

Tipp City Schools Facility Improvements

Tipp City, OH

Construction Completion: 2018

Size: 80,950 SF

Tri-Tech Services: PME Engineering



Project Description

The Tipp City Exempted Village Schools undertook a project to replace the building mechanical equipment in the Tipp City Middle School in order to add air conditioning and realize energy savings on building heating. Tri-Tech worked with contractors selected by the school district to provide mechanical and electrical engineering for the project.

The mechanical engineering design for the project included an evaluation of the building loads and existing heating and ventilation system. From this information, the building design was completed which included multiple variable refrigerant flow systems throughout the building, serving over 90 fan coil units. During the design process, Tri-Tech evaluated the existing building exhaust systems, and as a result was able to greatly reduce the amount of air the building was currently exhausting. This served to reduce the size of originally selected dedicated outside air systems, which provided a cost savings to the project.

To facilitate the addition of building cooling, the building electrical service was required to be increased in size. The original basis of design called for an increase from 2,000A to 4,000A. However, after analysis of the existing building loads and the actual mechanical equipment selected, it was determined that a 3,000A service provided adequate capacity for the building. This allowed for the existing utility transformer to remain instead of being replaced as was originally proposed, which provided additional cost savings to the project.

Electrical design also included providing new distribution throughout the building in order to provide power to the new mechanical equipment. Due to the quantity of units installed throughout the building, close coordination was required to provide a complete system. Tri-Tech worked with the contractor team throughout the project to help facilitate the equipment selection and ordering process due to the tight project timeline.