

Central Energy Plant Upgrade

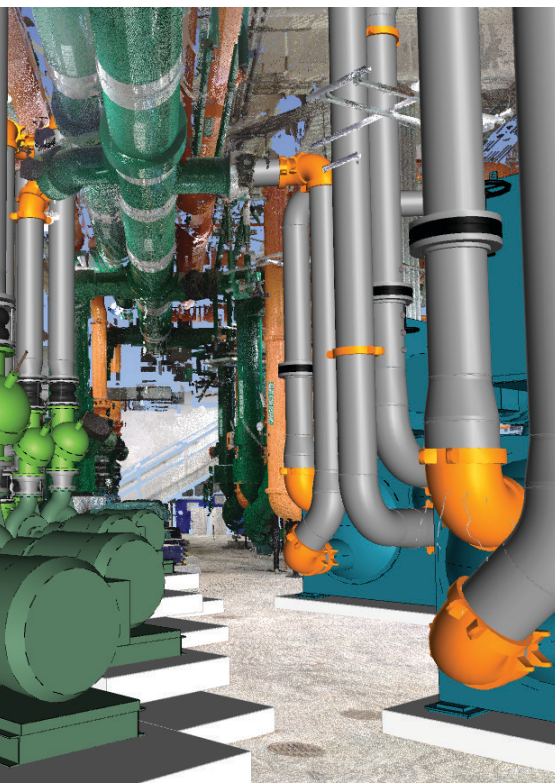
A Miami-area contractor engaged Ferguson to assist on a Central Energy Plant upgrade project with an aggressive timeline. The request involved adding two chillers, four pumps and a cooling tower to an existing chiller room to increase its operating capacity. Supporting and connecting this equipment required new piping systems with materials ranging from 8 to 14". After a site walk and review of the construction documents, this upgrade seemed like a perfect opportunity for our Mechanical Solutions team.



Mechanical Room Finished Installation



Mechanical Room Scan of Existing Plan



Mechanical Room Model of the Expansion

PRODUCTS USED

- Virtual Design & Construction (VDC)
- 3D Scanning Services
- Fabrication

LOCATION

Miami Metropolitan Area

THE CHALLENGE

The project's short completion window required speed, accuracy and delivery of ready-to-install products with little risk of rework. The entire solution had to consider that limited manpower would be available to perform in the field.

THE SOLUTION

We engaged several Mechanical Solutions silos as part of a comprehensive and seamless Scan-to-Fabrication process.

METHOD

Beginning with a 3D scan, we were able to capture precise measurements of the chiller room's existing systems and physical constraints. Using that data, we created a digital model of the updated system with its new components. To streamline installation once the material arrived on-site, we put together a hybrid build strategy by providing flange/groove connections for field bolt-ups—eliminating the need for any on-site welding.

The project was fabricated by our certified, in-house fabrication technicians according to the precise spool drawings created from our model, and the digital data enabled the project manager to organize layout well ahead of time.

When the material arrived on the job, the customer was given a detailed fabrication spool map to facilitate installation. Installation was completed ahead of schedule and with no rework—with an on-site team of just three people.

THE SOLUTION: FERGUSON

Our Scan-to-Fabrication solution vertically integrates the parts of the planning, design and construction phases that usually involve multiple parties. By keeping the entirety of the project in-house, we reduced the chance of miscommunication and ensured full access to all project data for every step of the process. Our extensive product inventory decreased the lead time for fabrication and delivery, allowing the customer to meet the tight deadline, and our robust fabrication capabilities allowed us to create a solution that would simplify installation.