One of the first steps of the Memorial Union Reinvestment project was assessing infrastructure building-wide. The engineering firm Arnold & O'Sheridan completed an exhaustive study of the building’s electrical, plumbing, technology, heating, ventilation and air conditioning (HVAC) systems. Their findings prior to the start of renovation are listed below.

- Many of the building’s systems are original, antiquated and out-of-date. There are electrical and other systems still used from the 1920s and 1930s, and pipes that have never been replaced (including drainage pipes with decades of sediment built up inside, which have caused flooding in various locations in the building).
- Some of the electrical systems, which are still used, are old enough that the electrical engineers had only read about them but never seen one in operation before.
- The building’s systems were designed over many decades. There are more than 20 HVAC systems in the building, even though much of the building has either no ventilation or only windows.
- The Memorial Union staff should be commended for maintaining these systems for decades. Without their exceptional care, the systems would have failed years ago.
- The original building was not designed for air conditioning or mechanical ventilation. As a result, many small air handling systems have been retrofitted into the building over the years.
- Most of the existing HVAC systems do not meet today’s ventilation codes and do not use the most energy efficient technologies.
- The lighting systems in the building use many different types of fixtures (bulbs) and do not use the most energy efficient technologies.
- The plumbing systems have different fixture types that do not meet today’s standards for water efficiency.
- The building was serviced by 29 air handling systems, some over 73 years old. The project will replace outdated mechanicals and consolidate systems, boosting efficiency.
- The building had four fire alarm systems and no sprinkler system.
- In 1928, 9,400 students attended UW. Today’s student population of 45,000 has simply maxed out the building’s aging mechanicals and infrastructure.
- The upper Theater deck has been closed to the public for years because flooding caused torrents of water to flow under the deck’s doors and into the Theater lobby. The flooding issues will be corrected and the deck will finally open after MUR renovations.
- The building had two primary elevators, used by both patrons and for service. Phase I has already added one additional public, central elevator that serves all floors, as well as a large service elevator for the Theater wing. Phase II plans call for an additional service elevator on the east end of the building.
- The current loading dock and garbage collection facilities on the east side of the building are outdated and unsightly. Phase II plans include an underground dock to better serve the 350 weekly deliveries and remove the sight and smell of garbage collection.