

Mechanical Electrical Building Subproject



The Mechanical Electrical Building (MEB) is the fourth of seven Uranium Processing Facility (UPF) subprojects. It began in 2017 and was completed in July 2022 for a total cost of \$309M.



The MEB Subproject included construction and equipment installation of:

- The building's foundation and structure
- HVAC air handlers and filters, chillers, electrical switchgear and transformers, compressors, and pumps
- Cooling towers
- Warehousing and laydown areas

Cost Savings Opportunities

The MEB is a 66,000-square-foot facility which houses most of the utility equipment required for the UPF process facilities. Separating utility and process work into multiple buildings allowed the MEB to be constructed to commercial standards, providing cost savings in construction and equipment installation. UPF's multiple-building approach allows each facility to be constructed to the safety and security requirements appropriate to each building.

The Y-12 National Security Complex has three primary national security missions that protect the U.S. and its allies around the world: maintaining the U.S. nuclear deterrent, reducing global nuclear threats, and fueling the U.S. nuclear Navy. Currently, key operations that support these missions are conducted in buildings that originated in the 1940's and are costly to operate and maintain. UPF is one of the Department of Energy's largest investments in Tennessee since the Manhattan Project and one of the National Nuclear Security Administration's largest construction projects. UPF will support Y-12's key missions and will ensure the long-term viability, safety, and security of enriched uranium capabilities in the United States.





Warehouses

Onsite and offsite warehouses are used for receipt of bulk materials and equipment, and the staging of systems and components.

A 20,000-square-foot onsite warehouse is complimented by a 150,000-square-foot offsite warehousing and 50-acre laydown yard. The offsite 100,000-square-foot Fabrication Facility and associated 50,000-square-foot warehouse contains areas for fabrication, testing and inspection, weld-test and paint booths, shop offices, and a tool room. Additional offsite office space supports the training and hiring of the skilled craft workforce.



Mechanical Electrical Building Fast Facts

MEB Building Footprint	45,000 square feet	Approximately the size of a football field
Cable	737,000 feet	Almost 140 miles, the distance from Washington, D.C. to Philadelphia
Concrete	6,600 cubic yards	Enough to cover a football field 4 feet deep
Pipe	21,800 feet	About 4 miles long
Rebar	500 tons	Weighs as much as 12 loaded semi-trucks

