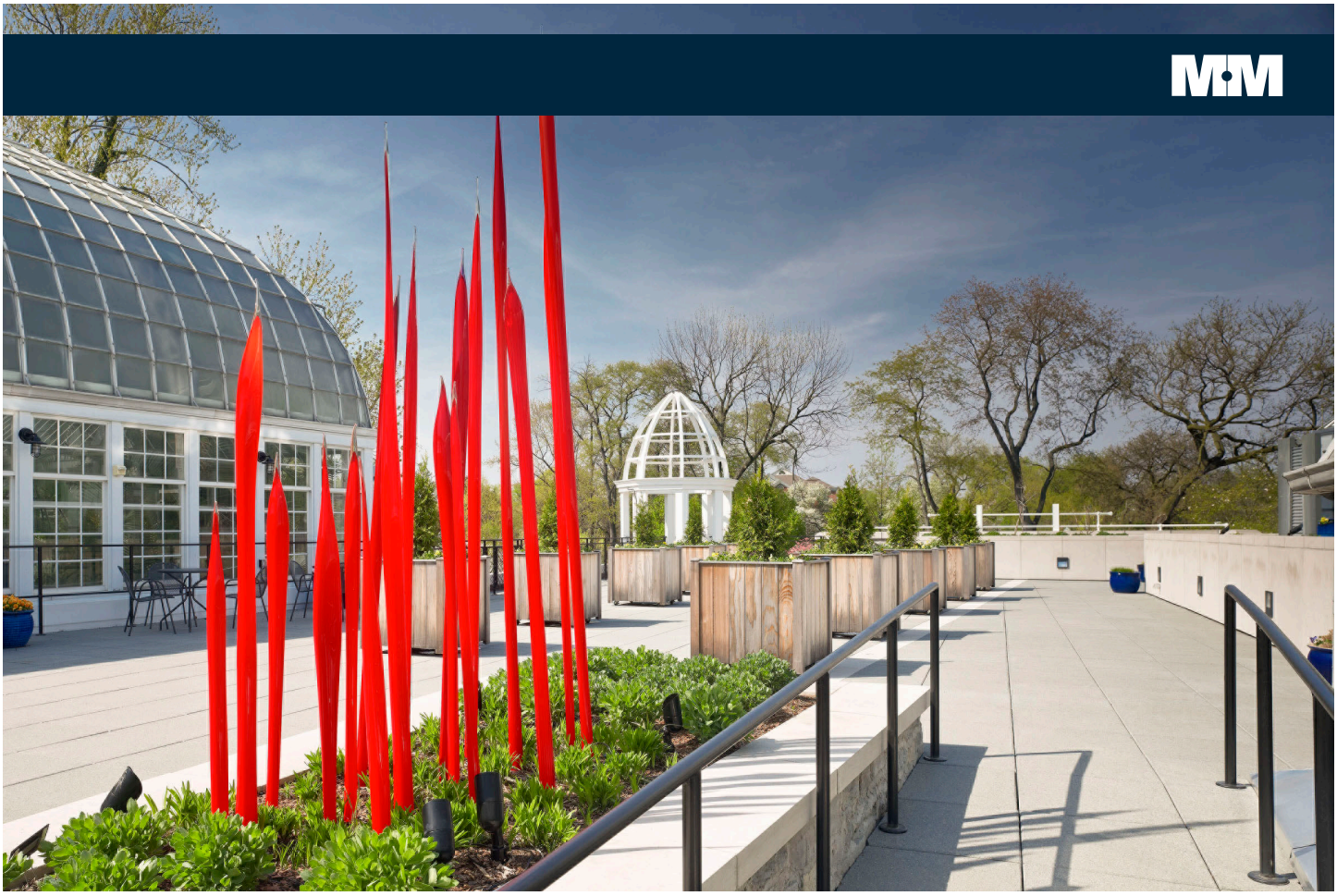
JOHN F. WOLFE PALM HOUSE EXPANSION

MILES•McCLELLAN CONSTRUCTION



Project Information

The John F. Wolfe Palm House expansion added two (2) 5,000 SF additions, containing a 130 seat special events venue and back of house support areas for the conservatory's special events staff, which includes a serving kitchen. There are dressing rooms for clients, conference rooms and offices for the conservatory's staff. The top of the additions features rooftop gardens. The gardens can be accessed through the show house by a glass elevator and monumental staircase.

Budget Discovery

Bid Package	Budget	Awarded Contract
General Trades/Site Work	$6,233,870	$6,023,168
Fire Suppression	$84,000	$71,800
Plumbing	$306,075	$357,845
HVAC	$432,075	$443,545
Electrical	$1,170,000	$1,253,860
Totals	$8,226,020	$8,150,218

Construction Challenges

The John F. Wolfe Palm House is a historically registered site. All new construction installations used techniques from the late 1800s to preserve historic features and character. The architectural style, materials, finishes, and methods had to comply with the strict standards of the historic preservation commission.

The Palm House has been exposed to the elements for over a century. The stone was discolored and mossy, making it difficult to match with new materials. For a homogenous appearance, the new stonework was “weathered” with muriatic acid for a distressed look that mimicked the natural patina of the existing stone. This acid etching process also made the stone more porous to encourage the growth of moss.

In addition to the unique treatments required for the stone finish, there were structural considerations as well. Modern construction techniques use stone veneer for most façades. Stone veneer is a thin side of a stone with a flat back designed to adhere to a building with mortar. In the 1800s, the entire rock created the facade, and guidelines called for the use of the same technique. The process of placing the large, 4-foot stones was difficult and time-consuming. The skill of the craftsmen involved is evident in the quality of the stonework, wood case openings, and elegant moldings. Even though attention to detail was of more importance than speed, the additions finished one month ahead of schedule.

This expansion was a step back in time, a respectful nod to how construction began using more laborious techniques. The end product embodies the craftsman’s spirit while offering versatile space to serve a modern community.

Constructability Review Success

The floor construction of the rooftop gardens would consist of rooftop pavers on pedestals on top of a waterproof membrane. The architect's initial design specified a standard waterproofing and paver system. However, while performing a constructability review, our team discovered the waterproofing system specified required a 40-degree minimum temperature for application. Based on the master schedule, the project wouldn't bid until mid-summer, and consequently, the roof system wouldn't be applied until the following December/January. By identifying this problem over a year ahead of time, we were able to thoroughly research different waterproofing systems that could be applied down to 0-degrees. Ultimately, the project was constructed precisely to our master schedule, and the waterproofing system went down without any delays in early winter, where many days were below 40-degrees.

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