



# University Classroom Building

LEED Silver Facility - New HVAC Construction

**Contract Value:** \$3.9 Million

**Project Description:** S. P. McCarl & Company, Inc. installed all the HVAC systems for the new 92,000 square foot LEED Silver certified facility. It was designed to showcase Pennsylvania hardwood products and includes a 4,000 square foot green roof, as well as a patio for classroom and leisure purposes. The building includes numerous laboratories for various disciplines, such as forest sciences, wildlife and fisheries, and wood products.

It was designed for more than just classrooms and laboratories. It was also intended to serve as an instructional tool itself for the students in Forestry. S. P. McCarl & Company, Inc. installed over 230,000 pounds of ductwork. This included large quantities of duct containing free areas up to 4320 sq. in. Plenums on this project were also in excess of 15' x 10' x 3'. In addition, the scope of work required the installation of over 21,000 feet of piping, numerous pieces of HVAC equipment including large air handling units requiring installation in the top floor mechanical room.

**Technical Challenge:** There were unique requirements for the HVAC systems since there was over 1,700 linear feet of wainscot paneling and over 14,000 linear feet of other unique millwork throughout the building. Therefore, during construction the humidity, cooling, and heating temperatures were held to very tight tolerances to acclimate the hardwoods to the space in order to be installed. Post construction HVAC system requirements were also critical due to the large amount of special hardwoods in the building.

S. P. McCarl & Company, Inc. was the lead contractor in coordinating the installation with other trades such as: plumbing, fire protection, electrical, and data systems. The space for all these systems was very tight which made it very challenging to resolve the numerous collision conflicts between the different trades. In spite of the immense challenges, the entire process from coordination drawings, to fabrication, installation, and final commissioning was completed in 10 months.

S. P. McCarl & Company, Inc. took the lead in developing, implementing, and maintaining the LEED Indoor Air Quality (IAQ) Plan. This plan included unique requirements for material storage, air handler filtration, building ventilation, and HVAC system protection. Special focus was taken to reduce construction dust and debris with very prompt clean up of spills to discourage the potential growth of mold or bacteria. Cleaning products used throughout this process were closely monitored to have low volatile organic compound content in order to minimize building contamination. While managing this IAQ plan, S. P. McCarl & Company, Inc. worked closely with the Construction Manager and all trades to ensure the requirements were followed in a safe, well organized, and efficient manner.

