project with this magnitude of man-hours.

The project, which required a turnover of 1 million square feet of innovative health care space, was not without its challenges. But PJ Dick was ready to meet them.

Although the existing St. Francis Hospital Facility had to be gutted to make way for the new Children's Hospital facility, the project was designed with newly-framed construction and elevations juxtaposed to a renovated existing structure, thereby creating the need for precise leveling and coordination by field engineers. Previously installed foundations and pre-purchased steel added to the challenges.

Yet one of the heaviest burdens would prove to be the installation of a 1.7 million-pound air-handling unit, aptly nicknamed "Big Blue", 11-stories up and atop the roof of Children's Hospital. Rising to the challenge, PJ Dick's mechanical subcontractor devised a trolley/rail system to permit installation of the 64 separate sections of the massive (293' long x 40' wide x 25' high) custom-fabricated air-handling unit. "Big Blue" now stands as a testament to the innovation of mechanical subcontractor McKamish and the engineering staff.

Breakthroughs are regularly made in medical research and healthcare innovation. As a result, throughout

the 3-year project duration, continuous upgrades, enhancements and redesigns were required to support these emerging technologies. "As we were constructing the job, the needs of the hospital were better defined ... and portions of the job got redesigned and changed," explained PJ Dick's Babik. "Children's Hospital was intended to provide the most comprehensive health care for children, and in order to do so, it was necessary that the hospital feature state-of-the-art technology and medical equipment. So we adapted and changed as necessary over three years. And the end product was extraordinary...befitting the high quality of UPMC and the special needs of the children."

The new Children's Hospital remains grounded in three principles: family-centered care, technological sophistication and environmental sustainability. The state-of-the-art facility is among the first fully digital hospitals in the country. As a LEED-certified building, Children's Hospital's environmentally-friendly features include:

- **Easy access to public transportation**
- **Availability of bike racks and showers**
- **Preferred parking for car pools**
- **Water efficient landscaping**
- **Recycling of water (when appropriate)**
- **Building materials with recycled content**
- **Local/regional construction material to reduce transportation issues**
- **Low VOC materials such as sealants, adhesives, paints, and carpets**
- **Installation of air filtration systems that increase indoor air quality**
- **Installation of water fixtures that reduce water use**
- **Maximum use of daylight and views**

