



Hackensack University Medical Center Central Utilities Plant, 26kV Substation & Commissioning

PROJECT INFORMATION

CONCORD DIVISION

Power & Infrastructure

PROJECT LOCATION

Hackensack, NJ

MARKET

Health Care/Hospital

SERVICES

Engineering Design

CONSTRUCTION COST

\$100 Million

ABOUT THE CLIENT

Hackensack UMC is a 900-bed non-profit research and teaching hospital located west of New York City in Hackensack, Bergen County, NJ. HUMC is New Jersey's largest provider of inpatient and outpatient services and is the fourth largest hospital in the nation based on admissions.

In 2017 HUMC embarked on a \$700 million+ expansion with a new full critical care tower and central utilities plant.

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CENTRAL UTILITIES PLANT DESIGN

Based on prior performance Concord was selected by HUMC to be the engineer of record for a new free standing Central Utilities Plant (CUP) that will support all electrical and thermal needs for the existing HUMC complex and the new 500,000 sf tower. The CUP will consolidate all services and required 2 "enabling phases" to support the relocation of existing services. Of prime importance was the relocation and expansion of the existing 26kV substation.

The Hospital's main 26kV distribution system has been designed to accommodate a pair of 26kV underground redundant feeders from PSE&G and has been designed per PSE&G Standards and Guidelines. This included close coordination and meetings with PSE&G for interconnections, metering requirements, SCADA communication etc.

To ensure close project coordination, meet the aggressive schedule, and remain on budget, select practices from Integrated Project Delivery (IPD) and LEAN construction were incorporated into the project execution plan.

26KV SUBSTATION DESIGN

The new dual feed 26kV utility interconnect substation and 13.2kV distribution switchgear, designed by engineer-of-record Concord Engineering, is fully operational and is now repowering the existing hospital campus to make way for the future 530,000 sf hospital expansion <https://shar.es/aXlg04> (link to new hospital and/or stats).

The new electrical substation is one of several Enabling Projects associated with HUMC's new remote Central Utility Plant (Concord is Engineer of Record), which will provide heating/cooling to the entire existing campus and new expansion, as well as 7.5MW of diesel generators.

The successful transitions from existing to new electrical feed were the first of several critical switchovers to minimize interruption to the fully operational hospital.

Kudos to the entire project team, including HUMC staff, Program Manager - Stantec, Architect - RSC/WHR, CM Blanchard-Turner, Civil Engineer - Langan, Structural Engineer - Reuther + Bowen and Electrical Contractor - Jordano Electric.



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COMMISSIONING OF NEW 500,000 SF TOWER & CUP

Concord's expertise in supporting mechanical and electrical systems for operating healthcare facilities was instrumental in helping HUMC achieve a consistent commissioning agent service. The new facilities (Tower and CUP) will look to achieve industry standard sustainability ratings as well as smooth transition in existing system changeover during phase in.