



As partners in the Design/Build (D/B) delivery of the structural and steel component of this project, Ruby+Associates worked closely with Art Iron (Toledo, OH) to design and construct this four-story, 144,000 square foot facility for the St. Vincent Mercy medical campus. Using Constructability concepts and the D/B delivery method, the structural project team compressed the steel schedule for the project, expediting an aggressive project completion target.

Art Iron and Ruby adopted electronic document sharing to seamlessly join the steel design and fabrication elements of the project. Ruby performed the engineering analyses and created the structural model that guided the steel fabrication. Art Iron provided input into the model and design throughout the process. Many economies were designed into the structure throughout this initial collaboration. When the model was completed, Ruby sent the files electronically to Art Iron, an Advance Bill of Materials for ordering raw steel was generated, and shop drawings were created. The review process was also performed electronically. The schedule was significantly reduced by using the design model to create the 3D detailing model. This approach facilitated “real time” collaboration on the structural design and shop fabrication drawing development.

DESIGN / BUILD METHOD

Design Time (10) weeks
 Bid / Estimate Time (0) weeks
 Award Time (0) weeks
 Prepare ABM (1) day
 Order Material (1) week
 Detail Shop Drawings (6) weeks
 Approval Review Time (1) week
 Incorporate Design Changes (1) week
 Fabricate Steel (8) weeks
 Erect Steel (8) weeks

Total Duration - 35 weeks & 1 day

Real Time Schedule Savings – 17 weeks

DOLLARS & SENSE:

\$2,345,000.00
 \$16.28 / SF
 772 Tons
 \$3,037.57 / Ton

DESIGN / BID / BUILD METHOD

Design Time (10) weeks
 Bid / Estimate Time (4) weeks
 Award Time (1) week
 Prepare ABM (3) weeks
 Order Material (1) week
 Detail Shop Drawings (8) weeks
 Approval Review Time (3) weeks
 Incorporate Design Changes (4) weeks
 Fabricate Steel (9) weeks
 Erect Steel (9) weeks

Total Duration – 52 weeks

DOLLARS & SENSE:

\$2,800,000.00
 \$19.44 / SF
 910 Tons
 \$3,076.92 / Ton