

## HEALTH CARE EXPERIENCE

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Matrix Consulting Engineers, Inc. is a mechanical/electrical/plumbing consulting engineering firm in Lansing, Michigan. Following are some of the projects in the healthcare field that we have been involved with since 1999. The majority of the below projects have been with Sparrow Hospital. We have also performed engineering services for many other hospitals and medical facilities. Our experience with healthcare projects has given us a vast understanding for the special needs of medical facilities.

Emergency Generator Study  
Sparrow Health Center  
Sparrow Health Center Additional Services  
South Side Family Practice  
Data Center Study  
Surgery, ICU, OB AHU Replacement  
Surgery, ICU, OB AHU Replacement  
Lab, Radiology AHU Improvements  
Lab, Radiology AHU Improvements  
HIS Renovations  
Conference Rooms HVAC Study  
Conference Rooms HVAC Upgrade  
DeWitt Family Medical Practice Renovations  
Lab, Locker and Storage Room  
PHP Insurance Office  
PHP Insurance Office  
CMCH Boiler Plant Study  
Angiography  
Chiller Emergency Power  
Parking Lot Lighting  
Cafeteria Remodel  
Pharmacy  
Consulting Services  
New Surgery, Pharmacy Addition  
MAB Second Floor Renovations  
Infrastructure Study  
Dietary HVAC  
First Floor Renovations  
Third Floor Renovations  
MAB Woman's Outpatient  
Ground Floor Pressurization Unit  
Medical Surgery Renovations, Third Floor  
Fifth Floor Renovations  
OB Floor Renovations  
Mechanical Room #4 Boiler System Upgrade  
Radiology Storage Expansion  
Power Quality Study  
Third Floor Nurse's Station-West

New Riser Diagram  
Cat Lab #4  
Main Waiting Lobby Radiant Heating Panels  
Oncology Center-MEP Review  
New Cooling Tower  
Phase I Study Master Planning  
Infrastructure Study  
Weight Management Renovations  
Third Floor Renovations  
MAB Elevator Equipment Room  
Electrical Study  
Chiller Emergency Power  
IS/UPS Upgrades  
Kitchen Improvements  
Wellness Center Lobby and Vestibule Heating  
IS HVAC  
CT Scanner Project  
New Pediatric Unit  
Physicians Offices  
Isolation Room  
New Chiller #3 (500 TON)  
OR/OB AHU Replacement  
CT Simulator  
New Toshiba MRI Unit  
MAB HVAC Improvements  
Multizone AHU Replacement  
Wellness Center-HVAC Improvements  
MAB Pharmacy Improvements  
Arc Flash Study  
Central Supply Sterilization  
CT UPS System  
Primary Switchgear Modification  
Domestic Hot Water Heater Replacement  
FHP-HVAC Improvements  
ACU-7 Air Balance  
ACU-7 Relocation Study  
Medical Gas Improvements  
Foster Addition-Six Story  
Foster Addition-Fifth Floor Bulletin  
Foster Addition-On Call Room  
Foster Addition-Gym Renovation  
Vacuum Pump System Replacement  
First Floor Cancer Center  
First Floor Cancer Center HVAC Study  
First Floor Cancer Center Air Handling Unit  
First Floor Cancer Center Tomotherapy/Simulator  
Fourth and Fifth Floor Additions  
Radiology Reading Rooms  
EEG/Radiology

DNA Lab-AHU Renovations  
DNA Lab-AHU-Construction Administration  
Fire Alarm Drawings  
DNA Lab-AHU-Additional Work  
Central Utility Plant - Review  
West Wing Review/Power Plant  
DNA Lab-AHU Equipment-Interior Fit-out  
Cath Lab #2 UPS  
Patient Support Services  
Boiler Plant Project  
Cath Lab #2  
CT Installation  
Corridor Renovations  
West Wing Coordination Drawings- Ten Story BIM Modeling  
West Wing First Floor Lighting  
Medical Arts Building  
Structural Analysis  
Waiting Room Expansion  
Facilities Office Renovation  
Lithotripsy  
Outpatient Care Unit  
Chilled Water System  
Vacuum System Replacement  
Central Utility Plant  
Second Floor, Foster Wing-Heart Chamber  
Chest Pain Clinic  
Third and Fourth Floor Renovations  
Exterior Lighting  
HS 11 Computer Room Expansion  
Data Center Cooling  
Data Center Renovation  
Cluster Rack for Tomotherapy  
Elekta Linear Accelerator Project  
Surgery Level Interior Fit-out  
Fifth and Sixth Floor Interior Fit-out  
RasterX-Converting Facility Drawings to Autodesk Format  
Linear Accelerator  
Imaging  
MRI #2 Suite Renovation  
Ultrasound Suite Renovation  
Fifth Floor Remodel  
Oncology Substation Upgrade  
Boiler Feed Water System  
West Wing Data Center and IT Closets  
Emergency Generator  
ED 3D Coordination Drawings  
Phase 3 Lobby Extension  
Temporary ER Addition and Renovation  
Normal and Emergency Power Study  
Deaerator replacement

Neumann Wing - Radiology UPS  
Security Submittals  
Medical Oncology Expansion - Chemotherapy  
PET/CT Suite Project  
Pharmacy Suite Renovation  
Radiology Oncology Waiting Room  
16,000 sq. ft. 825 Building Renovation  
Electrical Fit-out  
HN41 Closet  
New Cath Room 1 IT Closet  
Swiss Log System Power  
SLC2009  
2nd Floor IT Closet  
MMMRI Suite Study  
Reading and Holding Room Suite Renovation  
Medical Oncology Pharmacy and Exam Room Expansion  
16,000 sq. ft. Labor and Delivery Suite Renovation  
Third Floor Air Handling Replacement with Phasing to keep operational  
Sparrow Special Procedure room  
MSU cell research Lab  
CT Scan room 12  
Sparrow Data center modifications  
Revising Sparrow one line diagram  
CMCH new Cath Lab and suite  
CMCH Generator backup for hospital  
Sparrow CT Lab and Radiology 8  
Sparrow Fire Alarm Field Survey  
Sparrow Fire / Smoke Damper Replacement  
TCI – Ingham Campus  
TCI – Sparrow Campus professional building  
Sparrow Fire controller Replacement  
Medical Oncology Expansion  
Sparrow Storage area  
Substance Abuse Area  
Sparrow Labor and Delivery  
iSparrow New Communication System  
Sparrow Pharmacy Renovation  
Clinton Memorial Pharmacy Renovation  
St. Lawrence Pharmacy Renovation  
Ionia Hospital Pharmacy and Ultrasound  
St. Lawrence Wound Clinic  
Sparrow Morgue