

COLLEGE AND UNIVERSITY EXPERIENCE

Lansing Community College - Gannon Vocational-Technical Building

The Gannon Vocational-Technical building is a 5 story building including the basement with a total area of about 300,000 square feet. The total construction value of the project was approximately \$11,000,000.

The plumbing systems were evaluated and portions in poor condition were replaced and now meet the requirements of the new spaces. Mechanically, Matrix evaluated the existing systems to determine what should be reused and what should be removed. The new mechanical system consisted of types of systems to meet the needs and room constraints of the building. The first system was a VAV system with reheat. The second system was a blower coil system supplied with ventilation air from energy recovery units. Heat pumps were designed in a small portion of the facility to take advantage of the spare capacity of the preexisting heat pump system which was in good condition. The chiller plant was modified to replace the existing chillers with new energy efficient chillers. We designed a water side economizer system to serve the new blower coil units with minimum renovations to the existing piping beyond the mechanical room. This system was not only used for its energy efficiency but also for its compactness due to limited space constraints.

Electrically we provided a design for computer classrooms, audio/visual multi-media system, power and lighting design, data network, and ASHREA 99.1 lighting compliance.

LCC Infrastructure Evaluation Study

Performed Mechanical and Electrical Analysis of all facilities owned or leased by Lansing Community College. Project consisted of more than 30 buildings covering 1,400,000 square feet in three cities and included Mechanical and Electrical survey, evaluation, recommendation and cost estimate. Implemented Data Base including Catalog of all major pieces of equipment including installation date, condition, size, maintenance concerns and expected life. Final report will be used to develop future budget of maintenance department and major project funding.

Matrix Consulting Engineers designed the mechanical and electrical systems so the construction could phase to allow partial occupancy throughout the construction process.

Cooley Library

Renovated the electrical systems in the former JCPenny Building for a Library and Offices at Cooley Law School in Lansing, Michigan.

Cooley Law School

Replaced the infrastructure Mechanical and Electrical Systems for the seven story classroom building at Cooley law School in Lansing, Michigan.

Cooley Center

Renovated the Mechanical and Electrical systems for the existing 225,000 square foot Commerce Center Building into Facility and Administrative Offices for Cooley Law School, Lansing, Michigan. Project included new HVAC, plumbing, fire protection, life safety systems, fire pump, emergency power generation, new power distribution, security systems, phone/data wiring systems, fire alarm systems, lighting for interior and exterior, and digital building automation system and card access system.

Michigan State University

We have an open contact to work on projects at Michigan State University. We are requested frequently to assess small to medium sized renovation projects or to upgrade mechanical and electrical systems. Some of the buildings we have done design work in are:

- Wonders Hall – Kiva, Classroom and Kitchen Renovations
- Music Practice Building – Elevator
- Berkey Hall – Elevator Equipment Room A/C
- Engineering Building – Tar Exhaust
- Animal Diagnostic – Prints
- DCL Moot Court Room
- Biomedical – Physical Science Room B106
- Linton Hall AHU Project
- Yakeley Hall
- Linton Hall Room 324 AC
- Administration Building Renovations
- McDonell Hall
- Union Building
- Brody Hall
- Hannah Administration Building
- Natural Resources Building
- International Center
- Kellogg Center
- Food Science Building
- Hubbard Hall
- Clinical Center
- Life Science Building
- Natural Science Building
- Computer Center

- Veterinary Medicine
- Conrad Hall
- Fee Hall

Matrix Consulting Engineers, Inc. has commissioned the following buildings at MSU:

- Duffy Daugherty
- Wharton Center
- International Center
- Spartan Stadium
- Business College Complex
- Kellogg Center Complex
- Food Safety & Toxicology Building
- Student Services Building
- Central School Building

Matrix Consulting Engineers, Inc. has provided Electrical BIM Services the following buildings at MSU:

- Bio-Engineering Building
- Cyclotron
- Chittenden Hall