MiGBC MICHIGAN GREEN BUILDING COLLABORATIVE

Project Case Study



Western Michigan University
Valley Oaks Residence Hall

Objective: To deliver an exceptional student experience while achieving rigorous budgetary targets and a significantly compressed construction schedule through innovative design-build strategies.

Details

- Kalamazoo, MI
- 274,000 Square Feet
- Mass Timber Hybrid Structure
- **Prefabricated Assemblies:** Cold-formed metal stud interior walls, CLT floor slabs, 4 story panelized exterior walls, prefab shower stalls
- **Mass Timber Layout for Pricing:** residential wings, 3 PLY CLT floor slabs over cold form metal studs, 7 PLY CLT exit stair walls
- **Central Core:** 5 PLY CLT, glulam columns & beams

Results

- 5,083 ft³—of wood products incorporated
- The wood used in this project stored 2,757 metric tonnes of CO2 and avoided another 1,067 metric tonnes —an impact equivalent to the annual energy use of 404 homes.
- The project was completed in 2 years which was 33% faster than originally expected
- Biophilia

Financials

- $110,000,000 Guaranteed Maximum Price
- $89,000,000 total trade cost
- $330 per square foot
- $89,000 per bed

Project Partners

- **Architect & Interior Designer**: Hanbury
- **General Contractor**: Christman Company
- **Structural & Mass Timber Engineer**: Britt, Peters and Associates
- **MEP Engineer:** Millies Engineering Group
- **Civil Engineer:** Fishbeck
- **Landscape Architect**: VIRIDIS Design Group
- **Mass Timber Supplier**: Mercer
- **Research Grant Support**: Softwood Lumber Board
- **MassTimber@MSU**





"As we continued to talk to our contractor and architect, we found that we had a solution that would fit in the space and that would fit everything we needed as an owner. We were able to hit the price point, the natural comfort, and the tight schedule."

BARRY A. OLSON, ED.D.
Associate Vice President for Campus Life,
Western Michigan University

WESTERN MICHIGAN UNIVERSITY