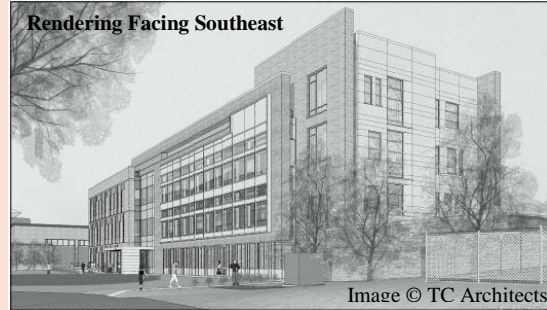


NEOMED Research and Graduate Education Building + Comparable Medical Unit Expansion

General Info

Location: The Northeast Ohio Medical University Campus
 4209 Ohio 44, Rootstown Ohio
Function: Research/Education
Size: 83,000 GSF
Height: Four Stories above Grade
Cost: \$38.8 Million
Delivery: Design-Bid-Build with Multiple Prime Contract
Construction Timeline: May 2011-August 2013



Project Team

Architecture: Ellenzweig, TC Architects
Interior Design: TC Architects, Schumacher Design
Testing: PSI, Inc.
MEP: BR+A, Scheeser Buckley Mayfield
Civil/Structural: The GPD Group
CM: The Ruhlin Company
Owner: Northeast Ohio Medical University

Architecture

Façade: Modular face brick with aluminum paneling and glass
Roof: 12"x12" concrete pavers
Interiors: Gypsum wall board on steel studs, grouted cmu's, interior glazing
Zoning: RGE- offices and conference rooms at east end, labs and support rooms west. Top floor shelled out. CMU- specimen holding areas, cage washes, future expansion Building D- several existing labs and offices renovated



Structural

Foundation: Concrete Footings
Superstructure: Steel Framing
Floors: Steel Deck with concrete

Electrical

Site Service: Existing high-voltage campus system stepped down via pad-mounted 1500 kVA transformer
Main Distribution: 480V via 3000A single-end switchboard, with stepdown transformers to convert to 208/120V. Outdoor diesel emergency/standby generator rated at 500 kVA, 480/277V

Mechanical

Heating: 4 3MMBTU boilers in RGE Basement
Cooling: 2 300 ton electric centrifugal chillers in RGE basement, 2 induced draft cooling towers
Ventilation: 2 custom-built AHU's for lab spaces at 37,500 CFM each, 100% OA; smaller office AHU sized at 25,000 CFM and 30% OA. CMU has one 85,000 CFM custom AHU with 100% OA.
Energy Recovery: Heat pipes with sealed refrigerant run from exhaust to supply ducts.
Controls: Independent DDC system interfaced with existing campus front ends

Sam Bridwell

Option-Mechanical

Advisor-Dr. Freihaut

<https://www.engr.psu.edu/ae/thesis/portfolios/2015/stb5114/index.html>