PROJECT PROFILE

Springfield Regional Medical Center

Building Enclosure Peer Review and Construction Period Services | Springfield, OH

CLIENT

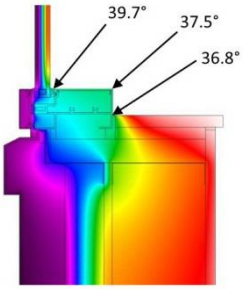
Danis Building Construction Company

BACKGROUND

The Springfield Regional Medical Center is a 475,000-square-foot, 254-bed, full-service medical facility in Springfield, Ohio. The $235 million building includes a four-story patient tower, expanded emergency center, office building, and an open air atrium. The building is clad in brick and stone veneer, prefabricated aluminum panels, and glazed curtain wall and storefront systems. The roofing system is a single-ply EPDM roofing membrane over low-sloped areas. The lower level courtyard has a green roofing system consisting of an extensive vegetated roof assembly installed over a thermoplastic waterproofing system.

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS

WJE was engaged by the construction manager to provide design peer review, on-site quality assurance, and performance testing services relating to the building enclosure. The role included working in close collaboration with the project team throughout the design and construction phases to assist in delivering a quality building enclosure that effectively manages heat, air, and moisture transfer through the building enclosure.



SOLUTION

WJE peer reviewed the building envelope design to address concerns associated with condensation potential, air barrier continuity, and rainwater penetration, and to identify other potential building enclosure performance issues. During the design phase, WJE provided recommendations to address air/water infiltration pathways and to assist in the selection of durable materials and systems. WJE performed hygrothermal analysis of several wall sections and thermal models (diagram on left) of various curtain wall profiles to evaluate the building envelope design; provided construction period services, including review of cladding and vegetated roof assembly shop drawings; reviewed the on-site mock-up wall panels; performed quality assurance water penetration testing; and conducted periodic on-site observation of the building envelope work to provide a measure of confidence that the as-built construction properly reflected the general recommendations.